

MINFILE NUMBER: **082GNE001**

NATIONAL MINERAL INVENTORY:

NAME(S): **COAL MOUNTAIN**, BYRON CREEK, CORBIN COLLIERY,
BYRON (CORBIN), CORBIN (COAL MOUNTAIN), BYRON CREEK SOUTH EXTENSION,
CORBIN CREEK, FORDING COAL, MAMMOTH,
ROBERTS, NO. 3

STATUS: Producer Open Pit Underground MINING DIVISION: Fort Steele
REGIONS: British Columbia
NTS MAP: 082G10E 082G07E UTM ZONE: 11 (NAD 83)
BC MAP:
LATITUDE: 49 30 00 N NORTHING: 5485674
LONGITUDE: 114 39 34 W EASTING: 669467
ELEVATION: 1981 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Area includes Byron Creek Collieries Lots 6999 and 6997 which cover Coal Mountain, (on which coal has been and is presently being mined); and Lots 6998, 6996 and 6994 to the west, which appear to have very little coal potential. The Shell Corbin-Coal Mountain property (082GSE052) lies to the south of Coal Mountain Lot 6995. Corbin-Middle Mountain (082GNE002) and Tent Mountain (082GNE004) lie to the north.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Fossil Fuel Sedimentary
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: The area contains a series of north trending folds with a predominant north plunging synclinal structure. The folds are commonly cut by north trending, west dipping thrust faults.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Shale
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: MVol Bituminous

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y
CATEGORY: Probable YEAR: 2000
QUANTITY: 45000000 Tonnes
COMMODITY: Coal GRADE: 100.0000 Per cent
COMMENTS: Reserves as at January 1, 2000.
REFERENCE: Information Circular 2001-1, page 6.

CAPSULE GEOLOGY

Coal Mountain operations is located 30 kilometres southeast of Sparwood. At the Byron Creek operations (now called Coal Mountain), the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) contains a number of coal seams of which the Balmer seam is stratigraphically lowest and most important. The other seams occur towards the top of the formation. The coal is medium volatile bituminous in rank and sulphur content ranges from 0.2 to 0.5 per cent. The coal when cleaned to 16 per cent ash, will have between 24 and 26 per cent volatile matter and a fuel value of 12,000 BTU's per pound. Two pits have been designated, No. 3 pit and North Ridge pit, and these contain 12,536,122 tonnes of clean coal while the remaining

CAPSULE GEOLOGY

reserves consist of approximately 22,677,500 tonnes of which much will be mined by underground methods (1973). The Mist Mountain Formation occurs in a north trending synclinorium running the length of Coal Mountain. The formation is thickest and increasingly abundantly preserved towards the north (example in Lots 6999 and 6997).

The structure consists of a north trending, north plunging synclinorium which is cut in places by north trending, west dipping thrust faults. The coal-bearing synclinorium is exposed in Coal Mountain. To the west are strata of the Jurassic Fernie Group, in Lots 6998, 6996 and 6994, which are also cut by a roughly north trending thrust fault.

The No. 3 pit extends from approximately 12,250 north to approximately 15,350 north (Mine Grid). The Balmer seam reserves are present within the north plunging double syncline, outcropping at the southern end and on the western limb.

The North Ridge pit, extending from 15,350 north to 18,600 north (Mine Grid), is separated from the No. 3 Pit by three transverse faults. In the south it consists predominantly of a double synclinal structure (north plunging) which is cut by several thrust faults farther north, giving rise to a complex multiple synclinal exposure of the coal-bearing strata.

To the east of both the above pits, is the No. 6 syncline, from which approximately 22 million tonnes of clean coal could be recovered, mostly by underground mining.

The southwest shoulder reserve is a southerly extension of the eastern limb of No. 3 pit seam, and is thought to contain 2 to 6 million tonnes of in place coal reserve.

Previous mining activity in the area was carried out by the Corbin Coal and Coke Company between 1908 and 1934. Mine No.'s 1, 2, 4 and 5 were four adits in the north end of the mountain which extracted coal from nearly vertical, north striking seams. The No. 4 mine was the major producer; 958,000 tonnes coal was mined between 1913 and 1930, while approximately 370,000 tonnes were mined from the other three mines. The No. 3 mine extracted approximately 450,000 tonnes from the west side of the mountain by open pit and underground methods. The No. 6 mine produced 598,000 tonnes from both limbs of a long narrow syncline which is less complicated than many of the other structures on Coal Mountain.

Byron Creek Collieries Limited operated on Coal Mountain from 1974 to 1990; Corbin Coal from 1991 to 1993 and Fording Coal Ltd. from 1993.

Indicated reserves at the Byron Creek operations are 31,942,276 tonnes of coal at 1.35 per cent (grade based on reflectivity and average volatile matter content, Coal Assessment Report 260).

Exploration in 1995 by Fording Coal Ltd., consisting of 80 drillholes totalling approximately 13,000 metres, has resulted in the definition of a reserve base of 40 million tonnes of clean coal. Production in 1995 reached 1.1 million tonnes and increased to 1.8 and 2.1 million tonnes in 1996 and 1997, respectively. In 1998, Fording sold about 1.8 million tonnes of coal, about 60 per cent of which was coking coal and the balance thermal and pulverised coal injection (PCI) coal (Exploration and Mining in BC 1998). Reserves as at January 1, 2000 are 45 million tonnes (Information Circular 2001-1, page 6).

BIBLIOGRAPHY

- EM EXPL 1996-A12, 1997-51, 1998-73
- EMPR AR 1907-86; 1908-18,85,232; 1909-172,185,260; 1910-227; 1911-272; 1912-307; 1913-401; 1914-495; 1915-431; 1916-379,502; 1917-436; 1918-458; 1919-355; 1920-341; 1921-338; 1922-344; 1923-374; 1924-360; 1925-424; 1926-55,422; 1927-384,460; 1928-498; 1929-486; 1930-43,47; 1931-235; 1932-281; 1933-342; 1934-G37; 1935-G30; 1936-G46; 1937-G32,35; 1938-G40; 1942-131; 1943-130; 1944-138; 1946-216,247; 1947-264; 1948-208,232; 1949-273,281; 1951-287; 1974-A114; 1975-A88; 1976-A98; 1977-110; 1978-122; 1979-122
- EMPR BULL 14, pp. 6,17,20; *33, p. 107
- EMPR COAL ASS RPT *259, *260
- EMPR ENG INSP Annual Report 1989, 1990
- EMPR FIELDWORK 1991, pp. 397-404
- EMPR GEM 1972-627; 1973-575
- EMPR INF CIRC 1995-9, p. 8; 1996-1, p. 8; 1997-1, p. 11
- EMPR IR 1984-1, pp. 94-95; 1984-3; 1984-4; 1984-5; 1986-1
- EMPR MAP 65 (1989)
- EMPR MIN STATS 1985, p. 42; 1987, pp. 44,47; 1990, pp. 40,46,52; 1992, p. 20; 1993, p. 30; 1994, p.34
- EMPR MINING Vol.1 1975-1980, p. 50; 1981-1985, p. 71; 1986-1987, p. 70; 1988, p. 69
- EMPR OF 1992-1; 1994-1

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 3
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR P 1986-3, p. 26
EMPR PF (Mining Technology Website (Apr.1999): Coal Mountain, 3 p.)
GSC P 89-4
N MINER Apr.12, 1999; Oct.8-14, 2001
WWW <http://www.mining-technology.com/projects/coalmt/index.html>

DATE CODED: 1986/03/03
DATE REVISED: 1987/05/05

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE001**

MINFILE NUMBER: **082GNE002**

NATIONAL MINERAL INVENTORY:

NAME(S): **CORBIN (MIDDLE MOUNTAIN)**, MIDDLE MOUNTAIN, MAMMOTH,
BYRON CREEK, FORDING COAL, COAL MOUNTAIN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G10E
BC MAP:

MINING DIVISION: Fort Steele

LATITUDE: 49 31 20 N
LONGITUDE: 114 39 34 W
ELEVATION: 1729 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5488144
EASTING: 669390

LOCATION ACCURACY: Within 500M

COMMENTS: Property is on Coal Licence 413, southeast of Tent Mountain
(082GNE004) and north of the Corbin-Coal Mountain property
(082GNE001).

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: A north trending, south plunging (approximately 35 degrees) anticline-
syncline pair occurs on the east side of the property.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization GRADE: MVol Bituminous

CAPSULE GEOLOGY

Only the lower portion of the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) is present in the Corbin (Middle Mountain) occurrence area and it is subdivided into the coal-bearing Mammoth seam and the upper sandstone and shale series. The lower Mammoth seam (up to 58 metres thick) consists of claystone with thin, discontinuous lenses and interbeds of coal and stony coal. The upper Mammoth seam (up to 35 metres thick) contains coal with discontinuous lenses and interbeds of claystone. The coal is estimated to be of medium volatile bituminous rank.

In the southeast corner of the licence, the Mammoth seam has been thrust repeated and as this is the only in-place coal occurrence on the property, open pit potential is confined to this area. Tonnages of coal are expected to be small.

The main fold structure consists of a north trending, south plunging (approximately 35 degrees) anticline-syncline pair which outcrops near the eastern boundary of the property. To the southwest of the folds are two northwest trending, west dipping thrust faults.

The west side of the property consists of a series of west dipping, northwest trending high angle reverse faults.

Exploration drilling was completed in 1998.

BIBLIOGRAPHY

EM EXPL 1996-A12, 1997-51; 1998-13, 73
EMPR COAL ASS RPT *350, *389
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

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FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE003**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARTEN CREEK**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G10W

BC MAP:

LATITUDE: 49 31 12 N

LONGITUDE: 114 50 49 W

ELEVATION: 1676 Metres

LOCATION ACCURACY: Within 500M

COMMENTS:

UTM ZONE: 11 (NAD 83)

NORTHING: 5487492

EASTING: 655828

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: The Marten Creek area is within the east (west dipping) limb of a north to north-northwest trending synclinorium.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone

Siltstone

Shale

Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous

INVENTORY

ORE ZONE: MARTEN CREEK

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 955722000 Tonnes

YEAR: 1971

COMMODITY

Coal

GRADE

0.8500

Per cent

COMMENTS: Grade based on reflectivity.

REFERENCE: Coal Assessment Report 343.

CAPSULE GEOLOGY

Up to 5 coal seams are present in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, siltstone and shale. The lowest seam, seam 5, is split into an upper (5 U) and lower (5L) bench. Thicknesses range from 1.5 to 3.7 metres and 0.9 to 5.5 metres respectively, increasing from north to south. The shale parting increases in thickness in the same direction. Seam 7 ranges in thickness from 1.8 to 5.5 metres (ash contents are 11.4 to 32.9 per cent). Seam 8 is thin, 1.1 to 1.2 metres. Seam B is the uppermost seam, ranging in thickness from 4.6 to less than 0.5 metres in the north. Ash contents in Seam B are 13.0 to 22.7 per cent. Seams 7 and B are the main economic seams in the Marten Creek occurrence area. Coal seams are high volatile bituminous in rank.

Total reserves with 457 metres cover are 500 million tonnes and 56,695,000 tonnes at pitches 0-15 degrees and 15-30 degrees, respectively. Reserves with 457 to 762 metres of cover are 3,612,000 tonnes and 56,755,000 tonnes at pitches 0-5 degrees and 15-30 degrees respectively, and with less than 762 metres of cover, 838,160,000 tonnes at 15-30 degrees pitch.

The coal-bearing strata are located on the east (west dipping) limb of a north to north-northwest trending synclinorium. Beds generally dip west. The strata are cut off to the east by the Marten

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CAPSULE GEOLOGY

Ridge (roughly north trending, sinuous, west dipping) thrust fault.

BIBLIOGRAPHY

EMPR AR 1909-174,185; 1912-53
EMPR COAL ASS RPT *343, 856
EMPR FIELDWORK *1978, pp. 61-65
GSC P *81-1B, pp. 145-152; 89-4

DATE CODED: 1986/03/01
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CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE004**

NATIONAL MINERAL INVENTORY:

NAME(S): **TENT MOUNTAIN, CORBIN (TENT MOUNTAIN), COLEMAN COLLIERIES, FORDING COAL, HILLCREST MOHAWK**

STATUS: Past Producer Open Pit
REGIONS: British Columbia
NTS MAP: 082G10E

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 49 32 27 N
LONGITUDE: 114 41 04 W
ELEVATION: 1828 Metres

NORTHING: 5490157
EASTING: 667517

LOCATION ACCURACY: Within 500M

COMMENTS: Both the Coleman Collieries (Alberta) and the Shell licences are located (contiguously) southeast of Tent Mountain, with the former being the most northerly and westerly. The Shell coal licence number is 412(?). It lies to the north of the Corbin Tent Mountain-Middle Mountain (082GNE002) Licence 413 and Coal Mountain (082GNE001).

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Siltstone
Mudstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: TENT MOUNTAIN

REPORT ON: Y

CATEGORY: Measured
QUANTITY: 77284920 Tonnes

YEAR: 1976

COMMODITY

Coal

GRADE

1.3000 Per cent

COMMENTS: Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Report 450.

CAPSULE GEOLOGY

Five main coal seams occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) at Tent Mountain, interbedded with sandstone, siltstone and mudstone. The stratigraphically lowest or No. 2 seam varies from 6.1 to 18.3 metres thick with a shale split 0.6 to 2.7 metres thick. The seam is repeated to the south by a thrust fault which also causes thinning and thickening of the seam. No. 3 seam (approximately 61 metres above No. 2 seam) is a coaly shale 1.5 metres thick. The No. 4 seam (131 metres above No. 2 seam) varies in thickness from 4.3 to 6.7 metres (averaging 5.2 metres) and is consistent over the property. The No. 5 seam (approximately 58 metres above the No. 4 seam) varies from 9.1 to 24.4 metres in thickness and contains small shale bands. Towards the north the No. 5 seam consists of two seams, 5A and 5B. Seam 5B thickens towards the south while 5A thins and becomes a coaly shale.

From 1952 to 1955, the 5B seam (average thickness 18.3 metres) has been mined in a trench cut known as the No. 4 Pit South. The No. 6 seam (46 metres above the No. 5B seam) varies from 2.4 to 7.9 metres in thickness in the south and is affected by thrust faulting

CAPSULE GEOLOGY

(cut off at depth). The No. 7 seam is generally cut off by the major thrust fault on the east flank of Tent Mountain.

Analyses from the No. 2 and No. 4 seams indicate ash, volatile matter and sulphur contents ranging from 11.3 to 15.1 per cent, 0.56 to 0.66 per cent and 24.8 to 26.1 per cent (clean coal) respectively. The BTU/pound varies from 13,400 to 13,500 with the Free Swelling Index from 4-5.5 (clean coal).

A total coal reserve of 77,284,920 tonnes has been proven down to the 610 metre cover-line on the east flank of Tent Mountain, 44.2 metres in Alberta, 41 metres in British Columbia (Coal Assessment Report 450). The surface mine potential is approximately 32 million tonnes; 20 million tonnes in British Columbia and 12 million tonnes in Alberta.

The structure consists of a series of tight north to northwest trending folds and approximately northwest trending, west dipping thrust faults.

BIBLIOGRAPHY

EMPR AR 1908-232; 1909-172-173,260; 1910-227-229; 1911-272-274;
1950-244,273; 1951-249,287; 1952-286,319; 1953-226,254;
1954-214,244; 1955-132,161; 1956-196,198,223-224; 1957-120,
121,144; 1958-134,135,154; 1959-252,253,273; 1960-217,218,237;
1961-252,253,273; 1962-269; 1963-238,263; 1964-307,324;
1965-390,391,409; 1966-392; 1967-455; 1968-A47; 1972-A48;
1973-A48; 1974-A114; 1975-A88; 1976-A98; 1977-110; 1978-122;
1979-122
EMPR BULL *33
EMPR COAL ASS RPT *449, *450
EMPR GEM 1969-419; 1970-522
EMPR IR 1984-2, p. 94
EMPR MINING 1975-1980, Vol. 1, p. 50
GSC P 89-4

DATE CODED: 1986/03/01
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FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE005**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEACH CREEK**, LEECH CREEK

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G10W

BC MAP:

LATITUDE: 49 33 50 N

LONGITUDE: 114 47 54 W

ELEVATION: 1402 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Property is subdivided into the Leach Creek North and Leach Creek South areas.

UTM ZONE: 11 (NAD 83)

NORTHING: 5492472

EASTING: 659204

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: East limb of the north-northwest trending, doubly plunging (towards the centre) McEvoy syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous

LVol Bituminous

COMMENTS: Coal seams vary in rank from low volatile to high volatile bituminous.

INVENTORY

ORE ZONE: LEACH CREEK SOUTH

REPORT ON: Y

CATEGORY: Inferred YEAR: 1981

QUANTITY: 972467 Tonnes

COMMODITY GRADE

Coal 1.3000 Per cent

COMMENTS: Projected geological reserves. Average grade based on reflectivity which varies from 0.9 to 1.7.

REFERENCE: B.C. Coal Ltd., 1981 Reserve & Resource data.

ORE ZONE: LEACH CREEK NORTH

REPORT ON: Y

CATEGORY: Inferred YEAR: 1981

QUANTITY: 2567919 Tonnes

COMMODITY GRADE

Coal 1.3000 Per cent

COMMENTS: Projected geological reserves. Average grade based on reflectivity which varies from 0.9 to 1.7.

REFERENCE: B.C. Coal Ltd., 1981 Reserve & Resource data.

CAPSULE GEOLOGY

Up to 11 coal seams are present in the Leach Creek North area in a sequence of sandstone, siltstone and shale of the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group). Coal seam thicknesses vary from 1.5 to 10.7 metres. The number of seams decreases to eight in the Leach Creek South (Middle part) area with seam thicknesses ranging from 3.0 to 16.8 metres, and to 5 in the south half of the Leach River South area (thicknesses from 1.1 to 5.5

CAPSULE GEOLOGY

metres). A number of the seams are split into two benches and contain rock partings of varying thicknesses. Rank varies from low volatile bituminous to high volatile bituminous. Projected geological reserves are 2,567,919 and 972,467 tonnes in the Leach Creek North and South areas respectively (B.C. Coal Ltd., 1981 Reserve & Resource data).

The area lies on the east limb of the McEvoy syncline. The limb contains a number of minor folds which parallel the north-northwest trend of the main axis. To the west is the Barnes anticline and several north-northwest trending, west dipping thrust faults.

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EMPR COAL ASS RPT *342
EMPR FIELDWORK *1978, pp. 61-65
GSC P *81-1B, pp. 145-152; 89-4
BC COAL LTD 1981 *Reserve & Resource Data

DATE CODED: 1986/03/01
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CODED BY: EVK
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FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE006**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARTEN RIDGE**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G10W

BC MAP:

LATITUDE: 49 34 25 N

LONGITUDE: 114 51 14 W

ELEVATION: 2011 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Marten Ridge is the northern extension of the Marten Creek area (082GNE003).

UTM ZONE: 11 (NAD 83)

NORTHING: 5493437

EASTING: 655156

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Tabular

MODIFIER: Faulted

COMMENTS: The coal-bearing strata occur in a relatively uniformly west dipping (18-40 degrees) homoclinal succession.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous

INVENTORY

ORE ZONE: MARTEN RIDGE

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1972

QUANTITY: 511263000 Tonnes

COMMODITY

GRADE

Coal

0.9000

Per cent

COMMENTS: Partially explored and projected total coal reserves. Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Report 345.

CAPSULE GEOLOGY

In the Marten Ridge occurrence area, up to nine coal seams, which are high volatile bituminous in rank, occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, siltstone and shale. From stratigraphically lower to higher, seam thicknesses are as follows: seam 9L - 5.1 to 8.0 metres; seam 9U - 1.4 to 2.5 metres; seam 8L - 3.5 to 9.0 metres; seam 8U - 4.8 to 7.9 metres; seam 7 - 2.2 to 5.8 metres; seam 5L - 3.2 to 4.7 metres; seam 5U - 2.3 to 3.6 metres; seam 3 - 3.9 to 7.3 metres and seam 2 - 1.5 to 3.6 metres. Ash contents in adit samples range from 8.5 to 30.7 per cent (raw coal), volatile matter from 25.4 to 35.0 per cent (raw coal), fixed carbon from 43.1 to 60.1 per cent (raw coal) and sulphur from 0.29 to 0.95 per cent (raw coal).

Total coal reserves (tonnes) under 457 metres; 457 to 762 metres; and greater than 762 metres of cover are: 100,553,000 and 70,717,000; 45,897,000 and 56,961,000; and 90,851,000 and 146,282,000 respectively. The reserves are partially explored and projected at pitches 0-15 degrees and 15-30 degrees respectively. Mining methods would be a combination of underground and open pit.

CAPSULE GEOLOGY

The strata are fairly uniformly west dipping (generally 18 to 40 degrees west) and are cut by a number of faults. The faults are north to north-northeast trending and west dipping. They include from west to east, a reverse fault and associated splays (normal, quite high angle fault) and the Marten Ridge fault (west branch-lower angle thrust fault and east branch-also a thrust fault).

The coal-bearing strata outcrop between the reverse fault and the Marten Ridge fault (west branch) in the south of the area. The number of seams outcropping increases towards the north and in the northernmost area of the property. Seams also outcrop to the west of the reverse fault.

BIBLIOGRAPHY

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EMPR FIELDWORK *1979-1, pp. 61-65
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE007**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOSMER WHEELER**, HOSMER, PARCEL 69

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 36 45 N
LONGITUDE: 114 54 24 W
ELEVATION: 1341 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5497653
EASTING: 651220

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of the 1976b development area. Parcel 69 overlaps much of the Hosmer Wheeler area.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Fossil Fuel Sedimentary

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: A broad, open, southwest plunging (10-30 degrees) syncline dominates the structure.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous
HVVol Bituminous

INVENTORY

ORE ZONE: HOSMER WHEELER

REPORT ON: Y

CATEGORY: Measured YEAR: 1976
QUANTITY: 35289818 Tonnes
COMMODITY: Coal GRADE: 100.0000 Per cent

COMMENTS: Geological mining reserves are estimated at 44,479,648 tonnes of which 35,289,818 tonnes will be recoverable.

REFERENCE: Coal Assessment Report 338.

CAPSULE GEOLOGY

At Hosmer Wheeler, approximately 79 metres of coal occurs in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group), which is 762 metres thick. The coal is interbedded with sandstone, siltstone and shale. The main seams are 2 (3.7-4.6 metres), 3 (3.7-19.8 metres), 4 (2.4-7.9 metres), 8 (7.9-10.1 metres), 9 (4.3-7.9 metres), 10 (3.7-4.9 metres) and 11 (4.3-4.6 metres). Ash content ranges from 7.9 to 9.9 per cent, volatile matter from 20.9 to 30.3 per cent, fixed carbon from 61.8 to 70.0 per cent and BTU/LB from 13,630 to 14,436 (dry basis). Coal seams 2 and 3 are high volatile bituminous in rank, seam 4 is medium to high volatile bituminous, while the lower seams 8, 9, 10 and 11 are medium volatile bituminous.

The structure is dominated by a broad open syncline which plunges southwest 10-30 degrees. The strata dips east on the Fernie and Hosmer ridges, swings south across the centre of the property and dips west on the Wheeler Ridge. The strata are cut by numerous north to north-northwest trending, both west and east dipping thrust faults and steeper normal faults.

CAPSULE GEOLOGY

Measured geological reserves are 35,289,818 tonnes of clean coal seams 3, 4, 8, 9, 10 and 11 (Coal Assessment Report 338). Geological mining reserves are estimated at 44,479,648 tonnes of which 35,289,818 tonnes will be recoverable (Coal Assessment Report 338).

BIBLIOGRAPHY

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1911-266-268
EMPR COAL ASS RPT *337, *338, 857
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EMPR FIELDWORK 1991, pp. 405-417
EMPR MAP 65 (1989)
EMPR MINING 1981-1985; 1986-1987; 1988
EMPR OF 1992-1
EMPR P 1986-3
GSC P 89-4
1970 Kaiser Resources Ltd. *(Freehold) Rpt.
1981 BC COAL LTD *Reserve and Resource Data

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE008**

NATIONAL MINERAL INVENTORY:

NAME(S): **PARCEL 73**, NATAL LOOKOUT

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 45 N
LONGITUDE: 114 50 44 W
ELEVATION: 1920 Metres

NORTHING: 5499630
EASTING: 655581

LOCATION ACCURACY: Within 500M

COMMENTS: Situated at the south end of Sparwood Ridge and the northern end of Hosmer Ridge.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: The area is separated into two segments by the north trending, west dipping Dominion thrust fault.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Mudstone
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous

CAPSULE GEOLOGY

Parcel 73 is separated into two segments by the north trending, west dipping Dominion thrust fault. The eastern segment contains a series of gentle open folds in predominantly Lower Cretaceous strata. The western segment contains a northwest trending syncline in the north, and numerous imbricate thrust fault slices in the south and west. The thrust faults trend northwest, north, northeast and east. The north-northwest trending, southwest dipping Razor normal fault occurs towards the west of the segment. Strata are overturned on the west limb of the syncline adjacent to the Lookout thrust fault.

Coal seams of the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) are exposed at the surface in the western segment. Several thick, commercial coal seams, the largest of which is the Lookout seam, occur between two prominent sandstones, the Moose Mountain sandstone and the Lookout sandstone. Several other thick seams occur above the Lookout sandstone. These have been removed except at the north end of Hosmer Ridge in the southwest of Parcel 73.

Lookout Hill and Hosmer Ridge are the best areas for coal development, with several thick seams dipping 15-25 degrees south to southwest. The best and thickest seams are the Lookout seam (30 metres below the Lookout sandstone) and the Wheeler seam (70 metres above the sandstone). Both seams are split by one and locally by several mudstone/siltstone units. The coal seams are commonly sheared and locally disrupted.

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GSC P *77-1A Part A, pp. 155-159; 89-4
CIM *1985, Vol.78, No.881, pp. 39-46

DATE CODED: 1986/03/01
DATE REVISED: 1987/05/05

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE008**

MINFILE NUMBER: **082GNE009**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCGILLIVRAY**, MCGILLIVRAY (LOOP), FORDING COAL

STATUS: Developed Prospect

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082G10W

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 40 N

LONGITUDE: 114 47 09 W

ELEVATION: 1280 Metres

NORTHING: 5501454

EASTING: 659844

LOCATION ACCURACY: Within 500M

COMMENTS: The south end of the railway loop.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Tabular

MODIFIER: Folded Faulted

COMMENTS: Strata trend approximately north and dip west between 8 and 60 degrees (normally about 30 degrees).

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Shale
Siltstone
Sandstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous

INVENTORY

ORE ZONE: MCGILLIVRAY

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1964

QUANTITY: 166794000 Tonnes

COMMODITY

GRADE

Coal 0.8000 Per cent

COMMENTS: Total, in-place, partially explored reserves. Grade based on reflectivity.

REFERENCE: Coal Assessment Report 430.

CAPSULE GEOLOGY

Up to twelve coal seams ranging in thickness from 4.0 to 0.2 metres were encountered in drill holes along the pipeline right of way northeast and south of the McGillivray Station. The seams are interbedded with shale, siltstone and sandstone of the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group). Beds dip west between 8 and 60 degrees (generally approximately 30 degrees). The area is bounded to the east by the Erickson normal fault, which trends approximately north to north-northwest.

The seams in the area from oldest to youngest are L10 (3.4 metres), 10 (4.9 metres), 9 (2.7 metres), 8 (7.6 metres), 7 (4.9 metres), 6 (2.1 metres), 5 (3.5 metres), U5 (2.1 metres), 4 (2.6 metres), U4 (5.8 metres), 3 (5.3 metres) and U3 (7.0 metres). The values in brackets are average thicknesses. The coal is very high in ash content.

In-place, partially explored reserves are 153,470,000 tonnes at a pitch of 30-90 degrees and with 0 to 457 metres of cover; and 13,324,000 tonnes with 457 to 762 metres of cover (Coal Assessment Report 430).

In 1998, Fording Coal Limited mined a bulk sample of about 30,000 tonnes, which was shipped to Coal Mountain Collieries

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 17
REPORT: RGEN0100

CAPSULE GEOLOGY

(082GNE0i01) for testing. Fording drilled 18 exploratory holes.

BIBLIOGRAPHY

EM EXPL 1998-13, 73
EMPR COAL ASS RPT *430
GSC P 89-4
Pearson, D.E. and Grieve, D.A.(1985): *CIM 1985, Vol.78, No. 881 pp.
39-46

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE010**

NATIONAL MINERAL INVENTORY:

NAME(S): **MICHEL SOUTH**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G10W

BC MAP:

LATITUDE: 49 39 42 N

LONGITUDE: 114 47 49 W

ELEVATION: 1493 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Appears to be the southern extension of the Michel Creek area (082GNE012), occurring to the north of the Leach Creek property (082GNE005).

UTM ZONE: 11 (NAD 83)

NORTHING: 5503345

EASTING: 658985

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive

CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: The area overlies the east limb (west dipping) of the approximate north trending Sparwood syncline. A number of north-northwest trending, west dipping thrust faults are present.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone

Siltstone

Shale

Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous

INVENTORY

ORE ZONE: MICHEL SOUTH

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1974

QUANTITY: 545177078 Tonnes

COMMODITY

GRADE

Coal

0.8000

Per cent

COMMENTS: Total projected coal reserves. Grade based on reflectivity.

REFERENCE: Coal Assessment Report 349.

CAPSULE GEOLOGY

Up to 18 coal seams occur in the Michel South area. From stratigraphically lower to upper, the main seams are: 10 (13.7 metres), 9 (3.0 metres), 8 (6.1 metres), 7 Lower (3.7 metres), 7 (1.8 metres), 6 (1.8 metres), 5 (2.4 metres), 2 (1.8 metres), 1 (3.0 metres), A (4.6 metres), B (1.8 metres), LC (4.9 metres), UC (3.4 metres) and D (1.5 metres)(information projected from the Sparwood Ridge area). The seams are interbedded with sandstone, siltstone and shale in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group).

Total projected coal reserves for the area are 545,177,078 tonnes (Coal Assessment Report 349). Rank, projected from the Michel Creek area to the north, is expected to be high volatile bituminous.

The area overlies the east (west dipping) limb of the Sparwood syncline (approximately north trending). The strata are cut by a number of north-northwest trending, west dipping thrust faults.

BIBLIOGRAPHY

EMPR COAL ASS RPT *349

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 19
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK *1978, pp. 61-65
GSC P 89-4
1981 BC COAL LTD *Reserve & Resource Data

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE011**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPARWOOD RIDGE**, WESTAR BALMER, SPARWOOD OPERATIONS,
PANEL 6, KAISER RESOURCES, BALMER SOUTH,
B.C. COAL, HYDRAULIC, BALMER HYDRAULIC,
BALMER NO. 1, NO. 10 SEAM, A SOUTH

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 41 00 N
LONGITUDE: 114 51 34 W
ELEVATION: 2011 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5505623
EASTING: 654407

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of the property (Sparwood Ridge and Sparwood Ridge South). Balmer South (Panel 6 underground mine) lies on the northwest flank of Sparwood Ridge. The status applies to the Westar Balmer general area. Sparwood Ridge trends north-northeast into the Harmer Ridge area. See also Balmer (082GNE015) and others in the area. Early production is included with Michel Creek (082GNE012) and later production with Elkview (082GNE017).

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: The structure is dominated by the north trending, south plunging Sparwood syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: SPARWOOD RIDGE

REPORT ON: Y

CATEGORY: Measured
QUANTITY: 29400000 Tonnes

YEAR: 1978

COMMODITY GRADE
Coal 1.4000 Per cent

COMMENTS: Proven, in-place coal reserves. Grade based on reflectivity and average volatile matter content.

REFERENCE: 1978 Kaiser Resources Ltd., Coal Reserves and Mining Outlook.

CAPSULE GEOLOGY

Approximately 52 metres of coal contained in 12 seams (from stratigraphically oldest to youngest 10, 9, 8, 7, 6, 5, 1, A, B, C Lower, C Upper and D) occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group), which is approximately 610 metres thick in the area. Only nine seams (aggregate thickness 45-61 metres) are present in Sparwood Ridge South. The seams which are missing in this area are 5, C Lower, C Upper and D. The coal occurs in strata consisting of sandstone, siltstone and shale.

The proven coal reserves in the Sparwood Ridge area are 29,400,000 tonnes in place (1978 Kaiser Resources Ltd., Coal Reserves and Mining Outlook). Ash contents in the raw coal are 15-22 per cent

CAPSULE GEOLOGY

and in coal cleaned at 1.50 specific gravity ash contents are 9.5-10 per cent, volatile matter is 19-26 per cent, sulphur is less than 0.5 per cent, and kilojoules/kilograms values are 32,560.

The structure consists of the roughly north trending, south plunging Sparwood syncline. The ridge forms the west limb of the syncline, on which strata dip approximately 30 degrees east. The sequence is cut by several approximately north-northwest trending, east dipping thrust faults. The faults dip steeper than the strata on the limbs.

The Balmer South mine is located on Sparwood Ridge. The No. 10 seam, which is 12.2-15.2 metres thick and dips approximately 30 degrees east, is mined hydraulically in this area.

BIBLIOGRAPHY

EMPR AR 1960-236; 1961-271; 1962-265,274; 1963-261; 1964-322;
1965-405; 1966-388; 1967-452
EMPR GEM 1969-410; 1970-516; 1971-489; 1972-629-633; 1973-577-581
EMPR MINING Vol. 1, 1975-1980, p. 51; 1981-1985, p. 74; 1988, p. 68
EMPR P 1986-3, p. 25
GSC P 89-4
1978 Kaiser Resources Ltd., *Coal Reserves & Mining Outlook
Kaiser Resources 1967-1968 *Freehold Report

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE012**

NATIONAL MINERAL INVENTORY:

NAME(S): **MICHEL CREEK**, MICHEL COLLIERY, KAISER RESOURCES,
WESTAR BALMER, BALMER, SPARWOOD OPERATIONS,
CROW'S NEST PASS, CROWS NEST INDUSTRIES, BALDY MOUNTAIN,
A, B, C,
NO. 1 SOUTH

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:

Open Pit Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 41 50 N
LONGITUDE: 114 49 19 W
ELEVATION: 1219 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5507245
EASTING: 657067

LOCATION ACCURACY: Within 500M

COMMENTS: The Michel Creek area lies between Sparwood Ridge to the west and
Natal Ridge to the east. Early production is included from Sparwood
Ridge (082GNE011), Natal Ridge (082GNE013), Balmer (082GNE015) and
Baldy Complex (082GNE016). See also J-Area (082GNE014), Elkview
(082GNE017) and Harmer Ridge (082GNE023). See Elkview for later
production in the area.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: The area overlies the east limb of the approximate north trending,
south plunging Sparwood syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous
MVol Bituminous

CAPSULE GEOLOGY

Twelve coal seams are present interbedded with sandstone, siltstone and shale in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group). The upper coal seams are high volatile bituminous in rank while the lower seams are medium volatile bituminous.

The Michel Creek occurrence area overlies the east (west dipping) limb of the Sparwood syncline (approximately north trending, south plunging) and the strata are cut by a relatively minor north trending, west dipping fault.

The Crow's Nest Pass Coal Company Limited began mining operations at Michel Colliery in 1899. Crows Nest Industries, Limited operated the colliery from 1965, when operations included several underground mines (including Balmer South (082GNE011), Balmer No. 2 (082GNE016), "A" North, Balmer North (082GNE015) and stripping operations ("A" South (082GNE011), Baldy (082GNE016), "C" Seam (082GNE013) and No. 7 Seam (082ENE013)).

The Michel Colliery (Kaiser Resources Ltd.) was demolished in 1980. See Elkview (082GNE017) for subsequent production in the area.

BIBLIOGRAPHY

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MINFILE NUMBER: **082GNE012**

BIBLIOGRAPHY

1199; 1902-262,276; 1903-28,81,225,228,232; 1904-110,283; 1905-236; 1906-133,234,249; 1907-86,198; 1908-226; 1909-169,185,255; 1910-223; 1911-123,268; 1912-303; 1913-394; 1914-484; 1916-412,498; 1917-433; 1918-455; 1933-295; 1936-G4,6,45; 1937-G5,32; 1938-G4,10,37; 1939-115,146; 1940-101,129; 1941-96; 1942-94,96; 1943-89,127; 1944-86,88,89,93,133; 1945-139,166; 1946-244; 1947-262; 1948-204,213,230-232; 1949-278,280,281,283,288,305; 1950-240,244,249,254,270; 1951-249,251,254,258,284; 1952-286,288,289,291,297,299,313; 1953-220,226,228,229,232,237,248; 1954-214,221,225,226,237; 1955-122,137,142,143,152; 1956-196,198,202,216,220; 1957-120,121,136-142; 1958-134,135,148-153; 1959-268-273; 1960-217,218,231-237; 1961-253,266-272; 1962-257,258,269-276; 1963-238,258; 1964-313,315,319-324; 1965-390,391,402-409; 1966-375,376,386-392; 1967-A47,450-455; 1968-A47,460-466; 1969-A49; 1970-A48; 1971-A48; 1972-A48; 1973-A48; 1974-A114; 1975-A88; 1976-A98; 1977-110; 1978-122; 1979-122
EMPR COAL ASS RPT 840, 854
EMPR FIELDWORK *1978, pp. 61-65
EMPR GEM 1969-410; 1970-517; 1971-488; 1972-629-633; 1973-577-581
EMPR MINING 1975-1980, Vol. 1, p. 51
EMPR P 1986-3
GSC P 89-4
*Pearson, D.E. and Grieve, D.A. (1985): CIM Vol.78, No.881 pp. 39-46

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE013**

NATIONAL MINERAL INVENTORY:

NAME(S): **NATAL RIDGE, HARMER RIDGE, WESTAR BALMER, BALMER, KAISER RESOURCES, SPARWOOD OPERATIONS, C SEAM, ERICKSON, NO. 7 SEAM, MICHEL COLLIERY, NO. 3 SEAM, ELKVIEW**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:

Open Pit Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 55 N
LONGITUDE: 114 47 44 W
ELEVATION: 1585 Metres

NORTHING: 5507455
EASTING: 658965

LOCATION ACCURACY: Within 500M

COMMENTS: Area is located approximately 5 kilometres southeast of Sparwood, in the northernmost part of the Crownsnest coalfield. Natal Ridge extends north-northwest and the property is located at its southern end. See also Sparwood Ridge (082GNE011), Michel Creek (082GNE012), J-Area (082GNE014), Balmer (082GNE015), Baldy Complex (082GNE016), Elkview (082GNE017), and Harmer Ridge (082GNE023). Production is included with Michel Creek.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Fossil Fuel Sedimentary

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: Beds strike approximately northwest, dipping west-southwest between 10 and 15 degrees, and are part of the east limb of the Sparwood syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Shale
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization GRADE: HVol Bituminous
MVol Bituminous

CAPSULE GEOLOGY

Twelve coal seams occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, shale and siltstone. Total thickness of the coal-bearing strata ranges up to 610 metres, containing approximately 45.7 metres of coal. The ascending order of seams is 10, 9, 8, 7, 6, 5, 3, A, B, C Lower, C Upper and D. The A, B, C and D seams vary from medium to high volatile bituminous to high volatile rank in the upper seams. Seams A, B, C and D are the more recent mining targets in the Natal Ridge area.

The strata strikes generally north to northwest and dips west, thus representing the east limb of the Sparwood syncline. There are a number of thrust faults (generally north-northwest trending, west dipping) and fewer, almost vertical normal faults.

Recent emphasis has been on strip mining. The A seam on Natal Ridge is close to the old Erickson strip mine. The No. 7 seam strip mine, the No. 3 seam strip mine and the C seam strip mine are the mines in the area. The No. 7 seam mine is 3.2 kilometres southwest of Michel and exploits the 9.4 metre thick coal seam. The seam contains a 1.8 metre parting and dips southwest at 15-20 degrees. The No. 3 seam at the No. 3 seam strip mine, which is 4 kilometres northwest of Michel, is 9.1 metres thick and contains two soil bands

MINFILE NUMBER: **082GNE013**

CAPSULE GEOLOGY

totalling 3.7 to 4.6 metres in thickness. The C seam strip mine operated for a small number of years on the Upper and Lower C seams. The coal has a high moisture content.

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WWW <http://www.infomine.com/>

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MINFILE NUMBER: **082GNE014**

NATIONAL MINERAL INVENTORY:

NAME(S): **J-AREA (SPARWOOD OPERATIONS)**, J PIT, WESTAR BALMER,
 HARMER RIDGE, BALMER, SPARWOOD OPERATIONS,
 KAISER RESOURCES, B.C. COAL

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082G10W
 BC MAP:
 LATITUDE: 49 43 05 N
 LONGITUDE: 114 48 29 W
 ELEVATION: 1661 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: J pit is located towards the southeast of the Sparwood operations
 area. See also Sparwood Ridge (082GNE011), Michel Creek (082GNE012),
 Natal Ridge (082GNE013), Balmer (082GNE015), Baldy Complex
 (082GNE016), Elkview (082GNE017) and Harmer Ridge (082GNE023). See
 Elkview for production.

Open Pit Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5509590
 EASTING: 658001

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
 MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
 CLASSIFICATION: Sedimentary Fossil Fuel
 TYPE: A04 Bituminous coal
 SHAPE: Irregular
 MODIFIER: Folded Faulted
 COMMENTS: J pit area is located on the east limb of the north trending Sparwood
 syncline (south plunging). The strata are offset by numerous closely-
 spaced approximate north trending, west dipping thrust faults.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
 Siltstone
 Shale
 Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
 TERRANE: Ancestral North America
 METAMORPHIC TYPE: Regional
 PHYSIOGRAPHIC AREA: Continental Ranges
 RELATIONSHIP:
 GRADE: MVol Bituminous

INVENTORY

ORE ZONE: J PIT REPORT ON: Y

CATEGORY: Proven YEAR: 1981
 QUANTITY: 129800000 Tonnes
 COMMODITY GRADE
 Coal 1.3000 Per cent

COMMENTS: Proven in-place reserves in the J pit area. Grade based on
 reflectivity and average volatile matter content.
 REFERENCE: 1981 B.C. Coal Ltd., Reserve and Resource data.

CAPSULE GEOLOGY

The main seam in the J pit area is the lowermost or No. 10 seam
 of the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group).
 It averages approximately 15 metres in thickness and is interbedded
 with sandstone, siltstone and shale. Ash in the raw coal varies from
 15 to 29 per cent with kilojoules per kilogram values of greater than
 27,640. In the coal cleaned at 1.50 specific gravity, volatile
 matter varies from 21 to 29 per cent, ash content from 9.5 to 10 per
 cent, sulphur less than 0.5 per cent, and kilojoules per kilogram
 values are approximately 32,560. Proven reserves in the J pit area
 are 129,800,000 tonnes in place (1981 B.C. Coal Ltd., Reserve and
 Resource data).

The J pit area is located on the east (west dipping) limb of the
 Sparwood syncline (approximately north trending, south plunging).

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CAPSULE GEOLOGY

The No. 10 seam is offset by a number of north trending, west dipping, closely-spaced thrust faults.

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FIELD CHECK: N
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MINFILE NUMBER: **082GNE015**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALMER**, BALMER NORTH, PANEL 6,
 KAISER RESOURCES, WESTAR BALMER, SPARWOOD OPERATIONS,
 B.C. COAL, MICHEL COLLIERY, NO. 10

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082G10W
 BC MAP:
 LATITUDE: 49 43 45 N
 LONGITUDE: 114 50 04 W
 ELEVATION: 1417 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Balmer North is the southern extension of the Baldy Ridge area. Coordinates indicate the approximate centre of the Balmer North underground mine. Balmer South (082GNE011) lies on the northwest flank of Sparwood Ridge. Balmer is now part of the Balmer Westar/Harmer Ridge area. See also Sparwood Ridge (082GNE011), Michel Creek (082GNE012), Natal Ridge (082GNE014), Baldy Complex (082GNE013), J-Area (082GNE017) and Harmer Ridge (082GNE023). See Michel Creek and Elkview for production.

Underground
 MINING DIVISION: Fort Steele
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5510770
 EASTING: 656063

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
 MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound
 CLASSIFICATION: Sedimentary
 TYPE: A04 Bituminous coal
 SHAPE: Irregular
 MODIFIER: Folded
 COMMENTS: The Balmer North mine is located on the east limb of the north trending, southward plunging Fording syncline.

Massive
 Fossil Fuel

Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
 Siltstone
 Shale
 Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
 TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Thirteen coal seams are present in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group). Of these, the No. 10 seam (oldest) (13.7 metres), No. 8 (3.0 metres), and the No. 7 seam (6.1 metres) are the thickest. In 1978, the No. 10 seam was being mined underground at Balmer North (continuous Miners) and south (hydraulic operation - Panel 5). Panel 5 has since been replaced by the Panel 6 underground mine. The coal is medium to high volatile bituminous in rank and occurs interbedded with sandstone, siltstone and shale.

The Balmer North mine is located on the west flank of the east limb of the north trending, south plunging Fording syncline, while the Panel 6 underground (Balmer South mine, 082GNE011) is located on the west (east dipping) limb of the syncline, to the west of Sparwood Ridge. The Balmer North mine contains a number of north-northwest trending, west dipping thrust faults.

The Panel 6 underground hydraulic mine was closed early in 1985 and the Balmer North mine in early 1986 (Grieve 1986). See Elkview (082GNE017) for production.

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MINFILE NUMBER: **082GNE016**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALDY COMPLEX**, WESTAR BALMER, HARMER RIDGE,
BALMER, HARMER II, SPARWOOD OPERATIONS,
KAISER RESOURCES, B.C. COAL, BALMER NO. 2,
PROSPECT NO. 22, MICHEL COLLIERY, BALDY RIDGE,
ELKVIEW

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

Open Pit

MINING DIVISION: Fort Steele

LATITUDE: 49 45 07 N
LONGITUDE: 114 50 29 W
ELEVATION: 1859 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5513287
EASTING: 655490

LOCATION ACCURACY: Within 500M

COMMENTS: The Baldy Complex is one of the westernmost areas of interest in the Sparwood operations area. It is a north-northwest trending pear-shaped area, with the bulbous portion to the south. See also Sparwood Ridge (082GNE011), Michel Creek (082GNE012), Natal Ridge (082GNE013), J-Area (082GNE014), Balmer (082GNE015), Elkview (082GNE017), and Harmer Ridge (082GNE023). See Michel Creek and Elkview for production.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Fossil Fuel Sedimentary
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: The Baldy Ridge is located on the east limb of the Sparwood syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous
HVVol Bituminous

INVENTORY

ORE ZONE: BALDY COMPLEX

REPORT ON: Y

CATEGORY: Proven YEAR: 1981
QUANTITY: 104000000 Tonnes
COMMODITY: Coal GRADE: 1.5000 Per cent

COMMENTS: Proven reserves; grade based on reflectivity and average volatile content.

REFERENCE: 1981 B.C. Coal Ltd., Reserve and Resource data.

CAPSULE GEOLOGY

Baldy Ridge is located on the west flank of the east limb of the Sparwood syncline (approximately north trending, south plunging) very close to the axial region of the syncline. The strata are cut by approximately north trending, west dipping thrust faults.

The Baldy Complex producing area is underlain by Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) sandstone, siltstone, coal and shale.

Baldy Ridge contains a total of 10 coal seams, which are from stratigraphically oldest to youngest named 10, 9, 8L, 8Ua, 8U, 7R1, 7L, 7, 6 and 5. Seams 5 and 6 were being mined in 1978 by surface

CAPSULE GEOLOGY

methods. Underground mining is limited to seams 7, 8U and 10. Seams 8L and 9 have very high ash contents, and seams 7R and 8Ua are laterally inconsistent. Seam 7R splits into four seams with thick intervening rock partings and seam 8Ua is lenticular. Ash content and kilojoules/kilograms in the raw coal are 19 to 22 per cent and 27,640 respectively. In the coal cleaned at 1.50 specific gravity, volatile matter ranges from 19 to 22 per cent, ash content from 9.5 to 10 per cent, sulphur is less than 0.5 per cent, and kilojoules/kilograms values are 32,560.

Proven reserves in the Baldy Ridge are 104,000,000 tonnes (1981 B.C. Coal Ltd., Reserve and Resource data). The estimated mining life of seams 7, 8U and 10 in this area is 20 years.

See Michel Creek (082GNE012) and Elkview (082GNE017) for production.

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WWW <http://www.infomine.com/>

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CAPSULE GEOLOGY

cent and kilojoules/kilograms are greater than 27,640. The coal cleaned at 1.50 specific gravity contains 19-22 per cent volatile matter, 9.5-10.0 per cent ash, less than 0.5 per cent sulphur and kilojoules/kilograms values of 32,560. Coal rank is medium to high volatile bituminous.

The Harmer mines are located on the east limb of the north trending, south plunging Sparwood syncline. Strata are cut by several roughly north trending, west dipping thrust faults and a lesser number of normal faults (both west and east dipping).

The Harmer Knob East, Harmer 11 and the Harmer Ridge open pit mine are the main mines in the Harmer area.

The general Westar Balmer area also includes the Baldy Complex (082GNE016), Natal Ridge (082GNE013), J-Area (082GNE014) and Harmer Ridge (082GNE023), Michel Creek (082GNE012) and Balmer (082GNE015). See Michel Creek for early production.

At the Elkview mine, Teck Corporation has submitted a new mine plan encompassing Natal Ridge (082GNE013) for government approval. The plan will increase production from approximately 2.8 million tonnes per year to 5 million tonnes per year over a period of five to six years. In 1995, exploration was mainly in active pits and consisted of 77 drillholes totalling approximately 10,000 metres (Information Circular 1996-1, page 9).

Coal reserves are 138.4 million tonnes (Teck Corporation 1996 Annual Report, page 25). The mine is operated by Elkview Coal Corp. Reserves at January 1, 2000 were 129.7 million tonnes (Information Circular 2001-1, page 6).

Reserves at December 31, 2001 were 167.9 million tonnes proven and 92.2 million tonnes probable, totalling 260.1 million tonnes. Resources were 20.5 million tonnes measured (Teck Cominco Limited, Annual Report 2001).

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FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE018**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROWN MOUNTAIN**, CROWN MOUNTAIN NORTH, CROWN MOUNTAIN SOUTH

STATUS: Developed Prospect

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082G15E

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 46 52 N

LONGITUDE: 114 43 34 W

ELEVATION: 1608 Metres

NORTHING: 5516775

EASTING: 663695

LOCATION ACCURACY: Within 500M

COMMENTS: The property is divided into two parts - the north part (Crown Mountain) and the South Extension.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: The area is part of the Lewis thrust plate.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Siltstone
Shale
Mudstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: CROWN MOUNTAIN

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1978

QUANTITY: 4600000 Tonnes

COMMODITY

GRADE

Coal

1.5000

Per cent

COMMENTS: Estimated geological reserves in the South Extension area of a ratio 7.5 bank cubic metres per tonne (inferred).

REFERENCE: Coal Assessment Report 393.

CAPSULE GEOLOGY

In the Crown Mountain occurrence area, three main seams, containing medium volatile bituminous B rank coal, occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) (up to 190 metres preserved) interbedded with sandstone, siltstone and shale. The No. 10 seam, the stratigraphically lowest, is 1.6-7.5 metres thick and contains several rock partings. Coal seams within the zone are discontinuous and lens-like. The zone occurs throughout the property. The No. 9 seam also extends throughout the property, ranges from 4.8 to 10.6 metres thick, contains fewer mudstone interbeds and is more continuous than the No. 10 seam. The No. 8 seam is preserved in the central part of the property only and is between 8 and 12 metres thick. It is structurally disturbed. Between seams 8 and 9 are several thin coal seams less than 2 metres thick.

Head raw analysis yielded ash, volatile matter, fixed carbon and sulphur contents ranging from 17.5 to 19.9 per cent, 20.8 to 23.6 per cent, 49.7 to 56.5 per cent and 0.23 to 0.26 per cent respectively.

Geological coal reserves in the South Extension area are estimated to be 4.6 million tonnes at a ratio of 7.5 bank cubic

CAPSULE GEOLOGY

metres per tonne (inferred), providing the best potential for open pit mining (Coal Assessment Report 393). Grade based on reflectivity and average volatile matter content.

The area is part of the Lewis thrust plate. At Crown Mountain, the Alexander Creek syncline (northwest trending, north plunging) is well-defined in the upper plate of the major thrust, while the lower plate consists of a west dipping monocline. The second major thrust in the area (central and south part) is the Ewin Pass thrust (northwest trending, west dipping). Several small scale high angle faults occur in the Crown Mountain South Extension area.

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MINFILE NUMBER: **082GNE019**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEEPEE MOUNTAIN**, TEE PEE MOUNTAIN, CROWS NEST RESOURCES

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082G15E 082G15W
BC MAP:
LATITUDE: 49 53 00 N
LONGITUDE: 114 44 54 W
ELEVATION: 1828 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5528090
EASTING: 661754

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: The property is located on the axis of the Forging River syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: MVol Bituminous

INVENTORY

ORE ZONE: TEEPEE MOUNTAIN REPORT ON: Y
CATEGORY: Indicated YEAR: 1981
QUANTITY: 4000000 Tonnes
COMMODITY: Coal GRADE: 1.5000 Per cent

COMMENTS: Estimated geological reserves with an overburden ratio of 4.39:1. Of these, 2.1 million tonnes are probable reserves.
REFERENCE: Coal Assessment Report 447.

CAPSULE GEOLOGY

Four mappable coal seams, with an aggregate thickness of 9.0 metres, occur in approximately 55 metres of lower coal-bearing Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) strata. The coal seams of medium volatile bituminous rank are interbedded with sandstone, siltstone and shale. The stratigraphically lowest seam, the Basal sandstone seam, ranges from 1.17 to 1.82 metres in thickness and may not be continuous over the proposed pit area. Seam 10 B varies from 1.15 to 1.80 metres in thickness and thins towards the south. Seam 10 A ranges from 1.0 to 1.6 metres in thickness. Seam 9 varies from 1.60 to 5.60 metres in thickness, thins towards the south and contains the bulk of the surface mineable reserves at Teepee Mountain. A seam, (1.25 metres thick), was encountered above seam 9 in outcrop.

The coal (clean, air dried basis, specific gravity 1.6) contains on average 10.19 per cent ash, 21.10 per cent volatile matter, 67.10 per cent fixed carbon with a kilocalorie/kilogram value of 6717.

The Teepee Mountain property is located on the axis of the Folding River syncline. Thrust faulting (north trending, both west and east dipping) is intense. Normal faults (east-northeast trending, downfaulted both to the north and south) are also present.

Geological reserves were estimated to be 4 million tonnes with

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CAPSULE GEOLOGY

an overburden ratio of 4.39:1. Of these, 2.1 million tonnes are probable reserves (Coal Assessment Report 447). Grade based on reflectivity and average volatile matter content.

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FIELD CHECK: N

MINFILE NUMBER: **082GNE020**

NATIONAL MINERAL INVENTORY:

NAME(S): **LINE CREEK**, LINE CREEK EXTENSION, LINE CREEK RIDGE,
CROWS NEST RESOURCES, HORSESHOE RIDGE, LOWER SOUTH,
MSA NORTH, MSA SOUTH, NORTH,
SOUTH, MANALTA COAL, LUSCAR

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:
LATITUDE: 49 55 45 N
LONGITUDE: 114 46 34 W
ELEVATION: 1729 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Line Creek property includes the Line Creek mine (south), Line Creek
Extension (north), Line Creek Ridge and Horseshoe Ridge (082GNE021).

Open Pit

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5533126
EASTING: 659607

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded
COMMENTS: North-northwest trending, northerly plunging Fording or Alexander
Creek syncline.

Massive
Fossil Fuel

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Shale
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization
GRADE: MVol Bituminous

INVENTORY

ORE ZONE: LINE CREEK EXTENSION
CATEGORY: Proven
QUANTITY: 19800000 Tonnes
COMMODITY: Coal
GRADE: 100.0000 Per cent
COMMENTS: Run-of-mine thermal coal.
REFERENCE: Line Creek Expansion, Phase II Application, May 1984.

REPORT ON: Y

YEAR: 1984

ORE ZONE: LINE CREEK
CATEGORY: Probable
QUANTITY: 38100000 Tonnes
COMMODITY: Coal
GRADE: 100.0000 Per cent
COMMENTS: Reserves at January 1, 2000.
REFERENCE: Information Circular 2001-1, page 6.

REPORT ON: Y

YEAR: 2000

ORE ZONE: LINE CREEK
CATEGORY: Proven
QUANTITY: 41336000 Tonnes
COMMODITY: Coal
GRADE: 100.0000 Per cent
COMMENTS: Surface mineable coal reserves in the current Line Creek open pit
mine. In-situ coal in tonnes; Metallur. 30,756,000, Thermal 10,580,000.
REFERENCE: Line Creek Expansion, Phase I Information Brief, September 1981.

REPORT ON: Y

YEAR: 1981

CAPSULE GEOLOGY

At the Line Creek operations, sixteen coal zones (E, D, C, B, A, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10B and 10A, from top to bottom) with a net aggregate thickness of 67.4 metres in 91.7 metres of gross aggregate coal section, occur in the Jurassic-Cretaceous Mist Mountain Formation (440-500 metres thick) (Kootenay Group) interbedded with sandstone, shale and siltstone.

The main seams are the 10B seam (average thickness 4.5 metres - thins north); 9 seam (two seams, average thickness 5.4 metres in a 6.4 metre zone - thins north and west); 8 seam (thickest seam - averages 11.6 metres in a 12.8 metre thick coal zone); 7 seam (averages 5.2 to 6.3 metres); 6 seam (two seams average 5.0 metres and 12.0 metres respectively - thickens southwest); 4 seam, which in the south is two seams, 5.0 and 12.5 metres respectively, and in the north is a single thick seam but with a shale split in the northeast, 11.6 and 12.0 metres respectively; 3 lower seam (single or multiple thin seams - 3.3 to 3.8 metres, disappears to the northwest); 3-Upper seam (4.0 to 6.0 metres average thickness, lower 50-75 per cent is a single coal seam with thin variable shale splits, upper portion consists of multiple thin coal seams with shale partings); and A seam (2 seams in the south, single thick seam in the north, average thickness is 3.0 to 4.0 metres). The remaining seams are commonly multiple, thinner (less than 3.0 metres) and tend to contain shale partings.

Ash contents range from 5 to 16 per cent (generally 7 to 8 per cent), volatile matter from 19.5 to 30.0 per cent and sulphur from 0.3 to 0.9 per cent (air dried basis). The coal is medium volatile bituminous in rank.

The main structural feature in the area is the north-northwest trending Fording or Alexander Creek syncline which plunges 10 degrees north with a nearly vertical axial plane. The limbs of the fold are symmetrical, with dips on the west limb ranging from 5 to 10 degrees near the axis, to vertical and overturned in some outcrops. Dips on the east limb are 5 degrees near the axis, and up to 60 degrees west near the east limb. The east limb is complicated by faults and drag folding associated with the Fording thrust zone, while imbricate, shallow east dipping thrust faults occur on the west limb.

Proven reserves at Line Creek Extension are 19,800,000 tonnes of run-of-mine thermal coal. Surface mineable coal reserves in the current Line Creek open pit mine are 41,336,000 tonnes of which the in-situ coal is broken down as follows; metallurgical coal - 30,756,000 tonnes, and thermal coal - 10,580,000 tonnes (Line Creek Expansion, Phase I Information Brief, September 1981, Phase II Application, May 1984).

Line Creek Resources Ltd. is building a conveyor to move coal 10 kilometres from the raw coal stockpile to the plant. The conveyor will cost about 30 million dollars and will have a capacity of 7 million tonnes per year. Currently, clean coal production is 2.2 million tonnes metallurgical coal and 0.6 million tonnes thermal coal. A new pit is being developed on Horseshoe Ridge (082GNE021) and the haul road to this area is under construction. Approximately 15,000 metres of exploration and development drilling were completed in 1995 (Information Circular 1996-1, page 9).

The Line Creek mine was acquired by Luscar Ltd. when it took over Manalta Coal Ltd. in mid-1998. Production for the year was about 3.2 million tonnes. In-pit development drilling totalled about 19,000 metres.

Reserves at January 1, 2000 are 38.1 million tonnes (Information Circular 2001-1, page 6).

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- EMPR BULL *82
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- EMPR ENG INSP Annual Report 1989, 1990
- EMPR FIELDWORK *1982, pp. 20-26; 1991, pp. 397-417
- EMPR GEM 1969-419; 1970-524; 1971-491; 1972-633-635
- EMPR INF CIRC 1995-9, p. 9; 1996-1, p. 9; 1997-1, p. 11; 1998-1, p. 12; 2001-1, p. 6
- EMPR IR 1984-4; 1984-5; 1986-1, p. 104
- EMPR MAP 65 (1989)
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- EMPR MINING 1981-1985, p. 72; 1986-1987, p. 72; 1988, p. 72
- EMPR OF 1992-1; 1994-1
- EMPR P 1986-3, p. 25
- EMPR PF (Manalta Coal Ltd. (June 1996): Line Creek Mine)
- GSC P 89-4
- CMJ Oct. 1998, p. 25
- N MINER Apr.12, 1999

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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PAGE: 40
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BIBLIOGRAPHY

PR REL Luscar Ltd., Apr.21, 1999
WWW <http://www.luscar.com>

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE021**

NATIONAL MINERAL INVENTORY:

NAME(S): **HORSESHOE RIDGE** LINE CREEK (HORSESHOE RIDGE), CROWS NEST RESOURCES

STATUS: Producer Open Pit

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082G15E

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 56 10 N

LONGITUDE: 114 44 39 W

ELEVATION: 1950 Metres

NORTHING: 5533967

EASTING: 661876

LOCATION ACCURACY: Within 500M

COMMENTS: See Line Creek (082GNE020) for production.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: Property forms part of the east limb of the Forging River or Alexander Creek syncline (north trending).

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone

Shale

Siltstone

Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

CAPSULE GEOLOGY

At least ten seams, with an aggregate thickness of 45 metres, occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) which is 245 to 400 metres thick and consists of interbedded sandstone, shale and siltstone. Seam 10 (stratigraphically lowest) varies from 6 metres thick in the south to 2 metres in the north. Seam 9 averages 2 metres thick. Seam 8 which is divided into upper and lower units, contains 17 metres of coal across 25 metres of section. Seam 7 is divided into an upper seam (6 metres thick) and a lower seam (3 metres thick). Seam 6 averages 4 metres in thickness. Above seam 6, four seams greater than 1 metre thick have been documented.

The coal is medium volatile bituminous metallurgical grade with average ash, volatile matter, fixed carbon and sulphur contents of 6.82 per cent, 24.61 per cent, 68.03 per cent and less than 0.5 per cent respectively (air dried basis). Free Swelling Index is on average 6.5.

The Horseshoe Ridge property forms part of the east limb of the Forging River or Alexander Creek north trending syncline. Local structure consists of an asymmetric syncline whose west limb is almost vertical while the east limb dips 25 to 70 degrees west. North-northwest trending high angle thrust faults occur on the east limb while the west limb is truncated and severely disturbed by the Forging River thrust zone. Reserve potential of the west limb is extremely limited.

Line Creek Resources Ltd. began production in 1997. See Line Creek (082GNE020) for production.

BIBLIOGRAPHY

EMPR COAL ASS RPT *403, *404, *419, *420, 829
EMPR INF CIRC 1996-1, p. 9; 1997-1, p. 11; 1998-1, p. 12

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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BIBLIOGRAPHY

GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE022**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT MICHAEL**, CROWS NEST RESOURCES

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G15W

BC MAP:

LATITUDE: 49 58 45 N

LONGITUDE: 114 45 54 W

ELEVATION: 2408 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Mount Michael refers to the ridge between the Horseshoe Ridge project (082GNE021) and the Ewin Pass project.

UTM ZONE: 11 (NAD 83)

NORTHING: 5538708

EASTING: 660238

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Tabular

MODIFIER: Folded Faulted

COMMENTS: Property is on the east limb of the Alexander Creek syncline which dips approximately 65 degrees west.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: MOUNT MICHAEL

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1980

QUANTITY: 100000000 Tonnes

COMMODITY

GRADE

Coal

1.3000

Per cent

COMMENTS: Grade based on reflectivity. Upper plate estimated to be over 50 mt; lower plate between 100-200 mt at 9:1 stripping ratio.

REFERENCE: Coal Assessment Report 435.

CAPSULE GEOLOGY

Eleven coal seams with an aggregate thickness of 39 metres occur within a 235 metre section of the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) on the west slope of Mount Michael (in a dip slope situation). The coal, which is expected to be of medium volatile bituminous rank (middle to upper range), is interbedded with sandstone, siltstone and shale.

The Mount Michael occurrence area is affected by two main structural elements, the Fording thrust fault and the Fording syncline. The fault (north- northwest trending, west dipping), repeats the coal-bearing strata resulting in an upper and lower plate. The north trending, north plunging Fording or Alexander Creek syncline folds the strata in the upper plate (average dip 62 degrees west on the east limb). Additional thrust faults occur in both the upper and lower thrust plates.

Potential open pit reserves in the upper plate are estimated to be over 50 million tonnes (approximately 7 cubic metres bituminous per tonne) while reserves in both upper and lower plates, at 9:1 stripping ratio, are between 100 and 200 million tonnes (Coal Assessment Report 435).

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CAPSULE GEOLOGY

Line Creek Resources drilled 6 holes, totalling 2500 metres on Mount Michael Ridge.

BIBLIOGRAPHY

EM EXPL 1996-A25
EM INF CIRC 1997-1, p. 25
EMPR COAL ASS RPT *435, *436, 829, 860
EMPR FIELDWORK *1979, pp. 91-96; *1982, pp. 20-26
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE023**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARMER RIDGE**, WESTAR BALMER, BALMER,
SPARWOOD OPERATIONS, ADIT 29, KAISER RESOURCES,
B.C. COAL

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:
LATITUDE: 49 44 40 N
LONGITUDE: 114 48 34 W
ELEVATION: 1790 Metres
LOCATION ACCURACY: Within 500M

Open Pit

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5512520
EASTING: 657815

COMMENTS: Westar Balmer is the present name for what was originally Harmer.
The Harmer Ridge (general area) includes the Baldy Complex (082GNE016), the J-Area (082GNE014), Natal Ridge (082GNE013), north part of the Sparwood Ridge (082GNE011), Elkview (082GNE017), the original Balmer underground mines (082GNE015), Michel Creek (082GNE012), Adit 29 and Adit 40. See Elkview for production.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: Area lies predominantly on the east limb of the north trending, southerly plunging Sparwood syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Continental Ranges
RELATIONSHIP: Post-mineralization
GRADE: MVol Bituminous
HVVol Bituminous

CAPSULE GEOLOGY

Approximately 14 mineable coal seams, which are medium to high volatile bituminous in rank, occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) in the Westar Balmer area. The strata consists of interbedded sandstone, siltstone and shale. The area generally overlies the east limb of the north trending, south plunging Sparwood syncline. The strata are cut by numerous north and north-northwest trending normal and west dipping thrust faults. The area can be subdivided into Westar Balmer (082GNE017), Baldy Complex (082GNE016), Natal Ridge (082GNE013), Balmer (082GNE015), and the J-Area (082GNE014).

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1973-577-581
EMPR MAP 65 (1989)
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1986-1987, p. 69; 1988, p. 68
EMPR P 1986-3, p. 25
GSC P 89-4
1978 Kaiser Resources Coal, *Reserves and Mining Outlook
1981 BC COAL LTD, *Reserve and Resource Data

DATE CODED: 1986/04/01
DATE REVISED: 1986/04/01

CODED BY: EVK
REVISED BY: EVK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE023**

MINFILE NUMBER: **082GNE024**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORDING RIVER**, GRAVE LAKE, ELK

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 54 20 N
LONGITUDE: 114 50 49 W
ELEVATION: 1554 Metres

NORTHING: 5530353
EASTING: 654599

LOCATION ACCURACY: Within 500M

COMMENTS: On Fording River, 4 kilometres north-northwest of Grave Lake.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Clay Calcite Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION:

STRIKE/DIP: 145/20S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

GROUP

Fernie

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

LITHOLOGY: Phosphorite
Shale
Siltstone
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

7.8800

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Fording River showing, a shallow dipping, thin pelletal phosphorite bed occurs at the base of the Jurassic Fernie Formation. Overlying this phosphorite are phosphatic shale and limestone of Sinemurian age and by belemnitic-bearing shale of Toarcian age. These strata unconformably overlie siltstone of the Triassic Sulphur Mountain Formation (Spray River Group).

The phosphorite bed is approximately 0.80 metres thick and contains 19.10 per cent P2O5. It is overlain by 0.5 metres of phosphatic shale containing 6.05 per cent P2O5 and 0.24 metres of shale and phosphorite averaging 7.88 per cent P2O5 (Open File 1987-16). Weakly phosphatic shale, 1.6 metres thick and averaging 2.54 per cent P2O5, caps the phosphatic sequence.

BIBLIOGRAPHY

EMPR ASS RPT *5545, 5866, 5867
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GSC MAP 11-1960
PERS COMM Butrenchuk, S.B. (1986)
MacDonald, D.E. (1985): Geology and Resource Potential of Phosphates in Alberta and Portions of Southeastern British Columbia, Unpublished M.Sc. Thesis, University

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BIBLIOGRAPHY

of Alberta

DATE CODED: 1986/12/10
DATE REVISED: 1986/12/10

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE025**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROWS**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 55 N
LONGITUDE: 114 43 29 W
ELEVATION: 1403 Metres

NORTHING: 5503901
EASTING: 664185

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

GROUP

Fernie

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Oolitic Sandstone
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Crows showing, thin phosphoritic beds occur at the base of the Jurassic Fernie Formation shales and above the basal contact with the Triassic Spray River Group. Beds are thin but persistent oolitic sandstones.

BIBLIOGRAPHY

EMPR AR *1930-245; 1967-311
EMPR OF 1987-16
GSC MAP 11-1960
GSC MEM 336
GSC P 61-24

DATE CODED: 1986/06/16
DATE REVISED: 1986/06/16

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE026**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROWSNEST**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 00 N
LONGITUDE: 114 41 33 W
ELEVATION: 1394 Metres

NORTHING: 5500421
EASTING: 666619

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Residual
TYPE: B06 Fireclay

Industrial Min.

E07 Sedimentary kaolin

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Shale
Clay

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Crowsnest showing, clay occurs within a sandy, granular shale. The clay has average shrinkage and fires red.

BIBLIOGRAPHY

EMPR BULL 30, p. 59
GSC MAP 11-1960

DATE CODED: 1986/06/23
DATE REVISED: 1987/05/05

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE027**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARTEN**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 00 N
LONGITUDE: 114 47 04 W
ELEVATION: 1342 Metres

NORTHING: 5492811
EASTING: 660199

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

GROUP

Fernie

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Oolitic Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Marten showing, thin phosphoritic beds occur at the base of the Jurassic Fernie Formation shales and above the basal contact with the Triassic Spray River Group. Beds are thin but persistent oolitic sandstones.

BIBLIOGRAPHY

EMPR AR *1930-245,378; 1926-246; 1928-282; 1931-211; 1932-160;
1967-311
EMPR OF 1987-16
GSC MAP 11-1960
GSC P 61-24

DATE CODED: 1986/06/16
DATE REVISED: 1986/06/16

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNE028**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT LYNE**, LINE CREEK

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 58 00 N
LONGITUDE: 114 48 14 W
ELEVATION: 2164 Metres

NORTHING: 5537236
EASTING: 657491

LOCATION ACCURACY: Within 500M

COMMENTS: Stratigraphic section on Mount Lyne, 11 kilometres southeast of Elkford (Open File 1987-16, page 75).

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Clay Calcite Quartz Sericite Illite

MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.

TYPE: F07 Upwelling-type phosphate

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 165/70E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	

DATING METHOD: Fossil

LITHOLOGY: Phosphorite
Shale
Siltstone
Phosphatic Shale
Cherty Limestone

HOSTROCK COMMENTS: Base of Fernie Group is Lower Jurassic in age.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

23.0000

Per cent

COMMENTS: Average grade of 2 metre thick bed.

REFERENCE: Open File 1987-16, page 73.

CAPSULE GEOLOGY

A phosphate horizon outcrops on the east slope of Mount Lyne, 11 kilometres southeast of Elkford, and continues southward west of Line Creek for 8 kilometres before crossing the creek.

A 4.9-metre thick phosphate interval is exposed at Mount Lyne at the base of the Jurassic Fernie Group. The group unconformably overlies siltstone of the Triassic Sulphur Mountain Formation (Spray River Group). The section dips 45 to 70 degrees east throughout its strike length. The base of the phosphate is marked by a 5 centimetre thick marcasite band and the top is marked by a 10 centimetre thick yellow-orange cherty limestone marker horizon. Within the phosphate interval there are distinct phosphorite and phosphatic shale beds. Shale overlies the phosphate. Phosphorite beds 2 metres thick contain an average of 23.0 per cent P2O5. These beds are overlain by a 0.9 metre thick phosphorite bed containing 13.4 per cent P2O5 (Open File 1987-16, page 73).

The phosphorite is composed of moderately well-sorted, chestnut brown to dark brown, ovoid phosphate pellets contained in a matrix of quartz, with trace amounts of sericite and illite. Along strike to

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RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 52
REPORT: RGEN0100

CAPSULE GEOLOGY

the south, the phosphate horizon becomes thinner.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 289-302; 1989, pp. 489-492
EMPR OF 1987-16, pp. 29-31, 41, 49, *72-75
GSC MEM 336
GSC OF 481

DATE CODED: 1986/12/10
DATE REVISED: 1991/03/18

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GNE029**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALEXANDER CREEK SOUTH**, HIGHWAY 3

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 10 N
LONGITUDE: 114 44 04 W
ELEVATION: 1290 Metres

NORTHING: 5502491
EASTING: 663525

LOCATION ACCURACY: Within 500M

COMMENTS: On Alexander Creek immediately south of Highway 3.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate Apatite
ASSOCIATED: Quartz Calcite Clay Feldspar Dolomite
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 010/25W TREND/PLUNGE:
COMMENTS: Bedding normal.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Phosphorite
Shale
Siltstone
Limestone
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY: Phosphate GRADE: 23.8000 Per cent
REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Alexander Creek South prospect, phosphate, phosphatic shale, limestone and shale of the Jurassic Fernie Group unconformably overlie siltstone and minor shale of the Triassic Sulphur Mountain Formation (Spray River Group). The contact is marked by a 5 centimetre thick basal conglomerate. Phosphorite is 1 metre thick and contains 23.8 per cent P2O5 (Open File 1987-16). The upper extent of the phosphate interval is marked by a yellow-orange weathering marker bed. Faulting is abundant in the shale above the phosphate. Overlying the phosphorite are 1.6 metres of phosphatic shale and limestone containing 8.4 per cent P2O5.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 289-302; 1989, pp. 489-492
EMPR OF *1987-16, p. 81
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1986/12/12
DATE REVISED: 1991/03/27

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE030**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARRIET LAKE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 52 20 N
LONGITUDE: 114 47 04 W
ELEVATION: 1890 Metres

NORTHING: 5526778
EASTING: 659196

LOCATION ACCURACY: Within 500M

COMMENTS: Approximately 5 kilometres east of Grave Lake.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Calcite Clay
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION:
COMMENTS: Normal sequence.

STRIKE/DIP: 165/70E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

GROUP

Fernie

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

LITHOLOGY: Phosphorite
Shale
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

13.8000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Harriet Lake showing, steeply dipping shale and phosphorite of the Jurassic Fernie Formation unconformably overlies siltstone of the Triassic Sulphur Mountain Formation (Spray River Group). The phosphorite is pelletal, has an exposed thickness of 0.55 metres and contains 13.8 per cent P2O5 (Open File 1987-16). It occurs at the base of the Fernie Group.

BIBLIOGRAPHY

EMPR OF 1987-16
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1986/12/12
DATE REVISED: 1986/12/12

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE031**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROW**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 45 N
LONGITUDE: 114 42 42 W
ELEVATION: 1463 Metres

NORTHING: 5503621
EASTING: 665136

LOCATION ACCURACY: Within 500M

COMMENTS: On Highway 3 in the Crowsnest Pass area, 2.5 kilometres north of pumping station (gas compressor station).

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate

ASSOCIATED: Clay Calcite Quartz Feldspar

MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound

CLASSIFICATION: Sedimentary Syngenetic Industrial Min.

TYPE: F07 Upwelling-type phosphate

SHAPE: Tabular

MODIFIER: Faulted

STRIKE/DIP: 180/20W

TREND/PLUNGE:

COMMENTS: Complicated by thrust faulting.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Jurassic

Fernie

Undefined Formation

DATING METHOD: Fossil

LITHOLOGY: Phosphorite
Shale
Siltstone
Phosphatic Shale
Cherty Limestone

HOSTROCK COMMENTS: Base of Fernie Group is of Lower Jurassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

REFERENCE: Fieldwork 1989, page 490, Sample VM89-3.

29.8100 Per cent

CAPSULE GEOLOGY

Phosphate occurs 15 kilometres southeast of Sparwood in the Crowsnest Pass area, 2.5 kilometres north of the pumping station on Highway 3.

Pelletal phosphorite is contained in two beds separated by phosphatic shale at the base of the Jurassic Fernie Group. The top of the phosphate horizon is marked by a thin yellowish weathering cherty limestone bed. The phosphate generally strikes north with shallow to moderate dips to the west. Thrust faulting complicates the distribution of the phosphate, causing the repetition of beds at some localities while causing the same beds to disappear in other locations. The horizon is locally structurally thickened to 4.8 metres. Individual phosphorite beds are 0.7 to 1.0 metre thick and contain 25.1 to 27.0 per cent P2O5 (Open File 1987-16, page 94, samples SBB86-4A to E). A sample analyzed by X-ray fluorescence contained 5.34 per cent SiO2, 1.11 per cent Al2O3, 0.53 per cent Fe2O3, 0.40 per cent MgO, 47.72 per cent CaO, 0.34 per cent Na2O, 0.15 per cent K2O, 0.07 per cent TiO2, 0.01 per cent MnO, 29.81 per cent P2O5 and 1.45 per cent sulphur (Fieldwork 1989, page 490, sample

CAPSULE GEOLOGY

VM89-3).

The Crow deposit has been explored periodically by Cominco Ltd. between the 1930's and the mid-1970's. The company shipped an 1800 tonne bulk sample to Trail in 1931 and completed 600 metres of underground development work. Formosa Resources Corporation sampled near the Crow adit in 1989 while assessing the northern extension of the phosphate horizon.

BIBLIOGRAPHY

EMPR AR *1930-245; 1933-316,322,323; 1967-311
EMPR ASS RPT 19942
EMPR FIELDWORK 1986, pp. 289-302; *1989, pp. 489-493
EMPR OF *1987-16, pp. 29-31,41,49,73,75
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC OF 481
GSC P 61-24
CIM *Vol.36, pp. 566-605

DATE CODED: 1986/12/10
DATE REVISED: 1991/03/18

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GNE032**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALEXANDER CREEK NORTH**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G15E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 51 00 N
LONGITUDE: 114 43 44 W
ELEVATION: 2042 Metres

NORTHING: 5524427
EASTING: 663263

LOCATION ACCURACY: Within 500M
COMMENTS: Headwaters of Alexander Creek.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Clay Calcite Quartz
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION:
COMMENTS: Normal sequence with no evidence of thrust faulting.

STRIKE/DIP: 170/25W TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Phosphorite
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY Phosphate GRADE 29.4000 Per cent
COMMENTS: Sample across 0.3 metre.
REFERENCE: Open File 1987-16, page 96, sample BB86-20A.

CAPSULE GEOLOGY

The Alexander Creek North phosphate prospect is located in the headwaters of Alexander Creek, 14 kilometres northeast of Sparwood. The area along Alexander Creek in the eastern margin of the Fernie Basin is underlain by fine-grained sandstones and siltstones containing abundant chert layers and nodules of the Permian Ranger Canyon Formation (Ishbel Group), overlain by interbedded dolomitic siltstones and shales of the Triassic Sulphur Mountain Formation (Spray River Group), followed by shales and siltstones of the Jurassic Fernie Group. These units dip west along the east limb of a major north trending variably plunging syncline. A thin phosphate horizon exposed in two road cuts at the base of the Fernie Group overlies siltstone of the Sulphur Mountain Formation. A sample across 0.3 metre contained 29.4 per cent P2O5 (Open File 1987-16, page 96, sample SBB86-20A). The top and bottom of the phosphate bed were not exposed. This occurrence was staked and prospected by Westrock Industries Ltd. in 1988. Formosa Resources Corporation prospected the southern extension of the phosphate horizon in 1989.

BIBLIOGRAPHY

EMPR ASS RPT 19942
EMPR FIELDWORK 1986, pp. 289-302
EMPR OF 1987-16, p. 77

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 58
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1986/12/10
DATE REVISED: 1991/03/27

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE033**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIGHWAY 3 ROADCUT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 15 N
LONGITUDE: 114 44 14 W
ELEVATION: 1300 Metres

NORTHING: 5502639
EASTING: 663320

LOCATION ACCURACY: Within 500M

COMMENTS: On highway 3, 14 kilometres east of Sparwood.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate Apatite
ASSOCIATED: Quartz Clay Calcite Feldspar Dolomite
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 160/30E TREND/PLUNGE:
COMMENTS: Shallow dipping normal sequence with no apparent thrust faulting.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Phosphorite
Shale
Siltstone
Limestone
Phosphatic Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY
Phosphate GRADE 15.7500 Per cent
REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Highway 3 Roadcut showing, phosphorite, phosphatic shale, shale and limestone of the basal Jurassic Fernie Group unconformably overlie siltstone and shale of the Triassic Sulphur Mountain Formation (Spray River Group). A 1 metre thick pelletal phosphorite bed containing 15.75 per cent P2O5 immediately overlies a 0.7 metre thick shale bed of Triassic age (Open File 1987-16). Overlying the phosphorite is a 1.9 metre thick phosphatic shale unit containing 3.10 per cent P2O5.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 289-302; 1989, pp. 489-492
EMPR OF *1987-16, pp. 80-81
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24
PERS COMM Butrenchuk, S.B. (1986)
MacDonald, D.E. (1985): Geology and Resource Potential of Phosphates in Alberta and Portions of Southeastern British Columbia (Section

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 60
REPORT: RGEN0100

BIBLIOGRAPHY

224) Unpublished M.Sc. Thesis, University of Alberta

DATE CODED: 1986/12/11
DATE REVISED: 1991/03/27

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE034**

NATIONAL MINERAL INVENTORY:

NAME(S): **LLADNER**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 40 N
LONGITUDE: 114 56 14 W
ELEVATION: 1475 Metres

NORTHING: 5506701
EASTING: 648763

LOCATION ACCURACY: Within 500M

COMMENTS: Located 7 kilometres south-southwest of Sparwood.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION: 40 x 1 Metres
COMMENTS: Phosphatic horizon is 0.5 metres thick.

STRIKE/DIP: 110/10S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Ishbel

FORMATION

Ranger Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Siltstone
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Lladner showing, a poorly exposed siltstone unit of the Permian Ranger Canyon Formation (Ishbel Group) contains a nodular phosphatic horizon 0.5 metres thick, striking 110 degrees and dipping 10 degrees south. Also in the sequence are thin chert bands.

BIBLIOGRAPHY

EMPR OF 1987-16
GSC MAP 35-1961; 1154A
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE035**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUMMIT LAKE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 10 N
LONGITUDE: 114 42 34 W
ELEVATION: 1372 Metres

NORTHING: 5502545
EASTING: 665330

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the western edge of Crowsnest Provincial Park, 0.5 kilometres north of Summit Lake.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate

ASSOCIATED: Quartz

MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound

CLASSIFICATION: Sedimentary Industrial Min.

TYPE: F07 Upwelling-type phosphate

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 180/35W

TREND/PLUNGE:

COMMENTS: Normal sequence

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Permian
GROUP: Ishbel

FORMATION: Undefined Formation

IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY: Phosphate

GRADE: 14.5000 Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Summit Lake showing, an approximately 3 metre thick sandstone of Permian age overlies Kananaskis or possibly Tunnel Mountain formations strata of the Pennsylvanian Spray Lakes Group. Within the sandstone is a nodular phosphate horizon approximately 1 metre thick. Nodules are 2 to 5 centimetres in size and contain 25.7 per cent P2O5. A grab sample of siltstone with abundant nodules contained 14.5 per cent P2O5 (Open File 1987-16).

BIBLIOGRAPHY

EMPR OF 1987-16
GSC MAP 35-1961; 1154A
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE036**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHEEP MOUNTAIN**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 51 55 N
LONGITUDE: 114 47 14 W
ELEVATION: 2134 Metres

NORTHING: 5526000
EASTING: 659019

LOCATION ACCURACY: Within 500M
COMMENTS: Located 500 metres east of Harriet Lake.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
COMMENTS: Overturned sequence

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Ishbel	Johnson Canyon	

LITHOLOGY: Phosphatic Cherty Sandstone
Cherty Conglomerate
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1987
SAMPLE TYPE: Rock	
<u>COMMODITY</u>	<u>GRADE</u>
Phosphate	13.8000 Per cent
REFERENCE: Open File 1987-16.	

CAPSULE GEOLOGY

At the Sheep Mountain showing, a 10 to 15 centimetre thick phosphate-cemented chert pebble conglomerate containing 13.8 per cent P2O5, unconformably overlies dolomitic siltstone of the Pennsylvanian Kananaskis Formation (Spray Lakes Group). This conglomerate is overlain by a phosphatic cherty sandstone bed 70 centimetres thick that contains 0.7 per cent P2O5 (Open File 1987-16), and which belongs to the Permian Johnson Canyon Formation (Ishbel Group).

BIBLIOGRAPHY

EMPR OF 1987-16
GSC MAP 35-1961; 1154A
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE037**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORDSTRUM**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 51 50 N
LONGITUDE: 114 59 59 W
ELEVATION: 2073 Metres

NORTHING: 5525416
EASTING: 643753

LOCATION ACCURACY: Within 500M

COMMENTS: Located at the end of seismic road near the headwaters of Nordstrum Creek.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate

ASSOCIATED: Quartz Dolomite Feldspar

MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound

CLASSIFICATION: Sedimentary Industrial Min.

TYPE: F07 Upwelling-type phosphate

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 140/20S

TREND/PLUNGE:

COMMENTS: Bedding appears to be normal in this area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Ishbel

FORMATION

Johnson Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Phosphorite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

21.2000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Nordstrum showing, three phosphate beds, each approximately 1 metre thick, are exposed across a width of 60 metres. Host lithologies are siltstone and fine sandstone of the Permian Johnson Canyon Formation (Ishbel Group). Phosphate is present as nodules, pellets and cement. The most westerly bed contains 21.20 per cent P2O5 across a width of 1 metre. The two easterly beds contain 5 per cent phosphate nodules by volume (Open File 1987-16).

BIBLIOGRAPHY

EMPR OF 1987-16
GSC MAP 35-1961; 1154A
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE038**

NATIONAL MINERAL INVENTORY:

NAME(S): **WEIGERT CREEK EAST**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 57 45 N
LONGITUDE: 114 56 29 W
ELEVATION: 1830 Metres

NORTHING: 5536492
EASTING: 647644

LOCATION ACCURACY: Within 500M

COMMENTS: Located east of a small tributary creek north of Weigert Creek.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Calcite Quartz Clay
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
DIMENSION:
COMMENTS: Normal sequence

STRIKE/DIP: 010/55E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Ishbel

FORMATION

Johnson Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Phosphorite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY
Phosphate

YEAR: 1987

GRADE
15.8000 Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Weigert Creek East showing, a pelletal phosphorite approximately 1 metre thick occurs within a phosphatic sandstone of Permian Johnson Canyon Formation (Ishbel Group). It can be traced for a strike length of 29 metres. A bulk grab sample from this bed contains 15.8 per cent P205 (Open File 1987-16). The strata are interpreted to be on the easterly limb of an anticlinal structure.

BIBLIOGRAPHY

EMPR OF 1987-16
GSC MAP 35-1961; 1154A
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNE039**

NATIONAL MINERAL INVENTORY:

NAME(S): **WEIGERT CREEK WEST**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 57 40 N
LONGITUDE: 114 56 39 W
ELEVATION: 1830 Metres

NORTHING: 5536333
EASTING: 647449

LOCATION ACCURACY: Within 500M

COMMENTS: Located west of a small tributary north of Weigert Creek.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Clay
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
DIMENSION:
COMMENTS: Normal sequence

STRIKE/DIP: 175/45W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Ishbel

FORMATION

Johnson Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Shale
Conglomerate
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY

YEAR: 1987

Phosphate

GRADE

14.2500

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Weigert Creek West showing, a 2 metre thick phosphatic horizon occurs within a shale-sandstone sequence of the Permian Johnson Canyon Formation (Ishbel Group). This phosphate horizon is comprised of pellets, phosphate cement and rare intraclasts or nodules. It averages 14.25 per cent P2O5 over 2 metres (Open File 1987-16). The sequence forms the westerly limb of what appears to be an anticlinal structure.

BIBLIOGRAPHY

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GSC MAP 35-1961; 1154A
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNW001**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAGNET**, JOY, RITA,
GERTRUDE, MJP

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 13 N
LONGITUDE: 115 35 04 W
ELEVATION: 915 Metres

NORTHING: 5499228
EASTING: 602209

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Magnet showing, an old adit and shaft was developed on vein-type lead, zinc, and silver mineralization (galena? sphalerite?) within Helikian Aldridge Formation (Purcell Supergroup) quartzites and argillites. No geological or assay details are available.

BIBLIOGRAPHY

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EMPR MAP 36
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GSC MAP 396A; 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/09

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW002**

NATIONAL MINERAL INVENTORY: 082G11 Cu1

NAME(S): **BULL RIVER**, BIG BONANZA, STEEPLES,
BONANZA, BUL RIVER, GALLOWAI BUL RIVER,
GBR, DALTON, OLD ABE,
CENTRAL ADIT, SILVER CHIEF (L.3548), KHEDIVE,
BULL CREEK, SILVER REEF, SILVER BUCKEYE,
SIRDAR (L.3554)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:
LATITUDE: 49 30 12 N
LONGITUDE: 115 23 09 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5484663
EASTING: 616868

COMMODITIES: Copper Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Tetrahedrite Pyrite Pyrrhotite Arsenopyrite
Galena
ASSOCIATED: Quartz Siderite
ALTERATION: Malachite Azurite Siderite
ALTERATION TYPE: Oxidation Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: 106 Cu±Ag quartz veins
DIMENSION: 400 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Helikian GROUP Purcell FORMATION Aldridge IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Quartzite
Dike

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: BULL RIVER REPORT ON: Y
CATEGORY: Combined YEAR: 1998
QUANTITY: 5300000 Tonnes
COMMODITY GRADE
Copper 2.2500 Per cent
Silver 36.3400 Grams per tonne
Gold 12.0000 Grams per tonne
COMMENTS: Measured and indicated resource. Calculation details are
unavailable.
REFERENCE: Bul River Mineral Corporation, 1998; Exploration in BC 1998, page 69.

ORE ZONE: BULL RIVER REPORT ON: Y
CATEGORY: Unclassified YEAR: 1982
QUANTITY: 664500 Tonnes
COMMODITY GRADE
Copper 1.9500 Per cent
COMMENTS: At 1.00 per cent copper cutoff and minimum thickness of 1.2 metres.
Placer Oil Co.
REFERENCE: Assessment Report 23786.

CAPSULE GEOLOGY

The property is located 23 kilometres due west of Fernie,
extending north from the Bull River, astride Burntbridge Creek,
between 900 and 1070 metres elevation.
A number of claims were located in the vicinity of Burntbridge

CAPSULE GEOLOGY

Creek in about 1896. The Silver Chief, Silver Reef, and Silver Buckeye claims were owned by David Griffith of Wild Horse Creek. Development work was done in a 30-metre crosscut adit and 4.5-metre shaft. The Daisy Fr. claim, owned by Thomas Bevans, was developed by shallow pits and open cuts. The Silver Chief (Lot 3548) and Sirdar (Lot 3554) were Crown-granted to Dave Griffith in 1899.

No further activity was reported until 1927 when the Silver Chief, Sirdar, and Khedive claims were owned by A.B. Fenwick of Bull River. The workings at that time included a crosscut adit about 40 metres in length.

The ground was subsequently restaked but no further activity was reported until 1968.

Mineral Lease M-69 comprising Lots 14717-14752, which included the Big Bonanza 1-4, June 1-6, and Bonanza 1-30 claims, was owned in 1968 by J. Van Koughnett.

Placid Oil Company optioned the property and during 1968 carried out geological mapping, a magnetometer survey, trenching and stripping. A number of old pits and 460 metres of old adit were cleaned out. Diamond drilling was done in 23 surface holes (2260 metres) and 5 underground holes (310 metres). The property was expanded to include 62 located claims. Exploration work during 1969 included soil sampling, induced polarization and electromagnetic surveys, and 5415 metres of surface diamond drilling in 45 holes. This work indicated two orebodies amenable to open pit mining. A 750-tonne per day mill was built and milling operations commenced on October 1, 1971. Mining had begun in Pit 2 in August with commencement of overburden removal. Exploratory drilling totalling 1168 metres was done in the vicinity of the tailings pond. Preproduction stripping of No. 1 pit began in 1972. Mining in No. 2 pit was completed in April 1973 and operations transferred to No. 1 pit. After completion of No. 2 pit, the pit was backfilled with material from No. 1 pit and almost completely refilled. Mining ceased in March 1974 because of depletion of open pit ore reserves. Milling of stockpiled ore continued until June 10th, 1974, when operations ceased.

In order to determine the feasibility of mining the underground reserves the company elected to sink a 200-metre exploration decline to intersect zone A, however, after several abortive attempts to collar the portal, the program was abandoned due to very blocky ground which could not be economically stabilized. Reserves are reported as 90,720 tonnes at 1.3 per cent copper, 0.31 gram per tonne gold, 21.77 grams per tonne silver (EMPR Reserves Map, 1984). Although milling operations began in October 1971 there is no available record of production for that year. During the period 1971-1974 inclusive, 471,900 tonnes of ore were milled. From this ore 126,123 grams of gold, 6,353,628 grams of silver, and 7,256,050 kilograms of copper were recovered.

In the Bull River mine area, quartz-siderite veins and veinlets host irregular blebs of chalcopyrite and disseminated pyrite and pyrrhotite. Malachite and azurite coat fractures in both vein and country rock as secondary minerals. Chalcopyrite is observed as fracture-fillings in less weathered host rocks. The veins are concentrated in highly fractured and sheared zones in dark grey laminated argillites and quartzites of the Helikian Aldridge Formation (Purcell Supergroup). The major veins ranged from 0.3 to 6 metres in width. The sediments are characterized by bands rich in fine, well-crystallized pyrite. The area is also intersected by dykes which are spatially related to mineralization.

Inferred (proven/probable/possible) reserves at Bull River are 2 million tonnes of copper-silver-gold ore (grade not given) (Open File 1992-1).

In 1996, R.H. Stanfield and Associates (Bul River Mineral Corp.) commenced excavation of a 1500-metre decline to provide access for underground drilling and sampling. Stanfield acquired the property from Placid Oil Co., who report reserves of 664,500 tonnes averaging 1.95 per cent copper, at a 1.00 per cent copper cutoff and minimum thickness of 1.2 metres (Assessment Report 23786). Stanfield has drilled the property since 1982.

In 1998, Bul River Mineral Corporation's exploration activity included 1100 metres on the 16 per cent decline (total 2000 metres), 725 metres level advance, 195 metres raise bore, 6508 metres of underground BQTK diamond drilling, 1144 metres of surface diamond drilling and 367 metres of percussion drilling. Measured and indicated resources are reported as 5.3 million tonnes, averaging 2.25 per cent copper, 36.34 grams per tonne silver and 12.0 grams per tonne gold (Bul River Mineral Corporation, 1998; Exploration in BC 1998, page 69). Calculation details are unavailable.

By December 1999 the decline had advanced approximately 3800 metres to the 900-foot level from surface. The company reported they

CAPSULE GEOLOGY

spent \$11.5 million in 1999 on underground development, bulk sampling and analytical work. This included extending the decline by 554 metres, 1424 metres of level development, 11,169 metres of underground drilling, 1741 metres of surface drilling and a 306-metre raise. Ministry geologists visited the site in June 1999 and took ten splits of mineralized vein material from three diamond-drill holes and five rock chip samples from veins exposed in the underground workings at the 300 and 500 levels for independent assay. The median gold grade returned by fire assay from ten mineralized core samples was 0.28 gram per tonne with the best intersect being 4.77 grams per tonne over 1.1 metres. Neutron activation results were in close agreement with those by fire assay.

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1972-A52; 1973-A52; 1974-A118
EMPR ASS RPT 7086, 12575, 15471, 18368, 19651, 22781, 23615, 23632,
23786, 24240
EMPR BC METAL MM00523
EMPR EXPL 1978-E68; 1982-77; 1983-105; 1996-E2; 1997-50; 1998-12,
69-70
EMPR FIELDWORK 1978, p. 117; *1979, p. 115; *1999, pp. 307-313
EMPR GEM 1969-348; 1970-476; 1971-417; 1972-65; *1973-84; 1974-79
EMPR MAP 34
EMPR OF 1988-14; 1992-1
EMPR PF (*Chiang, M.C. (1973): Geology of the Bull River Mine,
Placid Oil Company, 18 pp.; *Chiang, M.C. (1972): Report on
Underground Ore Reserve Estimation Bull River Mine, 11 pp.;
Allen, A.R. (1976): Report on the Holdings of R.H. Stanfield,
Geology and Ore Potential, in 082G General)
EMPR PRELIM MAP 66
EMR BULL 166
EMR MR 223, B.C. 44
EMR RESFILE (Bull River Mine)
GSC MAP 11-1960
GSC MEM 76
N MINER Feb. 7, 28, 2000
Business in Vancouver, Mar. 28, 2000
Edmonton Journal, Jan. 13, 2000
The Edmonton Sun, Jan. 13, 2000

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/10

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW003**

NATIONAL MINERAL INVENTORY:

NAME(S): **DIBBLE** LEO

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 35 50 N
LONGITUDE: 115 26 19 W
ELEVATION: 1900 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5495020
EASTING: 612830

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Copper Gold

MINERALS

SIGNIFICANT: Tetrahedrite Chalcopyrite
ASSOCIATED: Quartz Pyrite Arsenopyrite
ALTERATION: Azurite Malachite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Creston	

LITHOLOGY: Argillite
Quartzite
Argillaceous Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: VEIN REPORT ON: N

<u>CATEGORY:</u>	Assay/analysis	<u>YEAR:</u>	1988
<u>SAMPLE TYPE:</u>	Grab		
<u>COMMODITY</u>	<u>GRADE</u>		
Silver	3822.2000	Grams per tonne	
Gold	126.8000	Grams per tonne	
Copper	4.1000	Per cent	

COMMENTS: Highest assays.
REFERENCE: Assessment Report 18309.

CAPSULE GEOLOGY

The Dibble occurrence area is underlain by Helikian Lower Creston Formation (Purcell Supergroup) argillite, quartzite and argillaceous quartzite. The area of mineralization lies between two splays of the east trending Dibble Creek fault.

Two types of mineralized veins are present: 1) narrow quartz stringers (1-8 centimetres) with tetrahedrite, arsenopyrite, malachite, azurite and very minor chalcopyrite; and 2) wider quartz-pyrite veins (30-200 centimetres), breccias and replacements often in quartzite units. Alteration of wallrock from veins of the first type is slight (10-30 centimetres) whereas alteration of wallrock from the second type is more intense (30-150 centimetres). It is from veins of the first type that past production occurred. These veins strike approximately east and dip steeply north. Highest assays from these narrow veins were 4.1 per cent copper, 3822.2 grams per tonne silver, 0.01 per cent lead, 0.15 per cent zinc and 126.8 grams per tonne gold (Assessment Report 18309).

In 1995, with Explore B.C. Program support, G.H. Babcock retained R. Walker, P.Geo. to carry out a programme of geological mapping and compilation, sampling and assaying. The resulting report identified four drill targets and recommended a property wide soil survey and smaller, more focussed VLF and magnetometer surveys. The study also identified a potentially economic gypsum horizon at the

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

PAGE: 72
REPORT: RGEN0100

CAPSULE GEOLOGY

base of a Devonian sequence, which should be evaluated (Explore B.C. Program 95/96 - M127 DV).

BIBLIOGRAPHY

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1899-593; 1900-798; 1902-130; 1933-202; 1934-A25; 1935-E33
EMPR ASS RPT 8864, 15052, 15868, 15733, *18309
EMPR Explore B.C. Program 95/96 - M127 DV
EMPR GEM 1969-348
EMPR MAP 34
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76; 207, p. 48
GSC P 58-10

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW004**

NATIONAL MINERAL INVENTORY:

NAME(S): **VICTOR**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:
LATITUDE: 49 36 32 N
LONGITUDE: 115 27 47 W
ELEVATION: 1980 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5496281
EASTING: 611037

COMMODITIES: Lead Silver Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION:
COMMENTS: Vein dips vary from 70 degrees east to vertical.
STRIKE/DIP: 020/70E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Creston	

LITHOLOGY: Argillite
Quartzite
Argillaceous Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: UNDERGROUND REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 198.8000 Grams per tonne
Gold 7.0000 Grams per tonne
Copper 0.3900 Per cent
Lead 12.9000 Per cent
Zinc 7.6900 Per cent

COMMENTS: Highest assays from underground samples.
REFERENCE: Assessment Report 18309.

CAPSULE GEOLOGY

The Victor occurrence area is underlain by quartzites and argillaceous quartzites of the Helikian Lower Creston Formation (Purcell Supergroup) which strike north-northwest and dip 70-75 degrees west. Two distinct rock types are present; a green-grey argillaceous quartzite with minor interbedded apple green quartzite, and a silver grey-black graphitic argillite/phyllite with local silty units.

The Victor vein strikes 020 degrees and dips from 70 degrees east to vertical. It can be traced on surface for over 600 metres. The vein has a hydrothermal alteration envelope of 10-30 metres, polyphase quartz along its strike length with occasional siliceous zones swelling up to 4 metres, and sporadic mineralization. Mineralization consists of galena, sphalerite and pyrite with values in silver and gold. The sulphides are in small, lenticular shoots and thin streaks along the footwall with occasional disseminations in the quartz gangue.

Three tunnels have explored the Victor vein system. Recent

CAPSULE GEOLOGY

underground chip samples assayed a high of 12.9 per cent lead, 7.69 per cent zinc, 198.8 grams per tonne silver, 7.0 grams per tonne gold and 0.39 per cent copper (Assessment Report 18309).

In 1995, with Explore B.C. Program support, G.H. Babcock retained R. Walker, P.Geo. to carry out a programme of geological mapping and compilation, sampling and assaying. The resulting report identified four drill targets and recommended a property-wide soil survey and smaller, more focussed VLF and magnetometer surveys. The study also identified a potentially economic gypsum horizon at the base of a Devonian sequence, which should be evaluated (Explore B.C. Program 95/96 - M127 DV).

BIBLIOGRAPHY

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EMPR Explore B.C. Program 95/96 - M127 DV
EMPR GEM 1969-347; 1970-476; 1971-418
EMPR MAP 34
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARYSVILLE** PERRY CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

Open Pit

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 40 N
LONGITUDE: 115 58 33 W
ELEVATION: 1060 Metres

NORTHING: 5492192
EASTING: 574039

LOCATION ACCURACY: Within 500M

COMMENTS: Regional exposures of magnesite bed between Antwerp Creek and St. Mary's River.

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Quartz Calcite
COMMENTS: Only about 4.5 per cent silica is present as quartz.
ALTERATION: Calcite Magnesite Quartz
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Lower Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E09 Sparry magnesite
SHAPE: Regular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Cranbrook	

LITHOLOGY: Magnesite
Quartzite
Argillite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Magnesite forms a bed which is conformably interbedded with quartzites of the Lower Cambrian Cranbrook Formation. It is underlain by a sequence of thinly banded, reddish quartzitic and buff magnesite beds and is overlain by magnesite interstratified with thin, greenish argillite beds and locally thin limestone. It varies from coarse to finely crystalline, weathers rough and commonly has a rusty brown surface. Fresh surfaces are pearly grey, white or cream-coloured and are cut by minor quartz veins or host to knots of quartz. The best bed of magnesite is about 15 metres thick and samples indicate the following chemistry: 4.54 per cent SiO₂, 2.4 per cent Fe₂O₃, 0.4 per cent Al₂O₃, 0.79 per cent CaO, 43.7 per cent MgO and 48 per cent Loss On Ignition.

Minor production has been reported for the Marysville deposit (Z.D. Hora, personal communication, 1990), but no figures are available.

BIBLIOGRAPHY

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EMPR OF 1987-13; *1988-14
GSC MAP 396A; 15-1957; 11-1960
GSC MEM 76; *207, pp. 18,56
GSC SUM RPT 1932, Part AII, p. 101
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/11

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW006**

NATIONAL MINERAL INVENTORY: 082G11 Cu3

NAME(S): **COPPER KING**, CHICKAMON STONE, NEW MAX,
ZEUS

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:
LATITUDE: 49 30 12 N
LONGITUDE: 115 21 42 W
ELEVATION: 1060 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5484701
EASTING: 618617

COMMODITIES: Copper Silver Gold Lead

MINERALS

SIGNIFICANT: Chalcopyrite Tetrahedrite
ASSOCIATED: Quartz Siderite Pyrrhotite Pyrite
ALTERATION: Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Argillite
Quartzite
Greywacke
Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Copper King occurrence comprises quartz-siderite veins and veinlets hosting irregular blebs of chalcopyrite and galena with disseminated pyrite and pyrrhotite. Chalcopyrite also occurs as fracture-fillings. Veining is within and spatially related to Proterozoic Moyie Intrusions (diorite dykes), similar to the Bull River mine (082GNW002). The dykes are within sediments of the Helikian Aldridge Formation (Purcell Supergroup) which consist of argillite, quartzite and greywacke. A small amount of material was shipped to Trail for processing.

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1924-186; 1925-228,449; 1926-244; 1928-282
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EMPR EXPL 1978-E68
EMPR GEM 1972-64
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/11

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REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 77
REPORT: RGEN0100

MINFILE NUMBER: **082GNW007**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAUS CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 00 N
LONGITUDE: 115 33 09 W
ELEVATION: 1067 Metres

NORTHING: 5498870
EASTING: 604523

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C02 Buried-channel placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Tertiary

Glacial/Fluvial Gravels

LITHOLOGY: Gravel

HOSTROCK COMMENTS: Placer deposit

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Prospecting has continued on Maus Creek for placer gold in buried stream channels. No gold was reported from active or old channelways, although a seismic survey and over 31.2 metres of drifting was accomplished.

BIBLIOGRAPHY

EMPR AR 1968-294
EMPR ASS RPT 281
EMPR GEM 1969-377; 1970-484; 1971-447; 1972-566; 1973-524; 1974-358
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
Placer Dome File
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/12

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW007**

MINFILE NUMBER: **082GNW008**

NATIONAL MINERAL INVENTORY: 082G13 Zn1

NAME(S): **ESTELLA (L.6411)**, ESTELLA MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:
LATITUDE: 49 46 10 N
LONGITUDE: 115 36 19 W
ELEVATION: 1830 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5513930
EASTING: 600431

COMMODITIES: Silver Lead Zinc Cadmium Copper
Gold

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
ASSOCIATED: Silica Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Mesozoic	Purcell	Aldridge	Unnamed/Unknown Informal

LITHOLOGY: Argillite
Quartzite
Syenite

HOSTROCK COMMENTS: Deposit is associated with a syenite stock of Mesozoic age.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The Estella deposit is a vein-type consisting of massive galena, sphalerite, and pyrite in a zone of fracturing and shearing within Helikian Aldridge Formation (Purcell Supergroup) quartzites and argillites. The fracture zone with the sulphide mineralization is spatially related to the contact of a Mesozoic syenite stock. Quartz is not abundant within the sulphide ore but exists in crosscutting veinlets which carry little or no sulphide. The lode ranges from a single fracture of several centimetres to a zone 4 to 6 metres wide. Locally the ore zone and/or the host stratigraphy is strongly silicified. Although there were sulphides remaining when production ceased, these were for the most part contained in the narrower portions of the fracture systems and hence would not constitute economically recoverable reserves.

BIBLIOGRAPHY

EMPR AR 1896-522; 1897-526; 1898-1031; 1899-593,659; 1900-797;
1901-1005; 1902-130; 1903-93; 1904-108; 1905-248; 1910-90;
1916-191; 1920-140; 1927-266; 1929-297; 1950-155; 1951-40,
186; 1952-42,199; 1953-45,150; 1954-49,148; 1955-70;
1958-A45,61; 1959-A47; 1962-87; 1963-A48,82; 1964-133; 1966-
241; 1967-272
EMPR ASS RPT 68, *8835, 19671, 20175
EMPR FIELDWORK *1977, p. 15
EMPR GEM 1970-472
EMPR MAP 36
EMPR OF *1988-14
EMPR PF (*Underground Workings, Assay Plan (1951), Development
Workings, Vertical Section, Assay Plan)
EMR MP CORPFILE (United Estella Mines Ltd.; Copper Soo Mining Co.;
Giant Mascot Mines Ltd.; Giant Soo Mines Ltd.)

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 79
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/12

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW009**

NATIONAL MINERAL INVENTORY: 082G12 Pb1

NAME(S): **KOOTENAY KING (L.7789)**, KOOTENAY KING MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:
LATITUDE: 49 43 40 N
LONGITUDE: 115 35 14 W
ELEVATION: 2196 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5509322
EASTING: 601819

COMMODITIES: Silver Lead Zinc Cadmium Gold
Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive Disseminated
CLASSIFICATION: Sedimentary Exhalative
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag
SHAPE: Regular
MODIFIER: Folded

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Lower Aldridge

LITHOLOGY: Siltstone
Argillite
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Kootenay King deposit is a stratiform lead-zinc deposit. Pyrite, galena and sphalerite occur as fine laminations at the top of a coarse sandstone unit (Kootenay King quartzite) within a buff weathering section of the Helikian Lower Aldridge Formation (Purcell Supergroup). The deposit lies within the eastern overturned flank of a major anticline. The Kootenay King quartzite has a hanging wall of black argillites and a footwall of brown siltstones. The anticlinal structure plunges gently to the north.

BIBLIOGRAPHY

EM FIELDWORK 1999, pp. 185-192
EMPR AR 1898-1026; 1919-115; 1925-228,449; 1928-281; 1929-295;
1930-240; 1951-186; 1952-42,198; 1953-45,150; 1954-148
EMPR ASS RPT 3324, 3325, 5245, 8455, 15174, 20175
EMPR FIELDWORK 1977, p. 15; 1983, p. 25
EMPR GEM 1970-472; 1971-418; 1974-81
EMPR MAP 36
EMPR OF *1988-14; 2000-22
GSC MAP 396A; 10-1958; 11-1960
GSC MEM 76; 207, p. 45
GSC P 58-10
N MINER May 31, 1951
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/12

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GNW010**

NATIONAL MINERAL INVENTORY:

NAME(S): **PALMAYRA**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 43 50 N
LONGITUDE: 115 33 04 W
ELEVATION: 1433 Metres

NORTHING: 5509681
EASTING: 604415

LOCATION ACCURACY: Within 500M

COMMENTS: North of Wild Horse River on Spirit Creek.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz
ALTERATION: Anglesite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Helikian
Cretaceous

GROUP

Purcell

FORMATION

Middle Aldridge

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Syenite Dike
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Palmayra showing, galena and pyrite occur in quartz veins. A lower adit intersects a steeply dipping, highly faulted and fractured Cretaceous syenite dyke with fractures filled by quartz. Vein quartz in fractures contain minor galena and pyrite but do not cross into host Helikian Middle Aldridge Formation (Purcell Supergroup) argillites. Upper workings expose flat-lying quartz veins 3 to 6 metres wide which are shattered and faulted. The vein locally lies at the margin of a flat-lying syenite dyke. Galena is abundant locally and accompanied by some anglesite.

BIBLIOGRAPHY

EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 207, p. 48; 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/12

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW011**

NATIONAL MINERAL INVENTORY:

NAME(S): **LILY MAY EXT.**, PINTO

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 42 17 N
LONGITUDE: 115 33 28 W
ELEVATION: 1070 Metres

NORTHING: 5506800
EASTING: 603990

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz Siderite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Helikian
Cretaceous

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Syenite Dike
Argillite
Greywacke
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Lily May Ext. showing, a Cretaceous syenite dyke cutting Helikian Aldridge Formation (Purcell Supergroup) argillite, quartzite and greywacke is highly faulted, shattered and carbonatized. It is up to 2 metres wide and of irregular shape. The dyke is traversed by numerous quartz veinlets and has been replaced locally by quartz, which in places carries galena, chalcopyrite, pyrite and minor siderite.

BIBLIOGRAPHY

EMPR AR 1898-1026; 1900-799
EMPR GEM 1972-67
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 50

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW012**

NATIONAL MINERAL INVENTORY:

NAME(S): **PARK**, HERCULES, BEE LINE,
KIM

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:
LATITUDE: 49 39 03 N
LONGITUDE: 115 54 57 W
ELEVATION: 1037 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5500374
EASTING: 578260

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Regular
DIMENSION:
COMMENTS: Vein

STRIKE/DIP: 280/90S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Argillite
Quartzite
Greywacke
Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

The Park occurrence consists of a 1.5 metre wide quartz-carbonate vein within a Proterozoic Moyie Intrusions diorite sill occurring in Helikian Aldridge Formation (Purcell Supergroup) argillite, quartzite and greywacke. Sulphides are restricted to galena with very minor pyrite. Assays indicate 100 to 200 grams of silver and from 18 to 71 per cent lead but these are probably from hand-cobbed ore material.

BIBLIOGRAPHY

EMPR AR 1915-113; 1916-190,515; 1917-149,180,447; 1918-187;
1920-128; 1923-207
EMPR FIELDWORK 1980, p. 9
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76, p. 142; 207, p. 55
GSC SUM RPT 1932, Part AII

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW013**

NATIONAL MINERAL INVENTORY:

NAME(S): **LUKE, KIM**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 58 N
LONGITUDE: 115 53 00 W
ELEVATION: 1200 Metres

NORTHING: 5500254
EASTING: 580608

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Quartz vein

STRIKE/DIP: 150/80W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Middle Proterozoic
Proterozoic

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1919

SAMPLE TYPE: Rock

COMMODITY

GRADE

Copper

9.4000

Per cent

REFERENCE: Minister of Mines Annual Report 1919, page 118.

CAPSULE GEOLOGY

The Luke occurrence consists of a quartz vein about 1 metre wide with stringers of quartz on the margins in a diorite sill of the Proterozoic Moyie Intrusions within sediments of the Helikian Purcell Supergroup. The vein strikes 150 degrees and dips 80 degrees west. Sulphides consist of pyrite and minor chalcopyrite. Hand sorted sulphides ran as high as 9.4 per cent copper with traces of gold (Minister of Mines Annual Report 1919). The vein was trenched in 1919-1920.

BIBLIOGRAPHY

EMPR AR *1919-118
EMPR ASS RPT 1715, 2071
EMPR FIELDWORK 1980, p. 9
EMPR GEM 1969-346
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76; 207, p. 55
GSC SUM RPT 1932 Part AII, p. 98

DATE CODED: 1985/07/24
DATE REVISED: 1986/01/06

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW014**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREY COPPER, KIM**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 58 N
LONGITUDE: 115 53 36 W
ELEVATION: 1070 Metres

NORTHING: 5500244
EASTING: 579886

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Tetrahedrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Quartz vein

STRIKE/DIP: 045/45S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

The Grey Copper occurrence consists of a quartz vein hosted by Helikian Aldridge Formation (Purcell Supergroup) quartzites. The vein is directly beneath a diorite sill on the north side of Lone Pine Hill. The vein is less than 0.5 metres wide, strikes 045 degrees and dips about 45 degrees southeast into the hill. The showing is exposed by 15 metre incline shaft. Sulphides (tetrahedrite) occur as streaks and pods within the vein. Good assays from hand-cobbed ore were reported.

BIBLIOGRAPHY

EMPR AR *1920-N118
EMPR ASS RPT 1715, 2071
EMPR FIELDWORK 1980, p. 9
EMPR GEM 1969-346
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 207, p. 55; 76
GSC SUM RPT 1932 Part AII, p. 98

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW015**

NATIONAL MINERAL INVENTORY:

NAME(S): **YANKEE GIRL**, KIM

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 07 N
LONGITUDE: 115 53 07 W
ELEVATION: 1070 Metres

NORTHING: 5498677
EASTING: 580491

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Galena Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

STRIKE/DIP: 330/65W TREND/PLUNGE:

DIMENSION:
COMMENTS: Quartz vein

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Quartzite
Hornblende Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the Yankee Girl showing, Helikian Aldridge Formation (Purcell Supergroup) quartzites hosts a hornblende-diorite sill of the Proterozoic Moyie Intrusions. The sill hosts quartz veins and stringers carrying pyrite and chalcopyrite with minor galena and sphalerite. The major vein is 1 to 2 metres wide and strikes 330 degrees with 65 degree west dips.

BIBLIOGRAPHY

EMPR AR *1919-117; 1968-269
EMPR ASS RPT 1715, 2071, 2675
EMPR FIELDWORK 1980, p. 9
EMPR GEM 1969-346; 1970-475; 1972-68
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM *76, p. 146; 207
GSC SUM RPT Part AII, p. 98

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW016**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOTENAY-SELKIRK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 44 50 N
LONGITUDE: 115 36 29 W
ELEVATION: 2135 Metres

NORTHING: 5511456
EASTING: 600277

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Lead Silver

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Argillite
Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Kootenay-Selkirk occurrence consists of irregular lenses and veins of quartz and calcite up to 1 metre wide. They are hosted by quartzites and argillites of the Helikian Lower Aldridge Formation (Purcell Supergroup) and are close to a diorite sill of the Proterozoic Moyie Intrusions. The showing is within a fracture system associated with the upper part of the sill. Pyrite, galena and traces of chalcopyrite occur at the junction of a set of parallel and an echelon quartz-calcite veins and a set of narrow quartz stringers which link the former.

BIBLIOGRAPHY

EMPR AR *1929-296,298; 1930-240; 1956-109
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; 207, p. 53

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW017**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRY AGAIN**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 44 14 N
LONGITUDE: 115 37 59 W
ELEVATION: 1425 Metres

NORTHING: 5510311
EASTING: 598496

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Tungsten

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Scheelite may be the tungsten mineral.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: North dipping fault (thrust?); strongly brecciated.

STRIKE/DIP: 090/40N

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Fort Steele	

LITHOLOGY: Quartzite
Brecciated Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY: Copper
GRADE: 22.0000 Per cent

YEAR: 1899

REFERENCE: Minister of Mines Annual Report 1899.

CAPSULE GEOLOGY

At the Try Again showing, a strong east striking fault zone with a 40 degree north dip is strongly brecciated with quartz forming the matrix to sedimentary fragments which have been partially replaced by quartz. The quartz matrix carries considerable chalcopyrite and pyrite. The breccia zone is up to about one metre thick within Helikian Fort Steele Formation (Purcell Supergroup) quartzites.

A four kilogram specimen sent to the Paris Exposition in 1900 assayed about 22 per cent copper (Minister of Mines Annual Report 1899). Minor tungsten was indicated in later assays but no specific mineral was identified.

BIBLIOGRAPHY

EMPR AR 1899-592
EMPR ASS RPT 8157
EMPR MAP 36
EMPR OF *1988-14; 1991-17
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 51

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW018**

NATIONAL MINERAL INVENTORY: 082G11 Cu2

NAME(S): **CORONADO (L.3535)**, COR, CEDAR

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 42 58 N
LONGITUDE: 115 29 21 W
ELEVATION: 2135 Metres

NORTHING: 5508163
EASTING: 608911

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Tetrahedrite Chalcocite Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite Magnetite Tremolite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian Cretaceous	Undefined Group	Jubilee	Unnamed/Unknown Informal

LITHOLOGY: Dolomite
Slate
Argillite
Syenite
Quartz Monzonite

HOSTROCK COMMENTS: Syenite and quartz monzonite intrude Jubilee Formation sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Coronado occurrence consists of quartz veins hosted by Middle-Upper Jubilee Formation dolomites, slates and argillites close to a Cretaceous syenitic-monzonitic intrusive. The veins contain pyrite, chalcopyrite, malachite, tetrahedrite and traces of magnetite. The veins are discontinuous and are hosted by tremolitic dolomites. Thrust faulting occurs in the immediate area.

BIBLIOGRAPHY

EMPR AR 1898-1028; 1899-841; 1902-130; 1911-288; 1930-241
EMPR ASS RPT 3382, 5436, 5584, 12991
EMPR GEM 1971-418; 1974-80; 1975-E42
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 207, p. 55; 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW019**

NATIONAL MINERAL INVENTORY:

NAME(S): **DARDENELLE (L.10329)**, MOTHER LODE (L.10330)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 42 18 N
LONGITUDE: 115 32 16 W
ELEVATION: 1830 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5506858
EASTING: 605431

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Silver Gold Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Tetrahedrite
ASSOCIATED: Quartz
ALTERATION: Anglesite Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Vein system

STRIKE/DIP: 320/20S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Creston	
Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Argillite
Shale
Syenite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Dardenelle occurrence, a quartz vein occurs within Helikian Creston Formation (Purcell Supergroup) argillite and shale at the margin of a highly altered, carbonatized Cretaceous syenite dyke. The vein carries galena, chalcopyrite and tetrahedrite as blebs and smears. The vein is about 1 metre wide and the vein and syenite dyke appear to occupy a fault zone which has seen post-dyke and vein movements. The vein system strikes about 320 degrees and dips about 20 degrees south. Galena is locally altered to anglesite.

BIBLIOGRAPHY

EMPR AR 1893-1065; 1896-518; 1898-1027; 1899-659; 1902-130; 1913-423; 1925-229; 1934-E29
EMPR ASS RPT 12252, 13200, *16327
EMPR GEM 1974-25
EMPR MAP 36
EMPR OF *1988-14
EMPR PF (McLoughlin, R.H. (1925): Report of Inspection of the Dardenelle Mine, 2 p.)
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 49
PR REL Eagle Plains Resources Ltd., Jan.16, 2003

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW020**

NATIONAL MINERAL INVENTORY:

NAME(S): **LILY MAY**, TIT FOR TAT

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 55 N
LONGITUDE: 115 31 46 W
ELEVATION: 1921 Metres

NORTHING: 5506160
EASTING: 606046

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Chalcopyrite Gold
ALTERATION: Anglesite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Quartz vein

STRIKE/DIP: 345/35E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Helikian GROUP Purcell FORMATION Creston IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1982

COMMODITY	GRADE	
Silver	20.5000	Grams per tonne
Gold	2.9000	Grams per tonne
Lead	1.3000	Per cent

REFERENCE: Assessment Report 10732.

CAPSULE GEOLOGY

At the Lily May showing, a quartz vein within Helikian Creston Formation (Purcell Supergroup) argillites and quartzites occupies a fault with a displacement of approximately 1 metre. The vein varies from 4 centimetres to 1 metre in width and carries galena, chalcopyrite, pyrite and some secondary anglesite near surface. The vein strikes 345 degrees and dips 35 degrees east; it dies out northwards. Assays vary along strike but recent work reports the presence of visible free gold. A sample (#4964) across 1 metre assayed 2.9 grams gold, 20.5 grams silver, and 1.3 per cent lead (Assessment Report 10732).

BIBLIOGRAPHY

EMPR AR 1898-1026; 1900-799; 1902-130; 1904-295; *1934-E29
EMPR ASS RPT 10732
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 47
PR REL Eagle Plains Resources Ltd., Jan.16, 2003

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/13

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW021**

NATIONAL MINERAL INVENTORY:

NAME(S): **ST. TRESA**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 20 N
LONGITUDE: 115 33 04 W
ELEVATION: 1220 Metres

NORTHING: 5505049
EASTING: 604504

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1934
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 69.0000 Grams per tonne
Lead 2.0000 Per cent

REFERENCE: Minister of Mines Annual Report 1934, page E30.

CAPSULE GEOLOGY

At the St. Tresa showing, a quartz vein, less than 1 metre wide, is hosted by grey sandy argillites and quartzites of the Helikian Aldridge Formation (Purcell Supergroup). Two exposures of the quartz vein indicate a general east strike with a 78 degree south dip. The veins are irregular and ill-defined with sporadic pyrite and galena mineralization. Hand-cobbed material returned only 69 grams silver and 2 per cent lead with traces of gold and zinc; other samples were barren (Minister of Mines Annual Report 1934).

BIBLIOGRAPHY

EMPR AR *1934-E30
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; 207, p. 55

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 93
REPORT: RGEN0100

MINFILE NUMBER: **082GNW022**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIDAS (L.5456)**, BIG CHIEF (L.4046), MAGNET

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 40 00 N
LONGITUDE: 115 30 14 W
ELEVATION: 1830 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5502645
EASTING: 607959

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Silver Gold Copper

MINERALS

SIGNIFICANT: Gold Pyrite Galena Chalcopyrite
COMMENTS: Visible native gold reported.
ASSOCIATED: Quartz
ALTERATION: Calcite Silica
ALTERATION TYPE: Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Dykes

STRIKE/DIP: 050/55N

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Undefined Group	Eager	Unnamed/Unknown Informal
Cretaceous			

LITHOLOGY: Syenite Dyke
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Midas occurrence, quartz veins occupy joints and fractures within a Cretaceous syenite dyke in Lower-(?)Middle Cambrian Eager Formation argillites. Pyrite, chalcopyrite and galena are hosted by quartz stringers. Visible gold is reported locally. Dykes are highly carbonatized and locally the dyke and host sediments are silicified and carry disseminated pyrite. Dykes strike about 050 degrees and dip 55 degrees northwest.

BIBLIOGRAPHY

EMPR AR 1899-593,659; 1900-797,979; 1902-130,302; *1934-E30; 1954-148
EMPR ASS RPT 3928, 12247
EMPR GEM 1972-67; 1968-269
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 50

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW022**

MINFILE NUMBER: **082GNW023**

NATIONAL MINERAL INVENTORY:

NAME(S): **FISHER**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 40 25 N
LONGITUDE: 115 31 04 W
ELEVATION: 1983 Metres

NORTHING: 5503397
EASTING: 606942

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Lower Cambrian GROUP Undefined Group FORMATION Cranbrook IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomitic Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Fisher showing, a 2 metre bed of dolomitic limestone of the Lower Cambrian Cranbrook Formation occurs in part of the Wild Horse River fault zone. The bed has been highly shattered and a network of quartz veinlets and stringers traverses the rock. About 10 per cent of the mineralized bed contains quartz vein material. The quartz is host to pyrite, galena and chalcopyrite and a high-grade sample assayed 54 grams gold and 3565 grams silver, but this is not representative of average values.

BIBLIOGRAPHY

EMPR AR 1903-245
EMPR ASS RPT 12247
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 48

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW024**

NATIONAL MINERAL INVENTORY:

NAME(S): **DOUGHERTY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 54 N
LONGITUDE: 115 35 29 W
ELEVATION: 1067 Metres

NORTHING: 5502338
EASTING: 601649

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

E03 Carbonate-hosted disseminated Au-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Dougherty showing, small quartz veins in Helikian Aldridge Formation (Purcell Supergroup) sedimentary rocks are reported to contain free gold.

BIBLIOGRAPHY

EMPR AR 1899-659; 1900-797; 1904-108
EMPR ASS RPT 12953, *13540
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; 207, p. 55

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW025**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAGLE PLUME**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 50 N
LONGITUDE: 115 33 04 W
ELEVATION: 915 Metres

NORTHING: 5496711
EASTING: 604665

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:

STRIKE/DIP: 090/90S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Schist
Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Eagle Plume showing, disseminated chalcopyrite occurs in quartz-filled parallel fissure veins striking roughly east within altered limestone and schists of the Helikian Aldridge Formation (Purcell Supergroup).

BIBLIOGRAPHY

EMPR AR 1924-87
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; 207, p. 55

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW026**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAGLE'S NEST**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 30 N
LONGITUDE: 115 31 54 W
ELEVATION: 1250 Metres

NORTHING: 5496120
EASTING: 606082

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Tourmaline
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Dioritic Sill
Argillaceous Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Eagle's Nest showing, a 1 metre wide quartz vein occurs within a Proterozoic Moyie Intrusions diorite sill near its contact with host Helikian Aldridge Formation (Purcell Supergroup) argillaceous quartzites. The vein carries small amounts of chalcopyrite and pyrite.

BIBLIOGRAPHY

EMPR MAP 34
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; 207, p. 53

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW027**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER BELT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 41 N
LONGITUDE: 115 41 11 W
ELEVATION: 885 Metres

NORTHING: 5490695
EASTING: 594995

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Copper
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Kitchener	

LITHOLOGY: Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the Copper Belt showing, chalcopyrite and minor native copper occur in a fracture zone along a fault plane within Helikian Kitchener Formation (Purcell Supergroup) limestones and argillites. Mineralization is most pronounced within 1.5 metres of a hanging wall fault plane identified by a prominent fault gouge zone. The footwall argillites are seamed with quartz stringers which contain occasional specks of chalcopyrite and thin films of native copper.

BIBLIOGRAPHY

EMPR AR 1923-206
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; 207, p. 55

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW028**

NATIONAL MINERAL INVENTORY: 082G11 Pb1

NAME(S): **CUCKOO**, TWILIGHT, TRILBY,
STEEPLES

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 10 N
LONGITUDE: 115 20 54 W
ELEVATION: 915 Metres

NORTHING: 5484661
EASTING: 619584

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Copper Silver

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Diorite Dike
Quartzite
Argillite
Greywacke
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Cuckoo showing, galena-pyrite-chalcopyrite occur as blebs and pods within two large diorite dykes of the Proterozoic Moyie Intrusions which crosscut shales and argillites of the Helikian Aldridge Formation (Purcell Supergroup). The dykes are parallel, about 150 metres apart, and strike generally east with a vertical dip. A pod of sulphides about 38 centimetres wide was exposed within the dyke material.

BIBLIOGRAPHY

EMPR AR *1898-1005
EMPR ASS RPT 7086, 8014, 8531, 8584, 10075, 12575
EMPR EXPL 1978-E68
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 100
REPORT: RGEN0100

MINFILE NUMBER: **082GNW029**

NATIONAL MINERAL INVENTORY:

NAME(S): **EXPANDER**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 50 N
LONGITUDE: 115 34 26 W
ELEVATION: 975 Metres

NORTHING: 5502238
EASTING: 602914

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Tertiary

Glacial/Fluvial Gravels

LITHOLOGY: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Expander showing, in 1961, 222 cubic metres of material were sluiced from Tertiary gravels in the Wild Horse River near the mouth of Fisher Creek. A fair amount(?) of gold is reported to have been recovered.

BIBLIOGRAPHY

EMPR AR 1961-136
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW029**

MINFILE NUMBER: **082GNW030**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARTLEY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 05 N
LONGITUDE: 115 04 34 W
ELEVATION: 1707 Metres

NORTHING: 5496091
EASTING: 639012

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphorite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound Concordant
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
Triassic	Spray River	Sulphur Mountain	

LITHOLOGY: Phosphorite
Shale
Dolomitic Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY
Phosphate
COMMENTS: From a 50 centimetre thick bed.
REFERENCE: Open File 1987-16.

GRADE	
21.5000	Per cent

CAPSULE GEOLOGY

At the Hartley showing, a 50 centimetre thick phosphorite bed occurs in an overturned sequence at the base of the Jurassic Fernie Group. The phosphorite is pelletal, dark grey to black, recessive and weakly calcareous. It contained 21.5 per cent phosphate (P2O5) (Open File 1987-16). Stratigraphically underlying the phosphorite is a black dolomitic siltstone of the Triassic Sulphur Mountain Formation (Spray River Group).

BIBLIOGRAPHY

EMPR OF 1987-16; 1988-14
GSC MAP 11-1960
GSC MEM 76
PERS COMM S. Butrenchuk

DATE CODED: 1988/02/10
DATE REVISED: 1988/02/10

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNW031**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISLAND LAKE TWO**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 31 35 N
LONGITUDE: 115 10 44 W
ELEVATION: 1554 Metres

NORTHING: 5487568
EASTING: 631788

LOCATION ACCURACY: Within 500M
COMMENTS: Approximately 1.5 kilometres north of Island Lake.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Clay Calcite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic	Fernie	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Phosphorite
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY: Phosphate
GRADE: 15.4000 Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Island Lake Two showing, a 1 metre thick pelletal phosphorite bed is exposed in a trench along a power line right-of-way. Phosphate content is 15.4 per cent P2O5 (Open File 1987-16). This phosphate occurs in the basal portion of the Jurassic Fernie Group.

BIBLIOGRAPHY

EMPR OF 1987-16; *1988-14
GSC MAP 11-1960
GSC MEM 76
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1985/07/24
DATE REVISED: 1986/12/11

CODED BY: GSB
REVISED BY: SBB

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GNW032**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAGLE TOO**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 47 N
LONGITUDE: 115 30 29 W
ELEVATION: 1449 Metres

NORTHING: 5494826
EASTING: 607814

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Quartzite
Argillite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Eagle Too showing, a quartz vein carries disseminated pyrite and chalcopyrite. The vein is near the contact of a diorite sill of the Proterozoic Moyie Intrusions with argillites and quartzites of the Helikian Aldridge Formation (Purcell Supergroup). An old adit is evident at the showing.

BIBLIOGRAPHY

EMPR MAP *34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW033**

NATIONAL MINERAL INVENTORY:

NAME(S): **KING**, TOM, HAPPY DAY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

LATITUDE: 49 34 40 N
LONGITUDE: 115 42 59 W
ELEVATION: 960 Metres

LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5492479
EASTING: 592795

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Kitchener	
DATING METHOD: Fossil			
Proterozoic			Moyie Intrusions

LITHOLOGY: Dioritic Sill
Sediment/Sedimentary Rock

HOSTROCK COMMENTS: The Kitchener Formation hosts the diorite sill.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the King showing, disseminated chalcopyrite occurs within a diorite sill of the Proterozoic Moyie Intrusions intruded into the Helikian Kitchener Formation (Purcell Supergroup). The sulphides are concentrated within, and adjacent to northwesterly striking cross fractures in the sill. Typical of similar showings in the area, quartz is the gangue within the veins.

BIBLIOGRAPHY

EMPR AR *1956-108; 1966-240; 1967-271,275
EMPR ASS RPT 945, *946, 964
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW034**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISLAND LAKE ONE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 31 30 N
LONGITUDE: 115 10 44 W
ELEVATION: 1550 Metres

NORTHING: 5487414
EASTING: 631792

LOCATION ACCURACY: Within 500M

COMMENTS: Approximately 1 kilometre north of Island Lake.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Clay Calcite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic	Fernie	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Phosphorite
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY
Phosphate
GRADE 13.2000 Per cent
REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Island Lake One showing, a 1 metre thick phosphorite bed is exposed in a roadcut along a power line. Phosphate content is 13.2 per cent P2O5 (Open File 1987-16). The overlying and underlying strata were not observed. The phosphate is believed to be located at the base of the Jurassic Fernie Group.

BIBLIOGRAPHY

EMPR OF 1987-16; *1988-14
GSC MAP 11-1960
GSC MEM 76
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1985/07/24
DATE REVISED: 1986/12/11

CODED BY: GSB
REVISED BY: SBB

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GNW035**

NATIONAL MINERAL INVENTORY: 082G13 Cu1

NAME(S): **GOLDEN FLEECE**, STANLEY, HOMESTAKE

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 58 N
LONGITUDE: 115 37 12 W
ELEVATION: 1555 Metres

NORTHING: 5517246
EASTING: 599310

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Gold Silver Lead

MINERALS

SIGNIFICANT:	Chalcopyrite	Galena	Pyrite	Pyrrhotite	Sphalerite
ASSOCIATED:	Quartz	Calcite			
ALTERATION:	Malachite	Azurite	Silica	Chlorite	
ALTERATION TYPE:	Silicific'n		Oxidation		
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER:	Vein	Massive	Disseminated
CLASSIFICATION:	Epigenetic	Hydrothermal	
TYPE:	I05	Polymetallic veins	Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Cretaceous

GROUP

Purcell

FORMATION

Lower Aldridge

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Argillite
Syenitic Dike
Syenitic Sill
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Golden Fleece area is underlain by quartzites and argillites of the Helikian Lower Aldridge Formation (Purcell Supergroup) which has been subjected to complex faulting, probably related to the Lewis Creek fault system immediately to the north. The rocks have been intruded by syenitic dykes and sills which locally may or may not be coincident with mineralized zones. In many cases the syenites have suffered later stage shearing.

Mineralization appears as sulphides associated with quartz veins or stringers and within zones of silicification associated with shearing. Within the quartz stringers, blebs and masses of chalcopyrite, galena, pyrite and minor sphalerite and pyrrhotite occur. These veins and stringers seem confined predominantly to the argillaceous horizons. In addition, shear zones, either crosscutting or complementary to bedding plane orientations, have been selectively silicified. The strongly silicified zones host disseminated chalcopyrite, pyrite and galena. Secondary malachite and azurite are developed locally.

A highly chloritized, massive and highly sheared greenstone (Moyie Intrusions diorite sill?) has been reported near the Wanda B occurrence (082GNW046). Mineralization is characteristically spotty and of low grades. Copper is the dominant metal with traces of gold, silver and lead reported.

BIBLIOGRAPHY

EMPR AR 1900-797; 1911-288; 1925-230; 1939-97
EMPR MAP 36
EMPR OF *1988-14
EMPR PF (*Geological Rpt. by R.J. Maconachie)
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/17

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW035**

MINFILE NUMBER: **082GNW036**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOULDER CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 40 27 N
LONGITUDE: 115 30 54 W
ELEVATION: 1525 Metres

NORTHING: 5503463
EASTING: 607141

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Spheene Zircon Quartz Calcite
ALTERATION: Talc Serpentine Chlorite Hematite Calcite
 Magnesite Quartz

MINERALIZATION AGE: Lower Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Undefined Group	Cranbrook	

LITHOLOGY: Magnesite
 Quartzite
 Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Boulder Creek showing, a bed of coarsely crystalline, light creamy grey magnesite approximately 45 metres thick, occurs within the Lower Cambrian Cranbrook Formation. Near the basal and upper contacts the unit is intermixed with quartz and calcite but usually it has a core zone of relatively pure magnesite in the order of 12 metres thick. The magnesite weathers to a rough surface with a light buff color.

The magnesite grades upwards into a series of green quartzites with well-rounded quartz grains; accessory minerals include chlorite, serpentine and talc with minor hematite, sphene and zircon. In general it overlies light-coloured quartzites but in the Boulder-Wallinger creeks area these basal quartzites are at least in part, replaced by coarse conglomerates resting unconformably on the Siyeh or Gateway formations.

BIBLIOGRAPHY

EMPR ASS RPT 12247
EMPR MAP 36
EMPR MEM 76
EMPR OF 1987-13; *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 19

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 108
REPORT: RGEN0100

MINFILE NUMBER: **082GNW037**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRANBROOK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 48 N
LONGITUDE: 115 43 22 W
ELEVATION: 915 Metres

NORTHING: 5489013
EASTING: 592391

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay Shale
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Residual Industrial Min.
TYPE: B06 Fireclay E07 Sedimentary kaolin

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary			Unnamed/Unknown Informal

LITHOLOGY: Clay

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

In the Cranbrook showing area, the silts in the St. Mary River valley are very calcareous, cream-burning and yielded a highly porous brick. They can be used for common brick, drain tile, flower pots and crude pottery.

BIBLIOGRAPHY

EMPR BULL 30, pp. 52,59
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 65, p. 33; 76; 207
CANMET RPT 54

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW037**

MINFILE NUMBER: **082GNW038**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH KING**

MINING DIVISION: Fort Steele

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082G13E
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 15 N
 LONGITUDE: 115 36 02 W
 ELEVATION: 2000 Metres

NORTHING: 5515944
 EASTING: 600734

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Quartz Carbonate

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Epigenetic Hydrothermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite
 Dolomite
 Argillite
 Siltstone
 Dike

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
 TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1987
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	391.0000 Grams per tonne
Lead	2.9000 Per cent
Zinc	0.2000 Per cent

COMMENTS: These are considered to be high grade samples.
 REFERENCE: Assessment Report 16337.

CAPSULE GEOLOGY

The South King occurrence is mainly underlain by Helikian quartzite, dolomite, siltstone and argillite of the lower Purcell Group (Aldridge Formation). Purcell Group sills and dykes intrude the sedimentary rocks locally. The sedimentary and volcanic rocks of the region trend northerly and dip to the west. They are part of the eastern limb of a large open and recumbent anticline.

Quartz veins locally intrude all rocks of the region. Some are emplaced along shear zones. They generally dip steeply and have random orientations. They are up to 1.5 metres wide and locally contain galena, pyrite, sphalerite, and chalcopyrite as disseminations or patches making up as much as 5 per cent of the rock volume. The veins are mainly short, discontinuous, and up to a few centimetres across.

The highest assay values were returned from randomly oriented quartz veins in quartzite up to 44 centimetres wide, exposed for a few metres along strike. This high grade sample contained 391 grams per tonne silver, 2.9 per cent lead, 0.2 per cent zinc, and slightly anomalous gold. Another vein, 30 centimetres wide, was located 750 metres south of this showing. A grab sample returned the only significant gold value of 1.2 grams per tonne.

This occurrence is located 1.8 kilometres northeast of the old Estella mine (082GNW008) which produced between 1951 and 1967.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 110
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1896-522; 1897-526; 1898-1031; 1899-593,659; 1900-797; 1901-
1005; 1902-130; 1903-93; 1904-108; 1905-248; 1910-90; 1916-191;
1920-140; 1927-266; 1929-297; 1950-155; 1951-40,186; 1952-42,199;
1953-45,150; 1954-70; 1958-A45,61; 1959-A47; 1962-87; 1963-A48,82;
1964-133; 1966-241; 1967-272; 1970-472
EMPR ASS RPT *16337
EMPR GEM 1970-472
EMPR MAP 36
EMPR OF 1988-14
GSC MAP 11-1960
GSC P 58-10

DATE CODED: 1987/12/31
DATE REVISED: / /

CODED BY: GJP
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 111
REPORT: RGEN0100

MINFILE NUMBER: **082GNW039**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORT STEELE CLAY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 12 N
LONGITUDE: 115 37 34 W
ELEVATION: 915 Metres

NORTHING: 5497288
EASTING: 599235

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Residual
TYPE: B06 Fireclay

Industrial Min.

E07 Sedimentary kaolin

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Unnamed/Unknown Informal

LITHOLOGY: Clay

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Fort Steele Clay showing, the clay fires to buff colour and is porous with slight swelling. It might be used for porous partition and scouring brick.

BIBLIOGRAPHY

EMPR BULL 30, p. 52
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 65; 76
CANMET RPT 54

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW039**

MINFILE NUMBER: **082GNW040**

NATIONAL MINERAL INVENTORY:

NAME(S): **SYLVIA**, KIM

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 50 N
LONGITUDE: 115 55 04 W
ELEVATION: 1006 Metres

NORTHING: 5499971
EASTING: 578125

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION:
COMMENTS: Quartz vein

STRIKE/DIP: 063/85S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP
Purcell

FORMATION
Middle Aldridge

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Turbidite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the Sylvia showing, turbidites of the Helikian Middle Aldridge Formation (Purcell Supergroup) host a diorite sill of the Proterozoic Moyie Intrusions. Traces of galena and sphalerite are disseminated within the sediments and are associated with very localized chlorite alteration. Chalcopyrite and pyrite are hosted by quartz-calcite veining associated with the intrusive sill. The vein is up to 2 metres wide, strikes 063 degrees and dips 85 degrees southeast.

BIBLIOGRAPHY

EMPR ASS RPT 1715, 2071, 2675, 5217, 5638, 5967, 6312, 10629
EMPR EXPL 1975-42; *1976-45; 1977-59
EMPR GEM 1969-346; 1970-475; 1972-68
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM *76, p. 145

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/17

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW041**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUE DRAGON (L.8956), KIM**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 27 N
LONGITUDE: 115 53 48 W
ELEVATION: 1067 Metres

NORTHING: 5499283
EASTING: 579659

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Middle Proterozoic
Proterozoic

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the Blue Dragon showing, a vein system is hosted in a Proterozoic Moyie Intrusions sill. The system consists of a vertical shear zone with quartz-calcite filling fractures and hosting pyrite and chalcopyrite. The zone strikes 060 degrees and is a maximum 1.4 metres in width.

BIBLIOGRAPHY

EMPR AR 1909-275
EMPR ASS RPT 1715, 2071, 10629
EMPR EXPL 1975-42; 1976-45; 1977-59
EMPR GEM 1969-346; 1970-475; 1972-68
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM *76, p. 146

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/17

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW042**

NATIONAL MINERAL INVENTORY:

NAME(S): **OMINECA (L.5270)**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 45 N
LONGITUDE: 115 58 30 W
ELEVATION: 945 Metres

NORTHING: 5499758
EASTING: 573996

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the Omineca showing, quartz veins up to 0.6 metres in width are hosted by Cretaceous syenitic intrusions. The veins dip 45 to 60 degrees northwest and contain sparse blebs and stringers of chalcopyrite and pyrite within a quartz-calcite gangue.

BIBLIOGRAPHY

EMPR AR 1898-1020; 1913-423
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76, p. 147

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/17

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW043**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK HILLS (L.8950)**, KIM

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 22 N
LONGITUDE: 115 52 57 W
ELEVATION: 1005 Metres

NORTHING: 5499143
EASTING: 580684

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Azurite Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Quartz-calcite vein

STRIKE/DIP: 255/65S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the Black Hills showing, a Proterozoic Moyie Intrusions diorite sill contains three major quartz-calcite veins. One vein strikes 255 degrees and dips 65 degrees southwest and contains blebs and disseminations of chalcopyrite, pyrite and minor galena. The other two veins intersect, with strike directions of 330 and 340 degrees respectively, and host chalcopyrite and pyrite which alters to malachite and azurite on weathered surfaces.

BIBLIOGRAPHY

EMPR AR 1919-117; 1968-269
EMPR ASS RPT 1715, 2071
EMPR EXPL 1975-42; 1976-45; 1977-59
EMPR GEM 1969-346; 1970-475; 1972-68
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM *76, p. 146

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/17

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW044**

NATIONAL MINERAL INVENTORY: 082G11 Fe1

NAME(S): **BULL RIVER IRON**, BULL RIVER, GOLIATH (L.6346),
HEMATITE (L.6348)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:
LATITUDE: 49 30 30 N
LONGITUDE: 115 18 44 W
ELEVATION: 2135 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5485336
EASTING: 622184

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Hematite
ASSOCIATED: Silica
ALTERATION: Hematite Silica Silicific'n
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive Disseminated
CLASSIFICATION: Replacement Hydrothermal Industrial Min.
TYPE: K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Proterozoic	Purcell	Kitchener	Moyie Intrusions

LITHOLOGY: Dolomite
Quartzite
Shale
Limestone
Iron Formation
Diorite Dike
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Continental Ranges
RELATIONSHIP: Syn-mineralization
GRADE:

CAPSULE GEOLOGY

The Bull River Iron showing at the summit of Fenwick Mountain, east of the Bull River, is hosted by limestones, shales, sandstones and dolomites of the Helikian Kitchener Formation (Purcell Supergroup) which have a general north-northwest strike and an easterly dip of 20 to 35 degrees. This stratigraphy is cut on the northeast side of the summit by a northwesterly trending diorite dyke which is up to 15 metres thick.

The iron mineralization has three main modes of occurrence: (1) relatively pure hematite fills short and narrow fractures within and near the margins of the diorite dyke; (2) hematite impregnates and selectively replaces sedimentary beds at the margins of the intrusion and the hematite decreases in abundance away from the intrusive contact; and (3) an impure hematite that is silica-rich, occurs as fine-grained, dark grey-black pods and specks of generally ovoid shape within more siliceous stratigraphy. These first two types have values in the order of 50 to 55 per cent iron, trace phosphorus, 20 to 25 per cent silica and less than 1 per cent sulfur.

The extent of the mineralization is unclear.

BIBLIOGRAPHY

EMPR AR 1904-108; 1907-217; *1920-117
EMPR ASS RPT 12575
EMPR EXPL 1978-E68
EMPR MAP 34
EMPR OF *1988-14
GSC EC GEOL *3, pp. 142-147
GSC MAP 11-1960

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 76
GSC SUM RPT 1902, p. 179
CANMET RPT 217, p. 25 (1917)

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/19

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW045**

NATIONAL MINERAL INVENTORY: 082G13 Cu1

NAME(S): **EMILY-TIGER**, EHLINGER, MINNIE M

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 48 10 N
LONGITUDE: 115 36 59 W
ELEVATION: 1459 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5517621
EASTING: 599563

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Silver Copper Gold

MINERALS

SIGNIFICANT:	Chalcopyrite	Galena	Pyrite	Pyrrhotite	Sphalerite
ASSOCIATED:	Quartz	Calcite			
ALTERATION:	Malachite	Azurite	Silica	Chlorite	
ALTERATION TYPE:	Silicific'n		Oxidation	Chloritic	
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Lower Aldridge	Unnamed/Unknown Informal
Cretaceous			

LITHOLOGY: Argillite
Quartzite
Syenite
Syenite Sill

HOSTROCK COMMENTS: Syenite sills and dykes intrude strata but may or may not be related to the mineralization.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Emily-Tiger area is underlain by quartzites and argillites of the Helikian Lower Aldridge Formation (Purcell Supergroup) which have been subjected to complex faulting, probably related to the Lewis Creek fault system immediately to the north. The stratigraphy has been intruded by a system of Cretaceous syenitic dykes and sills which locally are coincident with mineralized zones. In many cases the syenites have suffered late-stage shearing.

Mineralization appears as sulphides associated with quartz veins or stringers and within zones of silicification associated with shearing. Within the quartz stringers, blebs and masses of chalcopyrite, galena, pyrite and minor sphalerite and pyrrhotite occur. These veins and stringers seem confined predominantly to argillaceous horizons. In addition, shear zones, either crosscutting or complimentary to bedding plane orientations, have been selectively silicified with the strongly silicified zones hosting disseminated chalcopyrite, pyrite and galena. Secondary malachite and azurite are developed locally.

A highly chloritized, massive and highly sheared greenstone (Moyie Intrusions diorite sill?) has been reported in the stratigraphy near the Wanda B occurrence (082GNW046). Mineralization is characteristically spotty and of low grades.

BIBLIOGRAPHY

EMPR AR 1898-1032; 1899-592; 1939-97
EMPR MAP 36
EMPR OF *1988-14
EMPR PF (*Report by R.J. Maconachie)
GSC MAP 11-1960

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
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REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/17

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW046**

NATIONAL MINERAL INVENTORY: 082G13 Cu1

NAME(S): **WANDA B**, LARCHWOOD

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 48 03 N
LONGITUDE: 115 36 01 W
ELEVATION: 1595 Metres

NORTHING: 5517427
EASTING: 600726

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Gold Silver Lead

MINERALS

SIGNIFICANT:	Chalcopyrite	Galena	Pyrite	Pyrrhotite	Sphalerite
ASSOCIATED:	Quartz	Calcite			
ALTERATION:	Malachite	Azurite	Silica		
ALTERATION TYPE:	Silicific'n		Oxidation		
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Cretaceous

GROUP

Purcell

FORMATION

Lower Aldridge

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Greywacke
Argillite
Syenite
Syenite Sill
Quartzite

HOSTROCK COMMENTS: Syenite sills and dykes intrude the sediments but may or may not be related to the mineralization.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Wanda B area is underlain by quartzites and argillites of the Helikian Lower Aldridge Formation (Purcell Supergroup) which have been subjected to complex faulting, probably related to the Lewis Creek fault system immediately to the north. The stratigraphy has been intruded by a system of Cretaceous syenitic dykes and sills which locally may be coincident with mineralized zones. In many cases the syenites have suffered later stage shearing.

Mineralization appears as sulphides associated with quartz veins or stringers and within zones of silicification associated with shearing. Within the quartz stringers, blebs and masses of chalcopyrite, galena, pyrite and minor sphalerite and pyrrhotite occur. These veins and stringers seem confined predominantly to argillaceous horizons. In addition, shear zones, either crosscutting or complementary to bedding plane orientations, have been selectively silicified with the strongly silicified zones hosting disseminated chalcopyrite, pyrite and galena. Secondary malachite and azurite are developed locally.

A highly chloritized, massive and highly sheared greenstone (Moyie Intrusions diorite sill?) has been reported in the stratigraphy near the Wanda B occurrence. Mineralization is characteristically spotty and of low grades. Copper is the dominant metal with traces of gold, silver and lead.

BIBLIOGRAPHY

EMPR AR 1939-97
EMPR MAP 36
EMPR OF *1988-14
EMPR PF (*Report by R.J. Maconachie)
GSC MAP 11-1960

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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BIBLIOGRAPHY

GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/17

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW047**

NATIONAL MINERAL INVENTORY:

NAME(S): **WALLINGER**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 45 N
LONGITUDE: 115 30 14 W
ELEVATION: 2285 Metres

NORTHING: 5505887
EASTING: 607895

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Quartz Calcite Sphene Zircon
ALTERATION: Calcite Magnesite Quartz Hematite Chlorite
Serpentine Talc

MINERALIZATION AGE: Lower Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian Undefined Group Cranbrook

LITHOLOGY: Magnesite
Quartzite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Wallinger showing, a bed of coarsely crystalline, light creamy grey magnesite, approximately 45 metres thick, occurs within the Lower Cambrian Cranbrook Formation. Near the basal and upper contacts, the layer contains quartz and calcite but usually has a core zone of about 12 metres thick of relatively pure magnesite. The magnesite weathers to a rough surface with a light buff colour.

The magnesite grades upwards into a series of green quartzites with well-rounded quartz grains; accessory minerals include chlorite, serpentine and talc with minor hematite, sphene and zircon. In general it overlies light colored quartzites but in the Boulder-Wallinger creeks area these basal quartzites are, at least in part, replaced by coarse conglomerates resting unconformably on the Siyeh or Gateway formations.

BIBLIOGRAPHY

EMPR MAP 36
EMPR OF 1987-13; *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 19

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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MINFILE NUMBER: **082GNW048**

NATIONAL MINERAL INVENTORY:

NAME(S): **FERNIE CLAY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 05 N
LONGITUDE: 115 07 14 W
ELEVATION: Metres

NORTHING: 5484893
EASTING: 636078

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Residual Industrial Min.
TYPE: B06 Fireclay E07 Sedimentary kaolin

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Fernie Clay showing, the clay fires to a buff-coloured brick. All samples were too gritty and not recommended for brick; very short firing range. There are very gritty, calcareous shales with very low plasticity.

BIBLIOGRAPHY

EMPR BULL 30, p. 59
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 65; 76
CANMET RPT 54, p. 54
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW048**

MINFILE NUMBER: **082GNW049**

NATIONAL MINERAL INVENTORY:

NAME(S): **APRIL**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 49 15 N
LONGITUDE: 115 31 00 W
ELEVATION: 1982 Metres

NORTHING: 5519766
EASTING: 606699

LOCATION ACCURACY: Within 500M

COMMENTS: Trenching in northwest corner of April claim Group.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Malachite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Middle Proterozoic

GROUP

Purcell

FORMATION

Gateway

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Carbonate Rock
Clastic Rock
Mafic Flow
Skarn
Hornfels
Feldspar Porphyritic Syenite

HOSTROCK COMMENTS: Mineralization related to contact margins of syenite intrusives; various host stratigraphy.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

RELATIONSHIP:

GRADE: Hornfels

CAPSULE GEOLOGY

The April occurrence area is underlain by northerly striking, steeply dipping Helikian Gateway Formation (Purcell Supergroup) carbonate and clastic rocks, and a unit of mafic flows all of which are unconformably overlain to the east by Cambrian carbonates and fine clastics. The stratigraphy has been intruded in the northeast by an alkali-feldspar porphyritic syenite stock. At the margins of the intrusions, sediments have been metamorphosed to marbles, hornfels and skarns and locally have had low grade sporadic copper mineralization introduced along fractures and joint surfaces. Chalcopyrite on these surfaces has locally weathered to produce malachite staining.

BIBLIOGRAPHY

EMPR ASS RPT *7896, *11078, 12989
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW050**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOT 1**, WILD

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 49 00 N
LONGITUDE: 115 28 54 W
ELEVATION: 1830 Metres

NORTHING: 5519353
EASTING: 609226

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Cambrian-Ordovician

GROUP

McKay

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Alkalic Rock
Feldspar Porphyry
Syenite
Monzonite
Carbonate
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP:

GRADE: Hornfels

CAPSULE GEOLOGY

At the Hot 1 showing, minor copper mineralization occurs as fracture-fillings associated with the intrusion of monzonitic to syenitic alkali feldspar porphyry stocks and dykes. These rocks intrude and alter Upper Cambrian-Middle Ordovician carbonate and shale units of the McKay Group, Middle-Upper Cambrian Jubilee and Middle Ordovician-Silurian Beaverfoot formations. Chalcopyrite is associated with quartz veining and silica flooding and is accompanied by up to 5 per cent disseminated pyrite. Copper-rich zones are geochemically anomalous in gold, arsenic and mercury.

BIBLIOGRAPHY

EMPR ASS RPT 7896, 11078, *12989, *14855, *15906
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1987/11/17

CODED BY: GSB
REVISED BY: GP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW051**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOX**

MINING DIVISION: Fort Steele

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082G11W
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 08 N
 LONGITUDE: 115 28 52 W
 ELEVATION: 1740 Metres

NORTHING: 5495513
 EASTING: 609748

LOCATION ACCURACY: Within 500M
 COMMENTS:

COMMODITIES: Lead Copper Zinc Gold Silver

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Epigenetic Hydrothermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
 TERRANE: Ancestral North America
 METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SHOWING REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1988
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	3.4000 Grams per tonne
Gold	1.5200 Grams per tonne
Lead	0.2700 Per cent
Zinc	0.1700 Per cent

COMMENTS: Highest assay.
 REFERENCE: Assessment Report 18309.

CAPSULE GEOLOGY

The Box occurrence area is underlain by Helikian Aldridge Formation (Purcell Supergroup) sediments which are in fault contact with Lower Creston Formation (Purcell Supergroup) sediments to the north and with Devonian sediments to the south.

Spotty patches of galena are associated with quartz veins (0.5-2.0 metres wide) within Aldridge Formation quartzites. The veins may be a strike extension of the Victor vein (082GNW004) or just similar to it in character. In addition, a large occurrence of brecciated and healed quartzite hosting patches of pyrite and chalcopyrite coincides with an east trending fault associated with the Dibble-Horseshoe Creek fault.

Grab rock samples from bedding plane parallel quartz veining assayed 0.27 per cent lead, 0.17 per cent zinc, 1.52 grams per tonne gold and 3.4 grams per tonne silver (Assessment Report 18309).

In 1995, with Explore B.C. Program support, G.H. Babcock retained R. Walker, P.Geol. to carry out a programme of geological mapping and compilation, sampling and assaying. The resulting report identified four drill targets and recommended a property wide soil survey and smaller, more focussed VLF and magnetometer surveys. The study also identified a potentially economic gypsum horizon at the base of a Devonian sequence, which should be evaluated (Explore B.C. Program 95/96 - M127 DV).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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BIBLIOGRAPHY

EMPR ASS RPT 11223, 4122, 10415, 8864, 13015, 15733, 15868, *18309
EMPR Explore B.C. Program 95/96 - M127 DV
EMPR MAP 34
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

MINFILE NUMBER: **082GNW052**

NATIONAL MINERAL INVENTORY:

NAME(S): **BBX**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 49 20 N
LONGITUDE: 115 52 44 W
ELEVATION: 1098 Metres

NORTHING: 5519468
EASTING: 580642

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: 110 Vein barite
DIMENSION: Metres
COMMENTS: Barite vein

Massive
Epigenetic
Industrial Min.
STRIKE/DIP: 010/85W
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Dutch Creek	

LITHOLOGY: Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: VEIN
CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY: Barite
REFERENCE: Assessment Report 6886.

REPORT ON: N
YEAR: 1977
GRADE: 92.0000 Per cent

CAPSULE GEOLOGY

The BBX vein contains coarsely crystalline, relatively pure barite, with some traces of malachite, and occurs within a highly sheared argillite of the Helikian Dutch Creek Formation (Purcell Supergroup). The vein strikes 010 degrees and dips 85 degrees west. It may be an extension of the McIntosh vein (082GNW065) and associated with the Hall Lake fault to the west. The material assays 87 to 92 per cent barium with a specific gravity of 4.14 (Assessment Report 6886).

BIBLIOGRAPHY

EMPR ASS RPT *6886, 8794
EMPR EXPL 1978-E283
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW053**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORT STEELE** RED MOUNTAIN

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 42 10 N
LONGITUDE: 115 29 09 W
ELEVATION: 2280 Metres

NORTHING: 5506685
EASTING: 609181

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Quartz Calcite Sphene Zircon
ALTERATION: Calcite Magnesite Quartz Chlorite Serpentine
 Talc Hematite

MINERALIZATION AGE: Lower Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Undefined Group	Cranbrook	

LITHOLOGY: Magnesite
 Quartzite
 Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Fort Steele showing, a bed of coarsely crystalline, light creamy-grey magnesite, approximately 45 metres thick, occurs within the Lower Cambrian Cranbrook Formation. Near the basal and upper contacts, the layer contains quartz and calcite but usually has a core zone of relatively pure magnesite in the order of 12 metres thick. The magnesite weathers to a rough surface with a light buff colour.

The magnesite grades upwards into a series of green quartzites with well-rounded quartz grains; accessory minerals include chlorite, serpentine and talc with minor hematite, sphene and zircon. In general it overlies light colored quartzites but in the Boulder-Wallinger creeks area these basal quartzites are, at least in part, replaced by coarse conglomerates resting unconformably on the Siyeh or Gateway formations.

BIBLIOGRAPHY

EMPR MAP *36
EMPR MEM 76
EMPR OF 1987-13; *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76; *207, p. 19

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW054**

NATIONAL MINERAL INVENTORY:

NAME(S): **FAIRY CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 02 N
LONGITUDE: 115 04 59 W
ELEVATION: 1097 Metres

NORTHING: 5488574
EASTING: 638701

LOCATION ACCURACY: Within 500M
COMMENTS: Located on Fairy Creek above dam.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
COMMENTS: Phosphate occurs as nodules in sandstone
ASSOCIATED: Quartz
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION:
COMMENTS: Bedding is overturned

STRIKE/DIP: 040/40N

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Ishbel	Ranger Canyon	

LITHOLOGY: Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1987

COMMODITY
Phosphate

GRADE
1.3500 Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

A 4 metre thick phosphatic interval occurs near the top of the Permian Ranger Canyon Formation (Ishbel Group) on Fairy Creek. The uppermost 2 metres average 1.35 per cent P2O5; the lower 2 metres average 0.32 per cent P2O5 (Open File 1987-16). Phosphate is in the form of ovoid nodules and very thin partings of massive phosphate along bedding planes.

BIBLIOGRAPHY

EMPR OF 1987-16; *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNW055**

NATIONAL MINERAL INVENTORY:

NAME(S): **MUTZ CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 40 N
LONGITUDE: 115 05 04 W
ELEVATION: 1250 Metres

NORTHING: 5486039
EASTING: 638665

LOCATION ACCURACY: Within 500M

COMMENTS: On Mutz Creek immediately north of the town of Fernie.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Clay Calcite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION:
COMMENTS: Bedding is overturned.

STRIKE/DIP: 175/55W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

GROUP

Fernie

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

LITHOLOGY: Phosphorite
Shale
Calcareous Siltstone
Silty Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

0.6800

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Mutz Creek showing, a 3.1 metre thick section of phosphorite and phosphatic shale occurs near the base of the Jurassic Fernie Group. A conglomerate occurs at the base. These strata unconformably overlie calcareous siltstone and silty limestone of the Triassic Sulphur Mountain Formation (Spray River Group). The entire sequence is overturned and dips moderately to the west. The phosphate interval has an average of 0.68 per cent P2O5 across 3.1 metres (Open File 1987-16).

BIBLIOGRAPHY

EMPR OF 1987-16; *1988-14
GSC MAP 11-1960
GSC MEM 76
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1985/07/24
DATE REVISED: 1986/12/11

CODED BY: GSB
REVISED BY: SBB

FIELD CHECK: N
FIELD CHECK: Y

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 132
REPORT: RGEN0100

MINFILE NUMBER: **082GNW056**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAGER STATION**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 00 N
LONGITUDE: 115 39 04 W
ELEVATION: 823 Metres

NORTHING: 5491327
EASTING: 597536

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay
MINERALIZATION AGE: Cambrian

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Residual Industrial Min.
TYPE: R02 Expanding shale

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Shale
Clay

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

The Eager Station showing is comprised of Cambrian red shale with fair plasticity and average (4.4 per cent) shrinkage. It should be suitable for facebrick.

BIBLIOGRAPHY

EMPR BULL 30, p. 59
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76; 65, p. 33

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/23

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW056**

MINFILE NUMBER: **082GNW057**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOLLY-MOLLY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 43 05 N
LONGITUDE: 115 26 04 W
ELEVATION: 2135 Metres

NORTHING: 5508460
EASTING: 612851

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Zinc Copper Tungsten

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite Pyrite Pyrrhotite

ASSOCIATED: Scheelite

MINERALIZATION AGE: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Undefined Group	Jubilee	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Limestone
Monzonite

HOSTROCK COMMENTS: Monzonitic sill of unknown age and source.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Galena, sphalerite, chalcopyrite, pyrite and pyrrhotite occur with quartz within Middle-Upper Cambrian Jubilee Formation limestones which host a monzonite sill about 60 metres thick. Scheelite has been reported from heavy mineral samples in the vicinity of the Jolly-Molly showings.

BIBLIOGRAPHY

EMPR ASS RPT 10289, 12469
EMPR MAP 36
EMPR OF *1988-14; 1991-17
EMPR PF (*Map)
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/19

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW058**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 40 N
LONGITUDE: 115 40 04 W
ELEVATION: 1190 Metres

NORTHING: 5527746
EASTING: 595684

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Sedimentary Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Lower Aldridge

LITHOLOGY: Argillite
 Calcareous Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Pre showing, pyrite, pyrrhotite, galena, sphalerite and chalcopyrite occur as disseminations and fracture-fillings within laminated, thin bedded argillites and calcareous argillites of the Helikian Aldridge Formation (Purcell Supergroup).

BIBLIOGRAPHY

EMPR ASS RPT 2587, 2588
EMPR GEM 1969-344; 1970-471
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/19

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW059**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAZY 19**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 48 N
LONGITUDE: 115 39 37 W
ELEVATION: 915 Metres

NORTHING: 5516885
EASTING: 596417

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT:	Chalcopyrite	Pyrite	Azurite	Malachite	Chalcocite
COMMENTS:	Possible chalcocite.				
ASSOCIATED:	Quartz	Siderite	Hematite		
ALTERATION:	Silica	Malachite	Azurite	Siderite	Hematite
ALTERATION TYPE:	Silicific'n		Oxidation		
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER:	Vein	Disseminated		
CLASSIFICATION:	Sedimentary	Hydrothermal		
TYPE:	I05	Polymetallic veins Ag-Pb-Zn±Au	E04	Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Fort Steele	
Middle Proterozoic			Unnamed/Unknown Informal

LITHOLOGY: Quartzite
Argillaceous Quartzite
Quartz Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Lazy 19 showing, chalcopyrite, pyrite and hematite occurs in quartz-siderite veins hosted by quartzites and argillaceous quartzite of the Helikian Fort Steele Formation (Purcell Supergroup). The veins are commonly related to quartz diorite sills in proximity to the Lewis Creek fault zone.

In addition, sparse chalcopyrite, pyrite and perhaps chalcocite is disseminated within clean, white, massive quartzite which is silicified and well-jointed. Malachite and azurite are noted in minor amounts on weathered surfaces. This copper mineralization appears limited to the top 20 to 30 metres of a massive quartzite immediately underlying an interbedded quartzite-argillite sequence. Copper values are generally low, in the 0.01 to 0.05 per cent copper range, with about 0.5 to 1.4 grams silver associated.

BIBLIOGRAPHY

EMPR ASS RPT *3092
EMPR GEM 1970-472
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/19

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW060**

NATIONAL MINERAL INVENTORY:

NAME(S): **CEDAR**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 44 10 N
LONGITUDE: 115 29 38 W
ELEVATION: 1830 Metres

NORTHING: 5510380
EASTING: 608526

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Tungsten Copper Silver Molybdenum

MINERALS

SIGNIFICANT: Scheelite Chalcopyrite Pyrite Molybdenite
COMMENTS: Minor mineralization.
ASSOCIATED: Quartz Tremolite
ALTERATION: Silica Calcite
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Replacement Hydrothermal Skarn
TYPE: I12 W veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Kitchener	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Dolomitic Limestone
Dike
Limestone
Monzonite

HOSTROCK COMMENTS: Monzonite stock intrudes the Kitchener Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Syn-mineralization GRADE:

CAPSULE GEOLOGY

At the Cedar showing, altered, dolomitic limestones of the Helikian Kitchener Formation (Purcell Supergroup) are host to an intrusive monzonite stock and a late stage(?) light coloured dyke. The dyke and quartz veins in the sediments west of the stock carry some scheelite and minor specks of chalcopyrite and molybdenite. Some replacement textures have also been noted within the sediments adjacent to the dyke as well as calcsilicate alteration of the country rock.

BIBLIOGRAPHY

EMPR ASS RPT 2574, 5436, 5584, 8137
EMPR EXPL 1975-E41; *1977-E58; *1978-E69; 1979-78
EMPR GEM 1970-473; 1972-66; 1974-80
EMPR MAP *36
EMPR OF *1988-14; 1991-17
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/19

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW061**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAZY 32**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 36 N
LONGITUDE: 115 40 17 W
ELEVATION: 914 Metres

NORTHING: 5516500
EASTING: 595624

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz Siderite
ALTERATION: Hematite Specularite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Middle Proterozoic

GROUP

Purcell

FORMATION

Fort Steele

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Quartzite
Argillaceous Quartzite
Quartz Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Lazy 32 showing, chalcopyrite, pyrite and hematite occurs in quartz-siderite veins hosted by quartzites and argillaceous quartzites of the Helikian Fort Steele Formation (Purcell Supergroup). The veins are spatially related to quartz diorite sills and are in proximity to a northeast trending splay fault of the Lewis Creek fault zone.

BIBLIOGRAPHY

EMPR ASS RPT *3092
EMPR GEM 1970-472
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/19

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW062**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHER**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 42 48 N
LONGITUDE: 115 36 59 W
ELEVATION: 1128 Metres

NORTHING: 5507677
EASTING: 599746

LOCATION ACCURACY: Within 1 KM
COMMENTS: Located within the Cher 5 claim(?).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Hydrothermal
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Fort Steele	

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Cher showing, stratabound chalcopyrite and bornite occur within argillites and quartzites of the Helikian Fort Steele Formation (Purcell Supergroup). There is little recorded data to confirm the character and/or location of this mineralization.

BIBLIOGRAPHY

EMPR GEM 1971-419
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW063**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK BEAR (L.4844)**, MABEL (L.4845)

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 40 N
LONGITUDE: 115 57 41 W
ELEVATION: 1067 Metres

NORTHING: 5501470
EASTING: 574955

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of claim Lot 4844.

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Quartzite
Argillite
Greywacke
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

The Black Bear occurrence consists of coarsely crystalline galena, associated with sphalerite and pyrite in a quartz gangue hosted by Helikian Aldridge Formation (Purcell Supergroup) quartzites. No observations of the geological setting have been recorded from the workings but specimens on the dump indicate the sulphides may have been associated with the contact zone of a diorite sill of the Proterozoic Moyie Intrusions and Aldridge quartzites.

BIBLIOGRAPHY

EMPR AR 1899-592,661; 1900-800; 1906-251; 1926-244
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW064**

NATIONAL MINERAL INVENTORY:

NAME(S): **FEDERAL**, ROB ROY, VICTORY,
EUREKA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13W
BC MAP:

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 32 N
LONGITUDE: 115 51 32 W
ELEVATION: 900 Metres

NORTHING: 5527272
EASTING: 581962

LOCATION ACCURACY: Within 1 KM
COMMENTS: Next to Skookumchuk Creek under a 30 to 40 metre high bluff.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Copper Pyrrhotite Pyrite
ALTERATION: Chlorite Limonite
COMMENTS: Reference to a soft, talcose mineral (chlorite?).
ALTERATION TYPE: Oxidation Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Kitchener	

LITHOLOGY: Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Federal occurrence is fault-hosted within schistose sediments of the Helikian Kitchener Formation (Purcell Supergroup). The surface showing apparently consists of massive pyrite and pyrrhotite and native copper contained within a shoot or chimney of soft talcose material (chlorite?) with limonite staining. The native copper occurs as thin layers and groups of arborescent crystals within the soft matrix of the fault zone. A sample across one metre assayed 11 per cent copper. The old workings are apparently located on the south side of the creek while the fault is exposed on both north and south slopes.

BIBLIOGRAPHY

EMPR AR 1917-149; 1920-116; 1921-166
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW065**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRENDA**, BONNY #1, MCINTOSH

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 49 38 N
LONGITUDE: 115 53 09 W
ELEVATION: 1220 Metres

NORTHING: 5520016
EASTING: 580134

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Tetrahedrite Tennantite Pyrite Chalcopyrite Bornite
ASSOCIATED: Siderite Quartz Barite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Dutch Creek	

LITHOLOGY: Phyllitic Rock
Muscovite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1977

COMMODITY	GRADE	
Silver	79.0000	Grams per tonne
Gold	0.7000	Grams per tonne
Copper	1.2700	Per cent

REFERENCE: Assessment Report 6886.

CAPSULE GEOLOGY

A fault-related quartz-siderite-barite vein is host to tetrahedrite (tennantite?), minor chalcopyrite and bornite mineralization. The host rocks are units of the Helikian Dutch Creek Formation (Purcell Supergroup) which are faulted phyllitic rocks and grey-green muscovite schist. The copper minerals occur as disseminations and patches of sulphides as well as forming thin selvages on cracks and partings within siderite and barite. One grab sample assayed 1.27 per cent copper, 0.7 grams gold and 79 grams silver (Assessment Report 6886).

There is a possibility that the (McIntosh) Brenda deposit is a stratiform deposit which has later been affected by faulting and remobilization of the barite mineralization.

BIBLIOGRAPHY

EMPR AR 1921-166; *1922-187; 1923-207; 1924-186; 1925-230; 1926-246; 1927-267
EMPR ASS RPT *6886, 7613, 7690
EMPR EXPL 1978-E70; 1979-326
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW066**

NATIONAL MINERAL INVENTORY:

NAME(S): **FERNIE**, FERNIE RIDGE, DOMINION 82 PARCEL

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 00 N
LONGITUDE: 115 03 14 W
ELEVATION: 914 Metres

NORTHING: 5431133
EASTING: 642292

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: On the west limb of the McEvoy syncline which trends roughly north.
The Lookout thrust and the Pipeline normal fault are present.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Shale
Sandstone
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: M/Vol Bituminous

CAPSULE GEOLOGY

At the Fernie prospect, at least thirteen coal seams of medium volatile bituminous rank are present in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with shale, sandstone and siltstone. The seams range in thickness from 0.3 to 6.1 metres. Many of the seams contain shale bands or are argillaceous, however, a number of clean seams or parts of seams are present. The No. 0 seam (3.05 metres) is equivalent to the older No. 11 mine, and seams numbers 1 to 10 are named from stratigraphically older to younger. Seam numbers 3, 4, 5, 9, 10 and B have been extensively mined (1950). Analysis of coal samples indicate values ranging from 9.5 to 42.7 per cent ash, 17.9 to 27.1 per cent volatile matter, 29.1 to 71.2 per cent fixed carbon and 0.3 to 0.5 per cent sulphur.

The structure in the area is dominated by the north trending (axis sinuous) McEvoy syncline. There are a number of north trending faults in the area including the west dipping Lookout thrust fault (Coal Creek area), the Pipeline normal fault, the Morrisey retrothrust fault to the southwest and several other minor faults.

BIBLIOGRAPHY

EMPR BULL *33
EMPR COAL ASS RPT *289, *290, *291, *292, *293, *294
EMPR OF *1988-14
GSC MAP 11-1960
GSC P *81-1B, pp. 145-152
*Newmarch, C.B. (1950): Ph.D. Thesis, Princeton

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW067**

NATIONAL MINERAL INVENTORY:

NAME(S): **PERRY CREEK**, PERRY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

Open Pit

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 57 N
LONGITUDE: 115 59 28 W
ELEVATION: 1065 Metres

NORTHING: 5488996
EASTING: 572977

LOCATION ACCURACY: Within 500M

COMMENTS: Although some placer mining was reported done at the above given location (in the vicinity of Antwerp Creek), the location is meant only as a general location for Perry Creek.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Glacial/Fluvial Gravels

LITHOLOGY: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

It is recorded that a total of 103,823 grams of gold was recovered from Perry Creek, mostly from 1874 to 1895.

BIBLIOGRAPHY

EMPR AR 1874-14; 1876-424; 1877-403; 1878-378; 1880-429; 1881-399;
1882-362; 1883-413; 1885-498; 1886-206; 1887-270; 1889-285;
1892-534; 1894-746; 1895-671,674; 1896-505,517,522,531;
1897-523; 1898-1013; 1899-660; 1900-799; 1901-1006; 1902-257;
1903-26,93; 1904-20,109; 1905-149; 1906-132; 1907-85; 1912-137;
1913-58,121; 1914-237; 1915-108,114; 1916-190; 1918-150,188;
1919-119; 1920-116,140; 1921-126; 1922-188; 1923-207; 1924-187;
1929-297; 1933-205; 1934-G53; 1953-178
EMPR ASS RPT 7103, 7723, 8598
EMPR BULL 1-95, 28-33
EMPR EXPL 1978-E58; 1979-64
EMPR GEM 1971-447; 1972-566; 1973-66
EMPR OF *1988-14
EMPR PF (1979 MEIPS Report on Placer claims on Perry Creek (near
Lisbon Creek))
GSC MAP 11-1960
GSC MEM 76
GSC SUM RPT 1932A-II

DATE CODED: 1985/07/24
DATE REVISED: 1999/12/01

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW068**

NATIONAL MINERAL INVENTORY:

NAME(S): **UPPER MUTZ CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 02 N
LONGITUDE: 115 06 04 W
ELEVATION: 1630 Metres

NORTHING: 5495952
EASTING: 637208

LOCATION ACCURACY: Within 500M

COMMENTS: Located immediately north of Fernie on Mutz Creek.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
COMMENTS: Occurs as nodules better described as phosphatic
ASSOCIATED: Quartz
MINERALIZATION AGE: Triassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
COMMENTS: Bedding is overturned

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Spray River

FORMATION

Sulphur Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphatic Sandstone
Chert
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY: Phosphate

YEAR: 1987

GRADE: 0.5300
Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Upper Mutz Creek showing, phosphatic chert and nodular phosphatic sandstone occur in two beds 40 to 50 centimetres thick and 10 to 20 centimetres thick separated by 1 to 2 metres of non-phosphatic sandstone. The best assay obtained was 0.53 per cent P2O5 across a width of 40 centimetres (Open File 1987-16). This phosphate occurs within 25 metres of the bottom of the Triassic Sulphur Mountain Formation (Spray River Group). Bedding is overturned in this area.

BIBLIOGRAPHY

EMPR OF 1987-16; *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNW069**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH SULPHUR CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 44 25 N
LONGITUDE: 115 02 54 W
ELEVATION: 1707 Metres

NORTHING: 5511582
EASTING: 640618

LOCATION ACCURACY: Within 500M

COMMENTS: Located 14 kilometres north of Hartley Lake.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Calcite Quartz Clay
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION:
COMMENTS: Dip slope situation

STRIKE/DIP: 160/40W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Ishbel

FORMATION

Ross Creek

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Fossiliferous Limestone
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1987

COMMODITY

Phosphate

GRADE

0.9000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the North Sulphur Creek showing, a poorly exposed coquinoid bed of the Permian Ross Creek Formation (Ishbel Group) contains a few phosphate nodules as well as disseminated phosphate pellets and cement. Some of the brachiopod shells within the coquinoid bed have been phosphatized. This phosphatic horizon is 90 centimetres thick and contains 0.9 per cent P2O5 (Open File 1987-16).

BIBLIOGRAPHY

EMPR OF 1987-16; *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 146
REPORT: RGEN0100

MINFILE NUMBER: **082GNW070**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIGEL**, POLARIS

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 18 N
LONGITUDE: 115 56 54 W
ELEVATION: 915 Metres

NORTHING: 5497098
EASTING: 575959

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Pyrrhotite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary Hydrothermal
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Middle Aldridge	

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

At the Rigel showing, disseminated pyrite and pyrrhotite with sparse galena and sphalerite occur along bedding planes and as veinlets in fractures hosted by Helikian Middle Aldridge Formation (Purcell Supergroup) quartzites and argillites.

BIBLIOGRAPHY

EMPR ASS RPT 5634, 7606
EMPR EXPL 1975-E42; 1977-E59
EMPR GEM 1972-53; 1973-85
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW070**

MINFILE NUMBER: **082GNW071**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRANCH F**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 58 10 N
LONGITUDE: 115 27 04 W
ELEVATION: 1981 Metres

NORTHING: 5536383
EASTING: 611072

LOCATION ACCURACY: Within 500M

COMMENTS: Located 1.2 kilometres west of Coyote Creek on the Branch F logging road and 8 kilometres north of the north end of Top of the World Park (Fieldwork, 1988).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Anhydrite Dolomite Quartz
COMMENTS: Traces of native sulphur.
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive Podiform Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
DIMENSION: 45 x 20 Metres STRIKE/DIP:
COMMENTS: Gypsum outcrop. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Devonian	Undefined Group	Burnais	

LITHOLOGY: Gypsum
Limestone
Limestone Breccia
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: BRANCH F REPORT ON: Y
CATEGORY: Inferred YEAR: 1990
QUANTITY: 3000000 Tonnes
COMMODITY: Gypsum GRADE: 85.0000 Per cent
COMMENTS: Potential for 2 to 3 million tonnes of gypsum at 85 to 92 per cent purity.
REFERENCE: Open File 1991-15, page 21.

CAPSULE GEOLOGY

The Branch F prospect consists of gypsum exposed in an outcrop, measuring 45 by 20 metres, located along a logging road locally called Branch F. Additionally, small sinkholes, many of which contain gypsum or possibly anhydrite, are present over an area measuring 300 by 100 metres.

In the Lussier River - Coyote Creek area, individual gypsum showings have been traced from about 2 kilometres north of the confluence of the Lussier River and Coyote Creek to the northern boundary of the Top of the World Park.

Gypsum observed in the Lussier River valley is vertical to steeply dipping. Faulting may have been important in the localization and preservation of these deposits. The dominant structural feature is a north-trending syncline with shallow dipping limbs. Gypsum is present along both limbs and the axis is located along the height of land separating the Lussier River and Coyote Creek.

The gypsum, tentatively assigned to the Devonian Burnais Formation, is overlain by a black limestone breccia which may be a collapse structure caused by solution of the underlying gypsum. The

CAPSULE GEOLOGY

gypsum is underlain by Devonian dolomite and grey limestone.
The gypsum, laminated and locally massive, is grey to dark grey to black in color. Its thickness is estimated at 30 metres. Native sulphur was observed in trace amounts.
The gypsum varies from 85 to 92 per cent in purity with minor amounts of dolomite and quartz. The results (in per cent) from analysis of a sample were as follows (Open File 1991-15):

Al2O3	0.19
CaO	35.52
Fe2O3	0.09
K2O	< 0.03
MgO	2.19
MnO	< 0.01
Na2O	0.03
P2O5	0.04
SiO2	1.04
TiO2	< 0.01
SO3	40.52
H2O	17.84
Cl	< 0.01

There is a potential for approximately 2 to 3 million tonnes of gypsum from this deposit.

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 502-503
EMPR OF 1988-14; *1991-15
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1988/11/22
DATE REVISED: 1991/05/02

CODED BY: SBB
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GNW072**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRILBY**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G11W
BC MAP:

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 45 N
LONGITUDE: 115 20 14 W

NORTHING: 5485759
EASTING: 620364

ELEVATION: 1220 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: East slope of Mount Fenwick about 300 metres above Bull River.

COMMODITIES: Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP
Purcell

FORMATION
Aldridge

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Diorite
Argillite
Quartzite
Greywacke

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Trilby showing, galena and sphalerite with pyrite are contained in a quartz gangue within a diorite dyke of the Proterozoic Moyie Intrusions intruding quartzites and argillites of the Helikian Aldridge Formation (Purcell Supergroup). A tunnel about 300 metres above the river exposes faulted and broken sediments for approximately 20 metres from the portal, but there is little evidence of mineralization.

BIBLIOGRAPHY

EMPR AR 1925-229
EMPR ASS RPT 3439, 7086, 8014, 8531, 8584, 10075, 12575
EMPR EXPL 1978-E68
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW073**

NATIONAL MINERAL INVENTORY:

NAME(S): **BC, KIM**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 22 N
LONGITUDE: 115 52 35 W
ELEVATION: 1005 Metres

NORTHING: 5499150
EASTING: 581126

LOCATION ACCURACY: Within 500M

COMMENTS: Kim claims staking over and around Lot 8953 (BC).

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

At the BC showing, several small quartz-calcite veins carry minor galena, sphalerite and chalcopyrite and are hosted by Helikian Aldridge Formation (Purcell Supergroup) quartzites and argillites.

BIBLIOGRAPHY

EMPR AR 1898-1018; 1909,275; 1968-269
EMPR ASS RPT 1715, 2071, 2675, 5217, 5638, 5967, 6312
EMPR EXPL 1975-42; 1976-45; 1977-59
EMPR GEM 1969-346; 1970-475; 1972-68
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW074**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLIVIA**, BLACK SNAKE

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 43 20 N
LONGITUDE: 115 31 34 W
ELEVATION: 1249 Metres

NORTHING: 5508789
EASTING: 606235

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Helikian	Purcell	Creston	

LITHOLOGY: Sediment/Sedimentary Rock

HOSTROCK COMMENTS: Vein may be hosted by either Aldridge or Creston formations sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Olivia occurrence consists of a quartz vein carrying small amounts of chalcopyrite(?). Hand-sorted ore on the dump assayed 1.01 per cent copper, 24 grams silver and 1 gram gold. The vein may be hosted by the Helikian Aldridge or Creston formations (Purcell Supergroup) but the location is too vague to identify proper stratigraphy.

BIBLIOGRAPHY

EMPR AR *1927-266
EMPR MAP 36
EMPR OF *1988-14
GSC MAP 396A; 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW075**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIM 53**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 47 N
LONGITUDE: 115 51 20 W
ELEVATION: 976 Metres

NORTHING: 5501798
EASTING: 582590

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole K-14 on Kim Claim 53 (Assessment Report 5967).

COMMODITIES: Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite
ASSOCIATED: Quartz
ALTERATION: Chlorite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Sedimentary Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzite
Argillite
Greywacke
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

At the Kim 53 showing, traces of galena and sphalerite are disseminated within Helikian Aldridge Formation (Purcell Supergroup) quartzites, greywackes and argillites. Chlorite is associated with sulphides within the sediments. Minor chalcopyrite occurs within quartz veinlets in a diorite sill of the Proterozoic Moyie Intrusions.

BIBLIOGRAPHY

EMPR ASS RPT 1715, *2071, 5217, 5638, *5967, 6312
EMPR GEM 1969-346; 1975-E42; 1976-E45; 1977-E59
EMPR OF *1988-14
GSC MEM 76; 396A; 11-1960
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW076**

NATIONAL MINERAL INVENTORY:

NAME(S): **WAR EAGLE (L.6119)**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 32 N
LONGITUDE: 115 52 24 W
ELEVATION: 1145 Metres

NORTHING: 5527256
EASTING: 580924

LOCATION ACCURACY: Within 500M
COMMENTS: Hilltop on Crown grant 6119.

COMMODITIES: Cobalt Nickel Copper

MINERALS

SIGNIFICANT: Unknown
COMMENTS: There is no data available on the sulphides in this showing.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Kitchener	Unnamed/Unknown Informal
Middle Proterozoic			

LITHOLOGY: Unknown

HOSTROCK COMMENTS: Host rock and style of mineralization are not defined.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

British Columbia Ministry of Mines Publications report work done on the War Eagle and adjacent claims but does not describe the mineral showing or economic minerals. The reports indicate cobalt, nickel and copper are present.

BIBLIOGRAPHY

EMPR AR 1898-1013; 1900-800; 1901-1007; 1912-325
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW077**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRANCH F WEST**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 57 45 N
LONGITUDE: 115 27 34 W
ELEVATION: 1950 Metres

NORTHING: 5535599
EASTING: 610491

LOCATION ACCURACY: Within 500M

COMMENTS: Located near the west end of the Branch F logging road, 2 kilometres west of Coyote Creek (Open File 1991-15).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Anhydrite Selenite Dolomite Quartz
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive Podiform Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
DIMENSION: 60 Metres STRIKE/DIP:
COMMENTS: Outcrop length. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	
Devonian	Undefined Group	Harrogate	

LITHOLOGY: Gypsum
Limestone
Limestone Breccia
Dolomite
Sandstone
Ortho Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: BRANCH F WEST AND COYOTE REPORT ON: Y
CATEGORY: Inferred YEAR: 1990
QUANTITY: 6000000 Tonnes
COMMODITY: Gypsum GRADE: 87.0000 Per cent
COMMENTS: The Coyote (082GNW078) and this deposit have a comb. potential for 6 mt. The grade is from the Branch F West dep. where gyp. purity is 87%.
REFERENCE: Open File 1991-15, page 21.

CAPSULE GEOLOGY

The Branch F West deposit, discovered in 1989, is located near the west end of the Branch F logging road, 2 kilometres west of Coyote Creek.

In the Lussier River - Coyote Creek area, individual gypsum showings have been traced from about 2 kilometres north of the confluence of the Lussier River and Coyote Creek to the northern boundary of the Top of the World Park.

Gypsum observed in the Lussier River valley is vertical to steeply dipping. Faulting may have been important in the localization and preservation of these deposits. The dominant structural feature is a north-trending syncline with shallow dipping limbs. Gypsum is present along both limbs and the axis is located along the height of land separating the Lussier River and Coyote Creek.

Gypsum, tentatively assigned to the Devonian Burnais Formation, is exposed in outcrop along a roadcut for a length of 60 metres. Small outcrops and sinkholes with exposed gypsum occur for a distance of 300 metres north from the main showing. A thin, black limestone

CAPSULE GEOLOGY

breccia, probably also of the Burnais Formation, overlies the gypsum. A black nodular limestone, of the Devonian Harrogate Formation, conformably overlies strata of the Burnais Formation. Limestone, dolomite, sandstone and orthoquartzite, of the basal Devonian unit, underlie the gypsum.

The pale grey to grey gypsum is typically laminated to thin-bedded. Bedding and laminae are locally contorted. White selenite, as irregular lenses and blebs, dolomite, quartz and anhydrite is present in minor quantities.

The gypsum has a purity in excess of 87 per cent, analysis of a sample taken across a 25 metre width gave the following results (Open File 1991-15):

Al2O3	0.19
CaO	39.61
Fe2O3	0.11
K2O	0.07
MgO	1.79
MnO	< 0.01
Na2O	< 0.02
P2O5	0.08
SiO2	1.23
TiO2	< 0.01
SO3	42.17
H2O	18.32
Cl	< 0.01

The Coyote deposit (082GNW078), 1000 metres to the north, is believed to be the northern extension of the Branch F West deposit. These two areas are estimated to have a combined potential for 6 million tonnes of gypsum (Open File 1991-15).

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 502-503
EMPR OF 1988-14; *1991-15
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1988/11/22
DATE REVISED: 1991/12/13

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GNW078**

NATIONAL MINERAL INVENTORY:

NAME(S): **COYOTE** COYOTE CREEK

STATUS: Developed Prospect

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082G14W

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 57 55 N

LONGITUDE: 115 28 04 W

ELEVATION: 1950 Metres

NORTHING: 5535895

EASTING: 609887

LOCATION ACCURACY: Within 500M

COMMENTS: Outcrop and sinkholes between two logging roads, 2 kilometres west of Coyote Creek (Open File 1991-15).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum

ASSOCIATED: Sulphur

MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive

Podiform

Stratabound

CLASSIFICATION: Evaporite

Sedimentary

Industrial Min.

TYPE: F04 Bedded celestite

DIMENSION: 60 x 30

Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Outcrop.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Devonian

Undefined Group

Burnais

Devonian

Undefined Group

Harrogate

LITHOLOGY: Gypsum

Limestone

Limestone Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

INVENTORY

ORE ZONE: BRANCH F WEST AND COYOTE

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1990

QUANTITY: 6000000 Tonnes

COMMODITY

GRADE

Gypsum

90.0000

Per cent

COMMENTS: The Coyote and Branch F West (082GNW077) areas have a comb. poten. of 6 mt. The grade is from the Coyote deposit where gypsum purity >90%.

REFERENCE: Open File 1991-15, page 21.

CAPSULE GEOLOGY

Gypsum at the Coyote prospect is exposed in outcrop and in sinkholes, between two logging roads, in a logged off area, 2 kilometres west of Coyote Creek.

In the Lussier River - Coyote Creek area, individual gypsum showings have been traced from about 2 kilometres north of the confluence of the Lussier River and Coyote Creek to the northern boundary of the Top of the World Park.

Gypsum observed in the Lussier River valley is vertical to steeply dipping. Faulting may have been important in the localization and preservation of these deposits. The dominant structural feature is a north-trending syncline with shallow dipping limbs. Gypsum is present along both limbs and the axis is located along the height of land separating the Lussier River and Coyote Creek.

At the Coyote deposit, a thin black limestone breccia overlies the gypsum. The gypsum and limestone breccia are assigned to the Devonian Burnais Formation. These are overlain by dark grey to black nodular limestone of the Devonian Harrogate Formation.

The main gypsum showing is exposed in outcrop across a width of 30 metres with an estimated vertical height of 60 metres. The gypsum is laminated, pale grey to dark grey with some thin black

CAPSULE GEOLOGY

laminations. Native sulphur, in trace amounts, is also present.
The gypsum has a purity in excess of 90 per cent, analysis of a sample gave the following results (Open File 1991-15):

Al2O3	0.18
CaO	36.52
Fe2O3	0.09
K2O	0.07
MgO	1.05
MnO	0.01
Na2O	0.02
P2O5	0.08
SiO2	0.86
TiO2	0.01
SO3	43.45
H2O	18.88
Cl	0.01

The deposit is believed to be the northern extension of the Branch F West (082GNW077) prospect, 1000 metres to the south. These two areas are estimated to have a combined potential of 6 million tonnes of gypsum (Open File 1991-15).

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 502-503
EMPR OF 1988-14; *1991-15
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1988/11/22
DATE REVISED: 1991/12/13

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNW079**

NATIONAL MINERAL INVENTORY:

NAME(S): **WAIT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 42 00 N
LONGITUDE: 115 47 28 W
ELEVATION: 876 Metres

NORTHING: 5505978
EASTING: 587174

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole 86-2, 250 metres north of Wait Creek and 1.5 kilometres north of Bartholomew Lake, just off a main road leading south of Highway 95A, 14 kilometres east of Kimberley (Assessment Report 15496).

COMMODITIES: Zinc Silver Lead Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Sphalerite Galena Chalcopyrite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE Helikian GROUP Purcell FORMATION Aldridge IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Mudstone
Siltstone
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 3.3000 Grams per tonne
Lead 0.0600 Per cent
Zinc 0.7600 Per cent

REFERENCE: Assessment Report 15496.

CAPSULE GEOLOGY

Bedrock encountered in drill holes at the Wait showing is interpreted to belong to the Helikian Aldridge Formation (Purcell Supergroup). The rocks consist of metamorphosed fine-grained clastic sediments comprised of mudstones, siltstones and sandstones which are cut by small quartz veinlets. Numerous faults are also evident.

Mineralization in the quartz veinlets consists of pyrite, pyrrhotite, and minor amounts of sphalerite, galena and chalcopyrite. A best assay from drill core returned 0.76 per cent zinc, 3.3 grams per tonne silver and 0.06 per cent lead (Assessment Report 15496).

BIBLIOGRAPHY

EMPR ASS RPT *15496, 15824, 16614
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1991/04/22
DATE REVISED: 1991/04/24

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW080**

NATIONAL MINERAL INVENTORY:

NAME(S): **MUTT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 40 35 N
LONGITUDE: 115 34 18 W
ELEVATION: 1037 Metres

NORTHING: 5503631
EASTING: 603048

LOCATION ACCURACY: Within 500M

COMMENTS: Stripped area on the west bank of Wild Horse River, 8 kilometres north-northeast of Fort Steele (Assessment Report 15912).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Sulphide
ASSOCIATED: Ankerite Quartz Carbonate
ALTERATION: Ankerite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite
Ankerite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Bulk Sample
COMMODITY

YEAR: 1987

Gold 4.9000 Grams per tonne

COMMENTS: Gravity concentration tests on bulk rock sample.
REFERENCE: Assessment Report 15912.

CAPSULE GEOLOGY

The Mutt occurrence area is underlain by a northerly trending faulted syncline of Helikian Purcell Supergroup sediments consisting of Aldridge Formation argillites and stratigraphically higher Lower Creston Formation micaceous quartzites. The property straddles a major north-northeast fault up the Wild Horse River valley.

Recent stripping has revealed a zone of 0.3-0.6 metre wide ankerite sills injected into graphitic argillites of the Aldridge Formation. These sills have minor sulphidic quartz-carbonate tension fracture veinlets associated with them. Two bulk samples of this material revealed low (particulate) gold values in the sills and veinlets. A gravity concentrate sample assayed up to 4.9 grams per tonne gold (Assessment Report 15912).

BIBLIOGRAPHY

EMPR ASS RPT *15912
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1991/04/23
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW081**

NATIONAL MINERAL INVENTORY:

NAME(S): **HUGHES**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 52 08 N
LONGITUDE: 115 34 54 W
ELEVATION: 2530 Metres

NORTHING: 5525018
EASTING: 601922

LOCATION ACCURACY: Within 500M

COMMENTS: Trenches, 1.75 kilometres north of the summit of Teepee Mountain,
14.5 kilometres northeast of the community of Wasa (Assessment Report
16537).

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomitic Sandstone
Siltstone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1987

COMMODITY

Silver
Gold
Lead

GRADE

1597.4000 Grams per tonne
0.6800 Grams per tonne
84.0000 Per cent

COMMENTS: Dump material from trenches.
REFERENCE: Assessment Report 16537.

CAPSULE GEOLOGY

The Hughes occurrence area is underlain by sedimentary strata of the Helikian Purcell Supergroup. On the property, buff weathering, pyritic, flaggy to shaly dolomitic sandstone, dark weathering, thinly bedded dolomitic sandstone, siltstone and quartzite comprise the Aldridge Formation. Creston Formation strata underlies the main part of the property, east of the Aldridge strata. These rocks consist of thinly intercalated ribbon quartzite, graphitic siltstone and fine-grained sandstone.

The Aldridge Formation rocks contain a large number of bull quartz and quartz-sulphide veins which occur through a 100 metre thick section, and are mainly parallel to local bedding. These veins comprise a relatively flat-lying en echelon stratabound swarm localized near the top of the Aldridge Formation below the overlying Creston Formation.

The quartz veins range from a few centimetres to several metres wide and are up to 100 metres long. A few of the veins contain coarse-grained argentiferous galena and pyrite. Selected grab samples of dump material from trenches assayed up to 1597.4 grams per tonne silver, 84 per cent lead and 0.68 grams per tonne gold (Assessment Report 16537).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 161
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *16537
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1991/04/23
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW082**

NATIONAL MINERAL INVENTORY:

NAME(S): **POORMAN**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 52 49 N
LONGITUDE: 115 31 13 W
ELEVATION: 2438 Metres

NORTHING: 5526369
EASTING: 606308

LOCATION ACCURACY: Within 500M

COMMENTS: Shaft, 1.75 kilometres south of the summit of Mount Wirth, 16 kilometres east of Skookumchuck (Assessment Report 19419).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Tetrahedrite Chalcopyrite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Replacement Sedimentary
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Undefined Group Jubilee

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1989
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	29.1300 Grams per tonne
Gold	4.3500 Grams per tonne
Copper	1.2300 Per cent
Lead	0.3100 Per cent
Zinc	0.2500 Per cent

REFERENCE: Assessment Report 19419.

CAPSULE GEOLOGY

The Poorman occurrence area is underlain by moderately dipping Middle-Upper Cambrian Jubilee Formation limestone, with underlying conformable strata of the Helikian Purcell Supergroup (Nicol Creek and Sheppard formations) forming the western limb of the Lussier River syncline. The strata are intruded to the east by a Cretaceous monzonite stock.

At the Poorman shaft, tetrahedrite-chalcopyrite replacement-style mineralization occurs in Jubilee Formation limestone. The sulphides are developed along preferred fractures and have sharp contacts with the limestone. Oxidation has produced spectacular textures which form in the boxworks produced by weathering. Brilliant colours of malachite and azurite form the oxidized mineralization.

A rock chip sample at the shaft collar across a width of 1.2 metres assayed 4.35 grams per tonne gold, 29.13 grams per tonne silver, 1.23 per cent copper, 0.25 per cent zinc and 0.31 per cent lead (Assessment Report 19419).

BIBLIOGRAPHY

EMPR ASS RPT *19419
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 163
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 58-10

DATE CODED: 1991/04/23
DATE REVISED: 1991/04/23

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW083**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIGER**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G13E
BC MAP:

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 56 N
LONGITUDE: 115 31 21 W

NORTHING: 5528435
EASTING: 606108

ELEVATION: 2469 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Shaft, 500 metres north-northeast of the summit of Mount Wirth, 15.5 kilometres east of Skookumchuck (Assessment Report 19419).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Tetrahedrite Chalcopyrite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Replacement Sedimentary
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Undefined Group Jubilee

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1989

COMMODITY	GRADE	
Silver	1232.3600	Grams per tonne
Gold	5.3400	Grams per tonne
Copper	26.9000	Per cent

REFERENCE: Assessment Report 19419.

CAPSULE GEOLOGY

The Tiger occurrence area is underlain by moderately dipping Middle-Upper Cambrian Jubilee Formation limestone, with underlying conformable strata of the Helikian Purcell Supergroup (Nicol Creek and Sheppard formations) forming the western limb of the Lussier River syncline. The strata are intruded to the east by a Cretaceous monzonite stock.

At the Tiger workings, tetrahedrite-chalcopyrite replacement-style mineralization occurs in Jubilee Formation limestone. The sulphides are developed along preferred fractures and have sharp contacts with the limestone. Oxidation has produced spectacular textures which form in the boxworks produced by weathering. Brilliant colours of malachite and azurite form the oxidized mineralization.

A grab sample from the workings assayed 5.34 grams per tonne gold, 1232.36 grams per tonne silver and 26.9 per cent copper (Assessment Report 19419).

BIBLIOGRAPHY

EMPR ASS RPT *19419
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 165
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 58-10

DATE CODED: 1991/04/23
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW084**

NATIONAL MINERAL INVENTORY:

NAME(S): **PINE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 50 N
LONGITUDE: 115 49 11 W
ELEVATION: 949 Metres

NORTHING: 5496371
EASTING: 585262

LOCATION ACCURACY: Within 500M

COMMENTS: Sample locations on the east side of McClure Lake, 3 kilometres northeast of Wycliffe, between the towns of Kimberley and Cranbrook (Assessment Report 18180).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Sulphide
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Cambrian
Cretaceous

GROUP

Undefined Group

FORMATION

Eager

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Monzonite
Siltstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1988

COMMODITY

Silver

GRADE

4.6000

Grams per tonne

Gold

0.6000

Grams per tonne

REFERENCE: Assessment Report 18180.

CAPSULE GEOLOGY

The Pine occurrence is underlain by Lower-(?)Middle Cambrian Eager Formation siltstones and argillites. Just east of McClure Lake, these sedimentary rocks have been intruded by several small irregularly-shaped Cretaceous monzonitic bodies which are from 20 to approximately 100 metres in diameter. A rock chip sample from a narrow quartz vein in monzonite assayed 0.6 grams per tonne gold and 4.6 grams per tonne silver (Assessment Report 18180).

BIBLIOGRAPHY

EMPR ASS RPT *18180
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1991/04/23
DATE REVISED: 1991/04/23

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW085**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAN**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 43 53 N
LONGITUDE: 115 39 24 W
ELEVATION: 853 Metres

NORTHING: 5509632
EASTING: 596807

LOCATION ACCURACY: Within 500M

COMMENTS: Sample location near the east shore of a small unnamed lake at the head of Saugum Creek, 13 kilometres north of Fort Steele (Assessment Report 20103).

COMMODITIES: Lead Copper Silver

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Pyromorphite Siderite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Fort Steele	
Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Syenite Dike
Felsic Dike
Quartzite
Siltstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SHOWING REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:
SAMPLE TYPE:	Rock	1989
COMMODITY	GRADE	
Silver	9.5000	Grams per tonne
Copper	0.1300	Per cent
Lead	1.0800	Per cent

REFERENCE: Assessment Report 20103.

CAPSULE GEOLOGY

The Dan occurrence area is underlain by Helikian Fort Steele Formation (Purcell Supergroup) metasedimentary rocks consisting of quartzites, siltstones and argillites. Regionally, the rocks are intruded by Cretaceous felsic intrusives of syenite to granodiorite composition.

The property covers a series of east striking, steeply dipping felsic dykes which range in composition from syenite to quartz monzonite and possibly granodiorite. Mafic diorites or gabbros are also present but these may be part of the Proterozoic Moyie Intrusions. Some of the felsic dykes contain disseminated sulphides, mainly pyrite but with minor galena and chalcopyrite; siderite and pyromorphite are also evident. Some of the dykes may also have associated marginal brecciation and quartz veining. A rock sample of a 12 centimetre wide quartz vein on the footwall contact of a syenite dyke assayed 1.08 per cent lead, 0.13 per cent copper and 9.5 grams per tonne silver (Assessment Report 20103).

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RUN TIME: 16:43:39

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BIBLIOGRAPHY

EMPR ASS RPT *20103
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1991/04/24
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW086**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 43 22 N
LONGITUDE: 115 35 20 W
ELEVATION: 2133 Metres

NORTHING: 5508764
EASTING: 601709

LOCATION ACCURACY: Within 500M

COMMENTS: A hand-dug trench on the northeast slopes of Lakit Mountain, 300 metres above Victoria Creek, 12 kilometres north of Fort Steele (Assessment Report 19203).

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite
Siltstone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1989

COMMODITY
Silver
Lead

<u>GRADE</u>	
1068.1000	Grams per tonne
77.0500	Per cent

REFERENCE: Assessment Report 19203.

CAPSULE GEOLOGY

The Kit occurrence is underlain by argillites, siltstones and quartzites of the Helikian Aldridge Formation (Purcell Supergroup). On the ridges of Lakit Mountain, numerous off-white to pale grey, short quartz stringers intrude all rock types. The veins are up to 0.75 metres wide, generally strike north-northwest and dip approximately 75 degrees west.

A hand-dug trench approximately 6 metres long and 1 metre wide is located on the property. Trench wallrock is a brown, fine to medium-grained argillite. Dump material adjacent to the trench consists of shattered white quartz with abundant galena occurring as medium to large blebs and fracture-fillings. A high-grade grab sample of this material assayed 77.05 per cent lead and 1068.1 grams per tonne silver (Assessment Report 19203).

BIBLIOGRAPHY

EMPR ASS RPT *19203
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1991/04/24
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW087**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN FIVE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G12E 082G13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 44 49 N
LONGITUDE: 115 30 57 W
ELEVATION: 1585 Metres

NORTHING: 5511552
EASTING: 606921

LOCATION ACCURACY: Within 500M

COMMENTS: Adits, 850 metres north and above the confluence of the Wild Horse and East Wild Horse rivers, 17 kilometres north-northeast of Fort Steele (Assessment Report 18027).

COMMODITIES: Lead Zinc Copper Silver Gold

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Creston

LITHOLOGY: Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: DUMP REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	84.7000	Grams per tonne
Gold	0.9200	Grams per tonne
Copper	0.2000	Per cent
Lead	2.2400	Per cent
Zinc	0.9500	Per cent

COMMENTS: Upper adit dump material.
REFERENCE: Assessment Report 18027.

CAPSULE GEOLOGY

The Golden Five occurrence area is underlain by Helikian Purcell Supergroup strata which is folded and overturned above thrust faults to the east. Intrusives include numerous dykes and sills and a quartz monzonite plug two kilometres to the southeast.

The property is underlain by dark grey and green argillites of the Creston Formation (Purcell Supergroup). The strata are overturned and strike 200 degrees with 50 degree dips to the west. Three old adits have explored a quartz vein system crosscutting the argillite. A grab sample from the upper adit dump material assayed 2.24 per cent lead, 0.95 per cent zinc, 0.20 per cent copper, 84.7 grams per tonne silver and 0.92 grams per tonne gold (Assessment Report 18027).

BIBLIOGRAPHY

EMPR ASS RPT *18027
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76

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RUN TIME: 16:43:39

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REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 58-10

DATE CODED: 1991/04/24
DATE REVISED: 1991/04/24

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GNW088**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHRIS**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 50 05 N
LONGITUDE: 115 52 14 W
ELEVATION: 1357 Metres

NORTHING: 5520866
EASTING: 581220

LOCATION ACCURACY: Within 500M

COMMENTS: Location is legal claim post at center of 4 claim block and showings.

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Replacement Epigenetic Industrial Min.
TYPE: * Unknown
SHAPE: Tabular
COMMENTS: Barite occurs in breccia, may be structurally controlled.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Kitchener	

LITHOLOGY: Argillaceous Dolomite
Argillaceous Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Chris barite showing is located on the west side of Lost Dog Lake on Lost Dog Creek, approximately 8.5 kilometres northwest of Tata Creek. Access is by logging roads from Tata Creek. The claims were staked in 1978 to cover barite mineralization. Hostrocks are argillaceous dolomite and limestone of the Helikian Kitchener Formation. Several outcrops expose barite as cement in an east-west trending crush zone within argillaceous dolomite. Four hand trenches were dug and two, about 3 metres apart, expose barite mineralization up to 50 centimetres wide. Two blocks of baritic dolomite, 1.2 metres in diameter and 6 metres apart, were reported (Assessment Report 8793).

BIBLIOGRAPHY

EMPR ASS RPT 8793
EMPR OF MAP 1987-8; 1988-14

DATE CODED: 1993/03/05
DATE REVISED: / /

CODED BY: KDH
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GNW089**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRANCHEYE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 55 30 N
LONGITUDE: 115 51 57 W
ELEVATION: 1040 Metres

NORTHING: 5530908
EASTING: 581408

LOCATION ACCURACY: Within 500M

COMMENTS: The Brancheye is located west of the settlement of Skookumchuck, which is situated 53 kilometres north of Cranbrook and 39 kilometres north of Kimberley on Highway 93/95. For additional location details see Capsule Geology.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Malachite
ASSOCIATED: Chlorite Pyrophyllite
ALTERATION: Sericite Carbonate

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Kitchener

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Dolomitic Siltstone
Phyllitic Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1997

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

1.0000

Per cent

REFERENCE: Derek Brown, 1997 (DBR97-380,381).

CAPSULE GEOLOGY

The Brancheye is located west of the settlement of Skookumchuck, which is situated 53 kilometres north of Cranbrook and 39 kilometres north of Kimberley on Highway 93/95.

From a point 1 kilometre south of Skookumchuck on Highway 93/95, follow Farstad Way west for 2.7 kilometres (Farstad Way is the road to the Skookumchuck pulp mill and there is a sign indicating this at the junction of Farstad Way and Highway 93/95). Before arriving at the pulp mill turn west on Torrent Road. Follow Torrent Road 2.7 kilometres to its junction with the Skookumchuck Mountain Road (before arriving at the Skookumchuck Mountain Road the Torrent Road crosses the railroad siding leading to the pulp mill, the Skookumchuck River and the main railroad tracks). From the junction of the Skookumchuck Mountain Road and the Torrent Road, branch west on the Skookumchuck Mountain Road and follow this road to the 5-kilometre sign. From this point follow a logging road to the west that is signed as Branch A. Branch A is followed approximately 2.5 kilometres to where the road ends at a landing. From the landing proceed at a compass bearing of 300 degrees for a distance of 300 metres to where the location line for the Brancheye claims intersects the recent logging. The location line for the claim has been chain-sawed out to make a base line for the first several hundred metres after which the location line can be easily followed due west through the open, mature forest to the showing. The showing is on a talus slope that extends from the Skookumchuck River east for

CAPSULE GEOLOGY

approximately 200 metres. The elevation at the landing at the end of the road is 1439 metres, while the elevation at the showing is 1040 metres. Walking time to the showing is approximately 1 hour.

Chalcopyrite occurs in phyllite and siltstone of the Helikian Kitchener Formation. A grab sample assayed 1.0 per cent copper (Derek Brown, 1997).

BIBLIOGRAPHY

O'Grady, F. (1997): Summary of Prospecting Skookumchuck River area, Brancheve Cu Showing, unpub. report.

DATE CODED: 1997/09/11
DATE REVISED: 1998/01/02

CODED BY: DAB
REVISED BY: DAB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GNW090**

NATIONAL MINERAL INVENTORY:

NAME(S): **PAUL-MIKE**, PAUL, MIKE

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G13E 082G12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 46 13 N
LONGITUDE: 115 41 44 W
ELEVATION: 853 Metres

NORTHING: 5513906
EASTING: 593929

LOCATION ACCURACY: Within 500M

COMMENTS: Drillholes along road beside Lewis Creek, east of the Kootenay River, about 23 kilometres northeast of the community of Kimberley (Assessment Report 22258).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Sedimentary
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Helikian	Purcell	Fort Steele	

LITHOLOGY: Quartzite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

The Paul-Mike claim group is located in the Rocky Mountain Trench, at the foot of the west-facing slope of the Hughes Range. The staking of the claims was based on a geological model which postulated that Sullivan-style lead-zinc-silver mineralization (082FNE052) could exist at depth in the area.

The Paul-Mike property is believed to be underlain by clastic rocks of the Helikian Purcell Supergroup (Fort Steele and Aldridge formations) but are extensively covered by overburden which covers the position of the Rocky Mountain Trench fault. The Fort Steele Formation crops out on the west edge of the property and has moderate westerly dips towards the centre of the claims. Here, the Fort Steele Formation represents the upper limb of a recumbent fold whose axial plane strikes north-northwest and dips west. If the projection of the Rocky Mountain Trench fault passes through the property it would transect and displace the upper limb of the recumbent fold. Because the direction and magnitude of movement on the fault is unknown, it is difficult to predict which formation underlies the overburden on the west half of the claims area.

Diamond drilling in 1991 intersected quartzites and siltstones similar to Fort Steele Formation units but with some intervals similar to Aldridge Formation. Chloritic alteration, minor pyrite and very minor chalcopyrite were noted in the core.

The Paul claims were staked in 1981 and heavy mineral reconnaissance samples of glacial drift were collected and analysed on behalf of C. Fipke. In 1982, an airborne electromagnetic, resistivity and magnetic survey was completed on behalf of Dia Met Minerals Ltd. In 1985, induced polarization surveys were conducted over the claims and heavy mineral geochemical sampling completed on behalf of Dia Met Minerals Ltd. Bearcat Exploration Ltd. optioned the property from Dia Met Minerals Ltd. and drilled three rotary holes totalling 546 metres. In 1987 and 1988, Dia Met Minerals Ltd. drilled three deep holes through overburden to reach bedrock in preparation for diamond core drilling. Two of these holes were successfully cased to bedrock while a third was drilled to bedrock

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but subsequently lost due to technical problems. During this phase of the work on the property, one of the earlier rotary holes was deepened but technical difficulties prevented getting to bedrock. In 1991, Dia Met Minerals Ltd. re-entered the two holes which were previously cased to bedrock and successfully cored bedrock from both holes.

BIBLIOGRAPHY

EMPR ASS RPT 10289, 11612, 13689, 14835, 17726, *22258, 25631
GSC MAP 11-1960
GSC MEM 76
WWW <http://www.infomine.com/>
Chevron File

DATE CODED: 1998/12/07
DATE REVISED: 1998/12/08

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE001**

NATIONAL MINERAL INVENTORY:

NAME(S): **PHILLIPS CREEK**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:
LATITUDE: 49 01 30 N
LONGITUDE: 114 59 49 W
ELEVATION: 1342 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Open Pit

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5432168
EASTING: 646431

COMMODITIES: Barite Copper

MINERALS

SIGNIFICANT: Barite Chalcopyrite Pyrite
ASSOCIATED: Carbonate Barite Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E04 Sediment-hosted Cu
DIMENSION:
COMMENTS: Barite vein; variable strike.

110 Vein barite
STRIKE/DIP: 280/80S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Sheppard	

LITHOLOGY: Brecciated Argillite
Quartzite
Volcanic Rock
Altered Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: QUARRY

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Bulk Sample
COMMODITY: Barite
GRADE: 57.4600 Per cent
YEAR: 1940

REFERENCE: Minister of Mines Annual Report 1954.

CAPSULE GEOLOGY

The Phillips Creek occurrence is in the area of the Wilda (082GSW019) and Green (082GSW020) showings and may represent a duplication of the Wilda showing although the descriptions are somewhat different.

The Phillips Creek occurrence consists of a main vein 15 centimetres to 1.53 metres in width and has been traced in excess of 107 metres across the nose of the ridge at 1340 metres elevation. The vein strikes 280 degrees at its east end and changes to 295 degrees at the west end. It crosscuts a sequence of Helikian Sheppard Formation (Purcell Supergroup) volcanics which dip gently northward. The hanging wall of the vein is reported as an altered porphyry, the footwall as a brecciated argillite.

The vein consists of massive, opaque, white barite but considerable carbonate is disseminated throughout in masses up to about 15 centimetres in diameter. Minor pyrite, chalcopyrite and quartz are also present. The iron carbonate and pyrite have oxidized on weathered surfaces to produce some limonite which stains the barite a yellowish brown. Accessory barite veins up to 30 centimetres wide are present; they are parallel or perpendicular to the main vein.

Seven tonnes of barite were shipped from two small quarries in 1940. Analyses were 57.46 per cent BaO, 0.64 per cent CaO, 0.18 per

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RUN TIME: 16:43:39

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CAPSULE GEOLOGY

cent total Fe and 31.45 per cent SO₃ (Minister of Mines Annual Report 1940).

BIBLIOGRAPHY

EMPR AR *1954-175; 1967-274
EMPR ASS RPT *1023
GSC MAP 20-1958; 11-1960; 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/02

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE002**

NATIONAL MINERAL INVENTORY:

NAME(S): **FENSTER CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 00 N
LONGITUDE: 114 53 24 W
ELEVATION: 2013 Metres

NORTHING: 5446274
EASTING: 653862

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
ASSOCIATED: Quartz Calcite Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I10 Vein barite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Roosville	

LITHOLOGY: Siltstone
Sandstone
Argillite
Quartzite
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Fenster Creek showing, quartz-calcite-barite veins cut strata of the Helikian Roosville Formation (Purcell Supergroup) consisting of siltstone, sandstone, argillite, quartzite and dolomite, in the southwestern part of the MacDonald Range. Three barite occurrences were discovered along the crestal region of the Wigwam anticline. The veins are steeply dipping fracture-fillings that vary in thickness from a few centimetres to over one metre.

BIBLIOGRAPHY

GSC MAP 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/03

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE003**

NATIONAL MINERAL INVENTORY:

NAME(S): **OUTLIER RIDGE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 40 N
LONGITUDE: 114 51 14 W
ELEVATION: 2075 Metres

NORTHING: 5442026
EASTING: 656617

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
ASSOCIATED: Quartz Calcite Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I10 Vein barite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Roosville	

LITHOLOGY: Siltstone
Argillite
Sandstone
Quartzite
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Outlier Ridge showing, steeply dipping quartz-calcite-barite veins cut strata of the Helikian Roosville Formation (Purcell Supergroup) consisting of siltstone, argillite, sandstone, quartzite and dolomite, in the southwestern part of the MacDonald Range. Three barite showings were discovered along the crestal region of the Wigwam anticline. The veins are fracture-fillings that vary in thickness from a few centimetres to over one metre.

BIBLIOGRAPHY

GSC MAP 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/03

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE004**

NATIONAL MINERAL INVENTORY:

NAME(S): **COULDREY RIDGE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 30 N
LONGITUDE: 114 45 04 W
ELEVATION: 2135 Metres

NORTHING: 5434524
EASTING: 664346

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
ASSOCIATED: Quartz Calcite Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I10 Vein barite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Roosville	

LITHOLOGY: Siltstone
Sandstone
Argillite
Quartzite
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Couldrey Ridge showing, steeply dipping quartz-calcite-barite veins cut strata of the Helikian Roosville Formation (Purcell Supergroup) consisting of siltstone, sandstone, argillite, quartzite and dolomite, in the southwestern part of the MacDonald Range. Three barite showings were discovered along the crestal region of the Wigwam anticline. The veins are fracture-fillings that vary in thickness from a few centimetres to over one metre.

BIBLIOGRAPHY

GSC MAP 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/03

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE005**

NATIONAL MINERAL INVENTORY:

NAME(S): **LODGEPOLE CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 30 N
LONGITUDE: 114 54 34 W
ELEVATION: 1375 Metres

NORTHING: 5463835
EASTING: 651957

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate Fluorapatite
MINERALIZATION AGE: Triassic-Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic
Triassic

GROUP

Fernie
Spray River

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Nodular Phosphatic Sandstone
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Lodgepole Creek showing, phosphate is identified within a nodular phosphatic sandstone at the base of the Triassic Spray River Group, and as a nodular and oolitic phosphate rock and phosphatic shale at the base of the Jurassic Fernie Group.

BIBLIOGRAPHY

EMPR AR 1966-271
EMPR OF 1987-16
EMPR Report Dec. 1, 1967 "Phosphate Occurrences in B.C." (unpub. report)
GSC MAP 20-1958; 1154A
GSC MEM *336
GSC P 58-10; *61-24
CIM 1944 Vol.36, pp. 566-605

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/06

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE006**

NATIONAL MINERAL INVENTORY:

NAME(S): **COMMERCE F & G**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 40 N
LONGITUDE: 114 24 55 W
ELEVATION: 2350 Metres

NORTHING: 5450435
EASTING: 688370

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Gold Silver Molybdenum

MINERALS

SIGNIFICANT: Bornite Chalcopyrite Chalcocite Tetrahedrite Molybdenite
ASSOCIATED: Quartz Siderite Pyrrhotite Pyrite Arsenopyrite
COMMENTS: Minor hematite and arsenopyrite.
ALTERATION: Hematite Malachite Azurite Siderite
COMMENTS: Malachite and azurite noted particularly in small greisen zones.
ALTERATION TYPE: Oxidation Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary Hydrothermal
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
105 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian Cretaceous-Tertiary	Purcell	Grinnell	Unnamed/Unknown Informal

LITHOLOGY: Siltstone
Shale
Quartzite
Syenite
Dioritic Sill

HOSTROCK COMMENTS: Purcell age diorite sills and dykes intrude the succession.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE:

CAPSULE GEOLOGY

The Commerce Peak area (Commerce F & G) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and redbeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Sihyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

EMPR AR 1967-272
EMPR ASS RPT *3336, *4535, 5070, 5560, 5938, 6398, 7567, 8301, *12638
EMPR EXPL 1975-E41; 1976-E42; 1977-E55; *1978-E66; 1979-76; 1980-97
EMPR GEM 1970-477; *1973-83; *1974-78
GSC MAP 35-1961

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 184
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 336
GSC P 61-24
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/09

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE007**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRI 37**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 17 N
LONGITUDE: 114 22 59 W
ELEVATION: 2200 Metres

NORTHING: 5449806
EASTING: 690743

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Gold Silver Molybdenum

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite Tetrahedrite Molybdenite
ASSOCIATED: Pyrite Pyrrhotite Quartz Arsenopyrite Siderite
ALTERATION: Hematite Malachite Azurite
COMMENTS: Malachite and azurite noted particularly in small greisen zones in argillites.

ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary Hydrothermal Igneous-contact
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Cretaceous-Tertiary	Purcell	Grinnell	Unnamed/Unknown Informal

LITHOLOGY: Argillite
Quartzite
Syenite

HOSTROCK COMMENTS: Purcell age diorite dykes and sills intrude succession.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Commerce Peak area (Tri 37) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and redbeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Sihyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

EMPR ASS RPT 3160, *4535, 5070
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24
WWW <http://www.infomine.com/index/properties/COMM.html>;
www.infomine.com/index/properties/COMMERCE.html

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/09

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE007**

MINFILE NUMBER: **082GSE008**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIN 22**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 29 N
LONGITUDE: 114 16 29 W
ELEVATION: 2530 Metres

NORTHING: 5435635
EASTING: 699158

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Uranium

MINERALS

SIGNIFICANT: Covellite Chalcocite Bornite
ALTERATION: Malachite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Lin 22 showing, mineralization consists of fine disseminations, or blebs (2 to 3 millimetres) of copper sulphides confined to quartzite beds of the Helikian upper Grinnell Formation. Where there is enrichment of copper sulphides, radiometric surveys indicate an anomalous radioactivity from uranium or possibly thorium enrichment.

Stratabound covellite, bornite and chalcocite occur at several quartzite horizons in the Grinnell Formation. The best mineralized beds are in the upper Grinnell Formation, are traceable laterally several thousand metres with interruptions, and may reach up to 10 per cent sulphides over several centimetres. Malachite is widespread at surface and to a depth of about 1 metre. The thickness of these mineralized quartzites rarely exceeds 1 metre. Radiometric prospecting indicates anomalous values in the order of 10,000 to 20,000 counts per minute locally with background in the area about 2500 counts per minute by a McPhar TV-1A spectrometer.

BIBLIOGRAPHY

EMPR ASS RPT *2703, 5694, 6521, 7678
EMPR EXPL *1975-E40; 1977-E55; 1979-75
EMPR GEM 1970-478
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1987/07/07

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE009**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOLF, BETTY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 45 N
LONGITUDE: 114 58 53 W
ELEVATION: 1833 Metres

NORTHING: 5430808
EASTING: 647605

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Barite
ASSOCIATED: Quartz
ALTERATION: Sericite Malachite Specularite
ALTERATION TYPE: Sericitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary Epigenetic
TYPE: E04 Sediment-hosted Cu I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Sheppard

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sub Greywacke
Quartzitic/Quartzose Sandstone
Stromatolitic Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Wolf showing, disseminated chalcopyrite occurs as 1 millimetre grains hosted by a subgreywacke unit and quartzitic sandstone of the Helikian lower Sheppard Formation (Purcell Supergroup). Disseminated sulphides are noted in close association to small normal faults which have little offset. Mineralization occurs immediately below (about 12 metres) a marker horizon of stromatolitic dolomite of the upper Sheppard Formation. The stromatolitic dolomite is also host to mineralized, quartz-filled fractures up to about 1 metre above the basal contact with the underlying mineralized clastic sediments. Sericite alteration is distinctive in mineralized areas. Quartz veins may contain chalcopyrite, barite, specular hematite and/or minor sphalerite but the veins are generally narrow and poorly mineralized.

BIBLIOGRAPHY

EMPR AR 67-274
EMPR ASS RPT *1023
GSC MAP 11-1960; 35-1961
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/22

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE010**

NATIONAL MINERAL INVENTORY:

NAME(S): **CABIN**, NOMAD

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 52 N
LONGITUDE: 114 58 34 W
ELEVATION: 1733 Metres

NORTHING: 5431035
EASTING: 647985

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Barite
ASSOCIATED: Quartz
ALTERATION: Sericite Malachite Specularite
ALTERATION TYPE: Sericitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary Epigenetic
TYPE: E04 Sediment-hosted Cu I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Sheppard

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sub Greywacke
Quartzitic/Quartzose Sandstone
Stromatolitic Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Cabin showing area, disseminated chalcopyrite occurs as 1 millimetre grains hosted by a subgreywacke unit and quartzitic sandstone of the Helikian lower Sheppard Formation (Purcell Supergroup). Disseminated sulphides are noted in close association to small normal faults which have little offset. Mineralization occurs immediately below (about 12 metres) a marker horizon of stromatolitic dolomite of the upper Sheppard Formation. The stromatolitic dolomite is also host to mineralized, quartz-filled fractures up to about 1 metre above the basal contact with the underlying mineralized clastic sediments. Sericite alteration is distinctive in mineralized areas. Quartz veins may contain chalcopyrite, barite, specular hematite and/or minor sphalerite but the veins are generally narrow and poorly mineralized.

BIBLIOGRAPHY

EMPR AR 67-274
EMPR ASS RPT *1023
GSC MAP 11-1960; 35-1961
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/04

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE011**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIN 20**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 50 N
LONGITUDE: 114 16 04 W
ELEVATION: 1985 Metres

NORTHING: 5436302
EASTING: 699642

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Uranium Molybdenum

MINERALS

SIGNIFICANT: Covellite Bornite Chalcocite Molybdenite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu
COMMENTS: Beds dip northeasterly as part of Lewis thrust sheet.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Helikian GROUP Purcell FORMATION Grinnell IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Lin 20 showing area, mineralization consists of fine disseminations, or blebs (1 to 3 millimetres) of copper sulphides confined to quartzite beds of the Helikian Grinnell Formation. Where there is enrichment of copper sulphides, radiometric surveys indicate anomalous radioactivity probably from uranium or thorium(?) enrichment. Stratabound covellite, bornite and chalcocite occur at several quartzite horizons in the Grinnell Formation. The best mineralized beds are traceable laterally over a thousand metres with interruptions, and may reach up to 10 per cent sulphides over several centimetres. Malachite is widespread at surface and to a depth of about 1 metre. The thickness of these mineralized horizons rarely exceeds 1 metre. Radiometric prospecting indicates anomalous readings in the range of 200 to 400 counts per second coincidental with areas of stronger sulphide enrichment. Background is about 50 counts per second on a BGS-1S Scintrex scintillometer. Trace amounts of molybdenum is also reported to be associated.

BIBLIOGRAPHY

EMPR ASS RPT *2703, 5694, 6521, 7678
EMPR EXPL *1975-E40; 1977-E55; 1979-75
EMPR GEM 1970-478
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1987/07/07

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE012**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIN 5**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 53 N
LONGITUDE: 114 16 27 W
ELEVATION: 1372 Metres

NORTHING: 5438230
EASTING: 699105

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Covellite Bornite Chalcocite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu
COMMENTS: Beds dip northeasterly as part of Lewis thrust sheet.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Lin 5 showing area, mineralization consists of finely disseminated, or blebs (1 to 3 millimetres) of copper sulphides confined to quartzite beds of the Helikian Grinnell Formation. Where there is enrichment of copper sulphides, radiometric surveys also indicate higher radioactivity.

Stratabound covellite, bornite and chalcocite occur at several quartzite horizons in the Grinnell Formation. The best mineralized beds are traceable laterally over a thousand metres with interruptions, and may reach up to 10 per cent sulphides over several centimetres. Malachite is widespread at surface and to a depth of about 1 metre. The thickness of these mineralized horizons rarely exceeds 1 metre.

BIBLIOGRAPHY

EMPR ASS RPT *2703, 5694, 6521, 7678
EMPR EXPL *1975-E40; 1977-E55; 1979-75
EMPR GEM 1970-478
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/09

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE013**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIN 4**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 04 N
LONGITUDE: 114 16 51 W
ELEVATION: 1525 Metres

NORTHING: 5438552
EASTING: 698606

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Covellite Bornite Chalcocite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu
COMMENTS: Beds dip northeasterly as part of Lewis thrust sheet.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Lin 4 showing area, mineralization consists of finely disseminated, or blebs (1 to 3 millimetres) of copper sulphides confined to quartzite beds of the Helikian Grinnell Formation. Where there is enrichment of copper sulphides, radiometric surveys also indicate anomalous radioactivity.

Stratabound covellite, bornite and chalcocite occur at several quartzite horizons in the Grinnell Formation. The best mineralized beds are traceable laterally over a thousand metres with interruptions, and may reach up to 10 per cent sulphides over several centimetres. Malachite is widespread at surface and to a depth of about 1 metre. The thickness of these mineralized horizons rarely exceeds 1 metre.

BIBLIOGRAPHY

EMPR ASS RPT *2703, 5694, 6521, 7678
EMPR EXPL *1975-E40; 1977-E55; 1979-75
EMPR GEM 1970-478
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/09

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE014**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIN 9**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 07 N
LONGITUDE: 114 17 32 W
ELEVATION: 1920 Metres

NORTHING: 5438615
EASTING: 697771

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Covellite Bornite Chalcocite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu
COMMENTS: Beds dip northeasterly as part of the Lewis thrust sheet.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Lin 9 showing area, mineralization consists of finely disseminated, or blebs (1 to 3 millimetres) of copper sulphides confined to quartzite beds of the Helikian Grinnell Formation. Where there is enrichment of copper sulphides, radiometric surveys also indicate higher radioactivity.

Stratabound covellite, bornite and chalcocite occur at several quartzite horizons in the Grinnell Formation. The best mineralized beds are traceable laterally over a thousand metres with interruptions, and may reach up to 10 per cent sulphides over several centimetres. Malachite is widespread at surface and to a depth of about 1 metre. The thickness of these mineralized horizons rarely exceeds 1 metre.

BIBLIOGRAPHY

EMPR ASS RPT *2703, 5694, 6521, 7678
EMPR EXPL *1975-E40; 1977-E55; 1979-75
EMPR GEM 1970-478
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/09

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE015**

NATIONAL MINERAL INVENTORY:

NAME(S): **STANG, PAUL**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 50 N
LONGITUDE: 114 17 44 W
ELEVATION: 2013 Metres

NORTHING: 5451049
EASTING: 697083

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Proterozoic	Purcell	Kintla	Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Stang showing, stratabound chalcopyrite, bornite and chalcocite are disseminated within Helikian upper Kintla Formation quartzite and concentrated at the margins of Proterozoic Moyie Intrusions diorite sills which occur in the succession.

BIBLIOGRAPHY

EMPR ASS RPT 3160
EMPR GEM 1970-478
GSC MEM 336
GSC P 61-24
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/04

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE016**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIKE 30**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 20 45 N
LONGITUDE: 114 34 09 W
ELEVATION: 1830 Metres

NORTHING: 5468744
EASTING: 676555

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite
ASSOCIATED: Pyrrhotite Pyrite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP

Purcell

FORMATION

Grinnell

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Mike 30 showing, disseminated chalcocite, chalcopyrite and bornite are found within quartzite units of the Helikian Grinnell Formation. Malachite staining is common on surface exposures. Chalcopyrite, with pyrite and minor pyrrhotite, is concentrated locally along the margins of diorite sills of the Proterozoic Moyie Intrusions.

BIBLIOGRAPHY

EMPR ASS RPT *3160, 3161
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/04

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE017**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOP 27**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 53 N
LONGITUDE: 114 22 27 W
ELEVATION: 1493 Metres

NORTHING: 5445382
EASTING: 691545

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite

ALTERATION: Malachite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated

CLASSIFICATION: Sedimentary

TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Top 27 showing, stratabound chalcocite, chalcopyrite and bornite are disseminated within quartzite horizons of the Helikian Grinnell Formation. Malachite staining is common on weathered surfaces. Bornite and chalcopyrite also occur as veinlets and patches in quartzites.

BIBLIOGRAPHY

EMPR ASS RPT 2746, 2749, 3160, *3336
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/04

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE018**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOP 12**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 07 N
LONGITUDE: 114 22 31 W
ELEVATION: 1435 Metres

NORTHING: 5445812
EASTING: 691449

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Top 12 showing, stratabound chalcocite, chalcopyrite and bornite are disseminated within quartzite horizons of the Helikian Grinnell Formation. Malachite staining is common on weathered surfaces. Bornite and chalcopyrite also occur in patches and as veinlets in quartzites.

BIBLIOGRAPHY

EMPR ASS RPT 2746, 2749, 3160, *3336
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/04

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE019**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRI 30**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 48 N
LONGITUDE: 114 25 04 W
ELEVATION: 2379 Metres

NORTHING: 5448823
EASTING: 688243

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold Molybdenum

MINERALS

SIGNIFICANT:	Chalcocite	Chalcopyrite	Bornite	Molybdenite
ASSOCIATED:	Arsenopyrite			
ALTERATION:	Hematite	Malachite	Azurite	Siderite
ALTERATION TYPE:	Oxidation			
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER:	Vein	Stratabound	Disseminated	
CLASSIFICATION:	Sedimentary			
TYPE:	E04 Sediment-hosted Cu		H08	Alkalic intrusion-associated Au
	I05 Polymetallic veins Ag-Pb-Zn±Au			

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite
Syenite Sill
Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Commerce Peak area (Tri 30) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and rebeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Siyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

EMPR ASS RPT *3160, *4535, 5070, 5560, 5938, 6398, 7567, 8301, 12638
EMPR GEM 1970-477
GSC MAP 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE020**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRI 38**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 14 N
LONGITUDE: 114 25 04 W
ELEVATION: 2318 Metres

NORTHING: 5449626
EASTING: 688215

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold Molybdenum

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite
ASSOCIATED: Arsenopyrite
ALTERATION: Hematite Malachite Azurite Siderite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	

LITHOLOGY: Quartzite
Syenite Sill
Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Commerce Peak area (Tri 38) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and rebeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Siyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

EMPR ASS RPT *3160, *4535, 5070, 5560, 5938, 6398, 7567, 8301, 12638
13978
EMPR GEM 1970-477
GSC MAP 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE021**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAGE 9**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 41 N
LONGITUDE: 114 22 04 W
ELEVATION: 2165 Metres

NORTHING: 5443175
EASTING: 692088

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Specularite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Sage 9 showing, chalcopyrite and bornite are disseminated within Helikian Grinnell Formation quartzites and are locally concentrated along the margins of diorite sills of the Proterozoic Moyie Intrusions. Malachite is common on weathered surfaces. Chalcopyrite and bornite are common in veinlets within quartzites and with specularite in fractures in diorites.

BIBLIOGRAPHY

EMPR ASS RPT 2746, 2749, 3160, *3336
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/04

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 200
REPORT: RGEN0100

MINFILE NUMBER: **082GSE022**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAGE 6**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 23 N
LONGITUDE: 114 21 53 W
ELEVATION: 2074 Metres

NORTHING: 5444480
EASTING: 692266

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ALTERATION: Malachite Specularite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian Proterozoic	Purcell	Grinnell	Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Sage 6 showing, chalcopyrite and bornite occur disseminated within the Helikian Grinnell Formation quartzites within localized zones of enrichment. Sulphides are also concentrated sporadically at the margins of diorite sills of the Proterozoic Moyie Intrusions. Malachite is common on the weathered surfaces of the sedimentary stratigraphy. Chalcopyrite and bornite are also common along veinlets within the quartzites and associated with specularite in fractures in the diorite.

BIBLIOGRAPHY

EMPR ASS RPT 2746, 2749, 3160, *3336
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE022**

MINFILE NUMBER: **082GSE023**

NATIONAL MINERAL INVENTORY:

NAME(S): **PARCEL 82**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G07W

BC MAP:

LATITUDE: 49 25 25 N

LONGITUDE: 114 50 29 W

ELEVATION: 1882 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS:

UTM ZONE: 11 (NAD 83)

NORTHING: 5476789

EASTING: 656537

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: Structurally dominated by the north trending, doubly plunging McEvoy syncline. Minor folding and numerous faults are present.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Shale
Sandstone
Mudstone
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous
HVVol Bituminous

INVENTORY

ORE ZONE: B SEAM

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1962

QUANTITY: 83680882 Tonnes

COMMODITY

GRADE

Coal

1.4000

Per cent

COMMENTS: Total estimated inferred coal reserves. Grade based on reflectivity.

REFERENCE: Coal Assessment Report 356.

ORE ZONE: A SEAM

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1962

QUANTITY: 95644624 Tonnes

COMMODITY

GRADE

Coal

1.5000

Per cent

COMMENTS: Total estimated inferred coal reserves. Grade based on reflectivity

and average volatile matter content.

REFERENCE: Coal Assessment Report 356.

CAPSULE GEOLOGY

In the Parcel 82 occurrence area, two main seams, the A and B seams, which range from high to medium volatile bituminous in rank, occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with mudstone, shale, siltstone and sandstone. The upper seam, or B seam, is consistently between 2.5 and 4.0 metres in thickness. The A seam varies in thickness from 3.0 to 10.0 metres.

Total inferred coal reserves are estimated to be 179,325,506 tonnes, or 95,644,624 tonnes and 83,680,882 tonnes for the A and B

CAPSULE GEOLOGY

seams respectively. Analyses of the B seam and A seam show ash, volatile matter, fixed carbon and sulphur values ranging from about 6.0 to 21.76 per cent and 4.3 to 6.8 per cent (ash), 17.44 to 24.2 per cent and 17.2 to 21.8 per cent (volatile matter), 60.4 to 75.7 per cent and 71.3 to 76.7 per cent (fixed carbon) and 0.39 to 0.60 per cent and 0.27 per cent to 0.50 per cent (sulphur), respectively.

The structure consists of the following approximately north trending features: the McEvoy syncline, Flathead normal fault, Barnes anticlinorium, Barnes thrust, McEvoy west dipping retrothrust, Morrissey east dipping retrothrust and the Lookout thrust. The McEvoy syncline is a doubly plunging structure which cuts across the central part of the parcel and dominates the structure in the area. The west flank is relatively simple with shallow dips, minor folding and many normal faults. Farther southwest there is a sudden transition to close, tight folding and numerous faults (illustrating the vertical disharmony in structural style).

BIBLIOGRAPHY

EMPR COAL ASS RPT *356
EMPR FIELDWORK *1978, pp. 61-65
GSC MEM 336
GSC P *81-1B, pp. 145-152; 89-4

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE024**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCEVOY CREEK**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G07E

BC MAP:

LATITUDE: 49 24 40 N

LONGITUDE: 114 44 04 W

ELEVATION: 1813 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS:

UTM ZONE: 11 (NAD 83)

NORTHING: 5475627

EASTING: 664334

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: Northwest trending anticline/syncline pair in north and east. To west, strata is cut by the Flathead fault.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Siltstone
Shale
Mudstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the McEvoy Creek occurrence area, at least two coal seams occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) (less than 200 metres thick) interbedded with sandstone, siltstone, mudstone and shale. The lowest seam, which occurs above the basal sandstone, ranges from 2 to 8 metres in thickness. Approximately 38 metres up section in one area (section 79-2) a coaly interval over 4 metres thick occurs. In another section (79-1) a thick seam occurs approximately 81 metres above the basal sandstone. The seam (about 9 metres thick) contains a major shale parting in addition to several 15 centimetre shale splits in the lower seam and is thought to be equivalent to the #3 seam at Lodgepole Creek (082GSE028).

Rank is expected to be medium to high volatile bituminous. The property can be divided into a north area and a south area for reserve assessment purposes. Both areas would only be suitable for underground mining and optimistic reserve estimates are 1 million tonnes of clean coal in the north and 10-12 million tonnes in the south (available by underground methods).

The structure of the property consists of a northwest trending anticline/syncline pair in the north and east, with the Flathead fault (northwest trending, west dipping) cutting through the centre of the property. An additional northwest trending fault appears to be present in the centre of the property.

BIBLIOGRAPHY

EMPR BULL *33
EMPR COAL ASS RPT *346
EMPR MAP *31
GSC MEM 336

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 204
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 89-4

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE025**

NATIONAL MINERAL INVENTORY:

NAME(S): **CABIN EAST**, DALLY HILL

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 23 N
LONGITUDE: 114 35 52 W
ELEVATION: 1646 Metres

NORTHING: 5440209
EASTING: 675382

LOCATION ACCURACY: Within 500M

COMMENTS: Sample location on the north slopes of Dally Hill, 1.25 kilometres south of Cabin Creek and 6 kilometres west of the Flathead River, 56 kilometres south-southeast of Fernie (Assessment Report 19948).

COMMODITIES: Phosphate Yttrium

MINERALS

SIGNIFICANT: Phosphorite Phosphate
ASSOCIATED: Limonite Clay Bentonite
MINERALIZATION AGE: Lower Jurassic
ISOTOPIC AGE: DATING METHOD: Fossil

MATERIAL DATED: Various fossils

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	

LITHOLOGY: Phosphorite
Siltstone
Shale
Bentonite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1989

COMMODITY	GRADE
Phosphate	30.8500 Per cent
Yttrium	0.9300 Per cent

REFERENCE: Assessment Report 19948.

CAPSULE GEOLOGY

This region of southeastern British Columbia is underlain by miogeosynclinal strata comprising marine clastics and carbonates of Devonian to Jurassic age and non-marine fluvio-deltaic clastics of Late Jurassic and Early Cretaceous age. The strata are exposed in a broad north trending doubly plunging synclinorium known as the Fernie Basin. These units are disrupted by secondary folding accompanied by thrust and normal faulting. Such structures trend north to northwest.

The area in the vicinity of Dally Hill at the south end of the Fernie Basin is underlain by quartzose siltstones and fine-grained sandstones of the Permian Ranger Canyon Formation (Ishbel Group), overlain by siltstones and calcareous siltstones of the Triassic Sulphur Mountain Formation (Spray River Group), followed by shales and siltstones of the Jurassic Fernie Group. The strata dip gently southeast into Dally Hill.

In the Cabin East occurrence area, a poorly exposed horizon of pelletal to massive phosphate (at the base of the Fernie Group) has been traced southwestward for 500 metres along the northwest flank of Dally Hill. Bedding at one point strikes 058 degrees and dips 20 to 75 degrees southeast. The horizon contains 1.25 metres of dense phosphate with limonite blebs, overlain by 0.25 metre of thin-bedded

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CAPSULE GEOLOGY

shale, which is in turn overlain by 1.5 metres of pelletal phosphate. The entire sequence is capped by 2.5 metres of chocolate-coloured shale or by brown and black shales and a yellow bentonite bed. A grab sample of black massive phosphate assayed 30.85 per cent P2O5 and 0.93 per cent yttrium (Assessment Report 19948).

BIBLIOGRAPHY

EMPR ASS RPT 10135, *19948
EMPR FIELDWORK 1986, pp. 289-302
EMPR OF 1987-16, pp. 87-93
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1991/04/18
DATE REVISED: 1991/05/16

CODED BY: GO
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

PAGE: 207
REPORT: RGEN0100

MINFILE NUMBER: **082GSE026**

NATIONAL MINERAL INVENTORY:

NAME(S): **FLATHEAD**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 30 N
LONGITUDE: 114 37 34 W
ELEVATION: 2011 Metres

NORTHING: 5444065
EASTING: 673190

LOCATION ACCURACY: Within 5 KM

COMMENTS:

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica Quartz
MINERALIZATION AGE: Triassic

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R07 Silica sandstone

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Spray River

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

White sandstone of the Flathead showing consists of 98 per cent quartz grains in a calcareous cement. The exposures have been identified as part of the Triassic Spray River Group.

BIBLIOGRAPHY

GSC MEM 87, p. 20; 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/06

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE026**

MINFILE NUMBER: **082GSE027**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAYLOR EAST**, TAYLOR MOUNTAIN EAST

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G07E

BC MAP:

LATITUDE: 49 29 55 N

LONGITUDE: 114 42 59 W

ELEVATION: 1950 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Property is bounded to the west by Parcel 82 (082GSE023) and to the southwest by Taylor Mountain South (082GSE036).

UTM ZONE: 11 (NAD 83)

NORTHING: 5485393

EASTING: 665349

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: Pits located on both limbs of a north-northwest trending syncline. Towards the west is a north to north-northeast trending, west dipping thrust fault.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: MICHEL RIDGE PIT WEST REPORT ON: Y
CATEGORY: Indicated YEAR: 1981
QUANTITY: 13019000 Tonnes
COMMODITY GRADE
Coal 1.3000 Per cent
COMMENTS: In-place coal reserves. Seams 9, 10 and M. Grade based on reflectivity.
REFERENCE: 1981 B.C. Coal Ltd., Reserve & Resource data.

ORE ZONE: MICHEL HEAD PIT A REPORT ON: Y
CATEGORY: Indicated YEAR: 1981
QUANTITY: 12088600 Tonnes
COMMODITY GRADE
Coal 1.3000 Per cent
COMMENTS: In-place coal reserves. Seams 9 and 10. Grade based on reflectivity.
REFERENCE: 1981 B.C. Coal Ltd., Reserve & Resource data.

ORE ZONE: MICHEL RIDGE PIT EAST REPORT ON: Y
CATEGORY: Indicated YEAR: 1981
QUANTITY: 24344000 Tonnes
COMMODITY GRADE
Coal 1.3000 Per cent
COMMENTS: In-place coal reserves. Seams 9 and 10. Grade based on reflectivity.
REFERENCE: 1981 B.C. Coal Ltd., Reserve & Resource data.

CAPSULE GEOLOGY

Three seams are present in the Jurassic-Cretaceous Mist Mountain

CAPSULE GEOLOGY

Formation (Kootenay Group) at Taylor Mountain East; seam 10 (stratigraphically lowest) averages 5.4 metres in thickness, seam 9, average thickness 10.7 metres, and seam 8 which is less than 1.5 metres thick.

Seam 10 is split in places into the 10 seam and the 10-1 seam with up to about 15 metres of sandstone, siltstone and shale in between the seams. The main seam 9 varies in thickness laterally. However this may be due to a considerable extent to fault repetition. Ash contents in the seams vary from 9.1 to 39.0 per cent (dry basis).

The in-place coal reserves can be subdivided as follows (in tonnes): Michel Head Pit A - 7,153,000 (seam 9) and 4,935,600 (seam 10); Michel Ridge Pit East - 311,400 (seam 9) and 2,123,000 (seam 10); Michel Ridge Pit West - 125,000 (seam M ?); between pits - 7,409,000 (seam 9) and 4,485,000 (seam 10). The reserves in the pits would be recovered by open pit mining methods at strip ratios from 2.5:1 to 8.3:1. Some 2,271,954 tonnes of in place coal reserves are present at the Michel Head Pit B (seam 9) - open pit reserves with a stripping ratio of less than 3:1.

The major structure in the area is a north-northwest trending syncline whose axis runs parallel to Michel Ridge. The Michel Ridge Pit West lies on the west limb and axis of the syncline while the Michel Ridge Pit East occurs on the east limb and axial regions. The Michel Head Pit lies on the east (west dipping) limb. A roughly north to north-northeast trending, west dipping thrust fault occurs near the west boundary (with Parcel 82, 082GSE023) of the property.

BIBLIOGRAPHY

EMPR COAL ASS RPT 444
GSC P 89-4
BC Coal Ltd., Reserve and Resource Data *1981

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE028**

NATIONAL MINERAL INVENTORY:

NAME(S): **LODGEPOLE** LODGEPOLE CREEK, LODGEPOLE RIDGE,
FORDING COAL

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082G07W
BC MAP:
LATITUDE: 49 20 05 N
LONGITUDE: 114 45 24 W
ELEVATION: 1722 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5467087
EASTING: 662974

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: Mainly on east limb of north trending McEvoy syncline. Normal faults occur to the north and south and several thrust faults occur to the east.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Mudstone
Conglomerate
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: LVol Bituminous

INVENTORY

ORE ZONE: LODGEPOLE REPORT ON: Y
CATEGORY: Indicated YEAR: 1981
QUANTITY: 81000000 Tonnes
COMMODITY GRADE
Coal 1.7000 Per cent
COMMENTS: Total geological reserves. Grade based on reflectivity and volatile matter content.
REFERENCE: Coal Assessment Report 429.

CAPSULE GEOLOGY

Eight coal seams greater than 1 metre thick are of low volatile (upper end) bituminous rank and occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, siltstone, mudstone and minor conglomerate. The lowermost seam (seam 1) has an average aggregate thickness of 14 metres (1 to 24 metres) and contains variable numbers of shale-siltstone splits. Seam 2 (average thickness 7.0 metres) contains a prominent split and thin siltstone lenses are common. Both seams 1 and 2 increase in thickness westward. More than seven seams overlie seam 2 (2A - 1.0 metre, 3 - 3 to 4 metres, 4 - 1.5 metres, 5 - 2.5 metres, 7 zone - 7 to 10 metres, 8 - 0.4 to 0.7 metres and 4 seams in the Elk Formation) and they vary in coal type and quality.
Average analyses (1980) is 19.6 per cent volatile matter, 11.6 per cent ash, 0.49 per cent sulphur with a kilocalorie per kilogram value of 7322 - air dried basis, 1.5 per cent float.
Total geological reserves are calculated to be 81 million tonnes (overburden to coal ratio - 3.7 cubic metres overburden per tonne of

CAPSULE GEOLOGY

coal, 3.7:1).

The Lodgepole property straddles and includes most of the east limb of the McEvoy syncline (approximately north trending). To the north and south of the property are the Flathead and Harvey normal faults (both approximately east-west, the latter being downthrown to the south). To the east and south of the property are a series of northeast trending, west dipping thrust faults.

Fording Coal Ltd. drilled 9 holes, totalling 817 metres in 1997.

BIBLIOGRAPHY

EM EXPL 1997-51
EM INF CIRC 1998-1, p. 23
EMPR COAL ASS RPT *423, *424, *425, *426, *427, *428, *429, 856, 865
EMPR FIELDWORK 1978, pp. 61-65
EMPR P 1979-1
GSC P 89-4

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE029**

NATIONAL MINERAL INVENTORY:

NAME(S): **FLATHEAD RIDGE**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 19 15 N
LONGITUDE: 114 47 34 W
ELEVATION: 1950 Metres

NORTHING: 5465466
EASTING: 660396

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal

SHAPE: Irregular
MODIFIER: Folded Faulted

COMMENTS: West limb of the McEvoy syncline is northwest trending. Some minor faulting occurs in the area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Mudstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization GRADE: LVol Bituminous
MVol Bituminous

CAPSULE GEOLOGY

Commercial quality coal occurs throughout the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) (425-550 metres thick) interbedded with sandstone, siltstone and mudstone. Coal is low to medium bituminous in rank.

Structurally, the Flathead Ridge occurrence area occurs on the west limb of the McEvoy syncline which trends northwest. Beds generally strike northwest and dip 10 to 30 degrees northeast. Minor faults are also evident in the area.

BIBLIOGRAPHY

EMPR COAL ASS RPT *302, *303, *304
GSC P 89-4
*Pearson, D.E., Grieve, D.A. (1985): CIM 1985, Vol.78, No.881, pp. 39-46

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE030**

NATIONAL MINERAL INVENTORY:

NAME(S): **LILLYBURT**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G07E

BC MAP:

LATITUDE: 49 22 00 N

LONGITUDE: 114 38 14 W

ELEVATION: 1501 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Property straddles the Flathead River predominantly east of McLatchie Creek.

UTM ZONE: 11 (NAD 83)

NORTHING: 5470903

EASTING: 671540

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: In an open asymmetric, easterly plunging syncline within the Flathead Valley graben. Faulting is common.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Shale
Sandstone
Coal
Carbonaceous Siltstone
Claystone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: LILLYBURT

REPORT ON: Y

CATEGORY: Inferred YEAR: 1979
QUANTITY: 130000000 Tonnes
COMMODITY: _____ GRADE: _____
Coal 1.3000 Per cent

COMMENTS: Geological reserves. Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Report 405.

ORE ZONE: LILLYBURT

REPORT ON: Y

CATEGORY: Indicated YEAR: 1979
QUANTITY: 248000000 Tonnes
COMMODITY: _____ GRADE: _____
Coal 1.3000 Per cent

COMMENTS: Total estimated indicated resources in the east block of the property. Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Report 405.

CAPSULE GEOLOGY

Between 6 and 10 coal seams ranging in thickness from 0.1 to 25 metres occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) (300 metres) interbedded with deltaic and fluvial claystone, siltstones and sandstones. Seam E, the uppermost of the five economic seams in the sequence, consists of seams less than 1 metre thick separated by shale and siltstone partings. Seam D averages 1 metre thick, and is not present on the east half of the south limb of the syncline. Seam C is the thickest on the property

CAPSULE GEOLOGY

(10-15 metres) and although otherwise clean, contains a 13 metre split on the east end of the south limb. Seam B is 1 to 2 metres thick, shaly and commonly contains a siltstone parting. Seam A overlies the Morrissey Formation sandstone, varies from 2.5 to 8.5 metres thick and may be quite shaly.

Volatile matter increases upsection from an average 26 per cent in seam A to 32 per cent (dried, ash free) in seam E. Free Swelling Index values are below 2.0 in seams A, B and C. Raw ash content averages 40 per cent and sulphur is low, 0.3 to 0.5 per cent. The coal is medium volatile bituminous in rank.

Total indicated resources in the east block of the property are estimated to be about 130 million tonnes. Geological reserves are calculated to be 24.8 million tonnes (Coal Assessment Report 405).

The Lillyburt occurrence is located in the Flathead Valley graben structure and is characterized by small and large scale gravity faulting. The roughly east trending Flathead normal fault is the predominant structure in the area (1200 metres displacement near Flathead townsite). Associated with it and subparallel to the main fault system are several strike-slip and normal faults. The southern margin of the property is defined by a large scale gravity fault while the western margin consists of the Squaw thrust.

Within the major structural block the coal-bearing strata are folded into an open asymmetric, east plunging syncline.

BIBLIOGRAPHY

EMPR COAL ASS RPT *405, *406, *407
EMPR FIELDWORK *1980, pp. 64-72
GSC P 89-4

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE031**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOLLEBEKE MOUNTAIN**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G07E

BC MAP:

LATITUDE: 49 22 10 N

LONGITUDE: 114 35 44 W

ELEVATION: 1669 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Lot number 1665, located on the southwest flank of Hollebeke Mountain.

UTM ZONE: 11 (NAD 83)

NORTHING: 5471307

EASTING: 674555

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: The two main structures in the area are the Lewis thrust fault (northwest dipping) and the Flathead normal fault, between which their anticlinal structure which exposes Kootenay strata on the limbs.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Siltstone
Sandstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: HOLLEBEKE MOUNTAIN

REPORT ON: Y

CATEGORY: Measured YEAR: 1980

QUANTITY: 6000000 Tonnes

COMMODITY GRADE

Coal 1.4000 Per cent

COMMENTS: Estimated in-place, strippable reserves. Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Report 334.

CAPSULE GEOLOGY

At least two seams of good quality metallurgical coal, with a total thickness of approximately 6 metres, are present in the Hollebeke Mountain occurrence area. In-place, strippable reserves are estimated to be approximately 5 to 6 million tonnes. The coal occurs in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) and previous reports on the area have documented four coal seams, 1.8 metres, 2.4 metres, 3.0 metres and 4.9 metres thick respectively with average volatile matter, fixed carbon and ash plus moisture values of 24 per cent, 57 per cent and 10 to 20 per cent respectively. The coal is medium volatile bituminous in rank.

The Lewis thrust (west dipping) is the main structural feature in the area and places Precambrian limestones of the Siyeh Formation above the Kootenay Group strata. The Flathead fault forms the eastern boundary of the Flathead River Valley graben structure.

Underground mineable reserves may be substantial in the Mist Mountain Formation which extends below the Lewis thrust and under Hollebeke Mountain. Measured resources are estimated at 6,000,000 tonnes.

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RUN TIME: 16:43:39

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BIBLIOGRAPHY

EMPR COAL ASS RPT *334
EMPR FIELDWORK *1980, pp. 64-72
GSC P 89-4

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE032**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARVEY CREEK**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G07E

BC MAP:

LATITUDE: 49 17 07 N

LONGITUDE: 114 34 54 W

ELEVATION: 1478 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: The property straddles the Flathead River to the west of Packhorse Peak.

UTM ZONE: 11 (NAD 83)

NORTHING: 5461983

EASTING: 675863

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Tabular

MODIFIER: Folded

COMMENTS: In an asymmetrical graben bounded by the Flathead and Shepp normal faults. Average easterly dip of strata is 55 degrees.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Siltstone
Shale
Sandstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: HARVEY CREEK

REPORT ON: Y

CATEGORY: Measured

YEAR: 1978

QUANTITY: 10600000 Tonnes

COMMODITY

GRADE

Coal

1.3000

Per cent

COMMENTS: Grade based on reflectivity and average volatile matter content.

Strippable resources to depth of 60 metres for thickest seam.

REFERENCE: Coal Assessment Reports 400, 401.

CAPSULE GEOLOGY

Four coal seams, predominantly of medium volatile bituminous rank, with thicknesses greater than 1 metre (2.2 to 13.7 metres making up a total aggregate thickness of 23.0 metres) occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) (70 to 160 metres thick) interbedded with siltstones, shales and sandstones. Eight seams are present and from stratigraphically lower to upper are on average 3.6 metres, 2.2 metres, 13.7 metres, 0.8 metres, 0.5 metres, 3.5 metres, 0.3 metres and 0.4 metres thick respectively. The thinner seams appear not to be laterally continuous.

Weighted average analyses for the lower 6 seams are as follows: raw coal - 31.01 per cent ash, 1.4 Free Swelling Index and for the 1.5 float - 8.88 per cent ash, 26.74 per cent volatile matter (air dried basis), 2.5 Free Swelling Index and 52 per cent yield.

Total in-place coal resources of the 4 seams greater than 1 metre thick (calculated to a maximum depth of 460 metres) total approximately 110 million tonnes. Strippable resources for the thick seam (to a depth of 60 metres) total 10.6 million tonnes, and assuming 60 per cent recovery, the reserves are reduced to 6.2 million tonnes (Coal Assessment Reports 400, 401).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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CAPSULE GEOLOGY

The Harvey Creek area, which is bounded to the northeast by the northwest trending Flathead normal fault and to the southwest by the northeast trending Shepp normal fault, lies within an asymmetrical graben. The coal-bearing strata dip east between 45 and 75 degrees, with the average dip approximately 55 degrees.

BIBLIOGRAPHY

EMPR COAL ASS RPT *400, *401
EMPR FIELDWORK 1980, pp. 64-72
GSC P 89-4

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE033**

NATIONAL MINERAL INVENTORY:

NAME(S): **CABIN CREEK**

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G02E

BC MAP:

LATITUDE: 49 08 00 N

LONGITUDE: 114 42 29 W

ELEVATION: 2072 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS:

UTM ZONE: 11 (NAD 83)

NORTHING: 5444807

EASTING: 667184

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded

COMMENTS: Structure consists of a broad, gentle, north trending, north plunging syncline, with dips ranging from approximately 10 to 30 degrees. No major faults have been recognized in the area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Mudstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: CABIN CREEK

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1981

QUANTITY: 8000000 Tonnes

COMMODITY

GRADE

Coal

1.3500

Per cent

COMMENTS: Estimated geological reserves. Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Report 381.

CAPSULE GEOLOGY

Two main seams composed of medium volatile, bituminous rank coal occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, siltstone and mudstone. Seam 5, the stratigraphically lowest, is approximately 4.2 metres thick and lacks significant rock partings. Seam 4, the upper seam, is split by a rock parting 1.8 to 5.2 metres, into an upper 3.6 to 5.9 metre seam and a lower 2.2 to 5.9 metre seam. The coals contain (dry basis) 9.4 to 9.7 per cent ash, 25.0 to 25.8 per cent volatile matter, 64.6 to 65.3 per cent fixed carbon and 0.48 to 0.58 per cent sulphur.

Estimated geological reserves are calculated to be 8 million tonnes (Coal Assessment Report 381).

The structure of the Cabin Creek coal deposit appears to be simple, consisting of a broad, gentle, north trending, north plunging syncline. Dips range from approximately 10 to 30 degrees. Minor disturbance of the coal seams occur in places, but there appears to be an absence of major thrust or normal faults.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 220
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK 1980, pp. 64-72
GSC P 89-4

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE034**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAGE CREEK**, SAGE CREEK (NORTH HILL), SAGE CREEK (SOUTH HILL)

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082G02E 082G01W
BC MAP:

MINING DIVISION: Fort Steele

LATITUDE: 49 04 45 N
LONGITUDE: 114 32 59 W
ELEVATION: 1371 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5439148
EASTING: 678928

LOCATION ACCURACY: Within 500M

COMMENTS: The property is divided into the North Hill and South Hill, and straddles the lower part of Cabin Creek.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Tabular

MODIFIER: Faulted

COMMENTS: An east dipping monocline strikes north to northeast. The Harvey fault and several other faults cut the strata.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Shale
Sandstone
Conglomerate
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: AREA 2

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 25798831 Tonnes

YEAR: 1971

COMMODITY
Coal

GRADE
100.0000 Per cent

COMMENTS: Possible geological coal reserves.

REFERENCE: Coal Assessment Report 359.

ORE ZONE: AREA 1

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 48587187 Tonnes

YEAR: 1971

COMMODITY
Coal

GRADE
100.0000 Per cent

COMMENTS: Possible geological coal reserves.

REFERENCE: Coal Assessment Report 359.

CAPSULE GEOLOGY

At Sage Creek, three major coal seams, seams 5, 4 and 2, with thicknesses ranging from 8 to 15 metres, occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with shale, sandstone and minor conglomerate.

Seam 5 (stratigraphically lowest) is on average 10.7 metres thick and is generally split into an upper and lower seam separated by a carbonaceous shale unit 0.9 to 2.4 metres thick. The upper part of seam 5 shales out to the southwest, resulting in an overall thinning out in that direction.

Seam 4 also occurs as two benches with the benches forming separate seams, seam 4 Upper and 4 Lower on North Hill. Seam 4 Upper

CAPSULE GEOLOGY

averages 8.2 metres thick while seam 4 Lower is 6.1 metres thick. The parting varies in thickness from 0.9 metres in the south slope of South Hill to 12.2 metres in the northeast slope of North Hill.

Coal seam 2 has an average thickness of 3.7 metres and varies from 1.5 metres below the south slope of South Hill to 11.3 metres in the centre of North Hill. At the locations of maximum development the seam is separated into two benches, the lower probably representing seam 3.

Ash contents in samples from the North Hill vary from 14.6 to 30.5 per cent, and in the South Hill from 21 to 42.6 per cent.

The Sage Creek property is cut off to the north by the Harvey fault and consists of an east dipping monocline which strikes north, and dips on average 30 degrees east. The continuity is interrupted by a number of north to northwest trending normal faults subparallel to and probably associated with, the Flathead and Harvey faults. Four faults cut the North Hill, while the number of faults increases to 10 in the smaller South Hill area. The faults are mostly west dipping and steep, however some east dipping faults also occur.

The total in situ reserves within the proposed pit limits are about 135 million tonnes of raw coal. Additional potential reserves are southwest of South Hill (potentially 30 million tonnes of raw coal amenable to open pit mining), east of North Hill (approximately 50 million tonnes of raw coal could be available for underground mining assuming all the seams continue to the Harvey fault) and east and southeast of South Hill. In the latter area coal seams persist downdip, however pre-Tertiary erosion has removed the coal to an unknown extent.

Possible geological (indicated) reserves at Area 1 are 48,587,187 tonnes and at Area 2 are 25,798,831 tonnes of coal (Coal Assessment Report 359).

BIBLIOGRAPHY

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EMPR FIELDWORK *1980, pp. 64-72; 1991, pp. 405-417
EMPR MAP 65 (1989)
EMPR OF 1992-1
GSC P 89-4
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1986/03/01

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE035**

NATIONAL MINERAL INVENTORY:

NAME(S): **FERNIE (MORRISSEY RIDGE)**, MORRISSEY CREEK, COAL CREEK,
 ELK RIVER COLLIERY, CARBONADO COLLIERY, MORRISSEY RIDGE,
 COLUMBIA IRON, NO. 1 EAST, NO. 9,
 NO. 1, NO. 3, NO. 4,
 NO. 2, PACIFIC COAL, CROWS NEST PASS

STATUS: Past Producer	Underground	MINING DIVISION: Fort Steele
REGIONS: British Columbia		
NTS MAP: 082G07W		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 49 26 50 N		NORTHING: 5479102
LONGITUDE: 114 59 49 W		EASTING: 645188
ELEVATION: 1859 Metres		
LOCATION ACCURACY: Within 1 KM		
COMMENTS: Includes coal seams from the north side of Coal Creek to the north side of Morrissey Creek.		

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
 MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound	Massive
CLASSIFICATION: Sedimentary	Fossil Fuel
TYPE: A04 Bituminous coal	
SHAPE: Irregular	
MODIFIER: Folded	Faulted
COMMENTS: Main structure is the north trending, doubly plunging McEvoy syncline. Fault and minor folds are common.	

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
 Shale
 Carbonaceous Shale
 Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland	PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Post-mineralization
	GRADE: LVol Bituminous MVVol Bituminous

CAPSULE GEOLOGY

The Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) (564 to 1097 metres thick) contains up to 24 seams greater than 0.9 metres thick. The formation is thickest in the Michel area (1097 metres), thins to 629 metres in the Fernie area, thickens towards Morrissey to 654 metres, and thins rapidly to the southeast from Michel (564 metres). The seams from oldest to youngest are 1, 0, 0 Upper, 1 Lower, 1 Middle and 1 Upper, 2 Lower, 2 Middle, 2 Upper, 3 Lower, 3 Upper, 4 Lower, 4 Upper, 5, 6 Lower, 6 Upper, 7, 8 Lower, 8 Upper, 9, 10 Lower, 10 Upper, B Lower, and B Upper.

In the Morrissey Ridge area, the total number of coal seams encountered (greater than 0.9 metres) and the total thickness of coal vary from 8 to 16 and 47.8 metres to 91.9 metres respectively. Many of the seams can be correlated over long distances, however, only the basal and 6 upper seams can be traced without interruption from Coal Creek to Morrissey Creek. In the latter area, seam thicknesses and ash contents increase going down the sequence, good coking characteristics and volatile content increase going up the sequence, and ash contents can change rapidly over short distances laterally. Upper coal seams are medium volatile bituminous while coals below the 5 seam are low volatile bituminous. Ash contents vary from 6 to 64.3 per cent in unwashed coals and sulphur contents (washed specific gravity 1.55) vary from 0.29 to 0.88 per cent. Volatile matter varies from 17.94 to 27.11 per cent.

Estimated reserves of good quality coking coal in the Fernie Ridge and Morrissey Ridge areas are 128.8 million tonnes recoverable raw coal or 113 million tonnes of coking coal under 762 metres of

CAPSULE GEOLOGY

cover. Early reserve estimates for the entire area have varied from 93.3 million to 20.5 billion tonnes of coal (mineable).

Previous mining operations were located at Morrissey (1902 to 1909 - production of 440,850 tonnes), Coal Creek (1898 to 1958 - production of just over 20 million tonnes) and operations in the Michel area which began in 1899 were still in operation in 1960 and had produced more than 25.4 million tonnes up till then. Mining has mainly concentrated on the upper seams which are better quality, lower ash and good coking coals, however the lower seams tend to be thicker.

The dominant structural element in the area is the close to north trending McEvoy syncline. It is doubly plunging, approximately 7 degrees from the south and approximately 11 degrees from the north, towards the centre. The limbs of the fold dip between 20 and 45 degrees, and several minor folds are present parallel to the main axis.

Major thrust faults also occur predominantly along the eastern edge of the synclinal basin. Of these, the Lewis thrust fault has the largest displacement. To the west are several normal faults including the Pipeline fault and some thrust faults such as the Lookout thrust fault and the Morrissey fault. The faults tend to strike north-northwest to north. Thrust faults dip mainly to the west.

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1909-167-169,224,257; 1910-215-220; 1911-260-265;
1948-204,227-230; 1949-278,303-305; 1950-244,267-270;
1951-249,281-284; 1952-286,316-319; 1953-226,251-254;
1954-214,242-244; 1955-132,158-161; 1956-196,221-223;
1957-120,121,142-144; 1958-134,135,153-154; 1960-237;
1961-272; 1962-276; 1964-325
EMPR COAL ASS RPT *295, *296, *297
EMPR FIELDWORK *1978, pp. 61-65
GSC P *81-1B, pp. 145-152; 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE036**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAYLOR SOUTH**, TAYLOR MOUNTAIN SOUTH

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082G07E

BC MAP:

LATITUDE: 49 28 13 N

LONGITUDE: 114 44 39 W

ELEVATION: 1828 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: The Taylor Mountain South area lies to the southwest of the Taylor Mountain East area (082GSE027), both to the southwest of Coal Mountain-Corbin (082GNE002).

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5482182

EASTING: 663432

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive

CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Tabular

MODIFIER: Folded

COMMENTS: North-northwest to north trending sequence of predominantly westerly dipping (15 to 40 degrees) strata.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone

Siltstone

Mudstone

Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: LVol Bituminous

MVol Bituminous

CAPSULE GEOLOGY

At the Taylor South occurrence, four coal seams are contained in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) which is up to 183 metres thick in the north but which has been weathered away in the south and terminates against an erosional unconformity. The coal is interbedded with sandstone, siltstone and mudstone and is low to medium volatile bituminous in rank.

The lowermost seam, M seam, lies directly on the Moose Mountain sandstone and is lenticular in nature. The other seams named 10, 9 and 8, in stratigraphically ascending order, occur within a 40 to 55 metre section, 101 to 152 metres above the Moose Mountain sandstone. The 10 seam is very lenticular in nature, ranging from 0.0 to 4.7 metres in thickness. Ash contents vary from 16.7 to 32.6 per cent. The 9 seam is the thickest (1.5 to 7.0 metres) and most consistent of the seams in the area. It pinches out to less than 0.6 metres in the western portion of Coal Licence 4185.

Rank varies from low volatile bituminous in the southwest to medium volatile bituminous in the northeast. Ash contents range from 27.5 to 50.8 per cent. The 8 seam is exposed only on the ridge to the east of Coal Licence 4185 where it ranges from 0.3 to 2.7 metres in thickness. The seam may be correlated with a zone of coaly bands to the south. Ash contents range from 32.0 to 45.5 per cent.

In-place, partially explored reserves (inferred) are 967,331 tonnes for the 9 seam, and 127,629 tonnes for the 8 seam.

Structurally the property consists of a north-northwest to north trending sequence with westerly dips ranging from 15 to 40 degrees. To the north are two minor folds trending north-northwest.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 226
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR COAL ASS RPT *445
EMPR FIELDWORK 1978, pp. 61-65
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE037**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOWELL**, ROK, CAT,
YSOO

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 13 25 N
LONGITUDE: 114 42 52 W
ELEVATION: 1800 Metres

NORTHING: 5454828
EASTING: 666415

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Copper Silver Gold

MINERALS

SIGNIFICANT: Pyrite Fluorite Galena Sphalerite Barite

 Chalcopyrite Chalcocite

ASSOCIATED: Quartz

ALTERATION: Silica Pyrite

ALTERATION TYPE: Silicific'n Pyrite Argillic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: J01 Polymetallic manto Ag-Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Cambrian Undefined Group

Cambrian Undefined Group

Cretaceous-Tertiary

Flathead

Elko

Unnamed/Unknown Informal

LITHOLOGY: Syenite
Trachyte
Quartzite
Sandstone
Dolomite
Limestone
Siltstone
Mudstone
Shale
Dolomitic Siltstone

HOSTROCK COMMENTS: Also Proterozoic Kintla Formation, Upper Cretaceous Belly River Formation and Alberta Group, and Upper Devonian Fairholme Group.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Howell occurrence area is underlain by a northwest striking and steep westerly dipping complexly faulted package of Proterozoic, Paleozoic and Mesozoic sediments intruded by Cretaceous to Tertiary pyritic and altered trachyte-syenite plutons, dykes and sills. The sediments consist of red hematitic and green siltstone and green and yellowish dolomitic siltstone of the Proterozoic Kintla Formation, quartzite and sandstone of the Cambrian Flathead Formation, mottled dolomite and limestone of the Middle and (?)Upper Cambrian Elko Formation, black shaly limestone of the Upper Devonian Fairholme Group, sandstone and dark shale sandstone of the Upper Cretaceous Alberta Group, and mudstone, shale and sandstone of the Upper Cretaceous Belly River Formation. All of the rock units have varying amounts of pyritization, silicification, argillic alteration, minute to large quartz veining, and in the case of some sediments, there are hornfels and skarn developed near intrusive contacts and fault zones.

Pyrite mineralization is extensive in both the intrusions and sedimentary rocks, occurring in silicified areas and quartz veins near intrusive contacts. Pyrite occurs as disseminations and fracture and breccia infillings. The oxidation of pyrite on surface has given rise to distinctive rusty weathering outcrop. In association with pyrite are purple fluorite, galena, sphalerite,

CAPSULE GEOLOGY

barite and minor chalcopyrite and chalcocite. These minerals occur mainly as fracture infillings in silicified areas or with late quartz veining. Most rock chip assays indicate less than 0.1 per cent of lead, zinc or copper. Locally silver ranges from 4 to 24 grams per tonne and gold in the range of 0.3 to 0.8 grams per tonne (Assessment Report 13242).

In May 2002 Goldrea Resources Corp. was granted an option by Eastfield Resources Ltd. to earn up to a 55 per cent interest in the Howell property. Goldrea completed an airborne survey and initiated drilling on August 17.

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EMPR GEM 1971-415; 1972-63
GSC MEM 336
GSC P 61-24
CSPG BULL Vol.12, pp. 350-377
PR REL Goldrea Resources Corp., Aug. 19, Dec.31, 2002
WWW <http://www.infomine.com/index/properties/HOWELL.html>;
<http://www.verdstonegroup.com/goldrea/index.htm>;
<http://eastfieldgroup.com/eastfield/howell.html>

DATE CODED: 1985/07/24
DATE REVISED: 1991/04/19

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE038**

NATIONAL MINERAL INVENTORY:

NAME(S): **PH**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 20 N
LONGITUDE: 114 40 16 W
ELEVATION: 1675 Metres

NORTHING: 5480707
EASTING: 668775

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate Fluorapatite
MINERALIZATION AGE: Triassic-Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic
Triassic

GROUP

Fernie
Spray River

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Sandstone
Nodular Phosphatic Sandstone
Oolitic Phosphate Rock
Phosphatic Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the PH showing, phosphate mineralization is identified within a nodular phosphatic sandstone at the base of the Triassic Spray River Group and as a nodular and oolitic phosphatic rock and phosphatic shale at the base of the Jurassic Fernie Group.

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GSC MAP 20-1958; 1154A
GSC MEM *336
GSC P 58-10; *61-24
CIM *1944, v. 36, pp. 566-605

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/06

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE039**

NATIONAL MINERAL INVENTORY: 082G1 Cu1

NAME(S): **COMMERCE ZONE H**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 14 N
LONGITUDE: 114 23 22 W
ELEVATION: 2227 Metres

NORTHING: 5449697
EASTING: 690280

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold Molybdenum Uranium

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite Molybdenite
ASSOCIATED: Quartz Carbonate
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Cretaceous-Tertiary	Purcell	Grinnell	Unnamed/Unknown Informal

LITHOLOGY: Quartzite
Syenite
Diorite Sill

HOSTROCK COMMENTS: Syenite sills, plugs and dykes of Tertiary-Cretaceous age and Purcell age diorites intrude the stratigraphy.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Commerce Peak area (Commerce Zone H) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and rebeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Siyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

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EMPR EXPL 1975-E41; 1976-E42; 1977-E55; 1978-E66; 1979-76
EMPR GEM 1970-477; 1973-83; 1974-78
GSC MEM 336
GSC P 61-24

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 231
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BIBLIOGRAPHY

Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE040**

NATIONAL MINERAL INVENTORY: 082G1 Cu1

NAME(S): **COMMERCE ZONE D**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 37 N
LONGITUDE: 114 24 06 W
ELEVATION: 2288 Metres

NORTHING: 5448524
EASTING: 689429

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold Molybdenum Uranium

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite Molybdenite
ASSOCIATED: Quartz Siderite Carbonate
ALTERATION: Siderite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Cretaceous-Tertiary	Purcell	Grinnell	Unnamed/Unknown Informal

LITHOLOGY: Quartzite
Sandstone
Syenite
Diorite Sill

HOSTROCK COMMENTS: Tertiary-Cretaceous syenites and diorites of Purcell age intrude the stratigraphy.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Commerce Peak area (Commerce Zone D) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and redbeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Sihyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

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EMPR EXPL 1975-E41; 1976-E42; 1977-E55; 1978-E66; 1979-76
EMPR GEM 1973-83; 1977-E56
GSC MEM 336
GSC P 61-24
PR REL Commerce Resources Corp., Feb.25, 2003

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

BIBLIOGRAPHY

Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE041**

NATIONAL MINERAL INVENTORY: 082G1 Cu1

NAME(S): **COMMERCE 3**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 23 N
LONGITUDE: 114 20 46 W
ELEVATION: 1937 Metres

NORTHING: 5450085
EASTING: 693429

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold Molybdenum Uranium

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite Molybdenite
ASSOCIATED: Quartz Carbonate
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Cretaceous-Tertiary	Purcell	Grinnell	Unnamed/Unknown Informal

LITHOLOGY: Quartzite
Sandstone
Diorite Sill
Syenite

HOSTROCK COMMENTS: Tertiary-Cretaceous syenite and Purcell age diorites intrude the sedimentary stratigraphy.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Commerce Peak area (Commerce 3) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and redbeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Sihyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

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EMPR EXPL 1975-E41; 1976-E42; 1977-E55; 1978-E66; 1979-76
EMPR GEM 1970-477; 1973-83; 1974-78
GSC MEM 336
GSC P 61-24
GCNL Sept. 15, 1973
PR REL Commerce Resources Corp., Sept.4, 2002; Feb.25, 2003

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RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 235
REPORT: RGEN0100

BIBLIOGRAPHY

WWW <http://www.infomine.com/index/properties/COMM.html>;
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<http://www.commerceresources.com/s/home.asp>
Falconbridge File

DATE CODED: 1985/07/24
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REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE042**

NATIONAL MINERAL INVENTORY: 082G1 Cu1

NAME(S): **COMMERCE 4**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 35 N
LONGITUDE: 114 21 09 W
ELEVATION: 2166 Metres

NORTHING: 5450439
EASTING: 692950

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold Molybdenum Uranium

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite Molybdenite
ASSOCIATED: Quartz Carbonate
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	Unnamed/Unknown Informal
Cretaceous-Tertiary			

LITHOLOGY: Quartzite
Sandstone
Syenite
Diorite Sill

HOSTROCK COMMENTS: Tertiary-Cretaceous syenites and Purcell age diorite intrude the sedimentary sequence.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE:

CAPSULE GEOLOGY

The Commerce Peak area (Commerce 4) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and redbeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Siyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

EMPR ASS RPT *3160, *4535, 5070, 5560, 5938, 6398, 7567, 8301, 12638, 13978
EMPR EXPL 1975-E41; 1976-E42; 1977-E55; 1978-E66; 1979-76
EMPR GEM 1973-83; 1974-78
GSC MEM 336
GSC P 61-24
PR REL Commerce Resources Corp., Sept.4, 2002; Feb.25, 2003

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

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Falconbridge File

DATE CODED: 1985/07/24
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CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE043**

NATIONAL MINERAL INVENTORY: 082G1 Cu1

NAME(S): **COMMERCE 8**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 47 N
LONGITUDE: 114 21 47 W
ELEVATION: 2227 Metres

NORTHING: 5450783
EASTING: 692168

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite
ASSOCIATED: Quartz Carbonate
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	Unnamed/Unknown Informal
Cretaceous-Tertiary			

LITHOLOGY: Quartzite
Sandstone
Syenite
Diorite Sill

HOSTROCK COMMENTS: Tertiary-Cretaceous syenite and Purcell age diorite intrude the sedimentary stratigraphy.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE:

CAPSULE GEOLOGY

The Commerce Peak area (Commerce 8) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and redbeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Siyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

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EMPR ASS RPT *3160, *4535, 5070, 5560, 5938, 6398, 7567, 8301, 12638, 13978
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EMPR GEM 1973-83; 1974-78
GSC MEM 336
GSC P 61-24
PR REL Commerce Resources Corp., Sept.4, 2002; Feb.25, 2003

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
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REPORT: RGEN0100

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<http://www.commerceresources.com/s/home.asp>
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

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FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
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REPORT: RGEN0100

MINFILE NUMBER: **082GSE044**

NATIONAL MINERAL INVENTORY:

NAME(S): **BETH**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 23 N
LONGITUDE: 114 16 46 W
ELEVATION: 1830 Metres

NORTHING: 5448405
EASTING: 698354

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Proterozoic	Purcell	Kintla	

LITHOLOGY: Shale
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Late Proterozoic Kintla Formation green shales in the Beth occurrence area are interbedded with a red sandstone lens 15 to 60 centimetres thick which is host to chalcopyrite mineralization.

BIBLIOGRAPHY

EMPR ASS RPT *3160, *4535
EMPR GEM 1973-83
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE045**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORUM**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 03 N
LONGITUDE: 114 04 26 W
ELEVATION: 1980 Metres

NORTHING: 5433527
EASTING: 713935

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcocite Bornite Tennantite
ALTERATION: Malachite Pyrolusite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Phillips	

LITHOLOGY: Dolomite
Argillite
Algal Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY
Silver
Copper

GRADE	
25.0000	Grams per tonne
1.5000	Per cent

REFERENCE: Assessment Report 5695.

CAPSULE GEOLOGY

At the Forum showing, two blue-grey dolomite beds near the central portion of the Helikian Phillips Formation (Purcell Supergroup) host disseminated copper sulphides. The upper dolomite is 2 metres thick while the lower is about 1.8 to 3 metres thick. The dolomitic units are separated by 2 metres of red argillite. The best grades were obtained from the lower dolomite which had copper values of 0.01 per cent to a high of 1.5 per cent. Silver assayed as high as 25 grams per tonne (Assessment Report 5645).

In 1975, four short drill holes tested the algal dolomites and revealed the presence of bornite, chalcocite, malachite with some tennantite and pyrolusite. A radiometric survey indicated anomalous radioactivity associated with the copper-bearing zones.

BIBLIOGRAPHY

EMPR ASS RPT *5695, 6521, 7699, 13032
EMPR EXPL 1975-E39; 1977-E55; 1979-74
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE046**

NATIONAL MINERAL INVENTORY:

NAME(S): **OPAL**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 35 N
LONGITUDE: 114 12 52 W
ELEVATION: 2135 Metres

NORTHING: 5432275
EASTING: 703692

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Lead

MINERALS

SIGNIFICANT:	Bornite	Chalcocite	Covellite	Galena	Chalcopyrite
ALTERATION:	Azurite	Malachite			
ALTERATION TYPE:	Oxidation				
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER:	Vein	Stratabound	Disseminated	
CLASSIFICATION:	Sedimentary	Hydrothermal		
TYPE:	E04	Sediment-hosted Cu	I05	Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzitic/Quartzose Sandstone
Diorite Dike
Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Opal showing, bornite, chalcocite and covellite with secondary malachite and azurite occur in a quartzitic sandstone as disseminated sulphides within argillite pebbles and as sulfide rims to the pebbles. Galena occurs in diorite dykes and sills of the Proterozoic Moyie Intrusions that intrude the Helikian Grinnell Formation. Anomalous radioactivity is associated regionally with zones of sulphide mineralization.

BIBLIOGRAPHY

EMPR ASS RPT *5696, 6521, 7678
EMPR EXPL 1975-E40; 1977-E54; 1979-74
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE047**

NATIONAL MINERAL INVENTORY:

NAME(S): **COMMERCE ZONE C**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 18 N
LONGITUDE: 114 24 09 W
ELEVATION: 2210 Metres

NORTHING: 5447935
EASTING: 689388

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite
ASSOCIATED: Quartz Carbonate
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu H08 Alkalic intrusion-associated Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	Unnamed/Unknown Informal
Cretaceous-Tertiary			

LITHOLOGY: Quartzite
Sandstone
Syenite
Diorite Sill

HOSTROCK COMMENTS: Tertiary-Cretaceous syenites as dikes and sills intrude the sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE:

CAPSULE GEOLOGY

The Commerce Peak area (Commerce Zone C) is host to three major types of mineralization: 1) copper-silver, as chalcopyrite-bornite-chalcocite disseminated within the quartzites and redbeds of the Helikian Grinnell Formation (similar to Spar Lake mineralization). Significant localized concentrations appear confined to thin, 1 to 5 centimetre quartzite horizons and to the axial regions of tight folds. Anomalous molybdenum and uranium and/or thorium(?) (200-400 counts per second) are associated with high copper values. Copper may assay up to 0.2 to 0.3 per cent locally with silver in the range of 1 to 10 grams; 2) gold, with lesser amounts of silver, is associated with contact-related sulphide concentrations at the margins of Tertiary-Cretaceous syenite and/or diorite sills. Although gold values of over 34.28 grams have been reported, the anomalous values are usually one gram or less. Syenitic intrusions commonly host a fraction of a gram of gold regionally; 3) veinlets of quartz-carbonate (plus/minus siderite) crosscut the Grinnell and Sihyeh formations and host local concentrations of copper sulfides. The veinlets may be as wide as 3 to 5 centimetres and assay up to 1 to 3 per cent copper.

BIBLIOGRAPHY

EMPR ASS RPT *3160, *4535, 5070, 5560, 5938, 6398, 7567, 8301, 12638, 13978
EMPR GEM 1970-477; 1976-E42; 1977-E55
GSC MEM 336
GSC P 61-24
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
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FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE047**

MINFILE NUMBER: **082GSE048**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOWE, HOWELL**

MINING DIVISION: Fort Steele

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082G02E
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 08 N
 LONGITUDE: 114 43 48 W
 ELEVATION: 1875 Metres

NORTHING: 5456122
 EASTING: 665243

LOCATION ACCURACY: Within 500M
 COMMENTS:

COMMODITIES: Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Pyrite
 ASSOCIATED: Quartz Fluorite Barite
 ALTERATION: Clay Silica Pyrite Jarosite Limonite
 ALTERATION TYPE: Argillic Silicific'n Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
 CLASSIFICATION: Hydrothermal Epigenetic Disseminated
 TYPE: J01 Polymetallic manto Ag-Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au
 H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cambrian	Undefined Group	Flathead	
Lower Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Syenite
 Trachyte
 Sandstone
 Limestone
 Quartz Vein
 Breccia

HOSTROCK COMMENTS: The "informal host" is a trachyte-syenite intrusive of unknown age and affinity.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
 TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SHOWING REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1989
SAMPLE TYPE: Drill Core	
COMMODITY	GRADE
Silver	31.6000 Grams per tonne
Gold	1.5600 Grams per tonne
Lead	0.4700 Per cent
Zinc	1.8000 Per cent

COMMENTS: Drill cuttings from reverse circulation drilling.
 REFERENCE: Assessment Report 18629.

CAPSULE GEOLOGY

The Howe occurrence area is partly underlain by a sequence of gently folded, conformable rocks of the Mississippian Rundle Group, Pennsylvanian and Permian Rocky Mountain Group and Triassic Spray River Group. The Rundle Group consists of coarse calcarenitic limestone, in parts skeletal, with increasing amounts of fine to medium crystalline limestone, silty dolomite and dolomitic siltstone. Overlying the Rundle Group is the Rocky Mountain Group consisting of dolomitic quartz arenite. This in turn is overlain by Spray River Group siltstones.

West of this package, on the property, in fault-bounded slices, are Upper Cretaceous shales of the Alberta Group structurally overlain by a disrupted package of Proterozoic Kintla Formation siltstone and shale, Cambrian Flathead Formation quartz arenites, Middle and (?) Upper Cambrian Elko Formation carbonates, and Upper

CAPSULE GEOLOGY

Devonian Fairholme Group limestones. This upper plate also hosts irregular Cretaceous-Tertiary plugs, dykes and sills of clay-altered limonitic syenite. The syenite is highly altered with a stockwork of quartz veining, jarosite-staining and argillic alteration. Local silicification, quartz veining and fluorite and barite is present. Pyrite mineralization is extensive in both the intrusions and sediments, occurring in the silicified areas and quartz veins and near intrusive contacts. The pyrite occurs as disseminations and fracture and breccia infillings.

Samples of drill cuttings from extensive reverse circulation drilling assayed up to 0.47 per cent lead, 1.8 per zinc, 31.6 grams per tonne silver and 1.56 grams per tonne gold (Assessment Report 18629).

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EMPR ASS RPT 3162, 3785, 6387, 11787, 13242, 15035, 18318, *18629
EMPR EXPL 1983-102; 1984-73; 2002-51-62
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GSC P 61-24
CSPG BULL Vol.12, pp. 350-377
WWW <http://www.infomine.com/index/properties/HOWELL.html>

DATE CODED: 1986/06/06
DATE REVISED: 1991/04/19

CODED BY: BG
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE049**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIN 21**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 30 N
LONGITUDE: 114 16 29 W
ELEVATION: 2318 Metres

NORTHING: 5435666
EASTING: 699157

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver Uranium Molybdenum

MINERALS

SIGNIFICANT: Covellite Bornite Chalcocite Molybdenite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu
COMMENTS: Beds dip northeast and are part of the Lewis thrust.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Helikian GROUP: Purcell FORMATION: Grinnell IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Lin 21 showing area, mineralization consists of fine disseminations and blebs (1 to 3 millimetres) of copper sulphides confined to quartzite beds of the Helikian upper Grinnell Formation. Where there is enrichment of copper sulphides, radiometric surveys indicate anomalous radioactivity, possibly from uranium enrichment. Stratabound covellite, bornite and chalcocite occur at several quartzite horizons in the Grinnell Formation. The best mineralized beds are traceable laterally a couple of thousand metres with interruptions, and may reach up to 10 per cent sulphides over several centimetres. Malachite is widespread at surface and to a depth of about 1 metre. The thickness of the mineralized horizons rarely exceeds 1 metre. Radiometric prospecting indicates anomalous readings in the range of 10,000 to 23,000 counts per minute coincidental with areas of stronger sulphide enrichment. Background is about 2500 counts per minute with a McPhar TV-1A spectrometer. Trace amounts of molybdenum is also reported to be associated.

BIBLIOGRAPHY

EMPR ASS RPT *2703, 5694, 6521, 7678
EMPR EXPL *1975-E40; 1977-E55; 1979-75
EMPR GEM 1970-478
GSC MAP 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/04

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE050**

NATIONAL MINERAL INVENTORY:

NAME(S): **MICHEL**, MICHEL CREEK

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 00 N
LONGITUDE: 114 40 04 W
ELEVATION: 1676 Metres

NORTHING: 5481950
EASTING: 668978

LOCATION ACCURACY: Within 1 KM

COMMENTS: Property is located on the southern portion of Coal Mountain.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: The area contains an approximately north trending anticline-syncline pair in the west portion and two steep, approximately north trending, westerly dipping thrust faults in the east portion.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) consisting of sandstone, siltstone, shale and coal is not preserved within the Michel licence area. Therefore, the Mammoth seam (4.5 to 7.5 metres) which is structurally thickened and occurs to the north of the area, was not encountered. The coal potential of the licence is negligible.

The structure consists of an approximately north trending anticline-syncline pair in the west portion of the property and two approximately north trending, west dipping thrust faults in the east.

BIBLIOGRAPHY

EMPR COAL ASS RPT *348
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE051**

NATIONAL MINERAL INVENTORY:

NAME(S): **WW**, BARNES LAKE

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 10 N
LONGITUDE: 114 41 54 W
ELEVATION: 1920 Metres

NORTHING: 5480338
EASTING: 666812

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Clay Calcite Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 5140 x 18 x 1 Metres
COMMENTS: Series of plunging anticlines and synclines.

STRIKE/DIP: 155/65W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
Triassic	Spray River	Sulphur Mountain	

LITHOLOGY: Phosphorite
Shale
Siltstone
Phosphatic Shale
Pelletal Phosphorite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY: Phosphate

YEAR: 1987

GRADE: 22.4000 Per cent

REFERENCE: Open File 1987-16

CAPSULE GEOLOGY

At the WW showing, a thin (80 centimetre) pelletal phosphorite bed occurs within shale at the base of the Jurassic Fernie Group. These strata unconformably overlie siltstone of the Triassic Sulphur Mountain Formation (Spray River Group). The phosphorite bed is moderate to steeply dipping and has a distinct concretionary appearance. It occurs on the limbs of an anticline-syncline pair of folds. Phosphate content across 0.80 metres is 22.4 per cent P205 (Open File 1987-16). Phosphate also occurs in thin beds at the top of the Permian Ishbel Group.

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EMPR GEM 1972-604
EMPR OF 1987-16
EMPR Unpub. Report Dec. 1, 1967 "Phosphate in B.C."
GSC MAP 20-1958; 1154A
GSC MEM *336
GSC P 58-10; *61-24
CIM *Vol.36, pp. 566-605

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 249
REPORT: RGEN0100

BIBLIOGRAPHY

PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1986/12/22
DATE REVISED: 1987/01/08

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSE052**

NATIONAL MINERAL INVENTORY:

NAME(S): **CORBIN**, CORBIN (COAL MOUNTAIN), SHELL (CORBIN),
BYRON CREEK, FORDING COAL, MAMMOTH

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:
LATITUDE: 49 28 50 N
LONGITUDE: 114 39 34 W
ELEVATION: 2072 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Property lies to the south of Coal Mountain (082GNE001).

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5483512
EASTING: 669534

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: Four major north plunging synclines and nine major high angle reverse faults occur in the area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Claystone
Bituminous Coal
Shale

HOSTROCK COMMENTS: The economic coal (35 metres thick) occurs in the Upper Mammoth seam.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: MAMMOTH UPPER COAL REPORT ON: Y
CATEGORY: Measured YEAR: 1986
QUANTITY: 7200000 Tonnes
COMMODITY GRADE
Coal 1.4000 Per cent
COMMENTS: Total raw recoverable coal reserves, mineable by open pit methods.
Grade based on reflectivity and average volatile matter content.
REFERENCE: Coal Assessment Reports 384, 385, 386, 387, 389.

CAPSULE GEOLOGY

The Upper Mammoth seam (up to 35 metres thick) which contains the economic coal in the Corbin area, occurs predominantly with discontinuous lenses and interbeds of shale varying from 0.5 centimetres to 4 metres in thickness. The strata belongs to the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group). In the south syncline, the Upper Mammoth seam consists of two coal splits, 12 and 6 metres thick, separated by 23 metres of clastic sediments. In the remainder of the property it consists of a single thick coal zone. The thickness of the unit varies considerably due to intense deformation.

The Lower Mammoth seam (up to 58 metres) consists of claystone with thin, discontinuous lenses and interbeds of coal and stony coal. The coal is bituminous (thermal and metallurgical) with a composite washed sample containing 23.6 per cent volatiles (dried airfree basis), 9.7 per cent ash (dry basis), 68.8 per cent fixed carbon (dry basis) and 0.32 per cent sulphur, with a British Thermal Unit value of 15,150 (dried airfree basis) (1976).

Total raw recoverable coal reserves for the Mammoth upper coal zone are calculated at 7.2 million tonnes, mineable by open pit methods. An additional 2.4 million tonnes are calculated for the

CAPSULE GEOLOGY

lower high ash zone. The major reserves lie in the west, central and south synclines on the west flank of Coal Mountain, with the smaller reserve area of the east syncline occurring on the east side of Coal Mountain.

The structure consists of four major synclines which plunge north at approximately 20 degrees. The western three synclines (west, central and south synclines) are faulted onto each other in an imbricate manner, while the eastern syncline is separated from the former by the Coal Mountain anticline. There are nine major (imbricate) high angle reverse faults in the area west of the anticline. They trend north, dip west and have a complex nonplanar geometry.

Extreme thickening of the coal in the area is thought to be due to fault repeats of the Mammoth seam, folding of coal within the seam and plastic flowage of the coal.

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EMPR COAL ASS RPT *384,*385,*386,*387,*389
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE053**

NATIONAL MINERAL INVENTORY:

NAME(S): **RA**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 00 N
LONGITUDE: 114 43 04 W
ELEVATION: 1580 Metres

NORTHING: 5470723
EASTING: 665692

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate Fluorapatite
MINERALIZATION AGE: Triassic-Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic
Triassic

GROUP

Fernie
Spray River

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Nodular Phosphatic Sandstone
Oolitic Phosphate Rock
Phosphatic Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Ra showing, phosphate mineralization is identified within a nodular phosphatic sandstone at the base of the Triassic Spray River Group and as a nodular and oolitic phosphate rock and phosphatic shale at the base of the Jurassic Fernie Group.

BIBLIOGRAPHY

EMPR AR 1968-324
EMPR GEM 1969-399
EMPR OF 1987-16
EMPR Unpub. Report Dec. 1, 1967 "Phosphate in B.C."
GSC MAP 20-1958; 1154A
GSC MEM *336
GSC P 58-10; *61-24
CIM *Vol.36, pp. 566-605

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/06

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE054**

NATIONAL MINERAL INVENTORY:

NAME(S): **ABC**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 03 N
LONGITUDE: 114 23 04 W
ELEVATION: 1403 Metres

NORTHING: 5445665
EASTING: 690784

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Quartz
ALTERATION: Malachite Specularite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP

Purcell

FORMATION

Grinnell

IGNEOUS/METAMORPHIC/OTHER

Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the ABC showing, chalcopyrite and bornite occur disseminated and within localized zones of enrichment within the quartzites of the Helikian Grinnell Formation. Sulphides are also concentrated sporadically at the margins of diorite sills of the Proterozoic Moyie Intrusions. Malachite is common on the weathered surfaces of the sedimentary stratigraphy. Chalcopyrite and bornite also form veinlets within the quartzites and are associated with specularite in fractures in the diorites.

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EMPR ASS RPT 2746, 2749, 3160, *3336
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/05

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE055**

NATIONAL MINERAL INVENTORY:

NAME(S): **CABIN CREEK (CS)**, CABIN CREEK, CS,
VIRGINIA

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 37 N
LONGITUDE: 114 40 41 W
ELEVATION: 1578 Metres

NORTHING: 5442311
EASTING: 669451

LOCATION ACCURACY: Within 500M

COMMENTS: Section on north side of Cabin Creek, 18 kilometres northwest of the Flathead border crossing (Open File 1987-16, Figure 33).

COMMODITIES: Phosphate Yttrium

MINERALS

SIGNIFICANT: Phosphorite Apatite
ASSOCIATED: Quartz Clay Bentonite Feldspar
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic
Triassic

GROUP

Fernie
Spray River

FORMATION

Undefined Formation
Sulphur Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Shale
Phosphatic Shale
Bentonite Shale
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: TRENCHES

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY

Phosphate
Yttrium

GRADE

20.4700
0.7090

Per cent
Per cent

COMMENTS: Composite chip sample over thickness of 3.51 metres.

REFERENCE: Assessment Report 19954, page 15.

CAPSULE GEOLOGY

The Cabin Creek (CS) phosphate prospect is located on Cabin Creek, 13 kilometres west of the Flathead River, 53 kilometres southeast of Fernie.

This region of southeastern British Columbia is underlain by miogeosynclinal strata comprising marine clastics and carbonates of Devonian to Jurassic age and non-marine fluvio-deltaic clastics of Late Jurassic and Early Cretaceous age. The strata are exposed in a broad north trending doubly plunging synclinorium known as the Fernie Basin. These units are disrupted by secondary folding accompanied by thrust and normal faulting. Such structures trend north to northwest.

The area in the vicinity of Cabin Creek at the south end of the Fernie Basin is underlain by fine-grained sandstones, siltstones and dolomitic siltstones of the Permian Ranger Canyon Formation (Ishbel Group), overlain by siltstones, shales and dolomite of the Triassic Sulphur Mountain Formation (Spray River Group), followed by shales, siltstones and minor sandstones of the Jurassic Fernie Group. The strata are exposed in the core of a northwestward trending doubly plunging ("domal") anticline that is bisected by Cabin Creek, which

CAPSULE GEOLOGY

flows eastward.

Phosphatic beds are found at the top of the Ranger Canyon Formation and at the base of the Fernie Group. The basal horizon of the Fernie Group is between 1.15 and 3.5 metres thick and consists of two poorly consolidated gritty pelletal phosphorite beds, separated by 17 to 63 centimetres of shale containing a thin intermediary phosphatic horizon. The sequence is overlain by brown and black shales or capped by one or more yellow bentonite beds, such as south of Cabin Creek. The horizon outcrops as a flattened northward trending ellipse 2400 metre long and 1000 metres wide.

Trenching along the southwestern flank of the anticline over a strike length of 700 metres south of Cabin Creek encountered phosphatic sections 1.15 to 3.51 metres thick averaging 17 to 20.5 per cent P2O5 and 0.540 to 0.710 per cent yttrium (Assessment Report 19954, page 19). A sample from the north side of Cabin Creek analyzed by x-ray fluorescence contained the following (in per cent) (Fieldwork 1989, page 490, Sample VM89-8):

SiO2	10.97
Al2O	31.71
Fe2O	31.94
MgO	0.35
CaO	45.43
Na2O	0.26
K2O	0.31
TiO2	0.16
MnO	0.02
P2O5	33.96
Sulphur	0.44
Total carbon	2.04
L.O.I.	5.35

This phosphate prospect was first mapped and diamond drilled by Imperial Oil Ltd. in 1978 before being remapped and sampled by First Nuclear Corporation in 1981 and Formosa Resources Corporation in 1989.

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EMPR ASS RPT 5556, *7617, *10135, *19954
EMPR FIELDWORK 1986, pp. 289-302; 1989, pp. 489-492
EMPR GEM 1969-399
EMPR OF 1987-16, pp. 87,90,91
EMPR Unpub. Report (1967): Phosphate in B.C.
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24
CIM Vol.36, pp. 566-605

DATE CODED: 1985/07/24
DATE REVISED: 1991/03/26

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSE056**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAM 1**, STN

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G02E 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 23 N
LONGITUDE: 114 44 59 W
ELEVATION: 1826 Metres

NORTHING: 5449132
EASTING: 664014

LOCATION ACCURACY: Within 500M

COMMENTS: Trench STN located in headwaters of Bighorn Creek, 45 kilometres southeast of Fernie (Assessment Report 10135, Drawing 5).

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate Phosphorite Fluorapatite

MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic
Permian

GROUP

Fernie
Ishbel

FORMATION

Undefined Formation
Ranger Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphatic Sandstone
Oolitic Phosphate Rock
Phosphatic Shale
Nodular Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1978

SAMPLE TYPE: Chip

COMMODITY

GRADE

Phosphate

21.3000 Per cent

COMMENTS: Across 1.5 metres.

REFERENCE: Assessment Report 7617, page 4.

CAPSULE GEOLOGY

Phosphate occurs in the headwaters of Bighorn Creek, some 45 kilometres southeast of Fernie.

Phosphatic horizons are found in both the Permian Ranger Canyon Formation (Ishbel Group) and in the Jurassic Fernie Group. A horizon in the Ranger Canyon Formation strikes north for 1000 metres along the nose of the Storm Creek thrust fault. A sample across 1.5 metres contained 21.3 per cent P2O5 (Assessment Report 10135, page 67).

A second horizon outcrops in this vicinity at the hinge of a gentle syncline at the base of the Fernie Group. From base to top the horizon is comprised the following lithologies with accompanying phosphate contents in per cent (Assessment Report 7617, page 4):

0.13 metres of phosphatic conglomerate (7.1)

0.38 metres of massive phosphorite (24.5)

0.18 metres of shaly phosphorite (24.5)

0.10 metres of shale (0.9)

0.08 metres of shaly phosphorite (12.1)

The Ram 1 prospect was first explored by Imperial Oil Ltd. in 1978 before being mapped and sampled by First Nuclear Corporation in 1981.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 257
REPORT: RGEN0100

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EMPR ASS RPT 5556, *7617, *10135
EMPR FIELDWORK 1986, pp. 289-302
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EMPR OF 1987-16
EMPR Unpub. Report Dec. 1, 1967 "Phosphate in B.C."
GSC MAP 20-1958; 1154A
GSC MEM *336
GSC P 58-10; *61-24
CIM Vol.36, (1933) pp. 566-605

DATE CODED: 1985/07/24
DATE REVISED: 1991/03/28

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE057**

NATIONAL MINERAL INVENTORY:

NAME(S): **LODGE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 16 30 N
LONGITUDE: 114 48 34 W
ELEVATION: 1430 Metres

NORTHING: 5460336
EASTING: 659333

LOCATION ACCURACY: Within 500M

COMMENTS: Twenty-six kilometres southeast of Coal Creek settlement.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate Phosphorite
ASSOCIATED: Clay Calcite Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic	Fernie	Undefined Formation	

LITHOLOGY: Phosphorite
Shale
Siltstone
Phosphatic Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: OUTCROP

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock

COMMODITY GRADE
Phosphate 29.5000 Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

A phosphorite bed approximately 1 metre thick occurs in brown and black shale and siltstone at the base of the Jurassic Fernie Group. These strata unconformably overlie fine siltstone of the Triassic Sulphur Mountain Formation (Spray River Group). Phosphate was intersected in one hole drilled by Imperial Oil. It contained 17.33 per cent P2O5 across 2.44 metres. Only one poorly exposed and badly weathered outcrop of phosphate is exposed in the Lodge occurrence area. A bulk grab sample of phosphorite from this locality contained 29.5 per cent P2O5 (Open File 1987-16).

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EMPR AR 1968-324
EMPR ASS RPT 5556, 7616, *7617, 10135
EMPR OF 1987-16
EMPR GEM 1969-399
EMPR Unpub. Report Dec. 1, 1967 "Phosphate in B.C."
GSC MAP 20-1958; 1154A
GSC MEM *336
GSC P 58-10; *61-24
CIM Vol.36 (1944), pp. 566-605
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1985/07/24
DATE REVISED: 1986/12/10

CODED BY: GSB
REVISED BY: SSB

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSE058**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOOF 30**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 21 55 N
LONGITUDE: 114 34 02 W
ELEVATION: 2040 Metres

NORTHING: 5470910
EASTING: 676627

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Bornite Pyrite Pyrrhotite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Grinnell	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Goof 30 showing, disseminated chalcocite, chalcopyrite and bornite is found within quartzite units of the Helikian Grinnell Formation. Malachite staining is common on surfaces exposed to weathering.

Chalcopyrite with pyrite and pyrrhotite are reported, concentrated locally along the margins of diorite sills of the Proterozoic Moyie Intrusions.

BIBLIOGRAPHY

EMPR ASS RPT 3160, 3161
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24

DATE CODED: 1986/06/04
DATE REVISED: 1986/06/04

CODED BY: BG
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FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 260
REPORT: RGEN0100

MINFILE NUMBER: **082GSE059**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAGE 44**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 15 N
LONGITUDE: 114 22 04 W
ELEVATION: 2348 Metres

NORTHING: 5442372
EASTING: 692116

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ALTERATION: Malachite Specularite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Grinnell	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Sage 44 showing, chalcopyrite and bornite occur disseminated and in localized zones of enrichment within quartzites of the Helikian Grinnell Formation. Sulphides are also concentrated sporadically at the margins of diorite sills of the Proterozoic Moyie Intrusions. Malachite is common on the weathered surfaces of the sedimentary stratigraphy. Chalcopyrite and bornite also form veinlets within the quartzites and are associated with specularite in fractures in the diorites.

BIBLIOGRAPHY

EMPR ASS RPT 2746, 2749, 3160, *3336
EMPR GEM 1970-477
GSC MEM 336
GSC P 61-24

DATE CODED: 1986/06/05
DATE REVISED: 1986/06/05

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE059**

MINFILE NUMBER: **082GSE060**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIGHORN, DS**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 26 N
LONGITUDE: 114 46 12 W
ELEVATION: 1650 Metres

NORTHING: 5447328
EASTING: 662588

LOCATION ACCURACY: Within 500M

COMMENTS: Sample site 350 metres southwest of Bighorn Creek, 39 kilometres northwest of the Flathead border crossing (Open File 1987-16, Figure 33).

COMMODITIES: Phosphate Yttrium

MINERALS

SIGNIFICANT: Phosphorite Phosphate Apatite
ASSOCIATED: Quartz Clay Feldspar
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
COMMENTS: Appears to be shallow dipping sequence, below MacDonald thrust fault.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
Permian	Ishbel	Ranger Canyon	

LITHOLOGY: Phosphorite
Limestone
Shale
Silty Dolomite
Dolomitic Siltstone
Calc Arenite

HOSTROCK COMMENTS: The Ishbel Group is overlain by sedimentary rocks of the Triassic Sulphur Mountain Formation, Spray River Group.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY: Phosphate GRADE
18.5000 Per cent
REFERENCE: Open File 1987-16, Figure 33.

CAPSULE GEOLOGY

The Bighorn phosphate prospect outcrops on Inverted Ridge on the south side of Bighorn Creek, 45 kilometres southeast of Fernie.

The area in the vicinity of Bighorn Creek near the southwest margin of the Fernie Basin is underlain by fine-grained quartzose sandstones, siltstones and dolomitic siltstones of the Permian Ranger Canyon Formation (Ishbel Group), overlain by siltstones and calcareous or dolomitic siltstones of the Triassic Sulphur Mountain Formation (Spray River Group), followed by shales, siltstones and minor sandstones of the Jurassic Fernie Group. These units are situated on the west limb of an anticline trending northwest along the east side of the MacDonald thrust fault. This stratigraphy is locally warped into a smaller anticline-syncline pair.

Phosphate mineralization is contained in the Fernie Group and the Ranger Canyon Formation. A phosphorite horizon trends northwest along the southwest side of Bighorn Creek at the base of the Fernie Group. The horizon consists of a 0.75 metre thick layer of dense black phosphate with limonite blebs, overlain by 1.5 metres of silty

CAPSULE GEOLOGY

shale and pelletal phosphate, which is in turn overlain by 1.5 metres of chocolate-coloured shale. A sample taken across its 2 metre thickness contained 18.50 per cent P2O5 (Open File 1987-16, Figure 33). A composite chip sample averaged over a true thickness of 0.51 metres contained 23.74 per cent P2O5 and 0.690 per cent yttrium (Assessment Report 19938, page 16, section IVR89-2).

This occurrence was first explored by First Nuclear Corporation in 1981 and then prospected by Formosa Resources Corporation in 1989.

BIBLIOGRAPHY

EMPR ASS RPT 7617, *10135, *19938
EMPR FIELDWORK 1986, pp. 289-302; 1989, pp. 489-492
EMPR OF 1987-16, p. 91
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1986/12/12
DATE REVISED: 1991/03/27

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REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GSE061**

NATIONAL MINERAL INVENTORY:

NAME(S): **STORM CREEK, STS**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 52 N
LONGITUDE: 114 40 08 W
ELEVATION: 1829 Metres

NORTHING: 5442795
EASTING: 670106

LOCATION ACCURACY: Within 500M

COMMENTS: Sample site 2 kilometres west of Storm Creek, 18 kilometres northwest of Flathead border crossing (Open File 1987-16, Figure 33).

COMMODITIES: Phosphate Yttrium

MINERALS

SIGNIFICANT: Phosphorite Phosphate
ASSOCIATED: Quartz Clay Calcite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

DATING METHOD:

Triassic

GROUP

Fernie

Fossil

Spray River

FORMATION

Undefined Formation

Sulphur Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Shale
Pelletal Phosphorite
Dolomitic Siltstone
Silty Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Chip

COMMODITY

GRADE

Phosphate

19.9000

Per cent

Yttrium

0.6020

Per cent

COMMENTS: Composite chip sample average over a thickness of 1.98 metres.

REFERENCE: Assessment Report 19956, page 15.

CAPSULE GEOLOGY

The Storm Creek phosphate prospect outcrops on a ridge trending northwest between Cabin Creek and Storm Creek, 12 kilometres west of the Flathead River, 53 kilometres southeast of Fernie.

This region of southeastern British Columbia is underlain by miogeosynclinal strata comprising marine clastics and carbonates of Devonian to Jurassic age and non-marine fluvio-deltaic clastics of Late Jurassic and Early Cretaceous age. The strata are exposed in a broad north trending doubly plunging synclinorium known as the Fernie Basin. These units are disrupted by secondary folding accompanied by thrust and normal faulting. Such structures trend north to northwest.

The area in the vicinity of Cabin Creek at the south end of the Fernie Basin is underlain by fine-grained sandstones, siltstones and dolomitic siltstones of the Permian Ranger Canyon Formation (Ishbel Group), overlain by siltstones, shales and dolomite of the Triassic Sulphur Mountain Formation (Spray River Group), followed by shales,

CAPSULE GEOLOGY

siltstones and minor sandstones of the Jurassic Fernie Group. This sequence is folded about an anticline trending north-northwest whose axial trace follows the crest of the ridge. An intervening syncline separates this prospect from an adjacent anticline to the west, where two other phosphate occurrences are exposed (Cabin Creek, 082GSE055 and Cabin G, 082GSE068).

Phosphate mineralization is contained within a shale sequence at the base of the Fernie Group. This horizon consists of a lower massive pelletal phosphorite bed overlain by a thin shale bed, which is in turn overlain by a second pelletal to shaly phosphorite bed capped by black shales. Sampling along the southwestern flank of the anticline revealed the lower bed contains 27 per cent phosphate and 0.900 per cent yttrium over a thickness of 0.46 metre, while the upper bed contains 20.47 per cent phosphate and 0.390 per cent yttrium across 0.40 metre (Assessment Report 19954, page 19). The entire section averages 19.90 per cent phosphate and 0.602 per cent yttrium over a thickness of 1.98 metres (Assessment Report 19954, page 15, trench CBC89-18).

This phosphate prospect was first mapped and diamond drilled by Imperial Oil Ltd. in 1978 before being remapped and sampled by First Nuclear Corporation in 1981 and Formosa Resources Corporation in 1989.

BIBLIOGRAPHY

- EMPR ASS RPT 7617, 10135, *19956
EMPR FIELDWORK 1986, pp. 289-302
EMPR OF 1987-16, pp. 87,90,91
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24
MacDonald, D.E. (1985): Geology and Resource Potential of Phosphates in Alberta and Portions of Southeastern British Columbia (Section 408); Unpublished M.Sc. Thesis, University of Alberta

DATE CODED: 1986/12/11
DATE REVISED: 1991/03/27

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSE062**

NATIONAL MINERAL INVENTORY:

NAME(S): **LODGEPOLE PHOSPHATE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 50 N
LONGITUDE: 114 55 34 W
ELEVATION: 1250 Metres

NORTHING: 5464419
EASTING: 650729

LOCATION ACCURACY: Within 500M

COMMENTS: East of the junction of the Lodgepole and Ram Creek forestry roads.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphorite Phosphate Apatite

ASSOCIATED: Quartz Calcite Clay

MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Bladed

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
Triassic	DATING METHOD: Fossil Spray River	Sulphur Mountain	

LITHOLOGY: Phosphorite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY
Phosphate GRADE
14.3000 Per cent
REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Lodgepole Phosphate showing, a 12 centimetre thick phosphorite bed occurs within two limestone horizons at the base of the Jurassic Fernie Group. This phosphorite bed has a phosphate content of 14.3 per cent P2O5 (Open File 1987-16). These strata unconformably overlies strata of the Triassic Sulphur Mountain Formation (Spray River Group). Thrust faulting and small scale folding are abundant.

BIBLIOGRAPHY

EMPR AR 1966-271
EMPR FIELDWORK 1986, pp. 289-302
EMPR OF 1987-16
EMPR Unpub. Report Dec. 1, 1967 "Phosphate Occurrences in B.C."
GSC MAP 20-1958; 1154A
GSC MEM *336
GSC P 58-10; 61-24
CIM Vol.36, pp. 566-605
PERS COMM Butrenchuk, S.B. (1986)
*Freebold, H. (1969): Subdivision and Facies of Lower Jurassic Rocks in the Southern Canadian Rocky Mountains and Foothills, G.A.C. Proceedings Vol. 20, pp. 76-87

DATE CODED: 1986/12/12
DATE REVISED: 1986/12/12

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSE063**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAM A**, HUNGER, LESLIE CREEK

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 40 N
LONGITUDE: 114 40 18 W
ELEVATION: 1768 Metres

NORTHING: 5447976
EASTING: 669743

LOCATION ACCURACY: Within 500M

COMMENTS: Sample site, 2 kilometres southwest of Hunger Lake and 27 kilometres northwest of the Flathead border crossing (Open File 1987-16, Figure 33).

COMMODITIES: Phosphate Yttrium

MINERALS

SIGNIFICANT: Phosphorite Phosphate Apatite
ASSOCIATED: Clay Calcite Quartz
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION: 4500 x 1 Metres STRIKE/DIP: 140/35W TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
Permian	DATING METHOD: Fossil Ishbel	Ranger Canyon	

LITHOLOGY: Phosphorite
Shale
Pelletal Phosphorite
Dolomitic Siltstone

HOSTROCK COMMENTS: The Ishbel Group is overlain by sedimentary rocks of the Triassic Sulphur Mountain Formation, Spray River Group.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Chip
COMMODITY GRADE
Phosphate 21.1000 Per cent
Yttrium 0.6490 Per cent
COMMENTS: Composite chip sample averaged across a thickness of 2.18 metres.
REFERENCE: Assessment Report 19938, page 61, Sample TR89-3-3.

CAPSULE GEOLOGY

The Ram A phosphate prospect outcrops southwest of Hunger Lake and Leslie Creek, 50 kilometres southeast of Fernie. This region of southeastern British Columbia is underlain by miogeosynclinal strata comprising marine clastics and carbonates of Devonian to Jurassic age and non-marine fluvio-deltaic clastics of Late Jurassic and Early Cretaceous age. The strata are exposed in a broad north trending doubly plunging synclinorium known as the Fernie Basin. These units are disrupted by secondary folding accompanied by thrust and normal faulting. Such structures trend north to northwest. The area in the vicinity of Hunger Lake near the south end of the Fernie Basin is underlain by fine-grained quartzose sandstones, siltstones and dolomitic siltstones of the Permian Ranger Canyon Formation (Ishbel Group), overlain by siltstones and calcareous or dolomitic siltstones of the Triassic Sulphur Mountain Formation (Spray River Group), followed by shales, siltstones and minor

CAPSULE GEOLOGY

sandstones of the Jurassic Fernie Group. These units are exposed along the northeast limb of a broad syncline. Bedding along this limb averages a strike of 121 degrees with 18 degree dips southwest.

Phosphate mineralization is contained in the Fernie Group and the Ranger Canyon Formation. A poorly exposed phosphorite horizon of Sinemurian age (Lower Jurassic) outcrops 2 kilometres southwest of Hunger Lake and continues northwest into the headwaters of Leslie Creek for 4.5 kilometres at the base of the Fernie Group. This horizon consists of a pelletal phosphorite to phosphatic shale layer 0.25 to 0.84 metres thick separated from an overlying pelletal or nodular phosphorite 0.18 to 0.77 metres thick, by 5 to 23 centimetres of chocolate to black shale. The entire section is overlain by slightly phosphatic black or brown shales which grade upward into non-phosphatic rocks. Trenching of this horizon encountered thicknesses of about 1 metre with grades of approximately 21 per cent P2O5 and 0.620 per cent yttrium. Higher grades were encountered over a 1.7 kilometre strike length near the headwaters of Leslie Creek, where the horizon averaged 22.52 per cent P2O5 and 0.657 per cent yttrium across 1.17 metres (Assessment Report 19938, page 20).

This phosphate prospect was mapped and sampled by First Nuclear Corporation in 1981 and Formosa Resources Corporation in 1989.

BIBLIOGRAPHY

EMPR ASS RPT 10135, *19938
EMPR FIELDWORK 1986, pp. 289-302
EMPR OF 1987-16, p. 91
GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24

DATE CODED: 1986/12/11
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REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GSE064**

NATIONAL MINERAL INVENTORY:

NAME(S): **ZIP**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 16 05 N
LONGITUDE: 114 36 04 W
ELEVATION: 1450 Metres

NORTHING: 5460024
EASTING: 674510

LOCATION ACCURACY: Within 500M

COMMENTS: On Morris Creek, 44 kilometres southeast of Fernie.

COMMODITIES: Phosphate Vanadium

MINERALS

SIGNIFICANT: Phosphorite Phosphate Apatite
COMMENTS: Shales overlying phosphorite are vanadium-rich.
ASSOCIATED: Clay Calcite Quartz
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
MODIFIER: Faulted
COMMENTS: Thrust faulting has repeated phosphate bed a minimum of 3 times.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
Triassic	Fossil Spray River	Sulphur Mountain	

LITHOLOGY: Phosphorite
Shale
Dolomite
Pelletal Phosphorite
Silty Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY Phosphate GRADE 27.1000 Per cent
COMMENTS: Sample across 0.70 metres.
REFERENCE: Open File 1987-16, page 95, Sample SBB86-15D.

CAPSULE GEOLOGY

The Zip phosphate prospect is located on Morris Creek, 2.5 kilometres west of the Flathead River, 44 kilometres southeast of Fernie.

A pelletal phosphorite bed 0.7 metres thick occurs at the base of the Jurassic Fernie Group and unconformably overlies dolomite and silty dolomite of the Triassic Sulphur Mountain Formation (Spray River Group). The phosphorite is overlain by vanadium-rich shales. The bed is repeated at least three times by thrust faulting and is truncated by a body of trachytic syenite. A sample taken across a thickness of 0.7 metres assayed 27.1 per cent P2O5 (Open File 1987-16, page 95, sample SBB86-15D).

First Nuclear Corp. carried out geological mapping and trenching in 1980.

BIBLIOGRAPHY

EMPR ASS RPT 9142, 10135
EMPR FIELDWORK 1986, pp. 289-302
EMPR OF *1987-16, pp. 92,93

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 269
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1154A; 35-1961
GSC MEM 287; 336
GSC P 61-24
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1986/12/10
DATE REVISED: 1991/03/27

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GSE065**

NATIONAL MINERAL INVENTORY:

NAME(S): **COMMERCE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 20 N
LONGITUDE: 114 23 54 W
ELEVATION: 1920 Metres

NORTHING: 5449860
EASTING: 689626

LOCATION ACCURACY: Within 500M

COMMENTS: Chip sample 10428A (Assessment Report 6398).

COMMODITIES: Uranium Copper Silver Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Quartz
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Sedimentary
TYPE: E04 Sediment-hosted Cu D05 Sandstone U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Grinnell

LITHOLOGY: Argillite
Sandstone
Quartzitic/Quartzose Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1976
SAMPLE TYPE: Chip
COMMODITY GRADE
Molybdenum 0.1580 Per cent
Uranium 1.2800 Per cent
REFERENCE: Assessment Report 6398.

CAPSULE GEOLOGY

The Helikian Grinnell Formation is host to disseminated stratabound copper, silver, and uranium mineralization. The Grinnell Formation consists mainly of red and green argillite, interbedded with quartzitic sandstone and fine-grained red sandstone. Anomalous radioactivity occurs throughout the Grinnell Formation, with the highest values (200 to 450 counts per second by BGS-1S scintillometre, with background 60 counts per second) associated with copper and silver mineralization. Chemical analysis of a chip sample at the Commerce showing assayed 0.06 per cent uranium, 136.4 grams per tonne silver, and 0.7 per cent copper (Assessment Report 6398). A chip sample 1300 metres to the east, assayed 1.09 per cent uranium and 0.158 per cent MoS2 (Assessment Report 6398) and a sample 1400 metres to the west assayed 0.05 per cent uranium (Assessment Report 5938).

BIBLIOGRAPHY

EMPR ASS RPT 5938, *6398, 7567
EMPR EXPL 1976-47; 1977-55-56; 1978-66-67; 1979-76
GSC MAP 35-1961
GSC MEM 336
GSC P 61-24

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 271
REPORT: RGEN0100

BIBLIOGRAPHY

Falconbridge File

DATE CODED: 1987/02/12
DATE REVISED: 1987/02/12

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE066**

NATIONAL MINERAL INVENTORY:

NAME(S): **FENSTER CREEK PHOSPHATE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 30 N
LONGITUDE: 114 49 09 W
ELEVATION: 1830 Metres

NORTHING: 5449200
EASTING: 658947

LOCATION ACCURACY: Within 500M

COMMENTS: Located north of headwaters of Fenster Creek and 8 kilometres northwest of Cabin Pass.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound Massive Disseminated
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 030/30S

TREND/PLUNGE:

COMMENTS: Overturned sequence above MacDonald thrust fault.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Ishbel	Johnson Canyon	

LITHOLOGY: Siltstone
Shale
Conglomerate
Limestone
Phosphatic Siltstone
Silty Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

11.7000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

In the Fenster Creek Phosphate occurrence area, phosphate as nodules and intraclasts occurs in the basal portion of the Permian Johnson Canyon Formation (Ishbel Group). The basal conglomerate, 25 centimetres thick, contains 4.0 per cent P2O5. This conglomerate is overlain by weakly phosphatic siltstone 1 metre thick containing 3.2 per cent P2O5, and phosphatic siltstone 0.40 metres thick containing 11.7 per cent P2O5 (Open File 1987-16). This sequence overlies, unconformably, silty limestone and limestone of the Pennsylvanian Kananaskis Formation (Spray Lakes Group). A thin band of silty limestone contains minor phosphate in the form of disseminated grains. A grab sample of this material contained 1.3 per cent P2O5.

BIBLIOGRAPHY

EMPR OF 1987-16
GSC MAP 35-1961
GSC MEM 336

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSE067**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAM SOUTH**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 00 N
LONGITUDE: 114 46 24 W
ELEVATION: 1524 Metres

NORTHING: 5446518
EASTING: 662369

LOCATION ACCURACY: Within 500M

COMMENTS: Located south of Bighorn Creek, 3.5 kilometres northwest of Cabin Pass.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound

CLASSIFICATION: Sedimentary Industrial Min.

TYPE: F07 Upwelling-type phosphate

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 120/50S

TREND/PLUNGE:

COMMENTS: Overturned sequence above MacDonald thrust fault.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Pennsylvanian

Spray Lakes

Kananaskis

Permian

Ishbel

Johnson Canyon

LITHOLOGY: Siltstone
Sandstone
Dolomite
Silty Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

1.8000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Ram South showing, phosphate nodules occur in a 5 metre thick section of fine sandstone and siltstone of the Permian Johnson Canyon Formation (Ishbel Group). Nodules are up to 20 per cent by volume. Phosphate values range from 0.3 to 1.8 per cent P2O5 across a thickness of 1 to 1.5 metres (Open File 1987-16). This sequence overlies dolomite and silty dolomite of the Pennsylvanian Kananaskis Formation (Spray Lakes Group). The contact was not observed, nor was the contact with the overlying Triassic Sulphur Mountain Formation (Spray River Group).

BIBLIOGRAPHY

EMPR ASS RPT 10135

EMPR OF 1987-16

GSC MAP 35-1961

GSC MEM 336

DATE CODED: 1987/02/04

CODED BY: SBB

FIELD CHECK: Y

DATE REVISED: 1987/02/04

REVISED BY: SBB

FIELD CHECK: Y

MINFILE NUMBER: **082GSE068**

NATIONAL MINERAL INVENTORY:

NAME(S): **CABIN G**, CABIN CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 26 N
LONGITUDE: 114 40 51 W

NORTHING: 5441965
EASTING: 669259

ELEVATION: 1615 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Sample site on south side of Cabin Creek, 18 kilometres northwest of Flathead border crossing (Open File 1987-16, Figure 33).

COMMODITIES: Phosphate Yttrium

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Clay Calcite
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.
TYPE: F07 Upwelling-type phosphate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Ishbel	Ranger Canyon	

LITHOLOGY: Phosphatic Siltstone
Cherty Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY: Phosphate
GRADE: 1.2000
YEAR: 1987
Per cent

REFERENCE: Open File 1987-16, Figure 33.

CAPSULE GEOLOGY

The Cabin G phosphate prospect is located on Cabin Creek, 13 kilometres west of the Flathead River, 53 kilometres southeast of Fernie.

The area in the vicinity of Cabin Creek at the south end of the Fernie Basin is underlain by fine-grained sandstones, siltstones and dolomitic siltstones of the Permian Ranger Canyon Formation (Ishbel Group), overlain by siltstones, shales and dolomite of the Triassic Sulphur Mountain Formation (Spray River Group), followed by shales, siltstones and minor sandstones of the Jurassic Fernie Group. The strata are exposed in the core of a northwestward trending doubly plunging ("domal") anticline that is bisected by Cabin Creek, which flows eastward.

Phosphatic beds are found at the base of the Fernie Group and near the top of the Ranger Canyon Formation. A 2 metre thick bed of medium grey to dark brown weathering calcareous siltstone to fine-grained sandstone of the Ranger Canyon Formation is poorly exposed southwest of Cabin Creek. The bed is underlain by either a buff to buff grey cherty siltstone or a light grey bituminous brecciated dolostone/dolomitic siltstone. The unit contains grey phosphate nodules 1 to 20 centimetres in diameter containing 20 per cent P2O5 and 0.200 per cent yttrium. Representative samples from this bed have assayed 9 to 13 per cent P2O5 and 0.150 to 0.200 per cent yttrium (Assessment Report 19954, page 13). The horizon averages 1.2 per cent P2O5 over its 2 metre thickness (Open File 1987-16, Figure 33).

The prospect was first explored by Imperial Oil Ltd. in 1978 and then by First Nuclear Corporation in 1981. The deposit was examined

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CAPSULE GEOLOGY

by Formosa Resources Corporation in 1989, while exploring the base of the Fernie Group for yttrium-enriched phosphates.

BIBLIOGRAPHY

EMPR ASS RPT 7617, 10135, *19954
EMPR FIELDWORK 1986, pp. 289-302
EMPR OF 1987-16, p. 91
GSC MAP 1154A: 35-1961
GSC MEM 336
GSC P 61-24

DATE CODED: 1987/02/04
DATE REVISED: 1991/03/27

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSE069**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT BROADWOOD**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 00 N
LONGITUDE: 114 56 59 W
ELEVATION: 1295 Metres

NORTHING: 5462828
EASTING: 649055

LOCATION ACCURACY: Within 500M

COMMENTS: Located at kilometre 26.5 on the Ram Creek forestry Road.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
COMMENTS: Phosphate nodules in siltstone and fine-grained sandstone.
ASSOCIATED: Quartz
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
COMMENTS: Moderately dipping overturned stratigraphic sequence.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Pennsylvanian
Permian

GROUP

Spray Lakes
Ishbel

FORMATION

Kananaskis
Johnson Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Siltstone
Shale
Phosphatic Conglomerate
Cherty Conglomerate
Cherty Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

3.8000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Mount Broadwood showing, a 22 metre thick phosphatic interval occurs within a cyclic, overturned sequence of sandstone, siltstone and shale in the Permian Johnson Canyon Formation (Ishbel Group). The base of the sequence and formation is marked by a 30 centimetre thick phosphatic and chert conglomerate that contains 3.80 per cent P2O5 (Open File 1987-16). A number of beds containing phosphate nodules in amounts up to 40 per cent by volume occur in this section. These beds are 1 metre or less thick and contain less than 2 per cent P2O5. The sequence unconformably overlies cherty dolomite of the Pennsylvanian Kananaskis Formation (Spray Lakes Group).

BIBLIOGRAPHY

EMPR OF 1987-16
GSC MAP 35-1961
GSC MEM 336

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSE070**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROWSNEST**, FLATHEAD 9, FLATHEAD,
CROW, FLAT

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G02E
BC MAP:
LATITUDE: 49 10 18 N
LONGITUDE: 114 36 05 W
ELEVATION: 2011 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5449309
EASTING: 674829

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Epigenetic Hydrothermal Skarn
TYPE: L04 Porphyry Cu ± Mo ± Au K04 Au skarn
H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mississippian	Rundle	Mount Head	
Mississippian	Rundle	Livingstone	
Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Syenite
Marble
Calcarenite
Limestone
Calcareous Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 7.5800 Grams per tonne
REFERENCE: Assessment Report 16676.

CAPSULE GEOLOGY

The Flathead 9 property area is underlain by a thick series of limestones, dolomites and black shales of the Upper Devonian Palliser Formation, Mississippian Rundle Group (Livingstone, Mount Head and Etherington formations), Lower Mississippian Banff Formation and Upper Devonian-Lower Mississippian Exshaw Formation. Quartz arenites and dolomitic sandstones of the Permo-Pennsylvanian Rocky Mountain Group also occur. Numerous small Cretaceous stocks of trachyte and syenite composition have intruded and locally altered the enclosing sedimentary strata.

The mineralization (pyrite) occurs within a syenite stock which is enclosed by coarse crystalline, skeletal calcarenites of the Mount Head and Livingstone formations. Within these rocks, an aureole of coarse equigranular marble has been developed for a distance of about 100 metres around the stock. Small bodies of calc-silicate skarn were also found along the contact with the stock.

Placer Dome Inc. drilled the area in 1989. Phelps Dodge Corporation of Canada Ltd. drilled in 1994. Eastfield Resources Ltd. acquired claims in the area in 1998 which constitute the Crownsnest project. International Curator Resources Ltd. is earning interest in the property in 1999. In 1999, 10 holes were drilled.

Goldrea Resources Corp. drilled 11 holes on the property in

CAPSULE GEOLOGY

2002 however drilling was located 5 kilometres east-southeast of the Crowsnest MINFILE location.

BIBLIOGRAPHY

EM EXPL 1999-40-52; 2002-51-62
EMPR ASS RPT 14162, 15359, 16676, 18091, 19455, 23199, 23665, 25730
EMPR PF (International Curator Resources Ltd. Website (Aug.1999, Nov. 1999): Crowsnest Gold Project, 5 p; Eastfield Resources Ltd. Website (Nov. 1999): Crowsnest Project, 1 p.)
GSC MAP 35-1961
GSC MEM 336
GCNL #59(Mar.25), 1999
PR REL Eastfield Resources Ltd., Sept. 2, 1998, March 23, 1999; International Curator Resources Ltd., Mar.23, June 28, Aug.17, 31, Sept.15, Oct.6, 18, 1999; Goldrea Resources Corp., Sept. 5, 2002; Goldrea Resources Corp., Sept.18, Dec.31, 2002
WWW <http://www.eastfieldgroup.com/eastfield/etfhome.html>;
<http://www.infomine.com/>

DATE CODED: 1988/03/10
DATE REVISED: 1991/05/03

CODED BY: GSA
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSE071**

NATIONAL MINERAL INVENTORY:

NAME(S): **FLATHEAD, WOLF, MITE,
BERG, JOSE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G08W 082G01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 15 00 N
LONGITUDE: 114 25 04 W
ELEVATION: 1800 Metres

NORTHING: 5458457
EASTING: 687914

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Silver Copper Tungsten

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Unnamed/Unknown Formation	

LITHOLOGY: Argillite
Argillaceous Limestone
Argillaceous Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Flathead Group, consisting of the Wolf, Berg, Mite and Jose claims, are located at the headwaters of the Middlepass Creek. They were staked in 1967 by H. Marasek.

The area is underlain by argillites and argillaceous limestones and dolomites of the Helikian Purcell Group. A sample of siliceous material taken from a fault zone assayed 34.29 grams per tonne silver, 1.17 per cent copper and 0.053 per cent tungsten (Lorimer, 1967).

BIBLIOGRAPHY

EMPR PF (*Lorimer, M.K. (1967): Report on the Flathead Group for Silver Benn Mines Ltd., in 082FNW154)
GSC MAP 35-1961
GSC P 61-24

DATE CODED: 1999/12/29
DATE REVISED: 1999/12/29

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW001**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORD, CAT, HAMILTON MINE,
JIM, BELLEVILLE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:
LATITUDE: 49 28 25 N
LONGITUDE: 115 54 14 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5480684
EASTING: 579409

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Middle Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Turbidite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Purcell Mountains
RELATIONSHIP:
GRADE:

CAPSULE GEOLOGY

At the Nord showing, sulphide mineralization consisting of pyrite, galena, sphalerite and sporadic chalcopyrite occurs disseminated in quartz veins, stringers and fault crush zones at the contact of a Proterozoic Moyie Intrusions diorite sill with Helikian Aldridge Formation (Purcell Supergroup) turbidites. Outcropping Aldridge strata strikes northwest and dips 10 to 15 degrees northeast. Also see Jim 16 (082GSW002).

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR 1903-245; *1926-245; 1932-162; 1967-272; 1968-270
EMPR ASS RPT *863, 1043, 1174, 1178, *1244, 1670
EMPR FIELDWORK *1983, pp. 24-35
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/15

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW002**

NATIONAL MINERAL INVENTORY:

NAME(S): **JIM 16**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 52 N
LONGITUDE: 115 52 39 W
ELEVATION: 1500 Metres

NORTHING: 5479694
EASTING: 581336

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Proterozoic	Purcell	Middle Aldridge	Moyie Intrusions

LITHOLOGY: Sediment/Sedimentary Rock
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Purcell Mountains
RELATIONSHIP:
GRADE:

CAPSULE GEOLOGY

At the Jim 16 showing, traces of galena are found within Helikian Lower-Middle Aldridge Formation (Purcell Supergroup) sediments in close proximity to a diorite sill of the Proterozoic Moyie Intrusions. Aldridge sediments strike northwest and dip 10 to 15 degrees northeast. Also see Nord (082GSW001).

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR 1967-272; 1968-270
EMPR ASS RPT 863, 1043, *1174, 1207
EMPR FIELDWORK *1983, pp. 24-35
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/15

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW003**

NATIONAL MINERAL INVENTORY:

NAME(S): **BERT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 33 N
LONGITUDE: 115 52 34 W
ELEVATION: 1500 Metres

NORTHING: 5482814
EASTING: 581390

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silica Gold

MINERALS

SIGNIFICANT: Silica Pyrite Gold
COMMENTS: Traces of pyrite and gold associated with silicification.
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Epigenetic Hydrothermal Industrial Min.
TYPE: I01 Au-quartz veins
DIMENSION: 180 x 15 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Silicified zone.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Creston	
Helikian	Purcell	Middle Aldridge	

LITHOLOGY: Quartzite
Brecciated Quartzite
Syenitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America

CAPSULE GEOLOGY

The Bert showing is a zone of intense silicification about 15 metres wide by about 180 metres strike length exposed in outcrop and opencuts. The zone follows the Cranbrook fault which has thrown Creston Formation rocks into contact with Aldridge Formation sediments, both formations of the Helikian Purcell Supergroup. The controlling fault has a general east strike and steep northerly dip. The brecciated quartzites are intensely silicified with minor quartz veins in which traces of pyrite and gold are reported. A syenite dyke has intruded the fault zone from the southwest but has not crossed it.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR *1956-158; 1957-94
EMPR ASS RPT 1174
EMPR FIELDWORK 1983, pp. 24-35
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76; *207, p. 51

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/15

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW004**

NATIONAL MINERAL INVENTORY:

NAME(S): **B & V, ST. JOSEPH, EL**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 45 N
LONGITUDE: 115 53 09 W
ELEVATION: 1220 Metres

NORTHING: 5481321
EASTING: 580708

LOCATION ACCURACY: Within 500M

COMMENTS: Two kilometres west of Jim Smith Lake, and about 1350 metres southeast of Kiakho Lake.

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
COMMENTS: Trace chalcopyrite near intrusive.
ASSOCIATED: Quartz Pyrite Pyrrhotite Calcite Arsenopyrite
ALTERATION: Biotite Chlorite Silica
COMMENTS: Contact alteration associated with monzonite stock in Aldridge Formation.

ALTERATION TYPE: Silicific'n Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Igneous-contact Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au STRIKE/DIP: 090/90 TREND/PLUNGE:
DIMENSION:
COMMENTS: Quartz veins strike east and crosscut stratigraphy which strikes approximately northwest and dips gently (12 degrees) east.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Middle Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Turbidite
Dioritic Sill
Argillite
Greywacke
Siltstone
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE:

CAPSULE GEOLOGY

Bedrock consists of Helikian Aldridge Formation (Purcell Supergroup) clastic sedimentary rocks, Proterozoic Moyie Intrusions diorite sills and a monzonite stock in the northwest part of the B & V property. Galena and sphalerite mineralization are disseminated in narrow quartz veins and stringers.

The local stratigraphy is composed of quartzose greywackes and turbidites alternating with thinner beds of laminated argillite or siltstone. Turbidites are up to 1.2 metres thick and average 0.6 metres and are a light grey color. Interbedded argillites are 10 to 15 centimetres thick, dark grey-brown and frequently have up to 3 per cent pyrrhotite on bedding planes. The general strike is 310 to 355 degrees with gentle east dips (5 to 25 degrees). Slump conglomerate is exposed near the original St. Joseph trench and adit.

The showing is associated with quartz vein(s) striking east, crosscutting stratigraphy and containing galena, sphalerite, pyrite and pyrrhotite. Disseminated galena and pyrite also occurs in a diorite sill where it is associated with zones of quartz veining.

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EM GEOS MAP 1998-3
EMPR AR *1927-266; 1928-282; 1929-297; *1930-243; 1932-162;
1958-62; 1966-241; 1967-271

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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EMPR ASS RPT *104, *895, 1043, 1174, *6444, *11570
EMPR GEM 1977-E57
EMPR MAP 49
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 285
REPORT: RGEN0100

MINFILE NUMBER: **082GSW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELKO**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 00 N
LONGITUDE: 115 05 49 W
ELEVATION: 915 Metres

NORTHING: 5462548
EASTING: 638353

LOCATION ACCURACY: Within 1 KM

COMMENTS: Near government road bridge (in 1914) at Elko.

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Residual
TYPE: B06 Fireclay

Industrial Min.

E07 Sedimentary kaolin

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Unnamed/Unknown Informal

LITHOLOGY: Clay

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Near the government road bridge at Elko, there are "pockets" of yellowish brown clay which are reported to contain a considerable amount of material.

The clay is plastic enough to work into brick but 8 per cent shrinkage is a little high and some sand would have to be added to reduce shrinkage. Tensile strength is 200 pounds per square inch. The clay burns to red colour and has good hard body even at cone 010; vitrified at cone 03 and completely fused at cone 05.

The clay would be suitable for brick or tile, but there is not sufficient quantities to support a large industry.

BIBLIOGRAPHY

EMPR BULL 30, p. 52
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 47, p. 36; 76
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/02

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW005**

MINFILE NUMBER: **082GSW006**

NATIONAL MINERAL INVENTORY:

NAME(S): **JIM 4**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 46 N
LONGITUDE: 115 52 04 W
ELEVATION: 1450 Metres

NORTHING: 5479519
EASTING: 582043

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
COMMENTS: Traces of galena within diorite sill.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Proterozoic	Purcell	Middle Aldridge	Moyie Intrusions

LITHOLOGY: Dioritic Sill
Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

At the Jim 4 showing, traces of galena are found within a Proterozoic Moyie Intrusions diorite sill which intrudes Helikian Middle Aldridge Formation (Purcell Supergroup) clastic sediments. Outcropping Aldridge strata strike northwest and dip 10 to 15 degrees northeast. An adit is also present near the occurrence.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR 1967-272; 1968-270
EMPR ASS RPT 863, 1043, *1174, 1207
EMPR FIELDWORK 1983, pp. 24-35
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW007**

NATIONAL MINERAL INVENTORY:

NAME(S): **JIM 6**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 56 N
LONGITUDE: 115 51 54 W
ELEVATION: 1450 Metres

NORTHING: 5479831
EASTING: 582239

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
COMMENTS: Traces of galena within diorite sill.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Proterozoic	Purcell	Middle Aldridge	Moyie Intrusions

LITHOLOGY: Dioritic Sill
Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

At the Jim 6 showing, traces of galena are found within a Proterozoic Moyie Intrusions diorite sill which intrudes Helikian Middle Aldridge Formation (Purcell Supergroup) clastic sediments. Outcropping Aldridge strata strike northwest and dip 10 to 15 degrees northeast. An adit is present on the showing.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR 1967-272, 1968-270
EMPR ASS RPT 863, 1043, *1174, 1207
EMPR FIELDWORK 1983, pp. 24-35
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/16

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW008**

NATIONAL MINERAL INVENTORY:

NAME(S): **LUMBARTON**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 40 N
LONGITUDE: 115 53 04 W

NORTHING: 5475610
EASTING: 580893

ELEVATION: 1067 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Poorly documented and may be confused with information from the Vine showings (082GSW049, 050 and 051).

COMMODITIES: Tungsten Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrrhotite Sphalerite Galena Chalcopyrite Scheelite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epithermal Hydrothermal Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L07 Porphyry W

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Proterozoic

GROUP
Purcell

FORMATION
Middle Aldridge

IGNEOUS/METAMORPHIC/OTHER
Moyie Intrusions

LITHOLOGY: Argillaceous Quartzite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Post-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

Minister of Mines Report 1943 indicates that an old shaft was dewatered for a check on tungsten mineralization. No record was found of the shaft origin.

The Lumbarton showing is poorly documented as to mineralization but may contain thin lenses of sulphides along bedding surfaces within thinly bedded argillaceous quartzite of the Helikian Middle Aldridge Formation (Purcell Supergroup). The area is also host to a large Proterozoic Moyie Intrusions diorite sill, so this showing may be a contact-related concentration of sulphides typical of other lead-zinc sulphide occurrences in the area.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR *1943-14
EMPR ASS RPT 7087
EMPR EXPL 1978-E67
EMPR OF *1988-14; 1991-17
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW009**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHIPKA CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 24 00 N
LONGITUDE: 115 25 13 W
ELEVATION: 761 Metres

NORTHING: 5473123
EASTING: 614615

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
MINERALIZATION AGE: Upper Devonian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
TYPE: F04 Bedded celestite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Devonian Fairholme Undefined Formation

LITHOLOGY: Limestone
Evaporite
Gypsum

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

A bed of streaky grey to black gypsum is exposed at Chipka Creek near Wardner. It is exposed over a width of about 12 metres as a bedded deposit in limestone within Upper Devonian Fairholme Group evaporitic sediments and limestones. A surface sample (weathered) assayed 10.2 per cent insolubles, 63.2 per cent CaSO₄, 12.4 per cent CaCO₃, 9.5 per cent MgCO₃, 1 per cent Fe₂O₃+Al₂O₃, 1 per cent soda and 29.4 per cent total SO₃.

BIBLIOGRAPHY

EMPR AR 1924-B187
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76, p. 53
GSC P 58-10, p. 40

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW010**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAMSHORN**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 15 20 N
LONGITUDE: 115 06 04 W
ELEVATION: 975 Metres

NORTHING: 5457600
EASTING: 638174

LOCATION ACCURACY: Within 1 KM
COMMENTS: At Sheep Mountain south of Elko.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Azurite Pyrite
ASSOCIATED: Quartz
ALTERATION: Azurite Chlorite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Roosville	

LITHOLOGY: Sediment/Sedimentary Rock
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Ramshorn showing, chalcopyrite, azurite and pyrite occur within a 0.5 metre quartz vein. Along one margin of the vein a talcose (chlorite?) gouge seam about 2 centimetres thick contains copper oxide minerals. Sills of Purcell diorite are reported in the vicinity and may have some relationship to the mineralization. Host stratigraphy is assumed to be Helikian Purcell Supergroup sediments.

BIBLIOGRAPHY

EMPR AR 1898-1001
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW011**

NATIONAL MINERAL INVENTORY:

NAME(S): **JENNIE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 45 N
LONGITUDE: 115 06 34 W
ELEVATION: 1006 Metres

NORTHING: 5456504
EASTING: 637595

LOCATION ACCURACY: Within 1 KM

COMMENTS: Situated 800 metres from the mouth of the south fork of Elk River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

COMMENTS: Minor chalcopyrite and pyrite in small quartz veins or lenses.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Roosville	
Helikian	Purcell	Gateway	

LITHOLOGY: Carbonate
K-Feldspar Porphyritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Jennie and Sweet May (082GSW012) showings are within a few hundred metres of one another on Sheep Mountain, 6 kilometres south of Elko. The showings occur in the sheared margins of a 10 metre thick potassium feldspar porphyry sill. Bedding in Helikian Gateway Formation (Purcell Supergroup) carbonates is vertical with a north trend. Both showings contain scattered blebs of chalcopyrite in thin quartz veins. In general, Sheep Mountain is host to many small quartz veins, some of which contain sulphides.

BIBLIOGRAPHY

EMPR AR 1898-1001
EMPR FIELDWORK *1979, p. 116
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW012**

NATIONAL MINERAL INVENTORY:

NAME(S): **SWEET MAY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 00 N
LONGITUDE: 115 06 04 W
ELEVATION: 1000 Metres

NORTHING: 5455130
EASTING: 638236

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Helikian

GROUP

Purcell
Purcell

FORMATION

Roosville
Gateway

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Carbonate
K-Feldspar Porphyritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Jennie (082GSW011) and Sweet May showings are within a few hundred metres of one another on Sheep Mountain, 6 kilometres south of Elko. The showings occur in the sheared margins of a 10 metre thick potassium feldspar porphyry sill. Bedding in Helikian Gateway Formation (Purcell Supergroup) carbonates is vertical with a north trend. Both showings contain scattered blebs of chalcopyrite and pyrite in thin quartz veins. In general, Sheep Mountain is host to many small quartz veins, some of which contain sulphides.

BIBLIOGRAPHY

EMPR AR 1898-1001
EMPR FIELDWORK *1979, p. 116
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW013**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIMROCK**, BURTON

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 19 38 N
LONGITUDE: 115 07 49 W
ELEVATION: 1228 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5465514
EASTING: 635854

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Sulphide
ASSOCIATED: Quartz Siderite Calcite
ALTERATION: Malachite Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 1 Metres
COMMENTS: Quartz vein.

E04 Sediment-hosted Cu
STRIKE/DIP: 055/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Gateway	

LITHOLOGY: Argillite
Quartzite
Siltstone
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY

YEAR: 1989

COMMODITY	GRADE	
Silver	9.9400	Grams per tonne
Copper	3.4000	Per cent

REFERENCE: Assessment Report 19227.

CAPSULE GEOLOGY

The Rimrock occurrence is underlain by sediments of the Helikian Purcell Supergroup which includes Gateway Formation argillite, siltstone, quartzite and dolomite, and Phillips Formation quartzite, argillite and siltstone.

A quartz-siderite-calcite vein is hosted by black argillites of the Gateway Formation. The sediments strike 280 degrees and dip 30 degrees northeast. The vein is up to 1.22 metres wide and strikes 055 degrees with a vertical dip. Mineralization in the vein consists of chalcopyrite, sulphides(?) and some malachite staining. Some fault gouge occurs on the vein margins. Elsewhere, hematite has been reported to occur with chalcopyrite.

Grab samples from the vein in an upper adit assayed a high of 3.4 per cent copper and 9.94 grams per tonne silver (Assessment Report 19227).

Development in the 1800's included two adits separated by about 64 metres vertically. Some shipments were made from these workings.

BIBLIOGRAPHY

EMPR AR 1898-999; 1900-979
EMPR ASS RPT 3439, 5442, 16448, 17934, *19227
EMPR EXPL 1978-E68

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 294
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK 1979, p. 116
EMPR MAP 34
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1985/07/24
DATE REVISED: 1991/04/22

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW014**

NATIONAL MINERAL INVENTORY:

NAME(S): **JESSIE** MARGARET, BISHOP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 50 N
LONGITUDE: 115 13 24 W
ELEVATION: 915 Metres

NORTHING: 5471280
EASTING: 628954

LOCATION ACCURACY: Within 1 KM

COMMENTS: About 800 metres up Sand Creek from the Canadian Pacific Railway crossing and the town of Cranston (Hanbury).

COMMODITIES: Lead Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Lower Aldridge	

LITHOLOGY: Argillaceous Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Jessie showing, several quartz veins in the order of 5 centimetres thickness are hosted by argillaceous sediments of the Helikian Lower Aldridge Formation (Purcell Supergroup). The veining was intersected in an upper adit although a second tunnel about 60 metres lower failed to identify the veins. The quartz veins carry minor chalcopyrite and galena (and probably some sphalerite) typical of the many showings in the area. Documentation indicates tunnels were driven into the steep hillside along the immediate stream channel at about 915 metres elevation.

BIBLIOGRAPHY

EMPR AR *1898-1001
EMPR ASS RPT *3439, 7086, 10570, 11681
EMPR EXPL 1978-E68
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/21

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW015**

NATIONAL MINERAL INVENTORY:

NAME(S): **EMPIRE (L.3540)**, MAJOR STEELE'S, STRATHCONA

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 23 50 N
LONGITUDE: 115 11 34 W
ELEVATION: 1418 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5473185
EASTING: 631127

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Lead Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Galena Arsenopyrite Pyrite Pyrrhotite
ASSOCIATED: Quartz
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Aldridge

LITHOLOGY: Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Empire-Strathcona deposit is a siderite-quartz vein occurrence hosted by dark grey, well-laminated Helikian Aldridge Formation (Purcell Supergroup) argillites. The sediments dip about 45 degrees northeast and the vein(s) dips vertical to 50 degrees southwest. The veins are up to 2 metres in thickness within a prominent shear zone. Mineralization consists of sparse blebs of galena and chalcopyrite with some pyrite, pyrrhotite, and arsenopyrite.

BIBLIOGRAPHY

EMPR AR *1898-1002; 1899-660,841(?); 1900-798; 1929-298; *1930-243, 378; 1937-E42; 1965-199; 1966-242
EMPR ASS RPT 7086, 10570, 11681
EMPR FIELDWORK *1979, p. 115
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/21

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW016**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUE GROUSE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 23 55 N
LONGITUDE: 115 11 59 W
ELEVATION: 1300 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5473327
EASTING: 630620

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Carbonate Siderite Pyrite Pyrrhotite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Aldridge	

LITHOLOGY: Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Blue Grouse showing, quartz with minor carbonate and siderite hosts minor chalcopyrite with scattered traces of pyrite and pyrrhotite. Veins crosscut Helikian Aldridge Formation (Purcell Supergroup) sedimentary stratigraphy and are related to the adjacent Empire (082GSW015) and Burt (082GSW018) occurrences.

Old records indicate trenching and tunnelling in the 1890's on the north side of Sand Creek.

BIBLIOGRAPHY

EMPR ASS RPT 7086, 10570, 11681
EMPR EXPL 1978-E68
EMPR MAP *34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/21

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW017**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEACOCK COPPER**, MONA NO.1, COMET,
TREASURE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:
LATITUDE: 49 22 20 N
LONGITUDE: 115 12 04 W
ELEVATION: 976 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Northeast 2.4 kilometres from Galloway, close to powerline.

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5470391
EASTING: 630589

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Quartz Calcite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Gateway	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Old records indicate that although the Peacock Copper occurrence is a typical copper-bearing quartz vein similar to other showings in the area, it is distinctive in that the host lithology is a blue to greyish limestone. A vein of quartz with a near vertical dip varies from 5 to 25 centimetres in width and carries chalcopyrite, pyrite and malachite. The Mona No.1 shaft, developed to 32 metres, was used to mine out a small pod of replacement sulphides (chalcopyrite and pyrite) on the hanging wall side of the vein at a depth from surface to about 4.5 metres. The final stope was about 3 to 6 metres in size.

The limestones are believed to be of the Helikian Gateway Formation (Purcell Supergroup) but this is not well documented.

BIBLIOGRAPHY

EMPR AR *1930-244
EMPR ASS RPT *3439, 10570, 11681
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/21

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW018**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURT**, DEAN REX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 24 00 N
LONGITUDE: 115 11 39 W
ELEVATION: 1190 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5473491
EASTING: 631019

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Zinc Lead Copper Silver

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite
Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Burt showing, bedded argillites of the Helikian Aldridge Formation (Purcell Supergroup) have been crosscut by a diorite dyke 9 to 12 metres thick. Quartz has filled fractures within the dyke and in the country rock and is host to blebs of galena, sphalerite and minor chalcopyrite and pyrite. The dyke generally strikes 285 degrees with a steep southerly dip. Mineralization is similar to other showings in the area. A rock slide had covered the area of the adits and trenches by 1952.

BIBLIOGRAPHY

EMPR AR *1937-E41; 1952-198
EMPR ASS RPT 3439, 5901, 7086, 10075, 10570, 11681
EMPR EXPL 1978-E68
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/21

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW019**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROO, WILDA**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 32 N
LONGITUDE: 115 00 19 W
ELEVATION: 1434 Metres

NORTHING: 5432213
EASTING: 645820

LOCATION ACCURACY: Within 500M
COMMENTS: Located northeast of Roosevelt.

COMMODITIES: Copper Silver Cobalt

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite
ASSOCIATED: Quartz Barite Specularite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated Vein
CLASSIFICATION: Sedimentary Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian
Helikian

GROUP

Purcell
Purcell

FORMATION

Sheppard
Nicol Creek

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Conglomerate
Siltstone
Stromatolitic Dolomite
Amygdaloidal Basalt
Syenite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1989

COMMODITY

Silver
Copper

GRADE

4.8000
0.4700

Grams per tonne
Per cent

COMMENTS: Sample over 1 metre.
REFERENCE: Assessment Report 19898.

CAPSULE GEOLOGY

Two major units of the Helikian Purcell Supergroup are recognized on the Roo property. The Sheppard Formation is comprised of sandstone and conglomerate locally at the base, and dolomitic quartzite, sandstone, oolitic dolomite and stromatolitic dolomite at the top. It rests on the Nicol Creek Formation which consists of massive to amygdaloidal basaltic to andesitic lava flows, volcanic and feldspathic sandstone and siltite. Green, locally purple volcanoclastic siltite, fine wacke and tuffaceous siltstone are also part of the Nicol Creek Formation. The Sheppard Formation is gently warped, with dips up to 15 degrees to the east.

Several modes of mineralization are evident on the property: 1) disseminated chalcocite and chalcopyrite occur in sandstone, conglomerate and siltstone below a stromatolitic dolomite horizon; 2) quartz-barite veins containing scattered patches of chalcocite and chalcopyrite (+/- specularite); 3) weak disseminated chalcopyrite +/- chalcocite within the lowermost one metre of stromatolitic dolomite at the base of the Sheppard Formation; and 4) one occurrence of a fine-grained syenite dike with quartz-barite veinlets carrying disseminated chalcopyrite.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 301
REPORT: RGEN0100

CAPSULE GEOLOGY

A grab sample of the first mode of mineralization assayed up to 0.47 per cent copper and 4.8 grams per tonne silver over 1 metre (Assessment Report 19898).

Samples of chalcocite/malachite assayed up to 1 to 2 per cent copper and up to 0.1 to 0.2 per cent cobalt (T.Schroeter, personal communication, 1993).

BIBLIOGRAPHY

EMPR AR 1967-274
EMPR ASS RPT 1023, *19898
EMPR INF CIRC 1993-13
EMPR OF *1988-14; 1994-1
GSC MAP 11-1960; 35-1961
GSC MEM 76
GSC P 58-10; 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1993/10/21

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW020**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREEN, ROO**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 40 N
LONGITUDE: 115 01 04 W
ELEVATION: 1450 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

NORTHING: 5432437
EASTING: 644900

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite
ASSOCIATED: Quartz Barite Specularite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Sheppard	

LITHOLOGY: Sandstone
Stromatolitic Dolomite
Syenite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY

GRADE	Grams per tonne
Silver 9.0000	Per cent
Copper 1.9300	

REFERENCE: Assessment Report 19898.

CAPSULE GEOLOGY

Two major units of the Helikian Purcell Supergroup are recognized on the Green property. The oldest is the Sheppard Formation comprised of sandstone and conglomerate locally at the base, and dolomitic quartzite, sandstone, oolitic dolomite and stromatolitic dolomite at the top. The Nicol Formation is comprised of massive to amygdaloidal basaltic to andesitic lava flows, volcanic and feldspathic sandstone and siltite. Green, locally purple volcanoclastic siltite, fine wacke and tuffaceous siltstone are also part of the Nicol Formation. The Sheppard Formation is gently warped, with dips up to 15 degrees to the east.

Several modes of mineralization are evident on the property: 1) disseminated chalcocite and chalcopyrite occur in sandstones below a stromatolitic dolomite horizon; 2) quartz-barite veins containing scattered patches of chalcocite and chalcopyrite (+/- specularite); 3) weak disseminated chalcopyrite +/- chalcocite within the lowermost one metre of stromatolitic dolomite at the base of the Sheppard Formation; and 4) one occurrence of a fine-grained syenite dyke with quartz-barite veinlets carrying disseminated chalcopyrite.

Trenching in an area exhibiting the first mode of mineralization (see above), returned an assay high of 1.93 per cent copper. Low grade silver values up to 9 grams per tonne were also recorded (Assessment Report 19898).

BIBLIOGRAPHY

EMPR AR 1967-274
EMPR ASS RPT 1023, *19898

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 303
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF *1988-14
GSC MAP 11-1960; 35-1961
GSC MEM 76
GSC P 58-10; 61-24

DATE CODED: 1985/07/24
DATE REVISED: 1991/04/19

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW021**

NATIONAL MINERAL INVENTORY: 082G4 Au1

NAME(S): **MIDWAY, FINLEY-LEASK**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G04W
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 14 05 N
LONGITUDE: 115 53 29 W
ELEVATION: 915 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5454141
EASTING: 580704

LOCATION ACCURACY: Within 500M

COMMENTS: Located immediately west of Moyie River on slope opposite and midway between Stone and Sundown creeks.

COMMODITIES: Lead
Tin

Zinc
Antimony

Silver

Gold

Copper

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite Tetrahedrite
ASSOCIATED: Quartz Pyrite Arsenopyrite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted Other
DIMENSION:
COMMENTS: Quartz veining is highly shattered, and width is variable from hairline to approximately 1.5 metres.

STRIKE/DIP: 315/40E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Helikian

Purcell

Middle Aldridge

LITHOLOGY: Turbidite
Quartzite
Argillite
Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Post-mineralization

GRADE:

CAPSULE GEOLOGY

At the Midway occurrence, highly sheared and shattered quartz veins trending north to northwest and dipping 30 to 50 degrees northeast, are traced on surface over 244 metres. The veins are highly variable in width, from hairline to over 2 metres. The veins crosscut Helikian Middle Aldridge (Purcell Supergroup) stratigraphy consisting of quartzites, turbidites and interbedded argillites. The occurrence is located on the west limb of the Moyie Lake anticline near the anticlinal axis. Two adits were driven on the vein, the upper one about 412 metres along strike and the second, located 21 metres lower, was driven about 320 metres but lost the vein at about 218 metres. Due to the regional anticline, the adits cut through progressively higher stratigraphic levels of the Middle Aldridge Formation as they were developed to the west. Records also indicate diorite sills occurring west of the showing within the Upper Aldridge Formation and at the Creston Formation-Aldridge Formation contact.

The vein carries lead, zinc and copper sulphides which have gold and silver values associated. Also reported from shipments are 0.9 per cent tin but the actual mineral is unidentified. Associated with the lead is 0.4 per cent antimony.

Intermittent mining, 1933 to 1962, produced 85,534 grams of silver, 9082 grams of gold, 2549 kilograms of lead, 1701 kilograms of zinc and 108 kilograms of copper from 1168 tonnes.

BIBLIOGRAPHY

EM GEOS MAP 1998-2

BIBLIOGRAPHY

EMPR AR 1929-297; 1931-140; *1933-202; 1934-E31; 1935-E27; 1937-E49;
A37; 1938-A35; 1939-A85; 1959-A47; 1962-A49,84; 1963-80; 1964-132;
1965-198; 1966-241
EMPR ASS RPT 1174, *5049, *8431
EMPR BC METAL MM00534
EMPR EXPL 1980-97
EMPR FIELDWORK *1982, pp. 9-17, *1983, pp. 24-25; 1997, pp.
9-1-9-22
EMPR INDEX 3-205; 4-123
EMPR MAP 49
EMPR OF *1988-14
EMPR PF (Sargent, H. (1938))
GSC MAP 11-1960
GSC MEM 76; 207
GCNL #284, 1969; #239, 1982; #58, 1983
PR REL Klondike Gold Corp., Feb.6, Mar.5, 2003

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/22

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW022**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 13 N
LONGITUDE: 115 25 49 W
ELEVATION: 1067 Metres

NORTHING: 5449424
EASTING: 614381

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of drilling in "Stone Farm" area, 1 kilometre west of the confluence of Bloom and Gold creeks, south of Bloom Creek, 40 kilometres south-southeast of Cranbrook (Assessment Report 19965).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Gateway	
Helikian	Purcell	Roosville	

LITHOLOGY: Siltstone
Dolomite
Dolomitic Quartzite
Argillaceous Dolomite
Basaltic Flow

HOSTROCK COMMENTS: Rocks of the Nicol Creek Formation are also present.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Gold Creek area is underlain by Proterozoic and Paleozoic sedimentary and volcanic rocks. Basaltic flows and volcanoclastics of the Helikian Nicol Creek Formation (Purcell Supergroup) outcrop sporadically while siltstones, dolomites and dolomitic quartzites of the Gateway Formation (Purcell Supergroup) are widespread. Quartzites of the overlying Phillips Formation (Purcell Supergroup) and fossiliferous limestones of the Upper Devonian Fairholme Group outcrop in the northeast. Roosville Formation (Purcell Supergroup) argillaceous dolomites also occur. Bedding generally strikes north-northwest with 30 to 40 degree dips to the northeast.

The area is transected by a series of north-northwest trending normal faults and associated splay faults. The most prominent normal fault is the Gold Creek fault. East-west faults have been inferred to occur also, and this trend parallels the trend of mineralized quartz veins in the area. Strike directions of 080 to 100 degrees are common for veining and joints.

Disseminated iron and copper sulphide mineralization is widespread, occurring in the Nicol Creek, Gateway and Roosville formations. Disseminated pyrite is occasionally thinly bedded to massive (up to 10 centimetres). Chalcopyrite is disseminated and occasionally concentrates as blebs. Malachite and azurite are less common, occurring in quartz veinlets and fracture planes.

BIBLIOGRAPHY

EMPR ASS RPT 19965
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 307
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 58-10

DATE CODED: 1991/04/19
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW023**

NATIONAL MINERAL INVENTORY: 082G5 Pb2

NAME(S): **AURORA (L.7017)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:
LATITUDE: 49 17 12 N
LONGITUDE: 115 50 49 W
ELEVATION: 968 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5459964
EASTING: 583851

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION:
COMMENTS: Vein system
STRIKE/DIP: 090/65S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Middle Aldridge	

LITHOLOGY: Turbidite
Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

The Aurora occurrence is a fault-related vein system striking east and dipping about 60 degrees south. The country rock is composed of Helikian Middle Aldridge Formation (Purcell Supergroup) turbidites, quartzites and argillites on the western limb of a northeast plunging anticline. The stratigraphy locally strikes northeast and dips approximately 50 degrees northwest.

The Aurora is a westerly extension of the fracture zone controlling the St. Eugene mine (082GSW025) on the east side of Moyie Lake. Mineralization consists of massive lenses and veins of galena and sphalerite within a quartz gangue with minor pyrite.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR 1898-1010,1012; 1899-660; 1900-799; 1901-1006; 1902-131;
1905-140; 1906-132,251; 1907-84; 1908-85; *1909-87,93; 1910-90;
1911-121; 1912-137; 1913-121; 1918-188; *1923-205; 1926-243;
1927-266; 1930-240; 1941-76; 1942-74; 1962-85; 1963-81
EMPR OF *1988-14
GSC EC GEOL 8, p. 328
GSC MAP 11-1960
GSC MEM *76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/22

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW024**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCNEIL**, MCNEIL CREEK

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082G05W 082F08E
 BC MAP:

MINING DIVISION: Fort Steele
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5468914
 EASTING: 572560

LATITUDE: 49 22 07 N
 LONGITUDE: 116 00 02 W
 ELEVATION: 1463 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of drilling for bedded sulphides, 350 metres east of McNeil Creek and 2.75 kilometres south of its confluence with Moyie River, 24 kilometres south-southwest of Cranbrook (Assessment Report 19989). This may be the same occurrence as the McNeil (082FSE109) on the next map area.

COMMODITIES: Lead Zinc Silver Copper Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
 ASSOCIATED: Quartz
 ALTERATION: Cerussite Pyromorphite Smithsonite
 ALTERATION TYPE: Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Stratabound
 CLASSIFICATION: Epigenetic Hydrothermal Sedimentary
 TYPE: E14 Sedimentary exhalative Zn-Pb-Ag I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzite
 Siltstone
 Argillite
 Gabbro Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
 TERRANE: Ancestral North America
 METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1989
 SAMPLE TYPE: Drill Core
 COMMODITY GRADE
 Silver 137.8000 Grams per tonne
 Lead 13.9900 Per cent
 Zinc 2.1100 Per cent
 COMMENTS: Quartz vein material.
 REFERENCE: Assessment Report 19989.

CAPSULE GEOLOGY

The McNeil property is entirely underlain by rocks of the Helikian Aldridge Formation (Purcell Supergroup) and predominantly comprise siltstones and quartzites. The sediments are relatively flat-lying and are thinly to very thickly bedded. A gently north-northeast plunging syncline is centred in the south part of the property. Lower Aldridge Formation rocks have been mapped on the east limb of the syncline, immediately north of the northeast trending Moyie fault. The west limb of the syncline is cut by the north trending McNeil Creek fault, a major steeply west dipping(?) normal fault with vertical displacement in the order of 1000 metres. Several thick, regional gabbro intrusions of the Proterozoic Moyie Intrusions also occur on the property. The uppermost of these, the "Hiawatha" sill, has been intersected in several diamond-drill holes. Mineralization is of two types: 1) stratabound base metal sulphides developed at the Lower-Middle Aldridge Formation contact;

CAPSULE GEOLOGY

and 2) a series of mineralized quartz veins in Middle Aldridge Formation rocks.

The stratabound mineralization generally occurs as banded sphalerite and as fracture-fillings and disseminations. A best drill intersection assayed 1.74 per cent zinc over 40 centimetres (Assessment Report 19989).

A series of sulphide-mineralized quartz veins occur in hydrothermally altered lower Middle Aldridge Formation quartzites and siltstones, just above the hanging wall of a regionally extensive, thick gabbro sill, on the west limb of the McNeil syncline. The veins occur near the gabbro hanging wall contact in an orthogonal set of fractures, of which two are steeply dipping and one is relatively flat. Wallrock adjacent to the vein zones are commonly altered. Vein widths range from a few centimetres to 1.5 metres. The veins carry galena, sphalerite, chalcopyrite and pyrite with gold and silver values. Cerussite and pyromorphite are extensively developed from weathering of galena, and chalcopyrite is typically oxidized to malachite; sphalerite has been weathered to smithsonite. The veins are oriented at approximately 120 degrees and are steeply dipping.

The best intersection of vein material assayed 13.99 per cent lead, 2.11 per cent zinc and 137.8 grams per tonne silver over 0.65 metres (Assessment Report 19989). There is a spatial and genetic relationship between the quartz veins and the "Hiawatha" sill, with the veins occurring near the juncture of feeder dyke(s) and the gabbro sill.

Sedex Mining Corp. drilled the property in 1998. See McNeil (082FSE109).

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EM EXPL 1998-68
EM GEOS MAP 1998-3
EMPR ASS RPT 16606, 18117, *19277, *19989, 24916
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76; 336
GSC P 58-10
GCNL #182(Sept.22), #184(Sept.24), #191(Oct.5), 1998
WWW <http://www.infomine.com/>
Placer Dome File
EMPR OF 2000-22

DATE CODED: 1991/04/22
DATE REVISED: 1991/04/22

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1893-1066; 1894-748; 1895-673; 1896-517,521; 1897-569,523;
1898-993,1010,1034; 1899-593,660; *1900-791,799,946; 1901-1006;
1902-131; 1903-93; *1904-104; 1905-24; 1906-132; 1907-163;
*1909-88,154,272; 1910-90,243; 1911-121; 1912-131,322; 1913-121,
419; 1914-237,509; 1915-444; 1916-191; 1917-150; 1918-150,176,179,
188,390; 1919-115,148; 1920-116,140; 1923-301; 1924-186; 1925-226;
1927-266; 1928-281; 1929-295; 1937-E52; 1940-A82; 1947-A175;
1962-85; *1963-81; 1965-199; 1966-241
EMPR ASS RPT 1174
EMPR BULL *20, p. 17, Part II
EMPR FIELDWORK *1980, pp. 9-13; 1983, p. 24
EMPR OF *1988-14; 1998-10
EMPR PF (Crownsnest Pass Website (Apr.1999): St. Eugene Mine, 2 p.)
GSC EC GEOL 8
GSC MAP 1960-11
GSC MEM *76, p. 118; 207
Falconbridge File
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW026**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAND CREEK**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 58 N
LONGITUDE: 115 09 32 W
ELEVATION: 1220 Metres

NORTHING: 5479050
EASTING: 633444

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Hematite Pyrite
ASSOCIATED: Quartz
ALTERATION: Limonite Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Massive
CLASSIFICATION: Sedimentary Epigenetic Industrial Min.
TYPE: F10 Lake Superior & Rapitan types iron-formation

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Gateway

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Sand Creek occurrence is a bed-like body of hematite, with pyrite at one exposure, hosted by quartzites and argillites of the Helikian Gateway Formation (Purcell Supergroup). The strike of the mineralization is generally 310 degrees with a dip of about 50 degrees southwest corresponding to the local stratigraphy. The hanging wall is a grey, fine-grained quartzite with the contact with the underlying hematite zone marked by slickensides.

The hematite is massive, 30 to 90 centimetres thick, and is exposed in three localities. The hematite hosts small highly fractured quartz veins and appears to contain considerable finely disseminated quartz. Locally the hematite zone has associated limonite and pyrite. The footwall consists of sheared argillites which are highly crumpled and sheared with abundant iron staining and a clay-like appearance. The hematite horizon is sheared within the plane of the stratigraphy and is also cut by high angle faults with various trends which may mask the strike extensions of the horizon.

The geological setting suggests a bedded origin for the hematite, but an epigenetic or replacement mode of origin cannot be discounted.

BIBLIOGRAPHY

EMPR AR *1919-115
EMPR ASS RPT 10570
EMPR EXPL 1978-E68
EMPR MAP 34
EMPR OF *1988-14
GSC EC GEOL *3, p. 147
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW027**

NATIONAL MINERAL INVENTORY: 082G5 Pb2

NAME(S): **GUINDON (L.6127)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:
LATITUDE: 49 17 25 N
LONGITUDE: 115 50 59 W
ELEVATION: 1060 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5460362
EASTING: 583643

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION:
COMMENTS: Vein system
STRIKE/DIP: 090/60S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Middle Aldridge	

LITHOLOGY: Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America

CAPSULE GEOLOGY

The Guindon occurrence is a lead-zinc vein system up to 90 centimetres wide with an easterly strike, dipping about 60 degrees south. The vein is hosted by Helikian Middle Aldridge Formation (Purcell Supergroup) sediments and is most likely a westerly extension of the St. Eugene fracture system and related to the Aurora vein (082GSW023) about 215 metres to the south.

The occurrence lies on the western limb of a northeasterly plunging anticlinal structure and probably represents a tensional fracture across the crest of the anticline. Veins carry scattered small pods and lenses of galena, sphalerite and pyrite in a quartz gangue. The workings produced in the order of 27 to 45 tonnes of ore material in the early 1900's but no reliable production or assay figures are available.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76, p. 125

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW028**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER KING**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 15 30 N
LONGITUDE: 115 05 39 W
ELEVATION: 790 Metres

NORTHING: 5457922
EASTING: 638671

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Roosville

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzitic/Quartzose Sediment/Sedimentary Rock
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Mineralization at the Silver King showing is hosted by what are believed to be sediments of the Helikian Roosville Formation (Purcell Supergroup). The occurrence consists of a few, narrow, scattered quartz stringers within quartzitic sediments. The quartz veins contain minor amounts of pyrrhotite and chalcopyrite. The quartzitic sediments are locally well-mineralized with fine, disseminated pyrite and these horizons are interbedded(?) with highly sheared argillites.

The showing is below the high water level of the Elk River within Lots SL34 and SL36.

BIBLIOGRAPHY

EMPR AR *1957-63
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW029**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEAH**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 15 00 N
LONGITUDE: 115 06 04 W
ELEVATION: 1050 Metres

NORTHING: 5456983
EASTING: 638189

LOCATION ACCURACY: Within 500M

COMMENTS: On south slope of Sheep Mountain, west of Elk River.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION:
COMMENTS: Quartz vein

STRIKE/DIP: 090/90S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP
Helikian Purcell

FORMATION
Gateway

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sediment/Sedimentary Rock
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Leah showing, galena was identified in scattered quartz veins within Helikian Gateway Formation (Purcell Supergroup) sediments and in close association with diorite sills of Purcell age. Veins strike generally east, the largest being about 8 centimetres. Only rare patches of lead sulphides were identified.

BIBLIOGRAPHY

EMPR AR 1954-146; 1957-64
EMPR FIELDWORK 1979, p. 116
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW030**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOCIETY GIRL (L.4405)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:
LATITUDE: 49 16 30 N
LONGITUDE: 115 48 24 W
ELEVATION: 1586 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5458712
EASTING: 586801

COMMODITIES: Lead Silver Zinc Gemstones

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz
ALTERATION: Cerussite Pyromorphite Clay Malachite Azurite
Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: Metres STRIKE/DIP: 300/60S TREND/PLUNGE:
COMMENTS: Quartz vein

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Middle Aldridge

LITHOLOGY: Argillaceous Quartzite
Quartzite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

The Society Girl is a northwesterly striking vein occurrence hosted by Helikian Middle and Upper Aldridge formations (Purcell Supergroup) argillites and quartzites. Aldridge strata strikes north and dips approximately 25 degrees east. The vein traverses the eastern limb of a northeast plunging anticlinal structure and is closely associated with the St. Eugene (082GSW025), Aurora (082GSW023) and Guindon (082GSW027) occurrences to the west.

The main vein is from 2 to 5 centimetres wide, strikes 300 degrees and dips 60 degrees south. The vein tends to be narrow within thin bedded argillaceous quartzites and widens in thicker, more massive quartzites. The vein is highly oxidized to a depth of about 10 to 15 metres from surface and the oxidized ore is composed of massive and well-crystallized cerussite and pyromorphite embedded in a matrix of clays and limonite. Minor traces of malachite and azurite were recorded. Below the oxidized zone the vein consists of galena and sphalerite with little or no quartz gangue.

The vein appears to be controlled by an older fault/fracture system and mineralization is restricted to the vein and within a few decimetres of the vein along cross fractures. Some small scale folding near the vein is recorded but as at the St. Eugene mine no major offset has been documented. The oxidized zone is a rare occurrence in the East Kootenays.

Nine kilograms of ore were sent to the Paris Exhibition in 1900 from this deposit.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EM PF (Smith, Tony (Spring 2000): The Society Girl Mine, Vol. 1,

BIBLIOGRAPHY

No. 2, 3 pages; Smith, Tony, (Summer/Fall 1999): The Society
Girl Mine, Vol. 3, No. 2, 2 pages)
EMPR AR 1899-592,660; 1900-799,980; 1901-1006; 1902-131; 1903-93;
1908-85; *1909-92; 1910-90,243; 1911-121,284; 1912-137,322;
1913-K121,419; 1916-191; 1917-149; 1920-116,140; 1922-188;
1924-186; *1947-175; 1948-150; 1949-194; *1951-40,181
EMPR EXPL *1978-E67
EMPR MAP *49
EMPR OF *1988-14
GSC EC GEOL 8
GSC MAP 11-1960
GSC MEM *76, p. 127
WWW <http://www.gemnews.net>; <http://www.canadianrockhound.com>
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW031**

NATIONAL MINERAL INVENTORY:

NAME(S): **BULL RIVER (L.7806)**, BULL RIVER GYPSUM

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 30 N
LONGITUDE: 115 24 27 W
ELEVATION: 793 Metres

NORTHING: 5483333
EASTING: 615326

LOCATION ACCURACY: Within 500M

COMMENTS: Outcrops along the banks of the Bull River (Open File 1991-15).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
MINERALIZATION AGE: Mississippian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mississippian	Undefined Group	Banff	

LITHOLOGY: Gypsum
Limestone
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Gypsum, with interbedded limestone, is exposed along the Bull River 4 kilometres upstream from the town of Bull River. Outcrops are restricted to the banks of the river, although a few sinkholes are present to the north and south.

The host rocks are believed to be Lower Mississippian Banff Formation sediments. Limestone outcrops extensively in the area, but contacts with the gypsum are not exposed. Black, nodular limestone, 5 to 15 metres thick, with shaly horizons, occurs north of the river. This limestone is lithologically similar to the Harrogate Formation in the Stanford Range (see 082JSW004, 082JSW021, 082JSW022, 082JSW028).

The gypsum is reported to be highly folded with local brecciation and faulting south of the river. The gypsum, exposed in old workings, is light grey to white-streaked in the upper part, grading to darker shades of grey towards the bottom.

About 317 tonnes of gypsum were shipped for testing in 1937 but no further development is recorded. The material analyzed approximately 30.5 per cent CaO, 39.20 per cent SO₃, 18 per cent H₂O, 2.5 per cent MgO and 0.80 per cent Fe₂O₃ and Al₂O₃ (Open File 1988-14).

BIBLIOGRAPHY

EMPR AR *1921-129; *1968-306
EMPR FIELDWORK 1988, pp. 496-507
EMPR OF *1988-14; 1991-15
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10
GSC SUM RPT 1932 Part AII, p. 167
CANMET RPT *714, p. 68 (1930)

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/13

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW032**

NATIONAL MINERAL INVENTORY:

NAME(S): **BULL RIVER**, NORKAY

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082G06W
 BC MAP:

Open Pit

MINING DIVISION: Fort Steele

LATITUDE: 49 28 49 N
 LONGITUDE: 115 29 17 W
 ELEVATION: 853 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5481947
 EASTING: 609518

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on quarry (Industrial Mineral File).

COMMODITIES: Limestone Dolomite

MINERALS

SIGNIFICANT: Calcite Dolomite
 MINERALIZATION AGE: Mississippian

DEPOSIT

CHARACTER: Stratabound Massive
 CLASSIFICATION: Sedimentary Industrial Min.
 TYPE: R10 Dolomite
 DIMENSION:
 COMMENTS: Attitude at quarry; dips southeast.

STRIKE/DIP: 025/25S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Mississippian	Rundle	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Limestone
 Dolomite
 Magnesian Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1944
 SAMPLE TYPE: Chip
COMMODITY GRADE
 Limestone 54.9800 Per cent
 COMMENTS: Across 3.4 metre thick bed of high calcium limestone. Grade given for calcium oxide.
 REFERENCE: CANMET Report 811, page 202, Sample 70B.

CAPSULE GEOLOGY

Dolomite was quarried 3.2 kilometres west-northwest of the town of Bull River, just northeast of the Kootenay River. The Bull River quarry is developed in thickly bedded (greater than 3 metres) carbonates of the Mississippian Rundle Group, striking 025 to 030 degrees and dipping 25 degrees southeast. These beds are quite variable in composition. They consist mostly of medium-grained, granular, flesh grey dolomite with some fine-grained, siliceous material.

A narrow railway cut, 1900 metres southeast of the quarry, exposes a section of carbonate beds striking 135 degrees and dipping 20 degrees northeast. The section is comprised of a 7.3 metre thick bed of coarse-grained, grey, magnesian limestone (bed 1) underlain by 5.2 metres of earthy, crumbly weathering magnesian limestone (bed 2). This bed is in turn underlain by a 3.7 metre thick bed of medium to coarse-grained, high calcium limestone (bed 3) followed by brown magnesian limestone (bed 4). A series of samples taken across the four beds analyzed as follows (in per cent) (CANMET Report 811, page 202 Samples 70, 70A to 70C):

	Width (m)	CaO	MgO	SiO2	Al2O3	Fe2O3	Sulphur
Bed 1	7.3	46.87	7.66	0.54	0.20	0.16	trace
Bed 2	5.2	38.65	13.71	1.92	0.24	0.26	trace

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 321
REPORT: RGEN0100

CAPSULE GEOLOGY

Bed 3	3.4	54.98	0.48	0.48	0.02	0.18	trace
Bed 4	-	47.11	7.07	1.28	0.02	0.18	trace

The dolomite quarry was operated by Cominco Ltd. between 1960 and 1962 to supply the company's iron reduction plant at Kimberley with dolomitic flux. A total of 17,835 tonnes of dolomite were quarried.

BIBLIOGRAPHY

EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
CANMET RPT *811 Part V, pp. 198-201 (1944)

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/12

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW033**

NATIONAL MINERAL INVENTORY:

NAME(S): **ASPEN**, FELDSPAR, ASPEN FELDSPAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 00 N
LONGITUDE: 115 26 04 W
ELEVATION: 910 Metres

NORTHING: 5482366
EASTING: 613394

LOCATION ACCURACY: Within 1 KM

COMMENTS: Drilling area on Aspen 11 claim.

COMMODITIES: Feldspar Building Stone

MINERALS

SIGNIFICANT: Feldspar
ASSOCIATED: Quartz Mica

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Magmatic Syngenetic Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Devonian

GROUP

Unnamed/Unknown Group

FORMATION

Palliser

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Feldspar Porphyry
Monzonite
Diorite
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

Plutonic Rocks

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

A monzonite-diorite stock intrudes Devonian limestone of the Palliser Group. A feldspar porphyry was drilled from 1987 to 1998 by R.H. Stanfield (Bul River Mineral Corporation) to investigate the feldspar potential. In 1998, NQ drilling totalled 1710 metres and percussion drilling totalled 93 metres. Tests were done for impurity removal. Indicated and inferred resources are 300 million tonnes of monzonite-diorite, predominantly feldspar and syenite building stone (Bul River Mineral Corporation, 1998).

BIBLIOGRAPHY

EM INF CIRC 1999-1, pp. 12, 16
EMPR ASS RPT 23602, 24595, 25191

DATE CODED: 1998/09/21
DATE REVISED: 1999/01/07

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW034**

NATIONAL MINERAL INVENTORY:

NAME(S): **FRANKIE** GILL

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 40 N
LONGITUDE: 115 23 19 W
ELEVATION: 800 Metres

NORTHING: 5450321
EASTING: 617399

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Mercury

MINERALS

SIGNIFICANT: Cinnabar Pyrite Hematite
ALTERATION: Clay Silica
ALTERATION TYPE: Argillic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Gateway	

LITHOLOGY: Limestone
Dolomite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY: Mercury

YEAR: 1988

GRADE
1.3000 Per cent

REFERENCE: Assessment Report 18748.

CAPSULE GEOLOGY

The Frankie showing is underlain by fine-grained carbonate and clastic rocks of the Helikian Gateway Formation (Purcell Supergroup) which include limestone, dolomite and siltstone. Diamond drilling has intersected extensive zones of brecciation and clay alteration. Widespread cinnibar mineralization is present, along with localized silicification, pyrite and hematite. A best assay from drill core was 1.3 grams per tonne mercury (Assessment Report 18748).

BIBLIOGRAPHY

EMPR AR 1967-272
EMPR ASS RPT *18748
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 1985/07/24
DATE REVISED: 1991/04/19

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW035**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORS, HELG, HOPE,**
VINE 3

MINING DIVISION: Fort Steele

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082G05W
 BC MAP:
 LATITUDE: 49 21 20 N
 LONGITUDE: 115 53 24 W
 ELEVATION: 1325 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS:

UTM ZONE: 11 (NAD 83)

NORTHING: 5467575
 EASTING: 580608

COMMODITIES: Lead Zinc Silver Copper Antimony
 Tungsten

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Sphalerite Galena Chalcopyrite
 Arsenopyrite Scheelite
 ASSOCIATED: Quartz
 ALTERATION: Silica Clay Mica
 ALTERATION TYPE: Silicific'n Argillic Sericitic
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Massive Disseminated
 CLASSIFICATION: Hydrothermal Epigenetic Sedimentary Exhalative
 TYPE: E14 Sedimentary exhalative Zn-Pb-Ag I05 Polymetallic veins Ag-Pb-Zn±Au
 DIMENSION: Metres STRIKE/DIP: 035/40N TREND/PLUNGE:
 COMMENTS: Shear zone.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzite
 Quartz Feldspar Arenite
 Meta Gabbro Sill
 Tourmalinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Ancestral North America
 METAMORPHIC TYPE: Regional
 COMMENTS: Upper greenschist facies.

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1992
 SAMPLE TYPE: Drill Core

<u>COMMODITY</u>	<u>GRADE</u>	
Zinc	1.3000	Per cent
Lead	9.8000	Per cent
Silver	100.0900	Grams per tonne

COMMENTS: A 1-metre drill intersection of massive sulphides (drill hole No. 92-1).
 REFERENCE: George Cross News Letter No. 222 (November 17), 1992.

ORE ZONE: MAIN SHOWING REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
 SAMPLE TYPE: Grab

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	130.0000	Grams per tonne
Lead	4.2000	Per cent
Antimony	1.4500	Per cent
Zinc	7.1000	Per cent

COMMENTS: Highest assays in a range of values.
 REFERENCE: Assessment Report 19809.

CAPSULE GEOLOGY

The Fors occurrence area is underlain by clastic rocks of the Helikian Purcell Supergroup. The units are dominantly siliclastic sedimentary rocks of the Lower and Middle Aldridge formations. In the southeast, the right-lateral reverse Moyie fault juxtaposes Aldridge rocks with a conformable package of younger Creston Formation siltstones and argillites. The Proterozoic Moyie Intrusions are gabbro sills and intrude the Lower, and lower part of the Middle Aldridge formations. Regional metamorphism is upper greenschist facies.

Two styles of mineralization are documented on the property. The first style comprises base metal sulphide mineralization related to a shear zone in Middle Aldridge Formation quartzite and quartz-feldspar arenite with minor argillaceous intercalations. The shear zone strikes 035-045 degrees and dips approximately 40 degrees northwest. The sulphide mineralization and related silicification at the Main showing occur together and are generally restricted to the zone of shearing or within a few metres of it. Argillic and sericitic alteration of the clastic rocks is common and consists of weak to complete replacement of feldspar in the matrix by white mica and clay minerals. The sulphides occur as bedding parallel disseminations and replacement patches and comprise pyrite, pyrrhotite, sphalerite, galena and chalcocopyrite, in decreasing order of abundance.

The second style of mineralization comprises minor sulphide mineralization (dominantly pyrite and sphalerite with minor chalcocopyrite) occurring in quartz veins hosted by Moyie metagabbro sills and to a lesser extent in Aldridge units. The vein material is typically vuggy, medium to coarse grained and highly fractured with much iron and manganese staining.

Grab samples from the Main showing assayed a range of values: 15-130 grams per tonne silver, 0.41 to 4.2 per cent lead, 0.21 to 7.1 per cent zinc and 0.024 to 1.45 per cent antimony (Assessment Report 19809).

Recent drilling (1992) by Consolidated Ramrod Gold Corp. has intersected exhalative massive sulphides and a large hydrothermal alteration zone of the type associated with the Sullivan deposit. Sulphide mineralogy in a zone of strong mineralization consists of pyrrhotite, pyrite, galena and sphalerite and appears to be banded in places and oriented at a high angle to the core axis. Arsenopyrite and scheelite have also been identified in core. A 1-metre intersection of massive sulphides assayed 1.3 per cent zinc, 9.8 per cent lead and 100.09 grams per tonne silver (George Cross News Letter No. 222 (November 17, 1992)).

The drill hole was oriented northeast along a direction of fractures associated with surface mineralization to determine if these fractures represented a seepage of mineral from depth. The collar of the hole was set up directly on the surface showing and drilled northeast (045 degrees), downslope and downsection into the Aldridge Formation. There are no structural features within the core to indicate the hole was collared in or drilled along a shear zone (George Cross News Letter No. 220 (November 16, 1992)).

In 1996/1997, Citation Resources Inc. drilled over 13,000 metres in 17 very deep holes without intersecting any significant mineralization. Chapleau Resources Ltd. holds a 50 per cent interest in the Fors property.

BIBLIOGRAPHY

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- EMPR ASS RPT 834, 1876, 6498, 6543, 7087, 7554, 11732, *19809, 22984, 23332, 23356, 25030, 25534
- EMPR EXPL 1966-240; 1967-271; *1977-E56; 1996-E2; 1997-47
- EMPR GEM 1970-475
- EMPR INF CIRC 1993-13
- EMPR OF *1988-14; 1994-1
- EMPR PF (Chapleau Resources Ltd. Website (Nov.1999): Fors Property, 2 p.)
- GSC MAP 11-1960
- GSC MEM 76
- GSC P 58-10
- GCNL #215(Nov.6), #217(Nov.10), #218(Nov.12), *#220(Nov.16), #222(Nov.17), *#240(Dec.14), 1992
- N MINER Dec.7, 1992
- WWW <http://www.chapleauresources.com>; <http://www.infomine.com/>
- Britton, J.M. and Pighin, D.L. (1994): The Fors Prospect, a Proterozoic Sedimentary Exhalative Metal Deposit in Middle Aldridge Formation, Southeastern B.C. (082G/5w), in Northeast Geology, October, 1994

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GEOLOGICAL SURVEY BRANCH
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BIBLIOGRAPHY

EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1992/11/26

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW036**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOTENAY RIVER (EAST SIDE)**, WARDNER

STATUS: Past Producer Open Pit

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082G06W

BC MAP:

LATITUDE: 49 27 16 N

LONGITUDE: 115 25 47 W

ELEVATION: 792 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on outcrop adjacent to railway on east side of Kootenay River, 3.8 kilometres north of Wardner (Geological Survey of Canada Map 11-1960).

UTM ZONE: 11 (NAD 83)

NORTHING: 5479161

EASTING: 613803

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Dolomite

MINERALIZATION AGE: Mississippian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R09 Limestone

DIMENSION:

COMMENTS: Limestone dips 60 to 90 degrees northwest.

STRIKE/DIP: 040/60W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Mississippian

GROUP

Rundle

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

LITHOLOGY: Limestone

Magnesian Limestone

Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Chip

COMMODITY

Limestone

GRADE

54.4100

Per cent

REFERENCE: CANMET Report 811, page 202, Sample 71.

CAPSULE GEOLOGY

Limestone of the Mississippian Rundle Group is exposed for 500 metres along a cliff adjacent to the Canadian Pacific Railway on the east side of the Kootenay River, 3.8 kilometres north of Wardner. The limestone strikes 040 degrees and dips 60 to 90 degrees northwest.

The limestone is brownish grey and fine grained. Chert is abundant near the south end of the exposure. A sample of the purer limestone taken along the face of a 60 metre high hill near the railway contained 54.41 per cent CaO, 0.53 per cent MgO, 0.94 per cent SiO₂, 0.23 per cent Al₂O₃, 0.33 per cent Fe₂O₃ and 0.02 per cent sulphur (CANMET Report 811, page 202, Sample 71).

At the Kootenay River (East Side) occurrence, limestone was quarried and burnt in two lime kilns near the south end of the exposure prior to 1944.

A mass of yellowish brown, sugary textured, magnesian limestone mixed with white calcite outcrops 800 metres north of the kilns. A sample contained 30.37 per cent CaO, 18.03 per cent MgO, 7.48 per cent SiO₂, 0.55 per cent Al₂O₃, 0.55 per cent Fe₂O₃ and a trace of sulphur (Sample 72).

BIBLIOGRAPHY

EMPR OF *1988-14

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
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REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 11-1960
GSC MEM 336, pp. 43-52; 76
CANMET RPT *811, Part V, pp. 200,202

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/05

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW037**

NATIONAL MINERAL INVENTORY:

NAME(S): **PAY ROLL (L.3562)**, PAYMASTER (L.3561)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 26 05 N
LONGITUDE: 115 56 24 W
ELEVATION: 1160 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5476324
EASTING: 576853

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Altaite
ASSOCIATED: Quartz Tourmaline
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Fractured
DIMENSION:
COMMENTS: Quartz veins

STRIKE/DIP: 090/70S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite
Syenitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

The Payroll occurrence is a vein-type deposit hosted by quartzites of the Helikian Middle Aldridge Formation (Purcell Supergroup). The Aldridge Formation quartzites are relatively flat-lying but with a gently northerly dip. The location is immediately northeast of the confluence of Negro Creek with the Moyie River.

The deposit consists of individual, or zones of, small quartz veins crosscutting the Aldridge Formation in a general east direction and tending to dip about 65 to 75 degrees southwest. The veining is also associated with faulting. A quartz vein in the order of 3 to 5 centimetres wide is closely associated with a syenitic dyke, and has been observed to carry visible free gold, pyrite, chalcopyrite and a lead telluride mineral identified as altaite. Tourmaline has been identified from a vein in the southern part of the showing.

Reports indicate that gold values were in the order of 2 to 14 grams per tonne with about 20.5 grams per tonne silver.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR AR *1898-1009; 1899-660; 1901-1228; 1907-213; 1927-267;
1928-282; *1933-204
EMPR ASS RPT 14724
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/28

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW038**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEE PEE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 20 18 N
LONGITUDE: 115 58 16 W
ELEVATION: 1830 Metres

NORTHING: 5465577
EASTING: 574744

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Apatite
COMMENTS: Minor apatite.
ALTERATION: Chlorite Muscovite Biotite
ALTERATION TYPE: Biotite Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: 105 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Quartz vein

STRIKE/DIP: 110/90S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Middle Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
Argillite
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Post-mineralization

GRADE:

CAPSULE GEOLOGY

The Pee Pee showing is a quartz vein 2 to 3 centimetres wide, containing spotty, fine-grained galena mineralization and some coarser grained apatite. The vein has a general strike of about 110 degrees and a near vertical dip. Quartzites and argillites of the Helikian Middle Aldridge Formation (Purcell Supergroup) host the occurrence and these sediments dip 30 to 40 degrees northwest and form the eastern limb of an anticlinal feature. The vein(s) are closely related to diorite sills which are generally conformable to stratigraphy and are 30 to 100 metres thick.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR ASS RPT *1063
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/28

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW039**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONILEE, NERO**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 27 N
LONGITUDE: 115 56 08 W
ELEVATION: 1112 Metres

NORTHING: 5475155
EASTING: 577192

LOCATION ACCURACY: Within 500M

COMMENTS: Portal, 250 metres upstream along Moyie River from the confluence with Negro Creek, 4.5 kilometres west from the village of Lumberton (Property File - map of workings).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C02 Buried-channel placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Tertiary			Glacial/Fluvial Gravels

LITHOLOGY: Gravel
Quartzite

HOSTROCK COMMENTS: Bedrock geology consists of Aldridge Formation quartzite.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Bedrock geology is comprised of flat-lying Helikian Aldridge Formation (lower Purcell Group) quartzite. Placer gold was recovered from Tertiary gravels in a buried channel of the Moyie River. Past development included underground workings which crosscut the channel from rim to rim and which has been drifted on for 61 metres along its length.

BIBLIOGRAPHY

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1889-285; 1892-534; 1893-1063(map); 1894-747; 1895-671,672; 1933-
A205; 1935-G53; 1938-E3; *1939-A111; 1958-82; *1960-124; 1963-135
EMPR BULL 1 (1933), p. 44; 28, pp. 33,34
EMPR GEM 1969-377; 1971-447; 1972-566
EMPR OF *1988-14
EMPR PF (*Map showing underground workings, 1939; Queenstake
Resources Ltd., 1988 Annual Report)
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1989/06/30

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW040**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREAT WESTERN, STEEPLES**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:
LATITUDE: 49 28 00 N
LONGITUDE: 115 16 42 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5480760
EASTING: 624743

COMMODITIES: Copper Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite
ASSOCIATED: Quartz Siderite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Quartz-siderite vein

STRIKE/DIP: 090/90S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE:

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY

YEAR: 1926

COMMODITY	GRADE	
Lead	5.9000	Per cent
Zinc	6.6000	Per cent

REFERENCE: Minister of Mines Annual Report 1926.

CAPSULE GEOLOGY

The Great Western showing is a mineralized quartz-siderite vein within thin bedded argillites and siltstones of the Helikian Aldridge Formation (Purcell Supergroup). The showing is at 1372 metres elevation, east of and immediately above Little Sand Creek. The vein strikes approximately east and has a near vertical dip. The quartz gangue carries lead, zinc and iron sulphides which carry minor gold and silver values. A rock sample assayed up to 5.9 per cent lead and 6.6 per cent zinc (Minister of Mines Annual Report 1926).

BIBLIOGRAPHY

EMPR AR *1926-244; 1927-266
EMPR ASS RPT 7086, 8137, *10304, 10570, 11681
EMPR EXPL 1978-E68
EMPR MAP *34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/28

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW041**

NATIONAL MINERAL INVENTORY:

NAME(S): **SMOKER, HELG**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 28 N
LONGITUDE: 115 54 44 W
ELEVATION: 1820 Metres

NORTHING: 5469651
EASTING: 578964

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Sphalerite Galena Bournonite

 Chalcopyrite

ASSOCIATED: Quartz

ALTERATION: Albite Sericite Tourmaline

ALTERATION TYPE: Sericitic Albitic Tourmalin'z'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Sedimentary Exhalative
 TYPE: E14 Sedimentary exhalative Zn-Pb-Ag
DIMENSION: 400 x 100 Metres
COMMENTS: Dimension is of vent complex.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
 Quartz Feldspar Arenite
 Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Purcell Mountains

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Upper greenschist facies.

CAPSULE GEOLOGY

The Smoker occurrence area is underlain by clastic rocks of the Helikian Purcell Supergroup. The units are dominantly siliclastic sedimentary rocks of the Lower and Middle Aldridge formations. Mafic sills intrude the Middle Aldridge rocks. The fragmental rocks are albitized and sericitized. Pyrrhotite, sphalerite and galena occur as disseminations. A vent complex measures 400 by 100 metres and is composed of breccia fragments in a matrix of siltstone. The breccia contains zones of weak to abundant disseminated galena, sphalerite and pyrrhotite associated with intense albitic and sericitic alteration.

Ascot Resources Ltd., who is acquiring the property from Super Group Holdings Ltd., drilled 2 holes (250 metres each) in 1998 and plan deeper drilling in 1999. Cominco Ltd. held the area as the Helg claims in 1966. Sulphide mineralization was seen hosted in quartzite and argillite. In 1999, Ascot drilled a 916-metre hole which terminated at the Moyie sill.

BIBLIOGRAPHY

EM EXPL 1998-69
EM GEOS MAP 1998-3
EMPR ASS RPT 834
EMPR PF (Ascot Resources Ltd. Website (Nov.1999): Project Summary, 3 p.)
GSC MAP 11-1960
GCNL #175(Sept.11), 1998; #190(Oct.6), 1999
N MINER Nov.9, 1998
PR REL Ascot Resources Ltd., Sept.8, Nov.12, 1998; July 7, Aug.16, 1999
WWW <http://www.bmts.bc.ca/aot/smoker.htm>; <http://www.infomine.com/>

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 2000-22

DATE CODED: 1998/12/07
DATE REVISED: 1998/12/07

CODED BY: LDJ
REVISED BY: DAB

FIELD CHECK: N
FIELD CHECK: Y

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
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PAGE: 335
REPORT: RGEN0100

MINFILE NUMBER: **082GSW042**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEE PEE 50**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 57 N
LONGITUDE: 115 58 34 W
ELEVATION: 1830 Metres

NORTHING: 5463071
EASTING: 574415

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Pyrrhotite Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

At the Pee Pee 50 showing, galena is associated with metacrysts of biotite and pyrrhotite within granular quartzites of the Helikian Aldridge Formation (Purcell Supergroup). There is no obvious local association to the intrusive sills and the mineralization is similar to other occurrences in the Kitchener-Yahk area.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR ASS RPT 1063
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/28

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW042**

MINFILE NUMBER: **082GSW043**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEE PEE 55**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 48 N
LONGITUDE: 115 59 49 W
ELEVATION: 1983 Metres

NORTHING: 5462772
EASTING: 572904

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena
ALTERATION: Chlorite Muscovite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite
 Argillite
 Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Post-mineralization GRADE:

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1967
SAMPLE TYPE: Rock	
COMMODITY	GRADE
Silver	2.7000 Grams per tonne
Lead	0.0600 Per cent
Zinc	0.1000 Per cent

REFERENCE: Assessment Report 1063.

CAPSULE GEOLOGY

At the Pee Pee 55 showing, galena mineralization is directly related to contact metamorphic conditions at the contact of a diorite sill with Helikian Aldridge Formation (Purcell Supergroup) quartzites and argillites. Mineralization weakens with increasing distance away from the contact of the diorite with the host rocks. The diorite is also host to some chlorite and muscovite alteration. Analysis over a section 1.8 by 0.3 metres assayed 0.06 per cent lead, 0.1 per cent zinc and 2.7 grams per tonne silver (Assessment Report 1063).

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR ASS RPT 1063
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1988/01/06

CODED BY: GSB
REVISED BY: ADE

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW044**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAYOOK QUARRY 94**, LOT 10220, LOT 10219

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 40 N
LONGITUDE: 115 32 54 W
ELEVATION: 850 Metres

NORTHING: 5481583
EASTING: 605158

LOCATION ACCURACY: Within 500M
COMMENTS: Quarry (Open File 1988-14).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Calcite
MINERALIZATION AGE: Upper Devonian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
SHAPE: Tabular
DIMENSION: 800 x 300 Metres STRIKE/DIP:
COMMENTS: Area containing four outcrops comprising the Mayook Quarry 94 occurrence.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Devonian	Undefined Group	Palliser	

LITHOLOGY: Gypsum
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

The Mayook Quarry 94 prospect consists of seven claims located to the south of the Canadian Pacific Railway, east of Mayook Station, 26 kilometres east of Cranbrook. Gypsum, known since before 1926, is exposed in four outcrops over an area measuring 800 by 300 metres. Three small test quarries have been opened on Lot 10220 and 10219. The prospect is probably a strike extension of the Sunrise prospect (082GSW045) to the north, although the intervening ground is heavily drift covered and no outcrop exposures are reported.

Most gypsum deposits in southeastern British Columbia are Devonian and/or Lower Carboniferous in age and this gypsum is thought to be hosted by Upper Devonian limestones of the Palliser Formation. The limestones strike generally north and dip steeply about 70 degrees east.

The gypsum is conformable with limestones to the east and west. The exposures, highly weathered and decomposed, are typically pale grey to grey and sucrosic. Bedding is indistinct except to the south where it dips steeply to the east. Locally, the gypsum is distinctly conglomeratic or brecciated, containing fragments of both gypsum and limestone.

The quality of the gypsum is consistently 77 per cent. An analysis indicated 28 to 30 per cent CaO, 5 to 6 per cent MgO, 0.5 to 1.4 per cent Fe2O3 plus Al2O3, 33 per cent SO3 and 16 to 17 per cent loss on ignition (Open File 1988-14).

In 1946, the Western Gypsum Company shipped 6950 tonnes to its Calgary plant, but no production has been reported since then.

BIBLIOGRAPHY

EMPR AR 1929-299,442; 1945-131; 1949-255; 1950-220; 1952-257;
1953-190; 1954-179; 1968-300
EMPR FIELDWORK 1988, pp. 497-506
EMPR OF *1988-14; 1991-15
GSC MAP 11-1960
GSC MEM 76

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 338
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 58-10, p. 40
CANMET RPT *714, 1930, p. 65

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/13

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW045**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUNRISE** CAVE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082G05E
BC MAP:

Open Pit

MINING DIVISION: Fort Steele

LATITUDE: 49 29 20 N
LONGITUDE: 115 32 54 W
ELEVATION: 850 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5482818
EASTING: 605134

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry on the Sunrise claim (Open File 1988-14).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Selenite Dolomite Sulphur
MINERALIZATION AGE: Upper Devonian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
SHAPE: Tabular
MODIFIER: Folded Faulted
DIMENSION: 550 x 200 x 36 Metres
COMMENTS: Area of exposed gypsum.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Devonian	Undefined Group	Palliser	

LITHOLOGY: Gypsum
Limestone
Dolomite
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

CAPSULE GEOLOGY

The Sunrise occurrence, comprising the Sunrise and Cave claims, is located along highway 3, 26 kilometres east of Cranbrook. A quarry has been opened on the Sunrise claim about 100 metres north of the Cranbrook-Wardner highway.

Gypsum is exposed over an area measuring 550 by 200 metres. The quarry is 125 metres long and 15 to 60 metres wide with gypsum exposed over a height of 36.5 metres decreasing to 2 to 4 metres along the south wall. The gypsum has been traced about 600 metres and is likely the strike extension of similar exposures on the Mayook Quarry 94 prospect (082GSW044).

Limestone and gypsum, of the Upper Devonian Palliser Formation, is exposed in the quarry and about 30 metres above the quarry. The main structural feature is a northeast plunging anticline. The north limb is cut by a fault where nearby gypsum is brecciated and contains clasts of both gypsum and limestone. The exposed rock is pale grey to dark grey, occasionally black, sucrosic and laminated to thin bedded. Sporadic small flakes of native sulphur, slightly altered fragments of limestone and stringers of white fibrous selenite, 1 centimetre or less in width, are locally found within the gypsum. Dolomite beds 2 to 4 centimetres thick are intercalated with the gypsum. Results of sampling indicate that the quality varies between 72 and 77 per cent (Open File 1991-15).

An analysis indicates 24 to 31 per cent CaO, 1 to 7 per cent MgO, to 2.7 per cent Fe₂O₃ plus Al₂O₃, 24 to 43 per cent SO₃ and 13 to 19 per cent loss on ignition.

Approximately 95,000 tonnes of gypsum was quarried here from 1926 to 1929 and again from 1948 to 1954 (Open File 1991-15).

BIBLIOGRAPHY

EMPR AR 1929-299,442; 1945-131; 1949-255; 1950-220; 1952-257;
1953-190; 1954-179; *1968-300

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 497-506
EMPR OF *1988-14; 1991-15
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10, p. 40
CANMET RPT *714, p. 65, 1930

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/13

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW046**

NATIONAL MINERAL INVENTORY:

NAME(S): **PIT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 28 N
LONGITUDE: 115 15 09 W
ELEVATION: 885 Metres

NORTHING: 5476109
EASTING: 626724

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Quartz Siderite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Pit showing, diamond drill holes (76-9 and 76-11) intersected black argillites and light to dark grey quartzites of the Helikian Aldridge Formation (Purcell Supergroup). Disseminated pyrite, pyrrhotite and chalcopyrite occur within near vertical quartz-siderite veinlets. The stratigraphy is similar to the Ross 1 showing (082GSW052) to the southeast.

BIBLIOGRAPHY

EMPR ASS RPT 5900, 5942, 10570, 11681
EMPR GEM 1976-E45
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/29

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

MINFILE NUMBER: **082GSW047**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNTAIN**, DEAN, ROSS 36

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 23 55 N
LONGITUDE: 115 13 44 W
ELEVATION: 885 Metres

NORTHING: 5473277
EASTING: 628504

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite Pyrrhotite
ASSOCIATED: Quartz Siderite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Lower Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Mountain showing, pits and trenches reported from the 1800's and drilling in 1976 intersected a quartz vein in black argillites of the Helikian Lower Aldridge Formation (Purcell Supergroup). Diamond-drill hole 76-4, drilled to a depth of 152.5 metres, intersected banded black argillites with bands and disseminated pyrite and pyrrhotite along bedding surfaces. Scattered quartz veins and fracture-fillings host chalcopyrite, galena and some siderite as well as pyrite and pyrrhotite. Similar results were obtained from diamond-drill hole C-1-83 drilled in 1983.

BIBLIOGRAPHY

EMPR AR 1898-1003
EMPR ASS RPT 5900, 5904, 5905, 11681, *12796
EMPR GEM 1976-E44; 1978-E68
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/21

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW047**

MINFILE NUMBER: **082GSW048**

NATIONAL MINERAL INVENTORY:

NAME(S): **DON**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 00 N
LONGITUDE: 115 11 22 W
ELEVATION: 1000 Metres

NORTHING: 5469794
EASTING: 631450

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Siderite Barite
ALTERATION: Malachite Hematite Siderite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Gateway

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Calcareous Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Outcrops of calcareous argillite of the Helikian Gateway Formation (Purcell Supergroup) are exposed in the vicinity of the Don showing. The stratigraphy generally strikes 030 degrees with a near vertical dip. The showing consists of chalcopyrite on fracture surfaces (1976 drill hole). Chalcopyrite, malachite and hematite in a fissure vein with a gangue of quartz-siderite-barite is also reported. The latter is exposed in an old shaft and in trenches.

BIBLIOGRAPHY

EMPR ASS RPT 5906, 10570
EMPR GEM 1976-E44
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/30

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW049**

NATIONAL MINERAL INVENTORY:

NAME(S): **VINE 55**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 44 N
LONGITUDE: 115 54 04 W
ELEVATION: 1052 Metres

NORTHING: 5479421
EASTING: 579628

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
COMMENTS: Quartz vein

STRIKE/DIP: 135/90S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Middle Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Sediment/Sedimentary Rock
Dioritic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

The Vine 55 showing is situated on the eastern limb of a localized, north plunging anticline within sediments of the Helikian Middle Aldridge Formation (Purcell Supergroup). The vein strikes about 135 degrees with a near vertical dip. This is similar to veins at the Nord (082GSW001) and Vine 1 (082GSW050) showings. The host stratigraphy also contains a number of diorite sills of the Proterozoic Moyie Intrusions in close proximity to this showing. Mineralization consists of galena, sphalerite and some chalcopyrite within a fracture which crosscuts the gently, northeasterly dipping strata.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR ASS RPT *12930, 17886
EMPR FIELDWORK 1977, p. 14
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/30

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW050**

NATIONAL MINERAL INVENTORY:

NAME(S): **VINE 1, VINE**

STATUS: Developed Prospect

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082G05W

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 24 00 N

NORTHING: 5472592

LONGITUDE: 115 49 14 W

EASTING: 585574

ELEVATION: 1006 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Area of drilling, on the northwest side of Peavine Creek 1 kilometre northwest of its confluence with Hogg Creek, 3 kilometres north of the north end of Moyie Lake, 16 kilometres south of Cranbrook.

COMMODITIES: Lead

Zinc

Silver

Copper

Gold

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

Shear

CLASSIFICATION: Epigenetic

Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 1000 x 700

Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Vine structure.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Helikian

Purcell

Middle Aldridge

LITHOLOGY: Argillite
 Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Purcell Mountains

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN

REPORT ON: Y

CATEGORY: Combined

YEAR: 1990

QUANTITY: 1300000 Tonnes

COMMODITY

GRADE

Silver

36.3000

Grams per tonne

Gold

2.2000

Grams per tonne

Lead

3.1200

Per cent

Zinc

0.7600

Per cent

Copper

0.1100

Per cent

COMMENTS: Proven and possible reserves.

REFERENCE: MDAP - Kokanee Exploration Ltd. Prospectus (1990).

CAPSULE GEOLOGY

The Vine property lies within the central portion of the Purcell Anticlinorium which consists of argillites, quartzites and related intruded gabbro sills and dykes of the Helikian Aldridge Formation (Purcell Supergroup).

The Vine 1 occurrence is a shear-related vein system in Middle Aldridge Formation argillites and quartzites. Trenching and drilling has exposed massive and disseminated sulphides (pyrite, sphalerite and galena) within a sheared vein system striking about 120 degrees and dipping 45 to 85 degrees to the northwest. Stringer and disseminated sulphides are conspicuous in the shear zone for several metres on either side of the massive sulphides. The mineralized Vine structure has been traced for over 1000 metres along strike and a downdip extension of at least 700 metres.

Recent drilling (1990) of the Vine structure (630 metres depth) has intersected 3 massive sulphide veins. The upper vein has a true width of 4 metres, the middle vein a true width of 2 metres and the lower vein a true width of 3.4 metres. The upper vein averages 2.94 per cent lead, 0.2 per cent zinc and 29.13 grams per tonne silver across 4 metres. The middle vein averages 36.24 per cent lead, 12.16

CAPSULE GEOLOGY

per cent zinc, 229.67 grams per tonne silver and 0.34 grams per tonne gold across 2 metres. The lower vein averages 4.7 per cent lead, 2.09 per cent zinc, 0.36 per cent copper and 35.3 grams per tonne silver across 3.4 metres. The lower vein represents a new sulphide zone within the Vine structure (George Cross News Letter #224 (November), 1991).

Proven and probable reserves for the Vine property are 1,300,000 tonnes grading 2.2 grams per tonne gold, 36.3 grams per tonne silver, 3.12 per cent lead, 3.12 per cent zinc and 0.11 per cent copper (MDAP - Kokanee Exploration Ltd. Prospectus (1990)).

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR ASS RPT 6498, 6863, *7087, 20518, 21827
EMPR EXPL 1978-E67
EMPR FIELDWORK 1977, p. 14
EMPR OF *1988-14; 1992-1; 1998-10
EMPR PF (Pighin, D. and Hoy, T (1994): Vine - a Middle Proterozoic Massive Sulphide vein system)
GSC MAP 11-1960
GSC MEM 76
GCNL #227(Nov.27),#236(Dec.8), 1989; #4(Jan.5),#14(Jan.19),
#23(Feb.1),#50(Mar.12),#112(Jun.11),#114(Jun.13),#124(Jun.27),
#211(Oct.31), 1990; #27(Feb.7),*#224(Nov.21), 1991; #31(Feb.13),
1992
WWW <http://www.infomine.com/>

DATE CODED: 1986/05/20
DATE REVISED: 1991/12/10

CODED BY: BG
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW051**

NATIONAL MINERAL INVENTORY:

NAME(S): **VINE 17**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 40 N
LONGITUDE: 115 48 44 W
ELEVATION: 1000 Metres

NORTHING: 5475690
EASTING: 586130

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrrhotite

ASSOCIATED: Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Wacke
Quartz Wacke

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

At the Vine 17 showing, a 9 centimetre intersection of 10 per cent pyrrhotite and 0.2 per cent sphalerite is reported from diamond-drill hole V-79-1 (Assessment Report 7677). The mineralization appears to be stratiform but is reported in association with a calcite-bearing vein which was intersected immediately below the mineralized horizon in a massive quartz wacke and thin bedded wackes of the Helikian Aldridge Formation (Purcell Supergroup). Locally the stratigraphy dips gently to the northeast and strikes generally northwest.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR ASS RPT *7677
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1986/05/20
DATE REVISED: 1986/05/20

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 348
REPORT: RGEN0100

MINFILE NUMBER: **082GSW052**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROSS 1**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 15 N
LONGITUDE: 115 14 54 W
ELEVATION: 885 Metres

NORTHING: 5475715
EASTING: 627035

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Ross 1 showing, diamond-drill hole 76-3 drilled to 600 metres, intersected black argillites and quartzites of the Helikian Lower Aldridge Formation (Purcell Supergroup). Disseminated pyrite and pyrrhotite occurs along bedding surfaces. Minor quartz veins cut the strata and host some chalcopyrite and sphalerite mineralization.

BIBLIOGRAPHY

EMPR AR 1898-1003
EMPR ASS RPT *5900, 5942, 11681
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
EMPR OF 2000-22

DATE CODED: 1986/05/21
DATE REVISED: 1986/05/21

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW052**

MINFILE NUMBER: **082GSW053**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROSS 2**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 24 35 N
LONGITUDE: 115 11 04 W
ELEVATION: 1677 Metres

NORTHING: 5474589
EASTING: 631698

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Pyrite Pyrrhotite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Ross 2 showing, galena occurs within black argillites and quartzites of the Helikian Aldridge Formation (Purcell Supergroup) both as disseminations within the stratigraphy, associated with pyrite, and in crosscutting quartz veinlets.

BIBLIOGRAPHY

EMPR ASS RPT *5901, 10570, 11681
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
EMPR OF 2000-22

DATE CODED: 1986/05/30
DATE REVISED: 1986/05/30

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW054**

NATIONAL MINERAL INVENTORY:

NAME(S): **CEDAR, G ZONE, FORT STEELE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 26 25 N
LONGITUDE: 115 15 14 W
ELEVATION: 1350 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5477867
EASTING: 626582

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Silver Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite
ASSOCIATED: Quartz Siderite Pyrite Pyrrhotite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Argillaceous Quartzite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The area is underlain by Helikian Aldridge Formation (Purcell Supergroup) quartzite, argillaceous quartzite and argillite. At the Cedar showing, a strong shear zone crosscuts nearly flat-lying argillites and argillaceous quartzite. The zone is 3 to 5 metres wide and has been exposed in trenches over a strike length of about 1100 metres. The shear gouge is grey to buff colored, oxidized (limonite?) and carries angular fragments of the wallrocks. At the showing, the zone is 4.9 metres wide and hosts a massive vein (pod?) of galena which assayed high values in lead and silver. Two short old tunnels had been driven to intersect the zone. Recent rotary percussion drilling tested the eastern extension of the mineralized zone and were collared east of the adit tunnel. The drilling intersected Aldridge sediments containing quartz stringers and quartz-siderite fracture-fillings containing pyrite, pyrrhotite and minor chalcopyrite and galena (Assessment Report 17850).

BIBLIOGRAPHY

EMPR ASS RPT 10304, 10570, 16222, 17850, 25129, 25637
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10
EMPR OF 2000-22

DATE CODED: 1986/05/30
DATE REVISED: 1991/04/19

CODED BY: BG
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 351
REPORT: RGEN0100

MINFILE NUMBER: **082GSW055**

NATIONAL MINERAL INVENTORY:

NAME(S): **OK, O.K.**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 24 14 N
LONGITUDE: 115 10 09 W
ELEVATION: 1220 Metres

NORTHING: 5473967
EASTING: 632822

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Shear zone

E14 Sedimentary exhalative Zn-Pb-Ag
STRIKE/DIP: 090/90S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Argillite
Quartzite
Vein

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

A shear zone crosscuts argillites and quartzites of the Helikian Aldridge Formation (Purcell Supergroup). The shear zone strikes easterly and has a near vertical dip and is reported to have a width in the order of 12 metres. Veins, irregular blebs and disseminations of galena are distributed throughout the altered and sheared argillites. The OK occurrence is similar in structure and stratigraphy to the Cedar showing (082GSW054).

BIBLIOGRAPHY

EMPR ASS RPT 10570, 11681
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76
EMPR OF 2000-22

DATE CODED: 1986/05/30
DATE REVISED: 1986/05/30

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW055**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 352
REPORT: RGEN0100

MINFILE NUMBER: **082GSW056**

NATIONAL MINERAL INVENTORY:

NAME(S): **VIKING**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

Underground

MINING DIVISION: Fort Steele

LATITUDE: 49 28 00 N
LONGITUDE: 115 17 19 W
ELEVATION: 1740 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5480743
EASTING: 623999

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Galena Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Siderite Limonite Malachite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Creston	

LITHOLOGY: Siltstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Records indicate the Viking occurrence was prospected with about 49 metres of drifting. Limited data indicates galena and/or chalcopyrite mineralization is hosted by quartz veins within Helikian Creston Formation (Purcell Supergroup) green siltstones and argillites. Mineralization was evident in areas of cross-fracturing.

BIBLIOGRAPHY

EMPR AR 1927-C266
EMPR ASS RPT 10304, 10570
EMPR MAP 34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1986/05/30
DATE REVISED: 1986/05/30

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW056**

MINFILE NUMBER: **082GSW057**

NATIONAL MINERAL INVENTORY:

NAME(S): **RANCH**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 05 N
LONGITUDE: 115 46 47 W
ELEVATION: 1100 Metres

NORTHING: 5474647
EASTING: 588504

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Middle Aldridge	

LITHOLOGY: Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

At the Ranch showing, a one metre wide quartz vein crosscuts Helikian Middle Aldridge Formation (Purcell Supergroup) sedimentary rocks. The vein strikes 135 degrees and has a near vertical dip, and is mineralized with galena and sphalerite.

BIBLIOGRAPHY

EM GEOS MAP 1998-3
EMPR ASS RPT 11706
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1986/05/30
DATE REVISED: 1986/05/30

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW058**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER PIPE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 42 N
LONGITUDE: 115 44 39 W
ELEVATION: 1880 Metres

NORTHING: 5455451
EASTING: 591402

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Silver Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Jamesonite Limonite Goethite Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Creston

LITHOLOGY: Mudstone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1982
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 99.0000 Grams per tonne
Copper 0.3400 Per cent
Lead 1.5000 Per cent
REFERENCE: Assessment Report 10907.

CAPSULE GEOLOGY

The Silver Pipe property lies within the Helikian Creston Formation (Purcell Supergroup) on the eastern limb of the northeast plunging Moyie Lake anticline. The showing consists of a quartz vein system 0.6 to 3.0 metres in width exposed along strike for about 200 metres. The vein strikes generally east, dips steeply and exhibits minor offsets due to faulting. The vein is highly oxidized on surface.

The showing was discovered during construction of a gas pipeline and grab samples of gossanous material returned values up to 1.5 per cent lead, 99 grams per tonne silver, and 0.34 per cent copper (Assessment Report 10907). Mineralization consists of galena, chalcopyrite, magnetite and quartz with some jamesonite, goethite, limonite and hematite in the more oxidized zone near surface.

BIBLIOGRAPHY

EMPR ASS RPT *10907
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1986/05/30
DATE REVISED: 1986/05/30

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW059**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIZARD**, LIZARD CREEK

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 22 N
LONGITUDE: 115 07 49 W
ELEVATION: 1200 Metres

NORTHING: 5483547
EASTING: 635407

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the south side of Lizzard Creek, 5 kilometres southwest of Fernie (Open File 1987-16).

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Clay Calcite Quartz Mica
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Sedimentary Industrial Min. Syngenetic
TYPE: F07 Upwelling-type phosphate
DIMENSION: STRIKE/DIP: 135/60S TREND/PLUNGE:
COMMENTS: Stratigraphy is overturned.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Fernie	Undefined Formation	
Triassic	Spray River	Sulphur Mountain	

LITHOLOGY: Phosphorite
Shale
Siltstone
Phosphatic Shale

HOSTROCK COMMENTS: Base of Fernie Group is of Lower Jurassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY: Phosphate GRADE: 12.9000 Per cent
COMMENTS: Across 3.4 metres.
REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

The Lizard phosphorite deposit is located on Lizard Creek 5 kilometres southwest of Fernie.
The phosphorite occurs at the base of the Jurassic Fernie Group, unconformably overlying fine clastic strata of the Triassic Sulphur Mountain Formation (Spray River Group). This sequence along the south side of Lizard Creek trends northwest and is overturned.
The phosphorite consists of well-rounded structureless brown pellets averaging 0.2 to 0.3 millimetres in diameter in a matrix of carbonate with lesser amounts of quartz and minor mica and clay. The matrix comprises 20 per cent of the rock. About half of the pellets contain quartz nuclei. Work by Cominco indicated the presence of a phosphorite bed 3.4 metres thick containing approximately 12.9 per cent P2O5 (Open File 1987-16, page 77). Some phosphate is also present in older Ishbel Group strata of Permian age.
The deposit was explored by Cominco Ltd. in the 1960's. At the present time the area is overgrown with only 2 adits (inaccessible) still locatable.

BIBLIOGRAPHY

EMPR AR 1929-298,442,447; 1967-311-314

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 356
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 289-302; 1989, pp. 489-493
EMPR OF *1987-16, pp. 29-31,41,49,77,78; 1988-14
GSC MAP 20-1958; 11-1960
GSC MEM 76
GSC OF 481
GSC P 58-10

DATE CODED: 1986/12/10
DATE REVISED: 1991/03/18

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082GSW060**

NATIONAL MINERAL INVENTORY:

NAME(S): **FERNIE SKI HILL**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 40 N
LONGITUDE: 115 06 34 W
ELEVATION: 1525 Metres

NORTHING: 5480435
EASTING: 636995

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the Fernie ski hill, northwest of Fernie.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphorite

ASSOCIATED: Quartz

MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
COMMENTS: Bedding is overturned

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Permian
Permian

Ishbel
Ishbel

Johnson Canyon
Ranger Canyon

LITHOLOGY: Phosphorite
Phosphatic Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1987

COMMODITY

GRADE

Phosphate

13.3000 Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Fernie Ski Hill showing, a phosphorite-phosphatic siltstone bed 50 to 70 centimetres thick, occurs near the top of the Permian Ranger Canyon Formation (Ishbel Group). This bed contains 13.3 per cent P2O5 (Open File 1987-16). Also present are several thin beds averaging 0.5 metres thick and containing less than 2.0 per cent P2O5 in the underlying Johnson Canyon Formation (Ishbel Group).

BIBLIOGRAPHY

EMPR OF 1987-16; *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSW061**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOTENAY RIVER (WEST SIDE)**, WARDNER

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 37 N
LONGITUDE: 115 28 51 W
ELEVATION: 1067 Metres

NORTHING: 5477881
EASTING: 610124

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on ridge, 3 to 7.5 kilometres northwest of Wardner (CANMET Report 811, page 198).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Mississippian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
SHAPE: Tabular
MODIFIER: Folded
COMMENTS: Folded about a northeast plunging syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mississippian	Rundle	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1944
SAMPLE TYPE: Grab
COMMODITY GRADE
Limestone 52.4600 Per cent

COMMENTS: Grade given for calcium oxide.
REFERENCE: CANMET Report 811, page 202, sample 69.

CAPSULE GEOLOGY

At the Kootenay River (West Side) occurrence, a ridge of coarse-grained, light grey limestone of the Mississippian Rundle Group lies along the southwest side of the Kootenay River, 3 to 7.5 kilometres northwest of Wardner. The limestone is folded about a northeast plunging syncline. A grab sample of the limestone contained 52.46 per cent CaO, 2.77 per cent MgO, 0.14 per cent SiO₂, 0.09 per cent Al₂O₃, 0.07 per cent Fe₂O₃ and a trace of sulphur (CANMET Report 811, page 202, Sample 69).

BIBLIOGRAPHY

EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 336, pp. 43-52; 76
CANMET RPT *811, Part 5, pp. 198-202

DATE CODED: 1989/10/06
DATE REVISED: 1991/05/07

CODED BY: PSF
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW062**

NATIONAL MINERAL INVENTORY:

NAME(S): **WARDNER NORTH**, KOOTENAY RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 09 N
LONGITUDE: 115 24 07 W
ELEVATION: 951 Metres

NORTHING: 5477135
EASTING: 615860

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on a summit of a hill, 1.9 kilometres north of a highway bridge at Wardner (CANMET Report 811, page 200).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica
COMMENTS: As chert and silicified fossils.
MINERALIZATION AGE: Mississippian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
COMMENTS: Bedding strikes west, dips south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mississippian	Rundle	Undefined Formation	
DATING METHOD: Fossil			

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1944
SAMPLE TYPE: Grab
COMMODITY GRADE
Limestone 55.2400 Per cent

COMMENTS: Grade given for calcium oxide.
REFERENCE: CANMET Report 811, page 202, sample 73A.

CAPSULE GEOLOGY

At the Wardner North occurrence, limestone of the Mississippian Rundle Group forms a 90 metre high hill on the east side of the Kootenay River, approximately 2 kilometres north of the highway bridge at Wardner. The limestone strikes west and dips southward.

On the southeast side of the hill the rock consists of coarse-grained, light brownish grey, high calcium limestone. The northeast side of the hill exposes fine-grained, dark grey limestone containing some silicified fossils and chert. Two grab samples analyzed as follows (in per cent) (CANMET Report 811, page 202, Samples 73A, 73B):

Sample	CaO	MgO	SiO2	Al2O3	Fe2O3	Sulphur
73A	55.24	0.29	0.38	0.12	0.06	nil
73B	54.37	0.44	1.50	0.37	0.07	nil

Sample 73A is of the coarse-grained limestone taken midway up the side of the hill. Sample 73B is of the fine-grained limestone.

BIBLIOGRAPHY

EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 336, pp. 43-52; 76
CANMET RPT *811, Part 5, pp. 200-202

DATE CODED: 1989/10/12
DATE REVISED: 1991/05/07

CODED BY: PSF
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW063**

NATIONAL MINERAL INVENTORY:

NAME(S): **WARDNER SOUTH**, KOOTENAY RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G06W
BC MAP:

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 24 36 N
LONGITUDE: 115 25 21 W

NORTHING: 5474232
EASTING: 614430

ELEVATION: 762 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on site of sample 74 just south of Wardner along railway cut near bridge (CANMET Report 811, page 201).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Dolomite
MINERALIZATION AGE: Upper Devonian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
 TYPE: R09 Limestone

STRIKE/DIP: 066/30N

TREND/PLUNGE:

DIMENSION:
COMMENTS: Limestone bed

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Devonian

GROUP

Undefined Group

FORMATION

Palliser

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

LITHOLOGY: Limestone
Dolomite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Grab

COMMODITY

GRADE

Limestone

47.2500

Per cent

COMMENTS: Grade given for calcium oxide.
REFERENCE: CANMET Report 811, page 202, sample 74.

CAPSULE GEOLOGY

At the Wardner South occurrence, a railway cut just south of Wardner on the west side of the Kootenay River exposes limestone of the Upper Devonian Palliser Formation. The limestone strikes 066 degrees and dips 30 degrees north. The unit is underlain and overlain by limestone, dolomite, siltstone and quartzite of the Upper Devonian Fairholme Group.

The railway cut displays thin-bedded to massive, well-fractured, fine-grained, dark bluish grey, high calcium limestone with some bands and fine mottlings of brown weathering magnesian material. The upper portion of the exposed section contains thin shale partings. A sample of mottled limestone taken near the railway bridge crossing the Kootenay River contained 47.25 per cent CaO, 6.32 per cent MgO, 2.04 per cent SiO₂, 0.40 per cent Al₂O₃, 0.16 per cent Fe₂O₃ and a trace of sulphur (CANMET Report 811, page 202, Sample 74).

BIBLIOGRAPHY

EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 336, pp. 38-40; 76

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 361
REPORT: RGEN0100

BIBLIOGRAPHY

CANMET RPT *811, Part 5, pp. 201-202

DATE CODED: 1989/10/12
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082GSW064**

NATIONAL MINERAL INVENTORY:

NAME(S): **ST. JOE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 47 N
LONGITUDE: 115 53 28 W
ELEVATION: 1050 Metres

NORTHING: 5481377
EASTING: 580324

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location of vein (Fieldwork 1995, in press).

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Middle Proterozoic

GROUP

Purcell

FORMATION

Aldridge

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Tuff
Volcaniclastic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The St. Joe showing is located about 8 kilometres southwest of Cranbrook.

The vein has been explored intermittently since the turn of the century by underground work, trenching and diamond drilling. Detailed surface mapping and diamond drilling were conducted in the mid-1980s by Cominco and in 1993 by Consolidated Ramrod Gold Inc.

The area is underlain by sedimentary rocks of the Aldridge Formation of the Middle Proterozoic Purcell Supergroup (Belt). Locally, the showing area is underlain by a tuff (St. Joe tuff) in gently dipping thick-bedded turbidite layers in the upper part of the middle Aldridge Formation. It is conformably overlain by a laminated silty argillite marker unit. East-northeast trending normal faults occur in the area. The Cranbrook fault is less than 1 kilometre to the north.

The showing comprises a small lead-zinc-silver vein hosted in tuff. The hostrocks contain elevated base metal values, particularly copper (up to 4 times background levels) in comparison to normal Aldridge sediments. A small massive sulphide occurrence and tourmalinization occur within a sedimentary fragmental unit about 100 metres stratigraphically below the St. Joe tuff unit.

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- EM GEOS MAP 1998-3
- EMPR BULL 84
- EMPR FIELDWORK 1995 (in press)
- EMPR OF 1994-8
- GSC MAP 11-1960
- GSC MEM 76
- PR REL Klondike Gold Corp., Mar.5, 2003

DATE CODED: 1995/01/10
DATE REVISED: 1995/01/10

CODED BY: DEJ
REVISED BY: DEJ

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082GSW065**

NATIONAL MINERAL INVENTORY:

NAME(S): **SWANSEA RIDGE**

STATUS: Producer

Open Pit

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082G05W

BC MAP:

LATITUDE: 49 24 12 N

LONGITUDE: 115 52 15 W

ELEVATION: 1067 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Proposed quarry site along the Canadian Pacific Railway tracks just north of the north end of Moyie Lake, about 14 kilometres south of the community of Cranbrook (Property File - Overview of CP Rail System Swansea Ballast Operation).

UTM ZONE: 11 (NAD 83)

NORTHING: 5472907

EASTING: 581920

COMMODITIES: Railroad Ballast

MINERALS

SIGNIFICANT: Plagioclase Hornblende

MINERALIZATION AGE: Proterozoic

DEPOSIT

CHARACTER: Massive

Concordant

CLASSIFICATION: Epigenetic

Hydrothermal

TYPE: E SEDIMENT-HOSTED

DIMENSION: 60

Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Moyie diabase sill.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Helikian

Purcell

Aldridge

LITHOLOGY:

Diabase

Diabase Sill

Quartzite

Biotite Quartzite

Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

Track ballast is the crushed rock which supports and restrains railway track and provides effective drainage. Some of the qualities looked for in the rock selected for ballast are its resistance to abrasion which occurs when trains pass, and its ability to resist breakdown from environmental factors. Detailed investigation has been undertaken of a site known as Swansea Ridge for CP Rail System. The Swansea Ridge site offers superior rock quality, acceptable geology, minimal impact on the environment, space for development and its location close to the railway's track. Based on an estimated annual requirement of 362,840 tonnes of ballast, Swansea Ridge will supply ballast to CP Rail System in eastern British Columbia, southern Alberta and parts of Saskatchewan for about 50 years. The proposed quarry will consist of four main operations: mining rock, crushing rock to produce ballast, stockpiling ballast and loading ballast into rail cars. Diabase sill material will be the source of the track ballast.

Site geology has been compiled and interpreted from test pit data, diamond-drill hole data and surface exposures. Geology maps indicate the area is underlain by Helikian Purcell Supergroup rocks and Proterozoic Moyie intrusions. Four structural units were recognized. From top to bottom they are: overburden, cap rock consisting of bedded quartzite and argillite, diabase sill and a lower sequence of bedded quartzite and argillite.

The metasedimentary cap rock which overlies the sill and the metasediments underlying the sill belong to the Aldridge Formation of the Helikian Purcell Supergroup. These rocks are predominantly composed of bedded quartzite, biotitic quartzite and argillite. The rocks generally strike along the length of Swansea Ridge and dip roughly parallel to its northeast-facing slope. The thickness of cap rock across the length of the ridge is variable. It reaches its

CAPSULE GEOLOGY

greatest thickness on lower slopes on the northern portion of the ridge, where in excess of 60 metres overlies the sill. On the southern portion of the ridge, it has been completely eroded. Cap rock has also been completely eroded along the crest of the ridge.

A Moyie diabase sill has intruded the Aldridge Formation and lies concordant with bedding. The rock is comprised of interlocking grains of unaltered plagioclase feldspar and hornblende. Two phases are recognized; a coarser grained phase at the top of the formation and a medium grained phase in the middle and lower sections. The thickness of the sill is consistent across the length of the ridge and averages approximately 60 metres (true thickness).

BIBLIOGRAPHY

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EMPR PF (*Overview of CP Rail System Swansea Ballast Operation)
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 1995/12/14
DATE REVISED: 1995/12/14

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW066**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRUZ**, CRUZ DE PLATA, MIDWAY,
SUPER NOVA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W 082G04W
BC MAP:

MINING DIVISION: Fort Steele

LATITUDE: 49 15 11 N
LONGITUDE: 115 50 36 W
ELEVATION: 1066 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5456231
EASTING: 584171

LOCATION ACCURACY: Within 500M

COMMENTS: Proposed drillholes location, just east of Highway 95 at the south end of Moyie Lake, about 29 kilometres south of the community of Cranbrook (Property File - Claim location map).

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrrhotite
COMMENTS: Inferred from lead-zinc anomalous outcrop.
ALTERATION: Albite Tourmaline Sericite
ALTERATION TYPE: Albitic Tourmalin'z'n Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite
Siltstone
Argillite
Tourmalinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Cruz property covers a newly discovered Sullivan-type silver-lead-zinc target. The claims were staked to cover a number of high grade lead-zinc-silver mineralized boulders. Detailed prospecting in the area north of the high-grade boulders found a large, lead-zinc anomalous fragmental outcrop. The fragmental is strongly albitized and tourmalinized (George Cross News Letter No.161, 1995).

The Cruz property is underlain by a 3,000 to 3,500 metre thick sedimentary flysch sequence of alternating siltstones, argillites and quartzites of the Proterozoic Middle Aldridge Formation. Two gabbro sills, each approximately 100 metres thick, intrude the sequence. The structural character of the property is dominated by a large, property wide anticline and numerous northeast and northwest striking normal faults. A thick package of fine siliceous and carbonaceous sediments including the Creston, Kitchener, and Van Creek Formations overlie the Aldridge Formation to the north.

Three vent structures have been located on the claims, including the Cruz, the Midway and the Super Nova; the last two are 5 and 10 kilometres southwest of the Cruz respectively. The Cruz vent is a small hydrothermal vent structure consisting of a crosscutting pipe-like body of intensely sericitized and albitized Aldridge fragmental rocks. Beds of tourmaline are present in sediments adjacent to the vent structure. The vent has been explored with four diamond drill holes which traced a 4-metre thick mineralized quartzite unit for 500 metres to the west and 100 metres to the east of the vent. Mineralization in the bed consisted of sub-oregrade disseminated sphalerite, galena and pyrrhotite.

Ascot Resources Ltd. optioned the property from Chapleau Resources Ltd. and Wild Horse Gold Corp. in 1998. They terminated

CAPSULE GEOLOGY

the option in August 1999.

In 1995, 4 holes, totalling 2016 were drilled. Chapleau plans drilling in 1999.

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EMPR ASS RPT 24401, 24772, 25138, 25378, 25822, 25823, 25858
EMPR PF (*Claim and drillhole location maps; Ascot Resources Ltd.
 Website (May 1999): Cruz Property, 3 p.; Chapleau Resources Ltd.
 Website (Nov.1999): Cruz Property, 2 p)
GSC MAP 11-1960
GSC MEM 76; 207
GCNL *#161(Aug.22), 1995; #192(Oct.6), 1999
PR REL Ascot Resources Ltd., Oct. 21, 1998; Chapleau Resources Ltd.,
 Oct.21, 1998; Aug.16, Sept.21, 1999
WWW <http://www.chapleaurresources.com>;
 <http://www.infomine.com/index/properties/CRUZ.html>
EMPR OF 2000-22

DATE CODED: 1995/12/14
DATE REVISED: 1995/12/14

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082GSW067**

NATIONAL MINERAL INVENTORY:

NAME(S): **DA VENT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 53 N
LONGITUDE: 115 55 07 W
ELEVATION: 1180 Metres

NORTHING: 5475975
EASTING: 578409

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Sphalerite Galena
ASSOCIATED: Quartz
ALTERATION: Albite Sericite Tourmaline
ALTERATION TYPE: Sericitic Albitic Tourmalin'z'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Sedimentary Exhalative
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag
DIMENSION: 450 x 100 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Dimension is of vent complex.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite
Quartz Feldspar Arenite
Tourmalinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Upper greenschist facies.

CAPSULE GEOLOGY

The DA Vent occurrence area is underlain by clastic rocks of the Helikian Purcell Supergroup. The units are dominantly siliclastic sedimentary rocks of the Lower and Middle Aldridge formations. The fragmental rocks are albitized, sericitized and contain scattered tourmaline alteration. Pyrrhotite, sphalerite and galena occur locally as disseminations. A vent complex measures 450 by 100 metres. Ascot Resources Ltd., who is acquiring the property from Super Group Holdings Ltd., mapped and sampled the area in 1998 and 1999.

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EM GEOS MAP 1998-3
EMPR ASS RPT 25783
EMPR OF 2000-22
EMPR PF (Ascot Resources Ltd. Website (Nov.1999): Project Summary, 3 p.)
GSC MAP 11-1960
GCNL #175(Sept.11), 1998
N MINER Nov.9, 1998
PR REL Ascot Resources Ltd., Sept.8, 1998
WWW <http://www.bmts.bc.ca/aot/smoker.htm>;
WWW http://www.infomine.com/index/properties/DA_VENT.html

DATE CODED: 1998/12/07
DATE REVISED: 1998/12/07

CODED BY: LDJ
REVISED BY: DAB

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082GSW068**

NATIONAL MINERAL INVENTORY:

NAME(S): **BAR**, LOOKOUT, BAR 19,
PALMER BAR

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082G05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 44 N
LONGITUDE: 115 55 32 W
ELEVATION: Metres

NORTHING: 5483100
EASTING: 577800

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Gold Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite
ASSOCIATED: Chlorite Quartz Carbonate Limonite
ALTERATION TYPE: Argillic Chloritic Silicific'n Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stockwork Breccia
CLASSIFICATION: Hydrothermal Igneous-contact
TYPE: I02 Intrusion-related Au pyrrhotite veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Cretaceous

GROUP

Purcell

FORMATION

Creston

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Argillite
Syenite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: MAIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY

YEAR: 1988

Copper

GRADE

0.5700

Per cent

COMMENTS: 50.5 metre drill intersection.
REFERENCE: MEM ASS RPT 20274.

CAPSULE GEOLOGY

The Bar prospect is located 11.5 kilometres west of Cranbrook. Chapleau Resources Ltd. discovered and drilled the Bar prospect in 1988: DDH B-88-20 returned 0.57 per cent copper over 50.5 metres (Assessment Report 20274). Noranda Exploration Company staked the Bar 19 claim in 1985 and took 49 soil geochemical samples. Swift Mineral Ltd. drilled a 293.2-metre deep hole in 1990 and some trenching occurred during the early to middle 1990's. Drilling by Chapleau Resources Ltd. in 2002 and early 2003 confirmed the mineralization extends 290 metres along strike and to a depth of 341 metres. A 7.45 metre drill intersection assayed 10.33 grams per tonne gold (Press Release Chapleau Resources Ltd., January 8, 2003).

Middle Proterozoic Purcell Supergroup, Creston Formation sedimentary rocks underlie the prospect area. An east-northeast trending normal fault separates the Creston Formation from the Middle Proterozoic Purcell Supergroup, Aldridge Formation, immediately to the south of the prospect. Aldridge Formation sediments also underlie the area to the northwest. A northwest trending and an east to northeast trending syenite dike coalesce and form a wishbone shaped fold-like feature that verges to the northwest. These intrusive rocks are believed to be Cretaceous in age. The prospect occurs at the intersection of the Cranbrook and Palmer Bar faults (Assessment Report 20274).

CAPSULE GEOLOGY

Mineralization occurs in a number of intensely brecciated hydrothermally emplaced zones within an approximately 50-metre wide fault that dips moderately to the north. It occurs in quartz veins and stockworks that cut argillic, chloritic, silicic and carbonate altered sediments and syenite dikes. Sulphide mineralization is oxidized and strongly limonitic in the upper portions of the structure.

Chalcopyrite, abundant pyrite and trace galena have been recored from drill core.

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EMPR ASS RPT 14823, 20274
EMPR BULL 84
EMPR OF 1994-8
GSC MAP 11-1960
GSC MEM 76
PR REL Chapleau Resources Ltd., Nov.27, Dec.12, 2002; Jan.8,
Feb.12, Mar.12, 2003
WWW <http://www.sedar.com>; <http://www.chaplearesources.com>

DATE CODED: 2003/04/01
DATE REVISED: / /

CODED BY: ICLW
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW001**

NATIONAL MINERAL INVENTORY: 082J13 Mg1

NAME(S): **MOUNT BRUSSILOF**, BAYMAG, BAYMAG MINE,
ROK, MOUNT EON, CROSS RIVER,
MT. BRUSSILOF

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082J13E
BC MAP:
LATITUDE: 50 47 20 N
LONGITUDE: 115 40 44 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Open pit, 1 kilometre north-northeast of the confluence of
Assiniboine Creek with Mitchell River, approximately 35 kilometres
northeast of Radium Hot Springs (Fieldwork 1990).

Open Pit

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5627181
EASTING: 593120

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite Dolomite
ASSOCIATED: Dolomite Calcite Pyrite Ankerite Chlorite
Quartz Chalcocite Fersmite
COMMENTS: Also phlogopite, talc, palygorskite, boulangerite, huntite and
brucite.
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Middle Cambrian

DEPOSIT

CHARACTER: Podiform Stratabound Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E09 Sparry magnesite
SHAPE: Irregular
MODIFIER: Folded
DIMENSION: 790 x 500 x 120 Metres STRIKE/DIP: 330/30W TREND/PLUNGE:
COMMENTS: Magnesite deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Middle Cambrian GROUP: Undefined Group FORMATION: Cathedral IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Magnesite
Dolomite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: BAYMAG REPORT ON: Y
CATEGORY: Combined YEAR: 1980
QUANTITY: 9500000 Tonnes
COMMODITY: Magnesite GRADE: 95.0000 Per cent
COMMENTS: Proven/probable reserves grading over 95 per cent magnesia in the
calcined product.
REFERENCE: Fieldwork 1990.

ORE ZONE: BAYMAG REPORT ON: Y
CATEGORY: Possible YEAR: 1986
QUANTITY: 17600000 Tonnes
COMMODITY: Magnesite GRADE: 92.4400 Per cent
COMMENTS: Grade averages 92.44 per cent magnesia in the calcined product.
REFERENCE: Fieldwork 1990.

CAPSULE GEOLOGY

The Baymag deposit is situated east of a Cambrian bathymetric
feature commonly referred to as the "Cathedral escarpment". The
carbonate rocks east of this feature, which host the magnesite
mineralization, were deposited in a shallower marine environment than

CAPSULE GEOLOGY

their stratigraphic equivalents to the west (Fieldwork, 1990).

Stratigraphy east of the escarpment is described from oldest to youngest. The Lower Cambrian Gog Group is a rusty, grey or buff, medium to coarse-grained, massive to thick bedded sandstone more than 250 metres thick. Middle Cambrian rocks overlying the Gog Group include the Naiset, Cathedral, Stephen, Eldon, Pika and Arctomys formations. The Naiset Formation comprises thinly bedded, brown and green shale 65 to 170 metres thick. The Cathedral Formation, which hosts the magnesite deposits, is about 340 metres thick and consists of buff, white and grey limestones and dolomites. Laminations, ripple marks, intraformational breccias, algal mats, oolites, pisolites, fenestrae and burrows are well preserved. Pyrite is common either as disseminations or pods and veins. The Stephen Formation consists of tan to grey, thinly bedded to laminated shale about 16 metres thick and contains abundant fossil fragments. The Eldon and Pika formations cannot be subdivided in this area. The lowermost beds of the Eldon Formation, overlying the Stephen Formation, are black limestones approximately 50 metres thick. The Arctomys Formation is characterized by green and purple shales and siltstones interbedded with beige, fine-grained dolomites.

The rocks outcropping immediately east of the escarpment strike 170 degrees and dip 20 degrees west and are affected by diagenetic dolomitization.

Sparry carbonate rocks occur within the Cathedral, Eldon and Pika formations. They consist mainly of coarse dolomite and magnesite crystals in varying proportions. Magnesite-rich sparry carbonates are restricted to the Cathedral Formation, where they form lenses, pods and irregular masses. Barren Cathedral Formation consists mainly of fine-grained, massive or laminated dolomites interbedded with limestones. Parts of the Cathedral Formation are entirely altered to sparry magnesite, forming deposits of economic interest.

In the Baymag mine area, sparry carbonates are separated from limestone by light grey massive dolomite, which may contain needle-shaped quartz crystals. The contacts between sparry carbonate masses and the fine-grained dolomite are sharp and may be concordant or discordant. Magnesitic sparry carbonate is usually white or light grey in colour and buff when weathered. It consists of regularly spaced, alternating white and grey magnesite layers, randomly oriented centimetre-scale white magnesite crystals or a mixture of light grey and white magnesite crystals. Common impurities of the magnesite ore are isolated rhombohedral dolomite crystals, calcite veins, pyrite veins, subvertical fractures filled by a mixture of beige ankerite, calcite and chlorite, coarse radiating or single quartz crystals and coarse pyrite pyritohedrons and octahedrons disseminated within sparry magnesite. Chalcocite, fersmite, phlogopite, talc and coarse, white acicular palygorskite were also observed in the mine. Boulangerite, huntite and brucite were reported from laboratory analysis (Fieldwork, 1990).

Where fine-grained dolomite is not entirely converted to magnesite, replacement features such as coarse, white carbonate crystals growing perpendicular to fracture planes or partings and lenses of fine-grained dolomite enclosed by sparry carbonates are common. Sparry dolomite rock consists mainly of dolomite rhombs. It forms lenses, veins or irregular masses in fine-grained dolomite and is believed to occur at the same stratigraphic horizons and to contain the same impurities as coarse sparry dolomite. Dolomite veins cutting magnesite ore occur at the mine, however magnesite veins were never observed to cut sparry dolomite.

It is suggested that the magnesite postdates early diagenesis of the Cathedral Formation and probably of the Stephen, Eldon and Pika formations as well (Fieldwork, 1990).

The Baymag deposit is defined as an area about 790 by 500 metres on a northwest axis with a maximum thickness of at least 120 metres within the main magnesite zone. The deposit is open in three directions with potential for substantial new reserves.

In 1980, proven and probable reserves were 9.5 million tonnes grading over 95 per cent magnesia in the calcined product and 13.6 million tonnes of 93 to 95 per cent magnesia in calcined product. Possible reserves were estimated at 17.6 million tonnes averaging 92.44 per cent magnesia in the calcined product (Fieldwork, 1990).

Since 1980, caustic magnesia and electrofused magnesia has been produced from two plants in Exshaw, Alberta and magnesium metal is produced at the Mag-Can plant in High River, Alberta (Z.D. Hora, personal communication, 1991).

Baymag Mines Company Limited continued to mine magnesite at an annual rate of approximately 175,000 tonnes. Construction of a new shaft kiln is in preparation at Exshaw, Alberta and is expected to be in production in 1997, increasing Baymag's output by approximately 70

CAPSULE GEOLOGY

per cent. The company plans to process and upgrade the lower grade magnesite (approximately 85 per cent) presently wasted (Information Circular 1996-1, page 9).

Mining continued in 1996 at a rate of 180,000 tonnes per year (Information Circular 1997-1, page 12).

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1999-51; 2002-52; 2001-51
EMPR FIELDWORK *1990, pp. 269-278
EMPR GEM 1970-503; 1972-603; 1973-551
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p. 12; 1998-1, p. 13
EMPR MAP 65 (1989)
EMPR MINING 1981-1985, p. 66,67; 1986-1987, p. 92; 1988, pp. 91,92
EMPR OF *1987, p. 13; 1991-23; 1992-1; 1992-9, 1992-14; 1994-1
EMPR PF (*Geology Map - Placer Development Ltd.; Information notes
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MINING IN BC Jan/Feb 1991, Vol. 2, No. 1, p. 19-20
N MINER Oct.19, 1998
W MINER, Nov. 1977 p. 24
WWW <http://www.baymag.com>

DATE CODED: 1985/07/24
DATE REVISED: 1991/05/30

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082JNW002**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHAG**, RED BED, BM

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 20 N
LONGITUDE: 115 30 44 W

NORTHING: 5610725
EASTING: 605203

ELEVATION: 1675 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of nine showings on east and west slopes of Shag Creek.

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Cambrian	Undefined Group	Cathedral	

LITHOLOGY: Dolomite
Limestone
Brecciated Dolomite

HOSTROCK COMMENTS: May be in overlying Middle Cambrian Pika or Eldon formations.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989

SAMPLE TYPE: Drill Core

COMMODITY	GRADE
Zinc	10.3000 Per cent

COMMENTS: Over 3.3 metres.

REFERENCE: Property File (Ecstall Mining Corp. Prospectus, May 4, 1989).

CAPSULE GEOLOGY

A number of small lead-zinc showings occur in a thick, massive to well-bedded limestone-dolostone unit of the Middle Cambrian Cathedral(?) Formation.

Most of the showings on the Shag property consist of galena and pale yellow to orange sphalerite in granular or brecciated dolostone overlain by dark, laminated limestone. The sulphide concentrations appear to be restricted to two horizons although a number of megascopically similar horizons occur in the succession. The dolostone at the "BM" (the largest showing) consists of an erosional, basal surface overlain by massive or irregularly laminated dark dolomite capped by a coarse fragmental breccia or fenestral dolomite. This succession of cyclical beds is capped by dark, well-layered limestone.

Coarsely crystalline, yellow sphalerite and galena with traces of pyrite occur as blebs and/or disseminations within sparry dolomite or dark argillaceous limestone that is interstitial to breccia fragments, or as disseminated grains in more massive dolomite. Sphalerite and galena also occur within carbonate veinlets and shears.

Work in 1981 resulted in the discovery of a 600 metre length of weakly mineralized dolostone (Red Bed showing). A drill hole intersected 10.3 per cent zinc over 3.3 metres (Ecstall Mining Corporation, Prospectus).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 374
REPORT: RGEN0100

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EMPR FIELDWORK *1980, p. 106
EMPR OF 1992-14
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103H 013)
GSC OF 481; 634
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/30

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082JNW003**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOFFRE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 00 N
LONGITUDE: 115 15 34 W
ELEVATION: 1830 Metres

NORTHING: 5603085
EASTING: 623265

LOCATION ACCURACY: Within 500M

COMMENTS: Located above a westerly flowing tributary of Joffre Creek.

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum Selenite
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Podiform Stratabound
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
TYPE: F04 Bedded celestite
DIMENSION: 100 x 40 Metres STRIKE/DIP: 075/15N
COMMENTS: Gypsum band.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Gypsum

HOSTROCK COMMENTS: Basal Devonian Unit is Upper(?) Middle and Earlier(?) Devonian age (Open File 1988-14).

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Gypsum is exposed along the north bank of a westerly flowing tributary of Joffre Creek. It varies from cream to pale grey to grey and is laminated to thin bedded. Laminations and bedding are highly contorted. Approximately 20 metres above the base of the outcrop the rock is distinctly conglomeratic in appearance. This band is 5 metres thick and consists of ovoid gypsum fragments in a gypsum matrix. Selenite is locally abundant but native sulphur is absent.

The gypsum at the Joffre occurrence has a minimum thickness of 40 metres with a strike length of less than 100 metres. Bedding strikes east-northeast with shallow dips to the north.

Stratigraphic relationships are uncertain. Tentatively this unit is assigned to the Upper(?) Middle and Earlier(?) Devonian "Basal Devonian Unit" (Open File 1988-14). Most probably it is equivalent to the Devonian Burnais Formation which is host to gypsum deposits in the Stanford Range.

BIBLIOGRAPHY

EMPR FIELDWORK *1988, p. 504
GSC OF 634
GSC P 86-1B, pp. 457-465

DATE CODED: 1988/11/22
DATE REVISED: 1991/04/15

CODED BY: SBB
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JNW004**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURNAIS**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 31 30 N
LONGITUDE: 115 54 49 W
ELEVATION: 1670 Metres

NORTHING: 5597569
EASTING: 577006

LOCATION ACCURACY: Within 500M

COMMENTS: North of the Windermere quarries (082JSW028) on the north side of Windermere Creek (Open File 1991-15).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Anhydrite Calcite Quartz
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive Stratabound Podiform
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
SHAPE: Tabular
MODIFIER: Folded

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Devonian
Devonian

GROUP

Undefined Group
Undefined Group

FORMATION

Burnais
Cedared

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Gypsum
Anhydrite
Dolomite
Limestone
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1991

COMMODITY

GRADE

Gypsum

85.0000

Per cent

COMMENTS: Average of sampling. Grades vary from 74 to 94 per cent gypsum.

REFERENCE: Open File 1991-15.

CAPSULE GEOLOGY

The Burnais prospect is located north of the Windermere quarries (082JSW028) on the north side of Windermere Creek.

Gypsum was discovered on Windermere Creek in 1947. Production, beginning in 1950, has been continuous to the present day totalling in excess of 6.8 million tonnes. Gypsum was mined from the four Windermere quarries until 1981 and, since 1982, from the Elkhorn quarry (082JSW021), 800 metres to the south of the Windermere deposits.

Gypsum, in Devonian age rocks, occurs along a northwesterly trend which has a strike length of 5 kilometres north and south of Windermere Creek. The area is underlain by a sequence of evaporites and associated carbonate rocks of the Burnais Formation with an overlying limestone and shale sequence of the Harrogate Formation. More recent work proposed the term "Cedared Formation" for a sequence of dolomites, sandstones and limestones that is, in part, stratigraphically equivalent to the Burnais Formation. Much of the carbonate strata previously included in the Burnais Formation are now tentatively assigned to either the Cedared or Harrogate formations. The Harrogate Formation is the youngest Devonian unit in the Stanford Range.

CAPSULE GEOLOGY

Thin-bedded or laminated gypsum of the Burnais Formation is assumed to be in fault contact with the underlying Ordovician to Silurian Beaverfoot-Brisco Formation or in conformable contact with the Cedared Formation and overlain conformably by the black to dark grey limestone of the Harrogate Formation. The Beaverfoot-Brisco Formation is comprised of thin to medium-bedded light grey dolomite and limestone with characteristic ovular chert nodules and lenses in a carbonate matrix. The gypsum is of good quality ranging between 83 and 93 per cent gypsum. It varies in color from pale grey to grey, brownish grey, dark grey and black. Cream-colored laminae are also present.

The evaporite sequence has been folded into a series of northwest-plunging, 18 to 40 degrees, folds. Small scale faulting with minimal displacement is present. Two gypsum horizons are interpreted, separated by dolomite and limestone. The lower gypsum bed is 50 metres wide and 50 to 100 metres thick.

The upper bed, structurally complex, is exposed semi-continuously over a strike length of 4.2 kilometres from Windermere Creek to north of Burnais Creek. To the north, it thins and disappears under thick overburden and anhydrite and limestone of the Cedared Formation.

Gypsum at the Burnais showing is similar to that observed elsewhere in the area, grading 74 to 94 per cent and averaging better than 85 per cent gypsum. Drilling on the ridge north of Windermere Creek intersected gypsum to depths varying from 17 to 43 metres and underlain by anhydrite.

BIBLIOGRAPHY

EMPR ASS RPT *8158
EMPR FIELDWORK 1988, pp. 497-506
EMPR OF *1991-25; 1992-14
GSC OF 634

DATE CODED: 1989/02/27
DATE REVISED: 1991/12/11

CODED BY: SBB
REVISED BY: DEJ

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JNW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **STODDART CREEK**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 45 N
LONGITUDE: 115 57 52 W
ELEVATION: 1680 Metres

NORTHING: 5601687
EASTING: 573345

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Crown grant Lot 15995 but covering ground from Lot 15991 to Lot 15998.

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
TYPE: F04 Bedded celestite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	

LITHOLOGY: Gypsum

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Stoddart Creek occurrence, gypsum is confined to the Devonian Burnais Formation within a small downdropped fault block that lies between the Redwall fault on the east and a smaller, less conspicuous fault on the west. The smaller fault brings the gypsum beds into juxtaposition with strata of the Upper Cambrian-Middle Ordovician McKay Group and the Middle Ordovician-Silurian Beaverfoot Formation.

Outcrops of gypsum are found chiefly in the bottoms of sink holes on the divide area between Stoddart and Shuswap creeks.

BIBLIOGRAPHY

EMPR BULL 35, p. 61
EMPR OF 1992-14
GSC MAP 24-1958
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/30

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW006**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEECH 2**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 49 N
LONGITUDE: 115 39 35 W
ELEVATION: 1710 Metres

NORTHING: 5624394
EASTING: 594522

LOCATION ACCURACY: Within 500M

COMMENTS: Showings on bluffs approximately 3.5 kilometres south of the Baymag mine (082JNW001) on the east side of Mitchell River.

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Dolomite Pyrite Calcite Mica Talc
COMMENTS: Rare talc.
ALTERATION: Dolomite
ALTERATION TYPE: Carbonate Pyrite
MINERALIZATION AGE: Middle Cambrian

DEPOSIT

CHARACTER: Stratabound Massive Podiform
CLASSIFICATION: Replacement Industrial Min.
TYPE: E09 Sparry magnesite
SHAPE: Irregular
COMMENTS: Outcrops and small bluffs of magnesite and magnesian dolomite are exposed along the west flank of Mount Brussilof.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Cambrian	Undefined Group	Cathedral	

DATING METHOD: Fossil
MATERIAL DATED: Fossil-trilobites

LITHOLOGY: Dolomite
Dolomitic Limestone
Dolomitic Magnesite

HOSTROCK COMMENTS: The region is affected by diagenetic dolomitization.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1965
SAMPLE TYPE: Grab
COMMODITY: Magnesite GRADE
47.0000 Per cent
COMMENTS: Grab samples of magnesite analysed 87 to 99 per cent MgO (calcined).
REFERENCE: Geological Survey of Canada Paper 66-1.

CAPSULE GEOLOGY

The Leech 2 showings are on bluffs on the west flank of Mount Brussilof, overlooking the Mitchell River. Host rocks to mineralization are dolomitized carbonates of the Middle Cambrian Cathedral Formation. These are massive white to dark grey reefal carbonate. Where mineralized with magnesite and magnesian dolomite, replacement textures are common as well as some brecciation. Magnesite mineralization is massive, coarse grained (greater than 10 millimetres) to sparry, buff, and forms large pods or lenses. Impurities include pyrite, calcite, white mica and rarely, talc. The mineralized zones extend along bluffs from the junction of Assiniboine Creek and Mitchell River to Struna Creek. Mineralized bluffs are typically rounded and buff in colour. The magnesite weathers out as discrete grains giving outcrops a sand-like mound appearance. Samples of magnesite from mapping by G.B. Leech of the Geological Survey of Canada yielded values of 40 to 99 per cent MgO (calcined).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 380
REPORT: RGEN0100

CAPSULE GEOLOGY

Samples from exploration yielded MgO values of 87 to 99 per cent (calcined).

The bluffs were first examined in 1965 by the Geological Survey of Canada then examined by explorationists in 1969. Further mapping by the British Columbia Ministry of Energy, Mines and Petroleum Resources included sampling and the results are still pending (1990).

BIBLIOGRAPHY

EMPR ASS RPT 2048
EMPR OF 1987-13; 1992-14
GSC MAP 634
GSC P *66-1, pp. 65,66

DATE CODED: 1990/12/05
DATE REVISED: 1991/04/15

CODED BY: KDH
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JNW007**

NATIONAL MINERAL INVENTORY:

NAME(S): **UPPER ELK RIVER VALLEY**, ELK VALLEY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J11E 082J06E
BC MAP:
LATITUDE: 50 30 30 N
LONGITUDE: 115 00 05 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5597060
EASTING: 641713

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: Structural features include the northwest trending, west dipping Bourgeau thrust fault and the northwest trending, asymmetrical Alexander Creek syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Siltstone
Sandstone
Mudstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Continental Ranges
RELATIONSHIP: Post-mineralization
GRADE: MVol Bituminous
HVVol Bituminous
COMMENTS: Coal seams are medium to high volatile bituminous.

CAPSULE GEOLOGY

More than 50 seams, ranging in thickness from 0.12 to 5.5 metres, are present in the Jurassic-Cretaceous Mist Mountain Formation (484 metres thick) (Kootenay Group) in the area. The coal which ranges from medium to high volatile in rank, is interbedded with siltstone, sandstone, mudstone and shale. Coal seams are also present in the overlying Elk Formation, however, they are thin, relatively uncommon and may be very shaly.

The Upper Elk River Valley occurrence area is dominated structurally by the Bourgeau thrust fault, (northwest trending, west dipping) towards the west, and the northwest trending Alexander Creek syncline to the east. The syncline is asymmetrical, plunges both north and south, and consists of two en echelon synclines separated by a short connecting anticline.

BIBLIOGRAPHY

EMPR COAL ASS RPT 829
EMPR FIELDWORK *1979, pp. 91-96; *1980, pp. 70-72
GSC P 89-4
*Graham, P.S., Gunther, P.R. and Gibson, D.W. (1976): ISPG Project 760056 p. 15

DATE CODED: 1986/03/01
DATE REVISED: 1987/01/07

CODED BY: EVFK
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW008**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOBERMORY RIDGE** TOBERMORY

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 32 12 N
LONGITUDE: 115 01 34 W
ELEVATION: 1825 Metres

NORTHING: 5600163
EASTING: 639877

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: On the northwest trending Alexander Creek syncline which is terminated on either end by faulting. The Borgeau fault cuts off the west limb.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Shale
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: HVol Bituminous

CAPSULE GEOLOGY

Up to 20 coal seams occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) in the Tobermory Ridge occurrence area. The coal is high volatile bituminous in rank and the seams are interbedded with sandstone, siltstone and shale. Five seams are of mineable thickness.

The coal-bearing strata occur on either side of the Alexander Creek syncline which trends northwest in the area. The syncline is faulted to the south in the vicinity of the Cadorna Creek depression and to the north by an east-west bend in the predominantly north-northwest trending, west dipping Borgeau thrust fault.

BIBLIOGRAPHY

EMPR COAL ASS RPT 829
EMPR FIELDWORK 1979, pp. 91-96
EMPR GEOLOGY *1977-1981, pp. 17-24
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1987/05/06

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW009**

NATIONAL MINERAL INVENTORY:

NAME(S): **SWANSEA**, WESCO

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 30 28 N
LONGITUDE: 115 56 49 W
ELEVATION: 1675 Metres

NORTHING: 5595620
EASTING: 574671

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Chalcocite Bornite
ASSOCIATED: Calcite
ALTERATION: Hematite Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E04 Sediment-hosted Cu
DIMENSION:
COMMENTS: Brecciated.

STRIKE/DIP: 020/75W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Undefined Group	Jubilee	

LITHOLOGY: Dolomite
Dolomite Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Swansea occurrence, tan and white weathering blocky dolomites of the Middle-Upper Cambrian Jubilee Formation are cut by a fault zone trending 020 degrees and dipping about 75 degrees west. The dolomites along this zone are faulted and brecciated with the breccia healed by carbonate containing disseminations and patches of malachite and azurite with associated bornite, chalcocite and chalcopyrite. A grab sample of malachite-azurite-rich material returned an assay high of 17.5 per cent copper. The fault-breccia zone is variable in width and appears to be located along a single fault zone which hosts both the Swansea and Rose 1 (082JSW007) showings.

BIBLIOGRAPHY

EMPR AR 1898-1039
EMPR ASS RPT 2437, 2667, 3504, 7084, 7782, 9958
EMPR BULL 35, p. 65
EMPR EXPL 1978-E73
EMPR GEM 1970-469; 1971-419; 1972-68
EMPR OF 1992-14
GSC MAP 24-1958
GSC OF 634

DATE CODED: 1986/06/25
DATE REVISED: 1986/06/25

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW010**

NATIONAL MINERAL INVENTORY:

NAME(S): **MILLER PASS**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 42 34 N
LONGITUDE: 115 36 25 W
ELEVATION: 1520 Metres

NORTHING: 5618440
EASTING: 598357

LOCATION ACCURACY: Within 500M

COMMENTS: Outcrop in a logging landing on a small hill at the junction of Cross River and Miller Pass Creek (informal name).

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite Dolomite
ASSOCIATED: Dolomite
ALTERATION: Dolomite Calcite Pyrite
ALTERATION TYPE: Carbonate Pyrite
MINERALIZATION AGE: Middle Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E09 Sparry magnesite
SHAPE: Irregular
COMMENTS: Magnesite and magnesian dolomite outcrops occur in a 2 hectare area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Cambrian	Undefined Group	Cathedral	
DATING METHOD:	Fossil		
MATERIAL DATED:	Trilobites		

LITHOLOGY: Dolomite
Magnesite
Dolomitic Magnesite

HOSTROCK COMMENTS: The region is affected by diagenetic dolomitization.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Miller Pass showings are new in the Cross River area. They extend across the end of a ridge between the Cross River and a creek flowing north out of Miller Pass (informally Miller Pass Creek). Access is by logging road, turning off west from "16 mile" on the Cross River forestry road.

The showings are hosted by carbonates of the Middle Cambrian Cathedral Formation. Locally the host carbonates are dolomitized (diagenetic) and brecciated. Magnesite and magnesian dolomite form massive zones in the dolomite. Replacement textures, including fenestrae, overprinting and breccia in-filling, are common. Significantly, the showings are within 1000 metres of the Cathedral escarpment similar to the location of the Baymag mine (082JNW001). Magnesite and magnesian dolomite is often coarse (greater than 10 millimetres) and sparry, white to buff in colour, and massive or forming bladed crystals.

Preliminary analysis of apparent high grade material yields a CaO/MgO ratio of 0.33 and a calcined MgO content of 74 per cent; work was done by the Geological Survey Branch, Ministry of Energy, Mines and Petroleum Resources.

The showings extend down the ridge both to Miller Pass Creek and Cross River. The Vano (082JNW013) showings are north across the Cross River and are part of the same mineralizing system.

BIBLIOGRAPHY

EMPR OF *1987-13; 1992-14
GSC OF 634

DATE CODED: 1990/12/05
DATE REVISED: 1991/04/16

CODED BY: KDH
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JNW010**

MINFILE NUMBER: **082JNW011**

NATIONAL MINERAL INVENTORY:

NAME(S): **YELO**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 36 N
LONGITUDE: 115 36 52 W
ELEVATION: 2164 Metres

NORTHING: 5624052
EASTING: 597723

LOCATION ACCURACY: Within 500M

COMMENTS: Location of best showings, just west of the lake at the head of Struna Creek.

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite Dolomite
ASSOCIATED: Dolomite
ALTERATION: Dolomite Calcite Pyrite
ALTERATION TYPE: Carbonate Pyrite
MINERALIZATION AGE: Middle Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Industrial Min.
TYPE: E09 Sparry magnesite
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Cambrian	Undefined Group	Cathedral	

DATING METHOD: Fossil
MATERIAL DATED: Fossil-trilobites

LITHOLOGY: Magnesitic Dolomite
Dolomite
Limestone

HOSTROCK COMMENTS: The region is affected by diagenetic dolomitization.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1976
SAMPLE TYPE: Grab
COMMODITY: Magnesite GRADE
41.8000 Per cent
COMMENTS: Highest assay was 87.5 per cent MgO (calcined) with 50.2 per cent loss on ignition. Typical assays are 42 to 68 per cent (calcined) MgO.
REFERENCE: Assessment Report 6565.

CAPSULE GEOLOGY

The Yelo showings are west of a small lake at the head of Struna Creek. Access is by air or 5 kilometres by foot up a steep canyon from the road to the Baymag mine (082JNW001).

The best outcrops of magnesite are about 350 metres southwest of the small lake. Mineralization is hosted in dolomitized carbonates of a shallow marine/reefal environment. The host formation is the Middle Cambrian Cathedral Formation. Mineralization consists of magnesium-enriched dolomite approaching magnesite composition. No samples of "high-grade" magnesite were identified. In general, the rocks on the claim group are dolomite, limestone and some magnesian dolomite.

General assay values of MgO content are 42 to 68 per cent in calcined samples. A single sample assayed 87.5 MgO (calcined) (Assessment Report 6565).

Prospecting and sampling were performed in 1976 and no work has been done since. The Yelo claims were acquired by Baymag Mines Ltd. in 1989.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 386
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *6565
EMPR OF 1987-13; 1992-14
GSC OF 634

DATE CODED: 1990/12/04
DATE REVISED: / /

CODED BY: KDH
REVISED BY:

FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **082JNW012**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEECH 3**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 44 17 N
LONGITUDE: 115 33 21 W
ELEVATION: 1540 Metres

NORTHING: 5621691
EASTING: 601904

LOCATION ACCURACY: Within 500M

COMMENTS: Southwest face of cliff above Cross River forestry road (approximately 28.3 kilometres), south side, at the junction of Cross River and Alcantara Creek.

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Dolomite
ALTERATION: Dolomite Calcite Pyrite
ALTERATION TYPE: Carbonate Pyrite
MINERALIZATION AGE: Middle Cambrian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Replacement Industrial Min.
TYPE: E09 Sparry magnesite
SHAPE: Irregular
COMMENTS: Patchy mineralization on cliff wall 40 metres high and 100 metres across.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Cambrian	Undefined Group	Eldon	

DATING METHOD: Fossil
MATERIAL DATED: Fossil-trilobites

LITHOLOGY: Dolomite
Limestone
Dolomite

HOSTROCK COMMENTS: The region is affected by diagenetic dolomitization.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
COMMENTS: The region is affected by diagenetic dolomitization.

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab
COMMODITY GRADE
Magnesite 23.7500 Per cent
COMMENTS: Average of four whole rock analyses - equivalent to 44 per cent MgO (calcined) - equivalent to stoichiometric dolomite.
REFERENCE: Unpublished analyses-Ministry of Energy, Mines & Petroleum Resources.

CAPSULE GEOLOGY

The Leech 3 showings are on a cliff on the south side of the Cross River where it is joined by Alcantara Creek. The Cross River forestry road passes within 50 metres of the cliff at about "mile 17.6".

Initial report of magnesite at that location is recorded on Geological Survey of Canada Open File Map 634. Mapping and sampling by the Ministry of Energy, Mines and Petroleum Resources and prospectors have failed to located magnesite mineralization. However the style of alteration (dolomitization) of the local carbonates is very similar to that near the Baymag mine (082JNW001). Host rocks are carbonates (limestone and dolomite) of the Middle Cambrian Eldon Formation. This is the next major carbonate package above the Middle Cambrian Cathedral Formation that hosts known magnesite showings and the Baymag magnesite mine. Further chemical analyses of rock samples

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CAPSULE GEOLOGY

are being done by the Ministry of Energy, Mines, and Petroleum Resources in 1990.

BIBLIOGRAPHY

EMPR OF 1987-13; 1992-14
GSC OF 634

DATE CODED: 1990/12/06
DATE REVISED: 1991/04/16

CODED BY: KDH
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JNW013**

NATIONAL MINERAL INVENTORY:

NAME(S): **VANO**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 42 57 N
LONGITUDE: 115 36 35 W
ELEVATION: 1463 Metres

NORTHING: 5619147
EASTING: 598148

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of area drilled (Assessment Report 19033).

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite Dolomite
ASSOCIATED: Dolomite
ALTERATION: Dolomite Calcite Pyrite
ALTERATION TYPE: Carbonate Pyrite
MINERALIZATION AGE: Middle Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Industrial Min.
TYPE: E09 Sparry magnesite
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Cambrian	Undefined Group	Cathedral	
DATING METHOD: Fossil			
MATERIAL DATED: Fossil-trilobites			

LITHOLOGY: Dolomite
Magnesitic Dolomite

HOSTROCK COMMENTS: The region is affected by diagenetic dolomitization.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
COMMENTS: The region is affected by diagenetic dolomitization.

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Drill Core
COMMODITY _____ GRADE _____
Magnesite 44.5000 Per cent
COMMENTS: Values range from 40 to 90 per cent MgO in calcined samples (generally 44.5 per cent).
REFERENCE: Assessment Report 19033.

CAPSULE GEOLOGY

The Vano showings were first examined in 1989 by Baymag Mines. They are between 75 and 200 metres north of the Cross River forestry road at "mile 14.5" (just past a major creek).

The rocks hosting mineralization are dolomitized reef platformal carbonates of the Middle Cambrian Cathedral Formation. Mineralization consists of magnesite and magnesitic dolomite. It is coarse (greater than 10 millimetres) to sparry, buff to white, and forms massive pods or lenses. Mineralization is scattered within the dolomite package.

Diamond drilling results indicated MgO contents ranging from 40 to 93 per cent in calcined samples in 10 shallow holes (less than 30 metres) over a 0.75 hectare area (3 units).

Showings in the area extend across the Cross River to the south and to the Miller Pass area. They are all part of the same mineralized system in the Mitchell River-Cross River area. Magnesite mineralization at the Vano showings is similar to that of the Baymag mine (082JNW001) to the north.

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BIBLIOGRAPHY

EMPR ASS RPT *19033
EMPR OF 1987-13; 1992-14
GSC OF 634

DATE CODED: 1990/12/04
DATE REVISED: / /

CODED BY: KDH
REVISED BY:

FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **082JNW014**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT ASSINIBOINE**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 49 26 N
LONGITUDE: 115 38 51 W
ELEVATION: 2133 Metres

NORTHING: 5631113
EASTING: 595261

LOCATION ACCURACY: Within 500M

COMMENTS: A magnesite-bearing zone in a cirque where Eon Creek originates, 2.5 kilometres north of the confluence of Aurora and Assiniboine creeks, on the western slopes of Eon Mountain, 40 kilometres north of Invermere (Assessment Report 19092).

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Dolomite
COMMENTS: Magnesite-bearing dolomite.
ASSOCIATED: Pyrite
ALTERATION: Dolomite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Middle Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Cambrian

GROUP

Undefined Group

FORMATION

Cathedral

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Argillaceous Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1989

COMMODITY

Magnesite

GRADE

43.0700 Per cent

COMMENTS: A maximum assay value.
REFERENCE: Assessment Report 19092.

CAPSULE GEOLOGY

The Mount Assiniboine occurrence area is underlain by carbonate, shale and phyllitic rocks of Middle Cambrian age which have been metamorphosed and uplifted into an anticlinal form. This anticlinal feature has its central axis located in the valley of Assiniboine Creek. West of this axis, the rocks dip from 5 to 35 degrees southwest and strike northwest from 310 to 355 degrees. East of the axis, the rocks are essentially flat-lying. The entire property is underlain at shallow depth by the Main Ranges thrust fault along which the rocks have moved eastward several kilometres.

Two distinct types of dolomite of the Middle Cambrian Cathedral Formation occur on the property. A "granola" textured dolomite is host to the magnesite mineralization and is generally underlain and sometimes enclosed by a tight, crystalline, sometimes argillaceous dolomite. The host rock which contains the magnesite mineralization is a very coarse-grained, recrystallized dolomite which occurs as massive, tan coloured, resistant outcrops. Magnesite mineralization in outcrop exposures is recognized by its extreme hardness, white colour, massive appearance and the presence of large rhombic crystals of dolomite spar with minor pyrite.

Two areas of significant buildup of coarse-grained magnesite-bearing dolomite were identified. The best area occurs in a cirque

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CAPSULE GEOLOGY

occupied by Eon Creek where 274 metres of Cathedral Formation hosts a 104 metre thick zone of rock which assays a high of 28.88 per cent MgO. The second area may represent the updip continuation of the Baymag orebody (082JNW001) to the south. The Cathedral Formation reaches a maximum thickness of 186 metres and contains 101 metres of favourable magnesite-bearing rock which assays a high of 43.07 per cent MgO (Assessment Report 19092).

BIBLIOGRAPHY

EMPR ASS RPT 18203, *19092
EMPR OF 1992-14
GSC OF 634

DATE CODED: 1991/04/17
DATE REVISED: 1991/04/17

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW015**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIGHMONT**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 01 N
LONGITUDE: 115 55 32 W
ELEVATION: 1341 Metres

NORTHING: 5600367
EASTING: 576119

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized showings on the western slopes of Pinto Mountain, 250 metres east of Shuswap Creek, 10 kilometres north-northeast of Invermere (Assessment Report 19368).

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena
ASSOCIATED: Dolomite Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Disseminated
CLASSIFICATION: Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn
DIMENSION: 30 x 1 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Lens-like breccia structure measures 30 by 1.5 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Ordovician Unnamed/Unknown Group Unnamed/Unknown Formation

LITHOLOGY: Dolomite Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Grab
COMMODITY GRADE
Lead 0.2700 Per cent
Zinc 7.4000 Per cent
REFERENCE: Assessment Report 19368.

CAPSULE GEOLOGY

The Highmont property is situated in the Stanford Range which is comprised of complexly faulted and folded clastic and carbonate rocks that range in age from Proterozoic to Middle Devonian. The north portion of the property is underlain by Ordovician dolomite. The southern area is underlain by Ordovician dolomite and Devonian evaporites. On the west, the Burnais fault forms the contact between Ordovician and Devonian sediments. On the east, Devonian evaporites unconformably overlies Ordovician dolomites.

Mineralization consists of galena, sphalerite and barite, hosted in dolomite breccia. The breccia structure is developed in dolomite along the Ordovician unconformity. Typical mineralization consists of dolomite clasts in a matrix of dolospar, barite, galena and sphalerite. The best showing is a lense-like structure 1.5 by 30 metres with a best grade of 7.4 per cent zinc and 0.27 per cent lead (Assessment Report 19368).

BIBLIOGRAPHY

EMPR ASS RPT 18952, *19368
EMPR OF 1992-14
GSC OF 634

DATE CODED: 1991/04/17
DATE REVISED: 1991/04/17

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW016**

NATIONAL MINERAL INVENTORY:

NAME(S): **PINTO**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 31 32 N
LONGITUDE: 115 53 51 W
ELEVATION: 1678 Metres

NORTHING: 5597647
EASTING: 578147

LOCATION ACCURACY: Within 500M

COMMENTS: This is the location of showing #2 where a diamond drill hole was collared.

COMMODITIES: Barite Fluorite

MINERALS

SIGNIFICANT: Barite
COMMENTS: Barite and fluorite are the most abundant minerals present, forming the breccia cement.
ASSOCIATED: Galena Fluorite
COMMENTS: Scattered grains of galena are present but form less than 1 per cent of the rock.
ALTERATION: Hydrozincite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Stratabound
CLASSIFICATION: Epigenetic Industrial Min.
SHAPE: Irregular
MODIFIER: Other
COMMENTS: The showings appear to be stratabound within the Beaverfoot Formation, which trends north-northwest in the area of the showings.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Ordovician-Silurian	Unnamed/Unknown Group	Beaverfoot	

LITHOLOGY: Dolomite

HOSTROCK COMMENTS: Host rocks are thick-bedded, grey dolomites of the Beaverfoot Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

CAPSULE GEOLOGY

The Pinto barite-fluorite showings extend from the head of Burnai Creek northwest to a branch of Shuswap creek, about 10 kilometres northeast of Windermere. The showings were staked in 1989 by Mr. A. Louie.

Host rocks are thick-bedded, grey dolomites of the Ordovician-Silurian Beaverfoot Formation. Mineralization occurs in breccias within grey to greenish grey dolomite. A combination of white dolomite, calcite, barite and purple fluorite infill the breccia. The minerals generally occur as subhedral to euhedral crystals 1 to 3 millimetres in diameter. Filled void space may comprise up to 50 per cent of the rock. Galena is present as small, disseminated grains (less than one per cent) and hydrozincite is also present in trace amounts.

Seven showings follow a north-northwest trend, parallel to bedding in the Beaverfoot Formation, along the base of Pinto mountain. The stratigraphy is normal to structurally inverted by backthrusting and folding associated with the Laramide orogeny. Mineralization appears to be stratigraphically limited to the middle and lower Beaverfoot Formation.

A sample assayed 16.79 per cent barium, 0.2 per cent strontium, 0.0007 per cent copper, 0.0017 per cent lead and 0.0035 per cent zinc (Open File, in prep 1993). Four samples from drill core analysed for fluorine yielded the following values: 3.4 per cent over 3 metres, 0.74 per cent over 3 metres, 0.82 per cent over 3 metres, 0.052 per cent over 3 metres from top to bottom of the hole. Work on the showings includes several hand trenches a 13.9 metre x-ray diamond drill hole on showing #2.

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BIBLIOGRAPHY

EMPR BULL 35
EMPR OF 1992-14; (in prep.): Barite Occurrences in B.C.; 1992-16

DATE CODED: 1993/04/14
DATE REVISED: 1993/04/14

CODED BY: KDH
REVISED BY: KDH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JNW017**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALBERT RIVER**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 00 N
LONGITUDE: 115 36 49 W
ELEVATION: 2133 Metres

NORTHING: 5611822
EASTING: 598011

LOCATION ACCURACY: Within 500M

COMMENTS: Area of sampling east of Tangle Peak near Albert River, about 35 kilometres northeast of the community of Invermere (Assessment Report 22541).

COMMODITIES: Tungsten Gold Copper Lead Zinc

MINERALS

SIGNIFICANT:	Chalcopyrite	Galena	Sphalerite	Scheelite
ASSOCIATED:	Quartz	Carbonate	Epidote	Pyrite
ALTERATION:	Chlorite	Muscovite	Sericite	Silica
ALTERATION TYPE:	Chloritic		Sericitic	Silicific'n
MINERALIZATION AGE:				

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Cambrian	Chancellor	Undefined Formation	

LITHOLOGY: Argillaceous Limestone
Shale
Phyllite
Limestone
Calcareous Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Albert River claim area is underlain by Middle Cambrian Chancellor Group sedimentary rocks. A basal unit consists of a sequence of light and dark, thin and medium bedded argillaceous limestone with local beds of calcareous argillite containing limestone nodules. The basal unit is conformably overlain by a locally non or weakly calcareous grey shale or locally sericitic, pelitic phyllite. The grey shale unit appears conformably overlain by a commonly cream-coloured, thick bedded to massive limestone.

The sedimentary units are isoclinally folded about a gently plunging to subhorizontal north-northwest trending fold axis with north-northwest trending and steeply (80 degrees) west dipping axial planes.

Quartz-carbonate veins that range up to 1 to 2 metres thick are, for the most part, confined to the axial plane cleavages of folds. Locally, veins contain minor amounts of epidote and pyrite with chlorite alteration envelopes or pyrite and chalcopyrite with muscovite sericite alteration envelopes. In some minor cases the quartz-carbonate veins contain minor amounts of galena and sphalerite.

A 3 kilometre zone of silicification is associated with a central area of intensely anomalous tungsten and moderately anomalous copper +/- gold and lead heavy mineral geochemistry surrounded by strongly anomalous copper and lead, moderately anomalous gold-arsenic and zinc, and weakly anomalous molybdenum. The area of intensely anomalous tungsten is coincident with two magnetic highs postulated to represent possible skarn deposits near the contact of a +/- 550 metres in diameter buried intrusive cupola. This area contains localized quartz-sericite +/- andalusite alteration. A large block of intensely scheelite-mineralized marble was located by prospecting directly downslope from one of the magnetic highs (Assessment Report 22541).

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CAPSULE GEOLOGY

Dia Met Minerals Ltd. drilled 1625 metres in 4 holes in 1996
and 1325 metres in 5 holes in 1997.

BIBLIOGRAPHY

EM EXPL 1996-E4; 1997-50
EMPR ASS RPT 16278, 17822, 20369, 21474, *22541, 24432
GSC OF 481; 634
WWW <http://www.infomine.com/>
Chevron File

DATE CODED: 1996/10/28
DATE REVISED: 1996/10/28

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE001**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURNT RIDGE** BURNT HILL

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 12 N
LONGITUDE: 114 48 39 W
ELEVATION: 2103 Metres

NORTHING: 5541298
EASTING: 656874

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: On west limb of the north-northwest trending Fording River syncline (Alexander Creek syncline). A number of minor folds and numerous faults are also present.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: HVol Bituminous

CAPSULE GEOLOGY

In the Burnt Ridge occurrence area, up to 8 major seams ranging from approximately 3.4 to 12.2 metres thick occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, siltstone and shale. The seams from oldest to youngest are #1 (7.9 to 9.8 metres), #2 (approximately 6.4 metres), #3 (approximately 4.9 to 8.5 metres, however an upper and lower bench, separated by several metres of thin coal partings and sediments, are present in places), #4 (main bench is 3.7 to 6.1 metres thick with an upper bench approximately 1.2 metres thick occurring in some holes), #5 (4.0 to 5.8 metres is dirty and contains a thin parting in section 1, Burnt Hill), #6 (split into an upper and lower seam in sections 1 and 3, the total thickness varies from 4.9 to 6.7 metres) and #7 (11.6 to 12.2 metres).

The ridge lies on the west limb of the roughly north-northwest trending Fording River syncline. The strata strikes north-northwest and dips towards the east. A number of minor folds lying parallel to the main synclinal trend occur towards the axis of the syncline. The strata are cut by numerous faults, trending from north-northeast to east.

BIBLIOGRAPHY

EMPR COAL ASS RPT 852
EMPR FIELDWORK 1979, pp. 91-96
GSC P 89-4
1981 BC Coal Ltd. *Reserve and Resource Data

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: 082JSE002

NATIONAL MINERAL INVENTORY:

NAME(S): EWIN PASS, SHELL (EWIN PASS)

STATUS: Developed Prospect
 REGIONS: British Columbia
 NTS MAP: 082J02E 082J02W 082G15W 082G15E
 BC MAP:

MINING DIVISION: Fort Steele
 UTM ZONE: 11 (NAD 83)

LATTITUDE: 50 00 10 N
 LONGITUDE: 114 45 04 W
 ELEVATION: 2377 Metres

NORTHING: 5541363
 EASTING: 661155

LOCATION ACCURACY: Within 500M
 COMMENTS:

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
 MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
 CLASSIFICATION: Sedimentary Fossil Fuel
 TYPE: A04 Bituminous coal
 SHAPE: Irregular
 MODIFIER: Folded Faulted
 COMMENTS: Two north trending folds and the Ewin Pass thrust fault (approximately northwest trending, west dipping), lie on the east flank and at the south end of the Alexander Creek syncline.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Carbonaceous Siltstone
 Argillite
 Claystone
 Sandstone
 Conglomerate
 Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
 TERRANE: Ancestral North America
 METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: MVol Bituminous
 HVol Bituminous

COMMENTS: Coal rank is medium to high volatile bituminous.

INVENTORY

ORE ZONE: EWIN PASS REPORT ON: Y

CATEGORY: Combined YEAR: 1981
 QUANTITY: 103000000 Tonnes
 COMMODITY GRADE
 Coal 1.4500 Per cent

COMMENTS: Estimated geological in-place (proven, probable, possible) reserves.
 Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Reports 397, 398.

CAPSULE GEOLOGY

Up to 17 coal seams are present in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) of which seams 4, 5, possibly 6, 8 and 9 are workable. Seam 4 averages 8.1 metres and thickens towards the north. Coal in seam 4 is very clean. Seam 5 (25 metres stratigraphically below seam 4) averages 2.5 metres thick and also thickens towards the north. Seam 6 (20 metres below seam 5) averages 0.8 metres and is consistent across the Ewin Pass property. Seam 8 (85 metres below seam 6) averages 13.3 metres, thickens in the middle of the map area, and like seams 4 and 5, is faulted in the northern part of the property. It is, despite the structural disturbance, of consistently good quality. Seam 9 (95 metres below seam 8) averages 8.3 metres thick, is repeated by faulting and is not as high a quality as seams 4 and 8. Seams 10B and 10A both average 1.6 metres in thickness and are extremely shaly. Seams stratigraphically above seam 4 are thin and less than 1.5 metres thick.

CAPSULE GEOLOGY

Seams 4, 8 and 9 contain (air dried basis) from 6.3 to 8.5 per cent ash, 21.6 to 27.5 per cent volatile matter, 64.5 to 69.5 per cent fixed carbon and 0.40 to 0.56 per cent sulphur with a Free Swelling Index from 5.0 to 8.5 (1981).

Geological in-place reserves are estimated to be 103 million tonnes, of which 47 million tonnes are proven, 46 million tonnes probable and 10 million tonnes possible (Coal Assessment Reports 397, 398).

The Ewin Pass property lies on the east flank towards the south end of the northwesterly trending, northwest plunging Alexander Creek syncline. Two northerly trending minor folds occur on the property. Towards the western margin of the property the Ewin Pass thrust (a roughly northwesterly trending, west dipping fault) truncates the folded strata. Strikes on Ewin Pass Ridge are 190 to 200 degrees and dips 20 to 60 degrees, averaging 37 degrees to the west. In places, particularly in the northern part of the area, bedding is overturned to the east.

BIBLIOGRAPHY

EMPR COAL ASS RPT *397, *398, 829, 831
EMPR FIELDWORK *1979, pp. 91-96
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1987/05/06

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE003**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT BANNER EAST**, MOUNT BANNER

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082J02W

BC MAP:

LATITUDE: 50 01 50 N

LONGITUDE: 114 45 19 W

ELEVATION: 2011 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Property is located in the northeast corner of the central block,
north of Ewin Pass.

UTM ZONE: 11 (NAD 83)

NORTHING: 5544442

EASTING: 660764

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: On east limb of north-northwest trending Alexander Creek syncline.
Strata are cut by two major thrusts.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Siltstone
Shale
Mudstone
Sandstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous
HVVol Bituminous

COMMENTS: Coal rank is medium to high volatile bituminous.

INVENTORY

ORE ZONE: MOUNT BANNER

REPORT ON: Y

CATEGORY: Indicated YEAR: 1980

QUANTITY: 8000000 Tonnes

COMMODITY: Coal GRADE: 1.5000 Per cent

COMMENTS: Geological in-place reserves with open pit potential at an overburden
ratio of approximately 3.5:1 cubic metres of rock per tonne of coal.

REFERENCE: Coal Assessment Reports 432, 433.

CAPSULE GEOLOGY

Thirteen coal seams with an aggregate thickness of over 50 metres occur in the Jurassic-Cretaceous Mist Mountain Formation (435 metres) (Kootenay Group) interbedded with siltstone, silty shale, mudstone and sandstone. The #10 seam (stratigraphically lowest) consists of 7.61 metres of coal in 6 splits with 7.44 metres of rock interbedded. The #9 seam is 1.23 metres thick, C seam is 0 to 0.60 metres, D is 0 to 2.60 metres, E is 7.55 to 12.39 metres, F is 0 to 1.19 metres, G is 7.69 to 12.69 metres, H is 1.73 to 2.65 metres, I is 5.30 to 6.37 metres, J is 1.47 to 1.57 metres, K is 5.5 metres and L is 4.94 metres thick, respectively.

Ranges of content (air dried basis to coal washed at 1.6 specific gravity) of ash, volatile matter, fixed carbon and sulphur are 5.87 to 12.54 per cent, 17.42 to 23.94 per cent, 58.30 to 71.85 per cent and 0.32 to 0.90 per cent respectively.

Approximately 8 million tonnes of geological in-place reserves (with open pit potential at an overburden ratio of approximately

CAPSULE GEOLOGY

3.5:1 cubic metres of rock per tonne of coal) are present in the Mount Banner East area. Grade based on reflectivity and average volatile matter content. Four seams greater than 5 metres thick, which dip south at about 20 degrees, may be amenable for underground hydraulic mining (1981).

The area is located on the eastern limb of the Alexander Creek syncline (north-northwest trending), and contains several subsidiary northwest trending folds. The strata are cut by two north trending, west dipping thrust faults. The Ewin Pass thrust fault has a number of associated thrust faults and small drag folds.

BIBLIOGRAPHY

EMPR COAL ASS RPT *432, *433, 829
EMPR FIELDWORK *1979, pp. 91-96; *1982, pp. 20-26
EMPR GEOLOGY 1977-1981, pp. 24-33
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE004**

NATIONAL MINERAL INVENTORY:

NAME(S): **EWIN CREEK**, IMPERIAL COAL, IMPERIAL RIDGE,
 FORDING RIVER, WESTAR

STATUS: Developed Prospect
 REGIONS: British Columbia
 NTS MAP: 082J02W
 BC MAP:
 LATITUDE: 50 03 30 N
 LONGITUDE: 114 46 25 W
 ELEVATION: 1585 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Property straddles Ewin Creek north of Mount Banner.

MINING DIVISION: Fort Steele
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5547491
 EASTING: 659359

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
 MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
 CLASSIFICATION: Sedimentary Fossil Fuel
 TYPE: A04 Bituminous coal
 SHAPE: Irregular
 MODIFIER: Folded Faulted
 COMMENTS: On east limb of north trending, south plunging Fording River syncline.
 Beds strike roughly north with dips at 30 to 50 degrees west.
 Projected thrust faulting.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
 Conglomerate
 Siltstone
 Mudstone
 Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
 TERRANE: Ancestral North America
 METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization GRADE: MVol Bituminous
 LVol Bituminous

INVENTORY

ORE ZONE: EWIN CREEK REPORT ON: Y
 CATEGORY: Inferred YEAR: 1981
 QUANTITY: 500000000 Tonnes
 COMMODITY _____ GRADE _____
 Coal 1.5000 Per cent
 COMMENTS: Estimated (inferred) total in-place coal reserves. Grade based on
 reflectivity and average volatile matter content.
 REFERENCE: Coal Assessment Reports 284, 285, 286.

CAPSULE GEOLOGY

Over twelve coal seams, up to 13.01 metres thick, occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, siltstone, mudstone and minor conglomerate.

The #3 seam is the lowest major seam in the section, and can be divided into 3 seam (approximately 2.17 to 3.95 metres) and 3L seam (approximately 1.40 to 3.12 metres, both low volatile bituminous in rank, separated by a rock split approximately 0.89 to 2.42 metres thick). The coal contains 18.8 to 20.8 per cent volatile matter and 79.4 to 80.2 per cent fixed carbon on a dry ash-free basis. Coal may be clean or may contain rock partings.

The #4 seam (4.11 to 5.64 metres) is low volatile bituminous in rank with volatile matter and fixed carbon ranging from 20.8 to 21.2 per cent and 78.9 to 79.2 per cent respectively (dried air free basis). Two or three rock partings occur in the #4 seam.

The #5 seam is the thickest seam found on the licences (15.27 to

CAPSULE GEOLOGY

8.31 metres). It is of medium volatile bituminous rank and contains numerous mudstone splits in the upper few metres. Thickness decreases to the north. Volatile matter and fixed carbon content range from 22.8 to 25.3 per cent, and 74.7 to 77.2 per cent respectively (dried air free basis).

The #6 seam is 4.42 metres thick on Imperial Ridge (where it contains a 1.07 metre rock parting) and it thins and pinches out to the south.

The #7 seam is approximately 4.29 to 2.95 metres thick. The #8 seam is approximately 3.43 to 5.30 metres thick and the #10 seam is 5.05 to 5.12 metres thick. Five seams of thicknesses 1.77 to 3.91 metres occur above the #10 seam.

The estimated (inferred) total in-place coal reserves at Ewin Creek are 500 million tonnes, of which approximately 60 per cent occur under less than 750 metres of cover.

The coal licences lie on the eastern limb of the Fording River syncline (Alexander Creek syncline) which trends roughly north and plunges south. Beds strike approximately north and dip 30 to 50 degrees west. Four westerly dipping thrust faults are projected through the licence area.

BIBLIOGRAPHY

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EMPR COAL ASS RPT *284, *285, *286, 829, 853
EMPR FIELDWORK 1980, pp. 71-72
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE005**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURNT RIDGE EXTENSION**, WESTAR GREENHILLS

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082J02W

BC MAP:

LATITUDE: 50 05 25 N

LONGITUDE: 114 48 54 W

ELEVATION: 1615 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Burnt Ridge Extension is now part of Westar Greenhills and is due to be mined in 1988 (Personal Communication - D. Grieve (1986)).

UTM ZONE: 11 (NAD 83)

NORTHING: 5550955

EASTING: 656292

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: On west limb of north trending, Alexander Creek syncline. Erickson fault and the Ewin Pass thrust cut the area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Claystone
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: BURNT RIDGE EXTENSION REPORT ON: Y

CATEGORY: Indicated YEAR: 1981

QUANTITY: 240000000 Tonnes

<u>COMMODITY</u>	<u>GRADE</u>
Coal	1.3000 Per cent

COMMENTS: Estimated open pit reserves. Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Reports 376, 377.

ORE ZONE: BURNT RIDGE EXTENSION REPORT ON: Y

CATEGORY: Measured YEAR: 1981

QUANTITY: 390000000 Tonnes

<u>COMMODITY</u>	<u>GRADE</u>
Coal	1.3000 Per cent

COMMENTS: Estimated open pit reserves. Grade based on reflectivity and average volatile matter content.

REFERENCE: Coal Assessment Reports 376, 377.

CAPSULE GEOLOGY

At least 13 coal seams greater than 1 metre thick, making up 12.4 per cent of the section, occur interbedded with sandstone, claystone and siltstone in the Jurassic-Cretaceous Mist Mountain Formation (437 metres) (Kootenay Group). Seam 1 averages 6.06 metres thick and while being a single seam in the south, consists of a series of splits in the north. Seam 2 is a single seam averaging 3.25 metres, and thins towards the south. Seam 3 averages 3.39 metres and is made up of 2 distinct seams (1 metre split). Seam 4 (6.51 metres) extends the length of the property and in the north

CAPSULE GEOLOGY

contains a 3 metre mudstone split. Seam 5 consists of two seams, a lower (5 metre thick in the north and 1 to 2 metres in the south) and an upper seam (wedges out northward). Average true thickness (composite) is 4.95 metres. Seam 6 is composed of up to 3 major coal splits with an average thickness of 7.47 metres in the south. It does not outcrop in the north. Seam 7 averages 2.97 metres thick, seam 8 is clean and averages 2.57 metres thick, seam 9 averages 4.13 metres and seam 10 is thin (averaging 1.6 metres) and continuous in the south. Seams 11, 12 and 13 are 1.09 metres, 6.79 metres (in a split seam) and 4.65 metres thick respectively.

The coal which is medium volatile bituminous in rank, contains on average 8.2 per cent ash with a Free Swelling Index of 6.4 (1.6 specific gravity float). Volatile matter ranges from 21 to 29 per cent and increases up section. Sulphur contents range from 0.32 to 0.54 per cent for seams 1 to 6, and also show an increase up section.

Open pit reserves are estimated to be 390 million tonnes measured and 240 million tonnes indicated. Underground reserves of seams 1, 4, 6 and 12 (ie. seams greater than 5 metres thick) are approximately 10 million tonnes to the elevation of Fording River (Coal Assessment Reports 376, 377).

The Burnt Ridge Extension property is situated on part of the west limb of the northerly trending Alexander Creek syncline. To the west is the northerly trending Erickson normal fault (downfaulted to the east). The eastern limb of the syncline is deformed by the Ewin Pass (or Fording) thrust. Beds strike north and dip east 35 to 65 degrees in the Burnt Ridge Extension area.

BIBLIOGRAPHY

EMPR COAL ASS RPT *376, *377, 829, 851
EMPR FIELDWORK *1979, pp. 91-96
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1987/05/06

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE006**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARE MOUNTAIN**, TODHUNTER RIDGE

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082J02W

BC MAP:

LATITUDE: 50 06 15 N

LONGITUDE: 114 47 04 W

ELEVATION: 2148 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Coordinates indicate approximate centre of property (1980 Assessment Report).

UTM ZONE: 11 (NAD 83)

NORTHING: 5552563

EASTING: 658432

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: On west limb of north trending Alexander Creek syncline. Several north trending, west dipping thrusts and some lateral normal faults occur.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous

INVENTORY

ORE ZONE: BARE MOUNTAIN

REPORT ON: Y

CATEGORY: Unclassified YEAR: 1981

QUANTITY: 50000000 Tonnes

COMMODITY GRADE

Coal 1.3000 Per cent

COMMENTS: Grade based on reflectivity. Overburden ratio of 7:1 bank cubic metres waste to tonne of coal.

REFERENCE: Coal Assessment Reports 374, 375.

CAPSULE GEOLOGY

At least 6 major coal seams, containing coal of medium volatile bituminous rank, occur in the Jurassic-Cretaceous Mist Mountain Formation, (380 to 480 metres) (Kootenay Group) interbedded with sandstone, siltstone and shale. The #1 seam, the stratigraphically lowest, consists of 3 smaller seams (separated by splits of 1 to 2 metres) with the aggregate thickness ranging from 7.0 to 14.2 metres. The #2 seam has a cumulative thickness with a 3 metre shale split in the centre. The #3 seam with an average thickness of 4.4 metres contains 3 smaller seams separated by two thin (less than 1.0 metres) shale splits. The #4 seam is the thickest seam, is clean and is structurally thickened to 11.3 metres in one area. The #5 seam contains a thin lower seam, an intermediate thick shaly coal band and a 4.5 metre thick upper seam of clean bright coal (all separated by shale splits). Cumulative thickness varies from 6.9 to 17.0 metres. The #6 seam averages 3.2 metres thick. The remaining upper seams appear to contain two more thick (5.0 metres) seams.

At Bare Mountain, coal reserves in the six lower seams are approximately 50 million tonnes with an overburden ratio of 7:1 bank

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 408
REPORT: RGEN0100

CAPSULE GEOLOGY

cubic metres waste/tonne of coal (Coal Assessment Reports 374, 375).
Bare Mountain consists of a consistently west dipping limb of the Alexander Creek syncline (approximately north trending). The strata are cut by several approximately northerly trending, west dipping faults and some lateral normal faults. Additional folding, associated with the Fording thrust, is also present.

BIBLIOGRAPHY

EMPR COAL ASS RPT *374, *375, 829
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE007**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREENHILLS**, FORDING (GREENHILLS), WESTAR (GREENHILLS),
COUGAR NORTH, SOUTH, MAIN,
RAVEN, WESTAR MINING, FORDING COAL,
WEST SPOIL

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082J02W
BC MAP:

Open Pit

MINING DIVISION: Fort Steele

LATITUDE: 50 06 40 N
LONGITUDE: 114 52 16 W
ELEVATION: 2133 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5553155
EASTING: 652213

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of property. Fording-Greenhills (082JSE010) lies to the north of Westar-Greenhills. Production figures for Fording-Greenhills are included with Fording River (082JSE012).

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary
TYPE: A04 Bituminous coal

Massive
Fossil Fuel

SHAPE: Irregular
MODIFIER: Folded

Faulted

COMMENTS: A broad, open, north trending, gently north plunging syncline is cut by normal and thrust faulting.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Post-mineralization
GRADE: MVol Bituminous
HVVol Bituminous

INVENTORY

ORE ZONE: GREENHILLS

REPORT ON: Y

CATEGORY: Proven
QUANTITY: 128000000 Tonnes

YEAR: 2000

COMMODITY
Coal

GRADE
100.0000 Per cent

COMMENTS: Reserves at January 1, 2000.
REFERENCE: Information Circular 2001-1, page 6.

CAPSULE GEOLOGY

Greenhills operations is located 8 kilometres northeast of Elkford. At Greenhills, up to 24 coal seams occur in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) interbedded with sandstone, siltstone and shale. The major seams, which are continuous throughout the area, are named 1, 7, 10, 16 and 20. Seams 1, 7 and 10 (68 per cent of in place geological reserves) are medium volatile bituminous coal, while seam 16 and other stratigraphically higher seams are high volatile A bituminous in rank. Other major seams are lenticular and less extensive (several kilometres extent) and occur generally in the upper half of the Mist Mountain Formation. Thicknesses of the major seams are as follows from oldest to youngest; seam 1 (10 to 16 metres), 7 (7 to 11 metres), 10 and 10L (5 to 11 metres), 16 and 16L (5 to 11 metres, and seam 20 (2 to 7 metres).

The main structure in the Greenhills area is a broad, open,

CAPSULE GEOLOGY

roughly north trending, gently north plunging syncline. Beds on the west limb dip 20 to 40 degrees east and on the east limb 20 to 60 degrees west. The east limb is cut off to the east by a major normal fault (north extension of the Fording River fault), whose local vertical displacement is greater than 600 metres. The west limb of the syncline is cut by some minor thrust faults. Three kilometres south of the Kaiser Resources north boundary, the Greenhills normal fault splays off the Fording River fault. The former has a 120 to 140 metre displacement (west side downthrown).

Unclassified reserves are 100 million tonnes of coal (The Coal Association of Canada 1993 Directory, page 12).

Westar Mining Ltd. started operations in 1981, production in 1982, and shut down in December 1992. Fording Coal Ltd. re-opened the mine in March 1993.

At the Greenhills mine, Fording Coal continues to increase production, 3.8 million tonnes in 1995 and 4.2 million tonnes in 1996. The plant capacity has been expanded by the addition of new heavy-media cyclone circuits. Eighty exploration drillholes, totalling 12,000 metres, were completed in the Raven and Cougar pits during 1995 (Information Circular 1996-1, page 8).

Sales totalled about 4 million tonnes in 1998. Exploration drilling totalled 5200 metres in 19 rotary drill holes in the Cougar North Extension area.

Reserves at January 1, 2000 are 128 million tonnes (Information Circular 2001-1, page 6).

BIBLIOGRAPHY

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- EMPR GEM 1969-420; 1970-523
- EMPR INF CIRC 1995-9, p. 8; 1996-1, p. 8; 1997-1, p. 11; 1998-1, p. 12; 2001-1, p. 6-8
- EMPR IR 1984-4; 1984-5; 1986-1, p. 104
- EMPR MAP 65 (1989)
- EMPR MIN STATS 1985, p. 42; 1987, pp. 44, 46; 1990, pp. 40,46,52; 1992, p. 20; 1993, p. 30; 1994, p. 34
- EMPR MINING 1978-1980, Vol. 1, p. 51; 1981-1985, pp. 74-75; 1986-1987, pp. 71-72; 1988, p. 71
- EMPR OF 1992-1; 1994-1
- EMPR P 1986-3, p. 24
- EMPR PF (Mining Technology Website (Apr.1999): Greenhills, 4 p.)
- GSC P 89-4
- B.C. Coal Ltd. Reserve and Resource Data *1981
- N MINER Apr.12, 1999; Oct.8-14, 2001
- WWW <http://www.mining-technology.com/projects/greenhills/index.html>;
- [http://www.infomine.com/index/properties/GREENHILLS_\(COAL\)_MINE.html](http://www.infomine.com/index/properties/GREENHILLS_(COAL)_MINE.html)
- Greenhills Report *1980, p. 325

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE008**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHAUNCEY CREEK**, CHAUNCEY RIDGE, CHAUNCEY RIDGE (NORTH BLOCK)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J02W
BC MAP:
LATITUDE: 50 07 15 N
LONGITUDE: 114 48 34 W
ELEVATION: 1767 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Coordinates indicate approximate centre of property (1980 Assessment Report).

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5554363
EASTING: 656590

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: In the area of the north trending, south plunging Alexander Creek syncline. Cut by normal and thrust faulting.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: MVol Bituminous

CAPSULE GEOLOGY

At least 8 coal seams occur interbedded with sandstone, siltstone and shale in the Jurassic-Cretaceous Mist Mountain Formation (480 metres) (Kootenay Group) with thickest coal occurring in the lower half.

A total of 29 to 33 metres of cumulative coal thickness occur in 450 to 480 metres of section on the east slope of Chauncey Ridge. An additional 220 metres of Mist Mountain Formation containing 4 coal seams are repeated by thrust faulting. Seam #2 is the thickest (7.8 metres).

On the west slope of Chauncey Ridge, 4 seams over 1 metre thick make up a total average thickness of 15.32 metres, with an additional seam 6.52 metres thick located down section. Three seams less than 1 metre thick also occur. Coal is medium volatile bituminous rank and contains from 4.96 to 36.49 per cent ash.

The Chauncey Creek property is centred on the approximately north trending, south plunging Alexander Creek syncline. The east slope displays large-scale thrust faulting and small-scale thrust faults which may be related to the major Fording thrust. The west slope is also thrust faulted, and small-scale normal faulting and local minor folding also occur.

BIBLIOGRAPHY

EMPR COAL ASS RPT *382, *383, 829
EMPR FIELDWORK *1979, pp. 91-96
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE010**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREENHILLS (FORDING)**, GREENHILLS BLOCK, ELK RIVER,
FORDING (GREENHILLS), ALDRIDGE BLOCK, FORDING RIVER

STATUS: Producer Open Pit

MINING DIVISION: Fort Steele

REGIONS: British Columbia

NTS MAP: 082J02W 082J07W

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 50 12 40 N

LONGITUDE: 114 53 56 W

ELEVATION: 1920 Metres

NORTHING: 5564216

EASTING: 649914

LOCATION ACCURACY: Within 500M

COMMENTS: The property can be divided into the Aldridge Block to the north and the larger Greenhills Block to the south. Production for Greenhills (Fording) is included with Fording River (082JSE012).

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: In area of northwest trending, north plunging Alexander Creek syncline. Two small folds and normal and thrust faulting are also present.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Siltstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: LVol Bituminous

INVENTORY

ORE ZONE: ELK RIVER

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 108000000 Tonnes

YEAR: 1988

COMMODITY	GRADE
Coal	100.0000 Per cent

COMMENTS: Total indicated reserves.

REFERENCE: Coal Assessment Report 261.

CAPSULE GEOLOGY

In the main coal-bearing section of the Jurassic-Cretaceous Kootenay Group (Mist Mountain Formation), one or two seams 4.6 to 6.1 metres thick occur in addition to up to three seams 1.8 to 3.05 metres thick. The total thickness of coal varies from 9.1 to 15.2 metres. The coal is low volatile bituminous in rank and is interbedded with siltstone, shale and sandstone. Coal seams may change thickness quite rapidly along strike. Samples taken from three seams show volatile matter contents ranging from 20.5 to 28 per cent, ash from 6.8 to 22.6 per cent, fixed carbon from 56.2 to 67.4 per cent, sulphur from 0.42 to 0.60 per cent and phosphorous from 0.033 to 0.038 per cent. Tonnage calculations at the Greenhills Block have yielded estimates of 108 million tonnes and 54 million tonnes, above and 183 metres below an adit (at 1402 metres elevation) respectively. Total indicated reserves are 108 million tonnes (Coal Assessment Report 261).

The structure in the area is dominated by the Alexander Creek syncline, a major, broad, northwesterly trending, north plunging (5

CAPSULE GEOLOGY

to 10 degrees) syncline. The Aldridge Block lies on the east limb and dips vary from 30 to 60 degrees west. The Greenhills Block lies on the west limb of the syncline which at this latitude plunges approximately 10 degrees northwest. Two subsidiary folds, an anticline in the west and a syncline in the southeast, occur associated with the main fold. They both trend northwest. Dips on the east limb of the minor syncline are approximately 20 degrees, while in the remainder of the block, dips are less than 15 degrees in the north and greater than 15 degrees in the south.

A major north-northwest trending fault, the Erickson normal fault (downthrown towards the west), occurs towards the east of the area. At least one northwest trending, west dipping thrust fault is also present, such as the fault south of Britt Creek.

Fording River Coal began operations at Greenhills (082JSE007) in March 1993.

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[http://www.infomine.com/index/properties/GREENHILLS_\(COAL\)_MINE.html](http://www.infomine.com/index/properties/GREENHILLS_(COAL)_MINE.html)

DATE CODED: 1986/03/01
DATE REVISED: 1987/01/08

CODED BY: EVFK
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE011**

NATIONAL MINERAL INVENTORY:

NAME(S): **BINGAY CREEK**, IRON CREEK

MINING DIVISION: Fort Steele

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082J02W

BC MAP:

LATITUDE: 50 12 42 N

LONGITUDE: 114 58 34 W

ELEVATION: 1409 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of property. Licence 5176 straddles Bingay Creek.

UTM ZONE: 11 (NAD 83)

NORTHING: 5564125

EASTING: 644403

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded

COMMENTS: A northeast trending, northeast plunging syncline is cut by a northeast trending fault.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Kootenay

FORMATION

Mist Mountain

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greywacke
Sandstone
Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: BINGAY

REPORT ON: Y

CATEGORY: Probable

YEAR: 1986

QUANTITY: 1000000 Tonnes

COMMODITY

GRADE

Coal

100.0000 Per cent

COMMENTS: In situ reserves estimated between 1 and 4 million tonnes.

REFERENCE: EM EXPL 1996-A25.

CAPSULE GEOLOGY

At least five seams, occurring interbedded with sandstone, greywacke and shale, are present in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group) in the Bingay Creek area. In the northeastern part of the property the seams (A-1, A, B, C and D) total approximately 12 metres in thickness over a stratigraphic interval of 120 metres. Seam A is estimated at 5 to 7.5 metres thick, the others 1.2 to 1.8 metres. In-situ reserve possibilities are estimated at between 1 and 4 million tonnes.

The structure consists of a northeast trending and northeast plunging syncline which is cut in the northwest by a northeast trending lineament which may be a fault.

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EM EXPL 1996-A25
EM INF CIRC 1997-1, p. 24
EMPR COAL ASS RPT *253, 829, 849
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

the Eagle Mountain (082JSE009) and Seam 15 underground mine.

The general structure of the area consists of the north-northwest trending Alexander Creek syncline in the east with a subsidiary north-northwest trending syncline to the west. The folds are separated by a north-northwest trending normal fault and smaller scale normal faults are also present.

The Greenhills area occurs on the east limb of the subsidiary western syncline. Seven major seams, the B, D, E, F, G, H and I are present. B seam (10.4 to 1.5 metres) generally is present as one thick seam, however it thins in places and may be disrupted by faulting which is common in the east. Seam D, whose main bench varies from 6.4 to 11.5 metres, can have up to two lower benches usually less than 2 metres thick. Seam E occurs as a single seam 6.7 to 9.8 metres thick or as a composite three bench seam totalling 9.2 metres thick. Seam F varies from 5.2 to 6.8 metres in thickness. Several benches of the F seam occur above the main bench but are separated by considerable thicknesses of rock. Seam G consists of a lower (2.1 to 2.8 metres) and upper (1.5 to 1.8 metres) seam. Seam H (3.3 to 4 metres) has several lower splits, generally less than 1.5 metres. Seam I is least extensive in the Greenhills area and is about 3.4 metres thick. The strata generally dips west at angles between 0 and 15 degrees. Minor normal faults are common in the east and these may be associated with the more major Erickson normal fault.

Strata in the Blackwood pit dip 0 to 28 degrees northeast, striking north-northwest. Coal seams outcropping in the pit area include seams 11, 9, 7 and 5 in the northwest and north, and seam 4 (8.2 to 12.8 metres) in the south (seam 4 being the main target). Several thinner seams (1.3 to 3.8 metres) are present stratigraphically below seam 4, however they do not outcrop in the pit area. The Blackwood pit is the southernmost pit on the main Alexander Creek syncline.

The Turnbull pit is the northernmost pit on the Alexander Creek syncline. Beds generally strike north-northwest, dipping northeast 10 to 30 degrees. Seams 12, 11, 9, 7, 5 and 4 outcrop in the area, with seam R-4 (9.1 to 9.8 metres) being one of the main targets (Pit R-4). A major thrust fault, flat and gently west dipping, displaces seams 4 (2.1 to 10.2 metres), 5 (10.5 to 12.0 metres) and 7 (3.7 to 6.7 metres).

The Clode pit is located to the southeast of the Turnbull pit and contains normal seams 7, 5 and 4 in addition to repeated seams below a major flat thrust fault (horizontal displacement approximately 488 metres). Strata strikes north-northwest and dips towards the northeast. Seams 9 and 11 also outcrop in the area. Seam 4 thins downdip.

The Taylor pit (west face and northwest Eagle Mountain) contains seam 14 (split into 2 to 4 widely separated seams 0.5 to 3 metres thick), seam 13 (4.4 metres, often split seams), seam 12 (5.3 metres and thins to the east and north to 2.1 metres), seam 11 Upper (3.2 metres), seam 11 (4.7 metres, sometimes split), seam 9 (5.9 metres including Lower 9), seam 7 (6.2 metres), seam 5 (6.9 metres) and seam 4 (9.8 metres). Thrust faults present in the area may account for seam thinning and splitting. The Taylor pit contains strata dipping 20 to 21 degrees northeast on the west face and the strata flatten from 8 to 10 degrees northeast in the axial region of the Alexander Creek syncline.

The north and south face of Eagle Mountain lie predominantly on the east limb of the Alexander Creek syncline with strata striking north-northwest and dipping 20 to 30 degrees west-southwest. To the south the area contains the axial region and part of the west limb. Coal seams outcropping, from north to south, include seams 15, 13, 12, 11, 9 and 7. Seam 15 is the main target in the north while the stratigraphically lower seams are more important in the south.

Unclassified reserves at the Fording River operations are 225 million tonnes of coal (The Coal Association of Canada 1993 Directory, page 12).

Production by Fording Coal Limited at the Fording River mine was over 7 million tonnes in 1995 and 7.9 million tonnes in 1996. Over 120 holes totalling 16,000 metres were drilled in 1995 as part of an exploration program on Henretta and Turnbull ridges. Main drilling programs were completed at Castle Mountain (10 holes totalling 6000 metres) and Henretta Ridge (30 holes totalling 4580 metres) in 1996. Over 8 million tonnes was produced in 1997; drilling was done at Castle Mountain.

About 8 million tonnes was produced in 1998; drilling totalled about 15,000 metres in 32 rotary holes, mainly in the Turnbull Mountain and Castle Mountain areas. Two deep exploration holes were drilled north of the Greenhills pit.

Reserves at January 1, 2000 are 231 million tonnes (Information

CAPSULE GEOLOGY

Circular 2001-1, page 6).

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6 p.)
GSC P 89-4
N MINER Apr.12, 1999; Oct.8-14, 2001
WWW <http://www.mining-technology.com/projects/fording/index.html>;
[http://www.infomine.com/index/properties/GREENHILLS_\(COAL\)_MINE.html](http://www.infomine.com/index/properties/GREENHILLS_(COAL)_MINE.html)

DATE CODED: 1986/03/01
DATE REVISED: 1996/11/13

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE013**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELK RIVER**, WEARY RIDGE

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082J07W

BC MAP:

LATITUDE: 50 24 00 N

LONGITUDE: 114 56 04 W

ELEVATION: 1570 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of property, above the upper part of the Elk River Valley between the confluences of Aldridge Creek and Cadorna Creek with the Elk River.

MINING DIVISION: Fort Steele

UTM ZONE: 11 (NAD 83)

NORTHING: 5585145

EASTING: 646795

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: Area is on the north extension of the north-northwest trending, asymmetric Alexander Creek syncline. Elk River thrust fault is also present.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Shale
Siltstone
Carbonaceous Shale
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous
LVol Bituminous

COMMENTS: Bituminous coal varies from poor to excessive coking capacity.

INVENTORY

ORE ZONE: ELK RIVER

REPORT ON: Y

CATEGORY: Indicated YEAR: 1978

QUANTITY: 4513000000 Tonnes

COMMODITY Coal GRADE 100.0000 Per cent

COMMENTS: Total coal in place.

REFERENCE: Elk River Coal Project, Stage II Rpt, Vol.II-Technical Descr., 08/78.

ORE ZONE: ELK RIVER

REPORT ON: Y

CATEGORY: Measured YEAR: 1978

QUANTITY: 889000000 Tonnes

COMMODITY Coal GRADE 100.0000 Per cent

COMMENTS: Recoverable clean coking coal. Also 731,000,000 tonnes of recoverable clean thermal coal.

REFERENCE: Elk River Coal Project, Stage II Rpt, Vol.II-Technical Descr., 08/78.

CAPSULE GEOLOGY

Approximately 900 metres of coal measures are present in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group). The lower 600 metres contain around 20 seams subdivided into as many as 60 splits, with a combined coal thickness of approximately 90 metres. Ash contents vary from 19 to 60 per cent (30 to 40 per cent in the

CAPSULE GEOLOGY

run-of-Mine coal). Seams 2, 3, 8, 9, 10, 4, 6 and 7 are low volatile bituminous in rank, the coking capacity varying from moderate to good in seams 2 and 3, to poor in 4, 6 and 7. Seams 11, 12, 13, 14 and 15 are medium volatile bituminous in rank with good coking capacity while seams 16, 17, 18 and 19 are high volatile bituminous in rank with excessive coking capacity.

Projected specifications of the final coal product (blend from the lower and upper seams) are 9.5 per cent ash, 19 to 21 per cent volatile matter and 0.6 per cent sulphur with a Free Swelling Index value of 6.5.

The structure consists of the north-northwest trending northern extension of the Alexander Creek syncline. The syncline is asymmetric with beds on the west side near vertical while strata on the east limb dip 35 to 45 degrees west. The syncline is overridden and truncated along the west flank by the Elk River thrust fault. The Lewis thrust fault is believed to be present 2,400 to 3,000 metres below the Elk River.

A 36 year open pit mine plan has been developed which will produce 4 million tonnes of clean coal per year (overall stripping ratio 3.27 billion cubic metres per tonne). Similar open pit reserves extend southward into the Big Weary Ridge area with 20 additional years of mining at a similar rate, but at a higher stripping ratio (6.0 billion cubic metres per tonne).

Total coal in-place of the Elk River deposit is 4513 million tonnes (Elk River Coal Project, Stage II Report, Volume II - Technical Description, August 1978). In addition, underground measured reserves of clean coking coal from within the total licence area are estimated to be in the order of 889 million tonnes for coking coal and 731 million tonnes for thermal coal (Elk River Coal Project, Stage II Report, Volume II - Technical Description, August 1978).

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EMPR OF 1992-1
GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1987/05/06

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE014**

NATIONAL MINERAL INVENTORY:

NAME(S): **VINCENT OPTION**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J07W 082J06E 082J11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 59 N
LONGITUDE: 115 00 03 W
ELEVATION: 1768 Metres

NORTHING: 5596103
EASTING: 641778

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of property lies in the upper Elk River Valley.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel

TYPE: A04 Bituminous coal

SHAPE: Irregular

MODIFIER: Folded Faulted

COMMENTS: A major north-northwest trending, south plunging syncline and anticline occur on the Lewis thrust plate. Numerous minor folds, at least one major thrust and several minor thrusts are also present.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous	Kootenay	Mist Mountain	

LITHOLOGY: Sandstone
Shale
Siltstone
Coal

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: MVol Bituminous
HVVol Bituminous

COMMENTS: Coal varies from medium to high volatile bituminous.

CAPSULE GEOLOGY

Up to ten coal horizons were intersected by drilling in the Jurassic-Cretaceous Mist Mountain Formation (Kootenay Group). The horizons often consist of several coal benches with thicknesses of individual seams varying from 0.3 to 10.8 metres and total coal horizon thicknesses varying from 0.7 to 10.8 metres. The calculated true thickness of mineable coal (seams greater than 1.8 metres) is 54.9 metres, with the total thickness of coal intersected being 117 metres. Calculated characteristics of 1/4 inch float at 1.55 specific gravity are as follows: 2.88 to 23.3 per cent ash, 24.8 to 34.6 per cent volatile matter, 56.3 to 66.1 per cent fixed carbon, 0.34 to 0.62 per cent (one sample 0.87 per cent) sulphur and Free Swelling Index ranging from 3.97 to 9.35.

The Vincent Option property lies within the Lewis thrust plate and the local structure consists of a major north-northwest trending, south plunging syncline and anticline. Parallel to these are many minor folds. The strata are cut to the west by the major Borgeau thrust fault which is northwest trending and west dipping. Several minor parallel thrusts occur to the east and north.

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GSC P 89-4

DATE CODED: 1986/03/01
DATE REVISED: 1986/03/01

CODED BY: EVFK
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 422
REPORT: RGEN0100

MINFILE NUMBER: **082JSE015**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEEHIVE**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 35 N
LONGITUDE: 114 40 39 W
ELEVATION: 2286 Metres

NORTHING: 5547855
EASTING: 666233

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Kyanite

MINERALS

SIGNIFICANT: Kyanite Andalusite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Metamorphic Industrial Min.
TYPE: P02 Kyanite-sillimanite schists

P01 Andalusite hornfels

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Continental Ranges

RELATIONSHIP: Syn-mineralization GRADE:

CAPSULE GEOLOGY

Southeast of Beehive Mountain, thermal metamorphism has developed kyanite and andalusite as small crystals disseminated throughout phyllite beds.

BIBLIOGRAPHY

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GSC OF 634

DATE CODED: 1986/06/27
DATE REVISED: 1987/05/06

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSE015**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 424
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 481; 634

DATE CODED: 1986/12/09
DATE REVISED: 1991/03/26

CODED BY: SBB
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082JSE017**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELKFORD**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 30 N
LONGITUDE: 114 57 34 W
ELEVATION: 1676 Metres

NORTHING: 5543405
EASTING: 646159

LOCATION ACCURACY: Within 500M

COMMENTS: Located above chairlift at the Elkford Ski Hill.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
COMMENTS: Phosphorite bed is 5 by 0.5 metres in size; bedding may be overturned.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Ishbel

FORMATION

Ross Creek

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Siltstone
Limestone
Conglomerate
Sandstone
Phosphatic Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

5.9300

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Elkford occurrence, a 0.5 metre thick phosphorite bed and a 0.4 metre thick phosphatic sandstone bed occur within the Permian Ross Creek Formation (Ishbel Group). This phosphate is underlain by conglomerate and limestone of the Telford Formation. Overlying the phosphate are siltstone and argillite of undetermined thickness. The phosphorite is pelletal and contains 5.93 per cent P2O5 (Open File 1987-16). Gangue minerals include calcite and quartz.

BIBLIOGRAPHY

EMPR OF 1987-16
GSC OF 634

DATE CODED: 1987/03/18
DATE REVISED: 1987/03/18

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082JSE018**

NATIONAL MINERAL INVENTORY:

NAME(S): **TODHUNTER**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 07 00 N
LONGITUDE: 114 45 34 W
ELEVATION: 1920 Metres

NORTHING: 5554006
EASTING: 660178

LOCATION ACCURACY: Within 500M

COMMENTS: Located on logging road north of the Todhunter logging road.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
COMMENTS: Moderately dipping normal sequence.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP
Permian Ishbel

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Conglomerate
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Phosphate

YEAR: 1987

GRADE
2.1000 Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Todhunter occurrence, a 1 to 1.5 metre thick chert-bearing conglomerate is exposed in a road cut. The conglomerate underlies Triassic rocks but the contact was not observed. The conglomerate is inferred to belong to the Permian Ishbel Group. A grab sample of the conglomerate contained 2.1 per cent P2O5 (Open File 1987-16). Phosphate is contained in black pebbles.

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EMPR OF 1987-16
GSC OF 634

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082JSE019**

NATIONAL MINERAL INVENTORY:

NAME(S): **ICE CROSS, RAM**
CROSSING CREEK, BONUS

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 31 N
LONGITUDE: 114 58 09 W
ELEVATION: 2133 Metres

NORTHING: 5550829
EASTING: 645261

LOCATION ACCURACY: Within 500M

COMMENTS: Ram 6.5 pipe, about 1750 metres east of the Cross kimberlite pipe, 8 kilometres north of the community of Elkford (George Cross News Letter No.225 (November 24), 1994).

COMMODITIES: Diamond Gemstones

MINERALS

SIGNIFICANT: Diamond
ASSOCIATED: Olivine Phlogopite Pyroxene Garnet Spinel
ALTERATION: Serpentine Hematite Talc Calcite Pyrite
Magnetite

ALTERATION TYPE: Serpentin'zn Hematite
MINERALIZATION AGE: Lower Triassic
ISOTOPIC AGE: 240 and 244 Ma DATING METHOD: Rubidium/Strontium MATERIAL DATED: Mica separates

DEPOSIT

CHARACTER: Pipe Breccia Disseminated
CLASSIFICATION: Diatreme Industrial Min.
TYPE: N02 Kimberlite-hosted diamonds
DIMENSION: 500 x 200 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Plan dimensions of the Ram 5 pipe. Age date of the Cross kimberlite.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian Rocky Mountain Unnamed/Unknown Formation

LITHOLOGY: Kimberlite
Carbonate Rock
Ultramafic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

CAPSULE GEOLOGY

A series of ultramafic diatreme breccias occurs along a northwest trend line east of the Rocky Mountain Trench. All the diatremes intrude the sedimentary sequence along the western margin of the North American continent, prior to the Jura-Cretaceous Columbian Orogeny and have been deformed, weakly metamorphosed and transported eastwards during orogenesis (Fieldwork 1986).
The Cross kimberlite lies north of Crossing Creek about 10 kilometres northwest of the community of Elkford. It is intruded into Pennsylvanian and Permian Rocky Mountain Group carbonate rocks. The kimberlite outcrop is a steep bluff some 15 metres high and 50 to 60 metres long (circa 1986). Recent work indicates the body is about 300 by 30 metres in plan as defined by mapping and trenching (George Cross News Letter No.225, 1994).
The kimberlite is lithologically heterogeneous and very friable. Inclusions comprise 15 to 20 per cent of the rock volume and consist of angular fragments of country rock, rounded, dark green serpentinitized xenoliths and black pyroxenite xenoliths. The rounded xenoliths range in size from a few millimetres to 6 centimetres in diameter.
Xenoliths are almost entirely serpentinitized pseudomorphs of olivine and pyroxene. Talc replaces pyroxene to a limited extent and also rims and veins serpentinitized grains. Olivines are completely serpentinitized. Interstitial spinels are also present in minor amounts. The xenoliths may therefore be broadly classified as spinel lherzolites (Fieldwork 1986).
Macrocrysts (0.5-5.0 millimetres) consist of completely serpentinitized olivines, partially altered garnets, garnets with kelyphitic rims and phlogopites. They may be round, oval or

CAPSULE GEOLOGY

lath-shaped in random orientation and make up 10 to 20 per cent of the rock volume. Garnets show a moderate to high degree of alteration or dissolution in reaction with the matrix. X-ray spectra of clear and brown garnets show roughly similar compositions in the pyrope-almandine-grossular range with minor amounts of titanium and chromium (Fieldwork 1986). In 1994, analysis of a small bulk sample taken from the Cross kimberlite indicated G9 and G10 pyrope garnets (George Cross News Letter No.225, 1994).

The phenocryst population is comprised of completely serpentinized olivine, together with phlogopite and spinel. Phlogopite grains vary in size and are randomly oriented, square to rectangular in shape and relative unaltered. Reddish brown translucent spinels are disseminated in the groundmass and show magnetite reaction rims.

The fine-grained groundmass is composed of serpentine and calcite with minor disseminated talc, pyrite and magnetite. Calcite is also present as medium grained, irregular-shaped masses suggesting late-stage crystallization. Secondary pyrite forms massive rims around calcite. Bright red hematite often forms envelopes around the pyrite and dendrites penetrating calcite aggregates.

Rubidium-strontium dating of mica separates from the Cross kimberlite has yielded ages of 240 and 244 million years (Fieldwork 1986).

The Ice property currently hosts 6 diatreme breccias, one of which is the Cross kimberlite. The Ram 5, 6 and 6.5 pipes are about 1700 metres directly east of the Cross pipe.

The Ram 5 pipe has plan dimensions of 500 by 200 metres as defined by hand pitting. One 363-tonne sample was taken from near the centre of the pipe and yielded one diamond of near gem quality about 2 millimetres in size. A sample taken from near the west edge of the pipe did not indicate any diamonds greater than 0.25 millimetres in size. One clear, gem quality diamond fragment measuring 0.65 millimetres has been found in a sample from the Ram 6.5 pipe (George Cross News Letter No. 225, 1994).

Quest International Resources Corporation (formerly Consolidated Ramrod Gold Corporation and now Standard Mining Corporation) reported the discovery of two new kimberlite pipes in a 1.5 millimetre gem-quality diamond fragment on its Ice property (Information Circular 1997-1, page 23). In 1996, a bulk sample of 23 tonnes was taken from each of three kimberlite pipes (Ram 5, Ram 6 and Ram 6.5) and a 4.5-tonne sample was taken from a kimberlite dike in a road cut. A total of 86 tonnes of kimberlite material has been shipped to Fort Collins, Colorado for diamond testing. Six diamonds were recovered, 3 from Ram 5 and 3 from Ram 6.5. The three diamond fragments from Ram 5 weighed 0.25 carat (Northern Miner, December 23, 1996).

Skeena Resources Ltd. optioned the property in 1999.

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EMPR ASS RPT 22983
EMPR FIELDWORK *1986, pp. 259-282
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EMPR PF (MineMarket.com Website (May 1999): Ice Diamond Property, 2 p.)
GSC OF 481
GCNL *#225(Nov.24), 1994; #75(Apr.20), 1999; #123(June 27), 2000
N MINER Dec. 23, 1996
WWW http://www.minemarket.com/ice_diamond_property.htm

DATE CODED: 1994/12/07
DATE REVISED: 1997/03/14

CODED BY: GO
REVISED BY: GP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 429
REPORT: RGEN0100

MINFILE NUMBER: **082JSE020**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUNDEE TUFA**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 05 N
LONGITUDE: 114 57 26 W
ELEVATION: 1740 Metres

NORTHING: 5550042
EASTING: 646136

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Travertine

MINERALS

SIGNIFICANT: Calcite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Discordant Layered
CLASSIFICATION: Industrial Min. Sedimentary
TYPE: H01 Travertine

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Tufa

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

White-beige tufa is exposed in the road cuts for approximately 30 metres. The thickness of the deposit and its extend up and downslope of the road-cut is not known. The material has low density high perosity and could be potentially used for landscaping applications. Locally it contains embedded limestone or limy shale angular fragments.

BIBLIOGRAPHY

PERS COMM George Simandl, EMPR, Geological Survey, 2003

DATE CODED: 2002/09/10
DATE REVISED: / /

CODED BY: GJS
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JSE020**

MINFILE NUMBER: **082JSW001**

NATIONAL MINERAL INVENTORY:

NAME(S): **RED CLOUD**

STATUS: Developed Prospect

Open Pit

MINING DIVISION: Golden

REGIONS: British Columbia

NTS MAP: 082J05E

BC MAP:

LATITUDE: 50 19 50 N

LONGITUDE: 115 39 44 W

ELEVATION: 1100 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry (Open File 1987-15).

UTM ZONE: 11 (NAD 83)

NORTHING: 5576240

EASTING: 595214

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica

MINERALIZATION AGE: Ordovician

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R07 Silica sandstone

DIMENSION: 30 x 3 x 3 Metres

STRIKE/DIP: 045/45W

TREND/PLUNGE:

COMMENTS: Quartzite band trends northeasterly with dips of 40 to 50 degrees west.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Ordovician

Undefined Group

Mount Wilson

LITHOLOGY: Quartzite
Shale
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: QUARRY

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1967

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silica

98.5600

Per cent

COMMENTS: Sample of randomly picked loose muck pieces.

REFERENCE: Open File 1987-15.

CAPSULE GEOLOGY

The small Red Cloud quarry is located on the west side of the Kootenay River, north from Canal Flats.

Quarrying has taken place on a band of quartzite of the Middle and/or Upper Ordovician Mount Wilson Formation (formerly the Wonah Formation). The band strikes northeast with dips of 40 to 50 degrees west. The band is 18.3 to 21.3 metres wide at the quarry. Wallrock consists of shale and limestone.

The quartzite is a hard white rock with grey streaks and occasional yellowish sandy patches. It is commonly fractured at intervals of 8 centimetres or greater.

The only record of production is a small trial shipment sent in 1967 when the quarry measured 30 by 3 by 3 metres. A grab sample of loose muck pieces taken in 1967 assayed 98.56 per cent SiO₂, 0.65 per cent Al₂O₃, 0.12 per cent total Fe, and 0.05 per cent CaO (Open File 1987-15).

BIBLIOGRAPHY

EMPR AR 1967-320

EMPR OF *1987-15

GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1987/04/14

CODED BY: GSB
REVISED BY: GRF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW002**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELKHORN**, ZAP, LUCKY,
CAMERON

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:
LATITUDE: 50 25 51 N
LONGITUDE: 115 53 05 W
ELEVATION: 1159 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Open Pit

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

NORTHING: 5587129
EASTING: 579211

COMMODITIES: Barite Lead Copper

MINERALS

SIGNIFICANT: Barite Galena
ASSOCIATED: Quartz
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive Disseminated
CLASSIFICATION: Sedimentary Hydrothermal Industrial Min.
TYPE: E17 Sediment-hosted barite
DIMENSION: 70 x 1 Metres STRIKE/DIP: 080/65N TREND/PLUNGE:
COMMENTS: Barite vein.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Undefined Group Jubilee

LITHOLOGY: Dolomite
Brecciated Dolomite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

CAPSULE GEOLOGY

The Elkhorn occurrence is hosted by medium-grained, light grey, vuggy Middle-Upper Jubilee Formation dolomites which are highly jointed and fractured. Barite occurs both as irregular pods, lenses and as a matrix to angular dolomite breccia fragments as well as in more massive vein concentrations. It is usually massive, coarse grained, white in color and locally contains inclusions of white cherty material and buff weathering recrystallized dolomite. Barite fills short irregular veinlets and forms a 70 metre long by 1 metre wide barite vein about 300 metres southeast of the main showing. Patches of malachite and azurite and disseminated galena are associated with the barite.

A trial shipment of direct shipping ore was mined out of a small quarry in 1963. It is estimated some 450 cubic metres of barite-rich limestone was mined from this open pit. In 1986, a tunnel was driven 37 metres and another 8 metres lateral extension driven to follow the bedded barite (Assessment Report 15706).

W.W.C. Consulting Ltd. drilled in 1997.

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EMPR ASS RPT *6358, *15706
EMPR BULL *35, p. 64
EMPR EXPL 1977-E61; 1997-50
EMPR GEM *1970-487
GSC MAP 24-1958
GSC OF 634
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW003**

NATIONAL MINERAL INVENTORY:

NAME(S): **BINGAY**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J03E 082J02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 12 00 N
LONGITUDE: 115 00 04 W
ELEVATION: 1480 Metres

NORTHING: 5562780
EASTING: 642654

LOCATION ACCURACY: Within 500M

COMMENTS: Upstream (2.4 kilometres) on Bingay Creek from the Elk River forestry road.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate

MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
DIMENSION:

STRIKE/DIP: 165/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

GROUP

Fernie

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phosphorite
Shale
Sandstone
Dolomite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

11.8000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

Vertical dipping phosphorite, sandstone and shale of the Jurassic Fernie Group overlies silty dolomite of the Middle or Upper Triassic Whitehorse Formation. The phosphorite bed at the Bingay showing is 1.04 metres thick and contains 11.8 per cent P₂O₅ (Open File 1987-16). The top of the phosphate horizon is marked by an orange weathering calcareous horizon and the base is marked by a thin conglomerate unit. The phosphorite bed is comprised of pelletal phosphate and contains a few shell fragments.

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EMPR FIELDWORK 1986, pp. 289-302; 1989, pp. 489-492
EMPR OF *1987-16, pp. 87,89
GSC MEM 336
GSC OF 481; 634
PERS COMM Butrenchuk, S.B. (1986)

DATE CODED: 1985/07/24
DATE REVISED: 1986/12/10

CODED BY: GSB
REVISED BY: SBB

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082JSW004**

NATIONAL MINERAL INVENTORY:

NAME(S): **AMOS, LUSSIER NORTH, CATH,
DOMTAR AMOS**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J04E
BC MAP:

MINING DIVISION: Fort Steele

LATITUDE: 50 05 15 N
LONGITUDE: 115 32 14 W
ELEVATION: 1220 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5549384
EASTING: 604641

LOCATION ACCURACY: Within 500M

COMMENTS: East bank of Lussier River, 2.2 kilometres north of the junction of
Lussier River and Coyote Creek.

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Anhydrite
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Sedimentary Stratabound
Evaporite Industrial Min.
TYPE: F02 Bedded gypsum F04 Bedded celestite
SHAPE: Irregular
MODIFIER: Folded

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	
Devonian	Undefined Group	Harrogate	

LITHOLOGY: Gypsum
Limestone
Anhydrite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Amos occurrence, two small gypsum outcrops are exposed along the east bank of the Lussier River, 2.2 kilometres north of the confluence of it and Coyote Creek. The gypsum belongs to the Devonian Burnais Formation and appears to be restricted to a very small area. Where exposed, the gypsum is pale grey, grey and pale brownish grey. It is laminated to thin-bedded with the laminae contorted and folded. Some breccia is also present. North and northeast, the gypsum is cut off by limestone and anhydrite. There is some potential present to the south.

Overburden in the area varies from 15 to 76 metres and may preclude mining of the gypsum in many localities.

Georgia Pacific Canada Inc. holds the property.

BIBLIOGRAPHY

EM EXPL 1999-40-52
EMPR ASS RPT 422, *16886
EMPR FIELDWORK 1988, pp. 497-506
GSC OF 634
WWW <http://www.gapac.com>

DATE CODED: 1989/02/27
DATE REVISED: 1991/04/16

CODED BY: SBB
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JSW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **LITTLE JOAN**, KOOTENAY RIVER, NINE MILE CREEK,
KOOTENAY WEST

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 13 30 N
LONGITUDE: 115 42 29 W
ELEVATION: 1040 Metres

NORTHING: 5564446
EASTING: 592156

LOCATION ACCURACY: Within 500M

COMMENTS: North of Canal Flats by road (13.6 kilometres), near centre of
largest exposure (Bulletin 35). See also Nine Mile 6 (082JSW020).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
DIMENSION: 125 Metres STRIKE/DIP:
COMMENTS: Gypsum exposed in trenches and workings. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	

LITHOLOGY: Gypsum

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Little Joan quarry is located on the west side of the Kootenay River about one kilometre south of Nine Mile Creek. Gypsum has been exposed in trenches and other workings over a stratigraphic interval of approximately 125 metres.

In the Kootenay River - Nine Mile Creek area, gypsum outcrops extensively on the west side of the river in an area approximately 1.5 kilometres in length, with an average width of 400 metres and an elevation difference of up to 30 metres. Bedding generally strikes north to northeast with moderate to steep dips to the east. The gypsum, typically laminated to thin-bedded, is pale grey to grey in color. Pure white gypsum is present locally. To the west, the gypsum is in fault contact with older rocks and to the east it disappears under extensive overburden in the river valley. The Little Joan quarry is located at the north end of this area (see also Nine Mile 082JSW020).

To the west of the Little Joan deposit, gypsum is in fault contact with the Upper Cambrian Sabine Formation. The gypsum at the quarry is normally well-laminated except for numerous lenses, blebs and irregular areas of white massive gypsum scattered throughout. Locally this white gypsum may crosscut or have gradational contacts with the grey laminated variety.

There are several large exposures of gypsum, to the north, along the east bank of the Kootenay River near Nine Mile Creek. The gypsum, thought to be of the Devonian Burnais Formation, is intercalated with carbonate rocks of the Cedared Formation.

Minor shipments, in 1951, from this quarry contained 85 per cent, or less, gypsum.

Westroc Industries Limited plan mining in the area.

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EM INF CIRC 1998-1, p. 13
EMPR AR 1950-223
EMPR BULL *35, p. 63
EMPR FIELDWORK 1988, pp. 497-506

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 435
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF *1991-15
GSC OF 634
WWW http://www.infomine.com/index/properties/WEST_KOOTENAY.html

DATE CODED: 1986/06/25
DATE REVISED: 1991/12/13

CODED BY: BG
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW006**

NATIONAL MINERAL INVENTORY:

NAME(S): **URSUS**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 21 49 N
LONGITUDE: 115 50 11 W
ELEVATION: 1373 Metres

NORTHING: 5579707
EASTING: 582761

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Silver Zinc

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz
ALTERATION: Limonite Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E12 Mississippi Valley-type Pb-Zn
DIMENSION:

STRIKE/DIP: 310/40E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Undefined Group Jubilee

LITHOLOGY: Brecciated Dolomite
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1987

COMMODITY	GRADE	
Silver	65.0000	Grams per tonne
Lead	0.2500	Per cent
Zinc	0.6000	Per cent

REFERENCE: Assessment Report 6990.

CAPSULE GEOLOGY

At the Ursus showing, minor galena with pyrite occurs in small quartz veins and is associated with shearing and brecciation of Middle-Upper Cambrian Jubilee Formation dolomites. A sample across a 15 centimetre vein assayed 0.25 per cent lead, 0.6 per cent zinc and 65 grams silver (Assessment Report 6990).

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EMPR ASS RPT *6990
EMPR EXPL 1978-E72
GSC MAP 24-1958
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/25

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW007**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROSE 1**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 40 N
LONGITUDE: 115 57 07 W
ELEVATION: 1230 Metres

NORTHING: 5594132
EASTING: 574337

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Chalcocite Bornite
ASSOCIATED: Calcite
ALTERATION: Hematite Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E04 Sediment-hosted Cu
SHAPE: Irregular
DIMENSION:

STRIKE/DIP: 020/75W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Undefined Group	Jubilee	

LITHOLOGY: Dolomite
Dolomite Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Rose 1 showing, tan and white weathering blocky dolomite of the Middle-Upper Cambrian Jubilee Formation is cut by a fault zone trending 020 degrees and dipping about 75 degrees west. The dolomites along this zone are faulted and brecciated with the breccia healed by carbonate containing disseminations and patches of malachite and azurite with associated bornite, chalcocite and chalcopyrite.

A grab sample of malachite-azurite-rich material assayed 17.5 per cent copper. Chip samples in the area of the Rose 1 showing returned values in the order of 3.3 per cent copper and 12 grams silver. The fault breccia zone is variable in width and appears to be associated with a single fault zone which hosts both the Swansea (082JNW009) and Rose 1 showings.

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EMPR AR 1898-1039
EMPR ASS RPT 2437, *2667, *3504, 7084, 7782, 9958
EMPR BULL 35, p. 65
EMPR EXPL 1978-E73
EMPR GEM 1970-469; 1971-419; 1972-68
GSC MAP 24-1958
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/25

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW008**

NATIONAL MINERAL INVENTORY:

NAME(S): **LUCIEN**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 26 04 N
LONGITUDE: 115 52 44 W
ELEVATION: 1345 Metres

NORTHING: 5587537
EASTING: 579619

LOCATION ACCURACY: Within 500M

COMMENTS: Near centre of north boundary of SL124.

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Sedimentary Hydrothermal Industrial Min.
TYPE: E12 Mississippi Valley-type Pb-Zn
DIMENSION: STRIKE/DIP: 215/80W TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Undefined Group	Jubilee	

LITHOLOGY: Dolomite
Brecciated Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Lucien showing, an isolated pod of mineralized dolomite which ranges 1 to 5 metres in width, is exposed over about 11 metres of strike length. The showing is surrounded by massive Middle-Upper Jubilee Formation dolomite but is covered by talus on the western side. The sulphide zone consists of brownish, highly oxidized brecciated dolomite that is partially replaced by galena. A channel sample across 3 metres assayed 6.3 per cent lead, 30.8 grams per tonne silver, 0.9 per cent zinc and trace gold (Assessment Report 6358).

BIBLIOGRAPHY

EMPR ASS RPT *6358
EMPR BULL *35, p. 64
GSC MAP 24-1958
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW009**

NATIONAL MINERAL INVENTORY: 082J4 Gyp1

NAME(S): **CANAL FLATS**, FOUR J, LUSSIER,
LUSSIER GYPSUM QUARRY, DOMTAR, ROAM CREEK,
COYOTE CREEK, 4J, GEORGIA PACIFIC,
GEORGIA-PACIFIC

STATUS: Producer Open Pit MINING DIVISION: Fort Steele
REGIONS: British Columbia UTM ZONE: 11 (NAD 83)
NTS MAP: 082J04E NORTHING: 5545242
BC MAP: EASTING: 606114
LATITUDE: 50 03 00 N
LONGITUDE: 115 31 04 W
ELEVATION: 1402 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Quarry (Industrial Mineral File - Rodgers, et al (1984)).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Carbonate Dolomite Quartz Anhydrite Selenite
Sulphur Pyrite
COMMENTS: Rare native sulphur and pyrite.
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F02 Bedded gypsum F04 Bedded celestite
SHAPE: Tabular
MODIFIER: Faulted Folded
DIMENSION: 156 x 100 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Gypsum exposed in outcrop across a 156 metre width and over a vertical height of 100 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	
Devonian	Undefined Group	Harrogate	

LITHOLOGY: Gypsum
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: LUSSIER REPORT ON: Y
CATEGORY: Unclassified YEAR: 1984
QUANTITY: 7000000 Tonnes
COMMODITY: Gypsum GRADE: 90.0000 Per cent
COMMENTS: Original reserves in 1984, when the quarry first began production.
Grade is 85 to 90 per cent (Z.D. Hora, personal communication, 1991).
REFERENCE: Open File 1991-15, page 17.

CAPSULE GEOLOGY

The Lussier quarry is located 500 metres east of the Lussier River and 2.5 kilometres south of its confluence with Coyote Creek, 24 kilometres southeast from the village of Canal Flats. The southernmost exposures of gypsum in the Stanford Range occur in the Lussier River - Coyote Creek area. In this area, individual gypsum showings have been traced from about 2 kilometres north of the confluence of the Lussier River and Coyote Creek to the northern boundary of the Top of the World Park. The gypsum observed in the Lussier River valley is vertical to steeply dipping. Faulting may have been important in the localization and preservation of these deposits. The dominant structural feature is a north-trending syncline with shallow dipping limbs. Gypsum is present along both limbs and the axis is located along the height of land separating the Lussier River and Coyote Creek.

CAPSULE GEOLOGY

Gypsum in the Stanford Range occurs in rocks of Devonian age. In the Lussier River - Coyote Creek area, the Devonian sequence is overlain by a shale unit and carbonate strata of the Mississippian Banff Formation. The area is underlain by a sequence of evaporites and associated carbonate rocks of the Burnais Formation with an overlying limestone and shale sequence of the Harrogate Formation. More recent work proposed the term "Cedared Formation" for a sequence of dolomites, sandstones and limestones that is, in part, stratigraphically equivalent to the Burnais Formation. Much of the carbonate strata previously included in the Burnais Formation are now tentatively assigned to either the Cedared or Harrogate formations. The Harrogate Formation is the youngest Devonian unit in the Stanford Range.

Thin-bedded or laminated gypsum of the Burnais Formation is assumed to be in fault contact with the underlying Ordovician to Silurian Beaverfoot-Brisco Formation or in conformable contact with the Cedared Formation and overlain conformably by the black to dark grey limestone of the Harrogate Formation. The Beaverfoot-Brisco Formation is comprised of thin to medium-bedded light grey dolomite and limestone with characteristic ovular chert nodules and lenses in a carbonate matrix. The gypsum is of good quality, ranging between 83 and 93 per cent gypsum and varying in color from pale grey to grey, brownish grey, dark grey and black. Cream-colored laminae are also present.

The evaporite sequence has been folded into a series of northwest-plunging, 18 to 40 degrees, folds. Small scale faulting with minimal displacement is present west of the Elkhorn quarry (082JSW021).

Gypsum/anhydrite evaporite deposits commonly form in either standing bodies of water or within the vadose zone and upper phreatic zone on supratidal flats and desert playas. Characteristics of the former include laminated or bedded evaporites and soft sediment deformation with small faults. They are usually void of fossils. Based on these criteria it can be interpreted that gypsum deposits in the Stanford Range probably formed in a standing body of water. Water depths were probably shallow ranging from a few centimetres to a few metres. This is evidenced by the presence of cross-laminations, cut and fill structures and rip-up breccias. The presence of selenite is also indicative of a shallow water environment (Open File 1991-15).

The Lussier gypsum deposit, hosted in the Burnais Formation, is exposed in outcrop across a width of 156 metres and over a vertical height of approximately 100 metres. It occurs in a northeast trending anticline and is truncated on the south by a fault, the deposit probably abuts a fault to the north, although evidence for this is lacking. Carbonate strata of the Cedared Formation outcrops immediately north and south of the deposit but nowhere are contact relationships exposed for observation. The deposit is overlain by nodular limestone of the Harrogate Formation. Structure within the deposit is complicated by numerous faults with minimal displacement and intricate small-scale enterolithic folds. A fault with considerable but undeterminable displacement near the southern end of the quarry has a carbonate band adjacent to it. These structures are the locus of sinkholes and other karst features within the deposit.

Gypsum varies in colour from pale grey to black with some cream to white laminae present. It is very well-laminated with laminae generally 0.1 to 4 millimetres thick but thicker laminae are present, locally. White selenite occurs as blebs along fractures and fault zones. Native sulphur and pyrite are present locally, but are rare. Anhydrite occurs as pods or thin layers within the deposit which increase in frequency and extent with depth.

In thin section, the gypsum is observed to have a fine-grained granular texture. The texture varies from distinct well-formed grains to grains with diffuse boundaries, giving the rock a felted appearance. Carbonate material, generally in the form of dolomite, constitutes approximately 10 to 15 per cent of the rock. Minor amounts of quartz and lesser anhydrite are also present.

The Lussier quarry which began producing in 1984 is owned by Domtar Inc. and operated by Domtar Gypsum. No production figures are available. Original reserves were calculated to be approximately 7 million tonnes (Open File 1991-15) grading 85 to 90 per cent gypsum (Z. D. Hora, personal communication, 1991). Gypsum is hauled a distance of 32 kilometres over logging roads to a plant situated at Canal Flats. There is no primary crushing of the gypsum at the quarry site; the crushing plant is located along a railroad spur at Canal Flats.

Georgia-Pacific Canada, Inc. began operating the Coyote Creek quarry in 1996 and drilled about 500 metres in 1997 near the Four J quarry and shipped product in 1998. Estimated production is 100,000

CAPSULE GEOLOGY

tonnes of gypsum yearly.

BIBLIOGRAPHY

EM EXPL 1996-A12; 1997-50; 1998-74; 1999-48,51; 2000-52; 2001-51
EMPR AR 1959-167; 1960-140; 1961-144; 1962-151; 1963-144; 1964-185
EMPR ASS RPT 8076, 10764
EMPR BULL 35
EMPR ENG INSP Annual Report 1989, 1990
EMPR FIELDWORK 1988, pp. 497-506
EMPR INF CIRC 1995-1 p. 9; 1996-1, p. 9; 1997-1, p. 12
EMPR MAP 65 (1989)
EMPR MINING 1981-1985, pp. 59,60; 1986-1987, p. 86; 1988, p. 85
EMPR OF *1991-15; 1991-23; 1992-1; 1992-9; 1994-1
EMPR PF (*Rodgers, G.M. and Kovacs, J. (1984): Stage One
Report, Lussier River Quarry)
EMR MP CORPFILE (Alscope Consolidated Ltd.; United Gypsum Corporation
Ltd.)
GSC BULL 146
GSC MAP 24-1958; 11-1960
GSC MEM 336
GSC OF 481; 634
GSC P 54-7, p. 29
N MINER Aug.26, 1971; Oct.19, 1998
WWW <http://www.gapac.com>

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/13

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 442
REPORT: RGEN0100

MINFILE NUMBER: **082JSW010**

NATIONAL MINERAL INVENTORY:

NAME(S): **THUNDER HILL**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082J04W
BC MAP:

Open Pit

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 08 50 N
LONGITUDE: 115 50 04 W
ELEVATION: 825 Metres

NORTHING: 5555650
EASTING: 583276

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of "Thunderhill 2" claim.

COMMODITIES: Shale

MINERALS

SIGNIFICANT: Shale

MINERALIZATION AGE: Hadrynian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R02 Expanding shale

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Hadrynian	Horsethief Creek	Undefined Formation	

LITHOLOGY: Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Thunder Hill occurrence, 3872 tonnes of Hadrynian Horsethief Creek Group(?) shales were quarried at Canal Flats and sent to Lethbridge, Alberta by Mountain Minerals Ltd. in 1969 and 1971.

BIBLIOGRAPHY

EMPR BULL 35
EMPR GEM 1969-387; 1971-459
GSC MAP 24-1958
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW010**

MINFILE NUMBER: **082JSW011**

NATIONAL MINERAL INVENTORY:

NAME(S): **MUNROE**, SOAB

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 06 23 N
LONGITUDE: 115 05 43 W
ELEVATION: 1550 Metres

NORTHING: 5552197
EASTING: 636200

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Zinc

MINERALS

SIGNIFICANT: Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Devonian	Undefined Group	Palliser	

LITHOLOGY: Dolomite
Limestone

HOSTROCK COMMENTS: Showings are within the Morro Member of the formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Monroe occurrence area, stratabound lead-zinc showings occur in platformal carbonates of the Upper Devonian Palliser Formation. A distinctive carbonate rock termed "Zebra Facies" that is characterized by fenestral (and geopetal) spar dolomite crescents in a fine-grained granular dolomite matrix, hosts the mineralization. It is interpreted to be of supratidal algal origin and is underlain and overlain by massive, subtidal limestone. Pale yellow to almost clear sphalerite is disseminated through the granular dolomite and is concentrated along the periphery of spar dolomite patches. The mineralization is confined to a number of discrete zones generally less than 1 metre thick and a few metres in length.

BIBLIOGRAPHY

EMPR AR 1953-155
EMPR ASS RPT 6263, 6910, *7489
EMPR EXPL 1976-E46; 1977-E60; 1978-E71; 1979-80
EMPR FIELDWORK *1980, p. 108
EMPR MAP *46
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW012**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALPINE**, SOAB

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 40 N
LONGITUDE: 115 04 32 W
ELEVATION: 2287 Metres

NORTHING: 5547199
EASTING: 637740

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Zinc

MINERALS

SIGNIFICANT: Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Devonian	Undefined Group	Palliser	

LITHOLOGY: Dolomite
Limestone

HOSTROCK COMMENTS: Showings are within the Morro Member of the formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Alpine occurrence area, stratabound lead-zinc showings occur in platformal carbonates of the Upper Devonian Palliser Formation. A distinctive carbonate rock termed "Zebra Facies" that is characterized by fenestral (and geopetal) spar dolomite crescents in a fine-grained granular dolomite matrix, hosts the mineralization. It is interpreted to be of supratidal algal origin and is underlain and overlain by massive, subtidal limestone. Pale yellow to almost clear sphalerite is disseminated through the granular dolomite and is concentrated along the periphery of spar dolomite patches and within the spar dolomite. The mineralization is confined to a number of discrete zones generally less than 1 metre thick and a few metres in length.

BIBLIOGRAPHY

EMPR AR 1953-155
EMPR ASS RPT 6263, 6910, *7489
EMPR EXPL 1976-E46; 1977-E60; 1978-E71; 1979-80
EMPR FIELDWORK *1980, p. 108
EMPR MAP *46
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/27

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW013**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOIVIN, SOAB**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 24 N
LONGITUDE: 115 04 07 W
ELEVATION: 2211 Metres

NORTHING: 5543012
EASTING: 638345

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Zinc

MINERALS

SIGNIFICANT: Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Disseminated
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Devonian	Undefined Group	Palliser	

LITHOLOGY: Limestone
Dolomite

HOSTROCK COMMENTS: Showings are within the Morro Member of the formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

In the Boivin occurrence area, stratabound lead-zinc showings occur in platformal carbonates of the Upper Devonian Palliser Formation. A distinctive carbonate rock termed "Zebra Facies" that is characterized by fenestral (and geopetal) spar dolomite crescents in a fine-grained granular dolomite matrix, hosts the mineralization. It is interpreted to be of supratidal algal origin and is underlain and overlain by massive, subtidal limestone. Pale yellow to almost clear sphalerite is disseminated through the granular dolomite and is concentrated along the periphery of spar dolomite patches and within the spar dolomite. The mineralization is confined to a number of discrete zones generally less than 1 metre thick and a few metres in length. The Boivin showing measures approximately 12 by 2 metres and contains up to 20 per cent zinc.

BIBLIOGRAPHY

EMPR AR 1953-155
EMPR ASS RPT 6263, 6910, *7489
EMPR EXPL 1976-E46; 1977-E60; 1978-E71; 1979-80
EMPR FIELDWORK *1980, p. 108
EMPR MAP *46
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082JSW014**

NATIONAL MINERAL INVENTORY:

NAME(S): **COL**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05W 082J04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 15 00 N
LONGITUDE: 115 48 14 W
ELEVATION: 2013 Metres

NORTHING: 5567112
EASTING: 585275

LOCATION ACCURACY: Within 500M

COMMENTS: Showing and claims continue onto NTS map 82J/4W.

COMMODITIES: Zinc Lead Barite

MINERALS

SIGNIFICANT: Sphalerite Galena Barite
ASSOCIATED: Pyrite
ALTERATION: Smithsonite
COMMENTS: Also iron-oxides and hydrates.
ALTERATION TYPE: Carbonate Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform Breccia
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Undefined Group Jubilee

LITHOLOGY: Dolomite
Brecciated Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Col showing, sphalerite, smithsonite, galena and barite are hosted in an east trending fault zone within Middle-Upper Cambrian Jubilee Formation dolomites.

Mineralization is associated with podiform barite, barite-healed fractures and/or tectonic breccia or crackle development. The zinc-lead mineralization is normally concentrated at the margins of the barite pods but is occasionally disseminated within them. There are traces of pyrite but there is no silicification or evidence of karst development of the sedimentary stratigraphy.

BIBLIOGRAPHY

EMPR ASS RPT 6316, *6526
EMPR BULL 35
EMPR EXPL 1977-E60
GSC MAP 24-1968
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW015**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAN**, MOUNT PEDLEY

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 24 45 N
LONGITUDE: 115 42 04 W
ELEVATION: 2225 Metres

NORTHING: 5585302
EASTING: 592287

LOCATION ACCURACY: Within 500M

COMMENTS: Mountain peak about 3 kilometres east-northeast of Pedley Mountain.

COMMODITIES: Barite Zinc Lead

MINERALS

SIGNIFICANT: Barite Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E12 Mississippi Valley-type Pb-Zn E17 Sediment-hosted barite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Ordovician-Silurian	Undefined Group	Beaverfoot-Brisco	

LITHOLOGY: Dolomite
Dolomite Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

CAPSULE GEOLOGY

At the Stan showing, barite veins carrying sphalerite and galena transect dolomite of the Middle Ordovician-Silurian Beaverfoot-Brisco Formation.

This barite deposit occurs on a steep north-facing slope 3 kilometres northeast of Mount Pedley at an elevation of 1800 metres. The hostrocks are greyish-brown, massive and brittle dolomites of the Ordovician-Silurian Beaverfoot-Brisco Formation. These rocks strike east with gentle dips of 20 to 40 degrees north. A barite-cemented dolomite breccia zone with many branches and off-shoots, strikes east with a steep dip to the north-northwest. The two main exposures are separated by a vertical distance of approximately 100 metres. The barite is white, coarse grained and contains scattered grains of galena. Locally it is stained light brown by secondary iron oxide. One sample has a specific gravity of 3.7, contains 32.79 per cent barium, 1.35 per cent lead and anomalous zinc and mercury (Open File 1997-16, page 66).

Barwell Resources Ltd. of Calgary mined several thousand tonnes of barite ore from this locality in 1985. The barite was processed at its Windermere plant.

BIBLIOGRAPHY

EMPR BULL 35
EMPR EXPL 1977-E61
EMPR OF 1997-16, pp. 64-66
GSC OF 634
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/26

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW016**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARTIN**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 14 27 N
LONGITUDE: 115 39 29 W
ELEVATION: 1067 Metres

NORTHING: 5566270
EASTING: 595690

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Anhydrite
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
TYPE: F04 Bedded celestite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	

LITHOLOGY: Gypsum
Anhydrite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

Very extensive gypsum deposits occur along the Kootenay River and the lower part of the Nine Mile Creek drainage within the Devonian Burnais Formation. The gypsum at the Martin occurrence is normally grey, well-laminated and locally folded.

BIBLIOGRAPHY

EMPR ASS RPT 6339
EMPR BULL 35
GSC MAP 24-1958
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1986/06/25

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW017**

NATIONAL MINERAL INVENTORY: 082J4 Gyp1

NAME(S): **BEAVER (LUSSIER SOUTH)**, BEAVER, LUSSIER SOUTH,
SQ

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082J04E
BC MAP:
LATITUDE: 50 02 15 N
LONGITUDE: 115 31 04 W
ELEVATION: 1326 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Quarry (Open File 1991-15).

Open Pit

MINING DIVISION: Fort Steele
UTM ZONE: 11 (NAD 83)
NORTHING: 5543853
EASTING: 606142

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Selenite Dolomite Quartz Anhydrite Sulphur
Albite Chlorite Syngenite
COMMENTS: Minor and trace amounts of all associated minerals.
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
SHAPE: Tabular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	

LITHOLOGY: Gypsum
Limestone
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

The Beaver (Lussier South) quarry is located 1025 metres south of the presently producing Lussier quarry (082JSW009), on the east side of the Lussier River, 4 kilometres south of its confluence with Coyote Creek and 24 kilometres southeast from the village of Canal Flats. There has been some minor production from this quarry but no figures are available.

Refer to the Lussier deposit (082JSW009) for detailed regional geology on the Lussier River - Coyote Creek area.

Gypsum of the Devonian Burnais Formation is exposed along the quarry walls across a width of 80 metres. It is laminated to thin-bedded, pale grey to grey with some dark laminae present. At the south end of the outcrop numerous faults and some brecciated gypsum is present. Minor amounts of selenite, as blebs and stringers, occur throughout. Trace to minor amounts of native sulphur, dolomite, quartz, anhydrite were also observed. Trace amounts of albite, chlorite and syngenite, a hydrous, calcium-potassium sulphate salt, were identified by x-ray diffraction study (Open File 1991-15). A high salt content in the deposit caused cessation of production.

Georgia Pacific Canada Inc. holds the property.

BIBLIOGRAPHY

EM EXPL 1999-40-52
EMPR AR 1968-308
EMPR ASS RPT 10764
EMPR BULL 35
EMPR FIELDWORK 1988, pp. 497-506
EMPR OF *1991-15
GSC BULL 146
GSC MAP 24-1958; 11-1960
GSC MEM 336

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 450
REPORT: RGEN0100

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GSC OF 481; 634
GSC P 54-7
WWW <http://www.gapac.com>

DATE CODED: 1986/06/25
DATE REVISED: 1991/02/12

CODED BY: BG
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082JSW018**

NATIONAL MINERAL INVENTORY: 082J3 Fsp1

NAME(S): **ROCK CANYON CREEK**, DEEP PURPLE, CANDY,
FLUORITE, D.P.

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J03E
BC MAP:

MINING DIVISION: Golden

LATITUDE: 50 13 00 N
LONGITUDE: 115 08 44 W
ELEVATION: 1760 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5564367
EASTING: 632300

LOCATION ACCURACY: Within 500M

COMMENTS: Located near the headwaters of Rock Canyon in the eastern White River drainage, about 40 kilometres east of Canal Flats. Location of zone of fluorite/rare earth mineralization from Fieldwork 1988, Figure 3-1-3, page 472.

COMMODITIES: Fluorite Rare Earths Thorium Silver Gold

MINERALS

SIGNIFICANT:	Fluorite	Barite	Bastnaesite	Gorceixite	Parisite
ASSOCIATED:	Prosopite				
ALTERATION:	Calcite	Pyrite	Phosphate	Apatite	Allanite
ALTERATION TYPE:	Pyrite	Limonite	Illite	Ankerite	
MINERALIZATION AGE:	Unknown		Fenitic	Carbonate	

DEPOSIT

CHARACTER: Stratabound Disseminated Vein
CLASSIFICATION: Replacement Hydrothermal Industrial Min.
TYPE: N01 Carbonatite-hosted deposits
COMMENTS: Carbonatite-related origin proposed.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Devonian	Fairholme	Undefined Formation	
Ordovician-Silurian	Undefined Group	Beaverfoot	

LITHOLOGY: Dolomite
Intraformational Conglomerate
Limestone
Mudstone
Carbonatite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock

<u>COMMODITY</u>	<u>GRADE</u>	
Fluorite	2.5000	Per cent
Thorium	0.0580	Per cent

COMMENTS: Rock sample from brown-altered carbonate with fluorite.
REFERENCE: Assessment Report 14677.

CAPSULE GEOLOGY

The Rock Canyon Creek occurrence area is underlain by a Cambro-Ordovician to Middle Devonian carbonate-dominated sequence. A west dipping thrust fault places Cambrian and Ordovician strata over younger rocks. An overturned to upright homoclinal sequence, younging to the east, comprises coral-rich limestones of the Middle Ordovician-Silurian Beaverfoot Formation, unconformably overlain by dolomites, mudstone and solution breccias of the "basal Devonian unit", which are conformably overlain by limestone of the Upper Devonian Fairholm Group.

Fluorspar and rare-earth mineralization is stratabound, hosted mainly by the "basal Devonian unit", and occurs in a northwest trend over 3.5 kilometres. The main type of fluorite mineralization identified consists of disseminations and veinlets of dark purple fluorite in a dolomite matrix. Associated minerals and elements

CAPSULE GEOLOGY

include bastnaesite, pyrite, gorceixite, calcite, limonite, illite, barite, parisite, apatite, niobium, strontium and yttrium. Fluorite content generally varies from 2 to greater than 10 per cent of the rock. Other types of fluorite occurring include: 1) higher grade massive, fine-grained purple and white fluorite; 2) disseminated purple fluorite in white calcite, locally interbedded with dolomite and forming the matrix of solution breccias; and 3) massive purple fluorite in the matrix of an intraformational conglomerate.

A sample of brown-altered carbonate with fluorite (R85DP-1A) assayed 1.0 per cent cerium, 0.98 per cent lanthanum, 0.3 per cent neodymium, 0.058 per cent thorium and 0.03 per cent samarium. About 700 metres to the east-southeast, a sample of altered carbonate with fluorite (R85DP-3) assayed 0.075 per cent thorium and a massive dark purple fluorite sample from a vein (R85DP-6) assayed 201 grams per tonne silver and 0.8 grams per tonne gold. Subsequent electron microprobe study identified a new silver telluride. (Assessment Report 14677).

A carbonatite-related origin is suggested for the fluorite and rare-earth mineralization, which resulted from metasomatically altered (finitized) Devonian carbonate rocks, possible related to a deep-seated alkaline intrusion (Fieldwork 1988).

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EMPR FIELDWORK *1985, pp. 241-242; 1986, pp. 255-257; *1988, pp. 472-475
EMPR OF *1987-17, pp. 18,31-36; 1990-32; 1992-16
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1990/08/02

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW019**

NATIONAL MINERAL INVENTORY:

NAME(S): **GYPIT**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 00 N
LONGITUDE: 115 28 04 W
ELEVATION: 1371 Metres

NORTHING: 5543462
EASTING: 609732

LOCATION ACCURACY: Within 500M

COMMENTS: East of Coyote Creek approximately 5 kilometres south of the junction of Coyote Creek and Lussier River.

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Dolomite Anhydrite Quartz
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Podiform Stratabound
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
TYPE: F04 Bedded celestite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	
Devonian	Undefined Group	Cedared	

LITHOLOGY: Gypsum
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Gypit occurrence, gypsum is exposed in a solitary outcrop over a length of 115 metres with thicknesses varying between 10 and 20 metres. It is dark grey to black with some pale grey and cream coloured laminae present. The gypsum is typically laminated with laminations being contorted and folded. Small-scale faults with negligible displacement are also present. In thin section the gypsum can be seen to be fine grained and granular. Very fine-grained dolomite is also present.

Contacts with the surrounding rocks are nowhere observed. A small outcrop of dark grey to black dolomite occurs a short distance to the northwest and is assigned to the Devonian Cedared Formation. The gypsum belongs to the Devonian Burnais Formation.

BIBLIOGRAPHY

EMPR ASS RPT 16887
EMPR FIELDWORK 1988, pp. 497-506
GSC OF 634

DATE CODED: 1989/02/27
DATE REVISED: 1991/04/16

CODED BY: SBB
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082JSW020**

NATIONAL MINERAL INVENTORY:

NAME(S): **NINE MILE** KOOTENAY RIVER, KOOTENAY WEST

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J04E
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 12 33 N
LONGITUDE: 115 42 29 W
ELEVATION: 915 Metres

NORTHING: 5562686
EASTING: 592186

LOCATION ACCURACY: Within 500M

COMMENTS: Gypsum outcrops in sinkholes along the east bank of the Kootenay River and on both sides of Nine Mile Creek (Open File 1991-15).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F04 Bedded celestite
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 1500 x 400 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Area containing gypsum exposures.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	
Devonian	Undefined Group	Cedared	

LITHOLOGY: Gypsum
Limestone

HOSTROCK COMMENTS: Gypsum is intercalated with carbonate strata of the Cedared Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Grab
COMMODITY GRADE
Gypsum 97.0000 Per cent
COMMENTS: Sampling indicates a gypsum content between 81 and 97 per cent.
REFERENCE: Open File 1991-15.

CAPSULE GEOLOGY

In the Nine Mile Creek area, very extensive gypsum deposits are exposed in an area 1.5 kilometres in length across an average width of 400 metres. Gypsum outcrops in sink holes along the east bank of the Kootenay River and on both sides of Nine Mile Creek.

To the west, gypsum is in fault contact with older rocks and to the east it disappears under extensive overburden in the Kootenay River valley. Bedding generally strikes north to northeast with moderate to steep easterly dips. Gypsum of the Devonian Burnais Formation is intercalated with carbonate strata of the Devonian Cedared Formation. The gypsum is pale grey to grey in color and is typically laminated to thin-bedded.

At the Nine Mile showing, the gypsum is highly folded, and contains scattered lenses, blebs and irregular areas of white massive gypsum. The gypsum varies from cream to pure white in the north, to the more typical pale grey to grey in southern exposures. On the north side of the creek a 21 metre cliff composed of gypsum is exposed for 76 metres.

The quality of rock in the area is variable, with gypsum content varying from 44 to 94 per cent (Fieldwork 1988, p. 503). Sampling, by Butrenchuk, indicated gypsum contents between 81 and 97 per cent

CAPSULE GEOLOGY

(Open File 1991-15).

A minor amount of gypsum was produced from the Little Joan quarry (082JSW005) at the north end of the Kootenay River - Nine Mile Creek area.

Westroc Industries Limited plan mining the gypsum deposits in the area.

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EMPR BULL *35, p. 63

EMPR FIELDWORK *1988, p. 503

EMPR OF *1991-15

GSC OF 634

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DATE CODED: 1985/07/24
DATE REVISED: 1991/08/20

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW021**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELKHORN**, ELKHORN 1, ELKHORN 2,
WESTROC, COLUMBIA GYPSUM, WINDERMERE,
ELKHORN QUARRY EXTENSION, ELKHORN WEST, ELKHORN EAST

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:
LATTITUDE: 50 29 50 N
LONGITUDE: 115 54 18 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Quarry site is on the south side of Winderemere Creek, 800 metres south of the Windermere deposits (082JSW028) (Open File 1991-15).

Open Pit

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5594489
EASTING: 577662

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Evaporite
TYPE: F02 Bedded gypsum
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 250 x 70 Metres
COMMENTS: Elkhorn 1 orebody.

Stratabound
Sedimentary

Industrial Min. F04 Bedded celestite

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	
Ordovician-Silurian	Undefined Group	Beaverfoot-Brisco	

LITHOLOGY: Gypsum
Limestone
Dolomite
Shale
Sandstone

HOSTROCK COMMENTS: The gypsum is in fault contact with the Beaverfoot-Brisco Formation or in conformable contact with the Devonian Cedared Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: ELKHORN
REPORT ON: Y

CATEGORY: Unclassified
QUANTITY: 4000000 Tonnes
COMMODITY: Gypsum
GRADE: 80.0000 Per cent

YEAR: 1982

COMMENTS: Initial estimated reserves between 3.3 and 4.0 million tonnes with a grade averaging greater than 80 per cent.

REFERENCE: Open File 1991-15, page 13.

CAPSULE GEOLOGY

Gypsum was discovered on Windermere Creek in 1947. Production, beginning in 1950, has been continuous to the present day totalling in excess of 6.8 million tonnes. Gypsum was mined from the four Windermere quarries (082JSW028) until 1981 and, since 1982, from the Elkhorn quarry (Elkhorn 1 deposit) south of the creek and 800 metres south of the Windermere deposits.

Gypsum, in Devonian age rocks, occurs along a northwesterly trend which has a strike length of 5 kilometres north and south of Windermere Creek. The area is underlain by a sequence of evaporites and associated carbonate rocks of the Burnais Formation with an overlying limestone and shale sequence of the Harrogate Formation. More recent work proposed the term "Cedared Formation" for a sequence of dolomites, sandstones and limestones that is, in part, stratigraphically equivalent to the Burnais Formation. Much of the

CAPSULE GEOLOGY

carbonate strata previously included in the Burnais Formation are now tentatively assigned to either the Cedared or Harrogate formations. The Harrogate Formation is the youngest Devonian unit in the Stanford Range.

Thin-bedded or laminated gypsum of the Burnais Formation is assumed to be in fault contact with the underlying Ordovician to Silurian Beaverfoot-Brisco Formation, or in conformable contact with the Cedared Formation, and overlain conformably by black to dark grey limestone of the Harrogate Formation. The Beaverfoot-Brisco Formation is comprised of thin to medium-bedded light grey dolomite and limestone with characteristic ovular chert nodules and lenses in a carbonate matrix. The gypsum is of good quality ranging between 83 and 93 per cent gypsum. It varies in color from pale grey to grey, brownish grey and dark grey to black. Cream-colored laminae are also present.

The evaporite sequence has been folded into a series of northwest-plunging, 18 to 40 degrees, folds. Small scale faulting with minimal displacement is present. A large northwest-trending fault cuts through the lower portion of the Elkhorn quarry. Two gypsum horizons are interpreted, separated by dolomite and limestone. The lower gypsum bed is 50 metres wide and 50 to 100 metres thick. The upper bed is structurally complex and thickness is difficult to determine.

The Elkhorn 1 orebody is tabular, conforming to the slope of the hill on which it outcrops, over a vertical height of approximately 120 metres. It varies in width from 120 to 250 metres with the depth of the gypsum varying from 12 to 70 metres. Immediately to the southeast and across a north-trending draw is the Elkhorn 2 deposit. It is expected that production from this deposit will follow production from the Elkhorn 1 quarry. Reserves are estimated to be sufficient to last well into the next century.

Initial reserves for the Elkhorn 1 were estimated to be 3.3 to 4.0 million tonnes with the gypsum grade averaging better than 80 per cent.

Production, shipped to Vancouver and Calgary, is primarily for the wallboard industry. Westroc Industries operates the quarry and the deposit is classified as a producer, producing between 100,000 and 1,000,000 tonnes per year (Mineral Market Update, July, 1991).

In 1996, the mine was producing about 460,000 tonnes of gypsum from two quarries (Information Circular 1997-1, page 12). In 1997, Westroc produced about 500,000 tonnes from Elkhorn 1 and Elkhorn 2.

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- GSC OF 634
- N MINER Oct. 19, 1998
- WWW <http://www.westroc.com>
- Placer Dome File

DATE CODED: 1986/06/25
DATE REVISED: 1991/11/12

CODED BY: BG
REVISED BY: SBB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW022**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRUROC**, ROAM CREEK, LUSSIER RIVER,
LUSS, NEW LUSS, WESTROC

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082J04E
BC MAP:

MINING DIVISION: Fort Steele

LATITUDE: 50 00 40 N
LONGITUDE: 115 31 04 W
ELEVATION: 1524 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5540919
EASTING: 606200

LOCATION ACCURACY: Within 500M

COMMENTS: Gypsum exposed on the east bank of the Lussier River (Open File 1991-15).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsum
ASSOCIATED: Sulphur
COMMENTS: Trace native sulphur.
MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive	Stratabound	Breccia
CLASSIFICATION: Evaporite	Sedimentary	Industrial Min.
TYPE: F02 Bedded gypsum		F04 Bedded celestite
SHAPE: Tabular		
MODIFIER: Folded	Faulted	
DIMENSION: 200 x 60 x 33	Metres	
COMMENTS: Gypsum body.		

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Undefined Group	Burnais	
Devonian	Undefined Group	Harrogate	

LITHOLOGY: Gypsum
Breccia
Limestone
Calcareous Tufa

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: TRUROC

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 20000000 Tonnes
COMMODITY: Gypsum
GRADE: 90.0000 Per cent

YEAR: 1990

COMMENTS: Potential reserves. The grade is 85 to 90 per cent (Z.D. Hora, personal communication, 1991).

REFERENCE: Open File 1991-15, page 19.

CAPSULE GEOLOGY

The Truroc deposit is located on the east bank of the Lussier River, 2.5 kilometres south of its confluence with Roam Creek, 26.5 kilometres southeast from the village of Canal Flats.

Gypsum in the Stanford Range occurs in rocks of Devonian age. The area is underlain by a sequence of evaporites and associated carbonate rocks of the Burnais Formation with an overlying limestone and shale sequence of the Harrogate Formation. More recent work proposed the term "Cedared Formation" for a sequence of dolomites, sandstones and limestones that is, in part, stratigraphically equivalent to the Burnais Formation. Much of the carbonate strata previously included in the Burnais Formation are now tentatively assigned to either the Cedared or Harrogate formations. The Harrogate Formation is the youngest Devonian unit.

Thin-bedded or laminated gypsum of the Burnais Formation is assumed to be in fault contact with the underlying Ordovician to Silurian Beaverfoot-Brisco Formation, or in conformable contact with

CAPSULE GEOLOGY

the Cedared Formation, and overlain conformably by the black to dark grey limestone of the Harrogate Formation. The Beaverfoot-Brisco Formation is comprised of thin to medium-bedded light grey dolomite and limestone with characteristic ovoid chert nodules and lenses in a carbonate matrix. The gypsum is of good quality ranging between 83 and 93 per cent gypsum. It varies in color from pale grey to grey, brownish grey and dark grey to black. Cream-colored laminae are also present.

The evaporite sequence has been folded into a series of northwest-plunging, 18 to 40 degrees, folds. Small scale faulting with minimal displacement is present west of the Elkhorn quarry.

In the Coyote Creek-Lussier River area, the Devonian sequence is overlain by a shale unit and carbonate strata of the Mississippian Banff Formation.

The southernmost exposures of gypsum in the Stanford Range occur in the Lussier River-Coyote Creek area. In the Lussier River valley, the majority of occurrences are located east of the river. Extensive and very thick overburden preclude tracing the gypsum over any significant distance. Where observed, the gypsum is steeply dipping to vertical. Faulting may have played an important role in the localization and preservation of these deposits. The dominant structural feature in the area is a north trending syncline with shallow dipping limbs. The axis of this syncline is located along the height of land separating the Lussier River and Coyote Creek. Gypsum is present along both limbs of the syncline (Open File 1991-15).

At the Truroc deposit, gypsum occurs on the east bank of the Lussier River, in steep bluffs, in excess of 30 metres high over a length of 200 metres. Sinkholes on both sides of the river suggest that gypsum may be present over a much larger area than observed in outcrop.

The gypsum is pale grey and thinly-bedded to laminar. Bedding and laminations are generally steeply dipping and very often severely contorted. Fault related breccia zones are observed in both outcrop and periodically in drill core. Native sulphur is present in trace amounts. Results of a drill program indicate that the gypsum is approximately 33 metres thick in its centre and 20 metres thick near its northern end.

Overlying the gypsum is black to dark grey limestone of the Harrogate Formation. To the south, the gypsum abuts against a calcareous tufa that is probably a facies equivalent. North of the gypsum, black aphanitic, steeply dipping limestone of the Cedared Formation occurs. The contact with the gypsum is not observed. Faulting is common and may mark the contact between the gypsum and this limestone.

Gypsum/anhydrite evaporite deposits commonly form in either standing bodies of water or within the vadose zone and upper phreatic zone on supratidal flats and desert playas. Characteristics of the former include laminated or bedded evaporites and soft sediment deformation with small faults. They are usually void of fossils. Based on these criteria it can be interpreted that gypsum deposits in the Stanford Range probably formed in a standing body of water. Water depths were probably shallow ranging from a few centimetres to a few metres. This is evidenced by the presence of cross-laminations, cut and fill structures and rip-up breccias. The presence of selenite is also indicative of a shallow water environment (Open File 1991-15).

A conservative reserve estimate suggests a potential for 20 million tonnes grading 85 to 90 per cent gypsum (Z.D. Hora, personal communication, 1991). No gypsum has been observed on the west side of the Lussier River at this locality. Drilling was unsuccessful in penetrating the overburden in this area. While the presence of sinkholes suggests that gypsum may be present at depth it is very doubtful that this gypsum, if present, can be exploited.

Westroc Industries holds the property.

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- EMPR OF *1991-15
- GSC BULL 146
- GSC MAP 24-1958; 11-1960
- GSC MEM 336
- GSC OF 481; 634
- GSC P 54-7

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 460
REPORT: RGEN0100

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WWW <http://www.westroc.com>

DATE CODED: 1989/02/27
DATE REVISED: 1991/02/12

CODED BY: SBB
REVISED BY: GO

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082JSW023**

NATIONAL MINERAL INVENTORY:

NAME(S): **FAIRMONT MOUNTAIN**, FAIRMONT HOT SPRINGS

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 19 28 N
LONGITUDE: 115 50 02 W
ELEVATION: 1219 Metres

NORTHING: 5575355
EASTING: 583007

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on sample site 91, 1.0 kilometre east-southeast of Fairmont Hot Springs (CANMET Report 811, page 214).

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite
MINERALIZATION AGE: Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R10 Dolomite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Undefined Group	Jubilee	
DATING METHOD: Fossil			

LITHOLOGY: Dolomite
Chert
Limestone
Argillite
Slate
Quartzite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1944
SAMPLE TYPE: Grab
COMMODITY GRADE
Dolomite 21.4000 Per cent

COMMENTS: Taken near top of ridge.
REFERENCE: CANMET Report 811, page 214, Sample 91B.

CAPSULE GEOLOGY

Dolomite of the Middle to Upper Cambrian Jubilee Formation underlies a ridge that rises southeastward from Fairmont Hot Springs, culminating in the summit of Fairmont Mountain and continuing eastward to the Kootenay River for a total length of 10 kilometres. The unit is overlain by limestone and argillite of the Upper Cambrian to Middle Ordovician Sabine Formation (McKay Group) and underlain by slate, quartzite and conglomerate of the Hadrynian Horsethief Creek Group. Bedding strikes 094 to 132 degrees and dips 25 to 63 degrees north. The formation is estimated to be 600 metres thick along the ridge.

The Jubilee Formation is composed of an upper, massive to thickly bedded dolomite member and a lower, well-bedded dolomite member. In the vicinity of Fairmont Hot Springs, the upper dolomite member is dark bluish grey and fine grained. Near the top of the ridge, further east, the dolomite becomes pale bluish grey to pinkish grey and medium grained. Both rock types weather to a rough, dark brownish grey surface. Two samples analysed as follows (in per cent) (CANMET Report 811, page 214, Samples 91, 91B):

Sample	CaO	Mgo	SiO2	Al2O3	Fe2O3	Sulphur
91	31.14	21.11	0.18	0.20	0.26	trace

CAPSULE GEOLOGY

91B 30.98 21.40 0.06 0.14 0.29 trace
Sample 91 is from exposures near the west end of the ridge, just south of Fairmont Creek. Sample 91B was taken near the top of the underlying lower member is comprised of light to dark grey, well-bedded dolomite frequently displaying fine laminae as exposed in a 288 metre thick section on the south slope of Mount Fairmont. Some of the beds contain numerous chert nodules.

BIBLIOGRAPHY

EMPR BULL 35, pp. 19,20,66,67
GSC MEM 148, pp. 21,22
GSC OF 634
CANMET RPT *811, Part 5, pp. 214,215

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/13

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW025**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOT**, CANAL FLATS

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 08 43 N
LONGITUDE: 115 45 16 W
ELEVATION: 1067 Metres

NORTHING: 555526
EASTING: 588995

LOCATION ACCURACY: Within 500M
COMMENTS: Koot claims (Open File 1987-15).

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Lower Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R07 Silica sandstone

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Cranbrook	

LITHOLOGY: Quartzite
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Drill Core
COMMODITY: Silica GRADE: 98.8500 Per cent

COMMENTS: Average of 25 composite samples, representing core lengths of 20 metres.
REFERENCE: Open File 1987-15.

CAPSULE GEOLOGY

The Koot prospect is located about 4 kilometres east-southeast of Canal Flats.

The Koot occurrence is underlain by the Lower Cambrian Cranbrook Formation which is primarily comprised of siliceous quartzite, grit and pebble conglomerate, and sandstone. The quartzite is dense, poorly bedded, milky and medium to coarse grained. It appears to be steeply dipping and ranges from a fairly competent rock to one that contains numerous hairline fractures. Limonite generally occurs on fracture surfaces and sometimes interstitially to quartz grains.

Silica values of composite core samples, generally representing 20 metre lengths, ranged from 97.27 to 99.28 per cent (Assessment Report 10160).

BIBLIOGRAPHY

EMPR ASS RPT *8976, *10160
EMPR OF 1987-15
GSC OF 634

DATE CODED: 1985/07/24
DATE REVISED: 1987/04/14

CODED BY: GSB
REVISED BY: GRF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW026**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEAD**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 21 N
LONGITUDE: 115 55 56 W
ELEVATION: 1870 Metres

NORTHING: 5547238
EASTING: 576409

LOCATION ACCURACY: Within 5 KM

COMMENTS: Located on tributary to Lavington Creek but may be east or west of main drainage. Consists of 'Mammoth' and 'Superior' claims.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Unknown

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Granodiorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Lead showing consists of the Mammoth and Superior claims located over a granodiorite sill at an elevation of about 1870 metres. Two tunnels were driven on a zone of veinlets and stringers containing galena and pyrite hosted by the intrusive. The sulphide zone is sheared and silicified.

BIBLIOGRAPHY

EMPR AR 1926-245; 1928-277; 1931-140; 1932-163; 1933-202; 1934-E31
GSC MAP 24-1958
GSC OF 481; 634

DATE CODED: 1986/06/23
DATE REVISED: 1986/06/23

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW027**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 45 N
LONGITUDE: 115 55 29 W
ELEVATION: 2225 Metres

NORTHING: 5547987
EASTING: 576935

LOCATION ACCURACY: Within 5 KM

COMMENTS: Located on tributary to Lavington Creek but may be east or west of main creek.

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: E03 Carbonate-hosted disseminated Au-Ag 105 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Dutch Creek	
Helikian	Purcell	Mount Nelson	

LITHOLOGY: Limestone
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

At the Silver showing, oxidized galena, sphalerite and pyrite occur within a highly faulted and fractured shear zone which strikes generally north and dips steeply to the west. Grab samples assayed 0.7 to 1.4 grams gold, 102 to 364 grams silver, 13 to 22 per cent lead and 10 to 26 per cent zinc. The shear zone occurs in limestones which may belong to the Helikian Dutch Creek or Mount Nelson formations(?) (Purcell Supergroup) but locational information is too vague to identify this accurately.

BIBLIOGRAPHY

EMPR AR 1926-245; 1928-277; 1931-140; 1932-163; 1933-202; 1934-E31
GSC MAP 24-1958
GSC OF 481; 634
Placer Dome File

DATE CODED: 1986/06/23
DATE REVISED: 1986/06/23

CODED BY: BG
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW028**

NATIONAL MINERAL INVENTORY:

NAME(S): **WINDERMERE**, WESTERN GYPSUM, WINDERMERE NOS. 1-4,
WESTROC, LOTS 16186-16188, LOT 16230

STATUS: Past Producer Open Pit

MINING DIVISION: Golden

REGIONS: British Columbia

NTS MAP: 082J05W

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 50 28 50 N

LONGITUDE: 115 52 24 W

ELEVATION: 1370 Metres

NORTHING: 5592670

EASTING: 579936

LOCATION ACCURACY: Within 500M

COMMENTS: Claims centred on gypsum outcrop (Lots 16186, 16187, 16188 and 16230).

COMMODITIES: Gypsum

Anhydrite

MINERALS

SIGNIFICANT: Gypsum Anhydrite Dolomite

MINERALIZATION AGE: Devonian

DEPOSIT

CHARACTER: Massive

Stratabound

Breccia

CLASSIFICATION: Evaporite

Sedimentary

Industrial Min.

TYPE: F02 Bedded gypsum

F04 Bedded celestite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Devonian

Undefined Group

Burnais

Ordovician-Silurian

Undefined Group

Beaverfoot-Brisco

LITHOLOGY:

Gypsum

Anhydrite

Breccia

Dolomite

Limestone

Shale

Sandstone

HOSTROCK COMMENTS:

Gypsum is inferred to be in fault contact with the Beaverfoot-Brisco Formation or in conformable contact with the Cedared Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

CAPSULE GEOLOGY

Gypsum was discovered on Windermere Creek in 1947. Production, beginning in 1950, has been continuous to the present day totalling in excess of 6.8 million tonnes. Gypsum was mined from the four Windermere quarries until 1981 and, since 1982, from the Elkhorn quarry (Elkhorn 1 deposit, 082JSW021) 800 metres to the south.

Gypsum, in Devonian age rocks, occurs along a northwesterly trend which has a strike length of 5 kilometres north and south of Windermere Creek. The area is underlain by a sequence of evaporites and associated carbonate rocks of the Burnais Formation with an overlying limestone and shale sequence of the Harrogate Formation. More recent work proposed the term "Cedared Formation" for a sequence of dolomites, sandstones and limestones that is, in part, stratigraphically equivalent to the Burnais Formation. Much of the carbonate strata previously included in the Burnais Formation are now tentatively assigned to either the Cedared or Harrogate formations. The Harrogate Formation is the youngest Devonian unit in the Stanford Range.

Thin-bedded or laminated gypsum of the Burnais Formation is assumed to be in fault contact with the underlying Ordovician to Silurian Beaverfoot-Brisco Formation or in conformable contact with the Cedared Formation and overlain conformably by the black to dark grey limestone of the Harrogate Formation. The Beaverfoot-Brisco Formation is comprised of thin to medium-bedded light grey dolomite and limestone with characteristic ovular chert nodules and lenses in a carbonate matrix. The gypsum is of good quality ranging between 83 and 93 per cent gypsum. It varies in color from pale grey to grey, brownish grey and dark grey to black. Cream-colored laminae are also present.

The evaporite sequence has been folded into a series of

CAPSULE GEOLOGY

northwest-plunging, 18 to 40 degrees, folds. Small scale faulting with minimal displacement is present. Two gypsum horizons are interpreted, separated by dolomite and limestone. The lower gypsum bed is 50 metres wide and 50 to 100 metres thick. The upper bed is structurally complex and the thickness is difficult to determine.

At the Windermere quarries, the Windermere Nos. 2 to 4 deposits are hosted by the main gypsum unit (upper bed) of the Burnais Formation and the Windermere No. 1 is hosted by a separate lens of gypsum which may represent a folded or faulted repetition of the main gypsum unit. Anhydrite is present in a breccia zone that is 30 metres wide. The breccia consists of angular anhydrite and gypsum fragments in an anhydrite matrix. The anhydrite tends to be more massive than the surrounding gypsum.

Minor production of mixed gypsum and anhydrite continues, as required by the cement industry. Exact production figures are not available.

Westroc Industries holds the property.

BIBLIOGRAPHY

EM EXPL 2002-51-62
EMPR AR 1957-83; 1958-89; 1959-166; 1960-139; 1961-144; 1962-150;
1963-143; 1964-184
EMPR BULL 35
EMPR FIELDWORK 1988, pp. 497-506
EMPR GEM 1969-389; 1970-497; 1971-462; 1972-596; 1973-546
EMPR MINING 1981-1985 p. 60; 1986-1987 p. 86-87; 1988 p. 86
EMPR OF *1991-15
GSC OF 634
MINING IN BC Jan/Feb 1991, Vol. 2, No. 1, p. 20-21
WWW <http://www.westroc.com>

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/11

CODED BY: GSB
REVISED BY: SBB

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 468
REPORT: RGEN0100

MINFILE NUMBER: **082JSW029**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORSYTH CREEK NORTH**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 18 10 N
LONGITUDE: 115 02 49 W
ELEVATION: 2435 Metres

NORTHING: 5574120
EASTING: 639084

LOCATION ACCURACY: Within 500M

COMMENTS: Located 3 kilometres north of Forsyth Creek and 1.5 kilometres east of Connor Lakes.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate
ASSOCIATED: Quartz
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate
SHAPE: Tabular
COMMENTS: Steeply dipping sequence repeated by vertical dipping normal faults.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Ishbel	Ranger Canyon	

LITHOLOGY: Phosphatic Siltstone
Phosphorite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

18.6000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

A 50 centimetre thick phosphorite bed containing 18.6 per cent P2O5 underlies a 15 metre thick chert horizon in the upper part of the Permian Ranger Canyon Formation (Ishbel Group) (Open File 1987-16). Below the phosphorite are 2.5 metres of phosphatic siltstone and chert containing 0.2 to 3.8 per cent P2O5 across widths of 0.3 and 1.3 metres respectively. In this section phosphate is in the form of ovoid nodules with the upper part of the phosphorite being massive phosphate.

The strata in the Forsyth Creek North showing area is vertically dipping and strikes north.

BIBLIOGRAPHY

EMPR OF 1987-16
GSC OF 634

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082JSW029**

MINFILE NUMBER: **082JSW030**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORSYTH CREEK SOUTH**

MINING DIVISION: Fort Steele

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 17 50 N
LONGITUDE: 115 02 49 W
ELEVATION: 2590 Metres

NORTHING: 5573502
EASTING: 639100

LOCATION ACCURACY: Within 500M

COMMENTS: Located 2.5 kilometres north of Forsyth Creek and 1.5 kilometres east of Connor Lakes.

COMMODITIES: Phosphate

MINERALS

SIGNIFICANT: Phosphate

ASSOCIATED: Quartz

MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F07 Upwelling-type phosphate

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 020/85W

TREND/PLUNGE:

COMMENTS: Vertical dipping sequence cut by series of normal faults.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Ishbel	Ranger Canyon	

LITHOLOGY: Siltstone
Chert
Limestone
Phosphatic Chert

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY

GRADE

Phosphate

25.8000

Per cent

REFERENCE: Open File 1987-16.

CAPSULE GEOLOGY

At the Forsyth Creek South occurrence, a 1 metre thick siltstone bed containing phosphate nodules 3 to 6 centimetres in diameter, overlies a 15 metres thick chert horizon. Below the chert are 2 metres of phosphatic chert averaging 1.2 per cent P2O5. In the lower part of the section phosphate is in the form of ovoid nodules. Nodules in the upper phosphatic horizon (above the chert) contain in excess of 25.8 per cent P2O5 (Open File 1987-16). The stratigraphic section is part of the Permian Ranger Canyon Formation (Ishbel Group). Overlying this section are reddish brown weathering siltstone of the Triassic Sulphur Mountain Formation (Spray River Group).

BIBLIOGRAPHY

EMPR OF 1987-16
GSC OF 634

DATE CODED: 1987/02/04
DATE REVISED: 1987/02/04

CODED BY: SBB
REVISED BY: SBB

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082JSW031**

NATIONAL MINERAL INVENTORY:

NAME(S): **FAIRMONT CREEK**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 18 45 N
LONGITUDE: 115 46 49 W
ELEVATION: 2469 Metres

NORTHING: 5574088
EASTING: 586845

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on sample site 92 on a saddle 0.85 kilometres north of Fairmont Mountain (CANMET Report 811, page 214).

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite

MINERALIZATION AGE: Ordovician-Silurian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R10 Dolomite

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION:

STRIKE/DIP: 095/45N

TREND/PLUNGE:

COMMENTS: Attitude of bedding in saddle of ridge just north of Fairmont Mountain.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Ordovician-Silurian

GROUP

Undefined Group

FORMATION

Beaverfoot

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

LITHOLOGY: Dolomite
Slate
Conglomerate
Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Grab

COMMODITY

GRADE

Dolomite

20.7500

Per cent

COMMENTS: Grade given for MgO.

REFERENCE: CANMET Report 811, page 214, sample 92.

CAPSULE GEOLOGY

Dolomite of the Silurian to Middle Ordovician Beaverfoot Formation is exposed over widths of up to 900 metres, south of Fairmont Creek, along the north flank of a ridge extending for 7.5 kilometres eastward from Fairmont Hot Springs to the Kootenay River. The formation is in fault contact to the north with dolomite of the Middle-Upper Cambrian Jubilee Formation and slate, quartzite and conglomerate of the Hadrynian Horsethief Creek Group. Bedding within the dolomite strikes 095 to 110 degrees and dips 45 to 55 degrees north.

The dolomite is fine grained, pale blue and faintly mottled with light grey. A sample of chips collected randomly on a "saddle," just north of Fairmont Mountain and along the slope facing Fairmont Creek analyzed 31.20 per cent CaO, 20.75 per cent MgO, 0.70 per cent SiO₂, 0.20 per cent Al₂O₃, 0.43 per cent Fe₂O₃ and trace sulphur (CANMET Report 811, page 214, Sample 92).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 471
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BULL 35, p. 25
GSC MEM 148, pp. 31-34
GSC OF 634
CANMET RPT *811, Part 5, pp. 214-215

DATE CODED: 1989/10/13
DATE REVISED: 1989/10/13

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082JSW032**

NATIONAL MINERAL INVENTORY:

NAME(S): **GEARY CREEK**, FAIRMONT HOTSPRINGS

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082J05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 18 24 N
LONGITUDE: 115 49 48 W
ELEVATION: 1402 Metres

NORTHING: 5573383
EASTING: 583315

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location centred on dolomite outcrop on spur along south side of Geary Creek (Bulletin 35, Figure 2).

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite

MINERALIZATION AGE: Ordovician-Silurian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R10 Dolomite

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 3800 x 1200 Metres

STRIKE/DIP: 112/35N

TREND/PLUNGE:

COMMENTS: Bedding attitude near centre of outcrop.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Ordovician-Silurian	Undefined Group	Beaverfoot	

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

LITHOLOGY: Dolomite
Slate
Conglomerate
Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

PHYSIOGRAPHIC AREA: Continental Ranges

TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Grab

COMMODITY

GRADE

Dolomite

21.2600

Per cent

COMMENTS: Grade given for MgO.

REFERENCE: CANMET Report 811, page 214, sample 93.

CAPSULE GEOLOGY

Dolomite of the Middle Ordovician to Silurian Beaverfoot Formation forms a spur that rises southeastward along the south side of Geary Creek, just northeast of the north end of Columbia Lake. The dolomite is exposed along the crest of the spur over a length of 3.8 kilometres, with a width of up to 1200 metres. Bedding strikes 105 to 120 degrees and dips 30 to 45 degrees north. The unit is in fault contact to the northwest with dolomite of the Middle-Upper Cambrian Jubilee Formation and slate, quartzite and conglomerate of the Hadrynian Horsethief Creek Group. Underlying limestone and argillite of the Upper Cambrian to Middle Ordovician Sabine Formation (McKay Group) outcrops to the south.

The deposit is comprised of very fine grained, dark bluish grey, thickly bedded dolomite. Chip samples collected from various places over the spur analyzed 30.39 per cent CaO, 21.26 per cent MgO, 1.40 per cent SiO₂, 0.40 per cent Al₂O₃, 0.30 per cent Fe₂O₃ and trace sulphur (CANMET Report 811, page 214, Sample 93).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 473
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BULL 35, p. 25
GSC MEM 148, pp. 31-34
GSC OF 634
CANMET RPT 811, Part 5, pp. 214-215

DATE CODED: 1989/10/13
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082JSW033**

NATIONAL MINERAL INVENTORY:

NAME(S): **POND, CANAL FLATS**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082J04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 11 N
LONGITUDE: 115 45 59 W

NORTHING: 5545259
EASTING: 588311

ELEVATION: 1012 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on drill hole P-81-7 near the centre of a 6.3 kilometre long ridge, 8.8 to 15.1 kilometres south of Canal Flats (Assessment Report 10079).

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite
ASSOCIATED: Calcite Silica Hematite
MINERALIZATION AGE: Cambrian

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R10 Dolomite
DIMENSION: 6300 x 750 Metres STRIKE/DIP: 174/35E TREND/PLUNGE:
COMMENTS: Bedding attitude near centre of ridge (Geological Survey of Canada Map 24-1958).

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u> Cambrian	<u>GROUP</u> Undefined Group	<u>FORMATION</u> Jubilee	<u>IGNEOUS/METAMORPHIC/OTHER</u>
<u>DATING METHOD:</u> Fossil			

LITHOLOGY: Dolomite

HOSTROCK COMMENTS: Hosted in the lower member of the Jubilee Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Southern Rocky Mountain Trench
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Dolomite 21.5300 Per cent
COMMENTS: Average of 5 drill holes. Grade given for MgO.
REFERENCE: Assessment Report 10079 (Holes P-81-1 to 81-5).

CAPSULE GEOLOGY

Dolomite of the lower member of the Middle to Upper Cambrian Jubilee Formation forms a ridge trending north-northwest for 6.3 kilometres along the east side of the Kootenay River, 8.8 to 15.1 kilometres south-southeast of Canal Flats. The dolomite outcrops over widths of up to 750 metres near the centre of the ridge. Bedding strikes 164 to 194 degrees and dips 35 to 50 degrees east. At the Pond occurrence, six diamond-drill holes near the south end of the ridge, a short distance west of Island Pond, encountered light to dark grey to bluish grey, variably mottled, fine to medium grained dolomite, displaying minor brecciation accompanied by secondary white to pinkish dolomite infilling fractures. Tabular to wavy to lenticular laminae are quite common. In places, the rock becomes more massive with indistinct bedding. Some black to light grey chert lenses and a few irregular blotches and rounded blebs of dark bluish grey chert are present. Vugs encrusted with white dolomite or pink calcite are locally evident. Two diamond drill holes near the centre of the ridge, some 3 kilometres to the north, cored light to medium grey, to blue-grey, fine-grained, massive to well-laminated dolomite that is extensively brecciated and cemented with white dolomite and white to pinkish calcite.

CAPSULE GEOLOGY

Drill core from the two areas assayed as follows (in per cent):

	North Zone	South Zone
CaO	31.06	30.09
MgO	21.29	21.53
SiO2	0.95	2.30
Al2O3	0.26	0.23
Fe2O3	0.24	0.12
Na2O	0.028	0.022
K2O	0.080	0.044
SO4	0.011	0.025
Ig. Loss	45.66	45.37

The North zone assays are averages of composite samples from holes P-81-1 to 81-5, while the South zone assays have been averaged from composite samples from holes P-81-6 and 81-7 (Assessment Report 10079).

BIBLIOGRAPHY

EMPR ASS RPT 8975, *10079
GSC MAP 24-1958
GSC P 54-7, pp. 9-10

DATE CODED: 1989/10/14
DATE REVISED: 1991/04/16

CODED BY: PSF
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE001**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLONDIE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 00 N
LONGITUDE: 116 23 33 W
ELEVATION: 1187 Metres

NORTHING: 5601815
EASTING: 543024

LOCATION ACCURACY: Within 500M

COMMENTS: Showing and drill hole located on the north side of Horsethief Creek, 36 kilometres from Invermere (Assessment Report 15320).

COMMODITIES: Silver Copper Bismuth

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite Bismuthinite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Exhalative
TYPE: E04 Sediment-hosted Cu

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Proterozoic

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllitic Argillite
Silty Limestone
Graphitic Slate
Quartz Grit
Quartz Pebble Conglomerate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY

YEAR: 1986

	GRADE	
Silver	1.1700	Grams per tonne
Bismuth	0.0150	Per cent
Copper	0.2700	Per cent

COMMENTS: From a 2.8 metre chip sample.
REFERENCE: Assessment Report 15320.

CAPSULE GEOLOGY

The Blondie property is underlain by steeply dipping coarse clastic sedimentary rocks of the Upper Proterozoic Horsethief Creek Group. These are described as dominantly thin-bedded black graphitic slate, phyllitic argillite and interbedded silty limestone with minor quartz grit, quartz pebble conglomerate and rare limestone.

Four massive sulphide beds are known to occur in the phyllitic argillite-silty limestone unit. At surface the sulphide beds range in thickness between 0.20 metre and 2.8 metres. The massive sulphide consists of mainly pyrrhotite, pyrite, minor chalcopyrite and very rare bismuthinite. The best average grade over a 2.8-metre width is reported to be 0.27 per cent copper, 0.015 per cent bismuth and 1.17 grams per tonne silver (Assessment Report 15320).

In 1983, the Blondie property was under option to Cominco Ltd. from owners V. Winser and G. Larrabee. Cominco collected 291 soil samples in that year. In 1986, two diamond-drill holes were drilled (totalling 143.3 metres) on the property by owners G. Larrabee, V. Winser, V. Newbury and J. Pannatoni. The holes intersected the target sulphide horizons at shallow depths but did not find any significant improvement in the grades or thickness.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 477
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 12270, *15320
EMPR EXPL 1986-C91
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 2003/01/27
DATE REVISED: 2003/01/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE002**

NATIONAL MINERAL INVENTORY:

NAME(S): **S, ICE, SLIDE,**
MOLYBDENUM, GOSSAN CREEK, CANSUP,
ANNETTE, ICE 6, ICE 9,
GRANITE

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 45 N
LONGITUDE: 116 28 27 W
ELEVATION: 1980 Metres

NORTHING: 5612427
EASTING: 537164

LOCATION ACCURACY: Within 500M

COMMENTS: Location of molybdenite mineralization (Assessment Report 1254).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Porphyry

TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Cretaceous

GROUP

Purcell

FORMATION

Dutch Creek

IGNEOUS/METAMORPHIC/OTHER

Horsethief Batholith

LITHOLOGY: Argillaceous Quartzite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1967

SAMPLE TYPE: Grab

COMMODITY

GRADE

Molybdenum

0.1600

Per cent

COMMENTS: The assay is for molybdenite.

REFERENCE: Assessment Report 1254.

CAPSULE GEOLOGY

Molybdenite was first discovered at the S occurrence by Kodiak Mines Ltd. in 1967. Argillaceous quartzites of the Middle Proterozoic Dutch Creek Formation (Purcell Supergroup) are in contact with granodiorite of the Cretaceous Horsethief Batholith. The contact trends to the northwest and is exposed for 244 metres. Along the immediate contact, the intrusion is fine grained and aplitic in nature with aplite dikes cutting the sediments.

Pyrite is abundant in all the rocks along the contact, forming a prominent oxidized zone up to 300 metres in width. Molybdenite, with minor chalcopyrite, occurs along fractures, as dissemination and in quartz stringers in both sedimentary and intrusive rocks. In the intrusive rock, the aplitic phase most commonly carries sulphides but it is also noted in the coarse-grained granodiorite.

Five rock trenches were excavated by Kodiak and geological mapping was carried out. Sampling in trenches and on surface yielded values of between trace and 0.013 per cent molybdenite. Two grab samples assayed 0.16 per cent and 0.54 per cent molybdenite (Assessment Report 1254).

Canadian Johns-Manville Company Limited staked and investigated a number of claims in the area in 1970, including the Slide, Annette and Blue. It is reported that 739 geochemical samples were taken in 1970. Some investigation of what they termed the "Cansup" molybdenite showing was done (Geology, Exploration and Mining in BC

CAPSULE GEOLOGY

1970, page 469). In 1971, Canadian Johns-Manville completed further geochemical, geological and geophysical surveys on its Slide group of claims, including the Ice claims which cover the Cansup and "S" molybdenite showings (Geology, Exploration and Mining in BC 1971, page 426). In 1972, the company completed further surveys on its Slide group including mapping and geochemical sampling (Geology, Exploration and Mining in BC 1972, page 74). The company returned in 1973 and conducted further surveys (Geology, Exploration and Mining in BC 1973, page 92). By the end of 1973, some of the Ice claim group, even those that had covered parts of the mineralized area, had lapsed and were restaked by Canadian Johns-Manville as the Granite claims.

BIBLIOGRAPHY

EMPR ASS RPT *1254, *3222, 3223, *3305, 3390, 3391, *4613
EMPR GEM 1970-469; 1971-426; 1972-74; 1973-92
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE003**

NATIONAL MINERAL INVENTORY:

NAME(S): **J, TOBY, COPPER ZONE,**
J2, J16

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

LATITUDE: 50 37 04 N
LONGITUDE: 116 22 27 W
ELEVATION: 2286 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Copper zone on J2 and J16 claims (Assessment Report 1254,
Map 2 - Claims Plan).

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

NORTHING: 5607509
EASTING: 544274

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Chalcocite Malachite Azurite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Proterozoic
Upper Proterozoic

GROUP

Horsethief Creek
Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation
Toby

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Shale
Argillite
Andesite

HOSTROCK COMMENTS: Host groups and/or formations are in question. A volcanic unit is mapped in the vicinity, apparently part of the Toby Fm (Map 62).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1967

SAMPLE TYPE: Chip

COMMODITY

Copper

GRADE

0.5600

Per cent

COMMENTS: From a composite sample averaging 0.56 per cent over 6.9 metres.

REFERENCE: Assesment Report 1254.

CAPSULE GEOLOGY

Strata underlying the region of the J showing, from oldest to youngest, include: quartzite and dolomite of the Middle Proterozoic Mount Francis Formation (Purcell Supergroup); conglomerates and coarse clastic sediments of the Upper Proterozoic Toby Formation (Windermere Supergroup); slates, quartzites, grits and conglomerates of the Upper Proterozoic Horsethief Creek Group; argillite and dolomite of the Cambrian to Ordovician McKay Group; dolomites of the Cambrian Jubilee Formation; dolomite, shale, sandstone and quartzite of the Ordovician to Silurian Beaverfoot Formation; argillite, argillaceous limestone and quartzite of the Middle Devonian Mount Forster Formation; and thin to medium-bedded biowacke stones of the Upper Devonian Starbird Formation. The strata form a broad, north plunging anticline, with numerous minor folds generally overturned to the east.

Copper mineralization was explored in 1967 by Kodiak Mines Limited. Six trenches with a total length of 91 metres were excavated in bedrock and mapping was carried out. This work outlined copper mineralization over a length of 143 metres and vertical range of 75 metres.

Copper mineralization occurs in quartz veins and stringers along a "shale-andesite" contact near a ridge crest. On the west side

CAPSULE GEOLOGY

of the ridge, the showings consist of two sub-parallel quartz veins up to 1 metre in width that strike easterly. Chalcopyrite, malachite and azurite occur in the quartz veins and stringers and along fractures in the adjoining shales and andesites. Assays vary up to 2.37 per cent copper across 0.76 metre with the best composite section averaging 0.56 per cent copper over 6.9 metres (Assessment Report 1254).

Near the top of the ridge and down the eastern slope, the zone breaks up into a number of mineralized quartz veins and stringers in andesite and amygdaloidal andesite. Chalcopyrite, chalcocite and malachite occur in the quartz and chalcopyrite was found disseminated in the andesite. The stringers were observed to become widely spaced to the east and the veins were covered by overburden to the west.

Imperial Oil held the area as the Toby claims in 1978 and conducted geochemical and airborne radiometric surveys while searching for uranium, however no mention is made of the J showings.

BIBLIOGRAPHY

EMPR ASS RPT *1254, 6884
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/04

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE004**

NATIONAL MINERAL INVENTORY:

NAME(S): **A, RK, ROCKING HORSE,
ANTIMONY ZONE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 46 N
LONGITUDE: 116 21 19 W
ELEVATION: 2347 Metres

NORTHING: 5606964
EASTING: 545615

LOCATION ACCURACY: Within 500M
COMMENTS: Location of Antimony zone on Rocking Horse 4 and A1 claims
(Assessment Report 1254, Map 2 - Claims Plan).

COMMODITIES: Antimony Copper Lead

MINERALS

SIGNIFICANT: Stibnite Chalcopyrite Galena
COMMENTS: Mineralogy is assumed as it is not reported.
ASSOCIATED: Barite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated Podiform
CLASSIFICATION: Replacement
TYPE: I09 Stibnite veins and disseminations

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic	Horsethief Creek	Unnamed/Unknown Formation	
Upper Proterozoic	Unnamed/Unknown Group	Toby	

LITHOLOGY: Limestone Conglomerate

HOSTROCK COMMENTS: Host groups and/or formations are in question.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Strata underlying the region of the J showing, from oldest to youngest, include: quartzite and dolomite of the Middle Proterozoic Mount Francis Formation (Purcell Supergroup); conglomerates and coarse clastic sediments of the Upper Proterozoic Toby Formation (Windermere Supergroup); slates, quartzites, grits and conglomerates of the Upper Proterozoic Horsethief Creek Group; argillite and dolomite of the Cambrian to Ordovician McKay Group; dolomites of the Cambrian Jubilee Formation; dolomite, shale, sandstone and quartzite of the Ordovician to Silurian Beaverfoot Formation; argillite, argillaceous limestone and quartzite of the Middle Devonian Mount Forster Formation; and thin to medium-bedded biowacke stones of the Upper Devonian Starbird Formation. The strata form a broad, north plunging anticline, with numerous minor folds generally overturned to the east.

Antimony-copper-lead mineralization was explored in 1967 by Kodiak Mines Limited. Mapping and sampling were carried out.

The mineralization is erratically distributed in a flat-lying white limestone conglomerate near the top of a very steep rocky ridge. Mineralization is exposed for a distance of 40 metres in a north-south direction and approximately 52 metres in a southwest direction on the opposite side of the ridge. One local, shown on a Kodiak map, shows that antimony (presumably stibnite) is associated with a barite vein. Elsewhere it occurs as pods in conglomerate. Pertinent documents did not discuss mineralogy.

BIBLIOGRAPHY

EMPR ASS RPT *1254, 6884
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/04

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE004**

MINFILE NUMBER: **082KNE005**

NATIONAL MINERAL INVENTORY: 082K9 U1

NAME(S): **FORSTER**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 00 N
LONGITUDE: 116 23 34 W
ELEVATION: 1420 Metres

NORTHING: 5611081
EASTING: 542928

LOCATION ACCURACY: Within 1 KM

COMMENTS: Placer concentrations occur intermittently along Forster Creek and its tributaries.

COMMODITIES: Uranium Niobium Rare Earths Thorium

MINERALS

SIGNIFICANT: Uraninite Uranothorite Pyrochlore Euxenite Polycrase

ASSOCIATED: Molybdenite Cassiterite Allanite
Andalusite Epidote Apatite Fluorite Ilmenite

MINERALIZATION AGE: Magnetite Sphene Zircon

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Cenozoic
Cretaceous

GROUP

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Horsethief Batholith

LITHOLOGY: Unconsolidated Gravel
Quartz Monzonite

HOSTROCK COMMENTS: Source rock for placer deposits.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

Plutonic Rocks

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes Helikian Purcell sediments. The intrusion is zoned from fine-grained - medium-grained granodiorite to coarse-grained quartz monzonite.

Black sand placer concentrations containing uranium-and columbium-bearing minerals occur in the outwash gravels from glacier action in the Horsethief Batholith. Minerals include euxenite-polycrase, pyrochlore, uraninite, uranothorite, allanite, andalusite, apatite, epidote, fluorite, garnet, hematite, ilmenite, magnetite, pyrite, sphene, zircon, lepidocrocite, cassiterite, and molybdenite.

The placer concentrations occur intermittently along Forster Creek and its tributaries for 12 kilometres. A heavy mineral fraction from the upper part of the creek assayed 0.11 per cent uranium (Assessment Report 6593).

See also East Creek (082KNE006), Vowell Creek (082KNE007), Malloy (082KNE008) and Upper Bugaboo (082KNE023).

BIBLIOGRAPHY

EMPR AR 1956-142,143
EMPR ASS RPT 2006, 2090, 6593
EMPR GEM 1969-377
EMPR MAP 22; 62
EMPR PF (Saunders, C.R. (1974): Radioactive Black Sands in Malloy and Vowell creeks, 14 p. with maps)
GSC EC GEOL *#16 (2nd Ed.), pp. 198,199; *#18, pp. 28,29; #29, pp. 70,134
GSC MAP 12-1957; 1362A
GSC MEM *369, pp. 87,92,117
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 1987/07/14

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE006**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAST CREEK**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 42 30 N
LONGITUDE: 116 50 24 W
ELEVATION: 1370 Metres

NORTHING: 5617403
EASTING: 511297

LOCATION ACCURACY: Within 1 KM
COMMENTS: Anomalous zone.

COMMODITIES: Uranium Niobium Thorium Rare Earths

MINERALS

SIGNIFICANT: Uraninite Uranothorite Monazite Allanite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cenozoic Cretaceous	Undefined Group	Unnamed/Unknown Formation	Bugaboo Batholith

LITHOLOGY: Unconsolidated Gravel
Quartz Monzonite

HOSTROCK COMMENTS: Source rock for placer concentrations.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America Plutonic Rocks

CAPSULE GEOLOGY

The Cretaceous Bugaboo Batholith intrudes Hadrynian Windemere sediments of the Horsethief Creek Group. The east part of the intrusion consists of medium-grained leuco-quartz monzonite to coarse-grained biotite quartz monzonite.

Black sand placer concentrations containing uranium-and niobium-bearing minerals occur in the outwash gravels from glacier action in the Bugaboo Batholith. Minerals include uraninite, allanite, rutile, titano-columbite, euxenite-polycrase, pyrochlore, monazite, uranothorite magnetite, ilmenite, apatite, andalusite, zircon, epidote, fluorite, garnet, hematite, pyrite, lepidocrocite, and sphene.

Placer concentrations are known to occur along the upper east branch of East Creek. Size and assay values are unknown.

See also Forster (082KNE005), Vowell Creek (082KNE007), Malloy (082KNE008) and Upper Bugaboo (082KNE023).

BIBLIOGRAPHY

EMPR PF (Saunders, C.R. (1974): Radioactive Black Sands in Malloy and Vowell creeks, 14 p. with maps)
GSC MAP 1326A
GSC MEM 369, pp. 92,117

DATE CODED: 1987/07/16
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNE007**

NATIONAL MINERAL INVENTORY: 082K15 U2

NAME(S): **VOWELL CREEK**, BUGABOO

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082K15W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 50 00 N
LONGITUDE: 116 48 04 W
ELEVATION: 1630 Metres

NORTHING: 5631310
EASTING: 514006

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of placer deposit. The deposit extends for 7.4 kilometres along Vowell Creek and averages 250 metres wide.

COMMODITIES:	Uranium	Niobium	Thorium	Cerium	Yttrium
	Lanthanum	Rare Earths	Tantalum	Zirconium	Iron
	Titanium	Manganese	Vanadium		

MINERALS

SIGNIFICANT: Magnetite Ilmenite Allanite Rutile Zircon

Monazite Titanite Uraninite

ASSOCIATED: Apatite Andalusite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer Industrial Min.

TYPE: C01 Surficial placers

SHAPE: Regular

DIMENSION: 7400 x 250 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Cenozoic
Cretaceous

GROUP

Undefined Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Bugaboo Batholith

LITHOLOGY: Unconsolidated Gravel
Quartz Monzonite

HOSTROCK COMMENTS: Source rock for placer deposits.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

Plutonic Rocks

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: VOWELL CREEK

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1979

QUANTITY: 15292000 Tonnes

COMMODITY

GRADE

Niobium

196.2800

Per cent

Uranium

18.1000

Per cent

COMMENTS: Quantity in cubic metres; commodities uranium and columbium pentoxide in grams per cubic metre. Additional values in manganese and titanium.

REFERENCE: Northern Miner - October 25, 1979, page 23.

CAPSULE GEOLOGY

The Cretaceous Bugaboo Batholith intrudes Hadrynian Windermere sediments of the Horsethief Creek Group. The east part of the intrusion consists of medium-grained leuco-quartz monzonite to coarse-grained biotite quartz monzonite.

Black sand placer concentrations containing uranium - and niobium-bearing minerals occur in the outwash gravels from glacier action in the Bugaboo Batholith. Minerals include uraninite, allanite, rutile, titanite, titanite-columbite, euxenite-polycrase, pyrochlore, monazite, uranothorite, magnetite, ilmenite, apatite, andalusite, zircon, epidote, fluorite, garnet, hematite, pyrite, lepidocrocite, and sphene.

The Vowell Creek deposit is about 7400 metres long and averages 250 metres wide. Indicated reserves are 15,292,000 cubic metres grading 18.1 grams per cubic metre uranium, 196.28 grams per cubic metre niobium (Northern Miner - October 25, 1979, page 23). Manganese was also reported to occur.

In 1953 uranium oxide and pyrochlore were identified in post-

CAPSULE GEOLOGY

glacial placer sand and gravel deposits in upper Bugaboo Creek (082KNE023). This and similar deposits on Forster (082KNE005) and Vowell creeks were mapped and variously explored by Quebec Metallurgical Industries from 1954 to 1957. A pilot plant (concentrating) was operated on Bugaboo Creek and 21 holes were churn drilled on Vowell Creek. In 1957, application for a contract to produce uranium was turned down by the Canadian government and the leases held in the area were allowed to lapse.

No further work was done in the area until, following restaking by Bugaboo Mines Ltd. in 1966 and 1967 of the upper Bugaboo Creek and Forster Creek deposits, an airborne spectrometer survey was conducted in the area during September, 1968. This survey, under the direction of Dolmage Campbell & Associates Ltd., located a number of anomalous areas on several creeks. At that time Dillingham Mining Co. became active in the area through property options and staking. Ground scintillometer surveys and visual estimates of relative gravel quantities in the several anomalous (airborne) areas resulted in the acquisition of property on Bugaboo, Forster, East (082KNE006), Vowell and Malloy (082KNE008) creeks. For a number of reasons, including some of a non-economic nature, some of the properties were allowed to lapse. However, detailed exploration was conducted by Dillingham on Malloy and Vowell creeks in 1969. This work consisted of drilling the favourable areas and doing some mineralogical studies and metallurgical testing.

In 1974, Tapin Copper Mines Limited held 21 placer leases on Malloy and Vowell creeks and evaluated the two deposits.

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GCNL #113(June 14), #143(July 27), 1976
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WWW http://www.infomine.com/index/properties/VOWELL_CREEK.html
Chevron File
Falconbridge File
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/12

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE008**

NATIONAL MINERAL INVENTORY: 082K15 U2

NAME(S): **MALLOY CREEK**, BUGABOO

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082K15W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 49 50 N
LONGITUDE: 116 52 43 W
ELEVATION: 1575 Metres

NORTHING: 5630989
EASTING: 508549

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of placer deposit, which extends for 2.7 kilometres along Malloy Creek and averages 300 metres wide.

COMMODITIES:	Uranium	Niobium	Thorium	Cerium	Yttrium
	Lanthanum	Rare Earths	Tantalum	Zirconium	Iron
	Titanium	Vanadium			

MINERALS

SIGNIFICANT: Uraninite Allanite Rutile Columbite Uranothorite

 Monazite Pyrochlore Euxenite

ASSOCIATED: Apatite Andalusite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer Industrial Min.

TYPE: C01 Surficial placers

SHAPE: Regular

DIMENSION: 2700 x 300 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cenozoic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous			Bugaboo Batholith

LITHOLOGY: Unconsolidated Gravel
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

Plutonic Rocks

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: MALLOY CREEK

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1969

QUANTITY: 9330000 Tonnes

COMMODITY	GRADE	
Niobium	97.8500	Per cent
Thorium	68.8000	Per cent
Uranium	19.6000	Per cent

COMMENTS: Quantity in cubic metres; commodities uranium, thorium oxide, and columbium pentoxide in grams per cubic metre; includes 8 kilograms per cubic metre magnetite and 0.59 kilograms per cubic metre ilmenite.

REFERENCE: Property File - C.R. Saunders, 1974.

CAPSULE GEOLOGY

The Cretaceous Bugaboo Batholith intrudes Hadrynian Windermere sediments of the Horsethief Creek Group. The east part of the intrusion consists of medium-grained leuco-quartz monzonite to coarse-grained biotite quartz monzonite.

Black sand placer concentrations containing uranium-and niobium-bearing minerals occur in the outwash gravels from glacier action in the Bugaboo Batholith. Minerals include uraninite, allanite, rutile, titanite-columbite, euxenite-polycrase, pyrochlore, monazite, uranothorite, magnetite, ilmenite, apatite, andalusite, zircon, epidote, fluorite, garnet, hematite, pyrite, lepidocrocite, and sphene.

The Malloy Creek deposit is about 2700 metres long and 300 metres average width. It contains about 9,330,000 cubic metres of gravel grading 19.6 grams per cubic metre uranium, 97.85 grams per cubic metre Nb2O5, 68.8 grams per cubic metre thorium oxide, 8 kilograms per cubic metre magnetite, and .59 kilograms per cubic metre

CAPSULE GEOLOGY

ilmenite (Property File Saunders). A 1.2 metre sample assayed 0.1 per cent uranium, 0.47 per cent titanium, 0.34 per cent zirconium, 0.19 per cent thorium, 0.035 per cent vanadium, 0.13 per cent columbium, 0.025 per cent cerium, and 0.038 yttrium (Property File, Schmidt).

In 1953 uranium oxide and pyrochlore were identified in post-glacial placer sand and gravel deposits in upper Bugaboo Creek (082KNE023). This and similar deposits on Forster (082KNE005) and Vowell (082KNE007) creeks were mapped and variously explored by Quebec Metallurgical Industries from 1954 to 1957. A pilot plant (concentrating) was operated on Bugaboo Creek and 21 holes were churn drilled on Vowell Creek. In 1957, application for a contract to produce uranium was turned down by the Canadian government and the leases held in the area were allowed to lapse.

No further work was done in the area until, following restaking by Bugaboo Mines Ltd. in 1966 and 1967 of the upper Bugaboo Creek and the Forster Creek deposits, an airborne spectrometer survey was conducted in the area during September, 1968. This survey, under the direction of Dolmage Campbell & Associates Ltd., located a number of anomalous areas on several creeks. At that time Dillingham Mining Co. became active in the area through property options and staking. Ground scintillometer surveys and visual estimates of relative gravel quantities in the several anomalous (airborne) areas resulted in the acquisition of property on Bugaboo, Forster, East (082KNE006), Vowell and Malloy creeks. For a number of reasons, including some of a non-economic nature, some of the properties were allowed to lapse. However, detailed exploration was conducted by Dillingham on Malloy and Vowell creeks in 1969. This work consisted of drilling the favourable areas and doing some mineralogical studies and metallurgical testing.

In 1974, Tapin Copper Mines Limited held 21 placer leases on Malloy and Vowell creeks and evaluated the two deposits.

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Report Tapin Copper Mines Limited, 4 p.)
- EMR MIN BULL MR 223 B.C. 64
- EMR MP CORPFILE (Western Uranium Explorations Inc.; Lansview
Resource Corp.; Tapin Copper Mines Limited)
- GSC EC GEOL *#16 (2nd Ed.), pp. 60,198,199; *#18, pp. 28,29
- GSC MAP 12-1957; 1326A
- GSC MEM 369, p. 92
- GSC OF 551
- GCNL #113(June 14), #143(July 27), 1976
- Chevron File
- Falconbridge File
- Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1998/08/12

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

white quartz pebbles, are sericitic, chloritic and locally limy. Deformation has produced elongated pebbles. The slates are locally phyllitic and limy, range from a centimetre to several metres in thickness and are black, green and grey in colour. Porphyroblasts of ankerite are present throughout the slates, syngenetic pyrite occurs parallel to bedding and minor drag folding is common. The limestone ("Ruth" limestone) is 6 to 15 metres thick and lies between two thick slate units. Individual limestone beds vary from less than a centimetre to several metres in thickness. Minor drag folding is also evident in this unit. All members of the Horsethief Creek Group are intercalated with readily discernible facies changes both along strike and dip.

Structurally, these units have been folded into a major northwest trending asymmetric anticline approximately 183 metres from crest to trough. The anticline crosses Vermont Creek near the property. The fold plunges gently to the southeast and the axial plane dips steeply to the northeast, parallel to the cleavage in the slates. The "Charlotte" anticline to the northeast, the "Sheba" anticline to the southwest and between them the "Ruth" syncline are local folds in the hinge zone of the major anticline. The "Ruth" syncline lies in a series of synclines and anticlines of varying amplitudes which culminate near the eastern extremity of the Charlotte claim (L.405), into the "Charlotte" anticline which is overturned to the west. The main workings are along the southwest limb of the "Ruth" syncline. The "Ruth" synclinal axis plunges 5 degrees towards an azimuth of 135 degrees and the axial plane dips 75 degrees northeast. The limestone on the southwest limb has an average strike of 140 degrees and a dip of 30 degrees northeast. This southwest limb contains the Nelson orebody.

Three sets of quartz-calcite fissure veins occur obliquely, transversely and parallel to bedding relative to the fold structures. The veins occur in well-defined sets of fractures. The veins are hosted in the "Ruth" limestone and in the slate above and below it. The oblique veins are well mineralized, strike southeast (110-115 degrees) have an average dip of 65 degrees southwest and cut bedding at 15 degrees. The transverse veins are poorly mineralized and are representative of fissure-fillings along a series of near vertical and parallel shears. Tension gashes are generally related to these veins. The veins parallel to bedding normally mark concordant contacts between the slate and limestone. Sulphide content in the veins are low. Scheelite occurs in varying amounts in the three sets of veins. Some of the veins have been traced underground for 609 metres and where they intersect the limestone beds, replacement-type mineralization occurs. The oblique veins occur in swarms which produce bulges and the irregular shape of such replacement zones. The veins tend to widen at depth and vary from centimetres to 2.4 metres in width.

Two veins of particular importance are the Pine Tree and the Blacksmith. The Pine Tree has been traced underground for 365 metres and plays a significant role as the main feeder for the replacement-type mineralization of the Nelson orebody. Underground development and drilling have proven a vertical extension of 152 metres for the Pine Tree vein. The Blacksmith vein has been developed for 152 metres along strike and 122 metres downdip and is roughly parallel to the Pine Tree. Two other veins have been discovered by underground drilling. These are the South vein and North vein. The Nelson orebody on the southwest limb of the "Ruth" syncline is the most important replacement zone developed. The orebody is near and crudely parallel to the axial plane of the fold and relatively flat-lying. The zone has been delineated for a length of 359 metres and varies from 6 to 33 metres in width. Within the limestone, sulphides occur in fractures ranging from a fraction of a centimetre up to 1.5 metres in thickness. Fine-grained sulphides are disseminated in the limestone adjacent to the fractures. Silicification accompanying the sulphides has taken place where the quartz veins have intersected the limestone beds. The Nelson orebody is surrounded by a conspicuous halo of coarse-grained pyrite. The extent of the replacement-style mineralization varies directly with the size and number of the feeder veins. A plunge to the zone is affected by the oblique intersection of the veins across the limestone. The mineralization in the zone exhibits lineations both parallel and normal to the bedding; the latter coincides with the axial plane cleavage of small drag folds.

Mineralization within the quartz veins consist of pyrite, galena, sphalerite, arsenopyrite, and minor amounts of boulangerite, argentiferous tetrahedrite, freibergite, chalcopyrite and scheelite. Gold is generally associated with arsenopyrite and pyrite. Scheelite is also present as fine disseminations. Younger scheelite-bearing quartz veins cut both the vein and replacement-type mineralization.

CAPSULE GEOLOGY

The mine has been extensively developed with underground workings. Reserves calculated in 1982 indicate 273,944 tonnes in all categories grading 233.10 grams per tonne silver, 4.8 per cent lead and 5.4 per cent zinc (George Cross News Letter No.182). In 1972, inferred reserves for most of the individual veins were compiled: 1)Nelson orebody - 190,029 tonnes grading 188.54 grams per tonne silver, 4.4 per cent lead, 6.1 per cent zinc; 2)Pine Tree - 43,903 tonnes grading 420.61 grams per tonne silver, 7.0 per cent lead, 6.06 per cent zinc; 3)South - 7529 tonnes grading 283.84 grams per tonne silver, 5.68 per cent lead, 6.78 per cent zinc; 4)North - 10431 tonnes grading 523.11 grams per tonne silver, 10.74 per cent lead, 5.16 per cent zinc (Tough, 1972).

Star Resources conducted underground drilling in 1996.

Jasper Mining Corporation performed preliminary geological mapping, soil and silt sampling during the 2002 field season (Press Release, Jasper Mining Corporation, November 7, 2002).

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EMPR ASS RPT 9808
EMPR BC METAL MM00021
EMPR ENG INSP (*plans, sections)
EMPR EXPL 1981-124; 1996-E3
EMPR GEM 1969-342; 1970-467,468; 1971-430; 1973-96; 1974-84,85
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EMR MIN BULL MR 166, 223 B.C. 63
EMR MP CORPFILE (Copperline Mines Ltd.; Ruth Vermont Mines Ltd.; Invermay Resources Inc.; Beverly Mines Ltd.)
GSC MAP 1326A; 12-1957
GSC MEM 369, pp. 111,114,115

PR REL Jasper Mining Corporation, Nov. 7, 2002
WWW <http://www.sedar.com> (Jasper Mining Corporation)

DATE CODED: 1985/07/24
DATE REVISED: 1989/06/14

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE010**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOTENAY BELL (L.11287), DUNN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 32 42 N
LONGITUDE: 116 58 45 W
ELEVATION: 761 Metres

NORTHING: 5599229
EASTING: 501476

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the Kootenay Bell workings as located by Newmont Exploration in 1984 (Assessment Report 13473). The location of the Kootenay Bell crown grant (L. 11287) is centred about 1 kilometre to the northeast.

COMMODITIES: Tungsten Lead Zinc Copper

MINERALS

SIGNIFICANT: Scheelite Pyrite Pyrrhotite Galena

ASSOCIATED: Quartz Carbonate

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Skarn

TYPE: K05 W skarn K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Proterozoic

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Amphibolite
Dolomitic Limestone
Marble
Quartzite
Muscovite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Purcell Mountains

TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1984

SAMPLE TYPE: Chip

COMMODITY

GRADE

Tungsten

0.2820

Per cent

COMMENTS: From a 1-metre chip sample. The assay measured tungstic oxide (WO3).

REFERENCE: Assessment Report 13473.

CAPSULE GEOLOGY

The Kootenay Bell occurrence is located about 750 metres north of the mouth of Dunn Creek which empties into the east side of Duncan Lake.

The area of the Kootenay Bell is underlain by coarse clastic rocks of the Upper Proterozoic Horsethief Creek Group. The rocks in the area have been mapped as amphibolite, dolomitic limestone, marble, quartzite and muscovite schist. The amphibolite is possibly a meta-volcanic rock.

Adits on the Kootenay Bell and 300 metres to the north at Dunn Creek (730 metres elevation) appear to have been driven on pyrite-pyrrhotite-galena veins in micaceous carbonate lenses. Lamping indicated fine scheelite in an old trench by the Kootenay Bell workings. Two 1-metre samples taken along the friable, carbonate-rich trench wall yielded 0.264 and 0.282 per cent WO3 (Assessment Report 13473). A grab sample of quartz-pyrite-pyrrhotite-galena rubble material from the Dunn Creek adit assayed 0.024 per cent WO3 (Assessment Report 13473). Zinc and copper is indicated in outcrop about 400 metres downstream from the Dunn Creek adit. The country rock in the vicinity of the Dunn Creek adit appears to be dolomitic limestone, quartzite or schist.

The area was investigated in the 1920s when the Dary and Dismuth

CAPSULE GEOLOGY

(082KNE062), 4 kilometres north, were explored. In 1945, five contiguous claims were staked in the vicinity of lower Cockle Creek on a northwesterly trend. They were known as the Tin City, Canyon, Old Glory, Cyclone and Erbeck claims. The Tin City was staked to cover a showing of tin, beryllium and scheelite mineralization. Claims in the vicinity of the Erbeck claim were Crown-granted in about 1900 (Iron Hand (Lot 5668) and Iron Chief (Lot 5669)). Sipald Resources acquired 12 claims covering the area in 1983. Newmont Exploration of Canada Limited optioned the property in 1984. Work by Newmont in 1984-85 included geochemical soil, silt and rock chip surveys, a magnetometer survey, trenching and 794 metres of diamond drilling in 13 holes.

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EMPR AR *1945-107
EMPR ASS RPT *13473
EMPR GEOFILE 2003-2
GSC MAP 1929-235A
GSC MEM 161

DATE CODED: 2003/02/15
DATE REVISED: 2003/02/15

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE011**

NATIONAL MINERAL INVENTORY: 082K15 Pb4

NAME(S): **CRYSTAL CREEK**, ATLAS, ADR,
RR, RJF, RJR,
RENN, COG, TECT,
LCP, VMT

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 55 41 N
LONGITUDE: 116 57 16 W
ELEVATION: 1828 Metres

NORTHING: 5641825
EASTING: 503202

LOCATION ACCURACY: Within 500M

COMMENTS: The Crystal Creek occurrence is located on the north side of Crystal Creek, the northern tributary of Crystalline Creek. The occurrence lies between Vermont and Crystalline Creeks, some 45 kilometres south of Golden, (Assessment Report 26405).

COMMODITIES: Zinc Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Malachite
Tetrahedrite Azurite Boulangerite Stibnite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated Massive Shear
CLASSIFICATION: Replacement Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E12 Mississippi Valley-type Pb-Zn
SHAPE: Tabular
MODIFIER: Sheared Folded
DIMENSION: Metres STRIKE/DIP: 120/ TREND/PLUNGE:
COMMENTS: Mineralization appears to be localized by folds and shears.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE Upper Proterozoic GROUP Horsethief Creek FORMATION Undefined Formation IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Slate
Quartzite
Dolomitic Limestone
Phyllite
Argillite
Arkose
Pebble Conglomerate
Grit

HOSTROCK COMMENTS: Mineralization is found in quartz veins in all lithologies also replacement sulphides have been observed in carbonates and quartzites.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional Contact RELATIONSHIP: GRADE: Greenschist Amphibolite

COMMENTS: Local assemblages characteristic of almandine-amphibolite facies.

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1982
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 224.2300 Grams per tonne
Lead 5.5300 Per cent
Zinc 7.8500 Per cent

COMMENTS: The metal values are an average of 16 selected assays from drill holes.

REFERENCE: Assessment Report 9671, page 10.

CAPSULE GEOLOGY

The Crystal Creek occurrence lies on the north side of Crystal Creek, the northern tributary of Crystalline Creek. These showings

CAPSULE GEOLOGY

lie between Vermont and Crystalline creeks, approximately 45 kilometres south of Golden. Mineralization has been detected both in surface exposures and in diamond drill core.

Showings on the north side of Crystal Creek were reported as early as 1890. In 1965, Mr. R. Renn located and staked the Atlas Group. The Group was then optioned by Purcell Range Mines Ltd. who did some stripping using a bulldozer. In 1967, ownership of the claims was transferred to Medesto Exploration Ltd. This company changed their name to Cochrane Oil & Gas in 1978. From 1967 to 1977, they conducted soil surveys, trenching and diamond drilling on the occurrence. In 1979, Norcen Energy Resources optioned the property and accumulated claims extending from the Ruth-Vermont Mine site on Vermont Creek to Crystalline Creek, Vowell Creek and Warren Creek. This area was referred to as the Crystal Creek Project. This large area included the Cog, Pro and Tect claim groups. Work carried out by Norcen in 1979, was restricted to a gridded area that included the showings north of Crystal Creek. They completed geological mapping, soil surveys, an electromagnetic survey and diamond drilling (12 holes, 763 metres). In 1980 under a similar program they drilled a total of 530 metres. As a result, they found anomalous areas coincidental with axial plane traces of major folds which localized mineralization. In 1982, Bluesky Oil & Gas Ltd. and Ruth Vermont Mine Ltd. explored the property under a joint venture agreement with Cochrane Oil & Gas Ltd. Work included geological mapping, magnetometer, electromagnetometer and self potential surveys. They drilled four drill holes, totaling 440 metres on the Tect claims. Average metal values from 16 selected assays from these holes are listed below (Assessment Report 9671, page 10).

Per Cent Lead	Per Cent Zinc	Grams Per Tonne Silver
5.53	7.85	224.23

Cochrane Oil & Gas Ltd. contracted Nolin Geo Enterprises to conduct an exploration program in 1982 and to do a follow-up program in 1983. A total of 4000 metres of detailed self-potential survey was run on the Tect grid, 650 metres of both self-potential and magnetometer lines were completed over the Cog II grid. About 759 meters of self-potential and 250 metres of gravity work was run over the North Pro grid. In 2000, Mountain Star Resources Limited and Bright Star Metals Inc. acquired the option (VMT claims and drilled the "LCP zone" but were not able to "demonstrate continuity of sulphides". Some of the sulphides "suggest primary sulphide deposition others a replacement origin". They reported (Assessment Report 26405), that most of the sulphides in the drill holes "appear to be bedded".

The Crystal Creek occurrence lies within an area underlain by Proterozoic rocks of the Horsethief Creek Group. Reesor, (Memoir 369, p. 27) described the Horsethief Group as "great thicknesses of slate, argillite, and phyllite as well as lesser amounts of quartzite, greywacke, and limestone. In addition, "...it contains considerable thicknesses of quartz-pebble conglomerates and pebbly grit."

Regional metamorphism within the area is lower to middle greenschist facies. Locally, contact metamorphism superimposed on the regional metamorphism has given rise to assemblages characteristic of the almandine-amphibolite facies.

In the occurrence area, argillite and phyllites are the predominant rock types ranging from light grey to black in colour. They vary in character, from massive and structureless to thinly laminated and bedded.

Clastic rocks in the local area include quartzite, arkose, grit and pebble conglomerate. These are light grey and green coloured, although dark grey varieties are present. Here, the clastic rocks are interbedded with argillite and phyllite.

The major structure in the area is an anticlinorium. Secondary folds plunge north and south. Fractures paralleling axial planes are mineralized with quartz veins which carry sulphides. Mineralization also appears to have been localized by folds and shears.

Argentiferous galena, sphalerite and pyrite occur in slates, quartzites and limestones. One showing consists of massive galena, minor pyrite and sphalerite along a series of fractures in the quartzite, that strike 120 to 125 degrees and dip steeply. They form a series of sulphides lenses 0.3 to 0.6 metre thick and more than a metre long, more or less parallel to a bed of quartzite. Galena and sphalerite also occur disseminated in quartzite. Locally, the quartzite, near fractures, is replaced by sulphides. Replacement sulphides also have been observed in carbonates. Mineralization is also associated with quartz veins in dolomitic limestone and phyllite. Some quartz veins contain argentiferous galena,

CAPSULE GEOLOGY

chalcopyrite and malachite. Azurite, boulangerite, stibnite and tetrahedrite are reported to be associated with faults or shear zones in carbonate strata.

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EMPR AR 1966-236; 1968-265
EMPR ASS RPT 5446, 5869, 6257, 6744, 7409, 7663, 8096, 8097, 8098,
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8297, 8298, 8560, 9131, 9671, 10576, 10793, *12071, *26405
EMPR EXPL 1969-E49, 1976-E52, 1977-E71, *1978-E86,
1979-95, 1980-127, 1982-97
EMPR GEM 1969-342, *1970-467, 1971-429, 1972-78, 1980-127, 1982-97

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/31

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE012**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRISCO SILICA**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

Open Pit

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 50 52 N
LONGITUDE: 116 17 08 W
ELEVATION: 900 Metres

NORTHING: 5633141
EASTING: 550296

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry (Open File 1987-15).

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R07 Silica sandstone
COMMENTS: Northwest strike and steep northeast dip.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Ordovician

GROUP

Undefined Group

FORMATION

Mount Wilson

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1964

COMMODITY

Silica

GRADE

98.6600 Per cent

COMMENTS: Pieces randomly selected from the muck pile.
REFERENCE: Open File 1987-15.

CAPSULE GEOLOGY

The Brisco deposit is located about 30 metres east of Highway 95, 2.4 kilometres north of Brisco.

Quartzite of the Middle and/or Upper Ordovician Mount Wilson Formation forms a bed 60 to 90 metres thick, striking northwest and dipping steeply to the northeast. The quartzite is hard, massive, white, medium to fine-grained and overlain by dolomite.

In 1964, 2450 tonnes of silica were quarried and shipped. A test shipment was refused by Wenatchee, Washington due to the high calcium content. Pieces randomly picked, in 1964, from the muck pile assayed; 98.66 per cent SiO₂, 0.47 per cent Al₂O₃, 0.06 per cent Fe₂O₃ and 0.08 per cent CaO (Open File 1987-15).

BIBLIOGRAPHY

EMPR AR 1964-207
EMPR OF *1987-15

DATE CODED: 1985/07/24
DATE REVISED: 1987/04/14

CODED BY: GSB
REVISED BY: GRF

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

commonly brecciated with a few scattered lenses or horses of brown quartzite. Mountain leather is abundant as films on fracture surfaces and a few small barite veins are present. The east wallrock is light grey weathering buff to flesh-coloured dolomite and limestone. It is brecciated, and near the main barite body contains barite in the matrix. The orebody itself is brecciated. Much of the barite is white, but the white sections are irregularly shaped and are usually edged or cut by zones of variable width that consist of a fine-grained black matrix enclosing angular fragments of white barite a fraction of a centimetre to several centimetres in diameter. The black colour is due to carbon (graphite).

The barite pinches and swells both horizontally and vertically. To the north it appears to be cut off by a fault and it pinches out to the south. White barite, occurring as irregular masses forming the matrix around breccia fragments of light coloured dolomite, occurs 762 metres north of the main body. A small amount of barite, present as irregular discontinuous masses in a zone of shearing, occurs 550 metres to the south.

Drilling in 1980 at the south end of the main ore zone intersected only a few stringers of barite. Drilling to the east and northeast of the main zone indicated a potential for 3000 tonnes of barite with a specific gravity of 4.27.

Old workings indicate that the barite occurred in a steeply dipping horizon bounded to the east by a fault structure. The west contact appears to be both fault controlled and conformable with the host dolomite. The mined out zone appears to have been controlled by a northerly plunging structure.

Production from the Brisco operations began in 1952 and continued to 1980. Initial production was from an open pit. In subsequent years production came from underground operations. A total in excess of 133,000 tonnes of barite was produced during this time. The deposit is considered depleted but a modest reserve of barite, not economical, is still present (Butrenchuk, S.B.B., 1988)

The main deposit and quarrying operations are on the Salmon claim (Lot 15046).

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- EMPR GEM 1969-383; 1970-489; 1971-454; 1972-578; 1973-538; 1974-371, 372
- EMPR INF CIRC 1984-1, p. 33; 1985-1, p. 44
- EMPR MINING 1975-1980 p. 42; 1981-1985 p. 54; 1986-1987 p. 79; 1988 p. 79
- EMPR MAP 62; 65, 1989
- EMPR OF 1988-13
- EMPR PF (Geology map of Brisco adit; Surface geology map; Drilling report by F. Nuss, Mountain Minerals, 1980)
- EMR MP CORPFILE (Mountain Minerals Limited)
- GSC MAP 12-1957; 1326A
- GSC MEM 369, p. 118
- GSC OF 481
- GSC P 91-1A, pp. 27-31
- CANMET IR 60, p. 18
- Butrenchuk, S.B. (1988), *Ministry of Energy, Mines and Petroleum Resources, internal unpublished draft manuscript on Barite
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DATE CODED: 1985/07/24
DATE REVISED: 1991/01/29

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNE014**

NATIONAL MINERAL INVENTORY:

NAME(S): **JAB**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 19 N
LONGITUDE: 116 21 34 W
ELEVATION: 1113 Metres

NORTHING: 5628367
EASTING: 545135

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT:	Magnesite	Pyrite	Chalcopyrite
ASSOCIATED:	Dolomite		
ALTERATION:	Talc	Serpentine	Silica Dolomite
ALTERATION TYPE:	Carbonate		
MINERALIZATION AGE:	Unknown		

DEPOSIT

CHARACTER:	Vein	Stratabound	
CLASSIFICATION:	Replacement	Hydrothermal	Industrial Min.
TYPE:	E09	Sparry magnesite	

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Magnesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The JAB claims were located over the first recorded magnesite discovery in the area. The magnesite forms a bare knoll about fifteen metres high and about 122 metres long by thirty to fifty metres wide. Most of the knoll consists of a medium to coarse-grained structureless, pale grey to white rock. Thin layers of magnesite separated by slickensided films of talc and serpentine occur at the southeast corner of the knoll. Visible impurities include patches of coarse, white dolomite, talc-serpentine films, discontinuous stringers of quartz and chalcedony and scattered crystals and small lenses of pyrite. Chip sampling over the top of the knoll contained 44.02 per cent MgO, 0.47 per cent CaO, 43.82 per cent CO₂, 8.99 per cent SiO₂ and 0.99 per cent Fe (Total).

BIBLIOGRAPHY

EMPR AR 1962-156; 1964-195,199
EMPR OF 1987-13
GSC MAP 12-1957

DATE CODED: 1985/07/24
DATE REVISED: 1986/10/09

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE015**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOPAZ LAKE**, WHITEHORSE

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 49 38 N
LONGITUDE: 116 24 05 W
ELEVATION: 1127 Metres

NORTHING: 5630782
EASTING: 542160

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Dolomite
ALTERATION: Talc Silica
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Replacement Hydrothermal Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Magnesite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Whitehorse claims, staked in 1960-61, covered the original magnesite discovery at the south end of Topaz Lake. The occurrence is a triangular shaped mass about 425 metres by 180 metres at the widest point. Drilling indicates 15 to 30 metres thickness of coarse-grained magnesite with 2 to 12 millimetre crystals underlain by a fine-grained cherty dolomite. The magnesite occurs in the trough of a northwest plunging syncline within the Mount Nelson dolomites and consists of a light to pearly grey rock with a rough rusty brown weathered surface. Visible impurities include quartz in scattered veinlets and grains as well as talc in minute shears.

A smaller magnesite body about 60 by 60 metres forms an apparent dip slope surface layer across the end of a low hillock about 150 metres northwest of Topaz Lake. Thickness is unknown but it is underlain by a fine-grained dolomite which hosts abundant siliceous chips. In addition, there are a number of other small magnesite bodies in the vicinity of the main occurrence.

BIBLIOGRAPHY

EMPR AR 1962-157; 1964-198
EMPR OF 1987-13
GSC MAP 12-1957
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1986/10/09

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE016**

NATIONAL MINERAL INVENTORY:

NAME(S): **ERBECK**, IRON CHIEF (L.5669), IRON HAND (L.5668),
DUNN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10W
BC MAP:
LATITUDE: 50 33 16 N
LONGITUDE: 116 59 00 W
ELEVATION: 1000 Metres

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5600279
EASTING: 501181

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the Erbeck workings as located by Newmont Exploration in 1984 (Assessment Report 13473). The Iron Hand or Iron Chief crown grants to the northeast may have been originally staked to cover the showings and therefore could be mislocated.

COMMODITIES: Tungsten Silver Lead Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Galena Chalcopyrite

ASSOCIATED: Quartz Carbonate

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Skarn

TYPE: K05 W skarn K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic	Horsethief Creek	Unnamed/Unknown Formation	

LITHOLOGY: Quartzite
Dolomitic Limestone
Marble
Muscovite Schist
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1984

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver 19.5000 Grams per tonne

Lead 1.0000 Per cent

Tungsten 0.0670 Per cent

COMMENTS: The assay measured tungstic oxide (WO₃).

REFERENCE: Assessment Report 13473.

CAPSULE GEOLOGY

The Erbeck occurrence is located between Cockle and Dunn creek which empty into the east side of Duncan Lake.

The area of the Erbeck is underlain by coarse clastic rocks of the Upper Proterozoic Horsethief Creek Group. The rocks in the area have been mapped as amphibolite, dolomitic limestone, marble, quartzite and muscovite schist. The amphibolite is possibly a meta-volcanic rock.

The area was investigated in the 1920s when the Dary and Dismuth (082KNE062), 4 kilometres north, were explored. In 1945, five contiguous claims were staked by R.E. Erdahl and J.E. Pinchbeck in the vicinity of lower Cockle Creek on a northwesterly trend. They were known as the Tin City, Canyon, Old Glory, Cyclone and Erbeck claims. The Tin City (082KNE071) was staked to cover a showing of tin, beryllium and scheelite mineralization. Claims in the vicinity of the Erbeck claim were Crown-granted in about 1900 (Iron Hand (Lot 5668) and Iron Chief (Lot 5669)). Sipald Resources acquired 12 claims covering the area in 1983. Newmont Exploration of Canada Limited optioned the property in 1984. Work by Newmont in 1984-85

CAPSULE GEOLOGY

included geochemical soil, silt and rock chip surveys, a magnetometer survey, trenching and 794 metres of diamond drilling in 13 holes.

In 1945, the rocks underlying the Erbeck claim were reported to be greyish-green and brown schist, quartzite and limestone cut by quartz veins. One vein up to 1 metre in width was exposed for 30 metres. Mr. Erdahl reported that a greater width and length of vein containing pyrite, pyrrhotite and galena had been observed at other localities on the claim.

In 1984, Newmont Exploration examined what they believed to be the Erbeck workings. These consisted of two shallow pits in a sheared carbonate-quartzite contact zone that hosts pyrite, pyrrhotite, chalcopyrite and galena. A sample of quartz vein material assayed 1 per cent lead, 19.5 grams per tonne silver and 0.067 per cent tungstic oxide (WO₃) (Assessment Report 13473).

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EMPR ASS RPT *13473
EMPR AR *1945-107
EMPR GEOFILE 2003-2
GSC MAP 1929-235A
GSC MEM 161

DATE CODED: 2003/02/15
DATE REVISED: 2003/02/15

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE017**

NATIONAL MINERAL INVENTORY:

NAME(S): **GROTTO, LARRABEE'S PROSPECT**

MINING DIVISION: Golden

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K09W
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 33 N
 LONGITUDE: 116 20 45 W
 ELEVATION: 1050 Metres

NORTHING: 5602862
 EASTING: 546320

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Grotto showing (Assessment Report 5543).

COMMODITIES: Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Smithsonite

ASSOCIATED: Quartz Carbonate

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein Breccia

CLASSIFICATION: Replacement

TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Unnamed/Unknown Group	Jubilee	
Ordovician-Silurian	Unnamed/Unknown Group	Beaverfoot	

LITHOLOGY: Dolomite
 Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1927
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	92.5800 Grams per tonne
Gold	0.6900 Grams per tonne
Lead	4.7000 Per cent
Zinc	0.7000 Per cent

COMMENTS: Sample taken across 60 centimetres.
 REFERENCE: Minister of Mines Annual Report 1927, page 265.

CAPSULE GEOLOGY

Some prospecting and exploratory work on the Grotto, also known as Larrabee's Prospect, was first documented in 1925. It was reported in 1927 that earlier prospecting revealed the presence of a large cave in limestone at the bottom of which a small pocket of galena was exposed. A 58-metre crosscut was driven and 15 metres of drifting done. A number of short diamond-drill holes were also completed in 1927. The next recorded work takes place in 1972 when Grotto Silver Mines Ltd. collected 200 soil samples, drilled one diamond-drill hole totalling 85 metres and did some trenching and stripping. In 1975, Cominco Ltd., for Grotto Silver Mines Ltd., completed four diamond-drill holes totalling 272 metres as well as some rotary drilling, mapping and road construction. Grotto Silver Mines did 60 metres of trenching in 1976, 12 metres of drifting in 1977 and 91 metres of diamond drilling in 1978. In 1979 Grotto completed 106 metres of diamond drilling, took 100 soil samples and completed some trenching.

Disseminated pyrite, galena, sphalerite and smithsonite occur in fractures and carbonate breccia in dolomites of the Cambrian Jubilee and Ordovician to Silurian Beaverfoot Formation.

It was mentioned in 1927 that 550 metres to the west of the Grotto cave, a vertical sheared fracture is slightly mineralized with quartz and galena across a width of 1.8 metres. A sample taken across 60 centimetres yielded 0.69 gram per tonne gold, 92.58 grams

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 505
REPORT: RGEN0100

CAPSULE GEOLOGY

per tonne silver, 4.7 per cent lead and 0.7 per cent zinc (Minister of Mines Annual Report 1927, page 265).

BIBLIOGRAPHY

EMPR AR 1925-222; *1927-264; 1929-292
EMPR ASS RPT *5543
EMPR GEM 1972-74
EMPR EXPL 1975-46,47, 1976-E49, 1977-E67, 1978-E79, 1979-89
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148, p. 50; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/01

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE018**

NATIONAL MINERAL INVENTORY: 082K16 Pb1

NAME(S): **SILVER GIANT**, SILVER GIANT MINE, GIANT MASCOT,
SPILLIMACHEEN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 55 52 N
LONGITUDE: 116 29 07 W
ELEVATION: 951 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5642290
EASTING: 536171

LOCATION ACCURACY: Within 500M

COMMENTS: Mine complex and portals, 750 metres north of the Spillimacheen River on the western slopes of Jubilee Mountain, 9 kilometres west of the village of Spillimacheen and the Columbia River (Property File - Plan maps).

COMMODITIES: Lead Antimony Zinc Cadmium Silver Copper Barite

MINERALS

SIGNIFICANT: Galena Sphalerite Barite Pyrite Chalcopyrite

ASSOCIATED: Bornite Silica Carbonate

ALTERATION: Silica

ALTERATION TYPE: Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Replacement Sedimentary Industrial Min.
TYPE: E12 Mississippi Valley-type Pb-Zn E10 Carbonate-hosted barite
E14 Sedimentary exhalative Zn-Pb-Ag
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Undefined Group	Jubilee	
Cambrian-Ordovician	McKay	Undefined Formation	

LITHOLOGY: Limestone
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The region includes strata from the Purcell and Windermere supergroups, overlain by a Paleozoic platformal carbonate succession. The structure of the area is dominated by the Mount Forster-Steamboat fault, one of a series of Mesozoic thrust faults, and it carries folded Middle and Upper Proterozoic strata over folded Upper Proterozoic and Paleozoic strata.

In the Silver Giant occurrence area, the Middle-Upper Cambrian Jubilee Formation consists of a massive dolomite-limestone unit unconformably overlying the Lower Cambrian Cranbrook Formation and Hadrynian Horsethief Creek Group. The Cranbrook Formation consists of thick-bedded mature quartzites and quartz grits; the Horsethief Creek Group comprises a series of interbedded thinly laminated, grey shales, massive thick-bedded grits, medium to thick-bedded, white and brown quartzites, and grey, black, and buff-weathering limestones and dolomites. The Upper Cambrian to Middle Ordovician McKay Group conformably overlies the Jubilee Formation and consists of recessively weathering shales, thin sandstones and dolomitic biowackestones. Base metal mineralization occurs within the Jubilee Formation in solution breccias beneath the Devonian and Ordovician unconformities.

At the Silver Giant mine, mineralization occurs in limestone of the Jubilee Formation close to its contact with slates of the McKay Group. The orebodies occur on the crest of an overturned anticline that has been subsequently folded and faulted. At the mine the main ore zone occupies the nose of the overturned anticline. The structure has a limestone core surrounded by slate. The plunge of

CAPSULE GEOLOGY

the nose is westerly, and underground development has shown it to vary from 45 degrees near the surface to flat-lying on the No. 8 level. A large regional thrust fault has been mapped 400 metres to the west and in the underground workings.

The various mineralized zones are barite-sulphide replacements with varying amounts of silica. They occur beneath the slate at its contact with the limestone along the nose of the fold and along the west limb. Some barren masses of barite also occur in the limestone beneath the contact; these are interpreted as the roots of the orebodies.

Mineralogy consists of predominantly fine-grained galena with lesser amounts of sphalerite, pyrite, chalcopyrite and bornite. Locally, small amounts of a grey copper-arsenic mineral also occur. The barite is most commonly white. It varies from very fine grained to coarse bladed crystal aggregates. The fine-grained barite is either massive or foliated and commonly contains sulphides and argillaceous material. Both fine and medium-grained carbonate occurs interstitial to the barite. Some chert may also be present. Locally, there is the suggestion of brecciation.

The Silver Giant discovery dates back to 1883 and was a producer of lead, zinc, silver, copper, antimony and cadmium during the period 1947 to 1957. In 1959 Baroid of Canada Limited entered into an agreement to produce barite from the property. Production in excess of 188,000 tonnes of barite came from reconcentration of mill tailings and some underground and open pit operations. Production ceased in 1983 and the deposit is considered depleted (Z.D. Hora, personal communication, 1991).

Since most of the barite appears to have been produced from a reworking of the mine tailings, a more accurate value of all ore actually mined at the Silver Giant would be 840,000 tonnes.

BIBLIOGRAPHY

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- EMPR ASS RPT 9, 35, 38, 39
- EMPR GEM 1969-383; 1970-489; 1971-454; 1972-579; 1973-538,539; 1974-372
- EMPR INF CIRC 1984-1, p. 33; 1985-1, p. 44; 1986-1, p. 67; 1987-1, p. 75
- EMPR MAP 62; 65, 1989
- EMPR OF 1998-10
- EMPR PF (Starr, C.C. (1928): Report on an Examination of Giant Mine, Sketch of No. 3 and No. 5 Tunnels Showing Samples, @ 1928; Parker, J.L. (1929, 1930): Notes on the Giant Vein Developments, Report on Mining Operations-Giant Mine B.C.; Various memoranda and notes; White, R.J. (1924): Report on the Giant Property; Kursell, H.A. (1927): Report on the Giant Mine; Plan map, sections and longitudinal section of drill holes, plan showing ore shoots, plans of mine workings, claim location map, assay plan; photograph)
- EMR MP CORPFILE (Silver Giant Mines, Limited; United Siscoe Mines Limited; Giant Mascot Mines, Limited)
- GSC MAP 12-1957; 1326A
- GSC MEM 369, p. 115
- GSC OF 481
- GSC P 91-1A, pp. 27-31
- GSC SUM RPT 1925 Part A, p. 228; 1926 Part A, p. 55; 1932 Part AII, pp. 173-176
- CANMET IR 688, pp. 82,83; 720, pp. 155-158; 2576; 3104
- CMJ Dec. 1951, pp. 47-50
- W MINER Vol.27, June 1954, pp. 42-47
- Butrenchuk, S.B.B. (1988), *Ministry of Energy, Mines and Petroleum Resources, internal unpublished draft manuscript on Barite

DATE CODED: 1985/07/24
DATE REVISED: 2001/08/01

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNE019**

NATIONAL MINERAL INVENTORY: 082K15 Pb3

NAME(S): **LEAD MOUNTAIN, MITTEN, IXL,
CONDOR, ROSE, DAISY,
TONY, DON, RON,
LEGACY**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K15E
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 59 15 N
LONGITUDE: 116 34 18 W
ELEVATION: 1280 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5648522
EASTING: 530064

LOCATION ACCURACY: Within 500M

COMMENTS: The occurrence is located 8 kilometres west of Harrogate, 2.5 kilometres north of the north end of Mitten Lake on Lead Mountain, (Exploration in British Columbia 1976, page 53).

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite
ASSOCIATED: Barite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Breccia Vein Disseminated
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Cambrian
Cambrian-Ordovician

GROUP

Unnamed/Unknown Group
McKay

FORMATION

Jubilee
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomitic Limestone
Dolomite
Argillite
Conglomerate
Mudstone
Sandstone
Grit

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: OUTCROP

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1918
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 168.0000 Grams per tonne
Lead 13.3000 Per cent
Zinc 16.3000 Per cent

COMMENTS: The values presented are an average of analyses of four grab samples.
REFERENCE: Minister of Mines Annual Report 1918, page 153.

CAPSULE GEOLOGY

The occurrence is located on Lead Mountain on the west side of the Rocky Mountain Trench, 9 kilometres northwest of Harrogate which lies within the trench.

The first documented exploration at Lead Mountain occurred in 1904, when ground was staked as the IXL and the Condor claims. In 1919, lead and zinc mineralization was staked as the Rose and Daisy claims. At that time, an adit, elevation 1289 metres, was driven into the top of the mountain. In 1925, another adit, elevation 1259 metres, was driven. In 1926, approximately two tonnes of silver-lead ore were shipped from the Daisy claim. In 1954, Giant Mascot Mines staked the ground and in 1956 drove a third adit, elevation 1198 metres, in which underground work and diamond drilling was done. Underground drilling from the drifts totaled 610 metres. This work was undertaken jointly by Cominco Ltd. and Giant Mascot Mines. In

CAPSULE GEOLOGY

1966, the property comprised the Tony, Don and Ron groups. During the year, Giant Mascot carried out 137 metres of diamond drilling in three holes. When the claims lapsed in 1966, Cominco Ltd. staked the property as the Mitten claim. Work by Cominco to 1984 included geological mapping, underground sampling and a soil geochemistry programs. The property was staked as the Legacy claims by A.G. Louie in 1993 and is operated by WWC Consulting Ltd.

The region includes strata from the Purcell and Windermere Supergroups, overlain by a Paleozoic platformal carbonate succession. The structure of the area is dominated by the Mount Forster-Steamboat fault, one of a series of Mesozoic thrust faults and it carries folded Middle and Upper Proterozoic strata over folded Upper Proterozoic and Paleozoic strata

While mapping at Lead Mountain, Cominco geologists considered the Upper Cambrian to Middle Ordovician McKay Group to be represented by debris flows, planar laminated mudstones and fine to coarse dolomitized gritstones exhibiting graded bedding and ripples. Here, the Middle to Upper Cambrian Jubilee Formation consists of dense, fine to coarse grained dolomites. The Lower Cambrian Cranbrook Formation, below the Jubilee Formation, consists of pink to white quartzose sandstone, grits and conglomerates.

At the top of Lead Mountain, primarily lead and zinc mineralization occurs in dolomite in an oval shaped area 610 by 245 metres. The mineralization is distributed in a zone 150 to 200 metres long, striking northwest and dipping 75 to 90 degrees southwest. Mineralized outcrops occur at the top of the ridge at an elevation of 1326 metres and on steep northeast cliffs between elevations of 1265 and 1295 metres. Sulphide minerals are associated with barite and include galena, sphalerite, pyrite and chalcopyrite. Mineralization is localized in breccias and tension fractures at the axis of a syncline. The ore, consisting of an intimate mixture of galena and sphalerite carries low silver values and can occur as replacements and impregnations of the limestone in contact with argillites. In places, the ore occurs in bunches and streaks and in others it seems to be disseminated throughout the limestone. The mineralization occurs primarily in the Jubilee Formation.

The following table lists the analyses from four grab samples from Lead Mountain. The analyses are from the Minister of Mines Annual Report 1918, page 153.

SAMPLE	SILVER grams per tonne	LEAD per cent	ZINC per cent
1	92.6	7.8	
2	274.3	10.2	24.5
3	137.1	27.5	20.0
4		7.6	4.5

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EMPR EXPL *1976-53
EMPR GEOFILE 2003-2
GSC MEM 369, p. 112
GSC SUM RPT 1933-172

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/23

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE020**

NATIONAL MINERAL INVENTORY: 082K10 Ag2

NAME(S): **SILVER BASIN**, WESTERN CROSS (L.1978), NO. 21 (L.1977),
SUMMIT, SILVER, SILVERTIP,
WALKER, CHIPPERFIELD, NIX

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:
LATITUDE: 50 41 19 N
LONGITUDE: 116 44 47 W
ELEVATION: 2225 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Central area of Crown Grant Lots 1977 and 1978 (Topographic Map 082K/10).

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5615229
EASTING: 517915

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Proterozoic Cretaceous	Horsethief Creek	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Limestone
Limy Argillaceous Schist
Porphyritic Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SHOWING REPORT ON: Y
CATEGORY: Unknown YEAR: 1973
QUANTITY: 13426 Tonnes
COMMODITY GRADE
Silver 69.9800 Grams per tonne
Copper 0.1600 Per cent
Lead 4.7300 Per cent
Zinc 3.3400 Per cent

COMMENTS: Year is assumed from work done by Purcell Development.
REFERENCE: National Mineral Inventory 082K/10 Ag 2.

CAPSULE GEOLOGY

The Silver Basin property is located at approximately 2195 metres elevation in Bugaboo Pass, at the headwater of Bugaboo Creek, some 53 kilometres northwest of Invermere.

The No. 21 (Lot 1977) and Western Cross (Lot 1978) claims were staked by T. Mercier in 1898 and bonded to the Golden and Fort Steele Development Company, Limited. Exploration work was done in opencuts and two short adits. The claims were Crown-granted to the above in 1900.

In 1936, Resident Mining Engineer H. Sargent visited the No. 21 and Western Cross which had been optioned by the Silver Basin Mining Syndicate from T. Mercier along with three adjoining claims, Walker, Chipperfield and Nix. Silver Basin referred to this property as the Summit group. Sargent reported that a Crown-grant plan showed three adits on the eastern slope and several cuts and pits on the saddle. A new adit was apparently driven on the property in the late 1930s.

In 1952, a one ton shipment of ore was reported under the names N. Robert and R.L. Kirk of Golden. Through a November 1968 option agreement, W. Wolfenden and W. Jones acquired the Crown-grants from Y.G. Mercier. This option to purchase was transferred to Purcell Development Co. Ltd. by an agreement dated August 1969. Wolfenden

CAPSULE GEOLOGY

and Jones and L. Wilder transferred their interest in adjacent ground, held as the Silver Basin claims, to the company by agreements dated June 1969 and April 1971. Purcell Development held a 70 per cent interest under various agreements. The remaining interest was held by Frontier Sulphur Company Inc., of Tulsa.

Purcell Development apparently restaked the located ground in 1969 as the Silver 1-29 claims and again in 1973 as the Silvertip 1-29 claims. Work during 1969 included geological mapping, sampling, an electromagnetic survey and 304 metres of diamond-drilling in 9 holes. During 1970, a magnetometer survey over 3.2 kilometres, trenching and 604 metres of diamond-drilling in 6 holes was carried out. Stripping was reported in 1971 and 670 metres of diamond-drilling in 8 holes in 1973.

An inventory was reported at 13,426 tonnes grading 69.98 grams per tonne silver, 4.73 per cent lead, 3.34 per cent zinc and 0.16 per cent copper (National Mineral Inventory 082K/10 AG 2).

The rocks in the area are reported to be limestone and limy argillaceous schist of the Upper Proterozoic Horsethief Creek Group. Porphyritic granite intrudes the country rock and may be related to the Cretaceous stock to the northwest.

Three types of mineralization were observed by Sargent: 1) dark granular limestone which has been replaced irregularly by massive, fine-grained, mixed sulphides consisting of galena, sphalerite, pyrite and chalcopryrite; 2) quartz veins mineralized with well-crystallized galena, with some pyrite and chalcopryrite, occurring in fine grey limestone or limy schist and; 3) veins and irregular quartz lenses in schist, mineralized by occasional bunches of pyrite.

Sargent also visited the Basin Group, held by the Silver Basin Mining Syndicate, which is in the area of the No. 21 and Western Cross. They are reported to be in a large basin on Green Mountain reached by about 5.6 kilometres of trail from the end of the road up Bugaboo Creek. The trail from the Basin Group branches from the trail to the No. 21 and Western Cross area.

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EMPR INDEX 3-218
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EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
EMR MP CORPFILE (Pucell Development Co. Ltd.)
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369
^Z

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE021**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAG**, NIMROD, PUZZLER

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 01 N
LONGITUDE: 116 21 56 W
ELEVATION: 1713 Metres

NORTHING: 5603715
EASTING: 544916

LOCATION ACCURACY: Within 500M

COMMENTS: Located on Starbird Ridge and southern slopes toward Horsethief Creek (Property File - Croteau, 1970). Location given is for centre of Mag claim from 1972 claim map.

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic	Horsethief Creek	Unnamed/Unknown Formation	
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Limestone
Slate
Quartzite

HOSTROCK COMMENTS: The uncertain location and inadequate documentation leaves the host formations in question.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1970
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		1426.0000	Grams per tonne
Lead		30.8400	Per cent
Zinc		10.1700	Per cent

REFERENCE: Croteau, F.L. (1970): Preliminary Geology Report

CAPSULE GEOLOGY

In 1967 on the Mag group of claims, Cominco Limited mapped and trenched (60 metres) and built 4 kilometres of road. In 1968, Cominco conducted soil sampling and 366 metres of trenching on the Mag 1 and 2 claim. In 1970, Silver Ray Mines Ltd. entered into an option agreement with owner Gordon Larrabee to gain ownership of the Mag group. Some work had been done on the claims on behalf of Silver Ray in 1969.

The area of the Mag occurrence is reported to be underlain by slate, quartzite and limestone. The only property report available (Croteau, 1970) reports that the Middle Proterozoic Mount Nelson Formation (Purcell Supergroup) and the Upper Proterozoic Horsethief Creek Group carry most of the mineralization. Property stratigraphy is poorly documented and the host formation(s) is open to question. The Mag property (which contained 39 claims by 1970) location is known only to be on Starbird Ridge at the 1980 metre elevation.

Some of the pits and trenches on the property show profuse mineralization that is predominantly lead, zinc and silver. The exposures appear to be replacement deposits in interbedded layers of

CAPSULE GEOLOGY

sediments. The most prominent is 1.2 metres wide showing heavy concentrations of galena and iron oxide. At a slope distance of 15 metres above the main showing there are narrow, siliceous vein zones carrying galena and sphalerite in a dark grey limestone band. Various trenches show that intermittent lead-zinc veins may occur over a distance of 762 metres from the creek upward on the slope. A grab from the "Lower Pit" yielded 1426 grams per tonne silver, 30.84 per cent lead and 10.17 per cent zinc (Property File, Croteau, 1970).

The Minister of Mines Annual Report for 1967 reports that galena and sphalerite occur in gash veins in dolomitic limestone and dolomites.

BIBLIOGRAPHY

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Ray Mines Ltd.)
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/05

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE022**

NATIONAL MINERAL INVENTORY:

NAME(S): **YOUNG, COPPER KING, COPPER QUEEN,
GREY EAGLE, AMELIA, MARJORY,
COPPER BUTTE, ST. ANDREW**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K15E
BC MAP:
LATITUDE: 50 49 48 N
LONGITUDE: 116 44 04 W
ELEVATION: 2216 Metres
LOCATION ACCURACY: Within 500M

Open Pit Underground

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5630954
EASTING: 518702

COMMENTS: The location includes the elevation of an open cut exposing a mineralized quartz vein (Minister of Mines Annual Report 1923, page 198).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite is disseminated throughout a quartz vein.
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic
TYPE: I06 Cu±Ag quartz veins E04 Sediment-hosted Cu
SHAPE: Tabular
DIMENSION: 585 x 3 Metres STRIKE/DIP: 330/58E TREND/PLUNGE: /
COMMENTS: The dimensions and attitude provided are for a vein which is exposed at two open cuts and in the face of a bluff.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic Horsethief Creek Unnamed/Unknown Formation

LITHOLOGY: Schist
Slate
Quartzite
Grit

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1923
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 78.8600 Grams per tonne
Gold 0.7000 Grams per tonne
Copper 11.2000 Per cent
REFERENCE: Minister of Mines Annual Report 1923, page 198.

CAPSULE GEOLOGY

The Young occurrence is situated on Rocky Point Creek, a small tributary of Bugaboo Creek. It is 32 kilometers west of the town of Brisco on Highway 95.
The earliest report on the property (Copper Butte), states that in 1916, "about two cars of chalcopyrite were shipped to the Trail smelter" and that the property was closed in the fall of 1916. In 1916 and 1917, 31 tonnes were mined and a total of 53,876 grams of silver and 1,542 kilograms of copper were recovered. In 1923, the occurrence was staked as three groups of claims, each group situated at different elevations along a mineralized quartz vein. At elevation 2353 meters, the Grey Eagle and Marjory claims covered the "Upper Lead". The Copper King and Copper Queen claims covered the "Middle Lead" at an elevation of 2,216 metres, a distance of 0.8 kilometre east of the Upper Lead. The "Lower Lead" was located at an elevation of 1,768 metres, 610 metres east of the Middle Lead.

CAPSULE GEOLOGY

Rocks in the area are metamorphosed sediments mapped as the Upper Proterozoic Horsethief Group. The vein conforms to the bedding of the country rocks, which include schists, slates, quartzites and grits.

In the Upper Lead, the vein is exposed in an open cut showing more than a metre of disseminated copper sulphides in the "hanging wall side". In this cut, the vein is well defined and 2.4 to 3 metres wide. Here, it strikes 325 degrees with a steep dip to the northeast.

In the Middle Lead, the vein is also exposed in an open cut. At this point, it strikes 330 degrees and dips 58 degrees to the northeast. It shows a width of 1.3 metres of disseminated copper sulphides in the hanging wall of the quartz vein, which is three metres wide. Ten metres below the cut is a short crosscut tunnel which has caved. A grab sample yielded the following analyses: (gold: 0.7 gram per tonne, Silver: 78.86 grams per tonne, copper: 11.2 per cent) (Minister of Mines Annual Report 1923, page 198).

In the Lower Lead, the vein is exposed in the face of a bluff and is 3.4 metres wide. It shows much the same characteristics as the Upper and Middle leads. In this showing, the mineralization is strongest toward the footwall over a width of approximately 4.6 metres.

In 1961, St. Andrew Mining Co. Ltd. completed geological and geophysical surveys. In addition, eight holes were drilled (366 metres). In 1983 and 1984, Palermo Resources mapped the area pertinent to the showings and conducted geochemical and geophysical surveys in the area. They had eighteen grab and channel samples analyzed. The average metal values for these samples was 3.09 grams per tonne silver and 2.63 per cent copper, (Assessment Report 14286, page 3).

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EMPR GEOFILE 2003-2
EMPR BC METAL NM00553
EMPR PF (Hunter, S.J.(1967):Report on the Young Claim Group,
Spillimacheen Area)
GSC MEM 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/03

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE023**

NATIONAL MINERAL INVENTORY: 082K10,15 U1

NAME(S): **UPPER BUGABOO**, BUGABOO

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:
LATITUDE: 50 44 50 N
LONGITUDE: 116 42 49 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Old placer lease.

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5621755
EASTING: 520205

COMMODITIES: Uranium Niobium Thorium Rare Earths

MINERALS

SIGNIFICANT: Uraninite Uranothorite Monazite Allanite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers
SHAPE: Regular
DIMENSION: 1170 x 0170 x 0005 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Contains 1,000,000 cubic metres of gravel.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cenozoic Cretaceous	Undefined Group	Unnamed/Unknown Formation	Bugaboo Batholith

LITHOLOGY: Unconsolidated Gravel
Quartz Monzonite

HOSTROCK COMMENTS: Source rock for placer deposits.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America Plutonic Rocks

CAPSULE GEOLOGY

The Cretaceous Bugaboo Batholith intrudes Hadrynian Windermere sediments of the Horsethief Creek Group. The east part of the intrusion consists of medium-grained leuco-quartz monzonite to coarse-grained biotite quartz monzonite.

Black sand placer concentrations containing uranium- and niobium-bearing minerals occur in the outwash gravels from glacier action in the Bugaboo Batholith. Minerals include uraninite, allanite, rutile, titanocolumbite, euxenite-polycrase, pyrochlore, monazite, uranothorite, magnetite, ilmenite, apatite, andalusite, zircon, epidote, fluorite, garnet, hematite, pyrite, lepidocrocite, and sphene.

The Upper Bugaboo placer deposit measures 1170 by 170 by 5 metres and contains 1,000,000 cubic metres of gravel. A sample assayed 0.18 per cent uranium (Geological Survey of Canada Economic Geology #16, 1952).

In 1953 uranium oxide and pyrochlore were identified in post-glacial placer sand and gravel deposits in upper Bugaboo Creek. This and similar deposits on Forster (082KNE005) and Vowell (082KNE007) creeks were mapped and variously explored by Quebec Metallurgical Industries from 1954 to 1957. A pilot plant (concentrating) was operated on Bugaboo Creek and 21 holes were churn drilled on Vowell Creek. In 1955, 11,309 kilograms of concentrate were produced from 5520 cubic metres of gravel (Minister of Mines Annual Report 1956, pages 142,143). In 1957, application for a contract to produce uranium was turned down by the Canadian government and the leases held in the area were allowed to lapse.

No further work was done in the area until, following restaking by Bugaboo Mines Ltd. in 1966 and 1967 of the upper Bugaboo Creek and Forster Creek deposits, an airborne spectrometer survey was conducted in the area during September, 1968. This survey, under the direction of Dolmage Campbell & Associates Ltd., located a number of anomalous areas on several creeks. At that time Dillingham Mining Co. became active in the area through property options and staking. Ground scintillometer surveys and visual estimates of relative gravel

CAPSULE GEOLOGY

quantities in the several anomalous (airborne) areas resulted in the acquisition of property on Bugaboo, Forster, East (082KNE006), Vowell and Malloy (082KNE008) creeks. For a number of reasons, including some of a non-economic nature, some of the properties were allowed to lapse. However, detailed exploration was conducted by Dillingham on Malloy and Vowell creeks in 1969. This work consisted of drilling the favourable areas and doing some mineralogical studies and metallurgical testing.

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EMPR ASS RPT 1711, 1713, *2090
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EMPR PF (*Saunders, C.R. (1974): Radioactive Black Sands in Malloy and Vowell Creeks, 14 p. with maps)
EMR CANMET Memo. Ser. #135, 1957
EMR MP CORPFILE (Tapin Copper Mines Limited)
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GSC MAP 12-1957; 1326A
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GSC OF 551
Chevron File (Jory, L.T. and Guardia, F. (1968): Airborne Spectrometer Survey, Bugaboo Creek)
Falconbridge File (Hughes, H.D. (1954): Report on Churn Drilling, Bugaboo Creek)

DATE CODED: 1985/07/24
DATE REVISED: 1987/07/15

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE024**

NATIONAL MINERAL INVENTORY:

NAME(S): **ECLIPSE BOB, HL.**
LIZ, WARREN CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K15E
BC MAP:

MINING DIVISION: Golden

LATITUDE: 50 54 06 N
LONGITUDE: 116 45 16 W
ELEVATION: 2042 Metres

UTM ZONE: 11 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5638919
EASTING: 517267

COMMENTS: The Eclipse occurrence is located on the east side of Warren Creek, 305 metres above the creek and 457 metres east of the creek (Minister of Mines Annual Report 1920, page 109).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Malachite Azurite
ASSOCIATED: Quartz
ALTERATION: Silica Malachite Azurite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Faulted Sheared

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic Horsethief Creek Unnamed/Unknown Formation

LITHOLOGY: Phyllite
Quartz Pebble Conglomerate
Argillite
Limy Talc Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 1.7000 Grams per tonne
Copper 0.5000 Per cent

COMMENTS: The copper and silver values are average assay values over 6 to 15 metre widths of vein material.

REFERENCE: Assessment Report 4716, page 3.

CAPSULE GEOLOGY

The Eclipse occurrence lies 51 kilometres south of Golden. It is located on the east side of Warren Creek, 305 metres above, and 457 metres east of the creek.

The first work was in 1920, at which time, two small tunnels, 11 and 6 metres long and several "hand trenches" were excavated along quartz veins. In 1960 and 1961, St. Andrews Mining Co. conducted airborne and ground electromagnetic surveys and 1201 metres of diamond drilling. They located three chalcopyrite-bearing quartz veins with pods of pyrite and chalcopyrite along the vein walls. In 1968, Carolin Mines Ltd. conducted an exploration program that included an electromagnetic survey, 792 metres of bulldozer trenching and 666 metres (nine holes) of diamond drilling. In 1972, Juniper Mines financed a program of geological, soil (298 samples) and self-potential surveys in the main mineralized zones. Norcen Energy optioned the property in 1979 from Cochrane Oil & Gas Ltd. Norcen

CAPSULE GEOLOGY

completed a large reconnaissance program which included the Warren Creek occurrence. Geochemical and geophysical surveys were included in that project.

The property lies along the eastern flank of the Purcell Mountains, west of the Rocky Mountain Trench. The area is underlain by northwest trending, folded and low grade metasediments of the Upper Proterozoic Horsethief Creek Group. Regionally, these sediments consist of slates, argillites, quartz pebble conglomerates, grits and minor limestone.

At the Eclipse showings, rocks mapped consist of phyllites, quartz pebble conglomerates, argillites, limy talc schists and quartzites. Here, rocks are folded, with northwest trends.

Three faults containing chalcopyrite have been mapped along silicified zones. The faults are associated with shear zones 4 to 5 metres wide. The main zone strikes in a northwest direction, subparallel to the strike of the metasediments. A second fault forms the contact between pebble conglomerate and shale.

Chalcopyrite occurs in three modes, first in quartz veins and silicified zones. In the second mode, chalcopyrite occurs in quartz boudins which occur in talc phyllite. The boudins are in wall rock on the south side of one fault. Pyrite is more abundant than chalcopyrite in the boudins. In the third mode of occurrence, chalcopyrite is in hard limy talc schist, exposed in outcrop. Malachite and azurite are found in shaley cleavage in a location south of the central quartz vein showing.

In 1961, A.C.A. Howe & Associates Ltd. reported average assays of 0.5 per cent copper and 1.7 grams per tonne silver over 6 to 15 metre widths of vein material. At that time, the best intersections from the drill program assayed 1.73 per cent copper, 0.17 grams per tonne gold and 40.11 grams per tonne silver (Assessment Report 4716, page 3).

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8294, 8297, 8298, 8560, 8646, 9131
EMPR GEM 1972-78,79, 1973-97
EMPR GEOFILE 2003-2
GSC MAP 12-1957
GSC MEM 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/04

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE025**

NATIONAL MINERAL INVENTORY: 082K9 Ag1

NAME(S): **PRETTY GIRL (L.2570)**, VENUS (L.2571), NEW CHUM (L.2572),
BEAUTY (L.2573), OLD CHUM (L.2574), MINNIEHAHA FR. (L.2575),
SNOW CAT, BURRO, JAY,
SILVER THREAD

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

Open Pit

MINING DIVISION: Golden

LATITUDE: 50 31 13 N
LONGITUDE: 116 18 46 W
ELEVATION: 2767 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5596706
EASTING: 548717

LOCATION ACCURACY: Within 500M

COMMENTS: The given location is for the centre of Pretty Girl crown grant (Lot 2570). However, Ashworth Exploration reported a discrepancy in the location of the showings indicating it was not at the location where Lot 2570 is plotted (Assessment Report 18342, page 15). The Ashworth location is 547100m east and 5594900m north.

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT: Tetrahedrite Malachite Azurite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Proterozoic	Horsethief Creek	Unnamed/Unknown Formation	

LITHOLOGY: Slate
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Pretty Girl claim is located at the 2280-metre elevation at the head of a northwesterly flowing tributary of Law Creek, some 19 kilometres west of Invermere. The original property extended from the summit of the mountain at 2590 metres elevation to Law Creek at the 1920 metres elevation.

In 1898 the property comprised 6 claims, the Pretty Girl, Venus, New Chum, Beauty, Old Chum, and Minniehaha Fr., held by New Golden British Columbia, Limited of London, England. Development work was confined to the Pretty Girl claim at the 2280-metre elevation and included open cuts, a 72-metre adit, a 12-metre shaft and crosscut. A 450-kilogram shipment of ore was sent to England for test purposes. The claims (Lots 2570-2575 respectively) were Crown-granted to the company in 1900. The property was worked under lease in 1903 and two apparently new adits were driven to lengths of 100 metres and 14 metres, and the shaft deepened to 21 metres. Five tonnes of ore were mined in 1904 with 10,482 grams of silver and 1,214 kilograms of copper recovered.

The Pretty Girl claim was re-Crown-granted to Jas McKay in 1914. The following year the claim was acquired by Messrs. Peake and Cornwall, who had re-staked adjacent lapsed claims; no work was reported.

Although no work is recorded for that year production records indicate that in 1917, 2 tonnes of ore were mined and 3110 grams of silver and 363 kilograms of copper were recovered.

No further activity was recorded until 1927 when prospecting was done. In 1928 North Kootenay Mines, Limited acquired the property and some activity apparently continued until the fall of 1929, but there is no report of work done. One tonne of ore was shipped in 1928 and 622 grams of silver and 91 kilograms of copper were recovered.

In 1972, G.B. Allan acquired the grants which were mineral

CAPSULE GEOLOGY

leases at the time. A rock sampling program was completed.

Pearson, Gallagher Ltd., of Nelson, held the property in 1981 but operators reported that they could not find the workings and surmised that there were discrepancies in the surveyed location of the Crown Grant.

In 1987, a self-potential survey (3.2 kilometres) was completed by T.R.B. Dundas & Associates for owner W. Pochylko. Much of the original crown grant area had been restaked as the Snow Cat claims of the Silver Thread group.

By 1988, nine reverted crown grants of the Pretty Girl and Delos/Trojan (082KNW030/082KNE033) groups were owned by Clive Ashworth as recorded in 1986. These were subsequently optioned to Gold Ford Capital Corp. and the Burro claims were staked to surround the Pretty Girl group and the Horse and Ass were staked around the Delos/Trojan group. At that time, 5 rock samples, 12 silt samples and 633 soils samples were taken. Approximately 21 metres of hand trenching were completed. Gold Ford returned in 1990 and conducted a 5 kilometre VLF survey.

In 1995 W. Pochylko had a 20-kilometre self-potential survey completed on his Jay claims which cover the Delos/Trojan and Pretty Girl workings as well as other workings to the south. Some of the survey was completed in the Pretty Girl area. In 1996, W. Pochylko completed a 6.4-kilometre self-potential survey in the same areas.

The Pretty Girl area is underlain by upper Proterozoic coarse clastic sedimentary rocks of the Horsethief Creek Group. Early surface workings were reportedly in shale or slate dipping near vertical and striking about north 25 degrees west. The upper adit evidently followed a vein, which varies from a seam up to 25 centimetres in width, consisting of quartz somewhat stained with malachite (copper carbonate). The ore in the shaft, some of which was shipped and some specimens of which are still to be seen on the dump, carried grey-copper with high values in silver.

A visit to the old Pretty Girl workings in 1988 by Gold Ford Capital showed the mineralization to consist of semi-massive tetrahedrite with minor chalcopyrite and pyrite within a malachite-azurite stained shale. At that time 7 hand trenches were dug averaging 3 metres in length. The work done in 1988 revealed a 25 metre long by 1.18 metre wide mineralized horizon. The showing was reported to be open along strike.

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EMPR ASS RPT 10248, 16808, *18342, *20887, 24025, 24579, 25146
EMPR AR 1898-1042,1055; 1899-595,667; 1900-980; 1903-104; 1914-513;
*1915-96; 1927-265; 1928-276; 1929-292
EMPR BC METAL MM00575
EMPR INDEX 3-209
EM GEOFILE 2003-2
EMR MP CORPFILE (North Kootenay Mines, Limited)
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/12/25

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE026**

NATIONAL MINERAL INVENTORY: 082K10 Pb1

NAME(S): **LEAD QUEEN (L.12763)**, COLUMBIA (L.12764), FIRST EFFORT (L.11426),
BIG CHIEF (L.12766), COLUMCHIEF FR. (L.11423), LEAD KING (L.11422),
LUCKY CHIEF FR. (L.11424)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:
LATTITUDE: 50 43 36 N
LONGITUDE: 116 34 04 W
ELEVATION: 2500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Lot 12763 (Lead Queen).

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5619519
EASTING: 530507

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomitic Limestone
Quartzite
Slate
Argillite
Calcareous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Lead Queen group is situated at an elevation of 2350 metres in a basin on the north side of and near the head of Frances Creek. The Steele Group (082KNE061) is located north of and adjoining the Lead Queen group at an elevation of 2530 metres on what could be the northern extension of the Lead Queen fissure.

The Lead Queen group of 9 claims was located in about 1900 by Tom Brown of Wilmer. The property was worked intermittently by Brown and associates until 1915 when J.T. Burgess optioned the property and reportedly formed a company to carry on development work. The company went into liquidation in 1916 and the property reverted to the original owners. The property was subsequently acquired by Paul Denhart of Seattle and intermittent work was carried on until about 1923. New York interests acquired the property in 1925 and intermittent work was carried on until 1929. Claims Crown-granted in 1928 include: Lead Queen (Lot 12763), Columbia (Lot 12764), First Effort (Lot 11426) and Big Chief (Lot 12766) to Dorothy McKay; Columchief Fraction (Lot 11423) to E.M. Davis; Lead King (Lot 11422) to Frances Simonds; and Lucky Chief Fraction (Lot 11424) to A.F. Hyde.

Intermittently from 1916 to 1929, a total of 390 tonnes were mined from which 439,174 grams of silver, 31 grams of gold, 145,867 kilograms of lead and 1193 kilograms of zinc were recovered.

The Upper workings consist of some 274 metres of crosscuts and drifts in 3 adits. A long meandering crosscut, possibly 335 metres in length, was driven at the 2042 metre elevation to intersect the vein but it is not known if the vein was found. A fifth adit was driven 46 metres to explore a second fault zone on the west side of the property.

The property was held by Silver Queen Mines Limited for a number of years but remained inactive. In January 1965, Lorne Dempster acquired the option to purchase the property and subsequently assigned the option to a private company, Silverton Explorations Limited. During 1965, the Cable Nos. 1-31 claims were staked

CAPSULE GEOLOGY

adjacent to the original claim group. In April 1966, Dempster Explorations Limited obtained a working option on the property.

Frances Creek Mines Ltd. obtained possession of the property by 1971 and conducted mapping and trenching (152 metres) and stripping (427 metres) on the Steele No. 2 Crown grant. In 1972, Frances Creek conducted mapping and magnetometer surveys. In 1972, Frances Creek Mines drilled one hole totalling 59.4 metres on the Lead Queen and three holes totalling 126.2 metres on the First Effort.

The property is underlain by sediments of the Middle Proterozoic Mount Nelson Formation, Purcell Supergroup. A major fault cuts most of the claims, striking north-northwest. Rocks in the property area include limestone, quartzite, argillite, black slate and calcareous schist. The fault that cuts these rocks has provided the locus for mineralization.

A dolomitic limestone and quartzite formation, which strike northwest and dips steeply to the southwest, occupies the west side of an anticlinal fold. The fault follows the bedding plane of the formation. The presence of talc gouge within the ore zone suggests considerable movement along the fault plane producing a zone of crushed material. The vein varies from 0.6 to 1.2 metres wide and carries galena in irregular masses within the crushed siliceous material.

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- EMPR AR 1901-1015, 1902-137, 1903-105, 1904-114, 1905-146, 1906-135, 1908-89, 1909-102, 1915-82,98, 1916-187,516, 1917-147,177,477, 1918-151,185, 1919-113, 1920-115,138, 1925-225, 1926-240, 1927-265, 1928-276,521, 1929-284,292, 1966-246
EMPR ASS RPT *796, 4538, *4747, 4712
EMPR GEM 1971-427,428; 1972-75; 1973-94
EMPR PF (*Allen, G.B. (1970): Compilation on the Frances Creek Property, Frances Creek Mining Co. Ltd., 23 pages; MacKenzie, A.G. (1971): Report on Geological Exploration of Lead Queen - Steele Property, Frances Creek Mines Ltd., 15 pages; MacKenzie, A.G. (1971): Progress Report No. 1 on Lead Queen - Steele Property, Frances Creek Mines Ltd., 5 pages)
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
EMR MP CORPFILE (Dempster Exploration Ltd.)
GSC MAP 12-1957
GSC SUM RPT 1925A, p. 227
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE027**

NATIONAL MINERAL INVENTORY:

NAME(S): **JERSEY**, MYRAS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 12 N
LONGITUDE: 116 19 58 W
ELEVATION: 1200 Metres

NORTHING: 5626314
EASTING: 547033

LOCATION ACCURACY: Within 500M

COMMENTS: Occurrence lies on the west flank of Steamboat Mountain (Assessment Report 1101, page 2).

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Breccia
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn
DIMENSION: Metres

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Unnamed/Unknown Group	Jubilee	

LITHOLOGY: Brecciated Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
COMMENTS: The occurrence is adjacent to the Mount Forster-Steamboat fault.

CAPSULE GEOLOGY

The Jersey showing is located 6 kilometres southwest of the town of Brisco which is located on Highway 95 in the Rocky Mountain Trench. In 1954, the property was examined by New Jersey Zinc Co. In 1965, the Consolidated Mining and Smelting Company of Canada Ltd. drilled 135 metres. In 1967, the Magnet Cove Barium Co. conducted an electromagnetic survey over the claims. The occurrence is a showing of disseminated chalcopyrite with minor galena and pyrite in brecciated dolomite of the Middle to Upper Cambrian Jubilee Formation. The dolomite is near the contact with the Cambrian McKay Group. The mineralization is adjacent to a large Mesozoic thrust fault, the Mount Forster-Steamboat Fault (Geological Survey of Canada, Memoir 369, page 112).

BIBLIOGRAPHY

EMPR AR 1965-203; 1967-280
EMPR ASS RPT *1101
EMPR GEOFILE 2003-2
GSC MEM 369, p. 112

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/26

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE028**

NATIONAL MINERAL INVENTORY:

NAME(S): **LANCASTER (L.1112)**, BEVERLY, SILVER KING (L.648),
HORSEHOE (L.266), FERMANAGH (L.15306), LONDON (L.15303),
MANCHESTER (L.15304), CORNWALL (L.15305), MOUNTAIN DAISY (L.647)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K16W

Underground

MINING DIVISION: Golden

BC MAP:
LATITUDE: 50 56 42 N
LONGITUDE: 116 27 40 W

UTM ZONE: 11 (NAD 83)

NORTHING: 5643847
EASTING: 537858

ELEVATION: 1463 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Manchester Crown grant, on the east slope of Jubilee Mountain.

COMMODITIES: Lead Silver Copper Zinc Barite

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Chalcocite Barite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Breccia
CLASSIFICATION: Replacement Sedimentary Industrial Min. Epigenetic
TYPE: E12 Mississippi Valley-type Pb-Zn E17 Sediment-hosted barite
SHAPE: Tabular
MODIFIER: Folded

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Unnamed/Unknown Group	Jubilee	
Cambrian-Ordovician	McKay	Unnamed/Unknown Formation	

LITHOLOGY: Dolomitic Limestone
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Lancaster occurrence is on the east side of Jubilee Mountain, which is on the west side of the Rocky Mountain Trench. These properties are 4 kilometres south of Harrogate and 8 kilometres northwest of Spillimacheen.

The Annual Report of 1889 records that the Lancaster claim was staked in 1887. No records of significant mineral production were found although the Annual Report for 1890 listed approximately 25 tonnes of "copper and carbonate" ore were shipped from Lancaster. In 1968, Calix Mines Limited carried out an induced polarization survey over the Crown grant claims. In 1974, Dekalb Mining Corporation conducted a drill program to locate a lead-silver-barite zone. In 1975, the corporation followed this with an electromagnetic survey and a geochemical soil survey over the claims. The following year Dekalb conducted another drilling program supplemented with gravity information. The drilling confirmed that mineralization was confined to dolomitic limestone of the Upper Jubilee Formation (Middle to Upper Cambrian) and associated with breccia zones.

In the Lancaster occurrence area, the McKay Group (Upper Cambrian to Middle Ordovician) conformably overlies the Jubilee Formation. Here, these units form the east limb of a large syncline. Disseminated galena, sphalerite, chalcopyrite and chalcocite occur in the Jubilee Formation in a breccia matrix and as small pockets of richer ore in the barite. The sulphides tend to concentrate near the contact of shale in the McKay Group. Silver is associated with the galena. The sulphide deposition is considered to be epigenetic and replacement in origin.

BIBLIOGRAPHY

EMPR AR 1988-309; 1889-287; 1890-374; 1896-556; 1899-593; 1918-153;
1926-448; 1968-277
EMPR ASS RPT 1247, 5013, 5876
EMPR EXPL 1975-E50

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 526
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1969-341, 1974-85
EMPR INDEX 3-202
EMPR GEOFILE 2003-2
EMPR PF *(Buckley, R.A. (1976): Geochemical Survey Jubilee Mountain
Prospect; Buckley, R.A. (1976): Geological Report, Jubilee Mountain
Prospect; Buckley, R.A. (1977): Geological Report, Jubilee Mountain
Prospect)
GSC MEM 369
GSC SUM RPT 1932A-106

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/25

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE029**

NATIONAL MINERAL INVENTORY: 082K9 Pb1

NAME(S): **ISAAC (L.5344)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 41 23 N
LONGITUDE: 116 27 37 W

UTM ZONE: 11 (NAD 83)

NORTHING: 5615461
EASTING: 538124

ELEVATION: 2300 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Reported at both 2194 and 2408 metres elevation near the head of Isaac Creek. Crown Grant Lot 5344 appears to be located (on the topographic map) about 1.5 kilometres north of the actual Isaac workings.

COMMODITIES: Silver Lead Gold Zinc

MINERALS

SIGNIFICANT: Galena Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic

GROUP

Purcell

FORMATION

Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzitic/Quartzose Schist
Limestone

GEOLOGICAL SETTING

TECTONIC BELT:

TERRANE:

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1922

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver	987.4400	Grams per tonne
Gold	6.8600	Grams per tonne
Lead	54.6000	Per cent
Zinc	3.0000	Per cent

REFERENCE: Minister of Mines Annual Report 1922, page 184.

CAPSULE GEOLOGY

The Isaac property is located near the head of Isaac Creek, a northerly flowing tributary of Frances Creek.

The Isaac claim (Lot 5344) was located by H.E. Forster in about 1900 and Crown-granted in 1904. Mr. Forster worked the claim intermittently until 1919 when Paul Denhart, of Seattle, purchased the property. Intermittent operations were continued and in 1921, W.D. McMillan purchased the property. In 1922, the property consisted of 5 claims, the Isaac Crown-granted claim and Isaac Nos. 1, 2, 3 and Isaac Extension, owned by J. Rutherford and associates.

Invermere Mines, Limited, operated the property in 1923. Development work to 1923 consisted of 2 inclined shafts sunk on the vein. The ore shaft is about 4.6 metres and the other is about 17 metres deep. Two 4.6-metre drifts were run on the vein from the deep shaft, one to the southeast at the 10.7 metre level, and the other to the northwest at the bottom of the shaft.

From 1916 to 1924 (not including 1919, 1921 and 1922), 431 tonnes of ore were shipped and 408,164 grams of silver and 151,801 kilograms of lead were recovered.

The Isaac showing is hosted in limestone and quartzite schist of the the Middle Proterozoic Mount Nelson Formation, Purcell Supergroup.

A vein striking 130 degrees and dipping 65 degrees southwest, follows the strike of the formation and varies in width from about

CAPSULE GEOLOGY

0.46 to 1.2 metres. Galena, with small amounts of pyrite, occurs in the veins as disseminations, bunches and stringers. Mineralization is exposed on the surface for a distance of about 107 metres south of the workings. A greenstone (dolerite) dike occurs just south of the showing but is thought to predate the mineralization.

A sample of the material assayed 6.86 grams per tonne gold, 987.44 grams per tonne silver, 54.6 per cent lead and 3 per cent zinc (Minister of Mines Annual Report 1922, page 184).

BIBLIOGRAPHY

EMPR AR 1900-807; 1903-105; 1904-114,295; 1913-187; 1915-82,106;
1916-187,516; 1917-147,178,447; 1918-185; 1919-113,146;
1920-115,139; 1921-125,165; *1922-184; 1923-200
EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369
GSC OF 341; 551
GSC SUM RPT *1925A, p. 228

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE030**

NATIONAL MINERAL INVENTORY: 082K9 Cu1

NAME(S): **DELOS (L. 3790)**, TROJAN (L. 3792), CALAMITY JANE (L. 3791),
COLOSSUS

STATUS: Past Producer Open Pit

MINING DIVISION: Golden

REGIONS: British Columbia

UTM ZONE: 11 (NAD 83)

NTS MAP: 082K09W

BC MAP:

LATITUDE: 50 30 28 N

LONGITUDE: 116 17 19 W

ELEVATION: 1830 Metres

NORTHING: 5595332

EASTING: 550444

LOCATION ACCURACY: Within 500M

COMMENTS: The given location is for the centre of the Delos claim (Lot 3790)
(NTS Map 082K/9).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Proterozoic

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Schistose Slate
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1915

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

27.4300

Grams per tonne

Gold

0.6900

Grams per tonne

Copper

9.6000

Per cent

COMMENTS: From a one metre chip sample.

REFERENCE: Minister of Mines Annual Report 1915, page 96.

CAPSULE GEOLOGY

The Delos/Trojan is located at 1830 metres elevation on the west side of Bruce Creek, a tributary of Horsethief Creek some 18 kilometres west of Invermere.

The Delos group, comprising the Delos, Calamity Jane and Trojan claims, and across the creek the Colossus claim, were owned by Tom Jones of Golden. He optioned them in 1898 to The Mines Development Trust and Gaurantee Company, Limited. Development work encompassed open cuts and a 16-metre crosscut adit and drift.

No further activity was reported until the Delos and Calamity Jane were Crown-granted to E.J. Scovil of Golden in 1916. The Trojan claim was Crown-granted to W.R. Grubbe that same year. The Property was acquired in 1918 as the Trojan group (6 claims) by F.W. Wonn, who formed the Trojan Copper Mines Corporation, of Seattle. Work during 1918-19 was done in open cuts and in a 35 metre adit. Government records show that 40 tonnes of ore were mined in 1919, from which 218 grams of silver and 4191 kilograms of copper were recovered.

In 1972, G.B. Allan acquired these grants and those of the Pretty Girl group (082KNE025). Some work was reported to have been done (Assessment Report 20887). In 1981, the showings were re-examined on behalf of owners D.J. Gallagher and R.W. Pearson and several grab samples were collected.

By 1988, nine reverted Crown Grants of the Pretty Girl and

CAPSULE GEOLOGY

Delos/Trojan groups were owned by Clive Ashworth as recorded in 1986. These were subsequently optioned to Gold Ford Capital Corp. In 1988, Ashworth Exploration, on behalf of Gold Corp Captial Corp, constructed a survey grid on the Delos/Trojan claims.

In 1995 W. Pochylko had a 20-kilometre self-potential survey completed on his Jay claims which cover the Delos/Trojan and Pretty Girl workings as well as other workings to the south. In 1996, W. Pochylko completed a 6.4-kilometre self-potential survey in the same areas.

The Delos/Trojan area is underlain by upper Proterozoic coarse clastic sedimentary rocks of the Horsethief Creek Group. The rock in the mineralized area is reported to be schistose slate with the foliation dipping nearly vertically. The strike is irregular but averages 300 degrees. An irregular quartz vein that splits into stringer, occurs along the foliation. The vein attains a width of up to 1.5 metres locally. The quartz is well-mineralized with chalcopyrite with solid bunches occurring locally. A sample across 1 metre from one open cut yielded 0.69 gram per tonne gold, 27.43 grams per tonne silver and 9.6 per cent copper (Annual Report 1915, page 96).

BIBLIOGRAPHY

EMPR ASS RPT 10248, 16808, *18342, *20887, 24025, 24579, 25145
EMPR AR 1898-1043,1055; 1899-595,667; 1900-806,979,980; *1915-96;
1916-188,523; 1917-146; 1918-151,185; 1919-113; 1922-185
EMPR INDEX 3-216
EMPR BC METAL MM00585
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/12/25

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE031**

NATIONAL MINERAL INVENTORY:

NAME(S): **VAD-AB**, AB, VAD,
AVD, DAV

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K15W
BC MAP:
LATITUDE: 50 54 59 N
LONGITUDE: 116 55 04 W
ELEVATION: 1341 Metres

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5640530
EASTING: 505780

LOCATION ACCURACY: Within 500M
COMMENTS: The centre of VAD-AB is located approximately 1.5 kilometres south of the junction of Vowell and Crystalline creeks (Assessment Report 25165).

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Arsenopyrite
COMMENTS: Sulfides are disseminated to "near massive".
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted Sheared
DIMENSION: Metres STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Proterozoic GROUP: Horsethief Creek FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER: _____

LITHOLOGY: Slate
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: VEINS REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1997
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 263.2000 Grams per tonne
Gold 14.9000 Grams per tonne
Copper 1.0900 Per cent
Lead 15.1900 Per cent

COMMENTS: The metal values are average values from three grab samples.
REFERENCE: Assessment Report 25165, page 23-24.

CAPSULE GEOLOGY

The VAD-AB property lies approximately 43 kilometres south of Golden. The centre of the VAD-AB claims is located about 1.5 kilometres south of the junction of Crystalline and Vowell creeks. The region is underlain by Upper Proterozoic rocks of the Horsethief Group including slate, argillite, phyllite, as well as lesser amounts of quartzite, greywacke and limestone. These sediments also contain considerable thicknesses of quartz-pebble conglomerate and pebbly grit.

The present occurrence area was subjected to a geochemical sampling program by Norcen Energy Resources in 1979 and 1980. In 1989, James S. Adamson, then owner of the AB claims, used a caterpillar tractor to dig three trenches. In 1990, trenching was done at four locations exposing several narrow quartz veins carrying pyrite and arsenopyrite. Thirteen rock samples and 93 soil samples were collected. From 1991 to 1993, work included prospecting and

CAPSULE GEOLOGY

collection of small numbers of soil and rock samples for geochemical analysis. In addition, 3.9 kilometres of magnetometer work was completed. At that time, owners and operators of the property were James S. Adamson and Sodi Berar. Twenty-eight soil samples were collected for chemical analyses in 1995. In 1996 and 1997, a total of 204 soil samples, 4 silt samples and 5 rock samples were collected. Three chemical analyses of the rock samples are listed below.

Gold	Silver	Lead	Copper
Grams Per Tonne	Grams Per Tonne	Per Cent	Per Cent
2.3	21.7	5.5	1.09
27.41	185.5	24.88	
	582.4		

Quartz veins were observed in the trenches and in outcrops of slate and argillite. Sulphides observed in the quartz veins consisted of galena, sphalerite, pyrite and arsenopyrite. Sulphides were described as disseminated to "near massive".

BIBLIOGRAPHY

EMPR ASS RPT 18849, 20035, 20312, 21448, 21639, 22415, 22525, 22986,
23020, 23440, 24049, 24537, 25165
EMPR GEOFILE 2003-2
GSC MEM 369

DATE CODED: 2003/02/07
DATE REVISED: / /

CODED BY: DRH
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE032**

NATIONAL MINERAL INVENTORY:

NAME(S): **HORSETHIEF CREEK**

MINING DIVISION: Fort Steele

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 53 N
LONGITUDE: 116 24 54 W
ELEVATION: 1280 Metres

NORTHING: 5601586
EASTING: 541432

LOCATION ACCURACY: Within 500M

COMMENTS: Approximately 28 kilometres west-northwest of Invermere on the south side of Horsethief Creek (Fieldwork, 1988).

COMMODITIES: Tremolite Wollastonite

MINERALS

SIGNIFICANT: Tremolite Wollastonite
ASSOCIATED: Dolomite Calcite Scheelite Garnet
COMMENTS: Calc-silicates.
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Vein Concordant
CLASSIFICATION: Skarn Hydrothermal Replacement Industrial Min.
TYPE: K09 Wollastonite skarn
SHAPE: Cylindrical
DIMENSION: 350 x 180 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Dimensions of skarn bearing zone.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Mount Nelson	
Helikian	Purcell	Dutch Creek	

LITHOLOGY: Dolomitic Limestone
Quartzite
Calc-silicate
Argillite
Shale
Dolomite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE:

CAPSULE GEOLOGY

The Horsethief Creek occurrence is located 28 kilometres west-northwest of Invermere, 104 kilometres north-northwest of Kimberley. The main outcrops are situated atop a prominent hill on the south side of Horsethief Creek. It was discovered and staked in 1988.

The region is underlain by a north trending sequence of argillite, shale, dolomite, limestone and quartzite of the Helikian Dutch Creek and Mount Nelson formations. The Horsethief Creek batholith, a large body of coarse-grained Cretaceous quartz monzonite, outcrops 1 kilometre northwest of this occurrence.

The hill on the south side of Horsethief Creek is underlain by quartzite and dolomitic limestone of the Mount Nelson Formation. Pale brown to light grey, massive and sometimes cherty quartzite extends northward along the east side of the hill towards Horsethief Creek. A large outcrop of limy quartzite is situated on the south side of the hill near its summit. Dark grey to black dolomitic limestone, striking north and dipping 30 to 65 degrees west, outcrops along the west side of the hill.

Skarn mineralization outcrops over the north side of the hill, beginning at the summit and continuing north for at least 1600 metres, over a vertical extent of 180 metres. Tremolite and wollastonite commonly occur in this zone as clusters of radiating fibres, up to 10 centimetres long, and as lenses and veins in siliceous dolomitic limestone. Minor scheelite and garnet occur. Several outcrops, occurring in a 110 by 175 metre area at the top of the hill and along

CAPSULE GEOLOGY

a 30 metre high cliff on the southwest face, contain 15 to 20 centimetre wide, northwest striking veins of massive, white to pale green calcium silicates intercalated with quartzite beds and cut by occasional veins of calcite.

A 36.8 kilogram sample was submitted to CANMET and the results were as follows (Open File 1991-17):

SiO2	51.8 %
Al2O3	0.68%
Fe2O3	1.58%
CaCo3	20.8 %
MgO	14.6 %
L.O.I.	8.32%
Brightness	75.85%
Lightness	88.48%

The lenticular and vein like nature of the calcium silicates suggest this mineralization is likely a product of siliceous hydrothermal solutions reacting with the dolomitic limestone along fractures. Such solutions likely originated from the nearby Horsethief Batholith.

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 495,496
EMPR MAP 62
EMPR OF *1991-17
GSC MAP 1326A
GSC MEM 369, p. 19
Grant, B.C., (1987): Purcell Wilderness Conservancy Mineral Potential Review - Geological Compilation (Energy, Mines and Petroleum Resources, Unpublished Report)

DATE CODED: 1988/12/10
DATE REVISED: 1995/04/13

CODED BY: GWV
REVISED BY: GR

FIELD CHECK: Y
FIELD CHECK: Y

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 535
REPORT: RGEN0100

MINFILE NUMBER: **082KNE033**

NATIONAL MINERAL INVENTORY:

NAME(S): **HORSE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 30 48 N
LONGITUDE: 116 19 00 W
ELEVATION: 2620 Metres

NORTHING: 5595931
EASTING: 548449

LOCATION ACCURACY: Within 500M

COMMENTS: Location of samples PR7 and JR10 taken at showing (Assessment Report 18342, page 28 and Figure 7).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Proterozoic

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartz Grit

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Chip

COMMODITY

GRADE

Copper

0.4600

Per cent

COMMENTS: From a two metre chip sample.
REFERENCE: Assessment Report 18342, page 29, 30.

CAPSULE GEOLOGY

The area of the Horse showing is underlain by upper Proterozoic coarse clastic sedimentary rocks of the Horsethief Creek Group.

While carrying out a field program in 1988 on behalf of Gold Ford Capital Corp., Ashworth Explorations Limited located a new showing on a north trending ridge between Law and Bruce creeks. The showing consists of a 2-metre wide milky quartz vein cross-cutting a quartz grit at 60 degrees to subvertical. The vein was traced along strike for 25 metres. Up to 1 per cent chalcopyrite was observed in seams. Malachite was also noted. Two chip samples yielded 0.46 per cent copper across 2 metres and 0.22 per cent across 1 metre (Assessment Report 18342, page 29).

BIBLIOGRAPHY

EMPR ASS RPT 16808, *18342, 20887
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 2003/12/25
DATE REVISED: 2003/12/25

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE033**

MINFILE NUMBER: **082KNE034**

NATIONAL MINERAL INVENTORY:

NAME(S): **RED MOUNTAIN, M1**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 50 44 N
LONGITUDE: 116 24 29 W
ELEVATION: 1375 Metres

NORTHING: 5632817
EASTING: 541674

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Dolomite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Replacement Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Magnesite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Red Mountain occurrence consists of a 12 to 28 metre thick by a 365 metre long zone of coarsely crystalline magnesite near the top of the Proterozoic Mount Nelson Formation. The magnesite is massive pearl-white, coarsely crystalline with a buff colored weathered surface. It grades laterally into a grey, psuedo-fenestral dolomite and is underlain by a fine-grained dolomite with 1 to 5 centimetre thick chert lenses. Magnesite occurs as one centimetre long crystals and appears to replace dolomite near the basal contact. Locally the larger crystals within a matrix of 0.5 millimetre grains of magnesite give a distinct "porphyritic" (bimodal?) appearance. Considerable silica is present as scattered remnants of cherty patches.

BIBLIOGRAPHY

EMPR AR 1964-198
EMPR FIELDWORK *1992, pp. 467-470
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 1995/01/10

CODED BY: GSB
REVISED BY: KDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNE035**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOTTS LAKE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 47 N
LONGITUDE: 116 22 06 W
ELEVATION: 1190 Metres

NORTHING: 5627373
EASTING: 544517

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Dolomite
ALTERATION: Dolomite Calcite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Replacement Industrial Min.
TYPE: E09 Sparry magnesite
DIMENSION: 118 x 10 Metres
COMMENTS: Size of occurrence.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Magnesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

South of Botts Lake on Dunbar Creek, dolomite of the lower part of the Proterozoic Mount Nelson Formation is replaced by impure, white fine-grained magnesite which contains considerable calcite and quartz. The occurrence is about 122 by 30 metres in size.

BIBLIOGRAPHY

EMPR AR 1964-199
EMPR FIELDWORK *1992, pp. 474-476
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 1995/01/10

CODED BY: GSB
REVISED BY: KDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNE036**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUNBAR CREEK**, M7, M8

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 45 N
LONGITUDE: 116 20 27 W
ELEVATION: 1067 Metres

NORTHING: 5629182
EASTING: 546439

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Dolomite
ALTERATION: Dolomite Silica Calcite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Replacement Hydrothermal Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Magnesite
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Dunbar Creek showings are all alteration (ie. replacement) deposits hosted by the basal member of the Upper Proterozoic Mount Nelson Formation dolomites. Magnesite occurs at six locations, all on or close to known faults. A grab sample (M7) collected close to Dunbar Creek, near a vertical northwest striking fault, contains 41.41 per cent MgO, 2.84 per cent CaO, 47.48 per cent CO₂, 3.97 per cent SiO₂ and 2.07 per cent Fe (total). The dolomite here is altered to a coarse-grained, highly irregular magnesite zone about 30 metres northeast of the fault.

North of the first site and across Dunbar Creek a low hill of dolomite is partly altered throughout and contains several, irregular patches composed completely of magnesite. A sample (M8) of this material contains 42.28 per cent MgO, 2.67 per cent CaO, 48.28 per cent CO₂, 3.22 per cent SiO₂ and 1.03 per cent Fe (total).

Several smaller magnesite bodies occur in the immediate area to the main showings.

BIBLIOGRAPHY

EMPR AR 1964-199
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 1986/10/09

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE037**

NATIONAL MINERAL INVENTORY: 082K15 Pb2

NAME(S): **SYENITE BLUFF (L.672)**, AGNES (L.764)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K15W
BC MAP:
LATITUDE: 50 57 20 N
LONGITUDE: 116 59 02 W
ELEVATION: 1930 Metres

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5644883
EASTING: 501132

LOCATION ACCURACY: Within 500M

COMMENTS: Syenite Bluff occurrence is located at the centre of Crown grant (L.672) (National Mineral Inventory).

COMMODITIES: Gold Silver Zinc Lead Antimony

MINERALS

SIGNIFICANT: Sphalerite Galena Boulangerite
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 549 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralization occurs in a vein that may be traced for 549 metres.
The vein varies in width from 0.3 to 0.6 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Proterozoic GROUP: Horsethief Creek FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER: _____

LITHOLOGY: Conglomerate
Slate
Bedded Limestone
Siliceous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1936
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 432.0000 Grams per tonne
Gold 7.8800 Grams per tonne
Zinc 17.7000 Per cent

COMMENTS: The grades provided are an average of two samples collected from a vein.

REFERENCE: Minister of Mines Annual Report 1936, page 42.

CAPSULE GEOLOGY

The Syenite Bluff occurrence lies 40 kilometres south of Golden. It is located on the north side of Vermont Creek, 4.5 kilometres west of the junction of Vermont and Vowell Creeks.

The Syenite Bluff occurrence was staked in 1889. The Golden Mining and Smelting Company of Canada (Limited), acquired the property and during 1891 an adit was driven more than 300 metres. The underlying rocks are metamorphosed sediments of the Upper Proterozoic Horsethief Creek Group. Lead-zinc mineralization has been exposed at several widely separated points. At one of these, disseminated sulphide occurs in conglomerate and in the slate underlying the conglomerate. At another point, lead-zinc mineralization occurs in bedded limestone. The most conspicuous feature of the property is a narrow vein mineralized with sphalerite, galena, and boulangerite. The boulangerite, a sulphur-antimonide of lead, forms a considerable part of the sulphide mineralization.

CAPSULE GEOLOGY

Oxidation of this mineral yields the yellow oxide of antimony. This marks the outcrop of the vein, which is traceable along a talus slope and down a steep slide course for a horizontal distance of 549 metres. The vein extends from the crest of the divide between Vermont and Copper Creeks to a point in the slide at 2362 metres elevation. The vein is easily traced by the yellow-coated float and is usually easily found in place by a little digging. The actual vein however is rarely exposed. It appears to have a width of from 0.3 to 0.6 metre. It is composed of mineralized quartz which may include a considerable quantity of siliceous schist which the vein appears to follow. Sphalerite forms an important part of the mineralization. The following table lists analyses of two vein samples.

Gold	Silver	Lead	Zinc
Grams Per Tonne	Grams Per Tonne	Per Cent	Per Cent
11.66	123.43	Trace	10.6
4.11	740.57	0.2	24.8

BIBLIOGRAPHY

EM EXPL 2000-43-53
EMPR AR 1890-374; 1896-556; 1928-275; 1929-290; 1930-232,447; 1931-138; 1932-160; 1934-E28; *1936-33,41
EMPR GEOFILE 2003-2
GSC MEM 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE038**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLELAND LAKE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 49 41 N
LONGITUDE: 116 23 19 W
ELEVATION: 1127 Metres

NORTHING: 5630882
EASTING: 543059

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Dolomite
ALTERATION: Dolomite Magnesite Calcite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Replacement Hydrothermal Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Middle Proterozoic GROUP Purcell FORMATION Mount Nelson IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Magnesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

At the south end of Cleland Lake a medium to coarse-grained magnesite is exposed as a dip slope unit overlying a fine-grained dolomite typical of the top of the Proterozoic Mount Nelson Formation. It is exposed over the western side of a low ridge in a zone about 30 by 185 metres with a thickness of 3 to 6 metres. A chip sample across a three metre stratigraphic section of the occurrence contained 38.2 per cent MgO, 7.89 per cent CaO, 47.74 per cent CO₂, 4.51 per cent SiO₂ and 1 per cent Fe (total).

BIBLIOGRAPHY

EMPR AR 1964-194
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 1986/10/09

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE039**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANNETTE 47**, RUSTY CREEK

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 45 N
LONGITUDE: 116 29 56 W
ELEVATION: 2225 Metres

NORTHING: 5610561
EASTING: 535430

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on "Rusty Creek" which empties into Forster Creek about 3 kilometres upstream from the mouth of Welsh Creek (Assessment Report 3222).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite
ASSOCIATED: Quartz
ALTERATION: Sericite Pyrite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Horsethief Batholith

ISOTOPIC AGE: 108 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Monzonite
Granodiorite
Granite

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Memoir 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Annette 47 (Rusty Creek) showing is located at the headwaters of an unnamed creek that flows north into Forster Creek. The Cretaceous Horsethief Creek Batholith intrudes Middle Proterozoic sediments of the Purcell Supergroup. The intrusion is zoned from fine-grained/medium-grained granodiorite to coarse-grained quartz monzonite. East trending aplite dykes cut the intrusion. Molybdenum mineralization occurs along fissures within the batholith, along with pyrite, sericite and quartz. Canadian Johns-Manville Company Limited staked and investigated a number of claims in the area in 1970, including the Slide, Annette and Blue. It is reported that 739 geochemical samples were taken in 1970 (Geology, Exploration and Mining in BC 1970, page 469). In 1971, Canadian Johns-Manville completed further geochemical, geological and geophysical surveys on its Slide group of claims (Geology, Exploration and Mining in BC 1971, page 426). In 1972, the company completed further surveys on its Slide group including mapping and geochemical sampling (Geology, Exploration and Mining in BC 1972, page 74). The company returned in 1973 and conducted further surveys including some detailed mapping on the Blue claims, (Geology, Exploration and Mining in BC 1973, page 92).

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EMPR ASS RPT 2603, *3222, *3223, 3390, 3391, 3753, 4485, 4559, 8665
EMPR GEM 1970-469; 1971-426; 1972-74; 1973-9
EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 543
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 148; 369
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/12

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE040**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAN, ANNETTE 55**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 15 N
LONGITUDE: 116 31 19 W
ELEVATION: 2300 Metres

NORTHING: 5609624
EASTING: 533806

LOCATION ACCURACY: Within 500M

COMMENTS: Sample location, Map 8 (Assessment Report 7048).

COMMODITIES: Uranium Molybdenum Tungsten

MINERALS

SIGNIFICANT: Uraninite
ASSOCIATED: Quartz Muscovite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I14 Five-element veins Ni-Co-As-Ag±(Bi, U) I15 Classical U veins
 C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Horsethief Batholith

ISOTOPIC AGE: 108 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Monzonite

HOSTROCK COMMENTS: Age dates from GSC MEM 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca Ancestral North America PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Plutonic Rocks

INVENTORY

ORE ZONE:	VEIN	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1978
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Molybdenum		0.0100	Per cent
Uranium		1.7000	Per cent
Tungsten		0.0100	Per cent

COMMENTS: Sample of a 1.0 centimetre wide quartz-muscovite vein.
REFERENCE: Assessment Report 7048.

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes Helikian Purcell sediments. The intrusion is zoned from fine-grained/medium-grained granodiorite to coarse-grained quartz monzonite.

Radioactivity is associated with fractures in the quartz monzonite. A sample of a 1 centimetre wide quartz-muscovite vein assayed 1.7 per cent uranium, 0.01 per cent molybdenum, and 0.01 per cent tungsten. Disseminated uraninite is likely the radioactive mineral (Assessment Report 7048).

The Horsethief Batholith commonly has areas of anomalous uranium, molybdenum, and tungsten. Black sand placer concentrates in outwash gravels around the batholith contain radioactive and rare earth minerals (see 082KNE005).

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EMPR EXPL 1977-68; 1978-80
EMPR GEM 1971-426
EMPR MAP 22
EMPR OF 1991-17
GSC MAP 1326A
GSC MEM 369, p. 92

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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BIBLIOGRAPHY

GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 1987/07/14

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE041**

NATIONAL MINERAL INVENTORY:

NAME(S): **WELSH CREEK**, ANNETTE 28,29,31

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 42 N
LONGITUDE: 116 30 48 W
ELEVATION: 2133 Metres

NORTHING: 5608608
EASTING: 534421

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Station 091/092 mineralization on the upper reaches of Welsh Creek (Assessment Report 3223, Map 3).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
ALTERATION: Silica Sericite K-Feldspar Pyrite
ALTERATION TYPE: Potassic Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Horsethief Batholith

ISOTOPIC AGE: 108 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Monzonite

HOSTROCK COMMENTS: Age date from GSC MEM 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
PHYSIOGRAPHIC AREA: Purcell Mountains
Ancestral North America

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Channel
COMMODITY Molybdenum GRADE 0.0050 Per cent
COMMENTS: No length of channel sample is reported.
REFERENCE: Assessment Report 3223, Map 3.

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes Middle Proterozoic sediments of the Purcell Supergroup. The intrusion is zoned from fine-grained/medium-grained granodiorite to coarse-grained quartz monzonite. East trending aplite dykes cut the intrusion. Molybdenite occurs in at least three outcrops within 500 metres of each other on the upper reaches of Welsh Creek. The three showings occur along a northwest trend. The northwest showing is an occurrence of molybdenite in two quartz veins, 5 centimetres apart. Intense k-feldspar alteration and strong sericite alteration characterizes the showing. A sample of the showing yielded 0.039 per cent molybdenum (Assessment Report 3223, Map 3). The central showing consists of molybdenite occurring in fissures 1 to 2.5 centimetres apart, with quartz, pyrite and sericite. Channel samples range up to 0.005 per cent molybdenum (Assessment Report 3223, Map 3). The southeast showing consists of an area of intense rusty joints with assays averaging 0.005 per cent molybdenum (Assessment Report 3223, Map 3). Canadian Johns-Manville Company Limited staked and investigated a number of claims in the area in 1970, including the Slide, Annette

CAPSULE GEOLOGY

and Blue. It is reported that 739 geochemical samples were taken in 1970 (Geology, Exploration and Mining in BC 1970, page 469). In 1971, Canadian Johns-Manville completed further geochemical, geological and geophysical surveys on its Slide group of claims (Geology, Exploration and Mining in BC 1971, page 426). In 1972, the company completed further surveys on its Slide group including mapping and geochemical sampling (Geology, Exploration and Mining in BC 1972, page 74). The company returned in 1973 and conducted further surveys including some detailed mapping on the Blue claims (Geology, Exploration and Mining in BC 1973, page 92).

BIBLIOGRAPHY

EMPR ASS RPT 2603, 3222, *3223, 3390, 3391, 3753, 4485, 4559, 8665
EMPR GEM 1970-469; 1971-426; 1972-74; 1973-9
EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/12

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE042**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALDER 16**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 01 N
LONGITUDE: 116 25 56 W
ELEVATION: 1280 Metres

NORTHING: 5601823
EASTING: 540210

LOCATION ACCURACY: Within 500M

COMMENTS: Drill hole location, HTC 71-1 (Assessment Report 3755).

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite Pyrrhotite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Cretaceous

GROUP

Purcell

FORMATION

Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

Horsethief Batholith

ISOTOPIC AGE: 108 Ma

DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartzite
Dolomitic Limestone
Quartz Monzonite
Granodiorite
Diabase

HOSTROCK COMMENTS: Age date from GSC MEM 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

Plutonic Rocks

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes sediments of the Middle Proterozoic Mount Nelson Formation, Purcell Supergroup. The intrusion is zoned from fine-grained to medium-grained granodiorite to coarse-grained quartz monzonite. In the area of the Alder 16 showing, the Horsethief batholith is predominantly quartz monzonite.

Canadian Johns-Manville Co. Limited initiated a biogeochemistry survey along Horsethief Creek in the winter of 1970-71. They followed up with a major biogeochemical survey in late 1971 after the staking of the Alder and Talus claims. An induced polarization survey was carried out and 4 diamond drill holes were drilled.

Drilling showed the sedimentary rocks to consist of banded quartzite, dolomitic limestone and hornfels. Disseminated sulphides, such as pyrite, pyrrhotite with trace chalcopyrite and galena are reported to be common, averaging 1 per cent but up to 10 per cent locally. Chalcopyrite was found as finely disseminated blebs in quartzite boulders and in quartz veins in diabase boulders. Traces of disseminated chalcopyrite in banded quartzite and dolomitic limestone were observed in drill hole HTC-71-1 which was drilled in order to test an IP anomaly.

BIBLIOGRAPHY

EMPR ASS RPT 3754, *3755, 3805
EMPR MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 1326A
GSC MEM 369
GSC OF 341; 551

DATE CODED: 2003/01/28
DATE REVISED: 2003/01/28

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE043**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALDER 72**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 37 N
LONGITUDE: 116 27 22 W
ELEVATION: 1260 Metres

NORTHING: 5601069
EASTING: 538524

LOCATION ACCURACY: Within 500M

COMMENTS: Drill hole location, HTC 71-3 (Assessment Report 3755).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ALTERATION: K-Feldspar
ALTERATION TYPE: Potassic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Horsethief Batholith

ISOTOPIC AGE: 108 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granite
Quartz Monzonite
Granodiorite
Quartzite
Dolomitic Limestone
Diabase

HOSTROCK COMMENTS: Age date from GSC MEM 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America Plutonic Rocks

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1971

SAMPLE TYPE: Drill Core

COMMODITY Molybdenum GRADE 0.0080 Per cent

COMMENTS: From a 1.5 metre drill interval.
REFERENCE: Assessment Report 3755, page 17.

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes sediments of the Middle Proterozoic Mount Nelson Formation, Purcell Supergroup. The intrusion is zoned from fine-grained to medium-grained granodiorite to coarse-grained quartz monzonite. In the area of the Alder showing, the Horsethief batholith is predominantly quartz monzonite. Canadian Johns-Manville Co. Limited initiated a biogeochemistry survey along Horsethief Creek in the winter of 1970-71. They followed up with a major biogeochemical survey in late 1971 after the staking of the Alder and Talus claims. An induced polarization survey was carried out and 4 diamond drill holes were drilled. Traces of molybdenite were found in drill core from diamond drilling done on the Alder 72 claim. The host rock is a medium to coarse-grained granite showing the pink colouration of potassium feldspar alteration. Molybdenite occurs as a sheared film along fractures and tiny flakes disseminated in rock contiguous to the fracture. A 1.5-metre drill interval assayed 0.008 per cent molybdenum and a grab sample assayed 0.24 per cent molybdenum (Assessment Report 3755, page 17).

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BIBLIOGRAPHY

EMPR ASS RPT 3754, *3755, 3805
EMPR MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 1326A
GSC MEM 369
GSC OF 341; 551

DATE CODED: 2003/01/28
DATE REVISED: 2003/01/28

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE044**

NATIONAL MINERAL INVENTORY:

NAME(S): **SLIDE 28**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 42 N
LONGITUDE: 116 28 54 W
ELEVATION: 2347 Metres

NORTHING: 5608624
EASTING: 5366661

LOCATION ACCURACY: Within 500M

COMMENTS: Location of molybdenite showing about 1 kilometre northwest of Donegal Peak (Assessment Report 3223, Map 3).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ALTERATION: Sericite Pyrite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Cretaceous

ISOTOPIC AGE: 108 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Horsethief Batholith

LITHOLOGY: Quartz Monzonite
Aplite Dike

HOSTROCK COMMENTS: Age date from GSC MEM 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1970

SAMPLE TYPE: Grab

COMMODITY

GRADE

Molybdenum

0.1110

Per cent

REFERENCE: Assessment Report 3223, Map 3.

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes Middle Proterozoic sediments of the Purcell Supergroup. The intrusion is zoned from fine-grained/medium-grained granodiorite to coarse-grained quartz monzonite. East trending aplite dykes cut the intrusion.

Disseminated molybdenite occurs in a pink aplite dike 30 centimetres in width. Associated parallel smaller dikes (5 centimetres wide) occur. Pyrite and sericite are associated alteration minerals. A sample of the material assayed 0.111 molybdenum (Assessment Report 3223, Map 3).

Canadian Johns-Manville Company Limited staked and investigated a number of claims in the area in 1970, including the Slide, Annette and Blue. It is reported that 739 geochemical samples were taken in 1970 (Geology, Exploration and Mining in BC 1970, page 469). In 1971, Canadian Johns-Manville completed further geochemical, geological and geophysical surveys on its Slide group of claims (Geology, Exploration and Mining in BC 1971, page 426). In 1972, the company completed further surveys on its Slide group including mapping and geochemical sampling (Geology, Exploration and Mining in BC 1972, page 74). The company returned in 1973 and conducted further surveys including some detailed mapping on the Blue claims, (Geology, Exploration and Mining in BC 1973, page 92).

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RUN TIME: 16:43:39

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BIBLIOGRAPHY

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EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/13

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE045**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAN 6, ICE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 16 N
LONGITUDE: 116 29 36 W
ELEVATION: 2469 Metres

NORTHING: 5611521
EASTING: 535816

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralized aplite dike (Assessment Report 7048).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Cretaceous

GROUP

Purcell

FORMATION

Dutch Creek

IGNEOUS/METAMORPHIC/OTHER

Horsethief Batholith

LITHOLOGY: Argillaceous Quartzite
Calcareous Quartzite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Argillaceous quartzite and calcareous quartzite of the Middle Proterozoic Dutch Creek Formation (Purcell Supergroup) are in contact with quartz monzonite of the Cretaceous Horsethief Batholith.

On the Stan 6 claim, it was noted that small amounts of molybdenite occur in an aplite dike that cuts Dutch Creek rocks. The intrusive contact is to the immediate south.

The eastern portion of the Stan 6 claims, that encompasses the Stan 6 occurrence, had been previously staked as the Ice claim in the early 1970s. See 082KNE002 (S) for a discussion of that work which occurred more to the southeast. Cominco Ltd. staked the Stan 1 to 6 claims in 1976 and followed up in 1977 by taking 55 silt, 52 water and 13 rock samples. In 1978, Cominco conducted a geological mapping survey and collected 154 soil and 8 silt samples for analysis.

BIBLIOGRAPHY

EMPR ASS RPT 6593, *7048
EMPR EXPL 1977-E68; 1978-E80
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/10

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE046**

NATIONAL MINERAL INVENTORY:

NAME(S): V, CC

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 59 N
LONGITUDE: 116 25 54 W
ELEVATION: 2316 Metres

NORTHING: 5612881
EASTING: 540165

LOCATION ACCURACY: Within 500M

COMMENTS: Area of copper mineralization east of V claims (Assessment Report 1254).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated

CLASSIFICATION: Unknown

TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic

GROUP

Purcell

FORMATION

Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1967

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

0.2500

Per cent

REFERENCE: Assessment Report 1254.

CAPSULE GEOLOGY

The V showing is located about 2.5 kilometres north of where Foster Creek is joined by Irish Creek. Kodiak Mines Ltd. explored the area in 1967 and discovered this showing about 1 kilometre east of their V claims.

In 1971, Canadian Johns-Manville Company staked the CC claims after locating a copper showing in diabase about 1.5 kilometres due south of the V showing. The CC claims appear to cover the area where the V showing plots. See CC (082KNE055) for a description of the CC showings.

Several narrow north to northwest trending gossan zones, varying up to 1 metre in width, are found in sediments of the Middle Proterozoic Mount Nelson Formation (Purcell Supergroup). Weathering is deep and no sulphides were observed. In the same area, chalcopyrite was noted in a 6-metre wide dolomite horizon, a grab sample of which assayed 0.25 per cent copper (Assessment Report 1254).

BIBLIOGRAPHY

EMPR ASS RPT *1254, 3753
EMPR GEM 1972-74
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 2003/02/07
DATE REVISED: 2003/02/07

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE047**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALTIC 10**, BZS-1, BZS-2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 37 N
LONGITUDE: 116 19 34 W
ELEVATION: 1737 Metres

NORTHING: 5608558
EASTING: 547664

LOCATION ACCURACY: Within 500M

COMMENTS: Location of BZS-1 showing. BZS-2 showing is located about 100 west-southwest (Assessment Report 20418).

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Ordovician-Silurian	Unnamed/Unknown Group	Beaverfoot	

LITHOLOGY: Dolomite
Limestone
Shale
Conglomerate
Sandstone
Quartzite
Slate
Argillite
Grit

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Strata underlying the Baltic, from oldest to youngest, include: conglomerates and coarse clastic sediments of the Upper Proterozoic Toby Formation (Windermere Supergroup); slates, quartzites, grits and conglomerates of the Upper Proterozoic Horsethief Creek Group; dolomites of the Cambrian Jubilee Formation; argillite and dolomite of the Cambrian to Ordovician McKay Group; dolomite, shale, sandstone and quartzite of the Ordovician to Silurian Beaverfoot Formation; and argillite, argillaceous limestone and quartzite of the Devonian Mount Forster Formation.

Two lead showings were mapped on the south side of the Forster Creek valley in an area of extensive overburden. The exposed showings, BZS-1 AND BZS-2, comprise disseminated sphalerite and galena along fractures in limestone and dolomites of the Beaverfoot Formation. Minor replacement textures in the carbonate are exhibited adjacent to the fracture mineralization. The BZS-1 showing is the better of the two and has interbedded shale and carbonate lithologies.

In 1990, Cominco did some mapping and investigation on the Baltic 10 property, owned by A. Louie. Prior to 1990, Cominco had investigated showings on the Baltic claims on the north side of Forster Creek. See Baltic (082KNE064) for details.

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EMPR ASS RPT 5555, 7061, *20418
EMPR EXPL 1975-E47; 1978-E80
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A

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BIBLIOGRAPHY

GSC MEM 148; 369

DATE CODED: 2003/02/02
DATE REVISED: 2003/02/02

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE048**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALDY**, WOLFENDEN, FRAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 42 00 N
LONGITUDE: 116 26 18 W
ELEVATION: 2285 Metres

NORTHING: 5616615
EASTING: 539665

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing (Assessment Report 3351).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Azurite Malachite Chalcopyrite Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Breccia Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: 106 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Proterozoic
Upper Proterozoic

GROUP

Horsethief Creek
Windermere

FORMATION

Unnamed/Unknown Formation
Toby

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Slate
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel
COMMODITY

YEAR: 1971

Copper

GRADE
1.1200 Per cent

COMMENTS: From a 91-centimetre channel sample.
REFERENCE: Assessment Report 3351.

CAPSULE GEOLOGY

Black slate (argillite) and a narrow band of limestone of the Upper Proterozoic Horsethief Creek Group overlies conglomerate of the Upper Proterozoic Toby Formation (Windermere Supergroup). Well-developed cleavage is present in the slate having an attitude of 135 degrees and dipping 33 degrees west. Bedding is overturned in many of the fault panels in this region.

The limestone is bluish grey on a fresh surface. Bedding is reported to strike 154 degrees and dip 62 degrees west. Joints with an attitude of 148 degrees and dipping 51 degrees to the southwest are present in the limestone. At the showing, the limestone is cut by a fault paralleling the strike of the units and dipping 30 degrees south.

Copper mineralization occurs between the contact of the limestone and the slate and a bedding fault within the formation. The fault is characterized by brecciation of the limestone and by displacement of minor units within the limestone. Malachite and azurite mineralization is confined to the limestone unit and occurs as a stain on the limestone and within quartz blebs and veinlets. Minor chalcopyrite and pyrite are also associated with quartz blebs and veinlets. The best 91-centimetre channel sample taken in 1971 assayed 1.12 per cent copper (Assessment Report 3351).

In 1968, Silver Eagle Explorations held the property as the Baldy and Fran Group of claims. They commissioned Robert Franz to conduct a photogeological and photogrammetric study of the claim area. A field check of data was completed. Maps indicate copper and silver mineralization at the showing site.

CAPSULE GEOLOGY

Prior to the field season of 1971, Penarroya Canada Limited entered into an option agreement for the Baldy group of claims with Lloyd Wilder, Winston Wolfenden and W.C. Jones. In 1971, Penarroya conducted surface mapping, a geochemical soil and silt survey and 122 metres of trenching. Two old caved adits were located in 1971 which indicate that the property had been investigated previously.

A 1972 prospectus by Purcell Development Co. Ltd. reported that Wilder, Wolfenden and Jones sold Purcell the rights of the Penarroya option. However, Penarroya dropped the option soon after completing their field work. Purcell indicated their intention to work the property in 1972 but nothing is recorded to indicate that they did.

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EMPR ASS RPT *3351
EMPR GEM 1971-426
EMPR PF (Frantz, R.H. (1968): Field Geology and Supplementary Photogeological and Photogrammetric Study of Frances Creek Area, Silver Eagle Explorations Ltd., 8 pages and 3 maps; Prospectus, Purcell Development Co. Ltd., July 15, 1972)
EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/16

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE049**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCLEAN, EVELYN**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 30 N
LONGITUDE: 116 33 49 W
ELEVATION: 2133 Metres

NORTHING: 5615629
EASTING: 530824

LOCATION ACCURACY: Within 500M

COMMENTS: Location of vein (Assessment Report 5073).

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena Cerussite
COMMENTS: Lead carbonate is indicated. Cerrusite is assumed.
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Middle Proterozoic GROUP Purcell FORMATION Mount Nelson IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1915
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 3915.4600 Grams per tonne
Gold 1.3700 Grams per tonne
Lead 63.6000 Per cent

REFERENCE: Minister of Mines Annual Report 1915, page 99.

CAPSULE GEOLOGY

The McLean occurrence was first staked as the Evelyn group at the turn of the century. Some exploration work occurred from 1902 to 1905, possibly trenching and the development of small adits.

In 1915, the property was reported on in the Minister of Mines Annual Report. It was stated that a vein filling a small fissure occurred in quartzite and greyish limestone, striking southeast with a southwest dip of 70 degrees. Several opencuts had been made along the vein, and along other veins not on the strike of this vein. A 7.6-metre adit showed the vein to be 20 to 38 centimetres wide

A 7.6-metre tunnel on the face of a very steep cliff shows the vein to be from 8 to 15 inches wide, largely consisting of iron oxide and sulphide and talcy material, but also containing streaks and nodules of galena. A sample across 25 centimetres of rusty material, which was considered as containing lead carbonate yielded only 212.57 grams per tonne silver and 2 per cent lead. A sample of clean galena however, assayed 1.37 grams per tonne gold, 3915.46 grams per tonne silver and 63.6 per cent lead (Minister of Mines Annual Report 1915, page 99).

The property was idle until 1956 when W.C. Wolfenden acquired it by staking. Some of the older workings were cleaned out and a small amount of work was done by optionees over the next several years.

In 1971, Purcell Development Co. Ltd. held the property as the Evelyn claims, conducting a mapping and soil sampling program. During 1972 some surface sampling was done by Purcell Development and

CAPSULE GEOLOGY

in 1973 the company completed 6 diamond-drill holes totalling 457 metres. The company also examined over 168 metres of old surface trenches cut into gossanous exposures.

In 1973, a mix of sulphides was reported in veins, mainly galena, that varied from 45 to 90 centimetres in width. The veins strike 125 degrees and dip between 55 and 65 degrees to the southwest. Assays of material from these trenches included 0.91 metres of mineralized gossan that yielded 428.58 grams per tonne silver and 5.5 per cent lead (Assessment Report 5073). The veins appear to be continuous over 168 to 183 metres

The area of the occurrence is underlain by rocks of the Middle Proterozoic Mount Nelson Formation, Purcell Supergroup.

BIBLIOGRAPHY

EMPR AR 1902-137; 1903-105; 1904-114; 1905-146; *1915-99
EMPR ASS RPT *5073
EMPR GEM 1971-427; 1973-93,94
EMPR MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 1326A
GSC MEM 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE050**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOLLY LAKE 1**, BEV 1, MOLLY LAKE I

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 21 N
LONGITUDE: 116 30 57 W

NORTHING: 5613518
EASTING: 534212

ELEVATION: 2286 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the Molly Lake 1 showing on the Bev 1 claim (Assessment Report 3581).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite

ASSOCIATED: Quartz Feldspar

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Porphyry

TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Middle Proterozoic

Purcell

Dutch Creek

Horsethief Batholith

Cretaceous

LITHOLOGY: Quartz Monzonite
Hornfels

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Molly Lake area is underlain by a marginal section of the Cretaceous Horsethief Batholith and sediments of the Middle Proterozoic Dutch Creek Formation (Purcell Supergroup).

The intrusive rock is a coarse-grained, greyish purple, quartz monzonite which is typical of the contact zone for about a 60 metre width. The Dutch Creek Formation is a dark reddish brown, biotite-rich hornfels, which is cut either by abundant white aplite dikes or by numerous quartz veins in different sections.

Smooth cliffs of quartz monzonite, facing north and measuring 91 metres in the east-west direction, contain at most 10 molybdenite-bearing veins. The mineralization consists of joints or fractures with or without quartz veining containing coarse pyrite and coarse molybdenite rosettes. Coarse, salmon-pink feldspar and grey glassy quartz occur between the sulphides. A grain of chalcopyrite was observed in mineralized talus blocks.

In 1971, Canadian Johns-Manville completed further surveys on its Slide group of claims and staked the Bev claims to cover newly found molybdenite showings, the Molly Lake showings. See also Molly Lake 2 (082KNE051).

A total of 77 geochemical samples were collected from the Bev area (Assessment Report 3581). The company did further mapping in 1972 and collected 271 samples from the Bev claims. In 1973, a further examination of the property was reported by the company (Assessment Report 4613).

BIBLIOGRAPHY

EMPR ASS RPT *3581, 4240, 4613
EMPR GEM 1970-469; 1971-426; 1972-74; 1973-92
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/08

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE050**

MINFILE NUMBER: **082KNE051**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOLLY LAKE 2**, BEV 5, MOLLY LAKE II

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 44 N
LONGITUDE: 116 30 49 W
ELEVATION: 2194 Metres

NORTHING: 5614230
EASTING: 534365

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Molly Lake 2 showing on the Bev 5 claim (Assessment Report 3581).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite

ASSOCIATED: Quartz Biotite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Porphyry

TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Cretaceous

GROUP

Purcell

FORMATION

Dutch Creek

IGNEOUS/METAMORPHIC/OTHER

Horsethief Batholith

LITHOLOGY:

Hornfels
Aplite
Aplite Dike
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Molly Lake area is underlain by a marginal section of the Cretaceous Horsethief Batholith and sediments of the Middle Proterozoic Dutch Creek Formation (Purcell Supergroup).

The intrusive rock is a coarse-grained, greyish purple, quartz monzonite which is typical of the contact zone for about a 60 metre width. The Dutch Creek Formation is a dark reddish brown, biotite-rich hornfels, which is cut either by abundant white aplite dikes or by numerous quartz veins in different sections.

Lying in the hornfels just north of the contact, the Molly Lake II showing is composed of two zones. A 213-metre wide aplite dike zone, adjacent to the contact, is slightly mineralized. A quartz vein zone, well mineralized, occurs 150 metres further north and is referred to as the proper of the Molly Lake II showing.

The aplite dike zone contains voluminous aplite dikes and irregular bodies that contain rare fine specks of molybdenite as well as quartz-rich vugs with molybdenite rosettes. At a point where these aplite dikes and bodies decrease abruptly in abundance, numerous molybdenite-bearing quartz veins cut across the fine-grained micaceous hornfels.

There are three types of molybdenite mineralization associated with the quartz veins:

- 1) molybdenite occurs as fissure-filling between the quartz veins and the host hornfels,
- 2) molybdenite specks are formed along lengthwise seams in quartz veins,
- 3) flakes of molybdenite are disseminated in a five millimetre biotite-rich band in hornfels, parallel to the neighboring quartz vein.

The quartz veins are mostly 5 centimetres thick, reaching 30 centimetres in some places. The predominant attitude strikes 045 degrees and dips 60 degrees southeast. The spacing of the veins varies from 1.5 to 9 metres. The quartz vein zone is mineralized in an area of at least 300 by 150 metres. Some of the mineralized veins were traced away from the contact for 300 metres until they became

CAPSULE GEOLOGY

barren.

In 1971, Canadian Johns-Manville completed further surveys on its Slide group of claims and staked the Bev claims to cover newly found molybdenite showings, the Molly Lake showings. See also Molly Lake 1 (082KNE050). A total of 77 geochemical samples were collected from the Bev area (Assessment Report 3581). The company did further mapping in 1972 and collected 271 samples from the Bev claims. In 1973, a further examination of the property was reported by the company (Assessment Report 4613).

BIBLIOGRAPHY

EMPR ASS RPT *3581, 4240, 4613
EMPR GEM 1970-469; 1971-426; 1972-74; 1973-92
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/08

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE052**

NATIONAL MINERAL INVENTORY:

NAME(S): **DISCOVERY CREEK**, ANNETTE 30

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 29 N
LONGITUDE: 116 29 57 W
ELEVATION: 2225 Metres

NORTHING: 5608214
EASTING: 535426

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on "Discovery Creek" between two small lakes at the headwaters of Welsh Creek (Assessment Report 3753, maps).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica Sericite K-Feldspar Pyrite Muscovite
Kaolin Limonite
ALTERATION TYPE: Potassic Greisen Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cretaceous _____ Horsethief Batholith

ISOTOPIC AGE: 108 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Monzonite
Granodiorite
Granite

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Memoir 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Plutonic Rocks Ancestral North America

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1971
SAMPLE TYPE: Grab
COMMODITY GRADE
Molybdenum 0.0460 Per cent
REFERENCE: Assessment Report 3753.

CAPSULE GEOLOGY

The Discovery Creek (Annette 30) showing is located at the head waters of Welsh Creek, a tributary of Forster Creek.

The Cretaceous Horsethief Batholith intrudes Middle Proterozoic sediments of the Purcell Supergroup. The intrusion is zoned from fine-grained/medium-grained granodiorite to coarse-grained quartz monzonite. East trending aplite dykes cut the intrusion.

The local fine-grained granite has been heavily fractured. Two systems of joint surfaces are associated with mineralization: 1) 110 to 140 degrees, dipping 65 to 80 southwest; 2) 225 degrees, dipping 35 to 60 degrees northwest.

Thick rust covering 80 per cent of fracture surfaces is chocolate brown, commonly mixed with yellowish or reddish variations. Canary yellow ochre and kaolin white powder are also present. The host rock exhibits 10 to 20 per cent potassic alteration.

Flakes of fine rosettes of molybdenite occur in vuggy quartz veins, 2.5 centimetres thick, and in greisen bands, 3.8 to 6.3 centimetres thick, that envelop the vuggy quartz veins. Most of the the quartz veins are developed along the joint system. The closest

CAPSULE GEOLOGY

spacing between two mineralized veins is 15 metres. The width of the this zone is 90 metres. The greisen bands are composed mainly of quartz and mica (muscovite and/or sericite). Disseminated pyrite cubes are abundant.

Ten grab samples were collected in 1971. The values range from 0.018 to 0.046 per cent molybdenite (Assessment Report 3753, page 7).

Canadian Johns-Manville Company Limited staked and investigated a number of claims in the area in 1970, including the Slide, Annette and Blue. It is reported that 739 geochemical samples were taken in 1970 (Geology, Exploration and Mining in BC 1970, page 469). In 1971, Canadian Johns-Manville completed further geochemical, geological and geophysical surveys on its Slide group of claims (Geology, Exploration and Mining in BC 1971, page 426). In 1972, the company completed further surveys on its Slide group including mapping and geochemical sampling (Geology, Exploration and Mining in BC 1972, page 74). The company returned in 1973 and conducted further surveys including some detailed mapping on the Blue claims, (Geology, Exploration and Mining in BC 1973, page 92).

BIBLIOGRAPHY

EMPR ASS RPT 2603, 3222, 3223, 3390, 3391, *3753, 4485, 4559, 8665
EMPR GEM 1970-469; 1971-426; 1972-74; 1973-9
EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/12

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE053**

NATIONAL MINERAL INVENTORY:

NAME(S): **CC**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 04 N
LONGITUDE: 116 25 54 W
ELEVATION: 1900 Metres

NORTHING: 5611182
EASTING: 540178

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralized dike (Assessment Report 3753).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Bornite Pyrrhotite

ASSOCIATED: Carbonate Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Middle Proterozoic
Unknown

GROUP

Purcell

FORMATION

Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Diabase
Conglomerate
Quartzite

HOSTROCK COMMENTS: The diabase dikes are of undetermined age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1971

SAMPLE TYPE: Chip

COMMODITY

GRADE

Copper

0.0400

Per cent

COMMENTS: The length of the chip sample was not reported.

REFERENCE: Assessment Report 3753.

CAPSULE GEOLOGY

In 1971, Canadian Johns-Manville Company staked the CC claims after locating a copper showing in diabase about 1 kilometre northeast of the confluence of Irish and Forster creeks. A follow-up geochemical survey in the vicinity indicated a small copper anomaly.

The fine-grained, dark greenish-grey diabase is thought to be a dike that strikes northeast and is estimated to be 15 metres wide. The dike intrudes siliceous greywacke and quartzite of the Middle Proterozoic Mount Nelson Formation (Purcell Supergroup).

Fine specks of chalcopyrite are present in carbonate-quartz veinlets. Less commonly, chalcopyrite occurs disseminated in the host rock or in the centre of carbonate-filled amygdules. Pyrite is common; bornite and pyrrhotite are rare. The diabase, generally massive, is marked by intense fracturing and heavy limonitic staining at the showing. The rock was blasted to a depth of 1.2 metres. A chip sample assayed 0.04 per cent copper (Assessment Report 3753). Leaching is evident and may account for the low yield.

BIBLIOGRAPHY

EMPR ASS RPT 1254, *3753
EMPR GEM 1972-74
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 567
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/07

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE054**

NATIONAL MINERAL INVENTORY:

NAME(S): **ZEN**, WHIRLPOOL

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 11 N
LONGITUDE: 116 36 08 W
ELEVATION: 2285 Metres

NORTHING: 5611320
EASTING: 528120

LOCATION ACCURACY: Within 500M

COMMENTS: Whirlpool showing on Zen claims (Assessment Report 4559, Map M2).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: K-Feldspar Sericite Quartz Chlorite
ALTERATION TYPE: Potassic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein Podiform
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Proterozoic
Cretaceous

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Horsethief Batholith

LITHOLOGY: Quartz Monzonite
Clastic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1973

SAMPLE TYPE: Chip

COMMODITY

GRADE

Molybdenum

0.1700

Per cent

COMMENTS: Over a 107-metre length.

REFERENCE: Assessment Report 4559.

CAPSULE GEOLOGY

The Whirlpool showing of the Zen claims occurs in the coarse-grained biotite quartz monzonite outer zone of the Horsethief Batholith. Surrounding the batholith are coarse clastic sediments of the Upper Proterozoic Horsethief Creek Group.

Molybdenite occurs as flakes and rosettes in quartz veins (as selvages) and fractures in quartz monzonite. It also occurs less commonly as flakes, disseminations or in fractures in aplite dikes and as lenses or pods in pegmatites. Mineralization is most intense near the contact but mineralized veins are found up to 240 metres away. The mineralized fractures are highly altered with secondary potassium feldspar, sericite and quartz. Minor chloritization of the mafic minerals are also observed. Molybdenite, pyrite and some chalcopyrite are associated with the altered fractures.

The most impressive surface showing is reported to be 107 metres long by 30 metres wide, having a minimum of 24 exposed mineralized quartz veins varying in width from 2.5 to 20 centimetres. The strike of the veins are 110 degrees dipping 35 to 45 degrees south. Surface chip sampling of this zone indicates 0.17 per cent molybdenum (0.25 per cent MoS₂) over the full 107-metre length of outcrop (Assessment Report 4559).

Mineralization was first discovered in 1971 by Canadian Johns-Manville Company Limited. The company conducted a mapping program and a geochemical survey, collecting 152 samples for analysis. Canadian Johns-Manville followed up in 1973 with more

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
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PAGE: 569
REPORT: RGEN0100

CAPSULE GEOLOGY

detailed mapping and a 16-metre diamond-drill hole. Canadian Johns-Manville was noted as the owner in 1980 but Denison Mines was the operator. They drilled two diamond-drill holes totalling 445 metres.

BIBLIOGRAPHY

EMPR ASS RPT *3806, *4559, *8575
EMPR GEM 1973-92
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/03

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE055**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 48 N
LONGITUDE: 116 35 45 W
ELEVATION: 2377 Metres

NORTHING: 5612465
EASTING: 528565

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located at approximately 2377 metres elevation on the eastern and southeastern slopes of Taurus Mountain (Geology, Exploration and Mining in BC 1973, page 93).

COMMODITIES: Tungsten

MINERALS

SIGNIFICANT: Scheelite
ALTERATION: Diopside
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Proterozoic
Cretaceous

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Horsethief Batholith

LITHOLOGY: Limestone
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

In 1972, Union Carbide Exploration Corporation mapped in the Bee 1 to 16 area north of Whirlpool Lake on the east to southeast slope of Taurus Mountain. They followed up in 1973 with 217.6 metres of diamond-drilling in seven holes.

Scheelite was found to occur in pale diopside skarn-altered limestone units of the Horsethief Creek Group, intruded by granitic stocks that are probably related to the Cretaceous Horsethief Creek Batholith.

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EMPR GEM 1972-75; *1973-93
EMPR OF 1991-17
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/03

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE056**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEBIRD**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 30 N
LONGITUDE: 116 20 40 W
ELEVATION: 1400 Metres

NORTHING: 5600917
EASTING: 546435

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is reported to be for centre of claims (Geology, Exploration and Mining in BC, 1972, page 73).

COMMODITIES: Lead Zinc Copper Silver

MINERALS

SIGNIFICANT: Unknown

COMMENTS: Minerals are assumed to be sphalerite, galena and chalcopyrite.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Unnamed/Unknown Group	Jubilee	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

In 1972, on the Bluebird claims, J.H. Conroy and A. Louie collected 150 soil samples constructed 1.6 kilometres of road and excavated 30 metres of trench.

It is reported that lead, zinc, copper and silver mineralization occurs in fractures and veins within dolomite of the Cambrian Jubilee Formation.

BIBLIOGRAPHY

EMPR GEM 1972-73,74
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/03

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE057**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAMARAK**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 31 48 N
LONGITUDE: 116 32 10 W
ELEVATION: 1500 Metres

NORTHING: 5597664
EASTING: 532879

LOCATION ACCURACY: Within 500M

COMMENTS: Location of claim centre at confluence of Paulding and Horsethief creeks (Geology, Exploration and Mining in BC 1973, page 92 and Figure A).

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: Commodities are reported but minerals are assumed.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Dutch Creek	

LITHOLOGY: Dolomite
 Calcareous Schist
 Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

On the Tamarak claims, lead, zinc and silver mineralization is reported to occur within rocks of the Middle Proterozoic Dutch Creek Formation (Purcell Supergroup). These rocks are reported to include dolomite, calcareous schist and argillite.

J.H. Conroy commenced work on his Tamarak claims in 1971, completing a program which included soil sampling, road construction, trenching (50 metres) and 230 square metres of stripping. In 1972, J.H. Conroy with A. Louie took 50 soil samples and completed 15 metres of trenching and 395 square metres of stripping on the Tamarak claims. In 1973, Conroy and Louie did more stripping and excavated 5 pits on the Rank and Tamarak claims.

BIBLIOGRAPHY

EMPR GEM *1971-427, *1972-74, *1973-92
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/30

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE058**

NATIONAL MINERAL INVENTORY:

NAME(S): **INTERNATIONAL**, RIVERSIDE, FORGOTTEN (L.14941),
JIANT (L.14358), BRENNAN (L.14363), PORTLAND (L.14940),
CHISHOLM (L.14360), CABIN FRACTION (L.14942), SOUTHERN (L.14361),
HOWSER (L.14359), POOLE (L.14362), SOUTHERN PACIFIC

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K10W
BC MAP:
LATITUDE: 50 31 58 N
LONGITUDE: 116 56 43 W
ELEVATION: 1310 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5597872
EASTING: 503878

COMMENTS: The location is for the original workings north of "McGuire" Pat Creek which drains into the east side of Duncan Lake (Prospectus, Kaslo Mines Corporation (Property File)). The workings are at the Portland-Jiant claim boundary. Workings on the Chisholm-Cabin Fraction claim boundary area, about 1 kilometre south of the original workings, are likely those named as the Southern Pacific Group.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic Horsethief Creek Unnamed/Unknown Formation

LITHOLOGY: Siliceous Schist
Micaceous Schist
Conglomerate
Quartzite
Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1926
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 384.0000 Grams per tonne
Lead 30.0000 Per cent

COMMENTS: From a 0.9 metre chip sample.
REFERENCE: Starr, C.C. (1926): Report of ... Examination of the Riverside Mine.

CAPSULE GEOLOGY

The International occurrence is located on the slopes on the east side of Duncan Lake just north of Pat "McGuire" Creek. The area of the International occurrence is underlain by coarse clastic rocks of the Upper Proterozoic Horsethief Creek Group. The rocks in the area have been listed as quartzite, limestone, argillite and grey schist. The host rocks consist of black, carbonaceous, siliceous schists and decomposed mica schists. A bed of conglomerate lies above the dark schists and forms the hangingwall of a quartz vein which is conformable to bedding. The vein is 0.6 to 1.2 metres wide where exposed and is mineralized with galena, tetrahedrite, pyrite and sphalerite. The vein strikes northwest with a generally flat dip to the northeast.

CAPSULE GEOLOGY

A sample was taken across the vein from where a small streak of galena, about 10 centimetres wide and 4.6 metres long occurs. The sample assayed 445.72 grams per tonne silver, 37.7 per cent lead and 1.2 per cent zinc (Minister of Mines Annual Report 1918, page 162).

The first report of the property comes in 1918 when Blue Lake Consolidated Mining Company was owner. It is mentioned at that time that there were already old workings consisting of a 7.6-metre drift and a few opencuts. Blue Lake was in the process of driving a crosscut to tap the vein at depth and were in 20 metres and still working.

John Noihl was reported to be active on the property in 1924, 1925 and 1926.

A property visit on behalf of Porcupine Goldfields Development and Finance Co. Ltd. occurred in 1926. A sample taken across 0.9 metre from the face of the east drift yielded 384 grams per tonne silver and 30 per cent lead (Starr, 1926 (Property File)).

In 1927, the International property was known as the Riverside group which included five claims: Riverside, Giant, Joint, Howser and Portland. The owners were J. Noihl, J.W. Mulholland and W. Sturgeon. At that time, property workings include two shallow incline shafts, opencuts and stripping.

In 1928, the Riverside was taken over by the Omo Mines Corporation of Spokane and a large number of claims covering the southern extension of the vein were acquired.

In 1929, a crosscut was driven by Omo Mines a little south of the older workings in order to test the southern extension of the vein. It was also reported that on the Southern Pacific group, about 1.2 kilometres to the south, another group of superficial workings explored what is thought to be the same vein. Short crosscut tunnels and opencuts were developed. The vein description is much the same. Omo continued work on the Riverside crosscut in 1930.

In 1942, Kaslo Mines Corporation of Spokane issued a prospectus regarding a share offering for their property which includes the Forgotten (L.14941), Jiant (L.14358), (L.14363), Howser (L.14359), Portland (L.14940), Brennan (L.14363), Chisholm (L.14360), Southern (L.14361), Poole (L.14362) and Cabin Fraction (L.14942). They reported that their main working tunnel was 142 metres long and had a 30-metre drift at the 122 metre point. It is not clear whether or not the company did any of this work or just assumed control of the workings.

In 1972, a Kaslo Mines Limited of Kaslo constructed a road to the showings. Some prospecting and the reopening of old workings was done. No further history of the property is recorded.

BIBLIOGRAPHY

- EMPR AR *1918-162; 1924-190; 1925-236; 1926-269; *1927-283; 1928-309;
*1929-325; 1930-257
EMPR GEM 1972-76
EMPR GEOFILE 2003-2
EMPR PF (*Starr, C.C. (1926): Report of Preliminary Examination of the Riverside Mine, Porcupine Goldfields Development and Finance Co. Ltd., 5 pages; *Prospectus, Kaslo Mines Corporation, 1942; Copies of original Crown Grant survey maps; Sectional View of Vein and Existing Tunnels on the Forgotten Mineral Claim (1"=20'))
GSC MAP 1929-235A
GSC MEM 161, page 51

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/14

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE059**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRISCO TUFA**, TUFFU, ROCKY MOUNTAIN TUFA

STATUS: Producer Open Pit

MINING DIVISION: Golden

REGIONS: British Columbia

NTS MAP: 082K16W

BC MAP:

LATITUDE: 50 49 23 N

LONGITUDE: 116 16 12 W

ELEVATION: 620 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Brisco claim.

UTM ZONE: 11 (NAD 83)

NORTHING: 5630402

EASTING: 551418

COMMODITIES: Travertine

MINERALS

SIGNIFICANT: Calcite

COMMENTS: Deposit is a blanket of tufa, at least 7 metres thick, developed from cold springs.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Layered

Massive

CLASSIFICATION: Sedimentary

Industrial Min.

TYPE: H01 Travertine

DIMENSION: 7

Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary

Undefined Group

Undefined Formation

LITHOLOGY: Calcareous Tufa

GEOLOGICAL SETTING

TECTONIC BELT: Foreland

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the small community of Brisco north of Radium Hot Springs, calcium carbonate water, emerging from cold springs beneath a small lake, has developed an extensive surface blanket of tufa, at least seven metres thick in places, which extends across several fields on both sides of Highway 95. The owners of some of the affected land, the Wolfenden family, staked the tufa deposit and are marketing it to alpine gardeners in Calgary. The tufa is of good quality and easy to extract in large chunks with a backhoe.

BIBLIOGRAPHY

EM EXPL 1996-E4; 1999-51; 2000-51,53; 2001-52
WWW <http://www.tufa.bc.ca>

DATE CODED: 1998/08/28
DATE REVISED: 1998/08/28

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE060**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUE, SPICEBOX**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 15 N
LONGITUDE: 116 26 32 W
ELEVATION: 2362 Metres

NORTHING: 5605957
EASTING: 539471

LOCATION ACCURACY: Within 500M

COMMENTS: Spicebox showing, Map 2 (Assessment Report 4485, Figure 407A-73-3).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT:	Chalcopyrite	Bornite	Molybdenite	Pyrite
ASSOCIATED:	Quartz			
ALTERATION:	Silica	Sericite	K-Feldspar	Pyrite
ALTERATION TYPE:	Potassic		Sericitic	
MINERALIZATION AGE:				

DEPOSIT

CHARACTER:	Vein	Disseminated	
CLASSIFICATION:	Epigenetic	Hydrothermal	Porphyry
TYPE:	L04	Porphyry Cu ± Mo ± Au	

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cretaceous			Horsethief Batholith

ISOTOPIC AGE: 108 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Monzonite

HOSTROCK COMMENTS: Age date from GSC MEM 369.

GEOLOGICAL SETTING

TECTONIC BELT:	Omineca	PHYSIOGRAPHIC AREA:	Purcell Mountains
TERRANE:	Plutonic Rocks		Ancestral North America

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes Middle Proterozoic sediments of the Purcell Supergroup. The intrusion is zoned from fine-grained/medium-grained granodiorite to coarse-grained quartz monzonite. East trending aplite dykes cut the intrusion.

The Spicebox showings all occur in coarse-grained quartz monzonite within 100 metres of the intrusive contact. In the area of the showings, the quartz monzonite is moderately fractured with the main set of fractures trending about 305 degrees. A secondary set trends about 035 degrees, some of the fractures being quartz-filled. It is along fracture faces that chalcopyrite, bornite, molybdenite and pyrite mineralization is found. Secondary alteration along fractures includes silicification, sericitization and pink k-feldspar alteration. Three showings have been found.

Showing 1 is the most northern showing. A fracture system trending northwest contains pyrite and chalcopyrite blebs along fracture faces with prominent k-feldspar alteration. Fracture density is approximately 1 every 1.2 metres.

Showing 2 occurs about 240 metres to the south of Showing 1. Chalcopyrite, bornite and pyrite occur in northwest trending fractures. Dominant secondary alteration of fractures includes k-feldspar, sericite and quartz. Fracture density is one every 15 centimetres. Mineralized fractures were noted over an outcrop area of 30 metres by 15 metres.

Showing 3 occurs about 240 metres south of Showing 2. Molybdenite was noted as spotty disseminations in two of the northeast trending, 5 centimetre wide quartz veins.

Canadian Johns-Manville Company Limited staked and investigated a number of claims in the area in 1970, including the Slide, Annette and Blue. It is reported that 739 geochemical samples were taken in 1970 (Geology, Exploration and Mining in BC 1970, page 469). In 1971, Canadian Johns-Manville completed further geochemical, geological and geophysical surveys on its Slide group of claims (Geology, Exploration and Mining in BC 1971, page 426). It was

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 577
REPORT: RGEN0100

CAPSULE GEOLOGY

reported that K. Schrijver found the Blue showings in 1971. In 1972, the company completed further surveys on its Slide group including mapping and geochemical sampling (Geology, Exploration and Mining in BC 1972, page 74). The company returned in 1973 and conducted further surveys including some detailed mapping on the Blue claims, Spicebox showings (Geology, Exploration and Mining in BC 1973, page 92).

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EMPR ASS RPT 3223, 3753, *4485, 8665
EMPR GEM 1970-469; 1971-426; 1972-74; 1973-9
EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/10

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE061**

NATIONAL MINERAL INVENTORY: 082K10 Pb2

NAME(S): **STEELE** FRANCES CREEK, STEELE (L.12499),
STEELE NO. 2 (L.12500)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:
LATITUDE: 50 43 34 N
LONGITUDE: 116 34 03 W
ELEVATION: 2530 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of lots 12499 and 12500.

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5619457
EASTING: 530527

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrolusite Tetrahedrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Podiform Vein
CLASSIFICATION: Replacement Hydrothermal Epigenetic
TYPE: E12 Mississippi Valley-type Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomitic Limestone
Dolomite
Quartzite
Slate
Argillite
Calcareous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Steele property is located north of and adjoining the Lead Queen group (082KNE026) at an elevation of 2530 metres on what could be the northern extension of the Lead Queen fissure.

Work on the Steele group began in about 1900 and in 1917 the Steele (Lot 12499) and Steele No. 2 (Lot 12500) were Crown-granted to a Messrs. Williamson, Cobb, Cottle and Scott. The Alice Arm Holdings Company, of Vancouver, acquired the property in about 1922 and part time work was continued into 1925. The vein has been developed by two crosscut adits and an unknown amount of drifting.

It is recorded that in 1923, 200 tonnes of ore were mined from which 159,465 grams of silver and 63,749 kilograms of lead were recovered.

The property was acquired by G. and M. Larrabee in 1969. One option agreement was started with Frances Creek Mines Ltd. but no work was done on the property. In 1994, the Larrabees had 6 diamond-drill holes executed totalling 338.6 metres.

The property is underlain by sediments of the Middle Proterozoic Mount Nelson Formation, Purcell Supergroup. A major fault cuts most of the claims, striking north-northwest. Rocks in the property area include limestone or dolomite, quartzite, argillite, black slate and calcareous schist. The fault that cuts these rocks has provided the locus for mineralization. The dolomitic unit which hosts the ore lies on the west limb of a recumbent anticline.

Ore lenses and pods and occasional disseminations are developed within the dolomitic unit. Ore consists of massive galena with minor brown sphalerite, quartz and pyrolusite. Tetrahedrite has also been reported. The mineralization can be traced south within the dolomite for at least 100 metres. It thins out to the south after about 30 metres and can be traced for another 70 metres as sporadic pods and wisps. Shearing has been observed striking 030 degrees.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 579
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1900-807; 1902-137; 1903-150; 1904-114; 1905-146; 1908-89;
1915-99; 1917-452; 1922-183; 1923-200; 1924-181; 1925-225
EMPR ASS RPT 796, 4538, 747, 4712, *23829
EMPR GEM 1971-427,428; 1972-75; 1973-94
EMPR PF (Croteau, F.L. (1969): Preliminary Geological Report on Steel
Claim Group (10 pages); Allen, G.B. (1970): Compilation on the
Frances Creek Property, Frances Creek Mining Co. Ltd., 23 pages
(in 082KNE026); MacKenzie, A.G. (1971): Report on Geological
Exploration of Lead Queen - Steele Property, Frances Creek Mines
Ltd., 15 pages (in 082KNE026); MacKenzie, A.G. (1971): Progress
Report No. 1 on Lead Queen - Steele Property, Frances Creek Mines
Ltd., 5 pages (in 082KNE026))
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 12-1957
GSC SUM RPT *1925A, p. 227
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: 082KNE061

MINFILE NUMBER: **082KNE062**

NATIONAL MINERAL INVENTORY:

NAME(S): **DARY AND DISMUTH**, DARY, DISMUTH

MINING DIVISION: Slocan

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082K10W
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 41 N
 LONGITUDE: 116 59 00 W
 ELEVATION: 1462 Metres

NORTHING: 5602905
 EASTING: 501180

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Dary, Dismuth and South workings (Assessment Report 13473).

COMMODITIES: Silver Lead Zinc Gemstones

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Sphalerite Galena Tourmaline

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic	Horsethief Creek	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Quartzite
 Muscovite Schist
 Gabbro
 Quartz Diorite
 Amphibolite
 Dolomitic Limestone
 Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1920
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		1371.0000	Grams per tonne
Lead		14.0000	Per cent
Zinc		4.4000	Per cent

REFERENCE: Minister of Mines Annual Report 1920, page 121.

CAPSULE GEOLOGY

The Dary and Dismuth claims, located on the north side of Cockle (Bear) Creek canyon, were owned in the 1920s by the Tapanila family of Kaslo. The workings included two inclined shafts about 90 metres apart on the Dismuth claim. In 1945, five contiguous claims were staked by R.E. Erdahl and J.E. Pinchbeck in the vicinity of lower Cockle Creek on a northwesterly trend. They were known as the Tin City, Canyon, Old Glory, Cyclone and Erbeck (082KNE016) claims. The Tin City (082KNE071) was staked to cover a showing of tin, beryllium and scheelite mineralization. Claims in the vicinity of the Erbeck claim were Crown-granted in about 1900 (Iron Hand (Lot 5668) and Iron Chief (Lot 5669)). Sipald Resources acquired 12 claims covering much of the area in 1983. Newmont Exploration of Canada Limited optioned the property in 1984. Work by Newmont in 1984-85 included geochemical soil, silt and rock chip surveys, a magnetometer survey, trenching and 794 metres of diamond drilling in 13 holes.

The area is underlain by coarse clastic rocks of the Upper Proterozoic Horsethief Creek Group. The rocks in the area have been mapped as amphibolite, dolomitic limestone, marble, quartzite and muscovite schist. The amphibolite is possibly a meta-volcanic rock.

CAPSULE GEOLOGY

Near the Dary and Dismuth workings, grey to brown quartzite with interbedded mica schists strike 150 degrees and dip 60 to 90 degrees southwest or downhill. Intruding the sediments is a large body of quartz gabbro diorite (meta-gabbro). It is massive and jointed and of speckled appearance. Tourmaline, with blue to brown pleochroism, forms large areas. The meta-gabbro dike roughly coincides with the strike of the enclosing sediments.

A milky white quartz vein, on which two shafts have been sunk and several opencuts made, strikes 330 degrees and dips 30 to 80 degrees northeast, cutting the sediments and the dike. It varies from 0.6 to 1.2 metres in width. It is mineralized with pyrite, pyrrhotite, sphalerite and galena. Tourmaline prisms and large masses are common. Where the vein cuts the dike, the amount of tourmaline, pyrrhotite, galena, pyrite and sphalerite increases.

Samples across the vein, taken in 1920 assayed up to 1371 grams per tonne silver, 14 per cent lead and 4.4 per cent zinc (Minister of Mines Annual Report 1920, page 121).

BIBLIOGRAPHY

EMPR ASS RPT *13473
EMPR AR 1945-107
EMPR GEOFILE 2003-2
GSC MEM 161 pp. 21,31,*33,115
GSC MAP 1929-235A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/19

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE063**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIDDEN TREASURE (L.1108)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

Open Pit Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 55 49 N
LONGITUDE: 116 28 28 W
ELEVATION: 1158 Metres

NORTHING: 5642203
EASTING: 536933

LOCATION ACCURACY: Within 500M

COMMENTS: The location given is for the centre of Crown grant L.1108.

COMMODITIES: Copper Silver Lead Zinc Barite

MINERALS

SIGNIFICANT: Chalcopyrite Galena Malachite Azurite Sphalerite

Barite Azurite

ALTERATION: Malachite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Shear

CLASSIFICATION: Epigenetic

Replacement

Sedimentary

Industrial Min.

TYPE: E12 Mississippi Valley-type Pb-Zn

DIMENSION: 12 x 9

Metres

STRIKE/DIP:

TREND/PLUNGE: /

COMMENTS: Mineralization is confined to a shear zone along the contact of limestone and shale.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Cambrian
Cambrian-Ordovician

GROUP

Unnamed/Unknown Group
McKay

FORMATION

Jubilee
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Hidden Treasure occurrence lies on the western slopes of Jubilee Mountain, 1 kilometre north of the Spillimacheen River and 8 kilometres northwest of the village of Spillimacheen on the Columbia River.

The principal work on the occurrence is an "excavation" in the side of the hill. The excavation started as an open cut and continued as a tunnel. The open cut is 12 metres high and 9 metres deep. Government records indicate that in 1895 eighteen tonnes of ore were shipped. In 1898, nine tonnes of ore were mined. From this ore 4,808 kilograms of copper were recovered. In 1916, six tonnes of ore were mined, producing 454 kilograms of copper and 10,886 grams of silver.

The region includes strata from the Purcell and Windermere supergroups, overlain by a Paleozoic platformal carbonate succession. The structure of the area is dominated by the Mount Forster-Steamboat Fault, one of a series of Mesozoic thrust faults, and it carries folded Middle and Upper Proterozoic strata over folded Upper Proterozoic and Paleozoic strata.

In Jubilee Mountain, the Middle to Upper Cambrian Jubilee Formation generally consists of a massive dolomite-limestone unit. The Upper Cambrian to Middle Ordovician McKay Group conformably overlies the Jubilee Formation and generally includes thin bedded limestones, shales and thin bedded sandstones.

At the Hidden Treasure occurrence, a limestone-slate contact is described. Chalcopyrite, galena, malachite, azurite, sphalerite and barite were observed in the Jubilee limestone, confined to a sheared zone of limestone and to "slate" of the McKay group. Copper sulphides, primarily "replacing limestone" have been converted to malachite and azurite.

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PAGE: 583
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1895-672; *1898-1045; 1899-593; 1916-188,516; 1917-178;
*1923-196
EMPR GEOFILE 2003-2
EMPR BC METAL MMO0560
GSC MEM 369
GSC SUM RPT 1925A-228

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/29

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE064**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALTIC**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 26 N
LONGITUDE: 116 19 18 W
ELEVATION: 1525 Metres

NORTHING: 5610074
EASTING: 547965

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of 1975 diamond-drill hole program (Assessment Report 5555).

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Smithsonite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Ordovician-Silurian
Cambrian

GROUP

Unnamed/Unknown Group
Unnamed/Unknown Group

FORMATION

Beaverfoot
Jubilee

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Cherty Clastic Rock
Dolomite Breccia
Sandy Dolomite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Strata underlying the Baltic, from oldest to youngest, include: conglomerates and coarse clastic sediments of the Upper Proterozoic Toby Formation (Windermere Supergroup); slates, quartzites, grits and conglomerates of the Upper Proterozoic Horsethief Creek Group; dolomites of the Cambrian Jubilee Formation; argillite and dolomite of the Cambrian to Ordovician McKay Group; dolomite, shale, sandstone and quartzite of the Ordovician to Silurian Beaverfoot Formation; and argillite, argillaceous limestone and quartzite of the Devonian Mount Forster Formation.

Fossiliferous dolomite and sandy dolomite overlie Jubilee dolomites and Horsethief conglomerates. Pyrite, galena, sphalerite and smithsonite occur in fossiliferous dolomite breccia at the base of a cherty clastic unit of the Beaverfoot Formation.

In 1975, operator Cominco Limited collected 500 soil samples, drilled 7 diamond-drill holes totalling 539 metres and performed unspecified rotary drilling, mapping and road construction. In 1978, owner Gordon Larrabee drilled one hole totalling 148.7 metres. In 1990, Cominco did some mapping on the Baltic property, owned by A. Louie, but most of the investigation appeared to be on the south side of the Forster Creek on the newer Baltic 10 claim showings (082KNE047).

BIBLIOGRAPHY

EMPR ASS RPT *5555, 7061, 20418
EMPR EXPL 1975-E47; 1978-E80
EM GEOFILE 2003-2
EMPR PRELIM MAP 62
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/02

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE065**

NATIONAL MINERAL INVENTORY:

NAME(S): **STEAMBOAT**, QUEST

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K09E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 36 N
LONGITUDE: 116 11 28 W
ELEVATION: 1340 Metres

NORTHING: 5616035
EASTING: 557132

LOCATION ACCURACY: Within 500M

COMMENTS: The mid 1970s drill area is 12 kilometres northwest of Radium Hot Springs on the east flank of Steamboat Mountain (Assessment Report 23812).

COMMODITIES: Lead Zinc Silver Barite Copper

MINERALS

SIGNIFICANT: Galena Smithsonite

ASSOCIATED: Barite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal Replacement Epigenetic Industrial Min.
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Undefined Group Jubilee

LITHOLOGY: Siliceous Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1975

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Lead

2.6000

Per cent

Zinc

2.2000

Per cent

COMMENTS: From a 4.3 metre drill interval.

REFERENCE: Assessment Report 5880.

CAPSULE GEOLOGY

The Steamboat property was first worked in 1975 and 1976 when Cominco Ltd. carried out a program of surface geological mapping, soil sampling (600 samples) and diamond drilling consisting of 1439 metres in eleven holes. The drilling intersected a 4.3-metre interval that assayed 2.2 per cent zinc, and 2.6 per cent lead. Cominco returned to the property in 1984 and collected 365 soil samples. Cominco followed up in 1986 with an 8.5-kilometre Induced Polarization survey. In 1994, the Steamboat 1-6 claims were staked over the mineralized area for W.R Gilmour. On his behalf, Discovery Consultants carried out a program of prospecting and mapping and took 63 soil samples and 2 rock samples. In 2003, the Quest claims covered the property.

The Steamboat occurrence is hosted by silicified dolomite of the Cambrian Jubilee Formation. The Steamboat occurrence comprises galena, smithsonite, barite and copper carbonate with barium. The dolomites are found along the west limb of a steeply dipping syncline that plunges gently to the north. The silicified dolomite contains a cherty boxwork texture and barite veining.

BIBLIOGRAPHY

EMPR ASS RPT 5880, 6200, 13581, 15043,*23812
EMPR EXPL 1976-48, 1977-67
GSC MEM 369
GSC MAP 1368A

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EM GEOFILE 2003-2

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/18

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE066**

NATIONAL MINERAL INVENTORY:

NAME(S): **SLIDE**, CAMPVIEW CIRQUE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 40 N
LONGITUDE: 116 27 54 W
ELEVATION: 2270 Metres

NORTHING: 5608570
EASTING: 537840

LOCATION ACCURACY: Within 500M

COMMENTS: Sample location, Map 2 (Assessment Report 4614).

COMMODITIES: Uranium Niobium Thorium Cerium Lanthanum
Vanadium Molybdenum Rare Earths

MINERALS

SIGNIFICANT: Uraninite Pyrochlore Euxenite Polycrase Anatase
Rutile Ilmenite Lepidocrocite

ASSOCIATED: Quartz

ALTERATION: Biotite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: 114 Five-element veins Ni-Co-As-Ag±(Bi, U)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cretaceous Horsethief Batholith

ISOTOPIC AGE: 108 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Quartz Monzonite

HOSTROCK COMMENTS: Age date from GSC MEM 369.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1973

SAMPLE TYPE: Grab

COMMODITY

GRADE

Lanthanum 0.0150 Per cent

Niobium 0.1650 Per cent

Thorium 0.0120 Per cent

Uranium 0.0220 Per cent

COMMENTS: A selected hand sample.

REFERENCE: Assessment Report 4614.

CAPSULE GEOLOGY

The Cretaceous Horsethief Batholith intrudes Helikian Purcell sediments. The intrusion is zoned from fine-grained/medium-grained granodiorite to coarse-grained quartz monzonite. East trending aplite dykes cut the intrusion.

Radioactivity occurs along fractures with biotite alteration within the quartz monzonite. The radioactive veins, which are up to 65 centimetres wide contain rare earth elements. The radioactive zone is north trending, 200 metres wide and may be up to 1500 metres long.

A selected hand sample assayed 0.0075 per cent uranium, 0.063 per cent thorium, 0.0425 per cent vanadium, 0.32 per cent cerium, 0.25 per cent lanthanum and 0.118 per cent niobium. Another sample assayed 0.022 per cent uranium, 0.013 per cent thorium, 0.015 per cent lanthanum, 0.165 per cent niobium (Assessment Report 4614). A representative heavy concentrate sample from the quartz-monzonite contained the minerals: pyrochlore-microlite, euxenite-polycrase, uraninite, anatase, lepidocrocite, epidote, allanite, magnetite, ilmenite, rutile, sphene, apatite, fluorite, and zircon (GSC Memoir 369).

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BIBLIOGRAPHY

EMPR ASS RPT 2603, 3222, 4559, *4614, 6044
EMPR EXPL *1976-49
EMPR GEM 1970-469; 1971-426; 1973-92
EMPR MAP 22; 62
GSC MAP 1326A
GSC MEM 369, p. 92
GSC OF 341; 551

DATE CODED: 1985/07/24
DATE REVISED: 1987/07/14

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE067**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOST**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 32 12 N
LONGITUDE: 116 19 54 W
ELEVATION: 2400 Metres

NORTHING: 5598516
EASTING: 547362

LOCATION ACCURACY: Within 500M

COMMENTS: Location of samples LR9 to LR15 taken at showing (Assessment Report 8842, Figure 6).

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Breccia Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Ordovician-Silurian
Devonian

GROUP

Unnamed/Unknown Group
Undefined Group

FORMATION

Beaverfoot
Mount Forster

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomitic Limestone
Dolomite
Slate
Siltstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1980

COMMODITY

Silver
Lead
Zinc

GRADE

309.1500 Grams per tonne
12.0000 Per cent
31.0000 Per cent

COMMENTS: High values from several samples.

REFERENCE: Assessment Report 8842.

CAPSULE GEOLOGY

The Lost claim was centered on an outlier of Paleozoic strata surrounded by upper Proterozoic metasedimentary rocks of the Horsethief Group. The outlier consists of a northwest trending package of dolomitic carbonate rocks of the Ordovician to Silurian Beaverfoot Formation overlain by rocks of the Devonian Mount Forster Formation comprising limestone, slate, siltstone and argillite.

The Lost claim was staked in 1980 to cover anomalous base metal concentrations in stream sediments. During staking, sparse galena was observed in fractures in dolostone float collected near the northeast corner of the claim. Subsequently, the probable source of the floated was located in outcrop. Samples of highly oxidized galena and sphalerite were collected from a number of widely-spaced, vertical fracture/breccia zones, up to 1.2 metres wide, in dolomitic carbonate. The samples contained up to 12 per cent lead, 31 per cent zinc and 309.15 grams per tonne silver (Assessment Report 8842).

BIBLIOGRAPHY

EMPR ASS RPT *8842
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A

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REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 148; 369

DATE CODED: 2003/12/26
DATE REVISED: 2003/12/26

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE068**

NATIONAL MINERAL INVENTORY:

NAME(S): **DRIFTWOOD CREEK**, FISH

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K15E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 54 16 N
LONGITUDE: 116 34 34 W
ELEVATION: 1220 Metres

NORTHING: 5639284
EASTING: 529805

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Quartz Dolomite
ALTERATION: Magnesite Dolomite Calcite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Replacement Hydrothermal Industrial Min.
TYPE: E09 Sparry magnesite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Undefined Group	Cranbrook	

LITHOLOGY: Quartzite
Dolomite
Phyllite
Argillite
Magnesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Lower Cambrian Cranbrook Formation quartzites, dolomites and phyllitic argillites host medium to coarse-grained crystalline magnesite. The occurrence is at the western end of the rocky ridge north of Driftwood Creek. Beds of slaty phyllites, overlain by a fine-grained dark, cherty dolomite, form the footwall to a strike exposure of about 110 metres of magnesite beds. The stratigraphy trends 290 degrees northwest and dips 80 to 85 degrees southwest.

Southwest and overlying the dolomite is a 65 metre thick sequence of medium to coarse-grained magnesite containing cherty blebs and lenses. This section also hosts two continuous horizons of massive magnesite 4.5 and 2.2 metres thick. A metallurgical test sample was collected from the lower, 4.5 metre thick, magnesite body and ran 42.5 per cent MgO. The upper part of this unit is host to a horizon of white to yellow, fine-grained orthoquartzite similar to that exposed below slaty phyllites.

The upper 45 metres of the section is a massive, medium to coarse-grained magnesite with no visible impurities and is exposed for several hundred metres along strike. A bulk sample from this section contained 40 per cent MgO.

BIBLIOGRAPHY

EMPR ASS RPT 8760
EMPR FIELDWORK 1983, p. 213
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 1986/10/09

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE069**

NATIONAL MINERAL INVENTORY:

NAME(S): **PAYSTONE**, COPPER VAULT

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 24 N
LONGITUDE: 116 16 16 W
ELEVATION: 1100 Metres

NORTHING: 5602633
EASTING: 551613

LOCATION ACCURACY: Within 5 KM

COMMENTS: The Paystone is located on Horsethief Creek (Minister of Mines Annual Report 1903, page 104). No other information is available as to its location.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Proterozoic

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1903

COMMODITY

Silver

GRADE

171.4300

Grams per tonne

Copper

12.0000

Per cent

COMMENTS: A value of \$4 per ton gold is also reported.

REFERENCE: Minister of Mines Annual Report 1903, page 104.

CAPSULE GEOLOGY

The Paystone group of four claims, including the Copper Vault, were situated on an area of quartzite and slate possibly of the Upper Proterozoic Horsethief Creek Group.

The showing is reported to be a 2.4-metre wide vein or "lead". Development consisted of a 9-metre tunnel and a 7.6-metre deep shaft on the Paystone. Development on the Copper Vault consisted of a 14.6-metre tunnel showing a "good body of ore" assaying 12 per cent copper, 5 ounces (171.43 grams per tonne) in silver and \$4 in gold per ton (Annual Report 1903, page 104).

BIBLIOGRAPHY

EMPR AR 1902-137; *1903-104
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/31

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE070**

NATIONAL MINERAL INVENTORY:

NAME(S): **IMPERIAL AND EMPIRE**, VIRGINIA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 31 01 N
LONGITUDE: 116 33 25 W
ELEVATION: 1500 Metres

NORTHING: 5596203
EASTING: 531411

LOCATION ACCURACY: Within 5 KM

COMMENTS: The Imperial and Empire is reported to be 6.5 miles (10.5 kilometres) from where the wagon road ends on Horsethief creek at the junction of MacDonald Creek (Minister of Mines Annual Report 1903, page 104). A report on the Virginia claim, one year earlier, was virtually identical except the distance was 7 miles (11.3 kilometres) (Minister of Mines Annual Report 1902, page 136). Some of the mineralogy reported matches that of the Imperial (082KSE004) and nearby occurrences at the headwaters of Farnham Creek, about 12 kilometres southeast of the given location for the Imperial and Empire.

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena Tetrahedrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Dutch Creek	

LITHOLOGY: Dolomite
Schist
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1902
SAMPLE TYPE: Rock
COMMODITY GRADE
Lead 60.0000 Per cent

COMMENTS: This 60 per cent lead sample yielded 10971 grams per tonne silver and \$27 per ton (?) in gold.

REFERENCE: Minister of Mines Annual Report 1902, page 136.

CAPSULE GEOLOGY

The Imperial and Empire is reported to occur in an area that is undelain by rocks of the Middle Proterozoic Dutch Creek Formation (Purcell Supergroup). These rocks include dolomite, calcareous schist and argillite.

Two distinct veins (ledges) 9 metres apart occur in an unreported rock type. One vein, consisting of quartz, is 4.6 metres wide carrying bunches of tetrahedrite and coarse cube galena. Rock samples yielded 60 per cent lead and were high for gold (\$27/ton?) and silver (10,971 grams/tonne?) (Minister of Mines Annual report 1902, page 136). The other vein is about 1.4 metres wide with about 25 centimetres of solid ore.

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EMPR AR *1902-136; *1903-104
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A

RUN DATE: 25-Jun-2003
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BIBLIOGRAPHY

GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/30

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE071**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIN CITY, MAIN, OLD GLORY,
CYCLONE, ERDAHL, ERBECK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10W
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 34 14 N
LONGITUDE: 116 59 59 W
ELEVATION: 730 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5602071
EASTING: 500020

LOCATION ACCURACY: Within 500M
COMMENTS: Location of the Tin City workings (Assessment Report 13473).

COMMODITIES: Tungsten Tin Beryllium Gemstones Lead

MINERALS

SIGNIFICANT: Scheelite Tourmaline Galena
ASSOCIATED: Quartz Feldspar Tourmaline Amphibole Mica
 Carbonate
ALTERATION: Muscovite Fluorite Tourmaline
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated Podiform
CLASSIFICATION: Skarn Hydrothermal
TYPE: K05 W skarn 112 W veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic Horsethief Creek Unnamed/Unknown Formation

LITHOLOGY: Amphibolite
Limestone
Muscovite Schist
Gneiss
Quartzite
Tourmalinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Chip
COMMODITY GRADE
Tungsten 1.1200 Per cent
COMMENTS: Estimates of tin and beryllium content by spectrographic analysis
range up to 0.04 per cent. The chip sample was 2 metres in length.
REFERENCE: Assessment Report 13473.

CAPSULE GEOLOGY

The Tin City showings are located at about 730 metres elevation, a few hundred metres north of where Cockle Creek empties into Duncan Lake.

The Dary and Dismuth claims (082KNE062), located on the north side of Cockle (Bear) Creek canyon (1463 metres elevation), were owned in 1920s by the Tapanila family of Kaslo. The workings included two inclined shafts about 90 metres apart on the Dismuth claim. In 1945, five contiguous claims were staked by R.E. Erdahl and J.E. Pinchbeck in the vicinity of lower Cockle Creek on a northwesterly trend. They were known as the Tin City, Canyon, Old Glory, Cyclone and Erbeck (082KNE016) claims. The Tin City was staked to cover a showing of tin, beryllium and scheelite mineralization. Claims in the vicinity of the Erbeck claim were Crown-granted in about 1900 (Iron Hand (Lot 5668) and Iron Chief (Lot 5669)). Sipald Resources acquired 12 claims covering much of the area in 1983. Newmont Exploration of Canada Limited optioned the property in 1984. Work by Newmont in 1984-85 included geochemical

CAPSULE GEOLOGY

soil, silt and rock chip surveys, a magnetometer survey, trenching and 794 metres of diamond drilling in 13 holes.

The area is underlain by coarse clastic rocks of the Upper Proterozoic Horsethief Creek Group. The rocks in the area have been mapped as amphibolite, dolomitic limestone, marble, quartzite and muscovite schist. The amphibolite is possibly a meta-volcanic rock.

The rocks in the showing area as described in the Minister of Mines Annual Report for 1945 are schist, gneiss, limestone and quartzite. Narrow discontinuous and irregular veins stringers and lenses of glassy quartz contain varying amounts of dark tourmaline, mica, amphibole and carbonate. Scattered grains of scheelite occur in many veins and sulphides are present in local concentrations. Traces of tin and beryllium were detected by spectrographic analysis, the estimates for both elements ranging up to 0.04 per cent (Minister of Mines Annual Report 1945, page 107).

Newmont discussed the showings after their 1984 work as follows. A skarn-altered tourmalinized rock is associated with the limestone-amphibolite contact cutting across the Tin City area. A thin section of the rock taken by Newmont confirmed it to be a tourmaline-rich muscovite-fluorite skarn or tourmalinite. Hand specimens show fine to coarse scheelite throughout the matrix. One sample assayed 1.12 per cent tungstic oxide (WO₃) over 2 metres (Assessment Report 13473). Very fine to coarse-grained scheelite occurs in widely-spaced, fracture-related, quartz-feldspar-tourmaline veinlets, principally found in the amphibolite unit.

North about 500 meters is Newmont's Main showing where masses of fine to coarse scheelite crystals are disseminated throughout the skarn matrix. Assays taken over widths of 1 metre range from 0.173 to 0.672 per cent WO₃ (Assessment Report 13473). The corresponding tin values were between 15 and 45 parts per million. Minor galena was noted in place.

BIBLIOGRAPHY

EMPR ASS RPT *13473
EMPR AR *1945-107
EMPR GEOFILE 2003-2
EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 161 pp. 21,31,33,115

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/19

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE072**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAVERICK, FALCON**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 57 N
LONGITUDE: 116 19 46 W

NORTHING: 5603614
EASTING: 547473

ELEVATION: 1325 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location in the vicinity of the Falcon 1 and Falcon 2 showings
(Assessment Report 15097)

COMMODITIES: Zinc Lead Silver

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite Chalcopyrite Smithsonite

ASSOCIATED: Barite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Breccia Vein
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn E10 Carbonate-hosted barite

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Undefined Group	Jubilee	
Ordovician-Silurian	Undefined Group	Beaverfoot	

LITHOLOGY: Dolomite
Limestone
Slate
Siltstone
Argillite
Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Chip
COMMODITY
Zinc GRADE
11.1000 Per cent

COMMENTS: From a 17 metre chip sample.
REFERENCE: Assessment Report 15097.

CAPSULE GEOLOGY

The area is underlain by a structurally preserved Paleozoic remnant of a generally shallow marine platform succession over which Proterozoic rocks of both the Purcell and Windermere Supergroups have been thrust. At the base of the Paleozoic succession are thick bedded quartzites and quartz grits of the Lower Cambrian Cranbrook Formation. These in turn are overlain by: dolomites of the Middle Cambrian Jubilee Formation; shale, sandstone and biowacke stones of the Upper Cambrian to Ordovician McKay Group; thick-bedded biowacke stones and peloidal mudstones of the Ordovician and Silurian Beaverfoot Formation; dolomites and dolimitic shales of the Middle Devonian Mount Forster Formation; and thin to medium-bedded dolomitic biowacke stone of the Upper Devonian Starbird Formation.

The Maverick occurrence was first mentioned in 1915 as being about 1 mile (1.6 kilometres) east of the Grotto occurrence (082KNE017). This puts it in roughly the same location as the Falcon showings described in a 1986 report by Cominco.

In 1915, it was reported that a small shipment of silver-lead-zinc ore had been shipped from that location in a previous year. The ore had been extracted from a deep open-cut run along the strike of a sheared fracture in limestone. Little evidence of vein matter remained in 1915. A crosscut tunnel was started by W.

CAPSULE GEOLOGY

Nixon and partner in order to prospect the westerly extension of the fracture. The presence of iron-stained float above the fracture was noted at that time.

It is reported that D.L. Pighin of Cominco Ltd. found the Falcon 2 showing in 1975 while mapping the adjacent Grotto property. In 1976, A. Louie staked the Falcon claims around the Falcon 1 and 2 showings. Louie apparently followed up the staking by drilling, blasting and excavating trenches on the showings, although records of this work is not available. Louie investigated barite mineralization on his Falcon (082KNE076) claims in 1982, further to the north. Cominco acquired an option on the Falcon and Mia claims and in 1986 conducted a program of drilling which included 468 metres in three holes, soil sampling (143 taken), rock sampling (19 taken) and mapping.

Cominco described the mineralization as: 1) copper-barite veins in Mount Forster Formation rocks adjacent to a breccia zone which represent the Beaverfoot Formation contact; (2) disseminated sphalerite accompanying barite cementing Beaverfoot fragments in the lower third of the breccia mass; and most importantly as 3) sphalerite and minor galena disseminated within and replacing cavity infilled sediments and breccias in the upper Jubilee Formation. The most significant accumulations of Type 3 occur in the Falcon 1 and 2 breccia zones although minor zinc-lead occurrences are widespread. Veins of coarsely crystalline sphalerite also occur in the crackle brecciated dolomite. Locally, smithsonite has developed from oxidation of the sphalerite. Minor galena and pyrite and low values in silver accompany the sphalerite.

A 17-metre section across the surface of the Falcon 1 breccia assayed 11.1 per cent zinc (Assessment Report 15097). A 1.80-metre chip across the barite cemented Beaverfoot breccia yielded 2.9 per cent zinc and 15.4 per cent barite (Assessment Report 15097).

BIBLIOGRAPHY

EMPR AR *1925-222
EMPR ASS RPT 11053, *15097
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE073**

NATIONAL MINERAL INVENTORY:

NAME(S): **PUZZLE**

MINING DIVISION: Golden

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082K09W
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 17 N
 LONGITUDE: 116 21 56 W
 ELEVATION: 1875 Metres

NORTHING: 5604209
 EASTING: 544912

LOCATION ACCURACY: Within 1 KM

COMMENTS: Reportedly located a short distance west of the Grotto property (082KNE017) at 1875 metres or approximately 762 metres above Horsethief Creek (Annual Report 1925, page 223).

COMMODITIES: Lead Zinc Silver Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite
 ALTERATION: Hematite
 ALTERATION TYPE: Oxidation
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
 CLASSIFICATION: Replacement
 TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Ordovician-Silurian	Unnamed/Unknown Group	Beaverfoot	
Devonian	Unnamed/Unknown Group	Mount Forster	

LITHOLOGY: Dolomitic Limestone
 Quartzite
 Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1925
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	66.5100 Grams per tonne
Gold	1.0300 Grams per tonne
Lead	12.3000 Per cent
Zinc	7.9000 Per cent

COMMENTS: From a 46-centimetre chip sample.
 REFERENCE: Minister of Mines Annual Report 1925, page 223.

CAPSULE GEOLOGY

The region is underlain by a structurally preserved Paleozoic remnant of a generally shallow marine platform succession over which Proterozoic rocks of both the Purcell and Windermere Supergroups have been thrust. At the base of the Paleozoic succession are thick bedded quartzites and quartz grits of the Lower Cambrian Cranbrook Formation. These in turn are overlain by: dolomites of the Middle Cambrian Jubilee Formation; shale, sandstone and biowacke stones of the Upper Cambrian to Ordovician McKay Group; thick-bedded biowacke stones and peloidal mudstones of the Ordovician and Silurian Beaverfoot Formation; dolomites and dolomitic shales of the Middle Devonian Mount Forster Formation; and thin to medium-bedded dolomitic biowacke stone of the Upper Devonian Starbird Formation.

The most likely area of location for the Puzzle property is underlain by Devonian Mount Forster Formation limestone, slate, siltstone and argillite. Coarse clastic sedimentary rocks of the Upper Proterozoic Horsethief Creek Group underlie the Paleozoic strata to the north at higher elevations.

In 1925, it was reported that the Puzzle property was located a short distance west of the Grotto occurrence (082KNE017) and was

CAPSULE GEOLOGY

owned by J. McCullough and E.J. Morigeau. The Puzzle area is underlain by steeply tilted and uniformly bedded dolomitic limestone and quartzite. Traces of copper have been found on the lower portion of the hill consisting of copper stains along fractures. Traces of lead in decomposed and iron-stained limestone are also found on the lower reaches of the hill. A sample from a shallow opencut yielded 72.00 gram per tonne silver and 2.4 per cent lead (Annual Report 1925, page 223).

The most significant showing on the Puzzle claims are at an elevation of 1875 metres where the rocks are lying at a relatively flat angle. A gossanous outcrop in limestone contains specks of galena. Shallow diggings are reported to indicate a considerable extent to this zone. A sample across 46 centimetres in an opencut assayed 12.3 per cent lead, 7.9 per cent zinc, 66.51 grams per tonne silver and 1.03 grams per tonne gold (Annual Report 1925, page 223).

BIBLIOGRAPHY

EMPR AR *1925-223
EMPR PF (**Entire File is Missing**) Puzzle Group Report (7 pages),
Cominco Ltd. 1968 (including 9 trench sketch maps (1 inch = 20
feet); Puzzle Group - Soil Sample survey for Lead and Zinc (1 inch
= 200 feet), 1968)
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE074**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLUM**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 04 N
LONGITUDE: 116 19 22 W
ELEVATION: 1495 Metres

NORTHING: 5627927
EASTING: 547723

LOCATION ACCURACY: Within 500M

COMMENTS: The occurrence is located at the north end of Steamboat Mountain (Assessment Report 10697), 4 kilometres southwest of Brisco.

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Dolomite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Breccia Stratabound
CLASSIFICATION: Epigenetic Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

STRATIGRAPHIC AGE	GROUP
Ordovician-Silurian	Unnamed/Unknown Group
Cambrian-Ordovician	McKay

FORMATION

FORMATION
Beaverfoot
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Massive Dolomite
Quartzite
Limestone
Limy Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Clum occurrence lies 4 kilometres southwest of Brisco, at the north end of Steamboat Mountain. Elevation on the property varies from 760 metres at the north end to 1,500 metres at the summit of Steamboat Mountain.

In 1981, AMAX of Canada Ltd., conducted preliminary mapping, prospecting and soil sampling over the showing. In 1982, AMAX commissioned an induced polarization survey to be done over the occurrence.

In the area, Cambrian and Silurian carbonate and clastic strata are separated from the Middle Proterozoic Mount Nelson dolomites and Upper Proterozoic coarse clastic rocks by a Mesozoic thrust fault, the north trending Mount Forster Steamboat Fault. The Paleozoic strata form a prominent syncline termed the Purcell Boundary Syncline. The Upper Cambrian to Middle Ordovician McKay Group, and the thin Middle or Upper Ordovician Mount Wilson quartzite underlie the mineralized hostrock, the Upper Ordovician to Lower Silurian Beaverfoot Formation. The Beaverfoot Formation, a gray, structureless, massive dolomite with local bands of chert nodules, occupies the core of the syncline. Here, the McKay Group is composed of interbedded limestone and limy argillite. The Beaverfoot dolomite is the hostrock for fine crystalline galena and sphalerite disseminated in restricted zones of white sparry dolomite breccia. The mineralization is considered to be Mississippi Valley type and epigenetic in origin.

BIBLIOGRAPHY

EMPR ASS RPT 9858, *10697
EMPR EXPL 1982, p. 99
EMPR GEOFILE 2003-2
GSC MEM 369, p. 51-52.

DATE CODED: 2003/01/28
DATE REVISED: / /

CODED BY: DRH
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE074**

MINFILE NUMBER: **082KNE075**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUGABOO**

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082K15E
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 15 N
LONGITUDE: 116 42 04 W
ELEVATION: 1230 Metres

NORTHING: 5622530
EASTING: 521084

LOCATION ACCURACY: Within 500M

COMMENTS: The placer deposit is on Bugaboo Creek. The deposit extends for 1.2 kilometres along the creek and averages 168 metres wide (Minister of Mines Annual Report 1955, page 86).

COMMODITIES: Uranium
Fluorite

Niobium
Zirconium

Titanium
Rare Earths

Tantalum

Thorium

MINERALS

SIGNIFICANT: Magnetite Ilmenite Rutile Sphene Euxenite
Polycrase Pyrochlore Anatase Uraninite Lepidocrocite
Allanite Zircon

COMMENTS: Minerals are derived from plutonic rocks of the Bugaboo Batholith.

ASSOCIATED: Apatite Epidote

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers
SHAPE: Regular
DIMENSION: 1173 x 168 x 5 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Cenozoic
Cretaceous

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Bugaboo Batholith

LITHOLOGY: Unconsolidated Gravel
Quartz Monzonite

HOSTROCK COMMENTS: Source rock for placer deposits.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Bugaboo occurrence is located on Bugaboo Creek 31 kilometres southwest of the town of Brisco.

Uranium-bearing black sand was discovered at the head of Bugaboo Creek by G.O. Reid in 1949. Prospecting in the area in August 1953 by Quebec Metallurgical Industries Ltd., a subsidiary of Ventures Limited, relocated the deposit and subsequent prospecting lead to the discovery of similar deposits on Vowell and Forster Creeks. Another subsidiary of Ventures Limited, St. Eugene Mining Corporation Limited, in 1955 to 1956 held special placer mining lease No. 163. They estimated that about 1,019,079 cubic metres of placer deposit was in their block. During 1955, the gravel was tested by 33 churn-drill holes totaling 295 metres. The drilling indicated a depth of 5 metres of outwash gravel across a length of 1,173 metres and a width of 168 metres. At Bugaboo Creek, a concentrating plant was operating until 1956. Bugaboo Uraniums Ltd., incorporated in August 1968, carried out an airborne spectrometer survey in September, locating a number of anomalous areas on several creeks. At that time, Dillingham Mining Co. became active in the area through property options and staking. Ground scintillometer surveys and evaluation of the several anomalous areas, resulted in the acquisition of property on Bugaboo, Forster (082KNE005), East (082KNE006), Vowell (082KNE007) and Malloy (082KNE008) creeks. In 1969, Johns-Manville Co. Ltd., over a distance of 11.3 kilometres, conducted geochemical, scintillometer and magnetometer surveys over the placer deposits on upper Bugaboo Creek (082KNE023). They found that there was a high concentration of uranium associated with high magnetic values.

The Cretaceous Bugaboo Batholith intrudes Hadrynian Windermere sediments of the Horsethief Creek Group. The east part of the

MINFILE NUMBER: **082KNE075**

CAPSULE GEOLOGY

intrusion consists of medium-grained leuco-quartz monzonite to coarse-grained biotite quartz monzonite.

Black sand placer concentrations containing uranium and niobium-bearing minerals occur in the outwash gravels from glacier action in the Bugaboo Batholith. Minerals include pyrochlore-microlite, euxenite-polycrase, uraninite, anatase, lepidocrocite, epidote, allanite, magnetite, ilmenite, rutile, sphene, apatite, fluorite, and zircon.

BIBLIOGRAPHY

EMPR AR 1955-86; 1956-142; 1968-293
EMPR ASS RPT *2090
EMPR GEM 1969-377
EMPR OF 1992-16
EMPR PF (Saunders, C.R. (1974): Radioactive Black Sands in Malloy and Vowell Creeks, 14 p. with maps.)
GSC EC GEOL NO 29-20, 52
GSC ECON GEO SERIES NO 18-P28; NO 16-198
GSC MAP 12-1957
GSC MEM *369 p. 92
Chevron File (Jory, L.T. and Guardia, F. (1968): Airborne Spectrometer Survey, Bugaboo Creek)
Falconbridge File (Hughes, H.D. (1954): Report on Churn Drilling, Bugaboo Creek)

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/15

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE076**

NATIONAL MINERAL INVENTORY:

NAME(S): **FALCON**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 00 N
LONGITUDE: 116 20 04 W
ELEVATION: 1829 Metres

NORTHING: 5603703
EASTING: 5471119

LOCATION ACCURACY: Within 500M
COMMENTS: Located 1.5 kilometres north of Horsethief Creek and 3 kilometres southwest of Mount Forster.

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER:	Breccia	Stratabound		
CLASSIFICATION:	Sedimentary	Epigenetic	Evaporite	Industrial Min.
TYPE:	E17 Sediment-hosted barite			
SHAPE:	Irregular			
MODIFIER:	Faulted			

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Devonian	Undefined Group	Starbird	

LITHOLOGY: Limy Dolomite
Dolomitic Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

Thin barite horizons occur in limy dolomite and dolomitic limestone of the Devonian Starbird Formation. The rocks are sheared, faulted and brecciated. Much of the barite appears to be fault controlled. None of the barite is considered economic.

BIBLIOGRAPHY

EMPR ASS RPT 11053

DATE CODED: 1989/11/09
DATE REVISED: / /

CODED BY: SBB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNE077**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPILLIMACHEEN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 55 08 N
LONGITUDE: 116 22 36 W
ELEVATION: 1067 Metres

NORTHING: 5640990
EASTING: 543815

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location centered on outcrop just south of Cedared Creek, 3.2 kilometres northwest of Spillimacheen (Canmet Report 811, page 213).

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite
ASSOCIATED: Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R10 Dolomite
SHAPE: Irregular
MODIFIER: Folded
DIMENSION: 8750 Metres
COMMENTS: Dolomite trends northwest for 8.75 kilometres.

Massive Evaporite
Industrial Min.
STRIKE/DIP: 138/75W
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Ordovician	Undefined Group	Beaverfoot	
DATING METHOD: Fossil			
MATERIAL DATED: Corals/Brachiopods			

LITHOLOGY: Dolomite
Dolomitic Breccia
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Continental Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1944

COMMODITY	GRADE
Dolomite	21.5400 Per cent

COMMENTS: Grade given for MgO. Grade is in per cent.
REFERENCE: Canmet Report 811, page 214-Sample 87.

CAPSULE GEOLOGY

Dolomite of the Ordovician to Silurian Beaverfoot Formation outcrops just south of Cedared Creek, 3.2 kilometres northwest of Spillimacheen. The dolomite continues to outcrop southeastward along the mountainside for 8.75 kilometres on the west limb of the Kindersley Creek Anticline. The underlying Ordovician Mount Wilson Quartzite outcrops to the east. The strata generally strike 138 degrees and dip 75 degrees southwest.

The deposit is comprised of nearly white weathering, brownish grey, thickly bedded, fine grained dolomite, with some beds of brown weathering, brecciated dolomite cemented in part by white calcite. A sample of the white weathering dolomite from the base of the mountain contained 30.91 per cent CaO, 21.54 per cent MgO, 0.74 per cent SiO₂, 0.25 per cent Al₂O₃, 0.50 per cent Fe₂O₃ and 0.02 per cent sulphur (Canada Bureau of Mines Report 811, page 214, Sample 87).

BIBLIOGRAPHY

GSC MAP 12-1957; 1320A
GSC MEM 369, pp. 51-53

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 606
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 481
CANMET RPT *811, Part 5, pp. 213,214

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/04

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 608
REPORT: RGEN0100

BIBLIOGRAPHY

CANMET RPT *811, Part 5, pp. 213,214

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/04

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE079**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUBILEE MOUNTAIN**, LEGACY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K16W
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 56 00 N
LONGITUDE: 116 27 29 W
ELEVATION: Metres

NORTHING: 5642551
EASTING: 538082

LOCATION ACCURACY: Within 500M

COMMENTS: Located 1.5 kilometres east of the Silver Giant mine and 7.5 kilometres northwest of Spillmacheen.

COMMODITIES: Barite Lead Silver Zinc

MINERALS

SIGNIFICANT: Barite Galena Sphalerite Pyrite

ASSOCIATED: Carbonate

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound Breccia
CLASSIFICATION: Sedimentary Epigenetic Industrial Min. E12 Mississippi Valley-type Pb-Zn
TYPE: E17 Sediment-hosted barite
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Cambrian Undefined Group
Cambrian-Ordovician McKay

FORMATION

Jubilee
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Dolomite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Foreland
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: JUBILEE MOUNTAIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1974

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Barite

16.9200

Per cent

COMMENTS: Width of 10.7 metres.

REFERENCE: Buckley, R.A., 1976.

CAPSULE GEOLOGY

Galena, sphalerite and pyrite occur as disseminations, as irregular veins with barite, and with barite in vugs and cavities in massive to thin bedded limestone of the Middle to Upper Cambrian Jubilee Formation. Breccia zones with angular clasts of dense dolomite and limestone in a granular carbonate matrix that contain disseminated sulphides and numerous barite and sulphide-filled vugs is also present.

Drilling in 1974 intersected grades of 12.16 per cent and 16.92 per cent barite across widths of 18.6 and 10.7 metres, respectively (Buckley, R.A. 1976).

A few narrow barite veins are present in the overlying slates of the Upper Cambrian to Middle Ordovician McKay Group.

Art Louie holds the area as the Legacy claims. WWC Consulting Ltd. optioned the claims in 1998 and drilled 4 holes totalling 197 metres.

BIBLIOGRAPHY

EM EXPL 1998-65-75; 1999-40-52; 2000-43-53; 2001-45-53; 2002-51-62
EMPR ASS RPT 25089, 25608
EMPR MAP 62
GSC MAP 12-1957; 1326A
GSC MEM 369
GSC OF 481

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 610
REPORT: RGEN0100

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DATE CODED: 1989/11/10
DATE REVISED: 1999/09/16

CODED BY: SBB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE080**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT NELSON**, TEMPLETON RIVER

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K15E 082K09W 082K10E 082K16W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 17 N
LONGITUDE: 116 34 55 W
ELEVATION: 1981 Metres

NORTHING: 5626340
EASTING: 529468

LOCATION ACCURACY: Within 500M

COMMENTS: Located on site of stratigraphic section - head of Templeton River
(Geological Survey of Canada Memoir 369).

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite
ASSOCIATED: Calcite Hematite Quartz
MINERALIZATION AGE: Helikian

DEPOSIT

CHARACTER: Massive Stratiform
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
TYPE: R10 Dolomite
SHAPE: Tabular
MODIFIER: Folded Faulted
COMMENTS: Unit trends northwest for 70 kilometres. Dimension is 70,000 by 1950 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Helikian GROUP: Purcell FORMATION: Mount Nelson IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Dolomite
Dolomitic Limestone
Magnesian Limestone
Ortho Quartz

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1973
SAMPLE TYPE: Grab
COMMODITY: Dolomite GRADE: 19.9300 Per cent
COMMENTS: Grade given for MgO.
REFERENCE: Geological Survey of Canada Memoir 369, page 20, sample 288.

CAPSULE GEOLOGY

Thick cliff forming dolomites and dolomitic limestones of the Helikian Mount Nelson Formation outcrop over 500 square kilometres along the west side of the Rocky Mountain Trench. The unit extends northwestward from Brew Creek along the east slope of the Purcell Mountains for 70 kilometres to Bugaboo Creek.

The carbonates rest on a basal white orthoquartzite member of the Mount Nelson Formation and are overlain by a succession of purple and red shale with dolomite interbeds of the Mount Nelson Formation. The carbonate member varies from 100 to 300 metres thick, while the entire formation varies up to 1950 metres in thickness.

The carbonates are comprised of light grey to purple, reddish buff weathering, thinly laminated to massive dolomite and dolomitic limestone, sometimes interbedded with purple shale. The dolomite commonly contains dark lenses and nodules of chert paralleling bedding. In thin section the rock displays fine grained carbonate, usually with abundant interstitial hematite and scattered silt sized quartz grains. A series of samples taken from various horizons in the formation analysed as follows (Geological Survey of Canada Memoir 369, page 20):

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CAPSULE GEOLOGY

Sample	286	288	295	300	305	341	383	386
CaO	24.96	27.42	27.70	20.74	15.58	22.86	25.05	22.54
MgO	17.14	19.93	18.64	14.63	11.43	16.40	17.67	15.54
CO2	38.30	42.80	42.75	31.85	24.35	36.30	38.10	34.55

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EMPR PRELIM MAP 62
GSC MAP 1326A
GSC MEM 369, pp. 19-21

DATE CODED: 1990/03/30
DATE REVISED: 2000/04/05

CODED BY: PSF
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE081**

NATIONAL MINERAL INVENTORY:

NAME(S): **SURELOCK**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 44 30 N
LONGITUDE: 116 25 34 W
ELEVATION: 1388 Metres

NORTHING: 5621255
EASTING: 540493

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate center of claim block and showings.

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Replacement Hydrothermal Industrial Min. E10 Carbonate-hosted barite
TYPE: 110 Vein barite
SHAPE: Irregular
DIMENSION: 450 x 5 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Mount Nelson	
Middle Proterozoic	Unnamed/Unknown Group		

LITHOLOGY: Argillaceous Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Surelock barite showings are located on the northern slope of Frances Creek, 41 kilometres northwest of Invermere. The claims were staked in 1989 by A. Louie and Mountain Minerals Ltd. optioned the property from 1990 to 1992.

Hostrocks are dolomite, argillaceous dolomite and minor shale of the Helikian Mount Nelson Formation. Mineralized outcrops extend over 450 metres along a north-northwest trend. Barite occurs as cement in structurally brecciated dolomite or as narrow stringers in dolomite. Surface work in 1990 included four trenches, geological mapping and soil geochemical sampling. In 1991, a 30.5-metre adit was driven on a showing nearest the road. In 1992, 11 diamond drill holes totalling 304 metres were done on the same showing as the adit and also on a showing farther up the hillside. This work showed that the mineralization is a maximum of 5 metres wide; bounded by faults to the east and west. Barite content varies from 5 to 90 per cent of the rock volume over widths of a few centimetres to 2 or 3 metres. Mineralization is not continuous of the strike length of the showings. Mountain Minerals Ltd. dropped its option in 1992 and no work has been recorded since then.

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EMPR ASS RPT 20360, 22485
GSC MEM 369

DATE CODED: 1993/03/04
DATE REVISED: / /

CODED BY: KDH
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082KNE082**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUNN CREEK**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 09 N
LONGITUDE: 116 57 57 W
ELEVATION: 990 Metres

NORTHING: 5600064
EASTING: 502420

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the Dunn Creek showing discovered by Newmont Exploration in 1984 (Assessment Report 13473). Located in Dunn Creek drainage at 990 metres elevation.

COMMODITIES: Tungsten

MINERALS

SIGNIFICANT: Scheelite Pyrrhotite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Skarn
TYPE: K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Proterozoic

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
Dolomitic Limestone
Marble
Muscovite Schist
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1984

SAMPLE TYPE: Chip

COMMODITY

GRADE

Tungsten

0.2190

Per cent

COMMENTS: The chip sample was 30 centimetres. The assay measured tungstic oxide (WO₃).

REFERENCE: Assessment Report 13473.

CAPSULE GEOLOGY

The Dunn Creek occurrence is located on Dunn Creek which empties into the east side of Duncan Lake.

The Dunn Creek area is underlain by coarse clastic rocks of the Upper Proterozoic Horsethief Creek Group. The rocks in the area have been mapped as amphibolite, dolomitic limestone, marble, quartzite and muscovite schist. The amphibolite is possibly a meta-volcanic rock.

Very coarse scheelite crystals, up to 2 centimetres wide, were discovered in two discordant quartz-sericite-feldspar veinlets at 990 metres elevation along Dunn Creek. The host rock is a pyrrhotite-pyrite-bearing biotite quartzite. A grab sample assayed 3.30 per cent tungstic oxide (WO₃). A more representative chip sample across the 30-centimetre wide vein yielded 0.219 per cent tungstic oxide (Assessment Report 13473).

The area was investigated in the 1920s when the Dary and Dismuth (082KNE062), 4 kilometres north, were explored. In 1945, five contiguous claims were staked by R.E. Erdahl and J.E. Pinchbeck in the vicinity of lower Cockle Creek on a northwesterly trend. They were known as the Tin City, Canyon, Old Glory, Cyclone and Erbeck claims. The Tin City (082KNE071) was staked to cover a showing of tin, beryllium and scheelite mineralization. Claims in the vicinity

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CAPSULE GEOLOGY

of the Erbeck claim were Crown-granted in about 1900 (Iron Hand (Lot 5668) and Iron Chief (Lot 5669)). Sipald Resources acquired 12 claims covering the area in 1983. Newmont Exploration of Canada Limited optioned the property in 1984. Work by Newmont in 1984-85 included geochemical soil, silt and rock chip surveys, a magnetometer survey, trenching and 794 metres of diamond drilling in 13 holes.

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EMPR AR *1945-107
EMPR GEOFILE 2003-2
GSC MAP 1929-235A
GSC MEM 161

DATE CODED: 2003/02/15
DATE REVISED: 2003/02/15

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNE083**

NATIONAL MINERAL INVENTORY:

NAME(S): **BASIN, BUGABOO, WALKER,
CHIPPERFIELD, NIX**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K10E
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 42 43 N
LONGITUDE: 116 43 50 W
ELEVATION: 2255 Metres

NORTHING: 5617827
EASTING: 519024

LOCATION ACCURACY: Within 500M

COMMENTS: Located at the southwest corner of the basin where Sargent indicates the main workings are located (Sargent, H., 1936 (Property File)).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Proterozoic
Cretaceous

GROUP

Horsethief Creek

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Porphyritic Granite
Sericitic Schist
Siliceous Schist
Limestone
Slate
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1936

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

98.0000

Grams per tonne

REFERENCE: Sargent, H. (1936): Special Report on Silver Basin, MMAR 1936, part E.

CAPSULE GEOLOGY

The Basin property is located on Frenchman Mountain near the headwaters of Bugaboo Creek, some 53 kilometres northwest of Invermere.

In 1936, Resident Mining Engineer H. Sargent visited the No. 21 and Western Cross claims (Silver Basin - 082KNE020) and the Basin Group of claims which seem to have included the Walker, Chipperfield and Nix. At the time, these properties were held by the Silver Basin Mining Syndicate of Alberta.

Sargent reports that the Basin group, located in a large basin having four small lakes, on "Green Mountain" is reached by about 5.6 kilometres of trail from the Bugaboo Creek trail. The trail to the Basin group branches from the main trail up Bugaboo Creek at about 2.4 kilometres from the end of the road up Bugaboo Creek (in 1936). This branch is reported to be at 1478 metres elevation.

Sargent reports that the workings on the Basin group are probably the same as those reported under Bugaboo group in the Minister of Mines Annual Report for 1898. The Bugaboo group was reported to be on French Mountain west of Bugaboo Creek. Today, Frenchman Mountain exists in this area and has a hanging valley similar to Sargents, with four lakes.

The rocks in the Basin are slates, schists, minor exposures of

CAPSULE GEOLOGY

thin-bedded limestone and conglomerate of the Upper Proterozoic Horsethief Creek Group. Porphyritic granite intrudes the strata as sills. The slates vary from light bluish-grey to almost black. There are soft sericitic schist and hard siliceous schist. The granite may be related to the Cretaceous stock to the northwest.

An abundance of unmineralized white quartz veins is observed in the schist and granite throughout the basin. Near the southwestern corner of the basin is an adit which goes in 4.6 metres from the end of a 9-metre rock cut, following a vein in porphyry. The dip is 75 degrees to the southwest. At the portal, the vein is honeycombed and rusty and mineralized with pyrite, arsenopyrite and some galena. A sample across 33 centimetres of vein assayed 98.00 grams per tonne silver and a trace of gold (Sargent, 1936 (Property File)). About 45 metres north of this adit is another adit which goes in 7.6 metres at 305 degrees, following a fracture in porphyry containing sheared wallrock and some quartz. This adit is about 7.6 metres higher than the first. About 180 metres northwest and 36 metres higher up than the second adit is a shaft about 2.4 metres deep. In the shaft is a quartz vein about 36 centimetres thick striking 305 degrees and dipping vertically. For 10 centimetres on the southwest side, the vein is well-mineralized with pyrite, arsenopyrite and a little galena in scattered kernels.

About 800 metres to the east of the Bugaboo workings, on a ridge, is another adit which has been driven into sericite schist for 32 metres in a northwest direction. Above the adit portal is a 1.2-metre quartz lens that did not yield any gold or silver.

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EMPR PRELIM MAP 22; 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 369

DATE CODED: 2003/02/18
DATE REVISED: 2003/02/18

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW001**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMESTEAD**, GOLDEN NUGGET (L.9133), RESL B (L.3614),
SAXONIA (L.3615), BERNHARD B (L.4070), FREE COINAGE (L.5716),
SINGLE JACK (L.9503), HAWK 3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:
LATITUDE: 50 45 54 N
LONGITUDE: 117 35 06 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Homestead, 5 kilometres southeast of Camborne and east of Mowhawk
Creeks, adjoins the Mohawk (082KNW041). See also the Spider mine
(082KNW045).

MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5623856
EASTING: 458744

COMMODITIES: Silver Lead Gold

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Homestead, 5 kilometres southeast of Camborne and east of Mohawk Creek, adjoins the Mohawk (082KNW041). See also the Spider mine (082KNW045).

The area is underlain by metasedimentary rocks of the Lower Paleozoic Lardeau Group, Broadview Formation, which includes medium grey to greenish quartzites, greywackes, carbonaceous phyllites and quartz sericite schist.

A series of well-defined quartz veins, ranging from 1 to 2.4 metres wide, cut the metasediments. The veins strike north northwest and occur from 1370 to 1830 metres in elevation. They contain minor galena and pyrite. Precious metal values are low, the highest being 284 grams per tonne silver and 17 grams per tonne gold (Annual Report 1914, page 262).

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DATE CODED: 1998/11/06
DATE REVISED: 1998/11/06

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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MINFILE NUMBER: **082KNW002**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEATON CREEK**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 06 N
LONGITUDE: 117 38 04 W
ELEVATION: 967 Metres

NORTHING: 5613135
EASTING: 455165

LOCATION ACCURACY: Within 500M
COMMENTS: NORTH OF SPILLIMACHEEN

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR BULL 45-FIG 2A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW002**

CAPSULE GEOLOGY

underground workings on the Horseshoe claim are accessible by two shafts collared 46 and 59 metres due west, respectively, from the Lucky Boy shaft. Both of these shafts were driven as declines down dip about 50 metres on the extension of the Lucky Boy vein. The Copper Chief workings lie approximately 1.2 kilometres southwest from the main Lucky Boy and Horseshoe shafts. The main showing, at the elevation of 1575 metres, is exposed in an adit driven at 027 on a steeply dipping fault.

The area in the vicinity of Wilke Creek on Trout Mountain is underlain by schists, pelitic quartzites, calcareous phyllites and limestone beds of the Lardeau Group that underwent regional metamorphism and multiple episodes of deformation. The strike of beds across the claims is rather uniform at 150 degrees. Bedding within the quartzite is obscured, but it and most limestone or skarn contacts dip from 65 degrees to very steeply northeast. In several places small dragfolds plunge 20 to 30 degrees northwest. This kind of folding, combined with gentle northwesterly plunging fold axes, seems typical of the area.

There are two types of mineral deposits on the property. One is typical of the main Lucky Boy and Copper Chief ore deposits and consists of nearly flat, drusy quartz veins which cut steeply dipping quartzites and limestones of the Lardeau group at nearly right angles. These veins carry galena, sphalerite, pyrite, tetrahedrite, minor native silver and scheelite in a quartz gangue. The second type is skarn mineralization in silicified limestone. The skarns contain garnet, pyroxene, pyrrhotite and considerable scheelite but little or no galena, tetrahedrite and only small amounts of sphalerite. They are rarely more than several metres in length and vary from 1 to 12 metres in width. The skarns usually crop out over exceedingly rugged and steep mountain sides.

The Lucky Boy vein has an easterly strike, with an average dip of 50 degrees south that becomes almost horizontal in places. The vein apparently follows the major jointing of the enclosing silicified schist and quartzite. The sulphides reticulate through the vein quartz, sometimes occurring as almond-shaped masses. The following order of formation of the metallic minerals is suggested - galena, tetrahedrite, chalcopyrite and pyrite, galena, sphalerite. Galena is found both in and surrounding tetrahedrite; sphalerite encloses both. Chalcopyrite encloses and forms veins in the foregoing assemblage, and pyrite and galena form the matrix for the other sulphides. From the way chalcopyrite embays the tetrahedrite, it looks as if it was formed at the expense of the latter - perhaps the result of a reaction of tetrahedrite with pyrite.

From the shaft on the No. 1 level (100 foot level) drifts have been driven to connect with the Horseshoe workings and stopes opened at intervals along the strike of the vein. Near the face of the west drift, a ribbon of ore 15 centimetres wide, containing abundant tetrahedrite, assayed 5 grams per tonne gold, 6500 grams per tonne silver and 3.3 per cent copper. Also, a sample across a 25 centimetre width of the vein, at the head of the stope, assayed 13.7 grams per tonne gold, 2600 grams per tonne silver and 47.2 per cent lead (Annual Report 1914, page 317).

The No. 2 level is driven eastward and westward from the shaft. To the east, the drifting was carried 75 metres without encountering significant ore. To the west, the vein was followed 37 metres and stoped throughout to the No. 1 level. At 17 metres from the shaft, scheelite mineralization is present in the remaining pillars and exposed along the drift westward. In the vein, in the stoping face at 30 metres from the shaft, there is an attractive display of scheelite across 0.7 metre that contains an estimated 1.84 per cent tungsten oxide (Stevenson, 1942, unpublished notes).

There is no development below the No. 3 level of the Lucky Boy mine. At that depth the vein fissure appears to cut a limestone bed but without significant accompanying mineralization. On the lowest level, the vein as exposed is narrow and contains little sulphides. However, scheelite mineralization extends nine metres up from the base of the shaft, and seven metres east on both walls of the drift - the drift having been driven 40 metres east and west from the shaft accessing raises that go through to the No. 2 level.

The distribution of scheelite mineralization indicates the existence of a shoot of several hundred tonnes of ore that rakes southeastward from the Horseshoe workings at surface, beginning by the east shaft, traversing through to the raise at the west end of No. 2 level and to the base of the shaft on No. 3 level, coinciding with the main shoot of sulphide mineralization which was previously mined. A grab sample of this scheelite ore assayed 1.41 per cent tungsten oxide and 0.63 per cent phosphorous (EMPR Bulletin 10, page 133).

There appears to have been a considerable tonnage of scheelite

CAPSULE GEOLOGY

ore in place before the silver-lead quartz- sulphide vein was mined. Unfortunately, the sulphides and scheelite were in the same sections of the vein and, as a result of the original focus on precious metals, only the high grade silver-lead ore was mined and much of the scheelite was discarded. The bulk of this rejected material was used as fill in empty stopes or in surface waste dumps.

Other less mineralized veins can be found on parallel fissures. Locally, there is evidence of replacement of inclusions of country rock where the veins widen.

Skarn occurrences are principally southeast of Wilkie Creek. A total of 16 skarns have been found between elevation 1090 metres (150 metres above the creek) and the crest of the northeast spur of Trout Mountain, at 1630 metres elevation. The skarn mineralization consists of varying amounts of pyrrhotite and fine grained scheelite. The skarn occurrences appear to coincide with three limestone beds or perhaps a single limestone bed that was intricately folded.

Several skarns lie on the southwest side of a steep gully extending from the Copper Chief adit at 1475 metres elevation down to creek level. The lowest showing is about 150 metres below the old low trail that leads southwest from the Lucky Boy camp along the side of Wilkie Creek. The skarn is light coloured and composed mainly of calcite with small amounts of garnet and diopside. It occurs on the northeast side and close to the top of a band of grey limestone that extends uphill from the creek. The skarn is about 2.4 metres wide and is moderately well mineralized with scheelite. The skarn is below an anticlinal fold in quartzite that plunges 20 degrees northwest.

Additional skarn exposures are located in the gully at 1408 metres elevation on the high trail from the Lucky Boy camp to the Copper Chief adit. One exposure of dark coloured skarn in this area is 3.3 metres wide and contains some scheelite and abundant pyrrhotite. Another dark coloured skarn band, exposed on the southwest side of the gully, is 16 metres wide and contains a high proportion of diopside and epidote. Scheelite is disseminated through this skarn across four metres adjacent to a narrow enclosure of grey limestone. At the portal of the Copper Chief adit, the skarn is 0.6 to 1.2 metres wide and encloses several lenses of limestone. A sample across 1.2 metres of the skarn and limestone assayed 1.06 per cent tungsten oxide (Annual Report 1952, page 186).

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EMPR GEM 1969-340; 1970-465
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CIM BULLETIN JAN 1983 V76 NO 849, pp. 115-124
CIM Special Volume 46, pp. 771-780
GCNL #229,1981

DATE CODED: 1985/07/24
DATE REVISED: 1998/06/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

dipping quartzites and limestones of the Lardeau group at nearly right angles. These veins carry galena, sphalerite, pyrite, tetrahedrite, minor native silver and scheelite in a quartz gangue. The second type is skarn mineralization in silicified limestone. The skarns contain garnet, pyroxene, pyrrhotite and considerable scheelite but little or no galena, tetrahedrite and only small amounts of sphalerite. They are rarely more than several metres in length and vary from 1 to 12 metres in width, are confined to limestone bands, and usually scattered over exceedingly rugged and steep mountain sides.

Skarn occurrences are principally southeast of Wilkie Creek. A total of 16 skarns have been found between elevation 1090 metres (150 metres above the creek) and the crest of the northeast spur of Trout Mountain, at 1630 metres elevation. The skarn mineralization consists of varying amounts of pyrrhotite and fine grained scheelite. The skarn occurrences appear to coincide with three limestone beds or perhaps a single limestone bed that was intrically folded.

Several skarns lie on the southwest side of a steep gully extending from the Copper Chief adit at 1475 metres elevation down to creek level. The lowest showing is about 150 metres below the old low trail that leads southwest from the Lucky Boy camp along the side of Wilkie Creek. The skarn is light coloured and composed mainly of calcite with small amounts of garnet and diopside. It occurs on the northeast side and close to the top of a band of grey limestone that extends uphill from the creek. The skarn is about 2.4 metres wide and is moderately well mineralized with scheelite. The skarn is below an anticlinal fold in quartzite that plunges 20 degrees northwest.

Additional skarn exposures are located in the gully at 1408 metres elevation on the high trail from the Lucky Boy camp to the Copper Chief adit. One exposure of dark coloured skarn in this area is 3.3 metres wide and contains some scheelite and abundant pyrrhotite. Another dark coloured skarn band, exposed on the southwest side of the gully, is 16 metres wide and contains a high proportion of diopside and epidote. Scheelite is disseminated through this skarn across four metres adjacent to a narrow enclosure of grey limestone. At the portal of the Copper Chief adit, the skarn is 0.6 to 1.2 metres wide and encloses several lenses of limestone. A sample across 1.2 metres of the skarn and limestone assayed 1.06 per cent tungsten oxide (Annual Report 1952, page 186).

BIBLIOGRAPHY

- EM FIELDWORK 1998
- EMPR AR 1898-1069; 1901-1020; 1905-154; 1911-155,285; 1912-323;
1913-420; *1914-316; 1915-446; 1916-201; 1917-165,191,449;
*1952-183-187; *1953-144-145
- EMPR ASS RPT 5598, 5968, 6094, 7913
- EMPR BC METAL MM00597, MM00611
- EMPR BULL 9, p. 83; 45, pp. 59, 64
- EMPR EXPL 1975-E47; 1976-E51; 1977-E70; 1978-E83
- EMPR GEM 1970-465
- EMPR INDEX 3-192, 199
- EMPR OF 1991-17
- EMPR PF (Maconachie, R.J. (1942): Various maps; Holland, S.S. (1953); Dolmage, V. (1952); McDougall, B.W.W. (1953); Psutka, J.F., Read, P.B. and Fyles, J.T. (1982): Stratigraphy, Structure and Metamorphism Trout Lake Molybdenum Deposit and Vicinity, Geotex Consultants Limited in 082KNW087)
- EMR CANMET RPT 592, p. 47
- GSC MAP 1929-36; 235A
- GSC MEM 161, p. 84
- CIM BULL Mar. 1982; Jan. 1983, Vol. 76, No. 849, pp. 115-124
- CIM Special Volume 46, pp. 771-780
- GCNL #229, 1981

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **FISSURE**, WOODS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 43 06 N
LONGITUDE: 117 30 58 W
ELEVATION: 1700 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5618630
EASTING: 463566

LOCATION ACCURACY: Within 500M

COMMENTS: Located northwest of True Fissure (082KNW030).

COMMODITIES: Silver Copper Zinc Iron

MINERALS

SIGNIFICANT: Pyrite Tetrahedrite Sphalerite Galena
ASSOCIATED: Quartz Calcite Ankerite
ALTERATION: Hematite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Lardeau Broadview

LITHOLOGY: Phyllite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Fissure is located about 1.5 kilometres northwest of the True Fissure (082KNW030). Mineralized quartz veins occur within phyllites of the Lardeau Group. To the south of this mineralized area, on the former Woods property, an adit was driven to investigate blood-red hematite.

In 1988 and 1989, Halley Resources Ltd. and Newfields Minerals Ltd. conducted road construction, geophysical surveys, overburden drilling and diamond drilling (13 holes, totalling 983.7 metres) to test geochemical anomalies found by Westmin Resources Ltd. Overburden drill samples returned assays up to 210.5 grams per tonne silver, 0.66 per cent copper and 0.58 per cent zinc (Assessment Report 19181).

BIBLIOGRAPHY

EMPR ASS RPT 9814, 19181
EMPR BULL 45, p. 57, Fig. 2
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/22

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW006**

NATIONAL MINERAL INVENTORY:

NAME(S): **TONAWANDA**, FERGI

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 42 18 N
LONGITUDE: 117 28 52 W
ELEVATION: 1200 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5617131
EASTING: 466027

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Broadview

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

Two adits were driven in about 1904 by P. Comerford at 1300 metres elevation in a small draw 90 metres south of Fissure Creek, on the lapsed Tonowanda claim. One adit traverses for 15 metres barren grey grits of the middle Broadview outcropping along the south edge of the draw. A small dump indicates the position of the other adit in the middle of the draw, but the portal is completely hidden by gravel and clay. Only black phyllite and a little quartz can be seen on the dump, but some pieces of sulphide were found during unsuccessful attempts to reopen the adit in 1955. In 1956 R. Ernewin diamond drilled two short holes from bedrock on the south edge of the draw, entering a large mud seam in which a little pyrite and a few specks of chalcopyrite were encountered. In 1958 a jeep-road was built down to this adit from the True Fissure road.

St. Patrick Mining conducted geochemical sampling in the area between 1992 and 1997.

BIBLIOGRAPHY

EMPR AR 1904-117
EMPR ASS RPT 22941, 23978, 24473, 25162
EMPR BULL *45, p. 86
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/21

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW007**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALTIMORE**, REVENUE, KATINKA,
FERGI

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 41 54 N
LONGITUDE: 117 28 04 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5616384
EASTING: 466964

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	
Cambrian	Lardeau	Ajax	

LITHOLOGY: Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

This ground has been held successively as the Baltimore, Revenue, and Katinka claims. It is 2.5 kilometres from Ferguson up the Ferguson Creek trail. Most of the work appears to have been done before 1908. The workings include two adits just above the trail and an open-cut just below. The open-cut has been made on a 2.4-metre quartz vein that strikes north 70 degrees east and dips 55 degrees south and is crossed by numerous veinlets of sphalerite. The vein is in Ajax quartzite on or close to the crest of the Silvercup anticline. The adits are 30 metres apart. The south one was caved in 1955. The north adit crosscuts lower Broadview grits and a narrow band of Ajax quartzite, entering black phyllite. A drift follows a 1.2-metre quartz vein along the quartzite-phyllite contact for 17 metres northwest without encountering appreciable sulphides.

St. Patrick Mining conducted geochemical sampling in the area between 1992 and 1997.

BIBLIOGRAPHY

EMPR AR 1908-101; 1924-212; 1929-98; 1931-197
EMPR ASS RPT 22941, 23978, 24473, 25162
EMPR BULL *45, p. 86
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/21

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW008**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRUCE** GIPSY, FISSURE

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 30 N
LONGITUDE: 117 29 04 W
ELEVATION: 1633 Metres

NORTHING: 5615650
EASTING: 465782

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located 1 kilometre northwest of Ferguson.

COMMODITIES: Lead Zinc Gold

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

Mineralized veins occur in phyllites and schists of the Lardeau Group.

In 1981 and 1982, Westmin Resources Ltd. conducted geochemical surveys on the Fissure claim.

BIBLIOGRAPHY

EMPR AR 1901-1019
EMPR ASS RPT 9814, 10843
EMPR BULL 45, p. 87
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/21

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 629
REPORT: RGEN0100

MINFILE NUMBER: **082KNW009**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **IXL (L.8710)**, IXL FR., GYP,
NETTIE L, I.X.L.

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 41 36 N
LONGITUDE: 117 27 16 W
ELEVATION: 1372 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5615822
EASTING: 467902

LOCATION ACCURACY: Within 500M

COMMENTS: See also Ajax (082KNW099), Gyp (082KNW010), Nettie L (082KNW100)
and May Bee (082KNW170).

COMMODITIES: Silver

Lead

Gold

Zinc

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz Ankerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian
Cambrian

GROUP

Lardeau
Lardeau

FORMATION

Broadview
Triune

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
Slate
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

MINERALIZED VEINS IN A SHEAR ZONE IN INTERBEDDED
QUARTZITES, SLATES AND SCHISTS.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-682; 1900-820,824; 1905-251; 1906-252;
1907-93; 1911-K290; 1918-157; 1924-B209,B210; 1930-266;
1949-A192; 1950-A151; 1951-A179; 1952-A187,A188,A189
EMPR BULL 45-67
GSC MEM 161-67,69

DATE CODED: 1985/07/24
DATE REVISED: 2000/01/04

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW009**

MINFILE NUMBER: **082KNW010**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **GYP FR. (L.5691)**, NETTIE L, G.Y.P.,
GOOD LUCK, GOOD HOPE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 41 30 N
LONGITUDE: 117 27 10 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See also Ajax (082KNW079), I.X.L. (082KNW009), Nettie L. (082KNW100),
and May Bee (082KNW170).

Underground
MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5615636
EASTING: 468019

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	
Cambrian	Lardeau	Triune	

LITHOLOGY: Quartzite
Slate
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Nettie L Group is situated between the north and south forks of Lardeau Creek, about 2.4 kilometres northeast of the town of Ferguson. The group consists of the Nettie L (Lot 4954) (082KNW100), Ajax (Lot 4955) (082KNW099) and the Gyp Fr. (Lot 5691) (082KNW009, 010). The May Bee (082KNW170) lies to the northwest.

In 1892, W.D. Pool located the Pool group, which included the Ajax and Nettie L claims and formed Great Western Mines, Limited Liability, himself being in charge of development work on these claims.

The Gyp Fraction was originally known as the IXL Fraction and was staked on the western extension of the main lead from Nettie L. In 1905, Wm. N. Brayton received a Crown grant for this claim. In 1924, it was owned by W. White. The workings consisted of an adit tunnel. White and George McLaren did further work on the claim during the following year. In 1949, this fraction belonged to J. Main of Ferguson, who leased it to A.E. Petersen of Revelstoke. He made repairs and did some work in an old tunnel. A shaft was also sunk on this fraction.

A sample of fine grained ore from Gyp Fraction assayed 0.69 gram per tonne gold, 806 grams per tonne silver, 26.7 per cent lead and 22.8 per cent zinc. Zinc and galena in quartz gangue assayed 3.77 grams per tonne gold, 476.6 grams per tonne silver, 16.5 per cent lead and 33.4 per cent zinc.

In 1950, Trout Lake Mining, Limited, took over the group and retimbered the old portals of the three mines. They enlarged the size of the workings on Gyp. They also drove an adit for another 12 metres and made two open cuts. In 1952, control passed to the company's successor, Trout Lake Mines, Ltd.

This area is underlain by carbonaceous phyllites and black slates, interbedded with grey to white quartzites of the Cambrian Lardeau Group. Mineralization consists of galena, pyrite, sphalerite and tetrahedrite. The orebodies occur as scattered lenticular masses, giving a spotted character. On the surface, the sulphides

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CAPSULE GEOLOGY

have been oxidized, forming an iron cap. The minerals appear to have been deposited in schist by water circulating along a line of fissuring. The schist is silicified near the fissure.

BIBLIOGRAPHY

EMPR AR 1930-266,1949-192; 1950-151; 1951-179; 1924-209
EMPR BULL 45-72,73
EMPR PF (*Starr, C.C. (1925): Report on the Nettie L Mine, 8 p., geology, assays, workings plan 1 " = 100 ' ; Various sketch maps, plans and sections, 1951-1952; Trout Lake Mines Ltd. (1952): Information Brochure & Prospectus; Plan of Nettie L Mine workings (1900) in 082KNW100)
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 632
REPORT: RGEN0100

MINFILE NUMBER: **082KNW011**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **BROW**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 54 N
LONGITUDE: 117 26 46 W
ELEVATION: 1833 Metres

NORTHING: 5614521
EASTING: 468483

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Iron Copper Lead Gold Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min.

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1900-820; 1903-241
EMPR BULL 45-87
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW011**

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 633
REPORT: RGEN0100

MINFILE NUMBER: **082KNW012**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **RAVEN**, SILVER BELL, OK,
CRACKER JACK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

MINING DIVISION: Revelstoke

LATITUDE: 50 40 48 N
LONGITUDE: 117 26 28 W
ELEVATION: 1867 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5614333
EASTING: 468835

LOCATION ACCURACY: Within 500M

COMMENTS: OK CLAIM IS PROBABLY A RESTAKING OF RAVEN, THE SILVER BELL, OK, OR THE
CRACKERJACK CLAIMS. MAY ACTUALLY BE A SEPERATE GROUP OF SHOWINGS, NOT
ALL THE SAME AS IT IS RECORDED AND PLOTTED HERE.

COMMODITIES: Silver Lead Zinc Iron Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1899-682; 1900-820; 1911-186; 1941-26
EMPR BC METAL MM00632
EMPR BULL 45
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW012**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

MINFILE NUMBER: **082KNW013**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **FLORENCE (L.7051)**, REWARD, FLORENCE FR. (L.7592)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 24 N
LONGITUDE: 117 26 04 W
ELEVATION: 1524 Metres

NORTHING: 5613589
EASTING: 469302

LOCATION ACCURACY: Within 500M

COMMENTS: ON FIVE MILE CREEK ABOUT 6 MILES FROM TROUT LAKE

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1898-1064; 1899-682; 1900-820; 1903-H242; 1906-138; 1907-
L218; 1911-K156; 1916-200; 1917-165,192; 1941-A26; 1955-67
EMPR BULL 45-87
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW013**

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RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: **082KNW014**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **BLACK EAGLE**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 24 N
LONGITUDE: 117 25 04 W
ELEVATION: 1567 Metres

NORTHING: 5613583
EASTING: 470479

LOCATION ACCURACY: Within 500M

COMMENTS: ON FIVE MILE CREEK ABOUT 6 MILES FROM TROUT LAKE

COMMODITIES: Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1896-542; 1898-1073; 1899-716; 1900-820; 1904-295; 1917-165
EMPR BULL 45-87
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW014**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 636
REPORT: RGEN0100

MINFILE NUMBER: **082KNW015**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **CANADIAN (L.4737)**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 12 N
LONGITUDE: 117 25 04 W
ELEVATION: 1400 Metres

NORTHING: 5613212
EASTING: 470477

LOCATION ACCURACY: Within 500M

COMMENTS: ON FIVE MILE CREEK ABOUT 6 MILES FROM TROUT LAKE

COMMODITIES: Lead Gold

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

GALENA WITHIN A QUARTZ VEIN IN CARBONACEOUS
PHYLLITE. THE PHYLLITE HAS A STRIKE OF N60W WITH
AVERTICAL DIP, CUT BY A QUARTZ VEIN HAVING A
STRIKE OF N10E WITH AN EASTERLY DIP OF 80 DEGREES

BIBLIOGRAPHY

EMPR AR 1914-300; 1926-449
EMPR BULL 45
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW015**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 637
REPORT: RGEN0100

MINFILE NUMBER: **082KNW016**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **GOLD BUG**, GOLD BUG FR.

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 54 N
LONGITUDE: 117 24 10 W
ELEVATION: 1133 Metres

NORTHING: 5612650
EASTING: 471534

LOCATION ACCURACY: Within 500M

COMMENTS: ON FIVE MILE CREEK ABOUT 6 MILES FROM TROUT LAKE

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

MINERALIZED QUARTZ VEINS CARRYING GALENA IN SLATE.

BIBLIOGRAPHY

EMPR AR 1900-824,984; 1905-153; 1910-101; 1911-155; 1916-201;
1917-191; 1919-144; 1921-161; 1933-216
EMPR BULL 45-87
GSC MAP 1929, 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 638
REPORT: RGEN0100

MINFILE NUMBER: **082KNW017**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **PARRSBORO**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 54 N
LONGITUDE: 117 24 10 W
ELEVATION: 1133 Metres

NORTHING: 5612650
EASTING: 471534

LOCATION ACCURACY: Within 500M
COMMENTS: SEE ALSO #'S 16,18,19

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1911-155, 1916-201, 1920-128, 1921-161
EMPR BULL 45-87
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW017**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 639
REPORT: RGEN0100

MINFILE NUMBER: **082KNW018**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **CANADIAN BOY**, SILVER SLIPPER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 48 N
LONGITUDE: 117 24 34 W
ELEVATION: 1267 Metres

NORTHING: 5612467
EASTING: 471062

LOCATION ACCURACY: Within 500M

COMMENTS: SILVER LEAD ORE AVERAGING ABOUT 90 OZ AG/TON.

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

MINERALIZED QUARTZ VEIN. THE VEIN CARRIES SMALL STREAKS OF CARBONATES.

BIBLIOGRAPHY

EMPR AR 1910-101; 1911-154,155; 1912-151; 1914-K300,K301
EMPR BULL 45-86,87
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 640
REPORT: RGEN0100

MINFILE NUMBER: **082KNW019**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **RAMBLER (L.6470)**, GOLD BUG

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 48 N
LONGITUDE: 117 23 46 W
ELEVATION: 1200 Metres

NORTHING: 5612462
EASTING: 472004

LOCATION ACCURACY: Within 500M

COMMENTS: THIS IS NOT THE OLD RAMBLER-CARIBOU MINE

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

REPLACEMENT(?) IN LIMESTONE WHICH IS CUT BY A
DIABASE SCHIST.

BIBLIOGRAPHY

EMPR AR 1905-J153; 1906-H253; 1919-N144
EMPR BULL 45-86,87
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW019**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 642
REPORT: RGEN0100

MINFILE NUMBER: **082KNW021**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **COPPER QUEEN (L.6477)**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 54 N
LONGITUDE: 117 25 28 W
ELEVATION: 2200 Metres

NORTHING: 5608952
EASTING: 469982

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR AR 1904-118; 1906-253; 1926-449; 1940-64
EMPR BULL 45-87
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW021**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 643
REPORT: RGEN0100

MINFILE NUMBER: **082KNW022**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **CALIFORNIA**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 24 N
LONGITUDE: 117 23 52 W
ELEVATION: 2233 Metres

NORTHING: 5609868
EASTING: 471873

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

A QUARTZ CALCITE VEIN CONTAINING POCKETS OF
MASSIVE GALENA IN A PYROCLASTIC MEMBER OF THE
LOWER BROADVIEW.

BIBLIOGRAPHY

EMPR BULL 45-87
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW022**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 644
REPORT: RGEN0100

MINFILE NUMBER: **082KNW023**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **U AND I (L.7589)**

MINING DIVISION: Revelstoke

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 24 N
LONGITUDE: 117 22 34 W
ELEVATION: 2367 Metres

NORTHING: 5608007
EASTING: 473395

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEINS IN ARGILLACEOUS, CARBONACEOUS AND
CHLORITIC SCHISTS.

BIBLIOGRAPHY

EMPR AR 1907-219; 1914-311; 1918-156; 1930-267
EMPR ASS RPT 8642
EMPR BULL 45-887
GSC MAP 235A
GSC MEM 161-27, 45, 46

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 645
REPORT: RGEN0100

MINFILE NUMBER: **082KNW024**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **OKANAGAN (L.9127)**, ENDERBY (L.9128)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 37 24 N
LONGITUDE: 117 22 34 W
ELEVATION: 2287 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5608007
EASTING: 473395

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Gold Silver
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

PYRITE, GOLD, SILVER, GALENA, SPHALERITE IN VEIN SYSTEMS ASSOCIATED WITH SHEAR ZONES THAT MAKE AN ACUTE ANGLE WITH THE REGIONAL TREND OF HOST PHYLLITE BELONGING TO THE BROADVIEW FORMATION OF THE LARDEAU GROUP.

BIBLIOGRAPHY

EMPR AR 1914-K310; 1915-449,450; 1918-156; 1940-64; 1941-62
EMPR ASS RPT 674, 8642, 12310
EMPR BULL 45-87
EMPR GEM 1973-95
EMPR PF (Rpt by B.W.W. McDougall, 1946)
GSC MAP 235A
GSC MEM 161-27,45,46

DATE CODED: 1985/07/24
DATE REVISED: 1998/05/14

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW024**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 646
REPORT: RGEN0100

MINFILE NUMBER: **082KNW025**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **WINSLOW (L.8680)**, GLADHAND (L.8681)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 12 N
LONGITUDE: 117 23 16 W
ELEVATION: 1951 Metres

NORTHING: 5607641
EASTING: 472568

LOCATION ACCURACY: Within 500M

COMMENTS: ENDERBY CLAIM ADJACENT TO WINSLOW WITH SIMILAR MINERALIZATION.

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Tetrahedrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

Pyrite, gold, silver, galena, sphalerite, present in vein systems associated with shear zones that make an acute angle with regional trend of host phyllite belonging to the Broadview Formation of the Lardeau Group.

Northern Crown Mines Ltd. optioned the property in 1988 and conducted surface work and drilling.

BIBLIOGRAPHY

EMPR AR 1904-118; 1906-138; 1908-101; 1909-117; 1911-154,290; 1914-309; 1933-216; 1934-A26; 1938-A35; 1939-38,78; 1940-25,64; 1941-26,62
EMPR ASS RPT 674, 8642, 12310
EMPR BC METAL MM00643
EMPR BULL 45-85
EMPR GEM 1972-76,77, 1973-95
EMPR INDEX 3-218
EMPR PF (Rpt by B.W.W. McDougall 1946, J. Millar 1963)
GSC MAP 1929-38, 235A
GSC MEM 161-27,45
N MINER JULY 7, 1983

DATE CODED: 1985/07/24
DATE REVISED: 1998/05/14

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW025**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 647
REPORT: RGEN0100

MINFILE NUMBER: **082KNW026**

NATIONAL MINERAL INVENTORY: 082K11 Ag2

NAME(S): **TRIUNE (L.5681)**, REVENGE (L.5685), TRIUNE NO.1,
SILVER CHIEF (L.5683), ENTERPRISE (L.5682)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 37 36 N
LONGITUDE: 117 21 40 W
ELEVATION: 2434 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5608372
EASTING: 474458

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

IN VEINS AND SHEAR ZONES IN A SILICEOUS DARK GREY
SLATE.

BIBLIOGRAPHY

EMPR AR 1900-817,822,823; 1901-1018; 1902-141; 1903-122,125;
1904-117; 1905-153,253; 1906-136; 1914-303; 1916-200,517;
1917-164,192; 1919-143; 1940-64; 1952-190
EMPR ASS RPT 7324, 9037
EMPR BULL 45-56&78
EMPR EXPL 1978-E81, 1979-90
EMPR INDEX 3-216
EMPR PF (BRIEF RPT BY L.T. JORY 1970)
GSC MAP 235A, #37
GSC MEM 161-17,23,27,28,59,120

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW026**

MINFILE NUMBER: **082KNW027**

NATIONAL MINERAL INVENTORY: 082K11 Ag1

NAME(S): **SILVER CUP (L.768)**, SUNSHINE (L.1564), SILVER CUP FRACTION (L.2622),
 COMSTOCK, COMSTOCK/AINSWORTH

STATUS: Past Producer	Underground	MINING DIVISION: Revelstoke
REGIONS: British Columbia		UTM ZONE: 11 (NAD 83)
NTS MAP: 082K11W		
BC MAP:		
LATITUDE: 50 38 19 N		NORTHING: 5609703
LONGITUDE: 117 22 09 W		EASTING: 473895
ELEVATION: 1924 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: 7 Level portal, 2.25 kilometres northwest from Triune Mountain, east of Cup Creek and 6.75 kilometres northeast from the shoreline of the centre of Trout Lake (Property File - Various geology maps, plans (1956)).		

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Pyrite	Galena	Sphalerite	Tetrahedrite	Gold
Chalcopyrite	Pyrargyrite	Freibergite		
ASSOCIATED: Quartz	Carbonate	Calcite	Pyrite	Arsenopyrite
ALTERATION: Carbonate	Quartz	Fuchsite	Mariposite	
ALTERATION TYPE: Carbonate		Silicific'n	Quartz-Carb.	
MINERALIZATION AGE: Unknown				

DEPOSIT

CHARACTER: Stratabound	Vein	Concordant
CLASSIFICATION: Mesothermal	Epigenetic	
TYPE: I05	Polymetallic veins Ag-Pb-Zn±Au	
SHAPE: Cylindrical		
MODIFIER: Folded		
DIMENSION: 0365 x 0091 x 0061 Metres		STRIKE/DIP:
COMMENTS: Silver Cup zone dips 66 degrees northeast and rakes 86 degrees northwest.		TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Triune	
Paleozoic	Lardeau	Index	

LITHOLOGY: Siliceous Phyllite
 Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization
	GRADE: Greenschist

INVENTORY

ORE ZONE: SILVER CUP	REPORT ON: Y
CATEGORY: Indicated	YEAR: 1951
QUANTITY: 37191 Tonnes	
COMMODITY	GRADE
Silver	229.6700 Grams per tonne
Gold	2.7400 Grams per tonne
Lead	1.7000 Per cent
Zinc	1.5000 Per cent
COMMENTS: Reserve figures based on 4 ore dumps combined.	
REFERENCE: Property File - Hamilton, W.S. 1951: Supplementary Report #1.	

CAPSULE GEOLOGY

Paleozoic Lardeau Group metasedimentary and sedimentary rocks form a northwest trending broad belt northeast of the Kuskanax batholith. This belt in part, straddles the northern end of the Kootenay Arc which is comprised of highly deformed sedimentary and volcanic rocks. Further east, Hadrynian and/or Lower Cambrian quartzite of the Hamill Group and Lower Cambrian limestone of the Badshot Formation forms a distinctive sequence of marker horizons that outline major structures in the Kootenay Arc.

The Silver Cup mine is close to the axial plane of a major isoclinal anticline that strikes 310 to 320 degrees and plunges

CAPSULE GEOLOGY

northwest. The inner core of the anticline is comprised of Index Formation phyllitic and arenaceous limestone and minor grey phyllite overlain by Index Formation grey and light green phyllite, minor phyllitic limestone and quartz grit, all of the Lower Cambrian to Middle Devonian or older Lardeau Group. This series of rocks are overlain by Triune Formation grey to black siliceous phyllite (also of the Lardeau Group) which locally hosts the mine. The repetition of certain stratigraphic units and the trend of contacts indicates that the major anticline has two apices separated by a tightly compressed syncline. Regional greenschist facies metamorphism has affected this sequence which dips steeply northeast.

Ninety-five per cent of production has come from the Silver Cup zone (365 by 91 by 61 metres), which is contained in openings of a structure that is a combination of a drag fold and a compressional bulge that dips with the host Triune Formation grey to black siliceous phyllite. This quartz vein zone dips to the northeast and rakes steeply northwest. Three other zones in the vicinity of the Silver Cup zone have a similar lenticular shape and steep rake and are contained in the same grey to black siliceous phyllite. However, they are not all in the same structural position with respect to the two apices of the major anticline. This suggests that mechanical properties of the host rock rather than a continuous structure such as a fault or shear zone are responsible for the localization of vein ore. The strata forms a structural bulge that is lenticular in vertical and horizontal section and contains zones of open space. Orebodies are laterally very short and extensive downdip and approximately on strike with the enclosing strata. Some internal shearing has taken place and crumpling of the wallrock is probably due to the adjustment of strata remaining in such openings to the general shortening of the structure. Drag folds in the wallrock do not have uniform attitudes or sense of movement. This deformation usually dies out within 3 to 6 metres from the quartz veins but persists on strike. Extensive crumpled zones also exist outside the mineralized zones and contain sparse mineralization.

Widespread (Ca, Mg, Fe) carbonate alteration, silicification and chromium mica (fuchsite-mariposite) alteration is evident. Chromium mica is always associated with silicification and both are later than the carbonate. Index Formation green and black phyllites are more susceptible to alteration than the Triune Formation siliceous black phyllite.

Mineralization consists of pyrite which carries sub-microscopic gold, galena, sphalerite with blebs of chalcopyrite, argentiferous tetrahedrite, minor pyrargyrite, freibergite and arsenopyrite in a gangue of quartz, carbonate, calcite and wallrock fragments. The Silver Cup zone is the main zone from which the majority of production stemmed from. It dips 66 degrees northeast and rakes 86 degrees northwest. It conforms to, or cuts the bedding at small angles and frequently contains vuggy quartz with minor amounts of carbonate and calcite. Many fragments of wallrock are included in the quartz. Ore shoots vary from a few centimetres to 1.5 or 3 metres in width. Fifteen metres west and roughly parallel to the Silver Cup zone is the Blind zone. It occurs in the footwall of the Silver Cup and shares the same characteristics as the Silver Cup. Numerous sparsely mineralized stringers of quartz occupy fractures between these two zones. Ore shoots occur where cross-fractures meet the quartz vein especially at the footwall of the Blind and the hangingwall of the Silver Cup. Quartz veins also intersect the zones in their hangingwall and footwall sides respectively. Three hundred and sixty-five metres northwest of the Silver Cup zone is the Sunshine zone. The Sunshine zone is located at the contact between Triune Formation grey to black siliceous phyllite and Index Formation green phyllite. Mineralization is present in both. In the green phyllite the mineralization occurs in small fissures and faults that commonly strike to the northeast and dip to the southeast. This type is apparently not economic. In the Triune Formation rocks, mineralization occurs in lenses between bulging planes of schistosity. The zone is short (3-7.6 metres), narrow (1.8 metre wide stope), but relatively long downdip (61 metres). Several small drag folds indicate relative movement of Triune Formation rocks to the northwest and one drag fold suggests upward movement of the hangingwall. The Sunshine X zone is just northwest of the Sunshine zone but strikes in a northeast direction and dips southeast, cutting the host rocks at a large angle. The zone is up to 2.1 metres wide and is hosted in Index Formation green phyllite.

The Triune (082KNW026) and Towser (082KNW028) past producers occur nearby and are also hosted in Triune Formation rocks. The Silver Cup and Sunshine zones are on the southwest limb of the southwestern anticline, the Towser is on the southwest limb of the northeast anticline and the Triune is on the southwest limb of the

CAPSULE GEOLOGY

major anticline.

Past development at the Silver Cup mine consisted of extensive underground workings. Several dumps exist on the mine property. Reserve figures are based on 4 dumps combined where indicated ore of 37,191 tonnes averages 229.67 grams per tonne silver, 1.7 per cent lead, 1.5 per cent zinc and 2.74 grams per tonne gold (Hamilton, W.S. 1951).

BIBLIOGRAPHY

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- EMPR ASS RPT 7324, 9037, 17446
- EMPR BULL 1 (1932), p. 113; *2 (1914), pp. 43,44; *45, 92 pp.
- EMPR ENG INSP (Underground plans-#61518)
- EMPR EXPL 1976-E50; 1977-E69; 1978-E81; 1980-122
- EMPR GEM 1969-341; 1970-466; 1971-429; 1972-77; 1973-95,96; 1974-25
- EMPR OF 1998-10
- EMPR PF (Prospectus 1976, C.T. Explorado Ltd.; MacKenzie, A.G. 1972: Report on the Properties of True Blue Explorations Ltd.; Eastwood, P. 1956: Plane table notes, rough notes; *Various geology maps, plans (1956); *Trettin, H.P. 1957: Regional Framework and Structural Ore Control of the Silver Cup Mine, Lardeau, M.Sc. Thesis, University of British Columbia; *Hamilton, W.S. 1951-1953: Various reports on the Silver Cup Property; Cannon, D.M. 1941: Report on the Property of the Silver Cup Mine; CAN SUP File; 082KNW General: Sketch map (1901), GCNL clippings; Starr, C.C. (1925): Report on the Silver Cup Mine, 8 pages, workings 1"=100')
- EMR MP CORPFILE (Silver Cup Mining & Milling Company, Limited; C.T. Explorado Ltd.)
- GSC MEM *161, 142 pp.
- GSC OF 288; 432; 464
- GSC SUM RPT 1903, pp. 66-68
- CANMET IR MD 2898

DATE CODED: 1985/07/24
DATE REVISED: 1989/06/08

CODED BY: GSB
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FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 651
REPORT: RGEN0100

MINFILE NUMBER: **082KNW028**

NATIONAL MINERAL INVENTORY: 082K11 Ag4

NAME(S): **TOWSER (L.1565)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 38 36 N
LONGITUDE: 117 22 28 W
ELEVATION: 1733 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: ALSO 082KNW027

Open Pit

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5610230
EASTING: 473524

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Sphalerite Galena Tetrahedrite Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ-CARBONATE VEIN THAT STRIKES N17W AND DIPS ABOUT 70 DEGREES EAST CUTTING ACROSS THE BEDS AT A SMALL ANGLE TO THE RIGHT. THE VEIN IS IN BASAL SILICEOUS SCATE OF THE TRIUNE FORMATION, CLOSE TO ITS CONTACT WITH THE TRIUNE PHYLLITE. THE VEIN CONTAINS BUNCHES AND STREAKS OF PYRITE, SPHALERITE, AND GALENA, WITH ASSOCIATED TETRAHEDRITE AND CHALCOPYRITE.

BIBLIOGRAPHY

EMPR AR 1896-542; 1897-548; 1899-681; 1900-823; 1917-164,192,449;
1918-156
EMPR BULL 45-75,78
EMPR EXPL 1976-E50; 1977-E69
EMPR GEM 1969-341; 1970-465,466; 1971-429; 1972-77; 1973-23,95
EMPR INDEX 3-216
EMPR PF (RPT BY A.G. MACKENZIE 1972)
EMR MP CORPFILE (Cansil Consolidated Mines Ltd.)
GSC MAP 235A
GSC MEM 161-30,65
GCNL #2,#16,#40, 1980

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW028**

MINFILE NUMBER: **082KNW029**

NATIONAL MINERAL INVENTORY:

NAME(S): **MUSKATEER**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 43 45 N
LONGITUDE: 117 27 01 W
ELEVATION: 1167 Metres

NORTHING: 5619805
EASTING: 468221

LOCATION ACCURACY: Within 500M

COMMENTS: Location for showings about 450 metres above the mouth of Mountaingoat Creek (Bulletin 45, page 87).

COMMODITIES: Iron Copper Nickel Gold

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Industrial Min.
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Lardeau Unnamed/Unknown Formation

LITHOLOGY: Phyllitic Grit
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Muskateer group was located on the east bank of the Ferguson Creek, 450 metres above the mouth of Mountaingoat Creek. The claims were located on disseminations and large pockets of massive pyrite and pyrrhotite in an area mapped as phyllitic grit and phyllite of the Cambrian to Devonian Lardeau Group.

James Furness of Beaton did some stripping in 1953 and had about 30 metres of diamond-drilling done in 1954. A sample across 60 centimetres assayed: gold, trace; silver, nil (Bulletin 45, page 87). Spectrochemical analyses of the pyrite and pyrrhotite revealed that traces of copper and nickel were present.

BIBLIOGRAPHY

EMPR BULL *45, p. 87
GSC MEM 161
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/17

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW030**

NATIONAL MINERAL INVENTORY: 082K11,12 Pb2

NAME(S): **TRUE FISSURE (L.1097)**, NEW TRUE FISSURE, PARK FR. (L.10648), MORGAN

STATUS: Past Producer	Underground	MINING DIVISION: Revelstoke
REGIONS: British Columbia		
NTS MAP: 082K11W 082K12E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 42 12 N		NORTHING: 5616955
LONGITUDE: 117 30 04 W		EASTING: 464614
ELEVATION: 1933 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: True Fissure is located on the east slope of Great Northern Mountain. See also Broadview (082KNW031), Blue Bell (082KNW060), Great Northern (082KNW061), St. Elmo (082KNW062) and Silver Queen (082KNW150).		

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena	Sphalerite	Tetrahedrite	Pyrite
ASSOCIATED: Quartz	Calcite	Ankerite	
MINERALIZATION AGE: Unknown			

DEPOSIT

CHARACTER: Vein	Disseminated		
CLASSIFICATION: Epigenetic	Hydrothermal	Skarn	
TYPE: I05	Polymetallic veins	Ag-Pb-Zn±Au	K02 Pb-Zn skarn
DIMENSION:	Metres	STRIKE/DIP: 165/45E	TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
 Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay	
METAMORPHIC TYPE: Regional	RELATIONSHIP:
	GRADE: Greenschist

INVENTORY

ORE ZONE: TRUE FISSURE	REPORT ON: Y
CATEGORY: Indicated	YEAR: 1972
QUANTITY: 51710 Tonnes	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	325.7000 Grams per tonne
Lead	6.0000 Per cent
Zinc	7.6000 Per cent
REFERENCE: Northern Miner June 21, 1973.	

ORE ZONE: TRUE FISSURE	REPORT ON: Y
CATEGORY: Measured	YEAR: 1972
QUANTITY: 33566 Tonnes	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	308.6000 Grams per tonne
Lead	6.3000 Per cent
Zinc	7.4000 Per cent
REFERENCE: Northern Miner June 21, 1973.	

CAPSULE GEOLOGY

True Fissure is located on the east slope of Great Northern Mountain. The property includes Blue Bell (082KNW060), Great Northern (082KNW061), St. Elmo (082KNW062) and Silver Queen (082KNW150). The Broadview (082KNW031) mine is to the southeast, across Broadview Creek.

The first showing is reported to have been found in 1890 on ground subsequently located as the Great Northern claim. Other discoveries soon followed, and the entire vein system was located before the turn of the century. Small scale exploration and development was carried on by the locators or bondholders for a

CAPSULE GEOLOGY

number of years.

The Great Northern claim was bonded to a Montana company in 1896. The Great Northern (Lot 1099), Hillside (Lot 1098), and Great Western Fr. (Lot 1102) was Crown-granted to Hugh McPherson and associates in 1898. Additional work in 1913, 1917, and 1928-30 was largely confined to No. 6 adit. In the 1950's the claims were owned by the D. McPherson Estate.

The True Fissure, St. Elmo and Blue Bell Crown-grants and 4 adjacent claims were bonded by G.F. Park and associates of Cincinnati, Ohio, who incorporated The Ohio Mines Development Company, Limited in October 1906. The claims were transferred to The True Fissure Mining and Milling Company, Limited which was incorporated by Park and associates in September 1907. Intermittent exploration and development work was carried out by the company or by lessees until 1930. The Latonia Milling Company was formed by the Park interests to install and operate a mill under agreement with the above company. A 100 ton-per-day mill was installed in 1930 at the level of the C (No. 3) True Fissure adit. The mill was completed under the terms of the G.F. Park Will although there was no ore available. No further activity was reported on any of the claims until 1937. True Fissure Mines, Limited optioned 22 claims in 1936 but no work was reported.

New True Fissure Mining & Milling Company, Limited was formed in 1937 to acquire the property; the Great Northern claim was optioned later in the year. The mill was operated during the winter of 1937-38. Development work was carried out in 1939 and the company ceased operations in 1940. Codan Lead & Zinc Company, Limited shipped ore from the dumps in 1943-44.

Comara Mining & Milling Company Limited acquired 43 claims in 1945 and completed 670 metres of surface diamond drilling on the True Fissure and St. Elmo claims. In 1949 the company holdings were transferred to Columbia Metals Corporation Limited. The Granby Consolidated Mining, Smelting and Power Company, Limited was engaged to carry out exploration work during 1952 and some 914 metres of diamond drilling was done on the True Fissure No. 2 and 3 levels.

The True Fissure mine includes 4 adit levels, and two raises connecting Nos. 2 and 3 levels; the Blue Bell workings consist of two adits and a connecting raise; the St. Elmo workings comprise two unconnected adits and, reportedly, a winze from the upper adit; the Great Northern workings include six adits.

No further development was undertaken until 1966. An induced polarization survey revealed an anomaly which more or less coincides with the projection of the main True Fissure vein toward the Broadview. A program of drifting and diamond drilling was begun in the True Fissure No. 2 adit. This program was resumed late in 1967 and continued through 1968. A 125 ton-per-day mill was installed at the portal of the Morgan (True Fissure No. 4) adit. Overburden was stripped from a portion of the True Fissure vein in preparation for open pitting. The mill only operated for several days during the period June to September 1971 due to inadequacy of the mill installation and ecological problems related to tailings disposal. It was later destroyed by snowfall. Exploration work during 1972 included electromagnetic and self potential surveys covering the St. Elmo, Blue Bell, True Fissure and Great Northern claims, 1102 metres of diamond drilling in 54 holes.

In 1972, Hudson's Bay Oil and Gas reported proven reserves of 33,566 tonnes of 308.6 grams per tonne silver, 6.3 per cent lead and 7.4 per cent zinc and probable reserves of 51,710 tonnes of 325.7 grams per tonne silver, 6.0 per cent lead and 7.6 per cent zinc (Northern Miner June 21, 1973). The property was held by Sibola Mines Ltd. in the mid-1980's.

Quartz-carbonate veins contain sphalerite, galena, tetrahedrite and pyrite. The veins cut phyllites and schists of the Upper Paleozoic Lardeau Group, Broadview Formation. Production from 1908 to 1944 totalled 4605 tonnes, yielding 1311 kilograms of silver, 6 kilograms of gold, 241,773 kilograms of lead and 129,986 kilograms of zinc.

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- EMPR AR 1895-694; 1896-541,561; 1897-549,550; 1898-1065,1069; 1906-138; 1907-93; 1908-100,101,247; 1909-117,273; 1913-424; 1914-294; 1916-200; 1917-191,449; 1918-156; 1921-161,163; 1922-217; 1923-233; 1924-208; 1925-263; 1926-272; 1927-293; 1928-315; 1929-338; 1930-264,266; 1936-E53; 1937-A40,A41,E56; 1938-E44; 1939-94; 1940-25,79; 1943-73; 1944-40; 1945-109; 1946-169; 1947-173; 1948-149; 1952-189; 1955-67; 1966-229; 1967-264
EMPR ASS RPT 19181, 22941
EMPR BC METAL MM00641
EMPR BULL 1, p. 112 (1932); *45, pp. 12,56,79-85

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 655
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1969-341, 1970-465,466, 1971-429, 1972-77
EMPR INDEX 3-216
EMPR PF (Plans, Workings C.1912; Assay 1938; Sargent, H. (1942):
Report; *Starr, C.C. (1925): Report on the True Fissure Mine,
Ferguson, 10 p. 1" = 100' scale map)
EMR MIN BULL MR 181 B.C. 1; 223 B.C. 55
EMR MP CORPFILE (The True Fissure Mining and Milling Company, Limited;
True Fissure Mines, Limited; New True Fissure Mining & Milling
Company, Limited; Codan Lead & Zinc Company, Limited; Comara Mining
& Milling Company Limited; Columbia Metals Corporation Limited)
GSC MAP 235A
GSC MEM *161, pp. 20,23,70-75
CANMET IR 771 (1935), p. 222; 1987 (1946)
N MINER June 21, 1973

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/21

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 657
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1895-694; 1896-541; 1897-549,569,573; 1898-1065; 1899-602;
1900-817-820; 1905-154; 1906-136,138,249; 1907-91,93; 1909-K118;
1912-K151; 1914-K297-K299; 1955-67; 1966-229; 1967-264; 1968-264
EMPR BC METAL MM00595
EMPR BULL 2, p. 38 (1914); *45, pp. 58-59,79
EMPR GEM 1969-341, 1970-465, 1971-429, 1972-77
EMPR INDEX 3-190
EMPR PF (Workings Plans, W.F. Robertson 1897, N. Emmens)
EMR MP CORPFILE (Columbia Metals Corp.)
GSC MAP 235A
GSC MEM 161, pp. 20,75

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/23

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

green, chlorite schist with some intercalated argillaceous beds, striking 130 degrees and dipping steeply southwest. To the northeast they are flanked by a thick band of grey crystalline limestone. The schists are crossed by numerous, irregular fissures, most of which trend northeast. Many of them have been filled with quartz and ankerite accompanied by pyrite. Numerous irregular quartz stringers extend from the main fissures and a network of small and large quartz veins has been produced. Most of the development has occurred on the larger veins, many of which are short. Ore from the shaft consisted of quartz, ankerite, pyrite, bismuthinite and free gold. Abundant manganese accompanies the mineralization and some malachite staining is reported. Samples of ore range up to 336 grams per tonne gold but the values, although locally high, are considered spotty (Geological Survey of Canada Memoir 161, page 50).

In 1933, Starr reported that a flat-lying quartz vein outcrops near the east end of the Goldenville claim and is continuous for 800 metres to the southwest corner of the Foundation claim. He reported that it contains rare galena and pyrite, both in large crystals. The vein varies from 0.3 to 1.2 metres in width. A similarly mineralized flat-lying vein was reported in 1990, about 600 metres west-northwest of Lade Peak.

BIBLIOGRAPHY

EMPR ASS RPT 18090, *20477
EM OF 1999-3
EMPR AR 1898-1071; 1899-602,684; 1900-822; 1903-114,244;
1904-121; 1922-217; 1924-212,368; 1925-263; 1932-25,159,182
EMPR BULL 45, pp. 54,87
EMPR INDEX 3-208
EMPR OF 1999-3
EMPR PF (*Starr, C.C. (1933): Report of Examination of the Orphir
Lade Group, 10 p.)
EM GEOFILE 2003-2
GSC MAP 235A
GSC MEM *161-49,113,137
GSC OPEN FILE 288; 432
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/17

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW033**

NATIONAL MINERAL INVENTORY:

NAME(S): **BADSHOT**, BAD SHOT (L.1105), PERRY LODGE (L.4568),
NO. 25 (L.1106), BUTTE (L.4569), LONE PINE (L.4570),
LIME MOUNTAIN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 44 13 N
LONGITUDE: 117 18 46 W
ELEVATION: 2133 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the centre of the Bad Shot Crown grant (Lot 1105).

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5620619
EASTING: 477929

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite Pyrite Sphalerite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Marble
Limestone
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Badshot property is located on Badshot Mountain near the headwaters of Badshot and Perry Lode creeks. The property is said to have consisted of the Bad Shot (Lot 1105), Perry Lode (Lot 4568), Lone Pine (Lot 4570), No. 25 (Lot 1106), and Butte (Lot 4569).

Bands of limestone belonging to the Lower Cambrian Badshot Formation are repeated by folding. Schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group are folded with the limestone and erosion has produced an alternating surface expression.

A quartz vein, up to 1 metre wide, strikes at 230 and dips at 45 degrees to the northwest. It occurs in massive, banded, grey marble at the foot of a bluff on Mount Badshot, having the same strike as the vein. The ore consists of galena, tetrahedrite, pyrite, and a little sphalerite. Some calcite occurs in the vein as well.

From 1899 to 1906, some 91 metres of development-work was done on the vein, consisting of a crosscut, an incline shaft some 21 metres deep, and drifts in both directions therefrom.

Government records show that in 1904, 25 tonnes of ore were mined from which 120,026 grams of silver and 10,977 kilograms of lead were recovered.

BIBLIOGRAPHY

EMPR AR 1894-744; 1895-695; 1896-542; 1897-545,551; 1898-1071; 1899-602,681,685; *1900-820,821,824,981,985; 1904-117; 1906-136;
*1914-314
EMPR BULL 45, p. 87; 2, p. 54 (1914)
EMPR INDEX 3-188
EM GEOFILE 2003-2
GSC MEM *161, pp. 20,26,108
GSC MAP 235A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 661
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OPEN FILE 288; 432

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/17

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW034**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK PRINCE (L.755)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11E 082K11W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 42 56 N
LONGITUDE: 117 16 13 W

NORTHING: 5618229
EASTING: 480919

ELEVATION: 2133 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Black Prince Crown grant (Lot 755).

COMMODITIES: Lead Silver Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Paleozoic

GROUP

Unnamed/Unknown Group
Lardeau

FORMATION

Badshot
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Slate
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Black Prince Crown grant (Lot 755) is located on Mohican Mountain. The property was worked almost continuously from 1893 to 1904. It is reported to have 2 adits and 1 shaft. In 1904, 27 tonnes were shipped from which 44,411 grams of silver and 3870 kilograms of lead were recovered.

Bands of limestone belonging to the Lower Cambrian Badshot Formation are separated by bands of schist and phyllites of the Cambrian to Devonian Index Formation (Lardeau Group). This surface expression is caused by folding and erosion.

The mineralization consists of galena, tetrahedrite and a little sphalerite in a quartz gangue containing calcite, occurring in limestone at or near its contact with slate.

BIBLIOGRAPHY

EMPR AR 1893-1049; 1894-744; 1895-695; *1896-542; *1897-545,551;
*1898-1072; 1900-824; *1903-125; 1904-117; 1914-315; 1925-449
EMPR BULL 2, p. 55 (1914), 45, p. 87
EMPR INDEX 3-189
GSC MEM 161, pp. 19,20
WWW http://www.infomine.com/index/properties/BLACK_PRINCE-EARLY.html

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/19

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW035**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOHICAN, MOHECAN (L.8706), PATHFINDER (L.8707),
EARLY BIRD (L.8708)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11E 082K11W
BC MAP:
LATITUDE: 50 42 30 N
LONGITUDE: 117 15 34 W
ELEVATION: 2000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Mohecan Crown grant (Lot 8706).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5617423
EASTING: 481681

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena Pyrite Tetrahedrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Carbonaceous Slate
Calcareous Schist
Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Mohecan Crown grant (Lot 8706) and adjoining grants Pathfinder (Lot 8707) and Early Bird (lot 8708) are located at the headwaters of Mohican Creek, a west-flowing tributary of Gainer Creek. In the region, bands of Lower Cambrian Badshot Formation limestone are repeated by folding as are schist and phyllite of the Cambrian to Devonian Index Formation (Lardeau Group). Erosion has produced an alternating surface expression of the Index and Lardeau rocks.

The Mohican was worked from at least 1897 to 1914, then lay idle until 1925 when the Mohican Mining Company took ownership. The pre-1915 workings consisted of numerous opencuts and two drifts on the vein. Government records show that 8 tonnes of ore were mined in 1903 from which were recovered: 15,396 grams of silver, 31 grams of gold and 2220 kilograms of lead. The 1925 to 1929 work consisted of driving a long adit from a point about 100 metres below the old workings. About 213 metres of tunneling was done, at first as a crosscut and then as a drift on the vein.

The vein, up 1.5 metres wide, outcrops on the side of a small creek. It consist of white quartz and strikes 185 degrees and dips 65 degrees southwest. It occupies a fissure in black carbonaceous slate and calcareous schist which strike 125 degrees and dip steeply southwest. Southward, the vein becomes discontinuous, but outcrops of rusty quartz are widespread. Reported sulphides include galena, tetrahedrite and pyrite. Zinc mineralization may also exist.

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1905-153; 1910-247; *1914-314; 1925-264; 1926-272; 1927-296
EMPR BULL 45, p. 87
EMPR INDEX 3-194,205
GSC MAP 235A
GSC MEM *161, pp. 28,82

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 664
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1903, p. 71A

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/19

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW036**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOLLIE MAC**, MOLLY MAC, LEAD STACK,
MILNER FR., MOLLY MACK, HOWARD,
SPRUCE CABIN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 41 30 N
LONGITUDE: 117 18 52 W
ELEVATION: 1667 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See also White Quail (082KNW037), Hidden Treasure (082KNW106), and Index (082KNW038).

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5615585
EASTING: 477790

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite Chalcopyrite
ASSOCIATED: Siderite Magnetite Ankerite
ALTERATION: Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive Vein
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

Within the larger segment siderite replacement is largely in three ragged parallel zones, 1 to 3 metres wide. One zone, 3 metres or more in width, follows the footwall of the limestone for 200 metres northwest from the fault; galena is irregularly disseminated in it and locally forms lenses or veinlets a few centimetres long and fractions of a centimetre wide. The other two zones, along the hangingwall and in the middle of the limestone band, are 135 and 45 metres long, respectively, and contain sparsely disseminated galena.

The Mollie Mac group of four Crown-granted mineral claims straddles Gainer Creek about 4 kilometres upstream from Ten Mile. The Milner Fraction lies immediately southeast of Gainer Creek, and the Mollie Mac Nos. 1 to 3 adjoin in succession to the northwest.

The showings are on the steep northwestern slope of Gainer Creek and extend across the crest of the ridge between Gainer and Bunker Hill creeks.

The Molly Mac claims were first located before 1895. A short adit was driven at 1356 metres elevation in barren limestone prior to 1925, and a small amount of work was done on the showings in the bluffs from time to time before 1951. In that year and the following, Mollie Mac Mines Limited built the road from Ten Mile and diamond drilled about 610 metres of short holes. In 1954, a second adit, 87 metres long, was driven at 1390 metres elevation. The work since 1951 has been directed to testing the extent of mineralization below the base of good bluff exposures at 1525 metres elevation. Mineralization discovered in this part of the hillside is referred to as the lower showings, that in the bluffs above as the upper showings. A caved shaft on the north brow of the ridge is about 60 metres to the northwest beyond the upper showings, and an adit is reported to have been driven farther to the northwest and lower down the slope toward Bunker Hill Creek.

Galena is essentially the only ore mineral, though minor amounts of sphalerite, chalcopyrite, and pyrite occur. Most of the galena occurs in siderite, as massive fine-grained lenses or less commonly as poorly defined disseminations. Locally galena is found in

CAPSULE GEOLOGY

limestone as small veinlets or replacements along beds, folds, or fractures. The largest pods of galena probably plunge gently to the northwest parallel to the axes of dragfolds. Other masses of galena are along discontinuous shear zones within masses of siderite or near their margins. The lenses of galena are a few metres wide and extend up the slope. Mostly they are well defined, and siderite away from the galena-bearing lenses is barren. A 76-centimetre sample assayed 61.7 grams per tonne silver and 10.89 per cent lead (Bulletin 45, page 67).

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1925-264; 1927-294-295; 1929-339; 1951-179; 1952-190; 1954-143;
1955-67
EMPR BULL *45, pp. 21,55,65-67
EMPR MR MAP 2 (1928)
EMPR PF (ASSAY PLANS 1951; *Starr, C.C. (1928): Report of Preliminary
Examination of the Molly Mack Mine, 7 p.; *Starr, C.C. (1933):
Report on the Mollie Mac Group, White Quail Group and Hidden
Treasure Group, 9 p., Detail of workings 1" = 100')
GSC MAP 1929-55, 235A
GSC MEM *161-25,28,30,96
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1999/11/17

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW037**

NATIONAL MINERAL INVENTORY:

NAME(S): **WHITE QUAIL (L.4577)**, PRESIDENT (L.4578), PRESIDENT FR.,
STAR FR. (L.4579)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 41 12 N
LONGITUDE: 117 18 10 W
ELEVATION: 1567 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See also Mollie Mac (082KNW036), Hidden Treasure (082KNW106), and Index (082KNW038).

Underground
MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5615026
EASTING: 478611

COMMODITIES: Lead Silver Zinc Gold

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz Siderite
ALTERATION: Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The White Quail is on the lower southeast slopes of Gainer Creek immediately southwest of the Index basin. In 1960 the White Quail was owned by L. Abrahamson. The property was part of a group including the Index (082KNW038) and Hidden Treasure (082KNW106). The Mollie Mac 9082KNW036 lies to the northwest.
On the White Quail two adits, side by side and 36 metres apart, were driven southeastward into the hillside at 1400 metres elevation, on the upper side of the trail. These adits were reopened in 1956, and it is reported that they join a short distance underground. On the Star Fraction, between the President and White Quail, the caved portal of an adit is at 1495 metres elevation.
The White Quail east adit and the Star Fraction adit were driven into limestone. Dump material indicates that the limestone in both adits was more or less replaced by siderite, in which galena is rather sparingly disseminated. A chip sample assayed 34.3 grams per tonne silver, 0.69 gram per tonne gold, 26.3 per cent lead and 0.5 per cent zinc (Starr, 1933).

BIBLIOGRAPHY

EMPR AR 1895-694; 1903-244; 1928-315; 1929-339; 1952-191; 1957-59
EMPR BULL *45, pp. 55,64,85
EMPR MR MAP 2 (1928)
EMPR PF (*Starr, C.C. (1933): Report on the Mollie Mac Group, White Quail Group and Hidden Treasure Group, 9 p., Detail of Workings 1" = 100')
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/11/17

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REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW038**

NATIONAL MINERAL INVENTORY:

NAME(S): **INDEX (L.3956)**, ROYAL R FR. (L.3958), RED CLIFF (L.3957),
HIDDEN TREASURE, WICKENDEN, DOM

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 40 48 N
LONGITUDE: 117 17 28 W
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See also Hidden Treasure (082KNW106), White Quail (082KNW037) and Mollie Mac (082KNW036).

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5614281
EASTING: 479433

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Siderite
ALTERATION: Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Index claim east of Gainer Creek is one of a line of Crown-granted mineral claims including, from southeast to northwest, the Red Cliff, Index, Royal R., Hidden Treasure (082KNW106), President, and White Quail (082KNW037). The claims lies east of the Mollie Mac (082KNW036).

Early work on the Index was done before 1914. In 1956 Northern Inland Resources Ltd. had a small crew stripping on the Index and White Quail. A tractor- road was built from the head of the Index basin jeep-road, and some diamond drill- ing was done that autumn and the following summer. The claims were held by G.C. Short in 1960.

Workings on the Index claim include a short adit and small inclined shaft driven into opposite sides of a band of limestone, extensive stripping for 180 metres southeast of the adit, and a caved prospect shaft and two pits 366 metres southeast of the adit. On the Hidden Treasure claim a long adit is reported to have been driven in unmineralized rock.

On the Index claim the limestone is in two parallel bands, both dipping steeply southwest. The southwest band forms the core of a small anticline and passes beneath phyllite to the southeast. The northeast band is believed to be a repetition of the limestone on the ascending limb of a dragfold. It is from 15 to 30 metres wide on the Index claim. It is pinched out just southeast of the Index claim, but structural lenses of the limestone occur more or less on strike with it higher in the basin. The limestone is exposed in only two places between the Index and White Quail. Both bands are offset about 15 metres to the left on a fault striking north 75 degrees east and dipping 80 degrees south, 200 metres southeast of the adit. Mineralization has been found only in the northeast band.

The Index showings comprise galena disseminated in siderite which has partly replaced two segments of the northeast band of limestone. One segment extends 300 metres from the cross-fault northwest to the end of the outcrop. The second mineralized segment is poorly exposed around the prospect shaft, 120 to 168 metres southeast of the fault. Exposures of limestone immediately southeast of the fault and southeast of the prospect shaft are unaltered and

CAPSULE GEOLOGY

unmineralized. About a foot of galena-bearing quartz has been injected along the fault where it traverses the northeast band. Exploration was confined to the larger mineralized segment of the limestone.

Within the larger segment siderite replacement is largely in three ragged parallel zones, 1 to 3 metres wide. One zone, 3 metres or more in width, follows the footwall of the limestone for 200 metres northwest from the fault; galena is irregularly disseminated in it and locally forms lenses or veinlets a few centimetres long and fractions of a centimetre wide. The other two zones, along the hangingwall and in the middle of the limestone band, are 135 and 45 metres long, respectively, and contain sparsely disseminated galena.

Chip samples from an adit dump assayed 58.3 grams per tonne silver, 15.1 per cent lead and 6.1 per cent zinc (Starr, 1933).

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EMPR PF (*Starr, C.C. (1933): Report on the Mollie Mac Group,
White Quail Group and Hidden Treasure Group, 9 p. Detail of
Workings 1" = 100 ')
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/11/17

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW039**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER CHIEF**, SILVER CHIEF NO.2 (L.6476), MAY

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 14 N
LONGITUDE: 117 17 11 W
ELEVATION: 1830 Metres

NORTHING: 5615083
EASTING: 479769

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of extinct Crown grant Silver Chief No. 2 (Lot 6476).

COMMODITIES: Lead Silver Zinc Copper

MINERALS

SIGNIFICANT: Galena Pyrite Tetrahedrite Sphalerite

ASSOCIATED: Siderite Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Disseminated Stratabound
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Paleozoic

GROUP

Unnamed/Unknown Group
Lardeau

FORMATION

Badshot
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1962
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 96.0000 Grams per tonne
Lead 16.1600 Per cent
Zinc 0.0200 Per cent
REFERENCE: Ministry of Energy, Mines and Petroleum Res. Bulletin 45, page 74.

CAPSULE GEOLOGY

The Silver Chief property (former Crown grant Lot 6476) is located on the north side of Index Creek basin, southeast of Gainer Creek.

The property is first mentioned in 1897 and by the following year an adit had been driven 24 metres. However, very little further work was done for over half a century. In 1953, Samson Mining Corporation built a jeep-road in the basin and did some test-pitting on the Silver Chief. The claims lapsed and in 1957 R. Zielinski located the May 1 to 6 claims. In 1958, ownership passed briefly to Foundation Mines Ltd., then to L.B. and Loyd York. Since 1957 some road and trail work and some stripping and prospecting were done. Workings to 1962 include three adits, a small cut in bedrock and a dozen or more small pits and trenches.

In the region, bands of Lower Cambrian Badshot Formation limestone are repeated by folding as are schist and phyllite of the Cambrian to Devonian Index Formation (Lardeau Group) which separate the limestone bands on surface.

A number of showings, all in limestone, have been documented and the reader is referred to Bulletin 45 for further details. In sequence, going downhill from 2232 metres elevation to 2042 metres elevation, the showings include the following:

1) A 0.3 to 0.9-metre wide zone of siderite contains sparse disseminated galena. The indicated length is about 90 metres.

2) A 0.6-metre wide zone of sparsely disseminated galena occurs

CAPSULE GEOLOGY

in limestone and is traced for 30 metres.

3) Parallel bands of massive galena, 7 to 10 centimetres wide, are traced for over 120 metres.

4) A nine-metre length of massive galena and tetrahedrite occurs, some 15 centimetres in width.

5) Galena, quartz and some siderite replace a limestone bed in an area of contorted strata. The most concentrated part of the zone showed a 25-centimetre thickness of galena. A sample across 1 metre assayed 16.16 per cent lead, 0.02 per cent zinc, 96.00 grams per tonne silver and nil gold (Bulletin 45, page 74). Some chalcocopyrite and sphalerite were observed nearby.

6) A lens of siderite contains clusters of galena and pyrite. It measures up to 9 metres in length and 0.6 metres in width.

7) Disseminated galena occurs in about 3 metres of rusty phyllitic limestone.

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1953-146; 1961-114
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EMPR BULL *45, pp. 55,73
EMPR EXPL 1978-E82, 1979-90
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/21

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

the road. In 1964 the property was optioned to Dakota Silver Mines Ltd. During this and the following years, limited work was carried out but the property and equipment was eventually abandoned.

The Beatrice is on the same belt of Lardeau metasedimentary rocks as the Silver Cup (082KNW027), Nettie L (082KNW100) and True Fissure (082KNW030) mines of the Ferguson camp to the southeast. Black slates, carbonaceous schists, grey and reddish-brown weathering grits and quartzites and greenish grey talcose schists underlie the property. On average the rocks strike 140 degrees and dip 65 degrees northeast.

Ore occurs as irregular veins in shear zones, on bedding plane slips and crosscutting faults. The veins range from a few centimetres to a few metres wide and consist of sphalerite, galena, tetrahedrite and pyrite in quartz gangue with minor calcite. Replacement is considered to be an important factor in the formation of the ore.

The mine workings develop two principal vein-lodes - the Beatrice and the Main veins. The Beatrice vein, which was the original discovery at surface, strikes 050 degrees and dips 65 degrees southeast across the axis of the controlling synclinal structure. The Main vein, found only on the lower levels of the mine, strikes 140 degrees and dips 65 degrees northeast.

The No. 1 adit was crosscut to the Beatrice vein where considerable stoping was done. Above the level the vein was mined for a vertical distance of about 18 metres and horizontally for 20 metres. The ore appears to have been hand cobbled in the stope and backfilled with rejected subgrade debris. The mineralization consists of a solid band of pinching and swelling massive sulphides, ranging up to 50 centimetres wide. The hanging wall is a two-metre wide siliceous zone carrying disseminated sulphides. Sampling at the face of No. 1 level across 0.6 metre yielded an assay result of 0.3 gram per tonne gold, 450 grams per tonne silver, 5.2 per cent lead and 7.8 per cent zinc (Ashton, 1997).

The Main vein on the No. 2 level consists of solid bands of sulphides and disseminations up to three metres wide, in a graphitic shear zone. In the most easterly workings of the intermediate level, the ore zone follows a parallel partly mineralized structure trending 138 degrees, dipping 60 degrees northeast.

A third vein, known as the 'Gold Lode' has been traced for a few hundred metres in open cuts below the main road. This vein, contains pyrite and a sprinkling of galena. It is 1.2 to 1.8 metres wide and strikes 155 degrees and dips steeply to the northeast. Assay results returned 5.1 grams per tonne gold and 32.5 grams per tonne silver (Annual Report 1914, page 267).

From 1899 to 1917, and 1984, 618 tonnes of ore was shipped from the property yielding 558 grams of gold, 1832 kilograms of silver, 182,930 kilograms of lead and 10,894 kilograms of zinc.

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1910-94,95; *1914-266-267; 1916-194; 1917-449; 1918-190;
1919-140; *1920-128,143; 1954-143; 1955-67; 1956-105; 1957-58;
1958-49; 1962-131; 1964-131; 1965-196
- EMPR ASS RPT 7207
- EMPR BC METAL MM00593
- EMPR BULL 1 p. 112
- EMPR EXPL 1979-93
- EMPR INDEX 3-189
- EMPR IR 1986-1, p. 111
- EMPR MR MAP 2 (1928)
- EMPR PF (*Ashton, A.S. (1977): Beatrice Property near Camborne,
Arch Mining and Milling Ltd., 27 pages; Emmens, N.W. (1914):
Report on the Mineral Resources of the Lardeau Mining Division,
pp. 40-42, in 082KNW General)
- EMR MP CORPFILE (New Era Mining Co. Ltd.)
- GSC MAP 235A
- GSC MEM 161, pp. 19, 23, 90, 116
- GSC SUM RPT 1903, p. 63

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW041**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOHAWK (L.4571)**, FRESNO, MOWHAWK,
FREZENO (L.4572), HAWK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 46 44 N
LONGITUDE: 117 35 49 W
ELEVATION: 944 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5625407
EASTING: 457914

LOCATION ACCURACY: Within 500M

COMMENTS: The Mohawk (Lot 4571), 4 kilometres by steep road southeast of Camborne and east of Mohawk and Pool creeks, is similar to a system of mineralized veins along the south side of Pool Creek. See the nearby Spider mine (082KNW045).

COMMODITIES: Silver Zinc Lead Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 155/72E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Broadview

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Mohawk (Lot 4571), 4 kilometres by steep road southeast of Camborne and east of Mohawk and Pool creeks, is similar to a system of mineralized veins along the south side of Pool Creek. See the nearby Spider mine (082KNW045).

The area is underlain by metasedimentary rocks of the Lower Paleozoic Lardeau Group, Broadview Formation, which includes medium grey to greenish quartzites, greywackes, carbonaceous phyllites and quartz sericite schist.

Two veins, the Mohawk and Fresno, cut the metasediments and contain galena, sphalerite and pyrite. The Mohawk vein, 1.2 metres wide, strikes 155 degrees and dips 72 degrees east. Samples assayed up to 1738 grams per tonne silver, 3.4 grams per tonne gold and 65.3 per cent lead (Annual Report 1914, page 261). The Fresno vein strikes 160 degrees and dips 80 degrees east. Samples assayed traces in gold and silver. Adits explore both veins.

In 1963, Dakota Silver Mines Ltd. recovered 13.5 kilograms of silver, 1358 kilograms of lead and 1699 kilograms of zinc from 8 tonnes of crude ore.

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EMPR BC METAL MM00623
EMPR INDEX 4-123
EMPR MR MAP 2 (1928)
EMPR PF (Emmens, N.W. (1928): Report on the Moscow-Mohawk Group;
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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 675
REPORT: RGEN0100

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GSC MAP 235A
GSC MEM 161, p. 89

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW042**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOSCOW (L.4500)**, MOHAWK CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 46 54 N
LONGITUDE: 117 35 40 W
ELEVATION: 1100 Metres

NORTHING: 5625714
EASTING: 458093

LOCATION ACCURACY: Within 500M

COMMENTS: The Moscow is located north of Pool Creek, about 4 kilometres southeast of Camborne.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Moscow (Lot 4500), located north of Pool Creek, was Crown Granted to A. Kitten in 1924. A 60-metre adit was driven in 1927.

A quartz vein containing sulphides cuts silicified black and grey schists (Lower Paleozoic Lardeau Group) that are considerably silicified.

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EMPR ASS RPT 10844, 11756, 19018

EMPR MR MAP 2 (1928)

EMPR PF (Emmens, N.W. (1928): Report on the Moscow-Mohawk Group, in 082KNW041; Skerl, A.C. (1957): Report on the Pipestem, in 082KNW146)

GSC MAP 235A

GSC MEM 161-89

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW043**

NATIONAL MINERAL INVENTORY: 082K13 Ag4

NAME(S): **EXCISE** EXECISE, DUTY,
MULTIPLEX, REVENUE (L.7492), OTTERTAIL (L.900),
BUCKHORN, MOHAWK CREEK, HAZEL,
HAWK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 46 30 N
LONGITUDE: 117 36 04 W
ELEVATION: 1133 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5624977
EASTING: 457617

LOCATION ACCURACY: Within 500M

COMMENTS: The Excise, 3.5 kilometres by steep road southeast of
Camborne and west of Mohawk Creek, is similar to a system of
mineralized veins along the south side of Pool Creek. See
the adjoining Spider mine (082KNW045).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 155/80E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Excise, 3.5 kilometres by steep road southeast of Camborne and west of Mohawk Creek, is similar to a system of mineralized veins along the south side of Pool Creek. See the adjoining Spider (082KNW045) and Eclipse (082KNW044).

The area is underlain by volcanic and sedimentary rocks of the Lower Paleozoic Lardeau Group. Sedimentary rocks of the Broadview Formation include medium grey to greenish quartzites, greywackes, carbonaceous phyllites and quartz sericite schist. The volcanic rocks of the Jowett Formation comprise massive fragmental lenses and lava flows, some chlorite schist and a few thin beds of banded iron formation.

Quartz veins, cutting the metasediments, contain galena, sphalerite and pyrite. One vein strikes 165 degrees and dips 50 degrees east. Samples assayed up to 1371 grams per tonne silver, 1.7 grams per tonne gold, 48.5 per cent lead and 5.5 per cent zinc; a 3.35-metre sample assayed 68.6 grams per tonne silver, 2.7 grams per tonne gold and 0.8 per cent lead (Annual Report 1914, page 261).

Underground workings total over 130 metres. An outcrop of galena was discovered on the hillside about 60 metres above Mohawk Creek in about 1910. Two claims the Excise and Duty were staked and exploration work began in open cuts and adits. Multiplex Mining, Milling and Power Company, Limited purchased a controlling interest in the property in 1917 and some development work was carried out the following year. The property was developed by three adits, exposing the vein to a depth of about 45 metres below the outcrop.

In 1986, Ram Explorations Ltd. drilled 5 holes totalling 410 metres. In 1988, they drilled 3 holes totalling 272.8 metres.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 678
REPORT: RGEN0100

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EMPR AR 1910-95; 1911-129; 1914-244; *260-261; 1915-118;
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EMPR ASS RPT 11756, 18836, 19018
EMPR MR MAP 2 (1928)
EMPR PF (Emmens, N.W. (1914): Report on the Mineral Resources of the
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(1933): Report of Preliminary Examination of the Harvey, Excise,
Eclipse and Other Claims, in 082KNW180; Magrum, M. and von
Einsiedel, C. (1986): Summary Report and Proposed Exploration
Program Hawk Claim Group, Barkhor Resources Inc. Prospectus, June
29, 1987; Skerl, A.C. (1957): Report on the Pipestem, in
082KNW146)
GSC MAP 235A
GSC MEM 161, p. 89

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW044**

NATIONAL MINERAL INVENTORY: 082K13 Ag3

NAME(S): **ECLIPSE (L.5170)**, ETTIE (L.5156), SPIDER MINE,
NO. 1, NO. 2, MULTIPLEX,
MOHAWK CREEK, SUNSHINE LARDEAU

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:
LATITUDE: 50 46 36 N
LONGITUDE: 117 36 17 W
ELEVATION: 833 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Eclipse (Lot 5170), 3.2 kilometres by steep road southeast of Camborne, is part of a system of mineralized veins along the south side of Pool Creek. See the Spider mine (082KNW045) for production.

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5625164
EASTING: 457364

COMMODITIES: Silver Cadmium Lead Antimony Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Arsenopyrite
ASSOCIATED: Quartz Ankerite Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
STRIKE/DIP: 005/75E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Lardeau Broadview

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Regional
GRADE: Greenschist

CAPSULE GEOLOGY

The Eclipse (Lot 5170), 3.2 kilometres by steep road southeast of Camborne, is part of a system of mineralized veins along the south side of Pool Creek. See the adjoining Spider mine (082KNW045) for production. The area is underlain by southeasterly striking, steeply dipping volcanic and sedimentary rocks of the Lower Paleozoic Lardeau Group. Sedimentary rocks of the Broadview Formation include medium grey to greenish quartzites, greywackes, carbonaceous phyllites and quartz sericite schist. The volcanic rocks of the Jowett Formation comprise massive fragmental lenses and lava flows, some chlorite schist and a few thin beds of banded iron formation. In the fragmental units, extreme elongation of the clasts, caused by synkinematic metamorphism, has imparted a crude secondary layering subparallel to the primary stratification.

The veins consist of quartz, pyrite, sphalerite and galena and minor amounts of ankerite, chalcopyrite, and rarely arsenopyrite and tetrahedrite.

The two Eclipse veins are believed to be on separate faults because of shears in the Eclipse adit curve into the foliation some distance short of the face; mineralization in No. 2 vein dies out short of the face, and the veins do not line up when projected to the same level. The No. 1 or adit vein is a thick quartz vein, largely in black phyllite. The country rock is extensively altered around the portal but is relatively fresh in the adit. The vein is bounded by shears and appears to end abruptly where they join and pass into foliation. It contains massive pyrite veins as much as 1 metre thick and lenses of arsenopyrite. A promising pocket of ore was opened in a surface cut above, but ore mineralization in the adit is negligible. The No. 2 vein has a known vertical range of about 76

CAPSULE GEOLOGY

metres and an average length of about 61 metres. It closely resembles the Spider veins, even though it is partly in black phyllite, but the envelope of altered wallrock is much thinner, rarely extending more than 2.4 metres from the fault. Toward the south end a cross-fracture to the southwest contains abundant sphalerite and galena for some 9 metres. On the sublevel the fracture appears to end at at bedded shear.

The Eclipse showing (No. 1 vein) was discovered and staked in August 1899 and by 1900 an adit had been driven 20 metres on the vein. Two claims, the Eclipse (Lot 5170) and Ettie (Lot 5156) were Crown-granted to W.H. Jackson in 1901. No further activity was reported although by 1914 the adit had been driven to a length of 63 metres.

The property was acquired in 1924 by J.E. Lindsley of Camborne and J.A. Darragh of Revelstoke. In 1925 the property was under option to Kay Alexander and some development work carried out. The Consolidated Mining and Smelting Company of Canada Limited optioned the claims in 1927 and during 1928 carried out diamond drilling and extended the adit; the option was abandoned that same year.

In 1954, Sunshine Lardeau Mines, Limited optioned the property from Lardeau Mines Exploration, Limited and discovered the No. 2 vein by diamond drilling from surface. A 305-metre crosscut from the Spider No. 10 level was driven to the vein in 1955. The vein was drifted on for 91 metres exposing a mineralized section 55 metres in length. A raise was put up 61 metres and a sublevel established at 34 metres and the vein drifted on for 73 metres. The mineralization pinched out 40 metres above No. 10 level and was mined out by the end of 1957. A winze was sunk on the vein for 46 metres at 65 degrees and a level (No. 11) established at 40 metres. This level was driven for 49 metres and a raise put up to No. 10 level. About half the ore between No. 11 and No. 10 levels was mined out by the end of 1957. All broken ore below No. 10 was removed and mining and milling was suspended May 14, 1958.

Westmin Resources Ltd. drilled 5 holes totalling 665.5 metres in 1987 to test the Eclipse vein.

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EMPR AR 1899-674; 1900-812; 1901-1224; 1909-104; *1914-259-260;
1917-182; 1921-168; 1924-207; 1925-261; 1926-270; 1928-318;
1929-340; 1954-143; 1955-66; *1956-A50,99-105; 1957-A46,58;
1958-A46,49
EMPR ASS RPT 10844, 11756, *19018
EMPR MR MAP 2 (1928)
EMPR PF (See Spider (082KNW045); Peck, J.W. (1957): North Lardeau notes and sketches; Emmens, N.W. (1914): Report on the Mineral Resources of the Lardeau Mining Division, pp. 28-29, in 082KNW General; Green, A.S. (1987): Drilling Mohawk Creek Group; Starr, C.C. (1933): Report of Preliminary Examination of the Harvey, Excise, Eclipse and Other Claims, in 082FNW180; Skerl, A.C. (1957): Report on the Pipestem Group, in 082KNW146)
EMR MP CORPFILE (Sunshine Lardeau Mines, Limited)
GSC MAP 235A
GSC MEM 161, p. 88
CIM BULL Vol. 50, No. 540, pp. 218-221

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW045**

NATIONAL MINERAL INVENTORY: 082K13 Ag2

NAME(S): **SPIDER (L.15752)**, SPIDER MINE, SPIDER NO. 1 (L.15753),
MULTIPLEX, SUNSHINE LARDEAU NO. 4,
NO. 5, ECLIPSE, GOLD BIRD (L.15750),
WINTON (L.15751), MAY FR. (L.15755), READY MONEY,
MABEL FR.

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 46 43 N
LONGITUDE: 117 36 32 W
ELEVATION: 842 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5625383
EASTING: 457072

LOCATION ACCURACY: Within 500M

COMMENTS: No. 10 level portal on the south bank of Pool Creek, 3.5 kilometres
east of Incomappleux River and 8 kilometres northeast of the Northeast
Arm of Upper Arrow Lake, 48 kilometres south-southeast of Revelstoke
(Property File - Map of mine to mill road). See also Eclipse
(082KNW044), Sandy (082KNW048) and Barclay (082KNW049).

COMMODITIES: Silver Lead Zinc Gold Copper
 Cadmium Antimony

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite Tetrahedrite
COMMENTS: Rare tetrahedrite.
ASSOCIATED: Quartz Ankerite Arsenopyrite
COMMENTS: Rare arsenopyrite.
ALTERATION: Silica Ankerite
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 170/75E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Cambrian
Cambrian

GROUP

Lardeau
Lardeau

FORMATION

Jowett
Broadview

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SPIDER

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 53343 Tonnes
COMMODITY

YEAR: 1964

COMMODITY	GRADE	
Silver	92.5700	Grams per tonne
Gold	2.7400	Grams per tonne
Lead	2.0000	Per cent
Zinc	4.2500	Per cent

REFERENCE: Sunshine Lardeau Mines Ltd. Annual Report 1964.

CAPSULE GEOLOGY

This vein was developed from surface to a depth of 200 metres. Ore grade material was intersected in drilling an additional depth of 70 metres below this level.

Past development consisted of at least 7 levels with raising and crosscutting. The No. 10 level adit and associated workings developed the No. 4 vein which was mined in the 1950's. Nearly all ore had been mined out above the No. 10 level by the end of 1957. Mining and milling was suspended on May 14, 1958. East of the No. 4 vein and accessible via the No. 10 level workings, is the Eclipse vein (082KNW044). This development exposed the top of the ore body through a vertical range of 46 metres. The Eclipse vein saw production between 1956-58 with approximately 31,748 tonnes of ore milled with ore of the Spider mine (Assessment Report 16724). The Eclipse vein occurs at a faulted contact between phyllite and greenstone of the Jowett Formation.

The main ore controls are a series of northerly trending fissures (splays or tension fractures?) that appear to be related to the through-going southeasterly trending Camborne fault along the valley of Pool Creek. Hydrothermal solutions were controlled by the intersection of the principal fissures with fold crests. Mineralization appears to have favoured the Jowett Formation because of the volcanic composition and the competent, fissure-sustaining characteristics of these rocks.

Measured geological reserves at the Spider mine are 25,400 tonnes grading 254.7 grams per tonne silver, 6.19 per cent lead, 6.34 per cent zinc and 4.46 grams per tonne gold (George Cross News Letter April 26, 1988).

In 1964, Sunshine Lardeau Mines Limited drilled 25 holes and drifted 61 metres. The diamond drill holes intersected the No. 4 vein over a length of 122 metres and to a depth of 69 metres below the No. 10 level. Based on this work, probable reserves were estimated at 53,343 tonnes averaging 2.74 grams per tonne gold, 92.57 grams per tonne silver, 2.00 per cent lead and 4.25 per cent zinc (Sunshine Lardeau Mines Limited, 1964 Annual Report). The company name was changed in 1965 to Sunshine Comstock Mines Limited, and in 1974 to Sunshine Columbia Resources Limited. The old tailings dump from the milling operation, located on the Treadwell claim (Lot 5402) and owned by C. Nelson, was sampled and tested for gold and silver values (see Cholla (082KNW143). Sunshine Columbia became K-2 Resources Inc. in 1987. They drilled in 1986.

BIBLIOGRAPHY

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EMPR AR 1909-K104; 1910-K95; 1911-K129,K285; 1912-K323; *1914-K258-K259; 1915-K118; 1916-K194; 1917-F153; 1918-K158,K190; 1923-A233; 1924-B206; 1925-A263; 1928-C318; 1929-C285; 1936-E49; 1937-E56; 1938-E22-E25; 1941-A26; 1949-A192; 1950-A150,A151; 1951-A178; 1952-A182,A183; 1953-A143,A144; 1954-A143; 1955-66,67; *1956-99-105; 1957-58; 1958-49; 1964-130
EMPR ASS RPT 10844, *16724, 19018
EMPR BC METAL MM00638
EMPR BULL 2 (1914)
EMPR GEM 1975-E48; 1976-E52
EMPR INDEX 3-214; 4-125
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1998-10
EMPR PF (Numerous plans, notes and sketches of underground workings, some 1929; Eastwood, P. (1954-1957): Notes and Sketches; Emmens, N.W. (1914): Report on the Mineral Resources of the Lardeau Mining Division, pp. 26-28, in 082KNW General; see Eclipse (082KNW044); Skerl, A.C. (1957): Report on the Pipestem Group, in (082KNW146))
EMR MIN BULL MR 223 B.C. 60 (Sunshine Lardeau Mines Ltd. Annual Report 1964)
EMR MP CORPFILE (Multiplex Mining, Milling and Power Company, Limited; Spider Gold and Silver Mines, Limited; Sunshine Columbia Resources Limited)
GSC MEM 161, pp. 85-88
GSC OF 288; 432; 464
GSC SUM RPT 1921 Part A, pp. 107-110
CANMET IR 279, p. 122; 539, pp. 126-128
CIM BULL *Vol. 50, No. 540, pp. 218-221(1957)
GCNL #56(Mar.19), #149(Aug.1), 1980; #220(Nov.17), 1982; #20(Jan.29), #62(Apr.1), #80(Apr.25), #122(June 25), 1986; #13(Jan.20), #193, 1987; *(Apr.26), 1988
MIN REV July/Aug. 1981

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 684
REPORT: RGEN0100

BIBLIOGRAPHY

V STOCKWATCH Aug.27, Oct.2,8, 1987 (K-2 Resources Inc.)

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 685
REPORT: RGEN0100

MINFILE NUMBER: **082KNW046**

NATIONAL MINERAL INVENTORY:

NAME(S): **ST. JOE (L.5675)**, MERIDIAN, LUCKY STRIKE

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 18 N
LONGITUDE: 117 36 52 W
ELEVATION: 1200 Metres

NORTHING: 5626467
EASTING: 456689

LOCATION ACCURACY: Within 500M

COMMENTS: The St. Joe (Lot 5675) is part of the Meridian property (082KNW064) and is 732 metres south of the Oyster vein (082KNW065).

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres

105 Polymetallic veins Ag-Pb-Zn±Au
STRIKE/DIP: 135/90E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The St. Joe (Lot 5675) is part of the Meridian property (082KNW064) and is 732 metres south of the Oyster vein (082KNW065).

A 1.5-metre wide, northwest striking, quartz vein carries galena. It is a continuation of the vein on the Red Horse (082KNW063). Underlying rocks are assigned to the Broadview Formation of the Lower Paleozoic Lardeau Group.

BIBLIOGRAPHY

EM FIELDWORK 1998, pp. 198-222
EMPR AR 1899-676; 1905-J253; 1914-257; 1934-E34
EMPR ASS RPT 18232
EMPR BULL 45
GSC MAP 235A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW046**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 686
REPORT: RGEN0100

MINFILE NUMBER: **082KNW047**

NATIONAL MINERAL INVENTORY:

NAME(S): **CONMORE (L.5677)**, MERIDIAN PIPESTEM

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 30 N
LONGITUDE: 117 36 34 W
ELEVATION: 1367 Metres

NORTHING: 5626835
EASTING: 457044

LOCATION ACCURACY: Within 500M

COMMENTS: The Conmore (Lot 5677) is part of the Meridian property (082KNW064), on Lexington Mountain. It adjoins the Lucky Jack (082KNW187).

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Conmore (Lot 5677) is part of the Meridian property (082KNW064), on Lexington Mountain. It adjoins the Lucky Jack (082KNW187).

The quartz veins contain pyrite, sphalerite and galena. The country rocks are phyllites of the Broadview Formation of the Lower Paleozoic Lardeau Group.

BIBLIOGRAPHY

EM FIELDWORK 1998, pp. 198-222
EMPR AR 1899-676; 1934-E34
EMPR BULL 45
EMPR PF (Skerl, A.C. (1957): Report on the Pipestem, in 082KNW146)
GSC MAP 235A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW047**

MINFILE NUMBER: **082KNW048**

NATIONAL MINERAL INVENTORY: 082K13 Ag5

NAME(S): **SANDY (L.8719)**, MULTIPLEX, SUNSHINE LARDEAU

STATUS: Prospect

Underground

MINING DIVISION: Revelstoke

REGIONS: British Columbia

NTS MAP: 082K13E

BC MAP:

LATITUDE: 50 46 54 N

LONGITUDE: 117 37 10 W

ELEVATION: 900 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Sandy (Lot 8719), 1.8 kilometres by steep road southeast of Camborne, is part of a system of mineralized veins along the south side of Pool Creek. See the Spider mine (082KNW045) for details.

UTM ZONE: 11 (NAD 83)

NORTHING: 5625729

EASTING: 456330

COMMODITIES: Silver

Lead

Zinc

Gold

MINERALS

SIGNIFICANT: Pyrite

Galena

Sphalerite

Arsenopyrite

ASSOCIATED: Quartz

Ankerite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic

TYPE: I01 Au-quartz veins

DIMENSION:

Hydrothermal

Metres

105 Polymetallic veins Ag-Pb-Zn±Au

STRIKE/DIP: 165/90E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Broadview

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone

Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Sandy (Lot 8719), 1.8 kilometres by steep road southeast of Camborne, is part of a system of mineralized veins along the south side of Pool Creek. See the Spider mine (082KNW045) for details.

The area is underlain by southeasterly striking, steeply dipping volcanic and sedimentary rocks of the Lower Paleozoic Lardeau Group. Sedimentary rocks of the Broadview Formation include medium grey to greenish quartzites, greywackes, carbonaceous phyllites and quartz sericite schist. The volcanic rocks of the Jowett Formation comprise massive fragmental lenses and lava flows, some chlorite schist and a few thin beds of banded iron formation. In the fragmental units, extreme elongation of the clasts, caused by synkinematic metamorphism, has imparted a crude secondary layering subparallel to the primary stratification.

The principal showing on the Sandy claim is a quartz vein which strikes 160 degrees. It is crosscut by four subparallel faults. The ore minerals (pyrite, galena, sphalerite and arsenopyrite) occur as irregular veinlets and small pockets along these faults. The Sandy, owned by F.R. Blockburger, was Crown-granted in 1923. By 1927 a drift adit had been driven for 22 metres.

Sunshine Lardeau Mines, Limited carried out surface diamond drilling in 1954. During 1955 the Sandy adit was extended to a total of about 152 metres of workings. At 91 metres from the portal a branch vein of sphalerite mineralization 30 centimetres wide was followed for 18 metres. Diamond drilling from the adit found no additional mineralization. The mining plant was removed in the spring of 1956.

K-2 Resources Inc. drilled in the area in 1986.

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EM FIELDWORK 1998, pp. 198-222

EMPR AR 1923-234; *1927-292; 1954-143; 1955-66; 1956-99-105

EMPR ASS RPT 16724

EMPR BULL 45

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 688
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR MR MAP 2 (1928)
EMPR PF (Plan of Upper Sandy Adit, 1"=40' (1956); see Spider
(082KNW045))
GSC MAP 235A
GSC MEM 161, pp. 35,40
GSC OF 288; 432; 464
CIM BULL Vol. 50, No. 540, pp. 218-221
GCNL #182,1980

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW049**

NATIONAL MINERAL INVENTORY: 082K13 Pb1

NAME(S): **BARCLAY**, MULTIPLEX, SUNSHINE LARDEAU

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 46 48 N
LONGITUDE: 117 36 58 W
ELEVATION: 833 Metres

NORTHING: 5625541
EASTING: 456564

LOCATION ACCURACY: Within 500M

COMMENTS: The Barclay showing, 2.2 kilometres by steep road southeast of Camborne, is part of a system of mineralized veins along the south side of Pool Creek. See the Spider mine (082KNW045) for details.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Barclay showing, 2.2 kilometres by steep road southeast of Camborne, is part of a system of mineralized veins along the south side of Pool Creek. See the Spider mine (082KNW045) for details. The area is underlain by southeasterly striking, steeply dipping volcanic and sedimentary rocks of the Lower Paleozoic Lardeau Group. Sedimentary rocks of the Broadview Formation include medium grey to greenish quartzites, greywackes, carbonaceous phyllites and quartz sericite schist. The volcanic rocks of the Jowett Formation comprise massive fragmental lenses and lava flows, some chlorite schist and a few thin beds of banded iron formation. In the fragmental units, extreme elongation of the clasts, caused by synkinematic metamorphism, has imparted a crude secondary layering subparallel to the primary stratification. The Barclay vein is hosted by altered greenstone and exposed at the east end of a road cut. The vein consists of galena sparingly disseminated in quartz. Diamond drill programs by Sunshine Lardeau Mines, in 1954 and 1956, failed to locate any extension of this zone. There is no record of ore production from this zone. K-2 Resources Inc. drilled in the area in 1986.

BIBLIOGRAPHY

EM FIELDWORK 1998, pp. 198-222
EMPR AR 1954-143; 1956-99-105
EMPR ASS RPT 16724
EMPR BULL 45
EMPR PF (See Spider (082KNW045))
GSC MAP 235A
GSC MEM 161
GSC OF 288; 432; 464
CIM BULL Vol. 50, No. 540, pp. 218-221

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW050**

NATIONAL MINERAL INVENTORY: 082K11Pb6

NAME(S): **SHEEP CREEK**, LARDEAU (L.3470)

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 40 N
LONGITUDE: 117 12 01 W
ELEVATION: 2225 Metres

NORTHING: 5612159
EASTING: 485844

LOCATION ACCURACY: Within 500M

COMMENTS: The portal is below the Wagner Glacier at the head of the north fork of Hall Creek, 3.1 kilometres south of Mount Templeman, 17.5 kilometres northeast of Trout Lake (Minister of Mines Annual Report 1952, page A191. See also Wagner (082KNW212).

COMMODITIES: Silver Lead Zinc Gold Tin

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Undefined Formation	
Paleozoic	Undefined Group	Index	

LITHOLOGY: Carbonaceous Phyllite
Carbonaceous Phyllitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SHEEP CREEK REPORT ON: Y

CATEGORY:	Indicated	YEAR:	1988
QUANTITY:	23584 Tonnes		
COMMODITY		GRADE	
Silver		287.2000	Grams per tonne
Gold		0.1300	Grams per tonne
Lead		8.7100	Per cent
Zinc		2.2400	Per cent

COMMENTS: Probable reserves.
REFERENCE: E. Brisbane to A. Legun (District Geologist, Nelson) pers. comm. 1988.

CAPSULE GEOLOGY

Paleozoic Lardeau Group metasedimentary and sedimentary rocks form a northwest trending, southwest dipping broad belt northeast of the Kuskanax Batholith. This belt in part, straddles the northern end of the Kootenay Arc which is comprised of highly deformed sedimentary and volcanic rocks. To the east of the Lardeau Group, Hadrynian and/or Lower Cambrian quartzite of the Hamill Group and Lower Cambrian limestone of the Badshot Formation forms a distinctive sequence of marker horizons that outline major structures in the Kootenay Arc. A narrow mineralized belt extending in part from Mount Templeman southeast to Mount Abbott is comprised of Index Formation phyllites proximal to the contact of underlying Badshot Formation limestone. The Index and Badshot Formation form part of the Paleozoic Lardeau Group. Numerous parallel quartz veins with disseminated and massive galena-sphalerite-pyrite-tetrahedrite mineralization occur in shear/fault/fracture zones. Replacement-type deposits occur in limestone along or near their contact with the adjoining phyllites. Mineralization is typically galena-sphalerite-pyrite. Quartz veins that crosscut the phyllites form replacement-type deposits along the strike of limestone beds which they traversed.

CAPSULE GEOLOGY

The Lardeau property is underlain by deformed northwest striking, southwest dipping carbonaceous phyllites and phyllite schists of the Lower Cambrian to Lower Mississippian Index Formation. A large outcrop of a rusty quartz vein with phyllite fragments, the Sheep Creek vein, contains small veinlets and disseminations of pyrite, sphalerite and galena. The vein is exposed for 213 metres between the 2248 and 2316 metre elevation and is mostly on the Lardeau claim (Lot 3470). In 1952 Sheep Creek Mines Limited started a portal to the south of the vein at 2225 metres elevation and drove a crosscut to the vein which was then followed by a drift to the northwest for a total distance of 184 metres. The quartz vein is presumed to be related to the shear/fault hosted vein system exposed on the Wagner property (082KNW212), which is approximately 1000 metres northwest along strike and 304 metres higher in elevation.

Eighteen metres west of the Sheep Creek portal a quartz vein system over 2.4 metres wide assayed 0.34 gram per tonne gold, 96.0 grams per tonne silver, 3.1 per cent lead, 1.49 per cent zinc across 1.5 metres and 0.03 grams per tonne gold, 548.6 grams per tonne silver, 14.6 per cent lead, 2.13 per cent zinc across 1.4 metres. In the same area small crosscutting quartz veins 5.0 to 30 centimetres wide assayed 14.4 grams per tonne gold and 9.4 grams per tonne gold with values in silver, lead and zinc. Two hundred and thirteen metres east of the portal another quartz vein system assayed 195.4 grams per tonne silver, 9.74 per cent lead, 1.9 per cent zinc and 0.03 gram per tonne gold across 91 centimetres (Property File 082KNW056; George Cross Newsletter #207, Oct.28, 1985).

Spectrographic analysis of an ore sample indicated 0.15 per cent tin (Property File 082KNW212; personal communication: G. Addie, District Geologist to K.E. Northcote, 1976).

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1949-A193; *1952-A191
EMPR EXPL 1985-A38
EMPR INF CIRC 1986-1, p. 47
EMPR OF 1998-10
EMPR PF (*082KNW056; Regional File; *082KNW212)
GSC MEM 161, p. 80
GSC OF 288; 432; 464

DATE CODED: 1989/01/16
DATE REVISED: 1989/01/16

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 692
REPORT: RGEN0100

MINFILE NUMBER: **082KNW051**

NATIONAL MINERAL INVENTORY: 082K11 Pb5

NAME(S): **BANNOCKBURN (L.4450)**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 48 N
LONGITUDE: 117 09 28 W
ELEVATION: 2167 Metres

NORTHING: 5610546
EASTING: 488845

LOCATION ACCURACY: Within 500M
COMMENTS: SEE SUPERIOR GROUP #54

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Tetrahedrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEIN IN GREY MARBLE ADJACENT TO CALCAREOUS
SCHISTS.
THE BANNOCKBURN VEIN CONSISTS OF LENSES OF MASSIVE
GALENA WITH SPHALERITE, PYRITE, AND
MINOR CHALCOPYRITE IN LIMESTONE.

BIBLIOGRAPHY

PERS. COMM. J.T. FYLES RES

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 693
REPORT: RGEN0100

MINFILE NUMBER: **082KNW052**

NATIONAL MINERAL INVENTORY: 082K11 Pb5

NAME(S): **SHEILA**, SHELAGH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 00 N
LONGITUDE: 117 10 04 W
ELEVATION: 2167 Metres

NORTHING: 5610918
EASTING: 488139

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite Chalcopyrite Tetrahedrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR AR 1960-78
EMPR ASS RPT 6729
EMPR BULL 45
EMPR EXPL 1978-E82
GSC MEM 161-77,78,82

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW053**

NATIONAL MINERAL INVENTORY: 082K11 Pb5

NAME(S): **RED ELEPHANT**, BANNOCKBURN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 24 N
LONGITUDE: 117 09 52 W
ELEVATION: 1463 Metres

NORTHING: 5611659
EASTING: 488376

LOCATION ACCURACY: Within 500M

COMMENTS: AT 4450 FT. ON N SIDE OF HALL CR JUST BELOW MOUTH OF BANNOCKBURN CR.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Siderite Limonite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
E14 Sedimentary exhalative Zn-Pb-Ag

DIMENSION: 130 x 2 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Unknown

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Unknown Unnamed/Unknown Group Unnamed/Unknown Formation

LITHOLOGY: Pyritic Phyllite

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

The ore has formed by replacement, along a zone trending east of north, of the schists by silica and pyrite, with minor amounts of chalcopyrite. The mineralization in part follows the strike of the sediments, particularly where the schists have been sheared against the more massive limestone bands. Subsequent oxidation has almost completely decomposed the pyrite, leaving a honeycombed siliceous mass that carries much limonite and values in free gold.

Bannockburn Resources worked on the property in 1984. Mikado Resources Ltd. sampled the workings in 1988.

A trench sample returned 20.6 grams per tonne gold and 3.3 per cent over 1.5 metres (Information Circular 1989). Roper Resources drilled the prospect in 1990; massive pyrite-pyrrhotite with stringers of chalcopyrite were intersected, but gold values were low (Information Circular 1990).

BIBLIOGRAPHY

EMPR INF CIRC 1985-1, p. 41; 1989-1, p. 24; 1990-1, p. 48
GSC MAP 235A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/06

CODED BY: GSB
REVISED BY: LJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 695
REPORT: RGEN0100

MINFILE NUMBER: **082KNW054**

NATIONAL MINERAL INVENTORY: 082K11 Pb5

NAME(S): **SUPERIOR (L.12849)**, NELSON (L.12848), MAGNOLIA (L.12850)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 12 N
LONGITUDE: 117 08 58 W
ELEVATION: 2200 Metres

NORTHING: 5609433
EASTING: 489432

LOCATION ACCURACY: Within 500M

COMMENTS: See Bannockburn (082KNW051).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Tetrahedrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

Replacement of white crystalline limestone, by galena, pyrite and a little sphalerite. Minor chalcopyrite is also present.

BIBLIOGRAPHY

EMPR AR 1918-K165; 1919-N122; 1923-A387; 1955-67; 1959-70; 1960-78
EMPR INF CIRC 1989-1, p. 24
GSC MAP 235A
GSC MEM 161-78

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW054**

MINFILE NUMBER: **082KNW055**

NATIONAL MINERAL INVENTORY:

NAME(S): **RENO**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 47 N
LONGITUDE: 117 05 30 W
ELEVATION: 945 Metres

NORTHING: 5614214
EASTING: 493524

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the south side of Hall Creek at 945 metres elevation,
above the Duncan River (Geological Survey of Canada Memoir 161, Map
235A).

COMMODITIES: Lead Copper Barite

MINERALS

SIGNIFICANT: Galena Pyrite Barite Chalcopyrite

ASSOCIATED: Quartz Barite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Industrial Min. Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic Horsethief Creek Unnamed/Unknown Formation

LITHOLOGY: Quartzitic/Quartzose Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Reno is located on the south side of Hall Creek about 1.5 kilometres east of the Duncan River.

The workings, in 1929, were owned by Earl Stevens and consisted of some small opencuts and a 30-metre adit. The area is underlain by quartzitic argillite of the Upper Proterozoic Horsethief Creek Group.

A vein (or possibly two different veins) vary from about 0.5 to 3 metres in width. The vein is composed of quartz and barite and contains bunches of pyrite, galena and chalcopyrite. The vein strikes south and dips steeply west. The pyrite did not contain gold and the amount of galena was not considered sufficient for further exploration.

BIBLIOGRAPHY

EMPR BULL 45
EM GEOFILE 2003-2
GSC MAP 235A
GSC MEM *161, p.78
GSC MAP 235A
GSC OPEN FILE 288; 432

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/22

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW056**

NATIONAL MINERAL INVENTORY: 082K11 Pb3

NAME(S): **ABBOTT (L.765)**, GREENLAW, KING WILLIAM (L.766),
 UNION (L.767), RE-UNION (L.6040)

STATUS: Past Producer	Underground	MINING DIVISION: Slocan
REGIONS: British Columbia		
NTS MAP: 082K11E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 37 50 N		NORTHING: 5608755
LONGITUDE: 117 09 37 W		EASTING: 488664
ELEVATION: 2077 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: A short crosscut adit is located between two upper tributaries of Abbott Creek immediately above a talus slope west-northwest of Mount Abbott, 18.7 kilometres northeast of Trout Lake (Assessment Report 12873). See also Jewell (082KNW057) and Wagner (082KNW212).		

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena	Sphalerite	Pyrite	Tetrahedrite	Chalcopyrite
ASSOCIATED: Quartz	Calcite	Carbonate		
MINERALIZATION AGE: Unknown				

DEPOSIT

CHARACTER: Vein	Stratabound			
CLASSIFICATION: Hydrothermal	Epigenetic	Replacement		
TYPE: E13	Irish-type carbonate-hosted Zn-Pb	J01	Polymetallic manto	Ag-Pb-Zn
	I05			
	Polymetallic veins Ag-Pb-Zn±Au			
SHAPE: Bladed				
MODIFIER: Fractured				
DIMENSION:		STRIKE/DIP: 335/75S		TREND/PLUNGE:
COMMENTS: Outcrop mineralization appears to have a vertical cylindrical shape.				

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Lardeau	Index	
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Carbonaceous Phyllite
 Carbonaceous Phyllitic Schist
 Limestone
 Siliceous Limestone

HOSTROCK COMMENTS: Mineralization occurs in Index Formation phyllites and Badshot Formation limestone.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization
	GRADE: Greenschist

INVENTORY

ORE ZONE: ABBOTT	REPORT ON: Y
CATEGORY: Measured	YEAR: 1999
QUANTITY: 39030 Tonnes	
COMMODITY	GRADE
Silver	286.3000 Grams per tonne
Gold	1.2000 Grams per tonne
Lead	10.2600 Per cent
Zinc	16.1200 Per cent
REFERENCE: Silver Peak Resources, Press Release, January 18, 1999.	

ORE ZONE: GREENLAW VEIN	REPORT ON: Y
CATEGORY: Indicated	YEAR: 1989
QUANTITY: 100616 Tonnes	
COMMODITY	GRADE
Gold	0.8900 Grams per tonne
Silver	195.0000 Grams per tonne
Lead	5.6100 Per cent
Zinc	2.8800 Per cent
REFERENCE: Filing Statement 99/89, Golden Arch Resources.	

CAPSULE GEOLOGY

widths up to 6 metres, is mineralized with galena. The vein is approximately 400 metres northwest along strike from the Abbott zone.

The claims were owned in 1984 by Bannockburn Resources Ltd., and acquired in 1985 by Turner Energy & Resources Ltd., and Mikado Resources Ltd. as part of the Wagner (082KNW212) joint venture. A block of mineralization between the upper and lower adits is estimated to be 11 metres wide, 29 metres high and 19.8 metres long, containing 20,200 tons with a weighted average assay of 0.857 grams per tonne gold, 752.2 grams per tonne silver, 28.47 per cent lead, 16.6 per cent zinc, mineable by open pit (George Cross News Letter, August 28, 1985).

A zone of mineralization that assayed 0.31 per cent lead, 0.34 per cent zinc, 168 grams per tonne silver and 8.9 grams per tonne gold over 1.5 metres, occurs 152 metres northwest of the Abbott zone and may be related to the aforementioned veins (George Cross News Letter #192, 1986). Two additional mineralized zones in Badshot Formation limestone on strike and 609 metres northwest of the Abbott zone are evident. The zones are 9 metres wide and contain galena, sphalerite and pyrite (George Cross News Letter #167, 1986).

One hundred and thirty-one metres northeast and up section of the Abbott zone, 10 bands of silicified and dolomitized limestone have been discovered within a 30 metre section of the Badshot Formation. They have been traced for more than 609 metres along strike. Initial surface sampling has indicated lead, zinc, silver and gold values (George Cross News Letter #170, 1986).

A portal has been collared on the Abbott zone where 152 metres of drifting and crosscutting is being proposed. High-grade ore has been removed from the exposed mineralization during drill site preparation and approximately 3174 tonnes stockpiled. In 1988, Mikado Resources Ltd. processed 1031 tonnes of custom ore, producing 81 grams of gold, 10,677 grams of silver, 4,204 kilograms of lead and 32,887 kilograms of zinc.

Measured reserves in Zone 1 are 29,573 tonnes grading 216.3 grams per tonne silver, 1.2 grams per tonne gold, 8.41 per cent lead and 16.51 per cent zinc. Measured reserves on Zone 2 are 9,453 tonnes grading 504.2 grams per tonne silver, 1.1 grams per tonne gold, 16.06 per cent lead and 14.91 per cent zinc. Indicated reserves of the Greenlaw Vein are 100,616 tonnes grading 195.0 grams per tonne silver, 0.89 grams per tonne gold, 5.61 per cent lead and 2.88 per cent zinc (Filing Statement 99/89, Golden Arch Resources in EMR Mineral Bulletin MR 223 B.C. 52).

Roper Resources Inc. sought to earn interest in the property in 1998 from Silver Peak Resources Ltd. and Golden Arch Resources Ltd.

In 1999, Silver Peak announced the Canam Mining Corporation plan to commence mining the property in July 1999. Measured reserves for the Abbott zone total 39,030 tonnes grading 286.3 grams per tonne silver, 1.2 grams per tonne gold, 10.26 per cent lead and 16.12 per cent zinc (Silver Peak Resources Ltd., Press Release, January 18, 1999). The 900-tonne stockpile of Abbott ores will be processed in the Spring of 1999.

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- EMPR AR 1893-1049; 1894-745; 1895-694; 1896-542,557,559; 1897-545, 552; 1898-1071; 1899-684; 1900-850; 1918-K163,K164,K166; 1926-A273; 1927-C296; 1949-A192
EMPR ASS RPT *12873
EMPR BC METAL MM00151
EMPR EXPL 1985-A38; 1986-A58,B24-B29; 1987-A65
EMPR INF CIRC 1986-1, p. 47; 1987-1, pp. 17,55; 1988-1, pp. 20,61; 1989-1, p. 24
EMPR MAP 65 (1989)
EMPR MIN STATS 1990, p. 28
EMPR OF 1992-1; 1998-10; 2000-22
EMPR PF (*see 082KNW056; 082KNW212; Regional File)
EMR MIN BULL MR 223 B.C. 52
EMR MP CORPFILE (Bannockburn Resources Ltd.)
GSC MEM *161, pp. 19,28,81,127
GSC OF 288; 432; 464
GSC SUM RPT 1904, p. 88A
GCNL #189, #193, #195, #198, #207, #217, 1985; #19 (Jan.28), 1998; #14 (Jan.21), 1999
N MINER May 20, 1996
PR REL Silver Peak Resources Ltd., Jan.18, 1999

DATE CODED: 1985/07/24
DATE REVISED: 1999/04/28

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW057**

NATIONAL MINERAL INVENTORY: 082K11 Pb7

NAME(S): **JEWELL**, FRANCIS JEWELL (L.3467), JEWELL FR. (L.3466),
EMA FR. (L.3468), LUCILLE K (L.3465)

STATUS: Developed Prospect

Underground

MINING DIVISION: Slocan

REGIONS: British Columbia

NTS MAP: 082K11E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 50 38 32 N

LONGITUDE: 117 10 44 W

ELEVATION: 2057 Metres

NORTHING: 5610055

EASTING: 487351

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lot 3467 (Francis Jewell), 3.5 kilometres northwest of Mount
Abbott, 19 kilometres northeast of Trout Lake. Geological Survey of
Canada, Memoir 161, page 82. See also Abbott (082KNW056) and Wagner
(082KNW212).

COMMODITIES: Silver

Lead

Zinc

Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Paleozoic

Lardeau

Undefined Formation

Paleozoic

Undefined Group

Index

LITHOLOGY: Carbonaceous Phyllite
Carbonaceous Phyllitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: JEWELL

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 64846 Tonnes

YEAR: 1988

COMMODITY

GRADE

Silver

41.1000

Grams per tonne

Gold

0.1700

Grams per tonne

Lead

1.0900

Per cent

Zinc

9.4900

Per cent

COMMENTS: Probable reserve.

REFERENCE: E. Brisbane to A. Legun (District Geologist Nelson), pers. comm. 1988.

CAPSULE GEOLOGY

The property is located at 2042 metres elevation on the divide between the head of Hall and Healy Creeks, some 24 kilometres east of the north end of Trout Lake and 80 kilometres southeast of Revelstoke.

Four claims and fractions were staked along a northwesterly strike in 1896 or earlier and acquired under bond by Spokane interests. Work to 1898 included open cuts and a 12 metre crosscut adit. The Jewell Fr. (Lot 3466), Ema Fr. (Lot 3468) and Lucille K (Lot 3465) were Crown-granted to C.T. Porter and associates in 1900. The Frances Jewell claim (Lot 3467) was Crown-granted to L.C. Gilliam and associates in 1901. C.T. Porter is reported to have bonded the property to other interests in 1928 but there is no record of activity.

Leadridge Mining Company, Limited held the property in 1949 along with the Wagner property (082KNW212) on strike to the northwest. Trenching and diamond drilling were carried out on the Jewel.

Mikado Resources Ltd. acquired the Crown-grants in 1985 from the C.T. Porter Estate and other minority interest owners. A joint

CAPSULE GEOLOGY

venture agreement was reached with Turner Energy & Resources Ltd. on several adjacent properties. Trenching and sampling was carried out in 1985.

Paleozoic Lardeau Group metasedimentary and sedimentary rocks form a northwest trending, southwest dipping broad belt northeast of the Kuskanax Batholith. This belt, in part, straddles the northern end of the Kootenay Arc which is comprised of highly deformed sedimentary and volcanic rocks. To the east of the Lardeau Group, Hadrynian and/or Lower Cambrian quartzite of the Hamill Group and Lower Cambrian limestone of the Badshot Formation forms a distinctive sequence of marker horizons that outline major structures in the Kootenay Arc.

A narrow mineralized belt extending in part, from Mount Templeman southeast to Mount Abbott, is comprised of Index Formation phyllites proximal to the contact of underlying Badshot Formation limestone. The Index and Badshot Formation form part of the Paleozoic Lardeau Group. Numerous parallel quartz veins with disseminated and massive galena-sphalerite-pyrite-tetrahedrite mineralization occur in shear/fault/fracture zones. Replacement-type deposits occur in limestone along or near their contact with the adjoining phyllites. Mineralization is typically galena-sphalerite-pyrite. Quartz veins that crosscut the phyllites form replacement-type deposits along the strike of limestone beds which they traversed.

The Jewell property is underlain by deformed northwest striking, southwest dipping carbonaceous phyllite and phyllite schist close to the contact with underlying northwest striking, southwest dipping limestone. The phyllites are part of the Lower Cambrian to Lower Mississippian Index Formation and the limestone, the Lower Cambrian Badshot Formation. Both formations form part of the Paleozoic Lardeau Group.

Samples from an ore dump indicates a quartz vein containing phyllite fragments is mineralized with coarse argentiferous galena, some pyrite, sphalerite and possibly tetrahedrite. The vein is presumed to be related to the southeast extension of the shear/fault zone hosted quartz vein system of the Wagner (082KNW212) and Sheep Creek (082KNW050), 3.5 kilometres and 2.5 kilometres to the northwest respectively.

Indicated reserves at the Jewell zone are 64,846 tonnes grading 41.1 grams per tonne silver, 0.17 grams per tonne gold, 1.09 per cent lead and 9.49 per cent zinc (E. Brisbane to A. Legun (District Geologist, Nelson), personal communication 1988).

Silver Peak Resources Ltd. hold 70 per cent and Golden Arch Resources Ltd. hold 30 per cent of the Abbott (082KNW056) and Wagner (082KNW212) property.

BIBLIOGRAPHY

- EMPR AR 1896-542; *1897-552; 1898-1071,1072; 1900-825,983; 1901-1224;
*1918-K163,K164,K166; 1928-C314,C315; 1949-A193
EMPR EXPL 1985-A38
EMPR OF 1998-10; 2000-22
EMPR PF (082KNW056; 082KNW057; 082KNW212; Regional File)
EMR MIN BULL MR 223 B.C. 52
GSC MEM *161, p. 82
GSC OF 288; 432; 464
GSC SUM RPT 1904, p. 88A
GCNL #180, #207, 1985; #14 (Jan.21), 1999

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/17

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW058**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROMWELL (L.13046)**, TARZAN (I.13048)

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 50 N
LONGITUDE: 117 20 29 W
ELEVATION: 2200 Metres

NORTHING: 5606945
EASTING: 475847

LOCATION ACCURACY: Within 500M

COMMENTS: Cromwell No. 2 vein (Assessment Report 9872).

COMMODITIES: Gold Silver Lead Zinc Copper
Asbestos

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Industrial Min.

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 0100 x 0001 Metres

STRIKE/DIP: 015/74E

TREND/PLUNGE:

COMMENTS: Cromwell No. 2 vein.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Sharon Creek

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Slate
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by the Lower Cambrian to Middle Devonian Lardeau Group consisting of phyllites, slates and quartzites. Several quartz veins parallel the northwest trend and cut across the strike of the enclosing metasediments. Two veins carry gold with minor silver, lead, zinc, and copper values.

The Cromwell No. 2 vein trends 015 and dips 74 degrees east. It ranges 0.15 to 1.2 metres wide and up to 100 metres long.

Mineralization consists of disseminated pyrite and scattered patches of galena and chalcopyrite. A 38 centimetre sample assayed 7.9 grams per tonne gold and 35 grams per tonne silver and a 2.1 metre sample taken 100 metres to the north assayed 2.06 grams per tonne gold and 3.4 grams per tonne silver (Minister of Mines Annual Report 1953).

The Tarzan No. 1 vein, 500 metres to the southwest and with similar mineralization, strikes 040 degrees and dips 55 degrees southeast. It is about 30 metres long and 0.6 metres wide. A 50 centimetre sample assayed 40.1 grams per tonne gold and 68.6 grams per tonne silver (Minister of Mines Annual Report 1953). A 2.5 kilogram grab sample of the shaft dump assayed 11.2 grams per tonne gold (Assessment Report 9872).

About 300 metres north of the Cromwell No. 2 vein, is a 60 metre wide conformable greenstone dyke adjacent to a 10 metre wide section of peridotite consisting of about 90 per cent serpentine.

BIBLIOGRAPHY

EMPR AR 1900-822,823; 1901-1018; 1902-141; 1903-125; 1914-K306-307; 1922-N217; 1923-A233; 1924-B212; 1925-A263,A449; *1953-46,146
EMPR ASS RPT 9069, *9872
EMPR BULL 1 (1932), p. 113; 2 (1914), p. 48
EMPR INDEX 3-193
EMPR OF 1995-25
GSC BULL 193
GSC MAP 235A; 1277A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 703
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161, pp. 45,56,111,118
GSC SUM RPT 1904, p. 87A
GSC OF 288

DATE CODED: 1985/07/24
DATE REVISED: 1986/08/20

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW059**

NATIONAL MINERAL INVENTORY:

NAME(S): **ETHEL**, FRANCIS, FRANCES,
NOEL, MAY DAY, SILVER CROWN,
ESTHER, KEYSTONE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:
LATTITUDE: 50 37 12 N
LONGITUDE: 117 34 58 W
ELEVATION: 2033 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Ethel mine is situated northeast of the summit of Trout Mountain, overlooking Humphries Creek. It is reached by a switchback logging road that connects the property to the settlement of Trout Lake, four kilometres to the northeast.

Underground
MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5607731
EASTING: 458774

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite Pyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
STRIKE/DIP: 130/60E
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Lardeau Undefined Formation

LITHOLOGY: Phyllite
Schist
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Ethel mine is situated northeast of the summit of Trout Mountain, between 1800 and 1900 metres elevation, overlooking Humphries Creek. It is reached by a switchback logging road that connects the property to the settlement of Trout Lake, four kilometres to the northeast.

The Ethel group, comprising the Ethel, Esther, May Day, Frances and Noel claims, was located in 1898 on a silver-lead rich vein lode. In 1902, the property was purchased by a Philadelphia based company and, after lying idle for 4 years, the mine was worked on a small scale resulting in a shipment of 480 sacks of high grade ore to the Trail smelter. Mining continued intermittently until 1918 resulting in a total production of 74 tonnes of ore yielding 377.8 kilograms of silver and 8045 kilograms of lead.

Underground development of the vein system extends over a vertical range of 50 metres and consists of one crosscut adit and seven drift adits - the longest of which is 90 metres. Since that time there has been no mining activity and the Crown granted claims have reverted. In the summer of 1965, the ground was restaked by Rexony Mining Co. Ltd., and a road was built connecting the property to an existing logging road. The workings were mapped and sampled and in June 1966 three holes, totaling 236 metres were drilled. In 1978 Cominco Ltd. staked the surrounding area and conducted detailed geochemical surveys, from 1979 to 1981, across the surrounding terrain. Subsequently there has been no additional development.

The showings at the Ethel mine are a series of closely spaced quartz veins hosted in dark grey phyllites and limestones of the Lardeau Group. A layer of fine grained limestone 15 to 23 metres thick contains the principal vein-lodes, however, some veins extend beyond the limestone into the phyllite. The veins strike 130 to 155 degrees and dip 60 degrees northeast, essentially parallel to the

CAPSULE GEOLOGY

schistosity of the phyllites. The quartz, containing scattered grains of galena, sphalerite, pyrite and tetrahedrite, form lenses up to 46 centimetres thick following the schistosity. They have mostly been mined out, but judging from surface exposures and small underground stopes, they formed en echelon bodies with an average dip of 40 degrees to the northeast. The old workings passed from one lens to the next, giving the appearance of a single continuous vein. Selected samples from the surface, containing sulphides or showing copper stain, assay as much as 2800 grams per tonne silver.

BIBLIOGRAPHY

EMPR AR 1898-1068; 1899-602,686; 1900-825; 1902-140; 1903-125;
1909-118,273; 1910-101; 1913-127; 1914-290,317; 1915-133,446;
1916-201; 1917-164,191; 1918-156; 1966-230
EMPR INDEX 3-195, 196
EMPR PF (Assay Plans, 1965)
GSC MAP 235A
GSC MEM 161-84
N MINER AUG 14,1975

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW060**

NATIONAL MINERAL INVENTORY: 082K11,12 Pb2

NAME(S): **BLUE BELL (L.5707)**, BLUEBELL, TRUE FISSURE

STATUS: Prospect

Underground

MINING DIVISION: Revelstoke

REGIONS: British Columbia

NTS MAP: 082K11W

BC MAP:

LATITUDE: 50 42 36 N

LONGITUDE: 117 29 58 W

ELEVATION: 2000 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Blue Bell claim is located on the east side of Great Northern mountain about 3.2 kilometres northwest of Ferguson. See also True Fissure (082KNW030), Great Northern (082KNW061), St. Elmo (082KNW067), Roadview (082KNW031) and Silver Queen (082KNW150).

UTM ZONE: 11 (NAD 83)

NORTHING: 5617696

EASTING: 464736

COMMODITIES: Lead

Silver

Zinc

Gold

Copper

MINERALS

SIGNIFICANT: Galena

Sphalerite

Tetrahedrite

Chalcopyrite

Pyrite

ASSOCIATED: Quartz

Calcite

Ankerite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

Disseminated

CLASSIFICATION: Epigenetic

Hydrothermal

Skarn

TYPE: I05

Polymetallic veins

Ag-Pb-Zn±Au

DIMENSION:

Metres

K02

Pb-Zn skarn

STRIKE/DIP: 145/40E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Cambrian

Lardeau

Broadview

LITHOLOGY: Phyllite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Blue Bell claim is located on the east side of Great Northern mountain about 3.2 kilometres northwest of Ferguson. It is part of the True Fissure (082KNW030), St. Elmo (082KNW062), Great Northern (082KNW061) and Silver Queen (082KNW150) properties.

The first showing is reported to have been found in 1890 on ground subsequently located as the Great Northern claim. Other discoveries soon followed, and the entire vein system was located before the turn of the century. Small scale exploration and development was carried on by the locators or bondholders for a number of years. The Blue Bell (Lot 5707) was Crown-granted to John Stauber and associates in 1904.

The True Fissure, St. Elmo and Blue Bell Crown-grants and 4 adjacent claims were bonded by G.F. Park and associates of Cincinnati, Ohio, who incorporated The Ohio Mines Development Company, Limited in October 1906. The claims were transferred to The True Fissure Mining and Milling Company, Limited which was incorporated by Park and associates in September 1907. Intermittent exploration and development work was carried out by the company or by lessees until 1930. The Latonia Milling Company was formed by the Park interests to install and operate a mill under agreement with the above company.

New True Fissure Mining & Milling Company, Limited was formed in 1937 to acquire the property; Comara Mining & Milling Company Limited acquired 43 claims in 1945. In 1949 the company holdings were transferred to Columbia Metals Corporation Limited. The Granby Consolidated Mining, Smelting and Power Company, Limited was engaged to carry out exploration work during 1952.

No further development was undertaken until 1966. Exploration work during 1972 included electromagnetic and self potential surveys covering the St. Elmo, Blue Bell, True Fissure and Great Northern claims, 1102 metres of diamond drilling in 54 holes.

Mineralization occurs in quartz veins and skarn in schists and phyllites of the Broadview Formation (Lardeau Group).

MINFILE NUMBER: **082KNW060**

BIBLIOGRAPHY

EMPR AR 1904-295; 1906-138; 1907-93; 1908-100,247; 1914-294-297;
1921-163; 1924-208; 1926-272; 1927-293; 1928-315; 1930-265;
1967-264
EMPR BULL 1, p. 112; *45, pp. 12,36,56,79-85
EMPR GEM 1969-341, 1970-465, 1971-429, 1972-77
EMPR PF (Sullivan, J. (1952): Blue Bell Mine, Assay Plan of Workings;
Starr, C.C. (1925): Report on the True Fissure Mine, Ferguson,
10 p., 1" = 100 ' scale map)
EMR MINES BR OTTAWA RPT 987
EMR MP CORPFILE (The True Fissure Mining and Milling Company,
Limited; True Fissure Mines, Limited; New True Fissure Mining &
Milling Company, Limited; Codan Lead & Zinc Company, Limited;
Comara Mining & Milling Company Limited; Columbia Metals
Corporation Limited, in 082KNW030)
GSC MAP 235A
GSC MEM 161, pp. 70,72
CANMET IR RPT 987
GCNL JULY 27, NOV 15,1972

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/21

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW061**

NATIONAL MINERAL INVENTORY: 082K11,12 Pb2

NAME(S): **GREAT NORTHERN (L.1099)**, HILLSIDE (L.1098), NORTHLAND (L.1100),
NORTHERN LIGHT (L.1101), TRUE FISSURE, GREAT WESTERN FR. (L.1102)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W 082K12E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 42 14 N
LONGITUDE: 117 29 58 W

UTM ZONE: 11 (NAD 83)

ELEVATION: 1820 Metres

NORTHING: 5617016
EASTING: 464732

LOCATION ACCURACY: Within 500M

COMMENTS: Lies immediately south of True Fissure (082KNW030). See also Blue Bell (082KNW060), St. Elmo (082KNW062) and Silver Queen (082KNW150).

COMMODITIES: Lead Silver Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Tetrahedrite
ASSOCIATED: Quartz Calcite Ankerite Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
STRIKE/DIP: J01 325/35E Polymetallic manto Ag-Pb-Zn
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Lardeau Broadview

LITHOLOGY: Phyllite
Graphitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Great Northern is located between elevations of 1650 and 1860 metres on the east side of Great Northern mountain about 3.2 kilometres northwest of Ferguson. The property also includes the True Fissure (082KNW030), Blue Bell (082KNW060), St. Elmo (082KNW062) and Great Northern workings. The Broadview mine is to the southeast, across Broadview Creek.

The first showing is reported to have been found in 1890 on ground subsequently located as the Great Northern claim. Other discoveries soon followed, and the entire vein system was located before the turn of the century. Small scale exploration and development was carried on by the locators or bondholders for a number of years.

The Great Northern claim was bonded to a Montana company in 1896. The Great Northern (Lot 1099), Hillside (Lot 1098), and Great Western Fr. (Lot 1102) was Crown-granted to Hugh McPherson and associates in 1898. Additional work in 1913, 1917, and 1928-30 was largely confined to No. 6 adit. In the 1950's the claims were owned by the D. McPherson Estate.

The True Fissure, St. Elmo and Blue Bell Crown-grants and 4 adjacent claims were bonded by G.F. Park and associates of Cincinnati, Ohio, who incorporated The Ohio Mines Development Company, Limited in October 1906. The claims were transferred to The True Fissure Mining and Milling Company, Limited which was incorporated by Park and associates in September 1907. Intermittent exploration and development work was carried out by the company or by lessees until 1930. The Latonia Milling Company was formed by the Park interests to install and operate a mill under agreement with the above company. A 100 ton-per-day mill was installed in 1930 at the level of the C (No. 3) True Fissure adit. The mill was completed under the terms of the G.F. Park Will although there was no ore available. No further activity was reported on any of the claims until 1937. True Fissure Mines, Limited optioned 22 claims in 1936 but no work was reported.

New True Fissure Mining & Milling Company, Limited was formed in

CAPSULE GEOLOGY

1937 to acquire the property; the Great Northern claim was optioned later in the year. The mill was operated during the winter of 1937-38. Development work was carried out in 1939 and the company ceased operations in 1940. Codan Lead & Zinc Company, Limited shipped ore from the dumps in 1943-44. Comara Mining & Milling Company Limited acquired 43 claims in 1945. The Great Northern workings include six adits.

No further development was undertaken until 1966. Exploration work during 1972 included electromagnetic and self potential surveys covering the St. Elmo, Blue Bell, True Fissure and Great Northern claims, 1102 metres of diamond drilling in 54 holes.

Quartz mineralized with pyrite, galena, sphalerite and tetrahedrite, occur in phyllites and schists of the Upper Paleozoic Lardeau Group. The vein strikes 325 degrees and dips 35 degrees northeast.

BIBLIOGRAPHY

- EMPR AR 1893-1049; 1894-745; 1895-694; 1896-541,561; 1897-545,550;
1898-1065,1069,1190; 1899-602; 1913-127; *1914-295-297, map after
page 320; 1917-191; 1929-337; 1930-266; 1938-E44; 1939-94;
1966-229; 1967-264; 1968-264
- EMPR BC METAL MM00607
- EMPR BULL 1, p. 112; *45, pp. 12,56,79-85
- EMPR GEM 1969-341; 1970-465; 1972-77
- EMPR INDEX 3-198
- EMPR PF (Starr, C.C. (1928): Report of Examination of the Great
Northern Mine; Frith, O.D. (1925): Sketch of Great Northern Mine,
Scale 1" = 100')
- EMR MINES BR OTTAWA RPT 1987
- EMR MP CORPFILE (The True Fissure Mining and Milling Company,
Limited; True Fissure Mines, Limited; New True Fissure Mining &
Milling Company, Limited; Codan Lead & Zinc Company, Limited;
Comara Mining & Milling Company Limited; Columbia Metals
Corporation Limited)
- GSC MAP 235A
- GSC MEM *161, pp. 19,27,75
- CANMET IR 1987 (1946)

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/22

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

electromagnetic and self potential surveys covering the St. Elmo, Blue Bell, True Fissure and Great Northern claims, 1102 metres of diamond drilling in 54 holes.

Quartz-carbonate veins contain sphalerite, galena, tetrahedrite and pyrite. The veins cut phyllites and schists of the Upper Paleozoic Lardeau Group, Broadview Formation. Underground workings total about 40 metres. H. McPherson shipped 6 tonnes of ore in 1899, yielding 19.4 kilograms of silver and 1098 kilograms of lead.

BIBLIOGRAPHY

- EMPR AR 1898-1065,1066,1069; 1899-602,683; 1900-825; 1901-1019;
1903-242,244; 1905-154; 1906-138; 1907-93; 1908-101; 1914-294;
1924-208; 1930-265; 1945-109; 1967-264
EMPR BC METAL MM00631
EMPR BULL 1, p. 112; *45, pp. 79-85
EMPR GEM 1972-77
EMPR INDEX 3-211
EMPR PF (Starr, C.C. (1925): Report on the True Fissure Mine,
Ferguson, 10 p. 1" = 100' Scale map, in 082KNW030)
EMR CANMET RPT 1987
EMR MP CORPFILE (The True Fissure Mining and Milling Company,
Limited; True Fissure Mines, Limited; New True Fissure Mining
& Milling Company, Limited; Codan Lead & Zinc Company, Limited;
Comara Mining & Milling Company Limited; Columbia Metals
Corporation Limited)
GSC MAP 235A
GSC MEM 161, pp. 20,23,28,70,74

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/10

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW063**

NATIONAL MINERAL INVENTORY:

NAME(S): **RED HORSE (L.8718)**, DEL NORTE, COLORADO,
SIR WILFRED, MERIDIAN LUCKY STRIKE,
MOHAWK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:
LATITUDE: 50 47 00 N
LONGITUDE: 117 36 52 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The claims are part of the Meridian property (082KNW064).

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5625911

EASTING: 456684

COMMODITIES: Silver Gold Lead Molybdenum

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite Molybdenite
ASSOCIATED: Quartz Ankerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres
STRIKE/DIP: I05 Polymetallic veins Ag-Pb-Zn±Au
155/70E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Lardeau Broadview

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Red Horse property is part of the Meridian property (082KNW064). The Red Horse claim is situated on Pool Creek 2.4 kilometres upstream from Camborne. The principal vein consists mostly of quartz and has been traced for a distance of 60 metres up the mountain side by a series of open cuts, trenches and an adit. The host rock is phyllite (Broadview Formation of the Lower Paleozoic Lardeau Group) striking 135 degrees, dipping vertically. The most prominent joint set strikes 045 degrees and dips 80 degrees northwesterly; a weaker set dips 15 degrees northwesterly. At the adit, the vein strikes 155 degrees, dips 70 degrees northeast and is divided by a median seam of phyllite into a 2.4-metre wide footwall section and a 1.8-metre wide hangingwall section. Sampling across the hanging wall section assayed trace gold and 20.5 grams per tonne silver. Sampling of the foot wall section assayed 0.7 gram per tonne gold, and 82 grams per tonne silver (Annual Report 1914, page 258).

Westmin Resources Inc. sampled the adit in 1983.

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EMPR PF (Emmens, N.W. (1914): Report on the Mineral Resources of the Lardeau Mining Division, pp. 25-26, in 082KNW General)
GSC MAP 235A
GSC MEM 161, pp. 35,40
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW064**

NATIONAL MINERAL INVENTORY:

NAME(S): **MERIDIAN**, MERIDIAN FR. (L.8713), EVA,
OYSTER, CRITERION, CHOLLA,
RED HORSE, LUCKY JACK, CONMORE,
ST. JOE, IMPERIAL, CAMBORNE GOLD,
LUCKY STRIKE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 47 24 N
LONGITUDE: 117 37 10 W
ELEVATION: 1200 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5626655
EASTING: 456338

LOCATION ACCURACY: Within 500M

COMMENTS: The Meridian property consists of a consolidation of the Eva
(082KNW066), Criterion-Oyster (082KNW065), Cholla (082KNW143), Lucky
Jack (082KNW187), Red Horse (082KNW063) and other claim groups.
The property is situated on the southwest slopes of Lexington
Mountain, northeast of Camborne near the confluence of Pool Creek and
the Incomappleux River.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres

STRIKE/DIP: 105 Polymetallic veins Ag-Pb-Zn±Au
120/70E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Meridian property consists of a consolidation of the Eva (082KNW066), Criterion-Oyster (082KNW065), Cholla (082KNW143), Lucky Jack (082KNW187), Red Horse (082KNW063), Conmore (082KNW047), St. Joe (082KNW046) and Imperial (082KNW186) claim groups. The property is situated on the southwest slopes of Lexington Mountain, northeast of Camborne near the confluence of Pool Creek and the Incomappleux River. The original access to the property was via a horse trail, following the cable tram line beginning at a log bridge crossing the canyon of Pool Creek at Camborne. Later a switchback road was constructed to the Eva workings from flats of the Incomappleux River directly below the mine. The road, trail and mine working are presently overgrown and in total disrepair.

Several gold-bearing quartz veins strike northwest within metasediments of the Broadview Formation of the Lower Paleozoic Lardeau Group. See associated claim groups for details of workings.

Production from the various properties from 1903 to 1941 totalled 88,763 tonnes resulting in 543.9 kilograms of gold and 165.5 kilograms of silver.

Duval Corporation mapped and sampled the old workings in 1968. Madison Oils Limited optioned the property in 1978. Granges Exploration Ltd. optioned the property from Lucky Strike Resources Ltd. in 1987 and conducted surveys and sampling.

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A30,E31,G51; 1936-E49; 1937-A40,E56; 1938-E22; 1939-38,78;

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 714
REPORT: RGEN0100

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EMPR ASS RPT 5172, 7013, 18232, 20054
EMPR BC METAL MM00601
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EMPR INDEX 3-205
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GSC MAP 235A
GSC MEM 161, pp. 35-40
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW064**

MINFILE NUMBER: **082KNW065**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRITERION-OYSTER**, OYSTER (L.5416), CRITERION (L.5417),
MASCOTTE FR. (L.5418), GOLD FLY (L.5421), MERIDIAN
OYSTER-CRITERION, ROSSLAND (L.4775), HIGHLAND MARY (L.5171),
GOLD BUG FR. (L.5419), LUCKY STRIKE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 47 37 N
LONGITUDE: 117 37 38 W
ELEVATION: 1233 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5627062
EASTING: 455793

LOCATION ACCURACY: Within 500M

COMMENTS: The Criterion-Oyster claim group is part of the Meridian
property (082KNW064) and adjoins the Eva (082KNW066) on the
southeast.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Gold Pyrite Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres

STRIKE/DIP: 135/80E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Graphitic Schist
Chlorite Mica Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Criterion-Oyster claim group is part of the Meridian property (082KNW064) and adjoins the Eva (082KNW066) on the southeast. In addition to a number of surface cuts on these claims, a total of 780 metres of underground development work has been done mostly on two levels following the Criterion vein. This vein is sub-parallel and appears to converge with the 'A' vein of the Eva mine. The ore was transported from the mine to the mill by a 1066-metre-long aerial tram; the mill at Camborne was operated by water power taken from Pool Creek below the intake of the Eva flume.

The Criterion vein is a well defined and persistent structure that strikes 120 degrees and dips 70 degrees northeast. No. 1 level develops the vein 30 metres below its surface outcrop following a continuous ore-shoot 300 metres long, averaging 1.5 metres wide, from which about 12,700 tonnes of ore was extracted. The vein is partly the result of fissure filling with quartz and replacement of the brecciated country rock consisting of carbonaceous phyllite. In places the vein is solid quartz but elsewhere it is comprised of a mass of reticulating quartz veinlets with phyllite between. It has been suggested that the carbon in the phyllite has acted as a precipitating agent for the gold contained in the mineral-bearing solutions - the highest grade of gold occurring around the carbonaceous inclusions. Underlying rocks are assigned to the Broadview Formation of the Lower Paleozoic Lardeau Group

The Criterion vein is cut by a mineralized fault striking 043 degrees known as the 'galena vein'. Where it cuts the Criterion it narrows from more than 1 to 0.3 metre wide, retaining well defined gouge seams along slickensided walls. This younger vein has been explored for 106 metres by drifting on the No. 1 level to a point where it is finally cut off by a shallow south-dipping east-west fault. At 160 metres in the tunnel another quartz vein, 2.4 metres

CAPSULE GEOLOGY

wide - similar to the 'A' vein at Eva, was encountered. The No. 2 tunnel, 53 metres below the upper level, was driven 137 metres to intersect the Criterion vein, however, the continuation of the ore-shoot, mined out on the No. 1 level, was not encountered.

The Oyster vein outcrops 90 metres north of the Criterion. It strikes 145 degrees, dips 65 degrees northeast and extends onto the Lucky Jack (082KNW187) property to the southeast. The only development on the vein is a series of trenches.

See Meridian for 1904 production (Great Northern Mines Ltd.) record (9164 tonnes, resulting in 50,169 grams of gold and 18,662 grams of silver).

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1932-181; 1933-213; 1934-E34; 1935-E31,G51; 1968-265
EMPR ASS RPT 5172, 7013, 18232
EMPR BC METAL MM00601
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EMPR INDEX 3-208
EMPR MR MAP 2 (1928)
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No. 1 & 2 Tunnels, 1"= 40' (date unknown); McDougall, B.W.W.
(1934): Plan of Assays of Criterion No. 2, 1"= 50'; McDougall,
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GSC MAP 235A
GSC MEM 161, pp. 36,38
GSC OF 288; 432; 464
GSC SUM RPT 1903, p. 60A

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW066**

NATIONAL MINERAL INVENTORY:

NAME(S): **EVA (L.5172)**, MERIDIAN IRON DOLLAR (L.5173),
 LAST CHANCE (L.5174), STOCKHOLM (L.6934), WEDGE FR. (L.5176),
 STOCKHOLM FR. (L.5424), HIGHLAND MARY (L.5171), LUCKY STRIKE

STATUS: Past Producer	Underground	MINING DIVISION: Revelstoke
REGIONS: British Columbia		
NTS MAP: 082K13E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 47 48 N		NORTHING: 5627403
LONGITUDE: 117 37 46 W		EASTING: 455640
ELEVATION: 1200 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The Eva is part of the Meridian property (082KNW064).		

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite	Galena	Sphalerite
ASSOCIATED: Quartz		
ALTERATION: Ankerite	Siderite	
MINERALIZATION AGE: Unknown		

DEPOSIT

CHARACTER: Vein			
CLASSIFICATION: Epigenetic	Hydrothermal		
TYPE: I01 Au-quartz veins			
DIMENSION: Metres		105 Polymetallic veins Ag-Pb-Zn±Au	
		STRIKE/DIP: 135/80E	TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
 Diabase
 Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay	
METAMORPHIC TYPE: Regional	RELATIONSHIP:
	GRADE: Greenschist

CAPSULE GEOLOGY

The Eva is part of the Meridian property (082KNW064). The first discovery of gold in the district was on the Eva claim (082KNW066). In 1900 an inexperienced prospector searching for silver-lead ores found what is now known as the Eva lode. Assays showed high gold values and a staking rush followed. By 1902 a group of 21 claims was assembled forming the nucleus of the property and much surface work together with more than 490 metres of lineal underground development was completed by Imperial Development Syndicate Ltd. At the end of mine operations in 1908 development comprised 945 metres of drifting on seven levels, 610 metres of crosscuts, 115 metres of raises and 23 metres of shaft sinking.

The Eva mine explores and develops two veins lying in and along two fault planes connected by numerous cross veins and stringers. The direction of the veins is about 120 degrees, cutting the host rocks at a low angle. On the No. 6 level the confining faults are 53 metres apart and dip away from each other. Since the veins follow these faults and converge upward, they are only 27 metres apart on the No. 2 level (150 metres above).

The country rocks (Broadview Formation of the Lower Paleozoic Lardeau Group) are spotted phyllite cut by yellow-weathering schistose diabase. The veins are quartz accompanied by siderite and a small amount of sulphides and some free gold. The sulphides consist of pyrite, a little galena and some sphalerite. The veins vary in width from a few inches to several metres. Gouge along the faults has evidently confined the ore-bearing solution within these planes and the crushed country rock between them.

Production from the Eva from 1903 to 1908 totalled 28,718 tonnes resulting in 235.2 kilograms of gold and 30.8 kilograms of silver. See Meridian for production details.

Duval Corporation mapped and sampled the old workings in 1968. Madison Oils Limited optioned the property in 1978. Granges Exploration Ltd. optioned the property from Lucky Strike Resources

CAPSULE GEOLOGY

Ltd. in 1987 and conducted surveys and sampling. In 1989, Keloza Resources Inc. drilled 6 holes, totalling 639.5 metres, and conducted a geophysical survey on the Stockholm claim.

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EMPR ASS RPT 5172, 7013, *18232, *20054
EMPR BC METAL MM00601
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EMPR INDEX 3-196
EMPR MR MAP 2 (1928)
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(1933): Plan of Criterion Workings with Assays, 1"= 50'; Criterion
No. 1 & 2 Tunnels, 1"= 40' (date unknown); McDougall, B.W.W.
(1934): Plan of Assays of Criterion No. 2, 1"= 50'; McDougall,
B.W.W. (1934): Plan of Assays of Rosslund Tunnel & Criterion No.
1, 1" = 50'; Emmens, N.W. (1934): Report on Meridian Mine, in
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GSC MAP 235A
GSC MEM 161, pp. 19,35-38
GSC OF 288; 432; 464
GSC SUM RPT 1903, p. 58A
GCNL #195(Oct.11), 1978
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW067**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOSS AND GARVEY**, FERN AND EVELYN, FARMSIDE,
PLATEAU, EAST RIVER, CAB,
DOT, JAB, MABEL,
FROST, FOX, SCOT,
MOLY, FOSS AND GARVIE

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 49 N
LONGITUDE: 117 10 55 W
ELEVATION: 766 Metres

NORTHING: 5623554
EASTING: 487168

LOCATION ACCURACY: Within 500M

COMMENTS: The location and elevation are for a diamond drillhole (Assessment Report 7848, page 4).

COMMODITIES: Molybdenum Tungsten Gold Zinc Lead
Copper Bismuth Antimony

MINERALS

SIGNIFICANT: Pyrite Molybdenite Scheelite Sphalerite Pyrrhotite
Galena Tetrahedrite Chalcopyrite Bismuthinite Stibnite

ASSOCIATED: Quartz
ALTERATION: Quartz Chlorite Sericite Epidote Biotite
Calcite

ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork Vein Discordant Disseminated
CLASSIFICATION: Epigenetic Porphyry Skarn

TYPE: L05 Porphyry Mo (Low F- type)

DIMENSION: 800 x 300 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Veins occur in a uniform joint pattern. Some joints are flat lying, others are close to vertical.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian Hamill Marsh Adams

LITHOLOGY: Biotite Schist
Quartz Monzonite
Phyllite
Quartzite
Hornfels
Skarn
Diorite

HOSTROCK COMMENTS: Mineralized quartz veins cut all rock types.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

METAMORPHIC TYPE: Contact Regional

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

2.5000

Grams per tonne

COMMENTS: The gold value is an average of two assay values.

REFERENCE: Assessment Report 16096, page 6.

CAPSULE GEOLOGY

The Foss and Garvey occurrence is situated in the Duncan River Valley, on the east side of the Duncan River, 125 kilometres north of Kaslo. The occurrence area is located near the confluence of Duncan River and Stevens Creek.

About 1917, the claims were staked by Foss and Garvey. In 1926, the property was restaked by Foss and Tapanila as the Fern and Evelyn claims. During 1969, Bryant Mines Limited completed 549 metres of

CAPSULE GEOLOGY

trenching and open cuts. During 1970, Noranda Exploration Co. Ltd. completed geological mapping, a magnetometer survey, a geochemical soil survey (504 samples) and drilled three diamond drill holes (425 metres). In 1979, the property (Fox claims) was optioned from Sherlynn Mines Ltd. by Amax of Canada Limited. They undertook geological mapping of the property, conducted soil and rock sampling, an induced polarization survey and drilled one diamond drill hole (435 metres). This core contained a 60 metre section containing an average of 0.07 per cent molybdenite (Assessment Report 7848, page 5). During 1984, Big I Developments Ltd. conducted a rock trenching program and in 1986 completed one diamond drill hole (103.3 metres). In 1993, they conducted an electromagnetometer survey and collected five grab samples for analysis.

The occurrence lies on the western margin of the Purcell anticlinorium, a north plunging structure developed in low-grade metamorphic, Upper Proterozoic to Lower Cambrian strata.

The occurrence area is underlain by phyllite, biotite schist, quartzite, hornfels and garnet-epidote skarns assigned to the Lower Cambrian Marsh Adams Formation (Hamill Group). These have been intruded by foliated diorite and leucocratic Cretaceous diorite.

Drilling done by Amax of Canada Ltd. (1979) encountered weak molybdenite mineralization along with trace amounts of scheelite and sphalerite in quartz veins. The veins were encountered on average, at three veins per metre and in some intervals at seven veins per metre. These veins ranged from two millimetres to one metre in width. Molybdenite occurs as scattered rosettes and stringers in approximately ten percent of the quartz veins and in trace amounts disseminated in skarn and quartz monzonite dikes. Pyrite and pyrrhotite both average less than two per cent in the core.

Scattered grains of scheelite occur along dry fractures in the hornfels and in quartz pyrite veins, but generally only in trace amounts. Assay results from drill core yielded gold values of two and three grams per tonne (Assessment Report 16096, page 6).

Mineralization in quartz veins and skarns consists of pyrite, molybdenite, scheelite, sphalerite, pyrrhotite, galena, tetrahedrite, chalcopyrite, bismuthinite and stibnite. Alteration zones next to the quartz veins are characterized by quartz, chlorite, sericite, epidote, secondary biotite and calcite.

The most significant structural feature related to mineralization is uniform jointing. The joints are flat lying and close to vertical (strikes of 70 to 80 degrees, dipping steeply south and strikes of 335 degrees, vertical dip). The veins occupy joints in the schists and also parallel bedding. They produce blocks in a quartz monzonite stock and contain molybdenite bearing quartz veins in and peripheral to the stock. They cover an area of 800 by 300 metres.

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EMPR BULL 45
EMPR EXPL 1979-94
EMPR GEM 1969-336, 1970-463
EM GEOFILE 2003-2
GSC MEM 161, pp. 21,34
GSC OF 288

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/15

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The Wigwam property is located on the north flank of the Akolkolex Valley, 19 kilometres southeast of Revelstoke.

The occurrence has been known since 1915, owned by A. Kittan and J. Lewis. In 1921, the property was owned by J. Kirkpatrick and R. Armstrong. Wigwam Mining Co. explored the property in 1925, conducting 1778 metres of diamond drilling in 39 holes, 598 metres of underground development and open cutting. The Schlumberger Electrical Prospecting Co. surveyed the property in 1928. Northwestern Explorations Ltd. (Kennco) optioned the property in 1953, conducting mapping and sampling. Cominco Explorations Ltd. mapped, sampled and trenched in 1960-61. In 1968, Parmac Mines Ltd. built 700 metres of road, drilled 381 metres in 5 holes and mapped and sampled. Canex Aerial Exploration Ltd. (Placer Dome) optioned the property in 1969 and conducted geological mapping, sampling, road building and diamond drilling. In 1977, Cyprus Anvil Mining Corp. conducted topographic mapping and road building on the Parmac claim for Parmac Mines Ltd. In the same year, Metallgesellschaft Canada Ltd. performed a geological study of 1.6 square kilometres north of the Akolkolex River. In 1981 Parmac drilled 684 metres in 15 diamond drill holes and in 1984 Parmac conducted a magnetometer survey.

A total of 4100 metres of drilling in 56 holes has been completed on the property. Resources are indicated at 632,814 tonnes grading 2.14 per cent lead and 3.54 per cent zinc (Assessment Report 10354). A total of 7,694,028 tonnes of inferred ore grading about the same grade as the indicated ore is estimated (Assessment Report 10354). This resource is also reported (about 1969) in a Parmac Mine Ltd., Prospectus, June 1972 (EMR Mineral Bulletin MR 223, B.C. 62). Drill intercepts average about 2 grams per tonne silver, with values up to 111.4 grams per tonne silver over 13 metres.

In a report by T.T. Tough (1970), resources were indicated at 2,944,383 tonnes grading 2.33 per cent lead and 3.93 per cent zinc, with additional inferred at 5,081,091 tonnes grading the same (Assessment Report 14070).

The area is underlain by Hadrynian Hamill Group quartzite and limestone; Lower Paleozoic Mohican Formation phyllite and limestone; Lower Cambrian Badshot Formation marble, limestone and argillite; and Index Formation phyllite.

Mineralization consists of massive and disseminated pyrrhotite, pyrite, sphalerite, galena, and minor chalcopyrite. Other minerals encountered in drilling include fluorite, graphite, magnetite, smithsonite, gypsum, cerussite and native sulphur. Also present are dipside, andalusite and sericite. The mineralization is within quartzites and carbonates. A total of 34 showings is exposed along a dip length of 1460 metres between 730 and 1340 metres elevation.

Sulphide bearing horizons are lensoid, varying from 1 millimetre to 6 metres in thickness, the longest being 700 metres in length. Zone 'A' measures 49 x 31 x 1.7 metres and contains a reasonably assured tonnage of 6800 tonnes with a grade of 2.06 grams per tonne silver, 2.93 per cent lead and 5.50 per cent zinc. Zone 'B' measures 183 x 61 x 5.7 metres and contains a reasonably assured tonnage of 169,644 tonnes with a grade of 1.7 grams per tonne silver, 2.62 per cent lead and 3.48 per cent zinc. Zone 'C' measures 46 x 31 x 2.1 metres and contains a reasonably assured tonnage of 7800 tonnes with a grade of 4.1 grams per tonne silver, 3.01 per cent lead and 2.91 per cent zinc (Assessment Report 10354).

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1927-290; 1928-303; 1929-334; 1930-261; 1931-151; 1960-86;
1961-84; 1968-264
EMPR ASS RPT 6240,*6462, *10354, *14070, 17099
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EMPR EXPL 1977-E71; 1985-C84
EMPR GEM 1969-339
EMPR OF 1992-16; 2000-22
EMPR PF (Starr, C.C. (1933): Report of Preliminary Examination of the
Wigwam Mine, 11 p., assay certificate (1931), survey map 1"=100',
survey of claims map 1"=1000', workings and assays 1"=30')
EMR MIN BULL MR 223 (Parmac Mining Ltd., Prospectus, June 1972) B.C.
62
EMR MP CORPFILE (Parmac Mines Ltd.)
GSC MAP 1929-85, 235A
GSC MEM 161, pp. 25, 101
CIM Special Volume 8, p. 243
CMH 1972-73
GCNL July 28, 1972; #205(Oct.27), #238(Dec.14), 1981; #195(Oct.9),
1997
N MINER Sept.17, 1981

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 723
REPORT: RGEN0100

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PR REL Orphan Boy Resources Inc., August 7, 2002
Thompson (1972): PhD Thesis, Queens University
WWW <http://www.richriver.bc.ca/>; <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/23

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW069**

NATIONAL MINERAL INVENTORY: 082K13 Ag1

NAME(S): **TEDDY GLACIER**, RITCHIE, RAMBLER-CARIBOO,
BLACKHEAD, MARGARET, MARY JANE,
BELL NO. 14, BIG SHOWING, DUNBAR

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E 082K13W
BC MAP:
LATITUDE: 50 52 05 N
LONGITUDE: 117 44 52 W
ELEVATION: 2268 Metres
LOCATION ACCURACY: Within 500M

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5635419
EASTING: 447380

COMMENTS: Location of upper adit on the eastern slopes of Mount McKinnon,
near the headwaters of a major tributary of Stephney Creek, 12
kilometres north of the Northeast Arm of Upper Arrow Lake, 38
kilometres east-southeast of Revelstoke (Assessment Report 546).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Tetrahedrite
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 163/80E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Jowett	
Cambrian	Lardeau	Index	

LITHOLOGY: Limy Phyllite
Carbonaceous Phyllite
Limestone
Greenstone Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: TEDDY GLACIER

REPORT ON: Y

CATEGORY: Combined
QUANTITY: 44216 Tonnes
COMMODITY

Silver	161.1400	Grams per tonne
Gold	4.4600	Grams per tonne
Lead	7.9000	Per cent
Zinc	6.8000	Per cent

YEAR: 1964

COMMENTS: Probable and inferred reserves.
REFERENCE: Sunshine Lardeau Mining Ltd. 1964 Annual Report.

CAPSULE GEOLOGY

The Teddy Glacier property is located at 2200 metres elevation on Mount McKinnon, at the head of a tributary of Stephany Creek, 16 kilometres north of Beaton. Access is 30 kilometres by road from Beaton via the main Incomappleux River and Sable Creek roads.

The property was staked in 1924 by G. Ritchie and G. Edge. High grade float strewn for 300 metres downslope led these prospectors to the mineral occurrences at the foot of the receding 'Teddy' glacier.

Teddy Glacier Mines, Ltd. was incorporated in 1924 by F.R. Blockberger and associates to acquire the important Rambler-Cariboo, Blackhead, Margaret and Mary Jane claims. A trail was opened to the property in 1925, and in late 1926 a crosscut adit was begun just below the main showing. The adit was advanced to the vein during 1927 and then work stopped. In 1929 the Bush and McCulloch

CAPSULE GEOLOGY

interests provided funds for extending the crosscut to a second vein. A shipment of 5 tonnes of ore was made at this time yielding 2302 grams of silver, 124 grams of gold, 855 kilograms of lead and 1351 kilograms of zinc.

No further activity was reported until a syndicate, financed by Mines Selection Trust of London, began extensive development work in 1934. A considerable amount of money was spent on equipment, trails and camp buildings. Also, at this time, about 500 metres of drifting and crosscutting was done in the upper adit. In 1935, a lower adit, begun 55 metres below the upper adit, was driven 18 metres then abandoned because the upper level results were not encouraging.

The claims were allowed to lapse in 1942. The central claims of the group, covering the main showings, were then restaked in 1942 by A.D. Oakley who subsequently sold controlling interest to A.M. Richmond representing American Lead-Silver Mines Ltd. Richmond did a detailed re-evaluation of the property. The property was optioned to Columbia Metals Corporation Ltd. in 1952. However, no activity other than road building was reported and the option was abandoned.

In 1959 the property was acquired under joint ownership by Sunshine Lardeau Mines Ltd., Maralgo Mines Ltd. and Magnum Consolidated Mining Co. Ltd. - an indirect interest was secured by Transcontinental Resources Ltd. Work by this consortium during 1963 included geological mapping, sampling of the underground workings and 150 metres of diamond drilling in six holes. Road construction in 1964 disclosed new showings on the Bell No. 14 claim, located 900 metres southeast of the main workings. However, a drill program, totaling 660 metres, was somewhat discouraging and did not establish the continuity of the ore zones. Diamond drilling was done in 1980 and an airborne geophysical survey was done in 1987. The property was held by K-2 Resources Inc. (formerly Sunshine Columbia Resources Limited) in 1987.

Lower Cambrian and younger Lardeau Group metasedimentary and sedimentary rocks form a northwest trending broad belt northeast of the Kuskanax batholith. This belt, in part, straddles the northern end of the Kootenay Arc.

The Teddy Glacier occurrence is predominantly underlain by complexly folded and sheared limy and carbonaceous phyllites, grits and limestone of the Lardeau Group (Jowett and Index formations). Regional structures trend northwest, with a northwest trending section of the Finkle Synform axis crossing the northeast corner of the area. There are however a number of lineations and fold axes mapped with an easterly vergence. The general strike of the phyllites are 315 degrees with steep dips to the northeast.

The most important mineralization at Teddy Glacier is found in quartz veins in two fracture zones that cut obliquely across limy and carbonaceous phyllites. Several greenstone dykes, generally narrow in width, are observed near the veins. The East vein is in the more easterly fracture and strikes approximately 350 degrees. The widths of the vein vary from a few centimetres to 1.2 metres. The West vein, to the west of the East vein, strikes 343 degrees and is similarly mineralized. The East and West veins merge in the southeast to form the "Big Showing". This showing comprises a large body of quartz roughly 9 metres long carrying bodies of coarse sulphides up to 1.5 metres wide. Assay results across 4.9 metres at the widest point on the vein yielded 8.9 grams per tonne gold, 280 grams per tonne silver, 12.9 per cent lead and 7.1 per cent zinc (Richmond, 1949). The Dunbar vein is 90 to 300 metres to the northwest and is in the same structure that hosts the West vein. Assay results on the Dunbar vein across 0.7 metre returned 6.9 grams per tonne gold, 840 grams per tonne silver, 34.0 per cent lead and 2.8 per cent zinc (Richmond, 1949).

There are numerous other quartz veins on the property which strike in various directions, but most frequently at right angles to the strike of the stratigraphy. Many of these veins connect with the main veins (East and West) and pinch out a short distance away from them. Mineralization in these veins is quite irregular, but are locally well mineralized near their junctions with the main veins.

The sulphides occur as masses and bunches of almost clean (70-80 per cent) galena, pyrite, sphalerite and minor chalcopryrite in quartz gangue and, less frequently, as intimately intermixed fine grained sulphides in narrow lenses in quartz. Tetrahedrite occurs as small inclusions in the galena. In most of the ore, silver is closely associated with galena and gold with pyrite (~29 grams of gold per tonne of pyrite). The wall rocks on both the foot and hanging wall sides of the orebodies are hard, competent limy-quartzitic sedimentary rocks that have been silicified, fractured and faulted during folding, and to a minor extent after sulphide mineralization.

CAPSULE GEOLOGY

Probable and inferred reserves at Teddy Glacier are 44,216 tonnes grading 161.1 grams per tonne silver, 4.4 grams per tonne gold, 7.9 per cent lead and 6.8 per cent zinc (Sunshine Lardeau Mining Ltd. 1964 Annual Report).

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EMPR AR 1924-B206-B207; *1925-A262-A263; 1926-A271,A272; 1927-C291, C292,C405; 1928-C318; 1929-C285,C339,C340; 1930-A261,A262; 1934-A30; 1935-E21-E24,G51; 1952-A183; 1963-80; 1964-131; 1965-197
EMPR ASS RPT *546, 10421, 16021, 16792
EMPR BC METAL MM00639
EMPR BULL 1 (1932), p. 112; 2 (1914)
EMPR INDEX 3-216
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1998-10
EMPR PF (*Richmond, A.M. (1949): Report on the Teddy Glacier Mining Property)
EMR MIN BULL MR 223 B.C. 61
EMR MP CORPFILE (Teddy Glacier Mines Limited; American Lead Silver Mines, Limited; Columinda Metals Corporation Limited; Transcontinental Resources Limited; Sunshine Lardeau Mines, Limited; Sunshine Columbia Resources Limited)
GSC MEM 161
GSC OF 288; 432; 464
GSC SUM RPT 1921 Part A, pp. 107-110
CANMET IR 462; 2950
GCNL #149(Aug.1), #56(Mar.19), 1980
V STOCKWATCH Dec.9, 1987 (K-2 Resources Inc.)

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 727
REPORT: RGEN0100

MINFILE NUMBER: **082KNW070**

NATIONAL MINERAL INVENTORY: 082K13 Pb2

NAME(S): **VIMY RIDGE**, BELL

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 52 00 N
LONGITUDE: 117 43 58 W
ELEVATION: 2600 Metres

NORTHING: 5635254
EASTING: 448434

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

VEINS WELL MINERALIZED WITH GALENA, SPHALERITE, AND CHALCOPYRITE CUT A LENS OF LIMESTONE WHICH IS UP TO A FEW FEET THICK. MINERALIZED LIMESTONE IN TWO OF THE TRENCHES IS NEAR THE CREST OF A FOLD.

BIBLIOGRAPHY

EMPR AR 1964-131, 1965-197
EMPR BULL 45
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW070**

MINFILE NUMBER: **082KNW071**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEAD STAR, SANDI**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 51 44 N
LONGITUDE: 117 41 25 W
ELEVATION: 1480 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5634731
EASTING: 451420

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite Chalcopyrite
ASSOCIATED: Quartz Ankerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 145/50E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Graphitic Schist
Chloritic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Lead Star is located south of Stephney Creek, a tributary of Sable Creek. It lies north of the Burniere (082KNW072). Sulphides (galena, sphalerite, tetrahedrite, pyrite and chalcopyrite) occur in quartz veins sometimes accompanied by ankerite. The veins lie on top of graphitic schists and black gouge material and are overlain by carbonated chlorite schists and dark grey schists (Lower Paleozoic Lardeau Group). A sample of ore assayed 14 grams per tonne gold, 504 grams per tonne silver, 30.4 per cent lead, 2.65 per cent copper and 28.1 per cent zinc (Annual Report 1925, page 260). In 1930, 12 tonnes produced 19,315 grams of silver, 31 grams of gold, 3104 kilograms of lead and 1263 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR *1925-260; 1926-271; 1928-318; 1929-340; 1930-230,261
EMPR ASS RPT 17809, 17911
EMPR BC METAL MM00616
EMPR INDEX 3-203
GSC MAP 235A
GSC MEM 161, pp. 27,92,113

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/10

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW072**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURNIERE (L.4198)**, BODMIN, ST. MABYN
BURNIERE 1 (L.4198), BURNIERE 2 (L.4199), COPPER KING

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:
LATITUDE: 50 51 02 N
LONGITUDE: 117 41 29 W
ELEVATION: 1967 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5633434
EASTING: 451330

COMMODITIES: Gold Silver Lead Copper

MINERALS

SIGNIFICANT: Tetrahedrite Chalcopyrite Galena Gold
ASSOCIATED: Quartz Mariposite Fuchsite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres
STRIKE/DIP: 105 Polymetallic veins Ag-Pb-Zn±Au
300/80S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Greenstone Dike
Phyllite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Burniere (Lot 4198) is located near the headwaters of Scott Creek, on the east slopes of Mount McKinnon (Comaplix Mountain). Free Gold, galena, chalcopyrite and tetrahedrite occur in a white quartz vein, up to 1.5 metres wide, striking 300 degrees, dipping 80 degrees southwest. The vein cuts a greenstone dike which has been altered to rusty weathering carbonate rock and contains green chromium mica. The dike occurs in phyllites of the Lardeau Group. Gold tends to be concentrated on fracture surfaces associated with the chromium mica. Faults cut the vein, which has been traced for 120 metres.

Grid Resources Ltd. investigated the property in 1983. An 80-centimetre sample assayed 67.5 grams per tonne gold (Assessment Report 12332).

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EMPR AR 1898-1064; 1899-676; 1906-140; 1907-94; 1909-104; 1910-95;
1911-129; 1914-248; 1916-194; 1918-190; 1919-140,151; 1920-128;
1925-261
EMPR ASS RPT *12332
EMPR PF (Emmens, N.W. (1914): Report on the Mineral Resources of the
Lardeau Mining Division, pp. 8-9, in 082KNW General)
GSC MAP 235A
GSC MEM *161, pp. 23,36,40,120
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/15

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW073**

NATIONAL MINERAL INVENTORY:

NAME(S): **VICTORIA (L.13479)**, JOKER (L.13478), BLUE JAY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 47 49 N
LONGITUDE: 117 25 26 W
ELEVATION: 1920 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5627330
EASTING: 470126

LOCATION ACCURACY: Within 500M

COMMENTS: Location is for the Victoria (Lot 13479) and Joker (Lot 13478) boundary (Minister of Mines Annual Report 1928, page 309).

COMMODITIES: Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Schist
Phyllite
Quartzite
Slate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Victoria area is underlain by limestone of the Lower Cambrian Badshot Formation and metasediments of the Cambrian to Devonian Index Formation (Lardeau Group) consisting of schist, phyllite, quartzite, slate and limestone.

Approximately parallel to the Blue Jay replacement-type deposit (82KNW079), and only a few hundred metres southwest is a polymetallic vein developed by a tunnel and some opencuts for a total length of 76 metres. These workings are in the northeast corner of the Victoria Crown grant (Lot 13479) and the southwest corner of the Joker Crown grant (Lot 13478).

This vein, which is conformable to the foliation of the enclosing schist, contains some fragmental, irregular mineralization consisting chiefly of galena, with some pyrite and chalcopyrite, associated with quartz.

The Victoria and Joker were historically part of the Blue Jay group. Please refer to the Blue Jay for details of the property history.

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EMPR AR *1928-C309
EMPR ASS RPT 11979, 14063, 17651, 18844, 18845, 22917
EM GEOFILE 2003-2
EM OF 2000-22
GSC OF 288; 432
GSC MAP 235A
GSC MEM 161

DATE CODED: 2003/03/07
DATE REVISED: 2003/03/07

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REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 731
REPORT: RGEN0100

MINFILE NUMBER: **082KNW074**

NATIONAL MINERAL INVENTORY:

NAME(S): **MORNING STAR**, ARGENTA

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 49 42 N
LONGITUDE: 117 33 40 W
ELEVATION: 1920 Metres

NORTHING: 5630885
EASTING: 460482

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Ankerite Galena Tetrahedrite Azurite Sphalerite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NUMEROUS IRREGULAR QUARTZ VEINS MINERALIZED IN SPOTS WITH SULPHIDES AND CARRYING SMALL AMOUNTS OF ANKERITE, CUT CARBONATE ROCK CONTAINING MUCH DISSEMINATED GREEN CHROMIUM MICA. SHEARING HAS TAKEN PLACE ALONG THE VEINS AND THE CARBONATE WALLROCK HAS BEEN CONVERTED TO GREY CALC-SCHIST. WITHIN THE CARBONATE ROCK ARE AT LEAST 2 BANDS OF UNALTERED CHLORITE SCHIST.

BIBLIOGRAPHY

EMPR AR 1910-248; 1914-K267,K248
GSC MAP 235A
GSC MEM 161-58,121

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW074**

MINFILE NUMBER: **082KNW075**

NATIONAL MINERAL INVENTORY:

NAME(S): **ASBESTOS, SPROAT, IXL,**
SIDMOUTH, SPROAT MOUNTAIN, LAUTHER

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082K13W
BC MAP:

MINING DIVISION: Revelstoke

LATITUDE: 50 45 10 N
LONGITUDE: 117 56 04 W
ELEVATION: 1260 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5622750
EASTING: 434083

LOCATION ACCURACY: Within 500M

COMMENTS: Located on western slope of Mount Sproat, 38 kilometres southwest of Revelstoke (Open File 1988-19).

COMMODITIES: Asbestos Talc Magnesite Manganese

MINERALS

SIGNIFICANT: Asbestos Antigorite Chrysotile Talc Magnesite

ASSOCIATED: Manganite
Carbonate Chlorite Magnetite Actinolite Olivine
Calcite

ALTERATION: Serpentine Talc

ALTERATION TYPE: Serpentin'zn Talc

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Metamorphic Hydrothermal Epigenetic Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos M07 Ultramafic-hosted talc-magnesite
DIMENSION: 15 x 6 x 2 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Largest talc zone.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Undefined Formation	
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Talc Schist
Serpentinized Dike
Limestone
Peridotite
Pyroxenite
Talc Carbonate Schist
Talc Actinolite Schist
Quartzite
Schist
Phyllite

HOSTROCK COMMENTS: Lardeau Group ranges from Cambrian to possibly Mississippian in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay

INVENTORY

ORE ZONE: PIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab

<u>COMMODITY</u>	<u>GRADE</u>	
Magnesite	25.0000	Per cent
Talc	50.0000	Per cent

COMMENTS: Talc is 40 to 60 per cent.
REFERENCE: Open File 1988-19, pages 21-23.

CAPSULE GEOLOGY

The Asbestos deposit has been known since 1921 and a test shipment of asbestos fibre was made in 1928. Talc and asbestos occur in a serpentine altered ultrabasic dyke (peridotite or pyroxenite), 270 metres wide and 400 metres long, which strikes north and intrudes Cambrian to Mississippian (?) Lardeau Group grey quartzite, phyllite, slate and schist. The ultrabasic dyke is situated near the base of the Lardeau Group, just above underlying limestone of the Badshot Formation; it is discordant

CAPSULE GEOLOGY

to the metasediments in the vicinity of the workings, but becomes concordant to the northeast (Property File - Purdie, J.J., 1953).

The dyke forms two parallel bluffs; the western bluff exposes talc and serpentine in contact with limestone. To the southwest, the gradation can be seen from talc-actinolite schists to mixed schists to interbedded argillites and limestone. The eastern bluff-forming serpentine exposure is also in contact with metasediments, but is barren of talc.

In general, the dyke is mostly composed of serpentine in its central core, while the outer edges are altered to talc-carbonate schist; in narrow portions the serpentine is absent and the entire width is talc-schist. The serpentine portion is mostly composed of antigorite with magnetite and olivine remnants and minor calcite and chrysotile cross-fibre veinlets. The talc schist is greenish white to dark grey, and greyish white when pulverized. The talc contains many crystals and veinlets of magnesite, which are weathered out on the surface.

The largest zone of talc is at the bottom of a pit, 6.0 metres wide by 15 metres long by 1.8 metres deep, within grey talc schist. This talc is fine-grained, micaceous and dark and contains coarse-grained magnesite and granular magnetite.

Manganese mineralization occurs in quartz stringers that cut massive quartzite. Assays are up to 33 per cent manganese (Newmarch, 1942).

X-rays diffraction analysis of two grab samples by the Ministry of Energy, Mines and Petroleum Resources in 1986, showed the talc to be composed of 40 to 60 per cent talc, up to 25 per cent magnesite, 5 to 10 per cent chlorite, lesser amounts of magnetite and trace amphibole (Open File 1988-19).

BIBLIOGRAPHY

- EMPR AR 1895-693; 1914-323; 1921-G159; 1928-C313; *1950-214-216;
1953-184; 1962-146
EMPR ASS RPT 469
EMPR BULL 45
EMPR OF *1988-19, pp. 21-23; 1995-25, p. 84
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GSC MEM 161
GSC OF 288; 432; 464; 481
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DATE CODED: 1985/07/24
DATE REVISED: 1988/01/13

CODED BY: GSB
REVISED BY: MM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW076**

NATIONAL MINERAL INVENTORY: 082K13 Au1

NAME(S): **GOLDFINCH (L.5654)**, DOROTHY (L.12481), WINDFLOWER, CAMBORNE, WALRUS (L.5653), INDEPENDENCE (L.12480), SCOTT CREEK, MORNING STAR (L.5660), EVENING STAR (L.5658), RED FOX (L.5656), RIDGE (L.5657), SEA LION (L.5655), BONANZA (L.5661), GOLD FINCH, CENTRE STAR (L.5659), DOE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:
LATITUDE: 50 49 25 N
LONGITUDE: 117 39 34 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Decline portal on the slope between Menhinick and Scott creeks, 2 kilometres west from the Incomappleux River, 4 kilometres north of the village of Camborne (Assessment Report 17929).

Underground
MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5630417
EASTING: 453552

COMMODITIES: Gold Silver Lead Zinc Copper
Silica

MINERALS

SIGNIFICANT: Pyrite Gold Galena Chalcopyrite Sphalerite
Tetrahedrite
ASSOCIATED: Quartz Calcite Pyrite Graphite
ALTERATION: Sericite Carbonate Siderite Mariposite
ALTERATION TYPE: Sericitic Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
SHAPE: Bladed
MODIFIER: Faulted Folded
DIMENSION: 546 x 99 x 3 Metres
COMMENTS: Dorothy zone. STRIKE/DIP: 315/50N TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	
Cambrian	Lardeau	Jowett	

LITHOLOGY: Phyllite
Phyllitic Greenstone
Phyllitic Grit
Greenstone
Carbonate Sericite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: DOROTHY
REPORT ON: Y
CATEGORY: Combined
QUANTITY: 181437 Tonnes
COMMODITY: Gold
GRADE: 10.2860 Grams per tonne
COMMENTS: Proven and probable reserves. About 3000 tonnes were mined in 1989. See Capsule Geology for calculations in November 1987.
REFERENCE: PF - Granges Exploration Ltd., Review of Major Projects, January 1987.

CAPSULE GEOLOGY

The Menhinick Creek area contains several mineralized quartz veins hosted in northwest trending, northeast dipping metamorphosed rocks of the Lower Cambrian and younger Lardeau Group. In this area the Lardeau Group consists of Broadview Formation grey and green phyllitic grit and phyllite, and Jowett Formation green phyllite, limy green phyllite and greenstone. Foliation generally strikes 320

CAPSULE GEOLOGY

degrees and dips between 35 and 75 degrees northeast with a predominance of steep dips. The rocks have been isoclinally folded and complexly faulted. The Finkle Creek synform is a major structure and passes through the area.

The rocks in the Goldfinch occurrence area are grouped into two units. The first is a series of silver to grey to dark grey gritty phyllites with local carbonaceous seams and layers of carbonate-sericite rock. Mariposite occurs locally in highly carbonatized rocks. The second unit comprises medium green, non-bedded to streaky phyllitic greenstone with dark green clasts and local silicic pebbles.

Mineralization consists of native gold, pyrite, minor galena, chalcopyrite, sphalerite and trace tetrahedrite in a gangue of quartz with occasional calcite and graphite. Gold is generally associated with coarse-grained pyrite and visible native gold is rare but is present throughout the veins. The main ore zone (Dorothy) appears to be in an axial plane shear and is in the shape of a pod or lens. The quartz vein terminates with abrupt pinch-outs and also contains minor disseminated siderite pods. The quartz veins are both vertical and sub-horizontal and vary from very narrow veinlets a few centimetres wide up to 6 metres wide. Locally they resemble a stockwork with a general strike of 315 to 335 degrees and 50 degree to vertical north dips. There is strong structural control, both through faulting and folding. Faults generally strike 335 degrees and dip steeply (80 degrees) southwest. Joints strike 315 degrees and dip flatly (20 degrees) southwest.

The Dorothy structure has been traced by drilling for a strike length of 546 metres with widths between 1.8 and 9.1 metres, but averaging 3 to 3.6 metres wide. The zone has been tested to a vertical depth of 99 metres. Combined (proven and probable) reserves are 181,437 tonnes grading 10.29 grams per tonne gold (Granges Exploration Ltd., Review of Major Projects, January 1987).

The East zone is located approximately 20 metres east and parallel to the Dorothy and has been drilled over a strike length of 150 metres and to a depth of 80 metres. This zone averages 1.98 metres wide and is comprised of an echelon quartz veining characterized by low sulphide content but carrying visible native gold. A best assay returned 92.55 grams per tonne gold over 1 metre (George Cross News Letter #224, 1987). Reserves are estimated to be about 622,000 grams of gold (Northern Miner, November 30, 1987). Sulphide mineralization consists of galena, sphalerite and trace chalcopyrite.

The West zone has been drilled for 60 metres along strike and comprises a sulphide-rich zone containing coarse pyrite with native gold in quartz within graphitic phyllite similar to the Dorothy zone.

The Dorothy North zone is 100 metres north and along strike with the Dorothy. The Dorothy North zone has an 80 metre strike length and appears to be a separate and distinct zone.

The Main or Dorothy zone grades approximately 8.57 grams per tonne gold. Surface drilling has outlined a reserve of 149,700 tonnes grading 8.23 grams per tonne gold in the Dorothy vein, the original discovery zone. Exploration work on the combined Dorothy, Dorothy North and East zone has blocked out approximately 3,110,000 grams of gold. The Dorothy North, which is still open along strike and depth, has potential for another 149,700 tonnes of 8.57 grams per tonne gold. Drill results from this zone included: 4.85 metres of 5.14 grams per tonne gold, 4.66 metres of 8.57 grams per tonne gold, 3.17 metres grading 12.0 grams per tonne gold and 3.63 metres of 11.67 grams per tonne gold. Preliminary metallurgical test work has indicated an over 90 per cent recovery rate for the gold (Northern Miner, November 30, 1987).

The Scott Creek zone is 500 metres north of the Dorothy and comprises quartz-carbonate and quartz stockwork veins with widths of 3 to 4 metres and occasionally 10 metres. Reported grab and chip samples assayed 3.08 to 26.73 grams per tonne gold (Northern Miner, August 10, 1987).

The Camborne group of 8 claims (Lots, 5653, 5655-5661), owned from 1901 or earlier by A. McKay and J.B. McKenzie, was Crown-granted in 1902. These claims surrounded on three sides the Goldfinch claim (Lot 5644). The North-western Mining Company, Limited optioned the Camborne group in 1901 and purchased the Goldfinch claim in 1902; this claim was Crown-granted to the company in 1903. A hydro plant, 1460-metre tramline and 10-stamp mill were installed on Menhinick creek in 1902-03. The company became insolvent and The Gold Finch Mining Company was formed to continue the operation. The mill operated for a short period in 1903-04, until a forest fire destroyed the tramline. Most of the development work was done on the Goldfinch claim. Ore for the mill came from a glory hole at elevation 1029 metres, about 100 metres southwest of the Independence group boundary. Two adits were driven on the

CAPSULE GEOLOGY

Goldfinch, an upper (1023 level) and a lower (1003 level); the lower adit totalled 352 metres of drifts and crosscuts. In addition, an adit was reportedly driven 40 metres on the south side of Menhinick creek. Limited work was reported in 1904 and 1906 by optionee A. Rosenberger and in 1917 by J. Darragh & associates. In late 1933 the property was acquired by Dalhousie Gold Mines, Limited of Victoria but no work was reported.

In 1903, production of 726 tonnes yielded 16.2 kilograms of gold and 4.98 kilograms of silver and, in 1904 an additional 590 tonnes yielded 4.67 kilograms of gold and 633 grams of silver. The Independence group of 5 claims (Lots 12479-12483) was held from about 1903. Most of the work was done on the Dorothy claim (Lot 12481) which adjoins the Goldfinch claim on the northwest. The workings included trenches and two adits of 6 metres and 44 metres in length. The property was owned in 1924 by Owen Rowland and Crown-grants were issued to him in 1931-33. In 1939 the property was under option to W.T. Baker, of Trout Lake; work included trenching and 10 metres of crosscut. The vein system appears to be aligned with the vein system on the Independence claim. There are two principal quartz veins on the Independence claim. These are hosted in phyllite and in and adjacent to a rusty-weathered diabase dike. The No. 1 vein was originally exposed by trenching which follow the bedding planes for 120 metres striking 135 degrees, dipping 60 degrees to 70 degrees northeast. The No. 2 vein has been opened and drifted on from a short adit. This vein strikes 155 degrees and dips 70 degrees degrees southwest. A splay of this vein, sampled across 4.9 metres, assayed 17.1 grams per tonne gold and 10.2 grams per tonne silver (Annual Report 1914, page 250).

Claims lying on Scott Creek and adjoining the Independence group on the northwest included the Lost Cup, Phyllis and Nina (Lots 1870, 3755 and 4239 respectively (082KNW195)). Showings on this ground were discovered and staked in 1898. Some work was reported by Rossland interestes in 1898-1899. The Lost Cup was Crown-granted in 1905 to Baird, Crane, McClymont et al.

Eaton Mining & Exploration Ltd. acquired the Goldfinch (Camborne) Crown-grants in July 1971 and staked the Vik and Doe claims (40 units) over the Crown-grants and adjacent ground in 1979. Work in 1980 included geological mapping, a geochemical soil survey (166 samples), and rehabilitation of the adits; mineralized quartz from the upper adit was shipped to Trail. The company name was changed in July 1982 to Synco Development Corp. Trenching and sampling were reported in 1983.

The Independence group was held in 1979 by R.W. Bacon, of Kamloops. A bulk sample from an open cut was shipped to Trail. Windflower Mining Ltd. in October 1983 optioned the 5 Crown-grants and 3 reverted Crown-grants comprising the Independence and Lost Cup groups from Academy Enterprises Ltd. and R.K. Evans, of Fanny Bay. The company staked the Academy 1-4 claims (68 units) over adjacent ground to the west and north. Work in 1984 included magnetometer and electromagnetic surveys over 12 kilometres.

Windflower Mining in November 1984 optioned the Goldfinch property from Synco Development. Granges Exploration Ltd. optioned from Windflower a 60 per cent working interest in the combined properties in 1985; work that year included a geochemical survey and 603 metres of diamond drilling in 7 holes, magnetometer (9.0 kilometres) and electromagnetic (16.6 kilometres) surveys. Drilling totalled 33,750 metres in 37 holes in 1986, 9588 metres in 76 holes in 1987, and 7429 metres in 63 holes in 1988. Additional work on the Dorothy zone led to further production in 1989.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 737
REPORT: RGEN0100

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Granges Exploration Ltd.)
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GSC SUM RPT 1903, p. 62
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#212,#217,#227, 1986; #122,#244, 1987; #87, 1988
N MINER Sept.29, Oct.13, Nov.3, 1986; Mar.9, July 6, Aug.3,10,
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Dec.4, 1989
NW PROS Dec./Jan., 1988
V STOCKWATCH Sept.17, Nov.26, Dec.1, 1987
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW076**

MINFILE NUMBER: **082KNW077**

NATIONAL MINERAL INVENTORY: 082K13Ag6

NAME(S): **MAMMOTH (L.6473)**, SIRDAR (L.6471), CRESCENT (L.6472),
EMPIRE FR. (L.6474)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 51 24 N
LONGITUDE: 117 34 27 W
ELEVATION: 2100 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5634043
EASTING: 459587

LOCATION ACCURACY: Within 500M

COMMENTS: The Mammoth property comprises four Crown granted claims straddling the narrow northwest ridge extending from the summit of Mount Goldsmith. The original route to this remote mountaintop property was by steep mountain trail from the Incomappleux River valley, however, the only practical access nowadays is by helicopter, 9.7 kilometres northeast of Camborne. See also Big Showing (082KNW078).

COMMODITIES: Silver Lead Gold Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite Pyrite Argentite
ASSOCIATED: Quartz Calcite
ALTERATION: Limonite Pyrite Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 135/10E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Lardeau Index

LITHOLOGY: Limestone
Chlorite Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Mammoth property comprises four Crown granted claims, Mammoth (Lot 6473), Sirdar (Lot 6471), Crescent (Lot 6472), Empire Fr. (Lot 6474), situated between 2070 and 2530 metres elevation, straddling the narrow northwest ridge extending from the summit of Mount Goldsmith (Goat Mountain). The original route to this remote mountaintop property was by steep mountain trail from the Incomappleux River valley, however, the only practical access nowadays is by helicopter, 9.7 kilometres northeast of Camborne.

The showings were discovered in 1903 and the property was worked from 1904 to 1907 by the Edward Baillie Syndicate of Nelson B.C. Production amounted to 76 tonnes of hand sorted ore that yielded 249 grams of gold, 483.6 kilograms of silver, 23.2 tonnes of lead and 1.95 tonnes of zinc. The claims were re-Crown-granted in 1916 to W. Lawrence and G. Adams.

The property was acquired in the early 1980's by P.F. Explorations Ltd. and subsequently optioned to Summer 90 Resources Ltd. New Campbell Island Mines Limited optioned the property, including the Big Showing (082KNW078) and Scout (082KNW139), from Summer 90 Resources in 1984. Subsequent work by H.A. Simmons (International) Ltd. and W.J. Olsson and Associates Ltd. included geological mapping and geochemical soil and rock sampling.

The mine consists of an adit driven 180 metres southeast and several side tunnels crosscutting the main ridge. Some tunnels broke through to surface which now give views of the valleys of Boyd Creek to the east and the Incomappleux River to the northwest. These workings develop a seam of galena, pyrite and argentiferous tetrahedrite, up to 25 centimetres thick, on an essentially

CAPSULE GEOLOGY

horizontal rolling fissure, dipping locally 5 to 10 degrees northeast, in a fine grained, dark grey limestone bed that strikes 150 degrees, and dips 80 degrees northeast. These beds are succeeded to the southwest by other units of the Lower Paleozoic Index Formation (Lardeau Group), including a bed of pure white crystalline limestone and west of that a thick band of green chlorite schist. The host rocks at the mine site are cut by a set of northeast-striking vertical joints. Southeast from the adit, along the ridge, there are several small quartz veins and a band of limestone that has been heavily replaced by pyrite (with minor gold) and iron carbonates.

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EMPR BC METAL MM00619
EMPR INDEX 3-204
EMPR OF 2000-22
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EMR MP CORPFILE (New Campbell Island Mines Limited)
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GSC MEM *161, pp. 26,95,109
N MINER Dec.27, 1984
WWW <http://www.infomine.com/index/properties/MAMMOTH.html>

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW078**

NATIONAL MINERAL INVENTORY: 082K13Ag7

NAME(S): **BIG SHOWING**, RUBY SILVER, GOLDY,
MAMMOTH

STATUS: Developed Prospect

Underground

MINING DIVISION: Revelstoke

REGIONS: British Columbia

NTS MAP: 082K13E

BC MAP:

LATITUDE: 50 52 14 N

LONGITUDE: 117 34 31 W

ELEVATION: 1524 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Big Showing is located on the northwest slope of Mount Goldsmith (Goat Mountain), east of Incomappleux river and 10 kilometres northeast of Camborne. Location is of Ruby Silver showing from Assessment Report 7996. See also Mammoth (082KNW077).

UTM ZONE: 11 (NAD 83)

NORTHING: 5635588

EASTING: 459521

COMMODITIES: Silver

Lead

Zinc

Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite

ASSOCIATED: Quartz Magnetite

ALTERATION: Quartz Chlorite Siderite Hematite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Disseminated Massive

CLASSIFICATION: Replacement Exhalative

TYPE: E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Chloritic Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: TOTAL

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 398883 Tonnes

YEAR: 1987

COMMODITY: Silver
GRADE: 480.0000 Grams per tonne

COMMENTS: Associated values in gold, lead and zinc.

REFERENCE: New Campbell Island Mines Limited, 1987 Annual Report.

ORE ZONE: TOTAL

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 217620 Tonnes

YEAR: 1987

COMMODITY: Silver
GRADE: 754.0000 Grams per tonne

COMMENTS: Associated values in gold, lead and zinc.

REFERENCE: New Campbell Mines Ltd. 1987 Annual Report.

CAPSULE GEOLOGY

Big Showing is located on the northwest slope of Mount Goldsmith (Goat Mountain), east of Incomappleux River and 10 kilometres northeast of Camborne. The mineralized zones outcrop on the west side of the Goldsmith Creek canyon and can be traced for about 1400 metres, following the southeasterly trend of the metasediments.

Big Showing was discovered in 1906 and the property was held by John Leask from 1914, when 64 metres of adit and crosscut were completed. COMINCO held an option in 1913 and 1926. The property was restaked by the Leask Syndicate in 1973 and again in 1979 as the Ruby Silver and Goldy, when mapping and prospecting was done.

CAPSULE GEOLOGY

Underlying rocks are chloritic schist or phyllites and limestones of the Lower Paleozoic Lardeau Group (Index Formation). Mineralized zones consist of pyrite, galena and sphalerite with associated silicification and associated manganiferous siderite with massive magnetite and hematite. Two major mineralized areas are within hinge zones in anticlinal folds. The lower showing occurs as patches and disseminations over a width of 5 to 7 metres. The upper showing ranges from 3 to 12 metres wide. The mineralization is stratiform, at the contact between the phyllite and limestone. At the contact metachert is associated with the manganiferous siderite.

A sample of galena assayed 55 grams per tonne silver, trace gold, 25.3 per cent lead and 1.5 per cent zinc (Annual Report 1919, page 143). A more recent 3-metre chip sample assayed 11 grams per tonne silver, 6.14 per cent lead and 0.78 per cent zinc (Assessment Report 7996).

The property was acquired by Summer 90 Resources Ltd. New Campbell Island Mines Limited optioned the property including the Mammoth (082KNW077) and Scout (082FNW139) in 1984.

From 1984 to 1986, New Campbell Island Mines Limited conducted geological mapping, geochemical surveys and property evaluations. Reserves are reported as probable 217,620 tonnes at 754 grams per tonne silver and possible 398,883 tonnes at 480 grams per tonne silver, both with associated values in gold, lead and zinc (New Campbell Island Mines Limited, 1987 Annual Report).

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- EMR MIN BULL MR 223 B.C. 58
- EMR MP CORPFILE (New Campbell Island Mines Limited)
- GSC MAP 235A
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- CMH 1986-87, p. 275; 1988-89, p. 330, 1989-90, p. 334; *1990-91, p. 326; 1991-92, p. 267; 1992-93, p. 252; 1993-94, p. 245; 1994-95, p. 262
- N MINER May 5, 1986

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/20

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW079**

NATIONAL MINERAL INVENTORY: 082K14 Pb2

NAME(S): **BLUE JAY (L.13482)**, SNOWSTORM (L.13481), MOUNTAIN VIEW (L.13477),
GLADSTONE (L.13480), COPPER GLANCE (L.13483), JOKER (L.13478),
JUTLAND (L.13484), VICTORIA (L.13479)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:
LATITUDE: 50 47 50 N
LONGITUDE: 117 25 16 W
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Area of Joker and Mountain View claims.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5627360
EASTING: 470322

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Marble
Limestone
Schist
Phyllite
Quartzite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1928
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 8.5700 Grams per tonne
Lead 12.3000 Per cent
Zinc 2.8000 Per cent

REFERENCE: Minister of Mines Annual Report 1928, page 309.

CAPSULE GEOLOGY

The Blue Jay area is underlain by limestone of the Lower Cambrian Badshot Formation and metasediments of the Cambrian to Devonian Index Formation (Lardeau Group) consisting of schist, phyllite, quartzite, slate and limestone.

The Blue Jay group, consisting of the Mountain View, Joker, Victoria, Gladstone, Snowstorm, Blue Jay, Copper Glance and Jutland (Lots 13477-13484), respectively were Crown-granted in 1927 to Messrs. Brachot, Cottle, Stanley, Comerford, Richards and Tait under the name of Blue Jay Mining Syndicate. Claim maps show this group to adjoin the three claims of the Black Warrior group (082KNW110) on their northeastern boundary. Work in 1928 was apparently confined to trenching.

A band of limestone, averaging 15 metres in width and striking 140 degrees and dipping nearly vertical to steeply southwest, has been traced in intervals for a distance of 460 metres up the steep slope of McDonald Creek. The replacement mineralization has been traced along the Joker and Mountain View for at least 213 metres. Mineralization within the limestone band consists of argentiferous galena with some sphalerite occurring in streaks, bunches and disseminations. The best exposure is seen in an open-cut at 1874

CAPSULE GEOLOGY

metres elevation where the mineralization occurs over a width of 6 metres. A sample of mineralized material assayed 8.57 grams per tonne silver, 12.3 per cent lead, 2.8 per cent zinc and a trace of gold (Minister of Mines Annual Report 1928, page 309).

No further activity was reported until 1952 when the Consolidated Mining and Smelting Company of Canada Limited optioned the property from the Blue Jay Mining Syndicate. Work by the company during 1952-53 included stripping and sampling and 968 metres of diamond drilling in 8 holes. The option was relinquished in 1953. Silver Standard Mines Limited acquired the Blue Jay group of 4 claims as a mineral lease in 1962. Documentation of this work is not available.

Provincial records show that in 1979 to 1981, 13,477 grams of silver, 1468 kilograms of lead and 1158 kilograms of zinc were recovered from at least 3 tonnes of ore. The tonnage mined in 1979 is not recorded. Only the production input form for 1979 exists in Property File and it indicates that the shipment came from Gladstone (Lot 13480).

See the Black Warrior (082KNW110) for details of the common history of the area through the 1980s.

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EM GEOFILE 2003-2
EM OF 2000-22
EMPR AR 1927-C484; 1928-C309; 1952-A189; 1953-A144
EMPR ASS RPT 11979, 14063, 17651, 18844, 18845, *22917
EMPR GEM 1972-78
GSC MAP 235A
GSC MEM 161, pp. 28,83
GSC OF 288; 432
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/07

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW080**

NATIONAL MINERAL INVENTORY:

NAME(S): **SURPRISE (L.8661)**, ADELINA FR. (L.8662), WELSH (L.8663)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 44 47 N
LONGITUDE: 117 25 40 W
ELEVATION: 1675 Metres

NORTHING: 5621710
EASTING: 469820

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the centre of the Surprise (Lot 8661). The Adelina Fr. (Lot 8662) is adjoined to the Surprise on its northwest boundary while the Welsh (Lot 8663) is adjoined on the southeast.

COMMODITIES: Lead Silver Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena Pyrite Magnetite Sphalerite Chalcopyrite
ASSOCIATED: Quartz Ankerite Phlogopite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Limestone
Chlorite Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
YEAR: 1914
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 96.0000 Grams per tonne
Lead 9.6000 Per cent

REFERENCE: Minister of Mines Annual Report 1914, page 311.

CAPSULE GEOLOGY

The Surprise claim group is located along Surprise Creek about 2 kilometres up from Ferguson Creek.

Bands of limestone belonging to the Lower Cambrian Badshot Formation are separated by bands of schist and phyllite of the Cambrian to Devonian Index Formation (Lardeau Group). This surface expression is caused by folding and erosion.

Work commenced on the Surprise group in 1898 with a crosscut developed "at a depth of some 50 feet". In 1904 it was reported that four men were employed in considerable work of a prospecting nature. A large amount of surface work was done in 1905. The Surprise (Lot 8661), Adelina (Lot 8662) and Welsh (Lot 8663) were Crown-granted to W.A. Foote and David Morgan in 1911.

On the property, a band of white to grey crystalline limestone, finely bedded, about 18 metres wide, lies between dark green schists. The strike is 310 degrees with a vertical dip. The limestone is exposed at intervals along the bank of Surprise Creek for over 120 metres and has been found by cuts and shafts for an additional 335 metres. The vein lies between steeply tilted chlorite schists on the footwall and limestone on the hanging wall. The limestone has been replaced, always within 3 metres of it's southwest contact, by up to 1.5 metres of ankerite, quartz, magnetite, pyrite, galena and sphalerite. Quartz forms a small part of the gangue. Chalcopyrite was reported to be in small quantities but was abundant in at least

CAPSULE GEOLOGY

one locale. An abundance of greenish white phlogopite has been developed in the limestone.

By 1914, it was reported that the vein had been prospected by a number of surface cuts and two shallow shafts along its course for a distance of 150 metres, and in the south bank of the creek it had been crosscut for 3.7 metres, showing it to be well-defined, with slickensided walls. An average sample taken across this 3.7 metres assayed: a trace gold, 96.00 grams per tonne silver and 9.6 per cent lead (Minister of Mines Annual Report 1914, page 311).

In 1924, R. H. Stewart took an option on the property from Dave Morgan, with the intention of doing some exploratory work the following spring. In 1926, the Surprise group was back in the possession of Dave Morgan.

BIBLIOGRAPHY

EMPR AR 1899-683; 1904-117; 1905-154; 1911-290; *1914-311, *1925-210
EM GEOFILE 2003-2
GSC OF 288; 432
GSC MEM *161, pp. 25,97,116

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/01

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW081**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELLSMERE**, ELSMERE, GOLD HILL,
 PENTICTON, SILVER HORN

STATUS: Prospect	Underground	MINING DIVISION: Revelstoke
REGIONS: British Columbia		
NTS MAP: 082K14W		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 46 32 N		NORTHING: 5624954
LONGITUDE: 117 25 48 W		EASTING: 469682
ELEVATION: 1829 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Located from Ellsmere claim plot indicated by Assessment Report 11979, Figure 2).		

COMMODITIES: Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Massive Vein
 CLASSIFICATION: Replacement
 TYPE: J01 Polymetallic manto Ag-Pb-Zn E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Limestone
 Marble
 Calcareous Schist
 Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
 TERRANE: Kootenay

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1924
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	65.1400 Grams per tonne
Gold	0.6900 Grams per tonne
Lead	31.1900 Per cent
Zinc	1.3000 Per cent

COMMENTS: From a 38-centimetre chip sample.
 REFERENCE: Minister of Mines Annual Report 1924, page 212.

CAPSULE GEOLOGY

The Ellsmere group was located in the Galena Creek watershed about 2 kilometres from Ferguson Creek. Development started on the Ellsmere property in 1899 and by 1928 development consisted of a lower tunnel, 76 metres in length along the vein; a 12-metre tunnel on about the same level; an 18-metre tunnel about 90 metres higher; and number of small opencuts. The Ellsmere group of four claims consisted of the Gold Hill Nos. 1-4, none of them Crown-granted. Mr. F. Hillman of Ferguson was the owner. From 1958 to 1960, J. Main of Ferguson did some repairs to the trail and workings in order to aid in property examination. The area was largely inactive until 1980s when a number of the old working came into the possession of Jack and Eric Denny through purchase or staking. The two rehabilitated many of the access trails and workings in the area of Galena Creek and to the east (to Marsh Adam Creek) and north. Some of the historically documented mineral occurrences were found and examined during this period but the mineralization was examined more as a whole than as individual showings. The following summarizes the ownership of and general work done in and around the property in question.

CAPSULE GEOLOGY

The Dennys commissioned geologist Gordon Turner to investigate the "Horne Ledge" and the Ellsmere zones and the first report on the area was written. In 1985, the large claim group was optioned briefly to Nakusp Resources Ltd. who did claim staking, mapping, collected 86 rock and 64 soil samples, excavated 18 metres of trench and conducted an electromagnetic survey. They referred to their project as the Silver Horn. In 1987 and 1988, the property was under option to Golden Range Resources Ltd. who conducted 150 kilometres of airborne VLF-EM resistivity and magnetic surveys and, geological mapping and sampling throughout their Black Warrior (082KNW110) and Silver Leaf groups (08KNW204), unsuccessfully attempting to relocate the latter's workings. The property reverted to the Dennys in 1989. In 1991, the property was optioned to Jopec Resources Ltd. who conducted mapping and collected 30 samples. Jopec examined the Ellsmere zone and workings at this time (Assessment Report 22917).

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. These bands are part of the Lower Cambrian Badshot Formation, repeated by folding and interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

Property rocks consist of interbedded limestone and calcareous schists which strike 310 degrees and dip vertically. The ore occurs in a bed of pure white marble which lies between schist on the south and blue limestone on the north. The ore minerals are galena, sphalerite and pyrite and occur as replacements of limestone varying from a few centimetres to 1 metre in width. The replacement along the south wall is persistent, extending almost without break for 800 metre, but averaging only 7 to 10 centimetres in width. Replacement lenses of ore also occur through the body of limestone but are small and infrequent. A sample across a 38-centimetre highly mineralized section assayed 0.69 gram per tonne gold, 65.14 grams per tonne silver, 31.19 per cent lead and 1.3 per cent zinc (Minister of Mines Annual Report 1924, page 212).

BIBLIOGRAPHY

EMPR AR 1899-683; 1900-824; 1916-F200; *1917-F163,F192; *1924-B212;
1958-50; 1959-70; 1960-77
EMPR ASS RPT *11979, 14063, 17651, 18844, 18845, *22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EMPR MR MAP 2 (1928)
EMPR PF (*Starr, C.C. (1928): Report on Examination of Gold Hill
Group, 3 p.)
EM GEOFILE 2003-2
GSC MAP 235A
GSC MEM *161, pp. 25,28,98-99
GSC OPEN FILE 288; 432; 64

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/12

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW082**

NATIONAL MINERAL INVENTORY: 082K14 Pb3

NAME(S): **LITTLE ROBERT**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 45 N
LONGITUDE: 117 26 02 W
ELEVATION: 2285 Metres

NORTHING: 5627211
EASTING: 469421

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Little Robert from Geological Survey of Canada Map 235A.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena Tetrahedrite Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Marble
Calcareous Schist
Slate
Limestone
Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1914

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	3909.0000	Grams per tonne
Lead	24.0000	Per cent

COMMENTS: This assay is apparently the value based on silver and lead recovery from 2250 kilograms of sorted ore.

REFERENCE: Minister of Mines Annual Report 1914, page 313.

CAPSULE GEOLOGY

The Little Robert area is underlain by limestone of the Lower Cambrian Badshot Formation and metasediments of the Cambrian to Devonian Index Formation (Lardeau Group) consisting of schist, phyllite, quartzite, slate and limestone.

A 45-metre band of marble forms the divide between McDonald and Ferguson creeks. The marble lies between dark grey to black, carbonaceous, calcareous schists and slates. The sediments strike 130 degrees and dip steeply west. Numerous quartz veins carrying pyrite occur in both slates and limestone.

In the late 1890s, development work was started on a 0.6 to 1.5-metre wide quartz vein in marble. Opencuts were excavated at 2194 metres elevation and a crosscut adit, begun at 2133 metres with the intention of cutting the veins at depth, was driven 29 metres. Mineralization consists of galena and tetrahedrite in quartz gangue.

In 1914, it was reported that two small shipments of sorted ore had been made (Minister of Mines Annual Report 1914, page 313). A 90 kilogram sample gave an assay of 3799 grams per tonne silver and 21.5 per cent lead. A 2250 kilogram sample assayed 3909 grams per tonne silver and 24 per cent lead.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 749
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1898-1070; 1899-602,683; *1914-313
EM GEOFILE 2003-2
GSC MAP 1929-66, 235A
GSC MEM *161, p. 83
GSC OF 288; 432

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/06

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW083**

NATIONAL MINERAL INVENTORY:

NAME(S): **METROPOLITAN**, METROPOLITAN FR. (L5331)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 48 17 N
LONGITUDE: 117 28 10 W
ELEVATION: 1967 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5628215
EASTING: 466921

LOCATION ACCURACY: Within 1 KM
COMMENTS: Location from Map 235A.

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Limestone
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Metropolitan property is located on the upper reaches of Ferguson Creek. The Metropolitan was purchased by Chas. F. McCrossan in 1900. The ore was reported to consist of galena and grey copper with very high silver values. By 1901 a 61-metre crosscut had been developed and 6.3 tonnes of ore was shipped. The Metropolitan Fraction was Crown-granted to Metropolitan G. & S.M. Co. of Lardeau in 1904. Gunning (GSC Bulletin 161) reports that in 1926 the Metropolitan was held by Messrs. Trite and Woods but was not in operation. By 1926, an opencut had been made near the contact of the "Big Five" limestone band and a crosscut run 46 metres. The opencut is developed on a strong but tight fissure in the limestone, striking 310 degrees and dipping 50 degrees to the northeast. A very small amount of galena, sphalerite and tetrahedrite occurs along the fissure. Eleven metres into the adit, a similar but smaller fissure was encountered. The contact of limestone and chlorite schist which is mineralized on the Big Five (082KNW084), to the northwest, lies 15 to 30 metres southwest of the working and is covered with talus. Government production records show that in 1901, 5 tonnes of ore were shipped from which 37821 grams of silver, 31 grams of gold and 896 kilograms of lead were produced. Lithologic units in the area have been mapped as belonging to the Cambrian to Devonian Index Formation but recent interpretations indicate that several of the limestone units may actually be part of the Lower Cambrian Badshot Formation, repeated through folding.

BIBLIOGRAPHY

EMPR AR 1900-824; 1901-1019; 1904-297
EMPR INDEX 3-205
EM GEOFILE 2003-2
GSC MAP 1929-66, 235A
GSC MEM 161-109
GSC OPEN FILE 288; 432

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/25

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW084**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG FIVE**

MINING DIVISION: Revelstoke

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K14W
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 49 N
 LONGITUDE: 117 29 01 W
 ELEVATION: 2133 Metres

NORTHING: 5629210
 EASTING: 465930

LOCATION ACCURACY: Within 1 KM
 COMMENTS: Location from Map 235A.

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite Pyrite

Boulangerite Bournonite Silver

ALTERATION: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Vein
 CLASSIFICATION: Replacement Hydrothermal
 TYPE: E12 Mississippi Valley-type Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Limestone
 Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1926
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	9077.5600 Grams per tonne
Gold	9.9400 Grams per tonne
Copper	0.4800 Per cent
Lead	33.4300 Per cent
Zinc	9.7400 Per cent

REFERENCE: Geological Survey of Canada Memoir 161, page 99.

CAPSULE GEOLOGY

The Big Five property is located on the uppermost reaches of Ferguson Creek, between 1980 and 2285 metres elevation. The Big Five No. 1-5 claims were first mentioned in 1896 and by 1898, some stripping and a 9-metre crosscut existed. The property was visited by a government geologist in 1914 but the property was by then idle. In 1924, the property was acquired by Vancouver interests and preparations were in progress for next years work. In 1926, development work continued and it was reported that a McMillan and Trethewey optioned it and were intending to dewater in 1927. Reports indicate that Messrs. W.T. McArthur, Kilmer, Thompson, Elliot and J. Kirkpatrick were the owners in 1926 and probably made the option agreement with McMillan and Trethewey. G.B. McMillan did further unspecified work in 1927. The property was staked along the northwesterly extension of the Elsmere band of crystalline limestone which, in the Big Five area, is less than 460 metres wide. To the southwest and northeast, the limestone is flanked by dark green chlorite schists and a short distance southwest there is a second large bed of limestone. Rock units in the area have been mapped as belonging to the Cambrian to Devonian Index Formation (Lardeau Group) but recent interpretations indicate that several of the limestone units may actually belong to the Lower Cambrian Badshot Formation, repeated

CAPSULE GEOLOGY

through folding.

Sulphides are reported in many places within the limestone. As at Elsmere (082KNW081), a narrow zone of pyrite, sphalerite and galena, with minor amounts of chalcopyrite, has replaced the limestone at intervals near its southwest contact with the chlorite schists. Well within the limestone are numerous, irregular leads. One such notable lead consists of white quartz containing scattered amounts of the above sulphides. At 2285 metres elevation, northwest of these showings, and near the top of the glacier, is a large area in which numerous small replacement bodies of sulphide with some quartz occurs, generally more or less parallel to bedding. Galena, sphalerite, tetrahedrite and pyrite are most abundant, forming isolated pockets or small veins along fissures. Microscopic examination of some of the richer pockets reveal the presence of boulangerite and bournanite. A sample of this material assayed 33.43 per cent lead, 9.74 per cent zinc, 0.48 per cent copper, 9.94 grams per tonne gold and 9077.56 grams per tonne silver (Geological Survey of Canada Memoir 161, page 100). Native silver has been reported also.

The most continuous mineralized zone on the property lies near the northeast contact of the limestone. It can be followed and found at frequent intervals for nearly 1371 metres on the surface, varying in width from 30 to 60 centimetres.

BIBLIOGRAPHY

EMPR AR 1896-543; 1898-1070; 1914-313; 1924-212; 1926-273; 1927-296
EM GEOFILE 2003-2
GSC MAP 1929-66; 235A
GSC MEM 161, p. 109
GSC OPEN FILE 288; 432
GSC MEM 161, pp. 28,99,109,116

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/25

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW086**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRENE (L.7464)**, EVA (L.7463), MARION,
CHARLOTTE

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 47 N
LONGITUDE: 117 02 37 W
ELEVATION: 1067 Metres

NORTHING: 5614211
EASTING: 496919

LOCATION ACCURACY: Within 500M

COMMENTS: Location is for common boundary of Irene and Eva claim in Irene
Creek (Topographic Map 82K/11).

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: Copper mineralization is also reported.
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic Horsethief Creek Unnamed/Unknown Formation

LITHOLOGY: Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1904
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 2057.0000 Grams per tonne
Lead 65.0000 Per cent
REFERENCE: Minister of Mines Annual Report 1904, page 197.

CAPSULE GEOLOGY

The Irene Group originally consisted of 4 adjoining claims running in a northwest line on the east side of Duncan River, straddling Irene Creek. Two of the claims, the Irene (Lot 7464) and Eva (Lot 7463), were Crown-granted in 1907 while the other two (Charlotte and Marion) lapsed. The mineralization is hosted in limestone which is overlain by quartzite, both of the Upper Proterozoic Horsethief Creek Group. The limestone member could be up to 100 metres thick.

The area was originally prospected in 1898 by the Irene Mining Company. Reports of work conducted occur annually from that date to 1904. The old work consisted of 77 metres of crosscutting and drifting, at the end of which is a 12.6-metre winze. A 15-metre shaft was also sunk and more drifting, consisting of an additional 76 metres, was completed. In 1983, owners Homestock Resources Ltd. commissioned an exploration program that consisted of geochemical sampling and geophysical surveys.

Mineralization exposed in the old workings consists of galena and sphalerite along with quartz. Some copper is also reported. The ore yielded from 1028 to 2057 grams per tonne silver and 65 per cent lead (Minister of Mines Annual Report 1904, page 197).

BIBLIOGRAPHY

EMPR AR 1900-850; 1901-1030; 1902-H152; 1904-G197; 1907-L217
EMPR ASS RPT *12140

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 754
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PRELIM MAP 62
EM GEOFILE 2003-2
GSC MAP 2070; 12-1957; 1326A
GSC MEM 148; 161; 369
GSC OPEN FILE 288; 432

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/22

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW087**

NATIONAL MINERAL INVENTORY: 082K12 Mo1

NAME(S): **TROUT LAKE**, MARLOW

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 11 N
LONGITUDE: 117 36 10 W
ELEVATION: 1493 Metres

NORTHING: 5609565
EASTING: 457374

LOCATION ACCURACY: Within 500M

COMMENTS: Location of centre of deposit 750 metres east of Wilkie Creek and 4 kilometres west of Trout Lake, 60 kilometres south-southeast of Revelstoke. The portal entrance is about 1200 metres to the northeast. The deposit lies near the old workings of the Lucky Boy (082KNW003) and Copper Chief (082KNW004).

COMMODITIES: Molybdenum Tungsten Lead Zinc Copper

MINERALS

SIGNIFICANT: Molybdenite Pyrite Pyrrhotite Scheelite Galena
Sphalerite Chalcopyrite Tetrahedrite

ASSOCIATED: Quartz
ALTERATION: Quartz K-Feldspar Albite Biotite Sericite
Pyrite Ankerite Chlorite

ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown
Sericitic

DEPOSIT

CHARACTER: Stockwork Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal Skarn
TYPE: L05 Porphyry Mo (Low F- type) K05 W skarn
I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Cylindrical
MODIFIER: Faulted
DIMENSION: 1000 x 300 x 200 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Undefined Formation	
Upper Cretaceous			Unnamed/Unknown Informal

ISOTOPIC AGE: 76 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Porphyritic Granodiorite
Quartz Diorite Porphyry
Quartz Diorite Porphyry Dike
Aplite Dike
Granodiorite Dike
Argillite
Phyllite
Biotite Chlorite Sericite Schist
Quartzite
Limestone

HOSTROCK COMMENTS: "Trout Lake" stock; age date from Canadian Institute of Mining and Metallurgy 1983.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional Contact RELATIONSHIP: GRADE: Greenschist
Hornfels

INVENTORY

ORE ZONE: TROUT LAKE

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 48700000 Tonnes
COMMODITY: Molybdenum
GRADE: 0.1160 Per cent

YEAR: 1983

COMMENTS: Drill indicated at a 0.10 per cent MoS₂ cutoff. Grade given is 0.193 per cent MoS₂ which has been converted to Mo using 1.6681 conversion factor. Includes 11,700,000 tonnes grading 0.195 per cent molybdenum (0.362 per cent MoS₂) at a 0.20 per cent MoS₂ cutoff (CIM Special Volume 46, page 780).

REFERENCE: CIM Bulletin, January 1983, page 115.

CAPSULE GEOLOGY

The Trout Lake deposit is located 60 kilometres southeast of Revelstoke on the northern spur of Trout Mountain between 1450 to 1520 metres elevation. Location of portal entrance is about 1200 metres northeast of the deposit. Access to the property is by logging road, five kilometres west of the north end of Trout Lake. The deposit lies near the old workings of the Lucky Boy (082KNW003) and Copper Chief (082KNW004).

Although molybdenum mineralization was first reported in 1917, much of the historical exploration of the area was related to the search for silver, lead, zinc and tungsten. Past work in the adjacent Lucky Boy and Copper Chief comprised underground development which resulted in ore shipments, primarily between 1901 and 1917.

In 1969, a subsidiary of Scurry Rainbow Oil Ltd. carried out trenching and a diamond drill program. The property was optioned by Newmont Exploration of Canada in 1975. From 1976 to 1982, a joint venture project by Newmont and Esso Minerals Canada Ltd. delineated the deposit by surface drilling and subsequently by diamond drilling and bulk sampling from the exploration adit. Underground development on the property consists of about two kilometres of adit and drifts. The pipe-like stockwork deposit extends from the surface to a depth greater than 1000 metres. The property has been inactive since 1982 and is now wholly owned by Newmont Mines Ltd.

Lower Cambrian and younger Lardeau Group metasedimentary and sedimentary rocks form a northwest trending broad belt northeast of the Kuskanax batholith. This belt, in part, straddles the northern end of the Kootenay Arc.

The Trout Lake deposit area is underlain by schists, phyllites and quartzites, with minor greenstone, of the Lardeau Group which are intruded by the Late Cretaceous "Trout Lake" stock. The metasediments have been tightly folded and strongly sheared in northwest trending folds which are broken into panels by northwest and north trending faults. Unconformably overlying these rocks are conglomerate, limestone and sandstone of the Upper Mississippian to Pennsylvanian or Permian Milford Group. The Middle Jurassic Kuskanax batholith, an aegirine-augite-bearing leuco quartz monzonite, lies 5 kilometres to the south of the property. Also within the region are a series of calc-alkaline stocks of Jurassic to Cretaceous age that includes the Trout Lake stock, which has been dated by potassium-argon methods on biotite at 76 Ma (Canadian Institute of Mining and Metallurgy January 1983). Molybdenum mineralization is associated with the Trout Lake stock.

The Lardeau Group includes light grey to black aphanitic argillites, very fine-grained grey to tan phyllites, and green to brown biotite-chlorite-sericite schists with prominent segregated quartz layers or lenses. Quartzite units are medium to coarse grained and impure, occurring in lensoidal beds; a carbonate unit is composed of massive to banded grey to white limestone and dolostone with variable skarn development. Milford Group rocks unconformably overlie the Lardeau Group and consist of a basal conglomerate overlain by shale, siltstone, phyllite and schist interlayered with sandstone, quartzite and limestone units.

The schistosity of the Lardeau rocks follows a regional northwest trend, dipping steeply northeast. First phase folding, recognized only locally, has been largely obliterated by a second phase. The dominant second phase fold axes trend northwest, with nearly horizontal to undulating moderate plunges. Folding as outlined by carbonate horizons varies from tight and isoclinal in the Lardeau Group to more open in the Milford Group rocks.

Regional metamorphic grade in the phyllite and schists of the Lardeau Group increases from north to south on the property, with chlorite, biotite and finally garnet/oligoclase appearing as the Kuskanax batholith is approached. There is a suggestion of an underlying arm of the batholith along an anticlinal axis, with intrusive apophyses manifesting themselves as dikes at surface. Superimposed on this regional metamorphic gradient is a thermal

CAPSULE GEOLOGY

biotite hornfels surrounding the Trout Lake stock.

The intrusive rocks of the Trout Lake stock vary from quartz porphyritic granodiorite to quartz diorite porphyry as a network of intersecting dikes and irregular masses at surface which coalesce downward into a large stock. There appears to be as many as four distinct intrusive phases, with the earliest porphyritic granodiorite making up the bulk of the stock, followed by aplite dyking, and being cut successively by a quartz diorite porphyry set of dykes, an intermediate dike set of granodiorite composition and finally a later quartz diorite set. The dikes are inter-mineral, as they both cut off and are cut by mineralized quartz veins.

A dominant feature is strong north and northwest faulting, which separates the country rock into "panels". The strong north trending "Z" fault appears to have exerted a control on the location of the Trout Lake stock and subsequent mineralization, as well as showing post-mineral movement. Many small conjugate and splay faults cut the Trout Lake deposit underground, but displacements on these faults are generally less than 10 metres.

Dike and quartz vein orientations also show interesting conjugate patterns, with prominent northeast and northwest sets as well as north-south sets, and lesser flat dipping veins. In general, both the dikes and veins appear to fill northwesterly b-c and northeasterly a-c joints, with the latter being more dilational and therefore often better mineralized. Veining increases toward several centres associated with intrusive apophyses, as north and northwest trending vein sets are developed in addition to the more widespread northeast trending set. Flat dipping veins also become more prevalent along with randomly oriented veins to form a true stockwork (Canadian Institute of Mining and Metallurgy January 1983).

Hydrothermal alteration at the Trout Lake deposit, as defined by quantitative X-ray diffraction studies on composite core sections, is composed of a central quartz-potassium feldspar-albite-minor biotite (potassic) zone coincident with molybdenum mineralization, which is overlapped by a slightly later, antipathetic quartz-sericite-pyrite (sericitic (phyllic)) zone. Ankeritic carbonate and chlorite are also common alteration minerals. In detail, many local fluctuations, reversals and retrograde minerals are observed. The relationships of biotite, sericite and chlorite are very complex due to the presence of a) regional metamorphic sericite, chlorite and biotite; b) thermal (hornfels) biotite development around the stock, on which has been superimposed c) hydrothermal sericite and biotite, both related to vein margins, and d) retrograde chlorite as the system cooled.

It appears that the sericitic alteration at Trout Lake was later than the potassic alteration which accompanied molybdenum mineralization (Canadian Institute of Mining and Metallurgy January 1983).

Concentrations of iron, expressed as Fe₂O₃, suggest a distribution peripheral to the main molybdenum zone which may represent an iron sulphide halo of pyrrhotite related to the thermal biotite hornfels and/or pyrite related to the phyllic zone of hydrothermal alteration.

Molybdenite mineralization occurs over a vertical range of more than 1000 metres in two zones: the upper, smaller A zone, and the larger, irregular, vertically attenuated B zone, which is up to 300 metres long by 200 metres wide as defined by the 0.10 per cent MoS₂ contour. Drill indicated reserves are 48,700,000 tonnes grading (0.193 per cent MoS₂) at a 0.10 per cent MoS₂. This includes 11,700,000 tonnes grading 0.195 per cent molybdenum (0.362 per cent MoS₂) at a 0.20 per cent MoS₂ cutoff (CIM Bulletin, January 1983, page 115 and Special Volume 46, page 780).

Molybdenite, as fine to medium flakes and rosettes accompanied by pyrite and pyrrhotite, is mainly present along the margins of veins in a well developed quartz stockwork. Occasionally, in higher grade zones (in excess of 1 per cent MoS₂), the molybdenite is strongly disseminated in microfractured intrusive bodies up to 20 metres wide by 200 metres long, accompanied by large (over 10 centimetres) quartz veins and intense quartz flooding. The quartz vein stockwork is best developed in and around the margins of the intrusive and its dike-like apophyses.

Molybdenum grades generally drop off sharply in the later, inter-mineral quartz diorite dykes which often cut off mineralized veins; there is a suggestion that grades are better around these dykes due to their having superimposed another episode of mineralization on the earlier veins caused by granodiorite. In the centre of the large granodiorite mass, grades drop off to very low (0.00x per cent) MoS₂ values.

Veins in the Trout Lake stockwork comprise several sets. The older veins trend southeast parallel to the major fold axes and most of the faults (135 degrees, subvertical). Secondary vein sets occur

CAPSULE GEOLOGY

on cross-joints striking 045 degrees and dipping subvertical; and there are late subhorizontal veins. In addition, conjugate subvertical, shear-related veins, striking 005 degrees and 095 degrees, are prominent. The close spatial and temporal relationship between these veins and the Trout Lake stock suggests that hydraulic fracturing followed emplacement of magma. Furthermore, this suggests that the fracturing was caused either by the release of orthomagmatic fluids, or by hot over-pressured metamorphic or meteoric fluids.

Post-mineral faults have been observed in drill core to cut off good grade molybdenite, but in underground exposure the displacements are seen to be only minor readjustments between blocks. Only the "Z" fault which bounds the deposit on the east appears to have significant dip-slip movement. The interrelationships of crosscutting diking, veining and faulting show a suitably complex style of repeated opening of fractures and regeneration of mineralizing fluids as an intrusive differentiated at depth (Canadian Institute of Mining and Metallurgy January 1983).

Tungsten mineralization (with minor molybdenum and copper) is virtually restricted to lenses of skarn occurring as replacements of limestone bands peripheral to the main molybdenum zone. The tungsten occurs as scheelite, with pyrrhotite and minor chalcopyrite as at the nearby Copper Chief occurrence (082KNW004), or as scheelite in quartz veins with galena, sphalerite and tetrahedrite as at the Lucky Boy (082KNW003).

Skarns, manifested mainly by clinopyroxene and garnet, and hosting minor scheelite, occur as replacements of marble along faults adjacent to the Trout Lake stock. Tremolite +/- clinozoisite (calc-silicate alteration) locally replaces clinopyroxene and in turn is replaced by biotite and/or calcite, indicating that skarn predated potassic (biotite) alteration.

Traces of chalcopyrite occur throughout the system. Galena and sphalerite occur rarely in late quartz-carbonate veins cutting the molybdenite stockworks.

Although molybdenum mineralization was among the earliest discoveries, much of the historical exploration of this area was related to a search for silver, lead, zinc and tungsten (see Copper Chief, 082KNW004 and Lucky Boy, 082KNW003). Past work on the adjacent Lucky Boy and Copper Chief comprised underground development which resulted in some ore shipments being made.

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Placer Dome File

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 759
REPORT: RGEN0100

MINFILE NUMBER: **082KNW088**

NATIONAL MINERAL INVENTORY: 082K12 Mo1

NAME(S): **VMS 9**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 54 N
LONGITUDE: 117 36 10 W
ELEVATION: 2400 Metres

NORTHING: 5603480
EASTING: 457324

LOCATION ACCURACY: Within 500M
COMMENTS: SEE ALSO 082KNW003,004.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Malachite Galena Molybdenite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: K02 Pb-Zn skarn K01 Cu skarn
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

DISSEMINATED CHALCOPYRITE AND FOLIATION COATINGS
OF MALACHITE IN QUARTZ AND PHYLLITIC SILTSTONE.
MINOR DISSEMINATED GRAINS OF CHALCOPYRITE IN
QUARTZ VEINS OR LAYERS CONFORMABLE WITH THE
BEDDING.

BIBLIOGRAPHY

EMPR ASS RPT 3804, 7889, 7913
EMPR EXPL 1978-E82
EMPR GEM 1972-78

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW088**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 760
REPORT: RGEN0100

MINFILE NUMBER: **082KNW089**

NATIONAL MINERAL INVENTORY: 082K12 Mo1

NAME(S): **VMS 19, 20**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 00 N
LONGITUDE: 117 35 28 W
ELEVATION: 2533 Metres

NORTHING: 5603658
EASTING: 458152

LOCATION ACCURACY: Within 500M
COMMENTS: SEE ALSO 082KNW003,004.

COMMODITIES: Copper Lead Zinc Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Malachite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: K01 Cu skarn

I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

PROPERTY IS UNDERLAIN BY A SEQUENCE OF METAMORPHOSED ROCKS WHICH INCLUDE SLATES, AND ARGILLITE, QUARTZITE, SCHIST AND GNEISS OF HIGHER METAMORPHIC GRADE. MINOR LEAD, ZINC, COPPER, AND MOLYBDENUM MINERALIZATION OCCURS IN SKARN AND IN QUARTZ VEINS. LENSES AND NODULES OF SULPHIDES IN A SKARN LENS.

BIBLIOGRAPHY

EMPR ASS RPT 3804, 7889, 7913
EMPR EXPL 1978-E82
EMPR GEM 1972-78

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 761
REPORT: RGEN0100

MINFILE NUMBER: **082KNW090**

NATIONAL MINERAL INVENTORY: 082K12 Mo1

NAME(S): **VMS 21**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 48 N
LONGITUDE: 117 35 10 W
ELEVATION: 2333 Metres

NORTHING: 5603285
EASTING: 458503

LOCATION ACCURACY: Within 500M
COMMENTS: SEE ALSO 082KNW003,004.

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

SPHALERITE BEARING QUARTZ VEIN AND VEIN OF MASSIVE
GALENA. MINOR GALENA AND TRACES OF CHALCOPYRITE
ARE ALSO PRESENT.

BIBLIOGRAPHY

EMPR ASS RPT 3804, 7889, 7913
EMPR EXPL 1978-E82
EMPR GEM 1972-78

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW090**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 762
REPORT: RGEN0100

MINFILE NUMBER: **082KNW091**

NATIONAL MINERAL INVENTORY: 082K12 Mo1

NAME(S): **VMS 23**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 42 N
LONGITUDE: 117 34 46 W
ELEVATION: 1867 Metres

NORTHING: 5603096
EASTING: 458973

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Lead

Zinc

Molybdenum

MINERALS

SIGNIFICANT: Galena Sphalerite Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

DISSEMINATED SULPHIDES IN A LENS OF LIMESTONE.

BIBLIOGRAPHY

EMPR ASS RPT 3804, 7889, 7913
EMPR EXPL 1978-E82
EMPR GEM 1972-78

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW091**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 763
REPORT: RGEN0100

MINFILE NUMBER: **082KNW092**

NATIONAL MINERAL INVENTORY: 082K12 Mo1

NAME(S): **VMS 1**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 12 N
LONGITUDE: 117 35 28 W
ELEVATION: 1500 Metres

NORTHING: 5602176
EASTING: 458140

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead

Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEIN SYSTEM IN LARGE GRANITIC DYKE CONTAINS LENSES AND GRAINS OF SULPHIDES. MOSTLY TWO PARALLEL VEINS IN ZONE 1-2 METERS WIDE. THE QUARTZ VEINS CONTAIN SCATTERED LENSES AND GRAINS OF PYRITE WITH LESSER GALENA AND MINOR SPHALERITE.

BIBLIOGRAPHY

EMPR ASS RPT 3804, 7889, 7913
EMPR EXPL 1978-E82
EMPR GEM 1972-78

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW092**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 764
REPORT: RGEN0100

MINFILE NUMBER: **082KNW093**

NATIONAL MINERAL INVENTORY: 082K12 Mo1

NAME(S): **VMS 2**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 33 54 N
LONGITUDE: 117 35 16 W
ELEVATION: 1400 Metres

NORTHING: 5601618
EASTING: 458372

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Zinc Molybdenum

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

SULPHIDES OCCUR AS FRACTURE COATINGS AND FINE
GRAINS DISSEMINATED IN QUARTZ VEINS IN APLITE
SILL.

BIBLIOGRAPHY

EMPR ASS RPT 3804, 7889, 7913
EMPR EXPL 1978-E82
EMPR GEM 1972-78

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW094**

NATIONAL MINERAL INVENTORY: 082K14 N3 Pb1

NAME(S): **ALPHA**, ALPHA (L.6785), ALPHA NO.2 (L.5113),
 ALPHA FRACTION (L.5100), OMEGA NO.2 (L.6787), OMEGA (L.6786),
 MAUD S (L.649), STANDBY (L.761), PICTON,
 BENNISON, BOSTON, BOSTON-BENNISON

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K14E
 BC MAP:
 LATITUDE: 50 59 43 N
 LONGITUDE: 117 09 10 W
 ELEVATION: 2385 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: The Alpha prospect included eight crown grants and a group of eleven claims.

MINING DIVISION: Golden
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5649311
 EASTING: 489279

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Tetrahedrite Chalcopyrite Sphalerite
 ASSOCIATED: Quartz
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Discordant Massive Disseminated
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 SHAPE: Tabular
 MODIFIER: Folded Fractured
 DIMENSION: Metres STRIKE/DIP: 300/ TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Proterozoic	Horsethief Creek	Unnamed/Unknown Formation	

LITHOLOGY: Quartz Vein
 Schist
 Quartzite
 Slate
 Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Ancestral North America
 PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: VEIN REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1927
 SAMPLE TYPE: Unknown
 COMMODITY GRADE
 Silver 249.6000 Grams per tonne
 Gold 6.1700 Grams per tonne
 Lead 26.6000 Per cent
 COMMENTS: Values given are average values.
 REFERENCE: Haggan, E.A. (1927): Report on Alpha Group of Mineral Claims, page 37.

CAPSULE GEOLOGY

The Alpha prospect is located at elevations of 2,286 to 2,591 metres on the summit of the divide between Bobbie Burns Creek, a tributary of the Spillimacheen River, and Bennison Creek, a tributary of the Duncan River. Alpha lies on the north side of International Basin which is located at the headwaters of Bobbie Burns Creek. The area is approximately 32 kilometres southwest of Golden.

The Maud S (L.649) was Crown-granted in 1893 and the Standby (L.761) in 1894. The Picton claim adjoined the Maud S. In the late 1890s the group was referred to as the Bennison group, the Boston group or the Boston-Bennison group. The workings in 1898 included a 76 metre adit on the Maud S claim and a 12-metre shaft on the Standby claim. A 15-metre shaft was developed on the Picton claim. Work also included open cuts and other adits. The No. 1 adit comprised about 79 metres of crosscuts and drifts on the Boston vein

CAPSULE GEOLOGY

and the No. 2 adit, 229 metres below the No. 1 adit, was a 48 metre drift on the Bennison vein. About 91 metres west of the Boston vein an adit was driven 11 metres on another vein. During 1903 to 1904 the 213 metre long Kimpton adit at 2,499 metres elevation was driven from the southeast side of the summit to explore a showing on the northeast side of the summit. The Alpha Fraction (L.5106), Alpha No. 2 (L.5113), Alpha (L.6785), Omega (L.6786) and Omega No. 2 (L.6787) were Crown-granted in 1905 and the Alpha Mines Syndicate acquired the property under the name Alpha Group. In 1922-23, they extended the Kimpton tunnel. In 1965, Bonanza Exploration Ltd. acquired the eight Crown grants and the Alpha group of eleven recorded claims and rehabilitated the Kimpton adit. During 1966, they completed geological mapping and 122 metres of "hand trenching." Four diamond drillholes totalling 186 metres were drilled and seven holes (640 metres) were drilled from the old Kimpton tunnel.

The occurrence is located in the Purcell Mountains. The area is underlain by northwest trending metasediments of the Upper Proterozoic Horsethief Creek Group. Regionally, this group consists of slates, argillites, quartz-pebble conglomerates, grits and minor limestone.

The formations in International Basin, as well as the adjoining main valley, are folded and fractured across the bedding. Rock types include greenish grey chloritic schists, dark slaty schists (in which cubes of pyrite are a characteristic feature), quartzites, slates and conglomerates. In the bluffs and ridges it is evident that the formations have been folded to form a large anticline. Cutting the metasediments are a series of well-defined quartz veins trending north and south. These are intersected by another series of quartz veins trending about 300 degrees. Mineralization occurs at the intersection of the two vein systems. Mineralization in the veins consists mainly of galena and pyrite with minor tetrahedrite, chalcopyrite and sphalerite. However, pyrite is described as occurring in massive form or irregularly disseminated throughout the quartz. Gold is associated with pyrite. Ore in one vein yielded the following average values: 6.18 grams per tonne gold, 249.60 grams per tonne silver and 26.6 per cent lead (Haggen, 1927, Property File).

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- EMPR AR 1896-556; 1898-1051, 1053, 1054; 1899-665; 1903-106;
1904-112; 1905-248, 250, 252; 1921-124; *1922-182; 1923-195;
1929-291; 1934-E28; 1936-E25; 1965-203; *1966-235
EMPR ASS RPT 11806
EMPR EXPL 1983-133
EMPR PF (*Haggen, E.A. (1927): Report on the Alpha Group of Mineral
Claims, 56 pages)
EMR MRD CORP FILE (Bonanza Exploration Ltd.)
GSC MAP 43-1962
GSC MEM 369, p. 27
GSC P 62-32

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/19

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 767
REPORT: RGEN0100

MINFILE NUMBER: **082KNW095**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUTI**, BONANZA KING (L.14178), GALLANT BOY (L.14179),
KING

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 33 36 N
LONGITUDE: 117 16 34 W
ELEVATION: 2700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5600933
EASTING: 480443

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena Tetrahedrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

BEDDED DEPOSITS AND FISSURE VEINS. PHYLLITE,
ARGILLITE AND LIMESTONE (LARDEAU GP) INTRUDED BY
ALTERED DIORITE DYKE. GALENA PYRITE, MINOR
SPHALERITE AND CHALCOPYRITE IN QUARTZ GANGUE OCCUR
IN TENSION FRACTURES.

BIBLIOGRAPHY

EMPR AR 1898-1059; 1900-981; 1923-234; 1926-A274; 1927-295; 1930-447
EMPR GEM 1973-94
EMPR PF (RPTS BY T.R. TOUGH)
GSC BULL 193
GSC MAP 1277A
GSC MEM 161-55

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW095**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 768
REPORT: RGEN0100

MINFILE NUMBER: **082KNW096**

NATIONAL MINERAL INVENTORY:

NAME(S): **MURRAY**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 00 N
LONGITUDE: 117 59 10 W
ELEVATION: 1400 Metres

NORTHING: 5607662
EASTING: 430237

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Unknown
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

SCHISTS OF METAVOLCANIC AND METASEDIMENTARY ORIGIN ARE CUT BY FELSIC DYKES, CALCITE STRINGERS AND MINOR QUARTZ VEINS. MINERALIZATION APPEARS TO BE STRATABOUND AND CONSISTS OF ARGENTIFEROUS PYRITE, CHALCOPYRITE AND MINOR SPHALERITE AND GALENA.

BIBLIOGRAPHY

EMPR ASS RPT 12702
WWW [http://www.infomine.com/index/properties/MURRAY_\(BIG_BEND\).html](http://www.infomine.com/index/properties/MURRAY_(BIG_BEND).html)

DATE CODED: 1985/07/24
DATE REVISED: 2001/09/05

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW096**

MINFILE NUMBER: **082KNW097**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIKE, OAKEY**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

Open Pit

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 45 N
LONGITUDE: 117 34 10 W
ELEVATION: 800 Metres

NORTHING: 5610596
EASTING: 459739

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cambrian Lardeau Undefined Formation

LITHOLOGY: Phyllite
Schist
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Mike, also Oakey, is located about one kilometre west of the northwest end of Trout Lake.

A 15 to 30 centimetre band of galena occurs in 0.3 to 4 metre wide quartz vein. The vein is traced for several kilometres through the underlying Lower Paleozoic Lardeau Group phyllites and schists.

In 1973, H.A. McGowan conducted surface exploration and shipped 1.8 tonnes of crude ore, resulting in 778 grams of silver, 195 kilograms of lead and 657 kilograms of zinc. In 1977, Oakey Holdings Ltd. conducted stripping and trenching. In 1978 and 1979, Cominco Ltd. conducted geochemical surveys and geological mapping in the area. See also Craig (082KNW147).

BIBLIOGRAPHY

EMPR AR 1914-K318; 1973-A55
EMPR ASS RPT 7376, 7411
EMPR BC METAL MM00622
EMPR EXPL 1977-E70, 1979-91
EMPR GEM 1973-23,96

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/10

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 770
REPORT: RGEN0100

MINFILE NUMBER: **082KNW098**

NATIONAL MINERAL INVENTORY:

NAME(S): **MORNING STAR**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 24 N
LONGITUDE: 117 20 46 W
ELEVATION: 2363 Metres

NORTHING: 5607997
EASTING: 475517

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Galena Ankerite Tetrahedrite Pyrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEINS WITH SMALL QUANTITIES OF ANKERITE CUT THE CARBONATE ROCK. THE VEINS ARE SMALL, IRREGULAR AND MINERALIZED IN SPOTS WITH GALENA, TETRAHEDRITE, AND SMALL AMOUNTS OF PYRITE AND SPHALERITE.

BIBLIOGRAPHY

EMPR AR 1894-744; 1898-1066; 1900-823; 1903-H243; 1913-K127; 1914-K303
EMPR ASS RPT 7324, 9037
EMPR EXPL 1979-90
GSC BULL 45, 193
GSC MAP 235A, 1277A
GSC MEM 161-58,120,121
GSC OPEN FILE 288-171

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW098**

MINFILE NUMBER: **082KNW099**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **AJAX (L. 4955)**, NETTIE L, POOL,
COPPER REEF

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 41 18 N
LONGITUDE: 117 27 16 W
ELEVATION: 1646 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See also Nettie L (082KNW100), Gyp (082KNW010), IXL (082FNW009)
and May Bee (082KNW170).

Underground
MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5615266
EASTING: 467899

COMMODITIES: Silver Gold Zinc Lead Manganese

MINERALS

SIGNIFICANT: Sphalerite Galena Tetrahedrite Manganite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	
Cambrian	Lardeau	Triune	

LITHOLOGY: Quartzite
Slate
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Nettie L Group is situated between the north and south forks of Lardeau Creek, about 2.4 kilometres northeast of the town of Ferguson. The group consists of the Nettie L (082KNW100) (Lot 4954), Ajax (Lot 4955) (082KNW099) and the Gyp Fr. (Lot 5691) (082KNW009, 010). The May Bee (082KNW170) lies to the northwest.

In 1892, W.D. Pool located the Pool group, which included the Ajax and Nettie L claims and formed Great Western Mines, Limited Liability.

In 1898 the Ajax was stripped and several crosscuts were made on the surface. In 1901 about 90 metres of underground work was done. When the Ferguson Mines, Limited, took over in 1909, 4 levels were run and 3 crosscut tunnels were driven. During this year, old adits and drifts were repaired. The following year, about 30 metres of underground work was done. In 1914, the claim was leased. By 1950, when Trout Lake Mining, Limited, took over, there were five adits on this claim, but only three were accessible then.

This group is underlain by carbonaceous phyllites and black slates, interbedded with grey to white quartzites of the Cambrian Lardeau Group. Mineralization consists of iron and zinc sulfides with copper and lead carrying values of gold and silver. The orebodies occur as scattered lenticular masses, giving a spotted character. On the surface, the sulphides have been oxidized, forming an iron cap. The minerals appear to have been deposited in schist by water circulating along a line of fissuring. The schist is silicified near the fissure.

An occurrence of earthy wad was found in the upper workings of the Ajax. An impure sample of this assayed 9.36 per cent manganese.

BIBLIOGRAPHY

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1901-1019; 1903-116,H120; 1907-218; 1909-K116; 1912-K151,K323;
1913-K127,K420, 1914-300,K290,K510, 1915-K133, 1916-K200; 1924-
B208; 1930-266; 1950-A151; 1951-A179; 1952-177,A187

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 772
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BULL 1-113, 2-41, 45-67,72
EMPR INDEX 3-187
EMPR PF (*Starr, C.C. (1925): Report on the Nettie L Mine, 8 p.,
geology, assays, workings plan 1 " = 100 ' ; Various sketch maps,
plans and sections, 1951-1952; Trout Lake Mines Ltd. (1952):
Information Brochure & Prospectus; Plan of Nettie L Mine workings
(1900) in 082FNW100)
GSC MEM 161-27,67,70,114
GSC SUM RPT 1903-64

DATE CODED: 1985/07/24
DATE REVISED: 2000/01/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW100**

NATIONAL MINERAL INVENTORY: 082K11 Pb4

NAME(S): **NETTIE L. (L.4954)**, KOOTENAY NO. 1 (L.7247), POOL,
LULA BELL FR., KOOTENAY NO. 2 (L.7248), KOOTENAY NO. 3 (L.7250)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:
LATITUDE: 50 41 18 N
LONGITUDE: 117 26 58 W
ELEVATION: 1567 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See also Ajax (082KNW079), Gyp (082KNW010), I.X.L. (082KNW009) and May Bee (082KNW170).

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5615264
EASTING: 468252

COMMODITIES: Silver Lead Zinc Gold Copper
 Graphite

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Tetrahedrite
ASSOCIATED: Quartz Ankerite Graphite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Quartzite
Slate
Schist
Graphitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Nettie L Group is situated between the north and south forks of Lardeau Creek, about 2.4 kilometres northeast of the town of Ferguson. The group consists of the Nettie L (Lot 4954), Ajax (Lot 4955) (082KNW099) and the Gyp Fr. (Lot 5691) (082KNW009, 010). The May Bee (082KNW170) lies to the northwest.

In 1892, W.D. Pool located the Pool group, which included the Ajax and Nettie L claims and formed Great Western Mines, Limited Liability.

Between 1898 and 1903, over 610 metres of underground work was done on the Nettie L claim. In 1902, an air compressor and a 60 h.p. boiler were installed. The following year, a mill was erected at Fivemile by the Silver Cup Mines, Limited (under the same management as Great Western Mines Limited), to treat ore from the Nettie L and Silver Cup (082KNW027) Mines. By 1904, all the known orebodies were mined out, so the mine was shut down and remained idle until 1912, although the Ferguson Miens, Limited, took over the group in 1909. In 1912, the mine was leased to Daney and Co. who completed about 38 metres of sinking and drifting. In 1917, the mine was worked under lease by McLaren, White and Cameron. In 1930, Gold Prospects Limited took out interests in Nettie L and in 1936 the Security and Investment Corporation, Limited, made repairs to the roads and buildings. Ten years later, Cansil Consolidated Mines Ltd., optioned the claim. They reopened old adits, surveyed, renewed and built trails, constructed bridges, rehabilitated the camp, set up a 220 cubic foot compressor and did some diamond drilling.

In 1950, Trout Lake Mining, Limited, took over the group and retimbered the old portals of the three mines. The following year, the levels of Nettie L were rehabilitated and 610 metres of diamond drilling was done in unstoped areas. Another adit was opened and some raising done. This company did no work on Ajax but enlarged the size of the workings on Gyp. They also drove an adit for another 40

MINFILE NUMBER: **082KNW100**

CAPSULE GEOLOGY

feet and made two open-cuts. In 1952, control passed to the company's successor, Trout Lake Mines, Ltd.

This area is underlain by carbonaceous phyllites and black slates, interbedded with grey to white quartzites of the Cambrian Lardeau Group. Mineralization consists of galena, pyrite, sphalerite and tetrahedrite. The orebodies occur as scattered lenticular masses, giving a spotted character. On the surface, the sulphides have been oxidized, forming an iron cap. The minerals appear to have been deposited in schist by water circulating along a line of fissuring. The schist is silicified near the fissure.

There are three main orebodies - main lead, cross lead, and "big quartz" vein. Most of the work was done on the main and cross leads. The main lead is a series of veins running N 45 degrees W and dipping about 80 degrees SW as does the surrounding rocks. The veins of the cross lead cross those of main lead at varying angles. Some eventually turn almost parallel to the main and merge into it.

Post-mineralization faulting with large displacement has occurred in the plane of the main lead. Small dragfolds plunge 25 degrees NW and the major fold structure is an isoclinal anticline which is over turned to the southwest, with its axial plane dipping 60 degrees NE and plunging about 25 degrees NW. This anticline is displaced by two steep, northerly striking faults.

A fracture zone, on the smooth hanging wall of the main lead, composed of quartzose material, highly charged with pyrite and carrying gold, silver, lead and copper, was found at the Nettie L mine.

BIBLIOGRAPHY

- EMPR AR 1898-1073; 1899-602,681; 1900-820,824; 1901-1019; 1902-140, 300; 1903-116,120,124; 1904-116; 1905-153; 1906-138; 1909-116; 1912-151,323; 1913-127,420; 1914-290,299; 1915-133; 1916-200; 1917-164,192; 1918-156; 1920-128; 1921-62,161; 1924-B208; 1930-266; 1936-E50; 1946-169; 1949-192; 1950-151; 1951-179; 1952-187
- EMPR BULL 45-10,37,67, 1-112
- EMPR INDEX 3-207
- EMPR OF 1998-10
- EMPR PF (*Starr, C.C. (1925): Report on the Nettie L Mine, 8 p., geology, assays, workings plan 1 " = 100 ' ; Various sketch maps, plans and sections, 1951-1952; Trout Lake Mines Ltd. (1952): Information Brochure & Prospectus; Plan of Nettie L Mine workings (1900))
- GSC MEM 161-17,23,27,67,91
- GSC SUM RPT 1903-65AA

DATE CODED: 1985/07/24
DATE REVISED: 2000/01/04

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 776
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1898-1064; 1899-674,679; 1901-1022; 1904-121; 1905-156;
1906-139,253; 1907-91; *1914-262-266; 1947-A37,A173; 1951-178;
1952-183; 1957-58-59
EMPR ASS RPT 5209, 11532, 12016, 15946
EMPR BC METAL MM00636
EMPR GEM 1974-84
EMPR INDEX 3-213
EMPR MR MAP 2 (1928)
EMPR PF (Plan of old workings, no date; *Reports by D.W. Tully
and J.P. McGoran (1983) for Fleck Resources Ltd. Prospectus,
March 9, 1984; Emmens, N.W. (1914): Report on the Mineral
Resources of the Lardeau Mining Division, pp. 35-40, in
082KNW General)
GSC BULL 2, p. 22
GSC MAP 1929-69, 235A
GSC MEM 161, pp. 36,40
GSC OPEN FILE 288
GCNL #153(Aug.9), #168(Aug.30), #192(Oct.4), 1984

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW102**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAKALU, PLUG**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 48 N
LONGITUDE: 117 09 40 W
ELEVATION: 1615 Metres

NORTHING: 5627226
EASTING: 488646

LOCATION ACCURACY: Within 500M

COMMENTS: The Makalu claim is located on the east side of Duncan River approximately two kilometres north of the mouth of Westfall River.

COMMODITIES: Tungsten Molybdenum Copper Lead Zinc

MINERALS

SIGNIFICANT: Scheelite Powellite Molybdenite Chalcopyrite Galena

ASSOCIATED: Pyrite Pyrrhotite Quartz
ALTERATION: Tremolite Biotite Muscovite Epidote Actinolite
 Hornblende Garnet Diopside

ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Skarn
 TYPE: K05 W skarn L05 Porphyry Mo (Low F- type)
SHAPE: Irregular
DIMENSION: Metres STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic Horsethief Creek Unnamed/Unknown Formation

LITHOLOGY: Skarn
Limestone
Amphibolite Schist
Hornblende Schist
Biotite Muscovite Schist
Biotite Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE:

INVENTORY

ORE ZONE: LENS REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1982
SAMPLE TYPE: Grab
COMMODITY GRADE
Tungsten 0.2300 Per cent
COMMENTS: Mineralized zones are low-grade, narrow and discontinuous.
REFERENCE: Assessment Report 10721, page 12.

CAPSULE GEOLOGY

The Makalu claims are located about 80 kilometres east-southeast of Revelstoke. They lie on the east side of the Duncan River, approximately two kilometres north of the mouth of the Westfall River.

The tungsten mineralization was located by personnel from the Union Oil Co. of Canada during a preliminary geological and geochemical program in 1980. At that time, soil surveys delineated several areas with moderate to highly anomalous tungsten along the southern margin of a granodiorite stock in close proximity to mineralized outcrop. In 1982, Union Oil mapped the geology and prospected the area.

The area is predominately underlain by highly deformed metasedimentary rocks of the Upper Proterozoic, Horsethief Creek Group. Within the occurrence area, the rocks are foliated, folded and regionally metamorphosed (greenschist facies). These strata have

CAPSULE GEOLOGY

been discordantly intruded by a small elliptical stock of biotite granodiorite. Carbonate horizons adjacent to the stock have been partly converted to skarn.

Limestone has been recrystallized and contact and regional metamorphism have produced amphibolite and hornblende schists, biotite-muscovite schists and tremolite skarn and iron rich skarn.

The tremolite skarn contains biotite and/or actinolite and diopside. The iron-rich skarns contain abundant pyrite, pyrrhotite, epidote, actinolite and hornblende with or without garnet and diopside.

The iron-rich skarns contain scheelite and powellite bearing pods of massive pyrite and pyrrhotite. Chalcopyrite is disseminated within these zones. A grab sample assayed 0.23 per cent tungsten (Assessment Report 10721, page 12). Scheelite, galena and sphalerite were observed in a few narrow quartz veins cross cutting and adjacent to this zone. Minor amounts of molybdenite were observed in quartz veins within the granodiorite stock. Mineralized zones are low-grade, narrow, discontinuous and close to the contact zone.

BIBLIOGRAPHY

EMPR ASS RPT 7331, 8645, *10721
EMPR OF 1991-17
EM GEOFILE 2003-2
GSC OF 432
GSC P 68-1
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/16

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FIELD CHECK: N

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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 779
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MINFILE NUMBER: **082KNW103**

NATIONAL MINERAL INVENTORY:

NAME(S): **JEWEL**, JEWELL

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 24 N
LONGITUDE: 117 19 28 W
ELEVATION: 3100 Metres

NORTHING: 5604283
EASTING: 477034

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEIN APPROX. 1 M WIDE HAVING A STRIKE OF N55E AND A DIP OF 70 DEGREES TO THE NW. VEIN CUTS THE FORMATION NEARLY AT RIGHT ANGLES. MINERALIZATION CONSISTS OF GALENA, PYRITE, AND A LITTLE SPHALERITE.

BIBLIOGRAPHY

EMPR AR 1914-307; 1928-314; 1937-E51
EMPR BULL 2-48 (1914)
GSC MAP 235 A #29
GSC MEM 161-47

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: AFW

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW103**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 780
REPORT: RGEN0100

MINFILE NUMBER: **082KNW104**

NATIONAL MINERAL INVENTORY:

NAME(S): **HERCULES**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 24 N
LONGITUDE: 117 18 28 W
ELEVATION: 2033 Metres

NORTHING: 5604278
EASTING: 478214

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite Chalcopyrite Ankerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

COUNTRY ROCK IS DARK GREEN CHLORITE SCHIST. THE MINERALIZATION CONSISTS OF PYRITE AND SPHALERITE WITH SMALL AMOUNTS OF GALENA AND CHALCOPYRITE IN A GANGUE OF QUARTZ AND ANKERITE.

BIBLIOGRAPHY

EMPR AR 1918-156; 1925-264; 1928-314; 1930-267
GSC BULL 193
GSC MAP 235A, 1277A
GSC MEM 161-56

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW104**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 781
REPORT: RGEN0100

MINFILE NUMBER: **082KNW105**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAR**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 00 N
LONGITUDE: 117 42 04 W
ELEVATION: 2033 Metres

NORTHING: 5614846
EASTING: 450469

LOCATION ACCURACY: Within 500M
COMMENTS: N.E. CORNER MAR 4 CLAIM. MAP ASS RPT 7008.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

THE PROPERTY IS UNDERLAIN BY A SECTION OF META-
SEDIMENTARY ROCKS OF THE MILFORD AND LARDEAU GROUP
. MOLYBDENUM SOIL GEOCHEMISTRY IS ASSOCIATED WITH
A QUARTZ FELDSPAR SERICITE SCHIST, AN ALTERED
EQUIVALENT OF A QUARTZ FELDSPAR ARGILLACEOUS
BANDED SCHIST WITHIN THE LARDEAU GROUP.

BIBLIOGRAPHY

EMPR ASS RPT 6920, 7008
EMPR EXPL 1978-E84

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW105**

MINFILE NUMBER: **082KNW106**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIDDEN TREASURE (L.4718)**, INDEX, WICKENDEN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

Underground

MINING DIVISION: Kamloops

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 12 N
LONGITUDE: 117 17 58 W

NORTHING: 5615025
EASTING: 478847

ELEVATION: 2033 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: See also Index (082KNW038), White Quail (082KNW037) and Mollie Mac (082KNW036).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz Siderite Ankerite Manganite
ALTERATION: Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Hidden Treasure, east of Gainer Creek, is one of a line of Crown-granted mineral claims including, from southeast to northwest, are the Red Cliff, Index (082KNW038), Royal R., Hidden Treasure, President, and White Quail (082KNW037).

On the Hidden Treasure claim a long adit is reported to have been driven in unmineralized rock. However, pyrite and galena are reported in limestone.

BIBLIOGRAPHY

EMPR AR 1908-250; *1914-313-314; 1957-59
EMPR BULL *45, p. 64
EMPR MR MAP 2 (1928)
EMPR PF (*Starr, C.C. (1933): Report on the Mollie Mac Group, White Quail Group and Hidden Treasure Group, 9 p., Detail of workings 1" = 100'; in 082KNW037; Starr, C.C. (1928): Notes on the Wickenden Property, 2 p., in 082KNW038)
GSC MAP 235A
GSC MEM 161, pp. 25,97

DATE CODED: 1985/07/24
DATE REVISED: 1999/11/17

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW107**

NATIONAL MINERAL INVENTORY:

NAME(S): **ESCALADE**, OASIS

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 55 41 N
LONGITUDE: 117 25 02 W
ELEVATION: 2200 Metres

NORTHING: 5641907
EASTING: 470678

LOCATION ACCURACY: Within 500M

COMMENTS: Location of tungsten skarn (Assessment Report 8539, Geology figure)

COMMODITIES: Tungsten

MINERALS

SIGNIFICANT: Scheelite
ALTERATION: Tremolite Diopside Grossularite
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Mohican	

LITHOLOGY: Limestone
Biotite Hornblende Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY
Tungsten

YEAR: 1984

GRADE
0.0600 Per cent

COMMENTS: Chip length not reported.
REFERENCE: Assessment Report 8539.

CAPSULE GEOLOGY

The area of the Escalade occurrence is underlain by the contact of Lower Cambrian sedimentary rock of the Mohican Formation and intrusive rock of the Cretaceous granodioritic Battle Range batholith.

Teck Corporation staked the Escalade claims in 1979 to cover an anomalous tungsten value reported in a newly released government report. Geological Survey of Canada Open File 515 reported the location of an anomalous tungsten value in a stream draining a small lake at the foot of Houston Glacier. In 1980, Teck mapped the property and collected 58 silt samples and 6 rock samples.

Tungsten mineralization was located in a skarn zone where biotite-hornblende-quartz monzonite is in contact with limestone. The occurrence is exposed at the foot of an ice-field above Houston Glacier at 2200 metres elevation. The host rock is a cream-coloured, fine-grained tremolite, diopside, grossularite skarn with lesser mineralized green siliceous bands. Two chip samples were taken, E19 followed the contact and E20 crossed the strike. E19 assayed 0.06 per cent WO3 and E20 assayed 0.03 per cent WO3 (Assessment Report 8539). The extent of the zone was difficult to determine due to ice cover.

Molybdenite was found in float about 1 kilometre to the east.

BIBLIOGRAPHY

EMPR ASS RPT *8539
EMPR OF 1991-17
EM GEOFILE 2003-2

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 784
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/22

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 785
REPORT: RGEN0100

MINFILE NUMBER: **082KNW108**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEW ZONE COPPER**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 18 N
LONGITUDE: 117 27 16 W
ELEVATION: 1300 Metres

NORTHING: 5615266
EASTING: 467899

LOCATION ACCURACY: Within 5 KM
COMMENTS: FROM BCDM MMAR 1961-79.

COMMODITIES: Copper Nickel

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

THE SHOWING IS IN SCHISTOSE SILICEOUS ROCKS ALONGSIDE THE ROAD AT AN ELEVATION OF ABOUT 4000 FT. THE ZONE APPEARS TO STRIKE N20W AND TO DIP STEEPLY TO THE SOUTHWEST. THE VEIN WAS MINERALIZED SPARSELY WITH PYRITE AND SOME CHALCOPYRITE.

BIBLIOGRAPHY

EMPR AR 1961-79

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW108**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 786
REPORT: RGEN0100

MINFILE NUMBER: **082KNW109**

NATIONAL MINERAL INVENTORY: 082K11 Ag3

NAME(S): **FREE COINAGE (L.1588)**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 00 N
LONGITUDE: 117 21 52 W
ELEVATION: 2408 Metres

NORTHING: 5609115
EASTING: 474226

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite Tetrahedrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEIN CARRYING SULPHIDES. ALSO FISSURE
STRIKING N30W AND DIPPING STEEPLY EAST.
FISSURE MINERALIZED WITH QUARTZ AND SPHALERITE
WITH SOME PYRITE AND GALENA.

BIBLIOGRAPHY

EMPR AR 1896-542; 1897-548; 1898-1066,1190; 1900-823,983; 1901-1018;
1905-153; 1924-210; 1926-273; 1927-296
EMPR BULL 45-75
GSC MEM 161-30,45,60,63

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW109**

MINFILE NUMBER: **082KNW110**

NATIONAL MINERAL INVENTORY: 082K14 Pb2

NAME(S): **BLACK WARRIOR (L.10646)**, WHITE STAR (L.11330), EVA MAY (L.10647)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:
LATITUDE: 50 47 13 N
LONGITUDE: 117 25 05 W
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Black Warrior Crown Grant (Lot 10646)

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5626216
EASTING: 470531

COMMODITIES: Silver Lead Copper Gold Zinc

MINERALS

SIGNIFICANT: Galena Chalcopyrite Tetrahedrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Schist
Marble
Limestone
Phyllite
Quartzite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1914
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Silver		2441.1600	Grams per tonne
Gold		9.6000	Grams per tonne
Lead		57.3000	Per cent
Zinc		7.8000	Per cent

COMMENTS: From a 60 centimetre sample.
REFERENCE: Minister of Mines Annual Report 1924, page 211.

CAPSULE GEOLOGY

The Black Warrior area is underlain by limestone of the Lower Cambrian Badshot Formation and metasediments of the Cambrian to Devonian Index Formation (Lardeau Group) consisting of schist, phyllite, quartzite, slate and limestone.

Initial activity on the Black Warrior group, which consisted of Black Warrior (Lot 10646), White Star (Lot 11330) and Eva May (Lot 10647), was directed to a mineralized quartz vein in schists and included surface and underground work on both sides of McDonald Creek. Later, the Blue Jay group (082KNE079) was staked on the northeast side and may have investigated some of the same showings.

The first report of the activity of the Black Warrior group was in 1898-99 although considerable work was done before and after that period for a total of 228 metres of underground tunneling. The workings on the northwest side of the creek apparently included an adit and several opencuts. On the southeast side of the creek 4 adits were driven between elevations of about 1615 and 1980 metres.

A quartz vein, 60 to 90 centimetres wide, occurs in schist some 18 metres southwest of, and approximately parallel to, the mineralized limestone band of the Blue Jay. As exposed by the

CAPSULE GEOLOGY

workings, the vein locally contains sparsely disseminated galena. The exception was a small lens of sulphides found on the hanging wall side of the vein at the 1920 metre elevation over a width of 76 centimetres and a similar length. At a depth of 9 metres, this lens was reduced to a few stringers of sulphides. The sulphides were mainly galena and chalcopyrite with a little pyrite and tetrahedrite. A sample taken across 60 centimetres in 1924 gave the following assays: gold, 9.60 grams per tonne; silver, 2441.16 grams per tonne silver; lead, 57.3 per cent and zinc, 7.8 per cent (Minister of Mines Annual Report 1924, page 211).

From 1958 to 1960, J. Main of Ferguson did some repairs to the trail and to some of the workings in order to aid in property examination.

The area was largely inactive until 1980s when a number of the old working came into the possession of Jack and Eric Denny through purchase or staking. The two rehabilitated many of the access trails and workings in the area of Galena Creek and to the east (to Marsh Adam Creek) and north. Some of the historically documented mineral occurrences were found and examined during this period but the mineralization was examined more as a whole than as individual showings.

The following summarizes the ownership of and general work done in and around the property in question. The Dennys commissioned geologist Gordon Turner to investigate the "Horne Ledge" and the Ellsmere zones and the first report on the area was written. In 1985, the large claim group was optioned briefly to Nakusp Resources Ltd. who did claim staking, mapping, collected 86 rock and 64 soil samples, excavated 18 metres of trench and conducted an electromagnetic survey. They referred to their project as the Silver Horn. In 1987, the Dennys optioned the property to Golden Range Resources Ltd. who conducted 150 kilometres of airborne VLF-EM resistivity and magnetic surveys and, geological mapping and sampling throughout their Black Warrior and Silver Leaf groups. In 1988, Golden Range investigated the Silver Leaf Crown-grant and area, unsuccessfully attempting to relocate the workings. The property reverted to the Dennys in 1989. In 1991, the property was optioned to Jopec Resources Ltd. who conducted mapping and collected 30 samples.

Refer to Assessment Reports by Golden Range (18845), 1988 and by Jopec (22917), 1993 for further details on the Black Warrior.

BIBLIOGRAPHY

EMPR AR 1898-1070; 1899-683,708; 1913-423; 1923-K423; *1924-B211;
1958-50; 1959-70; 1960-77
EMPR ASS RPT 11979, 14063, 17651, 18844, *18845, *22917
EMPR GEM 1972-78
EM GEOFILE 2003-2
GSC OF 288; 432
GSC MAP 235A
GSC MEM 161 pp. 28,83
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/07

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 789
REPORT: RGEN0100

MINFILE NUMBER: **082KNW111**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER PLATE**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 18 N
LONGITUDE: 117 19 10 W
ELEVATION: 2600 Metres

NORTHING: 5600390
EASTING: 477371

LOCATION ACCURACY: Within 1 KM

COMMENTS: ON THE SUMMIT AT THE HEAD OF NEIL CREEK

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

CLAIM IS COVERED TO A CONSIDERABLE DEPTH WITH WASH THICKLY IMPREGNATED WITH LARGE BOULDERS OF HIGH-GRADE GALENA ORE.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-686; 1904-118; 1905-154; 1914-K311
GSC BULL 193,1973
GSC MAP 235A, 1277A
GSC MEM 161-47

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW111**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 790
REPORT: RGEN0100

MINFILE NUMBER: **082KNW112**

NATIONAL MINERAL INVENTORY:

NAME(S): **BONANZA**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 48 N
LONGITUDE: 117 16 58 W
ELEVATION: 2073 Metres

NORTHING: 5601306
EASTING: 479972

LOCATION ACCURACY: Within 1 KM
COMMENTS: ON THE SUMMIT AT THE HEAD OF NEIL CREEK

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEINS CONTAINING PYRITE. THE COUNTRY ROCK IS CARBONACEOUS SLATE CONVERTED IN MANY PLACES TO MUCH CONTORTED GRAPHITIC SCHIST.

BIBLIOGRAPHY

EMPR AR 1900-825; 1905-J154; 1914-K308
EMPR PF (RPTS BY T.R. TOUGH)
GSC BULL 193
GSC MAP 235A, 1277A
GSC MEM 161-54

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW112**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 791
REPORT: RGEN0100

MINFILE NUMBER: **082KNW113**

NATIONAL MINERAL INVENTORY:

NAME(S): **SKYLINE**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 54 N
LONGITUDE: 117 20 16 W
ELEVATION: 2667 Metres

NORTHING: 5601508
EASTING: 476077

LOCATION ACCURACY: Within 500M
COMMENTS: ON THE SUMMIT AT THE HEAD OF NEIL CREEK

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

BETWEEN A BELT OF SILICIFIED SCHIST AND A CARBONACEOUS PHYLLITE IS AN IRREGULAR QUARTZ VEIN CONTAINING PYRITE WITH A LITTLE GALENA. QUARTZ MINERALIZED WITH PYRITE, CHALCOPYRITE AND A LITTLE GALENA. THE SCHIST IS ITSELF SLIGHTLY MINERALIZED WITH IRON AND COPPER SULPHIDES.

BIBLIOGRAPHY

EMPR AR 1914-307
GSC BULL 193
GSC MAP 235A, 1277A
GSC MEM 161-27,47

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW113**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 792
REPORT: RGEN0100

MINFILE NUMBER: **082KNW114**

NATIONAL MINERAL INVENTORY:

NAME(S): **FIDELITY, ANNIE E, NIPISSING,
SPOKANE, BOSUN, J.W.FR.**

MINING DIVISION: Revelstoke

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 32 42 N
LONGITUDE: 117 17 58 W
ELEVATION: 2267 Metres

NORTHING: 5599272
EASTING: 478783

LOCATION ACCURACY: Within 500M
COMMENTS: ON THE SUMMIT AT THE HEAD OF NEIL CREEK

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

THE SEDIMENTS STRIKE N55W ON THE AVERAGE AND ARE CUT BY NUMEROUS IRREGULAR FAULTS, SOME OF WHICH ARE MINERALIZED WITH QUARTZ, CARBONATES AND A LITTLE PYRITE. SHEAR ZONE THAT IS INTERMITTENTLY MINERALIZED WITH QUARTZ, PYRITE, GALENA AND A LITTLE SPHALERITE.

BIBLIOGRAPHY

EMPR AR 1900-824; 1902-141; 1910-247; 1911-155; 1912-151,323; 1913-420; 1914-308; 1917-165; 1918-156; 1922-355; 1927-295; 1928-318
EMPR ASS RPT 9208
EMPR EXPL 1978-E80
EMPR INDEX 3-196
GSC BULL 193
GSC MAP 235A, 1277A
GSC MEM 161-27,52

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW114**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 793
REPORT: RGEN0100

MINFILE NUMBER: **082KNW115**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARALLU**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 00 N
LONGITUDE: 117 20 46 W
ELEVATION: 2333 Metres

NORTHING: 5601696
EASTING: 475488

LOCATION ACCURACY: Within 500M
COMMENTS: ON THE SUMMIT AT THE HEAD OF NEIL CREEK

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR AR 1900-825; 1914-309

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW115**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 794
REPORT: RGEN0100

MINFILE NUMBER: **082KNW116**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN CROWN**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 00 N
LONGITUDE: 117 21 10 W
ELEVATION: 2333 Metres

NORTHING: 5601698
EASTING: 475016

LOCATION ACCURACY: Within 500M
COMMENTS: FROM GSC MAP 235A #28.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

GOLD QUARTZ VEINS ARE ASSOCIATED WITH GREENSTONE DYKES, MANY OF WHICH ARE COMPLETELY CARBONATED. ON OCCASION SULPHIDES ARE INCLUDED WITHIN THE VEINS. ON THIS CLAIM A VEIN COMPOSED OF HIGHLY CRYSTALLINE QUARTZ IS MINERALIZED WITH PYRITE.

BIBLIOGRAPHY

EMPR AR 1914-309; 1925-264

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW116**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 795
REPORT: RGEN0100

MINFILE NUMBER: **082KNW117**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOGGY DAY**, BRONZE

MINING DIVISION: Revelstoke

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 30 N
LONGITUDE: 117 21 34 W
ELEVATION: 2600 Metres

NORTHING: 5604480
EASTING: 474557

LOCATION ACCURACY: Within 500M
COMMENTS: FROM GSC MAP 235A #32.

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

ROCKS ARE ARGILLACEOUS, CALCAREOUS AND SILICEOUS
SEDIMENTS. QUARTZ VEINS MINERALIZED WITH PYRITE
AND LESSER AMOUNTS OF GALENA, SPHALERITE AND
TETRAHEDRITE. THE PYRITE IS WELL CRYSTALLIZED,
THE GALENA AND TETRAHEDRITE HAVE BEEN DEPOSITED
ALONG CRUSHED ZONES WITHIN THE VEINS.

BIBLIOGRAPHY

EMPR AR 1917-165,191; 1918-157; 1921-161; 1922-217; 1923-234;
1930-267; 1931-151; 1934-E36
EMPR INDEX 3-196
GSC MAP 235A
GSC MEM 161-47

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW117**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 796
REPORT: RGEN0100

MINFILE NUMBER: **082KNW118**

NATIONAL MINERAL INVENTORY:

NAME(S): **IXL**, OK

MINING DIVISION: Revelstoke

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 24 N
LONGITUDE: 117 20 10 W
ELEVATION: 2100 Metres

NORTHING: 5607993
EASTING: 476225

LOCATION ACCURACY: Within 1 KM
COMMENTS: FROM GSC MAP 235A #34.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

VEIN THAT STRIKES N35W AND DIPS 30 DEGREES NE.
QUARTZ VEIN THAT CONTAINS SOME CARBONATE, AND IS
MINERALIZED OVER WIDTHS UP TO 6 INCHES OR MORE,
WITH GALENA, PYRITE AND SPHALERITE. OTHER QUARTZ
VEINS IN THE VICINITY ALSO CONTAIN SULPHIDE
MINERALIZATION.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-686; 1900-823; 1905-J153; 1907-L93; 1911-
156; 1914-K305; 1918-K157
EMPR ASS RPT 7324, 9037
EMPR BULL 45-87
EMPR EXPL 1979-90
EMPR INDEX 3-200
GSC BULL 193
GSC MAP 235A, 1277A
GSC MEM 161-58,67,120
GSC SUM RPT 1904-87A

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW118**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 797
REPORT: RGEN0100

MINFILE NUMBER: **082KNW119**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHANCE**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 18 N
LONGITUDE: 117 20 34 W
ELEVATION: 2433 Metres

NORTHING: 5607810
EASTING: 475752

LOCATION ACCURACY: Within 500M
COMMENTS: FROM GSC MAP 235A #35

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

SEDIMENTS ARE BLACK SLATES AND SCHISTS, MORE OR LESS CALCAREOUS, STRIKING NORTHWEST AND DIPPING NE. THEY ARE CUT BY NUMEROUS QUARTZ STRINGERS THAT FOLLOW THE SCHISTOSITY. QUARTZ VEIN THAT HAS BEEN DEVELOPED CONTAINS A LITTLE CARBONATE, AND MANY INCLUSIONS OF THE SCHISTS. THE METALLIC MINERALS ARE PYRITE, SPHALERITE, GALENA, TETRAHEDRITE AND CHALCOPYRITE.

BIBLIOGRAPHY

EMPR AR 1911-154; 1914-304
EMPR ASS RPT 7324, 9037
EMPR BULL 45-56,78
EMPR EXPL 1979-90
GSC MAP 235A
GSC MEM 161-45,56,115

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW119**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 798
REPORT: RGEN0100

MINFILE NUMBER: **082KNW120**

NATIONAL MINERAL INVENTORY: 082K11 Ag5

NAME(S): **YUILL**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 24 N
LONGITUDE: 117 23 16 W
ELEVATION: 1433 Metres

NORTHING: 5611718
EASTING: 472590

LOCATION ACCURACY: Within 500M
COMMENTS: FROM GSC MAP 235A #43

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ CONTAINING SULPHIDES, PRINCIPALLY GALENA AND PYRITE. THE QUARTZ LIES BELOW A SMOOTH FAULT WALL THAT STRIKES N35W AND THAT DIPS 70 NE. BELOW THE VEIN, WHICH CUTS BLACK SCHISTS STRIKING N45W, IS A BAND OF GREY, KNOTTY, CALCAREOUS SCHIST, AND WEST OF THIS ARE CARBONACEOUS SCHISTS, GREY CALCAREOUS SCHISTS, AND A BED OF BLACK SPOTTED PHYLLITE.

BIBLIOGRAPHY

EMPR AR 1906-H138; 1915-K133
EMPR BULL 45
EMPR EXPL 1976-E50, 1977-E69
EMPR PF (RPT BY A.G. MACKENZIE 1972)
GSC MAP 235A
GSC MEM 161-30,66
GCNL #28,#41,#51, 1985

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW120**

MINFILE NUMBER: **082KNW121**

NATIONAL MINERAL INVENTORY:

NAME(S): **GUS**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 12 N
LONGITUDE: 117 26 36 W
ELEVATION: 1000 Metres

NORTHING: 5613222
EASTING: 468671

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Lardeau	Undefined Formation	

LITHOLOGY: Phyllite
Argillite
Pyroclastic
Limestone

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

Located northeast of the Trout Lake Fault, the underlying rocks are polydeformed, anticlinal siliceous phyllite and meta-argillite of the Lower Cambrian Lardeau Group. There are numerous quartz veinlets and sweats, some of which are pyritic. Drilling intersected a 6 centimetre vein of semi-massive pyrite-galena-sphalerite containing values of gold and silver.

BIBLIOGRAPHY

EMPR ASS RPT 12176
EMPR EXPL 1983-127

DATE CODED: 1985/07/12
DATE REVISED: / /

CODED BY: AFW
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 800
REPORT: RGEN0100

MINFILE NUMBER: **082KNW122**

NATIONAL MINERAL INVENTORY:

NAME(S): **YAMHILL**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 31 54 N
LONGITUDE: 117 23 34 W
ELEVATION: 800 Metres

NORTHING: 5597820
EASTING: 472162

LOCATION ACCURACY: Within 1 KM

COMMENTS: NEAR OUTLET OF ABRAHAMSON CREEK INTO TROUT LAKE

COMMODITIES: Gold

Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR AR 1901-1020; 1902-141

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW122**

MINFILE NUMBER: **082KNW123**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMESTAKE**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 18 N
LONGITUDE: 117 34 52 W
ELEVATION: 1800 Metres

NORTHING: 5607915
EASTING: 458893

LOCATION ACCURACY: Within 500M

COMMENTS: Located on Humphries Creek (Glacier Creek) adjoining the Ethel (082KNW059) property.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena

ASSOCIATED: Quartz Carbonate

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Cambrian Lardeau

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Homestake group of 4 claims is about 800 metres from the Ethel (082KNW059). Development work in 1898 consisted of a 20-metre cross-cut to a vein and a 21-metre drift long the vein. Ten centimetres of galena occurs within the quartz-carbonate vein. Underlying rocks consist of Lower Paleozoic Lardeau Group metasediments.

BIBLIOGRAPHY

EMPR AR 1898-1069; 1899-686

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 802
REPORT: RGEN0100

MINFILE NUMBER: **082KNW124**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALMA**, AICE, ALMA NO. 2,
ALICE

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 18 N
LONGITUDE: 117 32 34 W
ELEVATION: 1800 Metres

NORTHING: 5628281
EASTING: 461754

LOCATION ACCURACY: Within 500M
COMMENTS: AICE IS A MISSPELLING OF ALICE

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

MINERALIZATION CONSISTS OF LEAD, ZINC, AND IRON
SULPHIDES IN A GANGUE OF LIMESTONE AS WELL AS
BEING ASSOCIATED WITH SIDERITE.
A SILVER-LEAD-ZINC REPLACEMENT DEPOSIT IN
LIMESTONE IS SITUATED IN A MINERALIZED BELT WHICH
HAS BEEN TRACED IN A SOUTHEASTERLY AND NORTH-
WESTERLY DIRECTION. IT APPEARS THAT
MINERALIZATION REPLACED THE LIMESTONE NEAR ITS
CONTACT WITH SCHIST AND APPEARED TO BE STRONGEST
WHERE FLEXURES HAD PROVIDED CHANNELS FOR SOLUTION.

BIBLIOGRAPHY

EMPR AR 1899-673; 1900-813; 1904-295; 1925-A263,A450; 1927-G292;
1928-318; 1929-C339; 1957-59
EMPR PF (RPT BY D.B. STERRETT 1930)
GSC MEM 161-25,28

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW124**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 803
REPORT: RGEN0100

MINFILE NUMBER: **082KNW125**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOLY**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 24 N
LONGITUDE: 117 22 04 W
ELEVATION: 1100 Metres

NORTHING: 5613564
EASTING: 474012

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Unknown
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Unknown	Lardeau	Broadview	

LITHOLOGY: Argillite
Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

Pyrite, sphalerite and galena occur as semi-massive to disseminated pods and lenses within siliceous quartz breccia phyllites near a contact with tuffaceous rocks.

BIBLIOGRAPHY

EMPR ASS RPT 12177
EMPR EXPL 1983-128

DATE CODED: 1985/08/27
DATE REVISED: / /

CODED BY: AFW
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW127**

NATIONAL MINERAL INVENTORY:

NAME(S): **GILLMAN**, GILMAN (L.4496), BLACK HOCK (L.9497),
FRISCO (L.4498), GILMAN FR., SILVER DOLLAR

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K12E 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 44 58 N
LONGITUDE: 117 34 07 W

UTM ZONE: 11 (NAD 83)

ELEVATION: 1900 Metres

NORTHING: 5622117
EASTING: 459886

LOCATION ACCURACY: Within 500M

COMMENTS: The Gillman, 10 kilometres southeast of Camborne and on the north side of the East fork of Mohawk Creek, is at 1800 metres elevation. See also the Beatrice mine (082KNW040) and Silver Dollar (082KNW101).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
Metres

STRIKE/DIP: 165/35E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Broadview

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Black Slate
Carbonaceous Schist
Quartzite
Talcose Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Gillman, 10 kilometres southeast of Camborne and on the north side of the East fork of Mohawk Creek, is at 1800 metres elevation. See also the Beatrice mine (082KNW040) and Silver Dollar (082KNW101).

The area is underlain by metasedimentary rocks of the Lower Paleozoic Lardeau Group, which includes medium grey to greenish quartzites, greywackes, carbonaceous phyllites and quartz sericite schist.

A northwest striking, east dipping quartz vein, 2 metres wide, cuts the metasediments. The vein contains galena, pyrite and sphalerite. A sample assayed 109 grams per tonne silver and 124 grams per tonne gold (Annual Report 1914, page 263). In 1933, a tonne of ore returned 62 grams of silver, 62 grams of gold, 22 kilograms of lead and 23 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1901-1022; 1903-H107; 1907-L219; *1914-262; 1933-A215;
1938-E3,E11; 1957-58
EMPR ASS RPT 5209, 11532, 15946, 25031
EMPR BC METAL MM00604
EMPR GEM 1974-84
EMPR INDEX 3-197
EMPR PF (Emmens, N.W. (1914): Report on the Mineral Resources of the Lardeau Mining Division, pp. 34-35, in 082KNW General)
GSC MEM 161
GCNL #143 (July 29), 1986

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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PAGE: 806
REPORT: RGEN0100

BIBLIOGRAPHY

Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW128**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLD GOLD**, SILVER QUEEN (L.4694), SILVER KING (L.4695)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 45 53 N
LONGITUDE: 117 22 37 W
ELEVATION: 2134 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5623729
EASTING: 473416

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the centre of Silver Queen Crown-grant (Lot 4694).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Limestone
Graphitic Schist
Phyllite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Old Gold group, consisting of the Silver Queen (Lot 4694) and Silver King (Lot 4695), is located on the west fork of the Duncan River (Westfall River).

The Old Gold was already considered an important group in 1900 and development is reported to occur up to 1920. A shipment from the Silver Queen of silver-bearing galena was made by the Old Gold Quartz and Placer Mining Company in 1899. Government records show that in 1907, 4 tonnes were mined and 16,640 grams of silver and 1925 kilograms of lead were recovered. In 1916, 22 tonnes were shipped and 62,206 grams of silver and 2722 kilograms of lead were recovered. Conaway Mining Co. mined 24 tonnes of ore from the Silver Queen in 1917 which yielded 58,163 grams of silver, 31 grams of gold, and 13,807 kilograms of lead.

In 1917, development-work consisted of two crosscuts to tap the ore-body and about 42 metres of drifting along the vein, the total amount of tunneling being about 244 metres. In the upper workings approximately 1 metre of ore is exposed along the drift for a distance of 12 metres, and at the bottom of the 3-metre winze, about 1 metre of ore is exposed. Not much drifting has been done in the lower tunnel, but a nice showing of ore occurs, about 23 centimetres wide, at the end of the crosscut and situated approximately under the ore exposed in the winze in the upper level. The ore is a massive galena and tetrahedrite carrying high silver values, fairly free from gangue-matter and apparently low in zinc and iron. The formation consists of slates and graphitic schists, with intermittent narrow bands of limestone.

The strata strike 123 degrees and dip 50 degrees (direction not reported). The ore apparently occurs along the contact of the schists and limestone, and it appears to replace the limestone.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. These bands are part of the Lower Cambrian Badshot Formation, repeated by folding and interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 808
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1898-1071; 1899-602,684; 1900-822; 1901-1031,1227;
1904-G198; 1907-L96, L214; 1908-J94; 1916-K201, K517;
*1917-F164,448; 1919-N143; 1920-N121
EMPR ASS RPT 11979, 14063, 17651, 18844, 18845, 22917
EMPR INDEX 3-208,213
EMPR BC METAL MM01401
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW129**

NATIONAL MINERAL INVENTORY:

NAME(S): **WIDE WEST (L.6453)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 48 54 N
LONGITUDE: 117 30 46 W
ELEVATION: 2300 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5629378
EASTING: 463876

LOCATION ACCURACY: Within 500M

COMMENTS: The Wide West (Lot 6453) is located at the head of Pool Creek.

COMMODITIES: Lead Copper Gold Silver Zinc

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Wide West (Lot 6453) is located at the head of Pool Creek. In 1901, quartz veins, containing lead, copper and gold values, were investigated with 156 metres of underground workings. Underlying rocks are metasediments of the Lower Paleozoic Lardeau Group.

The property was held by Lardeau Mines Exploration Limited in 1957.

BIBLIOGRAPHY

EMPR AR 1899-673; 1901-1022; 1902-H145; 1906-H253; 1925-A450;
1957-59
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 810
REPORT: RGEN0100

MINFILE NUMBER: **082KNW130**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK BEAR (L.5086)**, KANGAROO

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 18 N
LONGITUDE: 117 30 46 W
ELEVATION: 1800 Metres

NORTHING: 5626413
EASTING: 463855

LOCATION ACCURACY: Within 500M
COMMENTS: CENTER OF L. 5086 PLOTTED.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

VEIN AVERAGING 5 METRES IN WIDTH.

BIBLIOGRAPHY

EMPR AR 1894-744; 1896-538; 1898-1064; 1899-673,679; 1900-813; 1901-
1222,1225
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW130**

MINFILE NUMBER: **082KNW131**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNTAIN BOY (L. 2495)**, GILMAN

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 06 N
LONGITUDE: 117 34 04 W
ELEVATION: 2100 Metres

NORTHING: 5622364
EASTING: 459947

LOCATION ACCURACY: Within 500M
COMMENTS: Location of centre of claim.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

Argentiferous galena occurs in a vein within phyllite of the Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1899-600,674,679; 1902-H300
EMPR ASS RPT 11532, 15946
EMPR MR MAP 2 (1928)
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/17

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 812
REPORT: RGEN0100

MINFILE NUMBER: **082KNW132**

NATIONAL MINERAL INVENTORY:

NAME(S): **AGNES**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 51 48 N
LONGITUDE: 117 42 34 W
ELEVATION: 1800 Metres

NORTHING: 5634867
EASTING: 450073

LOCATION ACCURACY: Within 1 KM

COMMENTS: MAY BE IN PART RESTAKED AS VIMY RIDGE ON AGNES CREEK A TRIBUTARY OF
STEPHNEY CREEK.
ON THE AGNES BRANCH OF SABLE CREEK.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Calcite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

DYKE CONSISTS OF GRAINS OF GREY CARBONATES WITH
MANY FLAKES OF GREEN MICA. ROCK CUT BY NUMEROUS
VEINLETS OF QUARTZ AND SOME OF PURE CALCITE.
PYRITE IS SPARINGLY DISSEMINATED THROUGHOUT THE
VEIN.

BIBLIOGRAPHY

EMPR AR 1894-744; 1895-692; 1896-537; 1898-1064; 1899-675,680
GSC MEM 161-56,119

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW132**

MINFILE NUMBER: **082KNW133**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUNSET (L.1970)**, COPPER SUNSET

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 50 42 N
LONGITUDE: 117 42 10 W
ELEVATION: 1990 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5632824
EASTING: 450522

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located at the head of Scott Creek.

COMMODITIES: Silver

Lead

Zinc

Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Tetrahedrite

ASSOCIATED: Quartz Mariposite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic

TYPE: I01 Au-quartz veins

Hydrothermal

I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian
Cambrian

GROUP

Lardeau
Lardeau

FORMATION

Jowett
Broadview

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Sunset is located at the head of Scott Creek. An 18-metre shaft and 7.6-metre adit were completed in 1898. Mineralization consisting of galena, sphalerite, and pyrite in a quartz gangue occurs in small cross-fractures. The country rocks are metasediments of the Lardeau Group. A sample from the dumps assayed 1 gram per tonne gold, 1334 grams per tonne silver, 12.2 per cent lead and 21 per cent zinc (Annual Report 1925, page 260).

BIBLIOGRAPHY

EMPR AR 1898-1064; 1899-676,847; *1925-260
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/16

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW134**

NATIONAL MINERAL INVENTORY: 082K14 Pb4

NAME(S): **GLENGARRY (L.1971)**, PRINCE EDWARD (L.1973), BANWELL FR., DEWEY

STATUS: Past Producer	Underground	MINING DIVISION: Slocan
REGIONS: British Columbia		
NTS MAP: 082K14W		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 49 30 N		NORTHING: 5630462
LONGITUDE: 117 27 09 W		EASTING: 468129
ELEVATION: 2438 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The location is for the Glengarry-Prince Edward claim boundary.		

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite
 ASSOCIATED: Quartz Carbonate
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Dolomite
 Limestone
 Quartzite
 Phyllite
 Limy Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
 TERRANE: Kootenay

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1899
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	3429.0000 Grams per tonne
Lead	40.0000 Per cent
REFERENCE: Minister of Mines Annual Report 1899, page 675.	

CAPSULE GEOLOGY

The Glengarry is located at the head of Boyd and Silvertip creeks, approximately 19 kilometres northeast of Trout Lake. The Glengarry group, consists of the Glengarry (Lot 1971), Prince Edward (Lot 1973) Banwell Fraction (Lot 1974) and Dewey. The Jim Dandy was adjoined to the southeast but was apparently not part of this group.

The Glengarry was located in 1892. Development work, done mainly in 1898, included a 7.6-metre crosscut adit and a 6.7-metre drift on the vein. The Glengarry and Prince Edward were Crown-granted to Lemuel Arthur in 1899 and the Banwell Fraction to C.E. Woods in the same year.

The area is underlain by rocks of the Lower Cambrian Badshot Formation and Cambrian to Devonian Index Formation (Lardeau Group). White limestone, quartzite and phyllite are reported to belong to the Badshot Formation. Limy phyllite containing minor dark grey or black limestone is correlated with the Index Formation. The strata strikes between 130 and 140 degrees with steep dips ranging from 80 degrees southwest to 70 degrees northeast.

A quartz and carbonate vein, up to 4.6 metres in width, contains up to 70 centimetres of galena with lesser chalcopyrite. The ore is reported to assay up to 3429 grams per tonne silver and 40 per cent lead (Minister of Mines Annual Report 1899, page 675). An unspecified amount of ore was shipped in 1899.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 815
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1894-745; 1895-692; 1896-543; 1897-551; *1898-1070;
*1899-600,675,683,708,842
EMPR ASS RPT 6496, 14592
EMPR EXPL 1977-71; 1985-C84
EM GEOFILE 2003-2
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/05

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 817
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR EXPL 1977-71; 1985-C84
EM GEOFILE 2003-2
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/05

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW137**

NATIONAL MINERAL INVENTORY:

NAME(S): **HUNTER (L.4495)**, TRAPPER (L.4494)

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 50 N
LONGITUDE: 117 30 22 W
ELEVATION: 2200 Metres

NORTHING: 5629251
EASTING: 464345

LOCATION ACCURACY: Within 1 KM

COMMENTS: Adjoins the Wide West on the southeast side. See Open File Map 288 #69.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Tetrahedrite Galena Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Hunter (Lot 4495) and Trapper (Lot 4494) are located at the head of Pool Creek, and adjoins the Wide West (082KNW129) on the southeast side.

A 150-metre quartz vein, containing galena, tetrahedrite and pyrite, occurs in limestone of the Lower Paleozoic Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1899-673,679; 1900-813; 1904-G297,G298; 1926-A449
GSC MEM 161
GSC OPEN FILE 288-69

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW138**

NATIONAL MINERAL INVENTORY:

NAME(S): **NELSON**, ACADEMY, WINDFLOWER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 50 07 N
LONGITUDE: 117 40 48 W
ELEVATION: 1400 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5631728
EASTING: 452116

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on the ridge between Menhenick and Scott Creeks.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres

STRIKE/DIP: I05 Polymetallic veins Ag-Pb-Zn±Au
TREND/PLUNGE: 120/50W

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Jowett	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

A quartz vein, striking north 60 degrees west and dipping 50 degrees, occurs in carbonaceous phyllite of the Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1903-107; 1906-140; 1909-104; 1910-95; *1914-249-259;
1918-190
EMPR PF (Emmens, N.W. (1914): Report on the Mineral Resources of the
Lardeau Mining Division, pp. 9-10, in 082KNW General)
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/16

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW139**

NATIONAL MINERAL INVENTORY: 082K13Ag7

NAME(S): **SCOUT**, MAMMOTH

STATUS: Prospect

Underground

MINING DIVISION: Revelstoke

REGIONS: British Columbia

NTS MAP: 082K13E

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 51 49 N

LONGITUDE: 117 34 54 W

ELEVATION: 1860 Metres

NORTHING: 5634819

EASTING: 459065

LOCATION ACCURACY: Within 500M

COMMENTS: The Scout showing is located on the northwest slope of Mount Goldsmith (Goat Mountain), east of Incomappleux River and 10 kilometres northeast of Camborne. Location is from Assessment Report 7996. See also Big Showing (082KNW078).

COMMODITIES: Silver

Lead

Zinc

Gold

MINERALS

SIGNIFICANT: Galena

Sphalerite

Pyrite

Tetrahedrite

ASSOCIATED: Quartz

Calcite

Siderite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

Stratiform

Disseminated

Massive

CLASSIFICATION: Epigenetic

Replacement

Exhalative

TYPE: I05

Polymetallic veins Ag-Pb-Zn±Au

E13

Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone

Chloritic Schist

Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Scout showing is located on the northwest slope of Mount Goldsmith (Goat Mountain), east of Incomappleux River and 10 kilometres northeast of Camborne. The showing was discovered and held by George Goldsmith in the early 1900's. Work prior to 1941 included trenching, an upper 56-metre adit and shorter lower adit.

Underlying rocks are chloritic schist or phyllites and limestones of the Lower Paleozoic Lardeau Group (Index Formation). A highly silicified zone, 5 to 8 metres wide and 90 metres long, conforms with bedding, which strikes 330 degrees and dips 45 degrees east. The silicified zone, which is associated with a fault that cuts the carbonates, contains patches and disseminations of pyrite, galena and sphalerite. Ore shoots of massive galena up to 1.5 metres wide and 7.6 metres long with maximum depths of 4.6 metres were investigated with 76 metres of adit and crosscuts.

A 1.5-metre sample assayed 89 grams per tonne silver and 0.7 gram per tonne gold (Annual Report 1914, page 269). A sample of galena assayed 2002 grams per tonne silver, 3.4 grams per tonne gold, 56.8 per cent lead and 2 per cent zinc (Annual Report 1919, page 142). A more recent assay ran 483 grams per tonne silver, 3.2 grams per tonne gold, 19.6 per cent lead and 0.27 per cent zinc (Assessment Report 7996).

New Campbell Island Mines Limited optioned the property, including the Mammoth (082KNW077) and the Big Showing (082KNW078), from Summer 90 Resources Ltd. in 1984.

BIBLIOGRAPHY

EMPR AR *1914-K269-270,314; 1918-K190; 1919-*141-142; 1928-C318
EMPR ASS RPT 7996
GSC MEM 161
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/20

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW139**

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 822
REPORT: RGEN0100

MINFILE NUMBER: **082KNW140**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRESCENT**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 48 N
LONGITUDE: 117 23 52 W
ELEVATION: 2300 Metres

NORTHING: 5606903
EASTING: 471857

LOCATION ACCURACY: Within 5 KM

COMMENTS: AT THE HEAD OF 8-MILE CREEK , A SHORT DISTANCE FROM FOGGY DAY

COMMODITIES: Silver Lead Gold

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

QUARTZ VEIN THAT CUTS A BROWNISH SCHIST FORMATION.
VEIN CONTAINS GALENA.

BIBLIOGRAPHY

EMPR AR 1898-1073, 1917-F165,F191, 1918-K157,K196, 1919-N143, 1928-
N128, 1921-G161
GSC BULL 193
GSC MAP 1277A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW140**

MINFILE NUMBER: **082KNW141**

NATIONAL MINERAL INVENTORY:

NAME(S): **GLENSIDE (L.4281)**, OGONTZ (L.4282), COMMONWEALTH

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Revelstoke

LATITUDE: 50 45 06 N
LONGITUDE: 117 26 39 W
ELEVATION: 1675 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5622304
EASTING: 468667

LOCATION ACCURACY: Within 500M

COMMENTS: Glenside is shown to be between the Circle City Lot 4951 and Link Fraction (Lot 14512) (Mineral Reference Map, 1926 (?)). The Link Fraction is shown as a small fraction between Glenside and Ogontz (Lot 4282). Recent topographic maps show the Link Fraction extending over the exact area of where the Glenside was.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Schist
Phyllite
Carbonate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Glenside (Lot 4281) group is located between Ferguson and Surprise creek about 500 metres from the confluence of the two creeks. The Ogontz (Lot 4282) is probably part of the original Glenside group and the Tom Thumb (Lot 3728) may be. The Vera (Lot 4283) (082KNE223) was reported to be part of the Glenside group in 1887 but it and its associated claims are located about 2 kilometres to the north. The location of the defunct Tom Thumb is not known.

In general, bands of Lower Cambrian Badshot Formation limestone are repeated by folding. These bands are interlayered with schist and phyllite of the Cambrian to Devonian Index Formation, Lardeau Group.

Three quartz and galena veins can be traced from Lardeau Creek to a point about 300 metres distant where they unite in one large vein which can be traced for kilometres. At a point about 150 metres below where the three veins unite, a tunnel is in a distance of 24 metres, on the centre small vein. In 1898, it was the intention of the owners (Commonwealth Mining and Development Company) to follow this vein to the point of convergence of all three veins. An opencut is also run for 6 metres at the point of convergence of the veins, which, after cutting through the iron capping, exposed a vein of well-mineralized quartz with stringers of galena. No work is reported after 1898.

BIBLIOGRAPHY

EMPR AR 1897-545,550; *1898-1069,1197; 1899-683; 1901-1224; 1925-450
EM GEOFILE 2003-2
GSC OF 288; 432
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/01

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW141**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
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PAGE: 824
REPORT: RGEN0100

MINFILE NUMBER: **082KNW142**

NATIONAL MINERAL INVENTORY:

NAME(S): **H.Y.M.**

MINING DIVISION: Revelstoke

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 48 N
LONGITUDE: 117 19 52 W
ELEVATION: 1982 Metres

NORTHING: 5606880
EASTING: 476574

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

TWO TUNNELS HAVE BEEN DRIVEN OF WHICH THE UPPER ONE IS DRIVEN ON THE VEIN AND SHOWS ORE FROM 10 TO 14 INCHES IN WIDTH FOR ITS ENTIRE LENGTH, AVERAGING ABOUT 90 OZ. SILVER TO THE TON.

BIBLIOGRAPHY

EMPR AR 1911-K155
GSC BULL 193
GSC MAP 1227A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW142**

BIBLIOGRAPHY

EMPR MR MAP 2 (1928)
EMPR PF (Starr, C.C. (1933): Notes on the Meridian Mine in 082KNW064;
Gibson, S. (1935): Plan of Workings; O'Grady, B.T. (1933):
Criterion Workings, 1"= 50'; Emmens, N.W. and McDougall, B.W.W.
(1933): Plan of Criterion Workings with Assays, 1"= 50'; Criterion
No. 1 & 2 Tunnels, 1"= 40' (date unknown); McDougall, B.W.W.
(1934): Plan of Assays of Criterion No. 2, 1"= 50'; McDougall,
B.W.W. (1934): Plan of Assays of Rossland Tunnel & Criterion No.
1, 1" = 50'; Emmens, N.W. (1934): Report on Meridian Mine, in
082KNW064; Langley, A.G. (1933): General Summary of Progress,
in 082KNW064; McDougall, B.W.W. (1934): The Meridian Mine, in
082KNW064; Emmens, N.W. (1914): Report on the Mineral Resources of
the Lardeau Mining Division, pp. 19-21, in 082KNW General)
GSC MAP 235A
GSC MEM 161, pp. 36,39
GSC OF 288; 432; 464
GSC SUM RPT 1903, p. 58
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW144**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEQUOD 6, MAD, SOUTH VEIN**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 56 56 N
LONGITUDE: 117 24 30 W
ELEVATION: 2362 Metres

NORTHING: 5644221
EASTING: 471316

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of south vein mineralized zone on Pequod 6 claim (Assessment Report 8167).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite
ASSOCIATED: Quartz Feldspar Tourmaline
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry
TYPE: L08 Porphyry Mo (Climax-type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Battle Range Batholith

LITHOLOGY: Porphyritic Feldspar Biotite Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Kootenay
PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Pequod 6 showing occurs in porphyritic feldspar biotite granodiorite of the Cretaceous Battle Range Batholith. Noranda Explorations Co. Ltd. and Amax Potash Limited first discovered molybdenite on their Mad claims in 1978. The joint venture restaked the Mad claims as the Pequod claims in 1979 and Noranda drilled one hole on the nearby Pequod 1 showing (082KNW167).

A zone of quartz-pyrite-molybdenite veining was discovered during 1979. The south vein zone, found on the scoured rock face immediately below Moby Dick Glacier, is exposed over a distance of approximately 1800 metres. Veins vary in width from 1 to 20 centimetres, striking 125 to 135 degrees and dipping 20 to 25 degrees northeast. The main part of the mineralized veins are comprised of smokey grey quartz with feldspar, pyrite, molybdenite and minor tourmaline, occurring along vein borders. The molybdenite occurs as fine disseminations, rosettes and irregular masses.

BIBLIOGRAPHY

EMPR EXPL 1978-E86, 1979-94
EMPR ASS RPT *8167
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 2003/03/04
DATE REVISED: 2003/03/04

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW145**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEQUOD 3**, MAD, NORTH VEIN

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 57 53 N
LONGITUDE: 117 24 51 W
ELEVATION: 2590 Metres

NORTHING: 5645984
EASTING: 470916

LOCATION ACCURACY: Within 500M

COMMENTS: Area of molybdenite mineralization known as north vein zone, on Pequod 3 claim (Assessment Report 8167).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite
ASSOCIATED: Quartz Feldspar Tourmaline
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry
TYPE: L08 Porphyry Mo (Climax-type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Battle Range Batholith

LITHOLOGY: Porphyritic Feldspar Biotite Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Kootenay
PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Pequod 3 showing occurs in porphyritic feldspar biotite granodiorite of the Cretaceous Battle Range Batholith. Noranda Explorations Co. Ltd. and Amax Potash Limited first discovered molybdenite on their Mad claims in 1978. The joint venture restaked the Mad claims as the Pequod claims in 1979 and Noranda drilled one hole on the nearby Pequod 1 showing (082KNW167).

A zone of quartz-pyrite-molybdenite veining was discovered during 1979 on the cliff faces between White Jacket and Moby Dick mountains. The zone is comprised of iron-stained shallow northeast dipping veins occurring on the cliff face from below the 2600-metre elevation to the ridge top at 3050 metres. The nature of the mineralization is said to be similar to that of the Pequod 6 showing (south vein zone) (082KNW144) and in fact could be part of the same zone but separated by 800 metres of the Moby Dick glacier. The main part of the mineralized veins are comprised of smokey grey quartz with feldspar, pyrite, molybdenite and minor tourmaline, occurring along vein borders. The molybdenite occurs as fine disseminations, rosettes and irregular masses. The mineralization in the north vein zone appears more continuous and of higher grade than that of the south vein zone.

BIBLIOGRAPHY

EMPR EXPL 1978-E86, 1979-94
EMPR ASS RPT *8167
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 2003/03/04
DATE REVISED: 2003/03/04

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW146**

NATIONAL MINERAL INVENTORY:

NAME(S): **PIPESTEM (L.15779)**, GIL (L.15756), GIL FR. (L.15757)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 46 49 N
LONGITUDE: 117 36 32 W
ELEVATION: 900 Metres

NORTHING: 5625568
EASTING: 457073

LOCATION ACCURACY: Within 1 KM

COMMENTS: The Pipestem group, 3 kilometres southeast of Camborne, is located on the north side of Pool Creek, near the confluence with Mohawk Creek. It is in the area of the Harvey (082KNW180) and Moscow (082KNW042) vein.

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 170/75E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Pipestem group, 3 kilometres southeast of Camborne, is located on the north side of Pool Creek, near the confluence with Mohawk Creek. It is in the area of the Harvey (082KNW180) and Moscow (082KNW042) vein.

Quartz veins, containing galena, sphalerite and pyrite, cut metasediments of the Lower Paleozoic Lardeau Group.

In 1957, Lardeau Mines Exploration Limited conducted trenching and a geophysical survey.

BIBLIOGRAPHY

EMPR AR 1957-59
EMPR PF (Skerl, A.C. (1957): Report on the Pipestem Group; Eastwood, P. (1954-1957): Notes and sketches, in Spider (082KNW045))

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
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REPORT: RGEN0100

MINFILE NUMBER: **082KNW147**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRAIG**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 00 N
LONGITUDE: 117 33 04 W
ELEVATION: 2000 Metres

NORTHING: 5605490
EASTING: 460997

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Lead Gold

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

TWO VEINS IN THE CALCAREOUS SCHIST. THE ORE OCCURS IRREGULARLY IN THE QUARTZ AS SOLID BUNCHES AND DISSEMINATED THROUGH THE ROCK. THE MINERALIZATION IS GALENA, TETRAHEDRITE, SPHALERITE AND PYRITE USUALLY RICH IN SILVER.

BIBLIOGRAPHY

EMPR AR 1914-K318
EMPR ASS RPT 7376
EMPR EXPL 1979-91
EMPR GEM 1973-96

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW147**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
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PAGE: 831
REPORT: RGEN0100

MINFILE NUMBER: **082KNW148**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIT SUP (L. 3500)**, KITSAP

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 48 N
LONGITUDE: 117 33 10 W
ELEVATION: 2300 Metres

NORTHING: 5629213
EASTING: 461056

LOCATION ACCURACY: Within 500M
COMMENTS: CENTER OF CLAIM (L. 3500)

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

LIME-SCHIST CONTACT IS MINERALIZED WITH SULPHIDE
ENRICHMENT CONSISTING OF LEAD, ZINC AND IRON
SULPHIDES IN A GANGUE OF LIMESTONE AND ASSOCIATED
WITH SIDERITE. ARGENTIFEROUS GALENA IS PRESENT.

BIBLIOGRAPHY

EMPR AR 1899-674; 1900-814; 1904-G297; 1918-K158; 1927-C292
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW148**

MINFILE NUMBER: **082KNW149**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAINY DAY**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 43 53 N
LONGITUDE: 117 32 44 W
ELEVATION: 2300 Metres

NORTHING: 5620097
EASTING: 461498

LOCATION ACCURACY: Within 1 KM

COMMENTS: Adjoins the Beatrice (082NKW040) on the Ferguson side of the Divide.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Cambrian

GROUP

Lardeau

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

A large 'iron capping' contains small quantities of chalcopyrite. The area is underlain by Lower Paleozoic Lardeau Group rocks.

BIBLIOGRAPHY

EMPR AR 1916-K201
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW150**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER QUEEN**, GREAT NORTHERN, TRUE FISSURE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K12E 082K11W
BC MAP:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 42 30 N
LONGITUDE: 117 30 10 W
ELEVATION: 1800 Metres

NORTHING: 5617512
EASTING: 464500

LOCATION ACCURACY: Within 500M

COMMENTS: The Silver Queen, part of the Great Northern Group, is located on the east slope of Great Northern Mountain. It is a northern extension of the True Fissure (082KNW030).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Undefined Formation	

LITHOLOGY: Phyllite
Black Slate
Carbonaceous Schist
Quartzite
Talcose Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Silver Queen, part of the Great Northern Group (082KNW061), is located on the east slope of Great Northern Mountain. It is a northern extension of the True Fissure (082KNW030).

Underground workings, about 100 metres, cuts sphalerite, galena and pyrite mineralization within phyllites and schists of the Lower Paleozoic Lardeau Group. The Conaway Mining Co. shipped 24 tonnes of ore in 1917, yielding 40.4 kilograms of silver and 9435 kilograms of lead.

BIBLIOGRAPHY

EMPR AR 1896-541; 1897-549,550; 1898-1065,1066,1069; 1899-681,
*682; 1900-825; 1901-1020; 1917-F449
EMPR BC METAL MM00637
EMPR INDEX 3-213
GSC MEM 161, p. 70

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/10

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW151**

NATIONAL MINERAL INVENTORY:

NAME(S): **REVELSTOKE (L.4476)**, NEGAUNEE (L.4477), PEWABIC (L.4478),
PEWABIC FR. (L.4479), ALLOUEZ (L.4480), CRESTED BUTTE (L.4481),
EMPIRE, REDCLIFF

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E 082K11W
BC MAP:
LATITUDE: 50 39 53 N
LONGITUDE: 117 14 55 W
ELEVATION: 2194 Metres
LOCATION ACCURACY: Within 500M

UTM ZONE: 11 (NAD 83)

NORTHING: 5612571
EASTING: 482430

COMMENTS: Location of mineralization on cancelled Revelstoke Crown grant (Lot 4476) (Assessment Report 13936, Figure 4). The Negaunee, Pewabic, Pewabic Fr., Allouez, and Crested Butte adjoined in a northwest line in that order (Mineral Reference Map 1926).

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz Siderite Chlorite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Podiform Stratabound
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Paleozoic

GROUP

Unnamed/Unknown Group
Lardeau

FORMATION

Badshot
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Chlorite Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel

YEAR: 1984

COMMODITY

Silver
Lead

GRADE

158.7400 Grams per tonne
17.6500 Per cent

REFERENCE: Assessment Report 13936.

CAPSULE GEOLOGY

The Revelstoke Crown grant (Lot 4476) was part of the Empire group which was located about 1 kilometre north of Mount Wagner at the headwaters of Stevens Creek. The group also consisted of the Negaunee (Lot 4477), Pewabic (Lot 4478), Pewabic Fr. (Lot 4479), Allouez (Lot 4480) and Crested Butte (Lot 4481).

Bands of Lower Cambrian Badshot Formation limestone are repeated by folding as are schist and phyllite of the Cambrian to Devonian Index Formation (Lardeau Group) which separate the bands on surface.

In 1898, Empire Mines of B.C. Ltd. had completed about 23 metres of development work and was planning a 61-metre crosscut the following year. Claims were Crown-granted in 1901 to Empire Mines and again in 1926 to Alice Maud Mollieres. In 1984, owners Silver State Resources Ltd. hired Ram Exploration to map and prospect on their Redcliff 1 and 2 claims which encompass the former Empire group.

Geologic mapping and prospecting by Ram Exploration showed that a mineralized horizon occurs along a chlorite schist-limestone contact. Sulphide-rich, elongate pods and lenses, up to 2 metres wide, have been explored at intervals by shallow pits and opencuts over a strike length of about 1 kilometre. Ram mapped the

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CAPSULE GEOLOGY

mineralized zone on the Revelstoke Crown-grant but the 1898 Annual Reports indicates that the Allouez claim hosted parts of the zone. The pods and lenses are made up of galena and pyrite within a gangue of siderite, chlorite and quartz. The limestone is altered and bleached to marble along the contacts of the mineralized horizon. Channel samples across the best mineralization observed assayed 17.65 per cent lead, 0.03 per cent zinc and 158.74 grams per tonne silver (Assessment Report 13936).

BIBLIOGRAPHY

EMPR AR *1898-1072: 1899-685; 1901-1226; 1926-449
EMPR ASS RPT *13936
EM GEOFILE 2003-2
GSC OF 288; 432
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/19

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW152**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK DIAMOND (L.4286)**, BLACK DIAMOND NO. 2 (L.4287), BLACK DIAMOND FR. (L.4291)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 56 N
LONGITUDE: 117 26 45 W

NORTHING: 5627556
EASTING: 468581

ELEVATION: 2060 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Black Diamond No. 2 which is in the centre of the Black Diamond Group (Mineral Reference Map, 1926, Property File).

COMMODITIES: Lead Silver Copper

MINERALS

SIGNIFICANT: Galena
COMMENTS: Rich carbonate ore is reported.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Limestone
Slate
Schist
Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Black Diamond area is underlain by limestone of the Lower Cambrian Badshot Formation and metasediments of the Cambrian to Devonian Index Formation (Lardeau Group) consisting of schist, phyllite, quartzite, slate and limestone.

The Black Diamond group of three claims is located at the headwaters of Silver Tip Creek, which empties into the Westfall River. Two ledges, lying between slate and limestone occur. On the upper vein a crosscut is run and passes through the ledge at a depth of 9 metres, where the vein is found to be 1 metre wide, with 20 centimetres of galena and 10 centimetres of copper ore on the wall. The grade of the carbonate ore is reported to be especially high. On the lower ledge the vein is stripped for about 60 metres. The ledge is about 1.5 metres wide, and has about 23 centimetres of ore, principally carbonates. This group was the property of the Silver Tip Mining Company of Rossland. A shipment of argentiferous galena was recorded in their name in 1899. The claims were Crown-granted in 1902 but have since lapsed.

BIBLIOGRAPHY

EMPR AR *1898-1070; 1899-602; 1902-H296
EM GEOFILE 2003-2
EM OF 2000-22
GSC OF 288; 432
GSC MAP 235A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/10

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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PAGE: 837
REPORT: RGEN0100

MINFILE NUMBER: **082KNW153**

NATIONAL MINERAL INVENTORY:

NAME(S): **NOBLE FIVE** NOBLE FOUR

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 00 N
LONGITUDE: 117 20 34 W
ELEVATION: 2167 Metres

NORTHING: 5607254
EASTING: 475750

LOCATION ACCURACY: Within 1 KM

COMMENTS: SOUTH SIDE OF NORTH FORK OF BROWN CREEK ON RIDGE BETWEEN 2 BRANCHES

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

LARGE IRREGULAR VEIN OF QUARTZ AND SOME CARBONATE SLIGHTLY MINERALIZED WITH PYRITE. THE COUNTRY ROCK IS A BLACK CARBONACEOUS LIMESTONE. QUARTZ IS MINERALIZED WITH GALENA, AND TETRAHEDRITE.

BIBLIOGRAPHY

EMPR AR 1905-J153; 1914-K306; 1915-K133; 1921-G161
EMPR INDEX 3-207
GSC BULL 193
GSC MAP 1277A
GSC MEM 161-59

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW153**

MINFILE NUMBER: **082KNW154**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER MOUNTAIN**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 43 59 N
LONGITUDE: 117 24 18 W
ELEVATION: 1845 Metres

NORTHING: 5620219
EASTING: 471419

LOCATION ACCURACY: Within 1 KM

COMMENTS: The main crosscut is reported to be at 1845 metres elevation at the headwaters of Surprise Creek (Minister of Mines Annual Report 1914 and 1930). A location contradiction exists in that the showing is also reported to be "above a glacier on the northern slope of the summit of Nettie L. mountain" (Minister of Mines Annual Report 1914).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Bornite Chalcocite Ilmenite Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Chlorite Schist
Carbonaceous Calc Schist
Phyllite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1914
SAMPLE TYPE:	Grab		
COMMODITY	GRADE		
Silver	20.5700	Grams per tonne	
Gold	0.3400	Grams per tonne	
Copper	5.7000	Per cent	

REFERENCE: Minister of Mines Annual Report 1914, page 311.

CAPSULE GEOLOGY

The Copper Mountain occurrence is located at the headwaters of Surprise Creek. Bands of Lower Cambrian Badshot Formation limestone are repeated by folding. These bands are interlayered with schist and phyllite of the Cambrian to Devonian Index Formation, Lardeau Group. Some years prior to 1912, a group of claims were located and some development-work done. The claims lapsed and remained open until 1912 when it was restaked at a reported elevation of 1845 metres. A crosscut was driven into a bluff composed of chlorite schist, showing some copper stain, for a length of 6.7 metres. Property owners reported that significant copper existed there with rocks giving these results: gold, 0.34 gram per tonne; silver, 20.57 grams per tonne; and copper, 5.7 per cent (Minister of Mines Annual Report 1914, page 311). A 1914 investigation by E.W. Emmens on behalf of the province found that the chlorite-schist belt in the Copper Mountain area had an average width of 300 metres, lying between a dark-coloured

CAPSULE GEOLOGY

carbonaceous calc-schist containing iron pyrites on the hanging-wall, and a rusty-weathering, much-decomposed schist (where exposed) on the footwall. The crosscut above mentioned was very carefully sampled along both sides from its portal to the face, a measured distance of 5.5 metres. The samples proved to contain a trace of gold, 20.57 grams per tonne silver and no copper. Samples of the rock taken by Emmens show the presence of ilmenite which when accompanied by a green stain may have been taken for chalcocite. Emmens also reported a notable absence of copper-stain in the vicinity of the crosscut, except along some of the small quartz-filled seams.

Some 600 metres southeast of this crosscut, in a draw at an elevation of 2103 metres which cuts the formation, and at the head of a talus slope, a sidehill cut had been made showing a number of narrow stringers occupying cracks in the rock. These stringers consist of quartz, mineralized with chalcocite and bunches of crystalline ilmenite.

It was reported in 1930 that the chlorite schist contained occasional, very widely separated, veinlets and small lenses of quartz containing disseminations of bornite and copper carbonates. No continuity to the erratic mineralization could be found at the time. The property was owned in 1930 by J.T. Lauthers and a small amount of work was financed by the B.C. Mining Syndicate.

BIBLIOGRAPHY

EMPR AR *1914-311; *1930-266
EM GEOFILE 2003-2
GSC OF 288; 432
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/03

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 840
REPORT: RGEN0100

MINFILE NUMBER: **082KNW155**

NATIONAL MINERAL INVENTORY:

NAME(S): **MABLE** RAINY LAKE, VIRGINIA,
NORA LEE

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 24 N
LONGITUDE: 117 21 40 W
ELEVATION: 1951 Metres

NORTHING: 5606148
EASTING: 474447

LOCATION ACCURACY: Within 1 KM
COMMENTS: HEAD OF EIGHT MILE CREEK A TRIBUTARY OF TROUT LAKE

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Galena Copper
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

VEIN CARRYING GALENA ORE AND A LITTLE COPPER AND A SIX INCH STREAK OF CARBONATES.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-686; 1900-825; 1914-311
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW155**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 841
REPORT: RGEN0100

MINFILE NUMBER: **082KNW156**

NATIONAL MINERAL INVENTORY:

NAME(S): **GLOOSCAP (L. 7257)**, GLASSCAP, GLOSSCUP,
GLASCAP, GLOOSCAP NO. 2 (L.7258), GLOOSCAP NO. 3 (L.7259)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

LATITUDE: 50 40 48 N
LONGITUDE: 117 26 04 W
ELEVATION: 1600 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: CENTER OF L. 7257

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5614331
EASTING: 469306

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

MINERALIZATION CONSISTS CHIEFLY OF SULPHIDES OF
IRON, WITH A LITTLE COPPER AND SOME LEAD, CARRYING
VALUES IN GOLD AND SILVER.

BIBLIOGRAPHY

EMPR AR 1899-682; 1900-820,824; 1907-L218; 1926-A449
EMPR BULL 45

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW156**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 842
REPORT: RGEN0100

MINFILE NUMBER: **082KNW157**

NATIONAL MINERAL INVENTORY:

NAME(S): **J.C. (L.7263)**, JC

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 12 N
LONGITUDE: 117 08 34 W
ELEVATION: 1920 Metres

NORTHING: 5605725
EASTING: 489896

LOCATION ACCURACY: Within 500M

COMMENTS: NO GEOLOGICAL DESCRIPTION AVAILABLE.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-686; 1900-825; 1907-218
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1998/06/18

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW157**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 843
REPORT: RGEN0100

MINFILE NUMBER: **082KNW158**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHARON**, OLD RELIABLE

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 38 48 N
LONGITUDE: 117 23 34 W
ELEVATION: 1250 Metres

NORTHING: 5610608
EASTING: 472230

LOCATION ACCURACY: Within 1 KM

COMMENTS: LIES TO NW OF TOWSER PROBABLY IN SHARON CREEK WHERE AN ADIT IS SHOWN
ON FYLES AND EASTWOOD'S MAP

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

SHARON CK FM IS SILICEOUS ARGILLITE, ARGILLITE,
SLATE, AND PHYLLITE LOCALLY CONTAINING LENSES OF
ARGILLACEOUS LIMESTONE, AND BEDS OF GREY QUARTZITE
AND PEBBLE CONGLOMERATE

BIBLIOGRAPHY

EMPR AR 1899-686; 1900-823; 1904-G117
EMPR BULL 45
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW158**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 844
REPORT: RGEN0100

MINFILE NUMBER: **082KNW159**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER BELT (L.5695)**, AGNES, WHISTLER (L.7433)

MINING DIVISION: Revelstoke

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 48 N
LONGITUDE: 117 19 28 W
ELEVATION: 1860 Metres

NORTHING: 5606878
EASTING: 477045

LOCATION ACCURACY: Within 500M
COMMENTS: CENTER OF AGNES L.5696.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

BAND OF SILICEOUS LIMESTONE WHICH HAS BEEN FRACTURED AND MINERALIZED BY QUARTZ WITH SMALL AMOUNTS OF PYRITE, GALENA, CHALCOPYRITE AND SPHALERITE. MINERALIZATION IS IRREGULAR.

BIBLIOGRAPHY

EMPR AR 1898-1072; 1899-681,685; 1904-G295,G298; 1905-J253;
1906-253
GSC MEM 161-56

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW159**

MINFILE NUMBER: **082KNW160**

NATIONAL MINERAL INVENTORY:

NAME(S): **CANADIAN GIRL (L.4705)**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 44 54 N
LONGITUDE: 117 23 17 W
ELEVATION: 1980 Metres

NORTHING: 5621911
EASTING: 472623

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Canadian Girl Crown grant (Lot 4705).

COMMODITIES: Lead Silver Zinc

MINERALS

SIGNIFICANT: Galena Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Paleozoic

GROUP

Unnamed/Unknown Group
Lardeau

FORMATION

Badshot
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Canadian Girl occurrence is located on Crown grant Lot 4705 near the head of Dave Morgan creek.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation and it is now held that all these bands are part of the Lower Cambrian Badshot Formation, repeated by folding. These bands are interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

The first mention of the Canadian Girl came in 1898 followed by the report of it being Crown-granted in 1902 to R.N. Northey et al. The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. Please see Silver Leaf (082KNW204) for a description of the recent history of the area. Nakusp Resource Ltd. briefly explored the property in 1985.

At the Canadian Girl, Nakusp Resources reported that there are three subparallel zones of oxidized limestone separated by chlorite schist and bleached limestone. The oxidized limestone contained some pyrite and galena. The averages of 2 one-metre chip samples from each zone yielded only trace amounts of lead, zinc and silver (Assessment Report 14063, Appendix 1, page 1).

BIBLIOGRAPHY

EMPR AR 1898-1069; 1902-H297
EMPR ASS RPT 11979, *14063, 17651, 18844, 18845, 22917
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW161**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEXINGTON (L.3088)**, BELLINGHAM, BRODIE,
LONE STAR (L.3091)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

LATITUDE: 50 50 30 N
LONGITUDE: 117 37 28 W
ELEVATION: 600 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Lexington (Lot 3088) and Lone Star (Lot 3091) are located on the east side of the Incomappleux River, northeast of Camborne.

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5632404
EASTING: 456034

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Lexington (Lot 3088) and Lone Star (Lot 3091) are located on the east side of the Incomappleux River, northeast of Camborne.

Underlying rocks are metasediments of the Lower Paleozoic Index Formation (Lardeau Group). A 3.6-metre wide vein contains galena, with high silver assays.

BIBLIOGRAPHY

EMPR AR 1893-1051; *1894-744; 1899-600,674; 1900-814; 1902-H299
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 847
REPORT: RGEN0100

MINFILE NUMBER: **082KNW162**

NATIONAL MINERAL INVENTORY:

NAME(S): **NELLIE (L.5670)**, DOM PAUL, NELLIE FRAC. (L.5674),
EMPRESS (L.5671), KITTY (L.5672)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

LATITUDE: 50 50 30 N
LONGITUDE: 117 35 04 W
ELEVATION: 1220 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: THE OTHER CLAIMS IN THE GROUP ARE THE KITTY AND THE EMPRESS, OTHER
THAN THE NELLIE CLAIM ITSELF. NORTH SLOPE OF LEXINGTON CREEK.

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5632381
EASTING: 458850

COMMODITIES: Lead

Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR AR 1898-1063; 1899-674; 1903-242; 1925-450
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW162**

MINFILE NUMBER: **082KNW163**

NATIONAL MINERAL INVENTORY:

NAME(S): **BANNER (L.3085)**, IOLA (L.3084)

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 49 30 N
LONGITUDE: 117 34 04 W
ELEVATION: 1707 Metres

NORTHING: 5630518
EASTING: 460010

LOCATION ACCURACY: Within 500M

COMMENTS: Location of centre of Banner (Lot 3085) claim, at the head of Lexington Creek.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Banner Gold Mining Company drove a 32-metre adit on the Banner in 1900. No other information is available.
The area is underlain by metasediments of the Lower Paleozoic Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1900-814; 1903-H241; 1925-H450

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 849
REPORT: RGEN0100

MINFILE NUMBER: **082KNW164**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK DIAMOND (L. 5680)**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 36 N
LONGITUDE: 117 33 04 W
ELEVATION: 2134 Metres

NORTHING: 5628841
EASTING: 461171

LOCATION ACCURACY: Within 500M
COMMENTS: CENTER OF(L. 5680)

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NOGEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-674; 1900-814; 1902-H297; 1925-A450
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW164**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 850
REPORT: RGEN0100

MINFILE NUMBER: **082KNW165**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALICE (L.7440)**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 30 N
LONGITUDE: 117 21 40 W
ELEVATION: 2226 Metres

NORTHING: 5606334
EASTING: 474448

LOCATION ACCURACY: Within 500M

COMMENTS: ADJOINS MABLE ON A PARALLEL LEAD. PLOTTED L.7440

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

HIGH ASSAYS IN GOLD.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1906-H252
GSC BULL 193
GSC MAP 1227A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW165**

MINFILE NUMBER: **082KNW166**

NATIONAL MINERAL INVENTORY:

NAME(S): **ST. LOUIS (L.7261)**, ST. LEWIS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 46 05 N
LONGITUDE: 117 24 29 W

NORTHING: 5624112
EASTING: 471224

ELEVATION: 2134 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of extinct Crown Grant St. Louis (Lot 7261) as indicated on Jopco Resources map (Assessment Report 22917).

COMMODITIES: Lead Zinc Copper Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite

ASSOCIATED: Siderite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Replacement

TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Schist
Limestone
Dolomitic Marble
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The St. Louis area (formerly Crown Grant Lot 7261) is located at the headwaters of Galena Creek.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation. It is thought that all these bands are part of the Lower Cambrian Badshot Formation, repeated by folding. These bands are interfolded with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

The property was first mentioned in 1900 when it was reported that it existed at the head of Lardeau Creek and was owned by the Galena Creek Mining Company. It was Crown-granted in 1906 to E.G. Sills. The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. The two rehabilitated many of the access trails and workings in the area of Galena Creek and to the east (to Marsh Adam Creek) and north. Some of the historically documented mineral occurrences were found and examined during this period but the mineralization was examined more as a whole than as individual showings. Please see Ellsmere (082KNW081) for a complete discription of more recent work in this area.

The St. Louis is described as the most easterly of the Ellesmere limestone-Mississippi Valley-type mineralization. Generally, in the Ellsmere limestone, this type of mineralization occurs as a mixture of sphalerite, galena, chalcopyrite, pyrite and siderite in a matrix of partially silicified and dolomitized coarse-grained marble. The Dennys reported that there are such zones on the St. Louis where the limestone is in contact with schist and were drifted on by the old timers.

BIBLIOGRAPHY

EMPR AR 1900-824; 1906-H253

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 852
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 11979, 14063, 17651, 18844, 18845, *22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW167**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEQUOD 1, MAD**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 58 17 N
LONGITUDE: 117 23 08 W

NORTHING: 5646714
EASTING: 472929

ELEVATION: 2285 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drill hole NB-1 on the Pequod 1 claim (Assessment Report 8167).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Pyrite
ASSOCIATED: Fluorite Magnetite
ALTERATION: Sericite Quartz Pyrite Fluorite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry
TYPE: L08 Porphyry Mo (Climax-type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cretaceous			Battle Range Batholith

LITHOLOGY: Porphyritic Feldspar Biotite Granite
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Pequod 1 showing occurs immediately north of Pequod glacier in intrusive rock of the Cretaceous Battle Range Batholith. Noranda Explorations Co. Ltd. and Amax Potash Limited first discovered molybdenite on their Mad claims in 1978. The joint venture restaked the Mad claims as the Pequod claims in 1979 and Noranda drilled one hole totalling 882.7 metres on the Pequod 1.

Drill hole NB-1 intersected a zone of intense alteration associated with minor molybdenite mineralization. The hole intersected 508 metres of Battle Range porphyry consisting of leucocratic, coarse-grained quartz-feldspar porphyritic biotite granite. It also intersected 252 metres of medium-grained granular quartz feldspar porphyry. The zone is totally within the Battle Range porphyry and does not appear to be related to the emplacement of the latter intrusion.

Pyrite is generally associated with intensity of alteration, ranging from 0 to 2 per cent in propylitic and argillic zones and sharply increasing within a sericite-quartz-pyrite zone. Several irregular masses (2 to 3 centimetres) of pyrite-magnetite-chalcopyrite occur around the 347-metre mark, associated with sericite-quartz-pyrite alteration. Molybdenite mineralization occurs as fine dustings and disseminations in narrow silicified sections within the sericite-quartz-pyrite alteration zones. Minor amounts of purple fluorite are also present.

The mineralized zone extends up through the section to an area of altered and mineralized Battle Range porphyry found in outcrop between the east and west glaciers. This indicates that the zone has a steep northerly dip.

BIBLIOGRAPHY

EMPR EXPL 1978-E86, 1979-94
EMPR ASS RPT *8167
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 854
REPORT: RGEN0100

BIBLIOGRAPHY

GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/04

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW168**

NATIONAL MINERAL INVENTORY:

NAME(S): **KINGSTON (L.6558)**, ISHPEMING FR. (L.6557), HOUGHTON (L.6556),
MAGGIE R. (L.6553), TONGUE (L.6555), PITTOCK FR. (L.6559),
RELIANCE (L.9130)

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 48 27 N
LONGITUDE: 117 36 55 W
ELEVATION: 1125 Metres

NORTHING: 5628599
EASTING: 456648

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Kingston (Lot 6558).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

Large masses of quartz, containing low grade mineralization,
occur in phyllites of the Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1899-676; 1903-107; 1908-250; 1909-276
EMPR MR MAP 2 (1928)
GSC MEM 161
GSC OF 288; 432; 464
GSC SUM RPT 1903, p. 63

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/15

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

MINFILE NUMBER: **082KNW169**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER TRAY**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 36 N
LONGITUDE: 117 17 40 W
ELEVATION: 2145 Metres

NORTHING: 5600938
EASTING: 479144

LOCATION ACCURACY: Within 5 KM

COMMENTS: ON TROUT LAKE SLOPE 200 FT BELOW SUMMIT OF DIVIDE LEADING TO BONANZA BASIN

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

FORMATION IS COMPOSED OF SCHISTS AND METAMORPHOSED
SEDIMENTARY ROCKS. ORE IS SILVER LEAD.

BIBLIOGRAPHY

EMPR AR 1925-A264; 1926-A273; 1927-A295
GSC BULL 193,1973
GSC MAP 1973-1227A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW169**

MINFILE NUMBER: **082KNW170**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAY BEE (L.4953)**, MAY B, MAY BE,
MAYBEE

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 41 30 N
LONGITUDE: 117 27 04 W
ELEVATION: 1372 Metres

NORTHING: 5615635
EASTING: 468136

LOCATION ACCURACY: Within 500M

COMMENTS: See also Ajax (082KNW099), Gyp (082KNW010), Nettie L (082KNW100),
and IXL (082KNW009).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	
Cambrian	Lardeau	Triune	

LITHOLOGY: Quartzite
Slate
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

This area is underlain by carbonaceous phyllites and black slates, interbedded with grey to white quartzites of the Cambrian Lardeau Group. Mineralization consists chiefly of sulphides of iron, with a little copper and some lead, carrying values in gold and silver. On the surface these sulphides have been oxidized forming an "iron cap".

BIBLIOGRAPHY

EMPR AR 1896-542; 1899-682; 1900-820; 1901-1019; 1902-300;
1924-208; 1952-187
EMPR BULL 45-67
EMPR PF (*Starr, C.C. (1925): Report on the Nettie L Mine, 8 p.,
geology, assays, workings plan 1 " = 100 ' ; Various sketch maps,
plans and sections, 1951-1952; Trout Lake Mines Ltd. (1952):
Information Brochure & Prospectus; Plan of Nettie L Mine workings
(1900) in 082FNW100)

DATE CODED: 1985/07/24
DATE REVISED: 2000/01/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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MINFILE NUMBER: **082KNW171**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOTENAY BELLE**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 18 N
LONGITUDE: 117 16 28 W
ELEVATION: 2317 Metres

NORTHING: 5600377
EASTING: 480559

LOCATION ACCURACY: Within 1 KM

COMMENTS: THE KOOTENAY BELLE IS LOCATED AT THE HEAD OF THE SOUTH FORK OF HASKIN CREEK.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1914-K311
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW171**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

MINFILE NUMBER: **082KNW172**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHOWSHOE**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 48 N
LONGITUDE: 117 07 28 W
ELEVATION: 1900 Metres

NORTHING: 5604982
EASTING: 491192

LOCATION ACCURACY: Within 5 KM
COMMENTS: HEAD OF LAKE CREEK

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

MINERALIZATION CARRIES HIGH VALUES IN COPPER.

BIBLIOGRAPHY

EMPR AR 1898-1063; 1899-686
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW172**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
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REPORT: RGEN0100

MINFILE NUMBER: **082KNW173**

NATIONAL MINERAL INVENTORY:

NAME(S): **RUSTY AXE**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 24 N
LONGITUDE: 117 07 46 W
ELEVATION: 1900 Metres

NORTHING: 5604241
EASTING: 490837

LOCATION ACCURACY: Within 5 KM
COMMENTS: HEAD OF LAKE CREEK

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

MINERALIZATION CARRYING HIGH VALUES IN COPPER.

BIBLIOGRAPHY

EMPR AR 1899-686
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW173**

MINFILE NUMBER: **082KNW174**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRUNSWICK (L.4354)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 02 N
LONGITUDE: 117 37 32 W
ELEVATION: 884 Metres

NORTHING: 5627833
EASTING: 455917

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Brunswick (Lot 4354). Adjoins the Eva (082KNW066) to the south.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Brunswick adjoins the Eva (082KNW066) on the north. Quartz veins with gold occur in phyllite of the Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1898-1064; 1899-600,676; 1900-812,981; 1906-253
EMPR MR MAP 2 (1928)
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/15

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW175**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACKBURN**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 07 N
LONGITUDE: 117 23 53 W
ELEVATION: 1980 Metres

NORTHING: 5622316
EASTING: 471920

LOCATION ACCURACY: Within 1 KM

COMMENTS: The Blackburn claim is reported to be located about 760 metres south of the Horne ledge or Horne claim (082KNE210) (Minister of Mines Annual Report 1897, page 551). Recent Assessment Reports indicate that the old Morgan claim (Lot 1301) was the most southeastern of the Horne Group (Assessment Report 22917, Plate 4). The Blackburn coordinates (above) are for a sample location in Dave Morgan Creek (sample 18767) which is also about 760 metres southeast of where the Morgan claim was (Assessment Report 11979).

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Limestone
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1895
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 2400.0000 Grams per tonne
REFERENCE: Minister of Mines Annual Report 1895, page 694.

CAPSULE GEOLOGY

The Blackburn occurrence is thought to be located between Surprise and Morgan creek.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation. It is now thought that all these bands are part of the Lower Cambrian Badshot Formation, repeated by folding. These bands are interfolded with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

The Blackburn is first mentioned in 1893 and in 1894 it was reported to consist of 3 claims which were concentrating ore. Samples were reported to assay between 2057 and 2400 grams per tonne silver and up to \$18 in gold per ton (Minister of Mines Annual Report 1895, page 694). However, the Annual Report for 1897 said there was little development but there was some low grade galena showing.

The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. Please see Silver Leaf (082KNW204) for a description of the recent history of the area.

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CAPSULE GEOLOGY

A sample taken at the possible location of the Blackburn, along the Horne ledge in Dave Morgan Creek, yielded 32.02 per cent lead, 0.02 per cent zinc, 122.06 grams per tonne silver and 0.1 gram per tonne gold (Assessment Report 11979, page 24).

BIBLIOGRAPHY

EMPR AR 1893-1050; *1894-744; 1895-694; 1897-551
EMPR ASS RPT *11979, 14063, 17651, 18844, 18845, *22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW176**

NATIONAL MINERAL INVENTORY:

NAME(S): **MABEL**, MAUDE, NO. 2,
 GERTRUDE

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K11E
 BC MAP:
 LATITUDE: 50 35 56 N
 LONGITUDE: 117 06 51 W
 ELEVATION: 2042 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Location of Gertrude prospect (Assessment Report 13937, Figure 4).

Underground
 MINING DIVISION: Revelstoke
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5605228
 EASTING: 491920

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite Chalcopyrite
 ASSOCIATED: Quartz Carbonate
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Massive Stratabound
 CLASSIFICATION: Epigenetic Hydrothermal Replacement
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E14 Exhalative Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Limestone
 Schist
 Phyllite
 Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Kootenay
 PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 YEAR: 1984
 CATEGORY: Assay/analysis
 SAMPLE TYPE: Channel
 COMMODITY

COMMODITY	GRADE	
Silver	250.2900	Grams per tonne
Gold	4.5600	Grams per tonne
Copper	0.9800	Per cent
Zinc	0.1500	Per cent

REFERENCE: Assessment Report 13937.

CAPSULE GEOLOGY

The Mabel property was located on the north side of Sob Creek (at 2042 metres elevation) which flows east into Duncan River, near Duncan Lake. The property consisted of the Mabel, Maud and No. 2 claims which were staked on an area of previous interest in 1926. Some superficial workings were observed at that time. In 1984, Ram Exploration, on behalf of owner Silver State Resources Ltd., examined some old workings on their Gertrude claims that match the location of the old Mabel property. They report two showings, as described below.

Bands of limestone belonging to the Lower Cambrian Badshot Formation are repeated by folding. These bands are separated by schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group. Quartzite of the Upper Proterozoic to Lower Cambrian Hamill Group are also found.

Showing No. 1 consists of a shear-hosted quartz, galena, chalcopyrite and sphalerite vein. It has been developed by a shallow shaft and several opencuts. Sulphides occur as irregular lenses and disseminated grains within a quartz-carbonate gangue. A 0.6-metre channel sample collected across the best mineralization assayed 4.56 grams per tonne gold, 250.29 grams per tonne silver, 14.75 per cent lead, 0.98 per cent copper and 0.15 per cent zinc (Assessment Report

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CAPSULE GEOLOGY

13937). The hostrocks area not indicated.
Showing No. 2 consists of stratabound massive sulphide (pyrite) mineralization developed by a 15-metre shaft and a caved adit. A 2-metre channel sample collected across the top of the shaft yielded 3.19 grams per tonne gold, 48.00 grams per tonne silver, 0.04 per cent lead and 0.03 per cent zinc (Assessment Report 13937). This showing occurs at a limestone-sericite schist contact.

BIBLIOGRAPHY

EMPR AR 1905-252; 1926-269
EMPR ASS RPT *13937
EMPR BULL 45
EM GEOFILE 2003-2
GSC MEM 161
GSC MAP 235A
GSC OPEN FILE 288; 432

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/29

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW177**

NATIONAL MINERAL INVENTORY: 082K11 Pb8

NAME(S): **WARD (L.3479)**, LAURA J. (L.3478)

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 18 N
LONGITUDE: 117 12 02 W
ELEVATION: 2347 Metres

NORTHING: 5611480
EASTING: 485823

LOCATION ACCURACY: Within 500M

COMMENTS: The summit on L.3479 (Ward) 3.75 kilometres south of Mount Templeman,
18 kilometres northeast of Trout Lake. NTS Map 082K11E.

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Undefined Formation	
Paleozoic	Undefined Group	Index	

LITHOLOGY: Carbonaceous Phyllite
Carbonaceous Phyllitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1985

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	1758.9000	Grams per tonne
Gold	0.3400	Grams per tonne
Lead	64.7000	Per cent
Zinc	0.0200	Per cent

COMMENTS: Sample across 30 centimetres of vein.

REFERENCE: Property File (082KNW056, George Cross Newsletter #207, 1985).

CAPSULE GEOLOGY

Paleozoic Lardeau Group metasedimentary and sedimentary rocks form a northwest trending, southwest dipping broad belt northeast of the Kuskanax Batholith. This belt, in part, straddles the northern end of the Kootenay Arc which is comprised of highly deformed sedimentary and volcanic rocks. To the east of the Lardeau Group, Hadrynian and/or Lower Cambrian quartzite of the Hamill Group and Lower Cambrian limestone of the Badshot Formation forms a distinctive sequence of marker horizons that outline major structures in the Kootenay Arc.

A narrow mineralized belt extending in part, from Mount Templeman southeast to Mount Abbott, is comprised of Index Formation phyllites proximal to the contact of underlying Badshot Formation limestone. The Index and Badshot Formation form part of the Paleozoic Lardeau Group. Numerous parallel quartz veins with disseminated and massive galena-sphalerite-pyrite-tetrahedrite mineralization occur in shear/fault/fracture zones. Replacement-type deposits occur in limestone along or near their contact with the adjoining phyllites. Mineralization is typically galena-sphalerite-pyrite. Quartz veins that crosscut the phyllites form replacement-type deposits along the strike of limestone beds which they traversed.

The Ward and Laura J. claims lie along the steep face of phyllite

CAPSULE GEOLOGY

cliffs parallel to the Wagner property (082KNW212) 1.5 kilometres northwest. The claims are underlain by deformed northwest striking, southwest dipping carbonaceous phyllite and phyllite schist of the Lower Cambrian to Lower Mississippian Index Formation which forms part of the Paleozoic Lardeau Group.

A narrow quartz vein mineralized with argentiferous galena and possibly sphalerite has been traced for 762 metres within the claims. The vein is presumed to be related to the shear/fault zone hosted quartz vein system on the Wagner property to the northwest.

BIBLIOGRAPHY

EMPR AR *1897-552; 1900-985,989
EMPR PF (*082KNW056; 082KNW212; Regional File)
EMR MP CORPFILE (Mikado Resources Ltd.; Bannockburn Resources Ltd.)
GSC MAP 235A
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/17

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 869
REPORT: RGEN0100

MINFILE NUMBER: **082KNW179**

NATIONAL MINERAL INVENTORY:

NAME(S): **DEATH ON THE TRAIL (L.4986)**, LITTLE TOM, LITTLE TOMMY (L.4985)

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 42 N
LONGITUDE: 117 10 40 W
ELEVATION: 1982 Metres

NORTHING: 5612217
EASTING: 487435

LOCATION ACCURACY: Within 500M

COMMENTS: LOCATED THE CENTER OF (L.4986)

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

STRINGERS OF GALENA IN THE SLATES UNDERLYING THE
LIMESTONE OF THE "LIME DYKE".

BIBLIOGRAPHY

EMPR AR 1897-552; 1901-1223,1225; 1902-H300; 1960-78
EMPR ASS RPT 6729
EMPR EXPL 1978-E82
GSC MEM 161-77,82

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW179**

MINFILE NUMBER: **082KNW180**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARVEY (L.5169)**, HARVEY FR., EXCELSIOR (L.4763),
EMERALD FR. (L.9137), NOBLE 2, MOHAWK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

LATITUDE: 50 46 48 N
LONGITUDE: 117 36 21 W
ELEVATION: 900 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5625535
EASTING: 457288

LOCATION ACCURACY: Within 1 KM

COMMENTS: The Harvey, 3 kilometres southeast of Camborne, is likely the continuation of the Eclipse (082KNW044) vein.

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz Ankerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 360/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Greenstone
Chlorite Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Harvey, 3 kilometres southeast of Camborne, is likely the continuation of the Eclipse (082KNW044) vein. It was worked by the Harvey Bros. in 1900.

The vein, containing galena and pyrite, cuts metasediments of the Lower Paleozoic Lardeau Group.
Westmin Resources Ltd. sampled the adit in 1983.

BIBLIOGRAPHY

EMPR AR 1899-674; 1900-813
EMPR ASS RPT *11756
EMPR PF (Starr, C.C. (1933): Report of Preliminary Examination of the Harvey, Excise, Eclipse and Other Claims)
GSC MEM 161-35

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/16

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 872
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161, p. 56; 369, p. 22

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW182**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONITOR (L.651)**, SOUTHERN CROSS (L.544)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14E
BC MAP:

MINING DIVISION: Golden

LATITUDE: 50 59 14 N
LONGITUDE: 117 02 28 W
ELEVATION: 2400 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5648405
EASTING: 497114

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the centre of the joint boundary between Crown grants L.651 and L.544 on Carbonate Mountain (Minister of Mines Annual Report 1896, page 556).

COMMODITIES: Silver Antimony Lead Copper

MINERALS

SIGNIFICANT: Stibnite Galena Tetrahedrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Proterozoic GROUP: Horsethief Creek FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Slate
Mica Schist
Granite Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1890
SAMPLE TYPE: Unknown
COMMODITY: Silver GRADE: 1714.2900 Grams per tonne
REFERENCE: Minister of Mines Annual Report 1890, page 373.

CAPSULE GEOLOGY

The Monitor prospect is located on Crown grants Lot 651 and Lot 544 on Carbonate Mountain, one kilometre northwest of Malachite Creek.

In 1888, a 26-metre long tunnel was constructed on Crown grant Monitor (Lot 651). Two open cuts also occur on this grant.

The occurrence is located in the Purcell Mountains and the area is underlain by northwest-trending metasediments of the Upper Proterozoic Horsethief Creek Group. Regionally, this group consists of slates, argillites, quartz pebble conglomerates, grits and minor limestone.

The prospect includes a 0.6 to 1.5-metre wide vein. It trends in a northeast to southwest direction with a near-vertical dip. The vein can be traced across the properties. The vein contains antimony sulphide (Stibnite) located in micaceous slates and schists, having a dike of granite gneiss as its hanging wall. Above the vein is another "lode" of highly argentiferous galena, impregnated with minute specks of tetrahedrite.

The ore averages 1714.29 grams per tonne of silver (Minister of Mines Annual Report 1890, page 373).

BIBLIOGRAPHY

EMPR AR 1888-310; *1889-288; 1890-373; 1896-556; 1918-473;
1936-37
EMPR ASS RPT 11806
EM GEOFILE 2003-2

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 874
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/18

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 875
REPORT: RGEN0100

MINFILE NUMBER: **082KNW184**

NATIONAL MINERAL INVENTORY:

NAME(S): **GERTRUDE (L.6804)**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 30 N
LONGITUDE: 117 06 40 W
ELEVATION: 2043 Metres

NORTHING: 5602571
EASTING: 492132

LOCATION ACCURACY: Within 500M

COMMENTS: SITUATED ON LAKE CREEK NEAR HEAD OF SOB CREEK

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

ORE CONTAINS ARGENTIFEROUS GALENA.

BIBLIOGRAPHY

EMPR AR 1899-596; 1905-J251; 1928-C309
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW184**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 876
REPORT: RGEN0100

MINFILE NUMBER: **082KNW185**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRILBY**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 54 06 N
LONGITUDE: 117 42 16 W
ELEVATION: 1710 Metres

NORTHING: 5639126
EASTING: 450465

LOCATION ACCURACY: Within 1 KM

COMMENTS: ON DIVIDE BETWEEN SABLE CREEK AND ISSAAC CREEK (AKOLKOLEX)

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1899-675,680
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW185**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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PAGE: 877
REPORT: RGEN0100

MINFILE NUMBER: **082KNW186**

NATIONAL MINERAL INVENTORY:

NAME(S): **IMPERIAL (L.4778)**, BALFOUR (L.4777), ROSSLAND (L.4775),
JOKER (L.5404), EVAN, CRITERION,
MERIDIAN LUCKY STRIKE

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 48 00 N
LONGITUDE: 117 37 46 W
ELEVATION: 991 Metres

NORTHING: 5627773
EASTING: 455643

LOCATION ACCURACY: Within 500M

COMMENTS: Adjoins the Eva (082KNW066) on the southwest. The claims are located
on Lexington Mountain on the east slope of Incomappleux (Fish) River.
See also Meridian (082KNW064).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epithermal Hydrothermal

TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite
Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Imperial adjoins the Eva (082KNW066) on the southwest and
Criterion (082KNW065) on the west. Quartz veins with pyrite,
sphalerite and galena, occur in isoclinally folded argillite and
quartzites of the Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1900-812; 1903-114,129,133,241,243; 1933-213; 1934-E34;
1968-265
EMPR ASS RPT 18232
EMPR MR MAP 2 (1928)
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/15

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW186**

BIBLIOGRAPHY

EM FIELDWORK 1998, pp. 193-222
EMPR AR 1894-744; 1899-676; 1902-H145; 1903-126,H107; 1907-L91;
1908-J247; 1909-K104; 1910-K95; 1914-K255; 1918-473;
1923-234; 1924-B367; 1932-181; 1933-A215; 1934-E34
EMPR ASS RPT 5172, 7013, 18232
EMPR BC METAL MM00618
EMPR INDEX 3-204
EMPR MR MAP 2 (1928)
EMPR PF (Starr, C.C. (1933): Notes on the Meridian Mine in 082KNW064;
Gibson, S. (1935): Plan of Workings; O'Grady, B.T. (1933):
Criterion Workings, 1"= 50'; Emmens, N.W. and McDougall, B.W.W.
(1933): Plan of Criterion Workings with Assays, 1"= 50'; Criterion
No. 1 & 2 Tunnels, 1"= 40' (date unknown); McDougall, B.W.W.
(1934): Plan of Assays of Criterion No. 2, 1"= 50'; McDougall,
B.W.W. (1934): Plan of Assays of Rosslund Tunnel & Criterion No.
1, 1" = 50'; Emmens, N.W. (1934): Report on Meridian Mine, in
082KNW064; Langley, A.G. (1933): General Summary of Progress,
in 082KNW064; McDougall, B.W.W. (1934): The Meridian Mine, in
082KNW064; Emmens, N.W. (1914): Report on the Mineral Resources of
the Lardeau Mining Division, pp. 19-21, in 082KNW General)
GSC MAP 235A
GSC MEM 161, pp. 35,39,41,118
GSC OF 288; 432; 464
GSC SUM RPT 1903, p. 75

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KNW188**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANACONDA (L.4710)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 46 13 N
LONGITUDE: 117 24 52 W
ELEVATION: 2134 Metres

NORTHING: 5624361
EASTING: 470775

LOCATION ACCURACY: Within 500M

COMMENTS: The given location is for the Anaconda Crown grant (Lot 4710). Descriptions, however, indicate that the Anaconda is located further down Boyd Creek than the Kootenay Chief (082KNW135). This would place the described location to the northwest of the Kootenay Chief whereas the Crown grant is located some 8 kilometres to the southeast. The description of the mineralization does fit with that found in the area of the Crown grant.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Significant mineral is assumed to be chalcopyrite.
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Schist
Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Anaconda Crown grant (Lot 4710) is located at the headwaters of Galena Creek.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation. It is thought that all these bands are part of the Lower Cambrian Badshot Formation, repeated by folding. These bands are interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

In 1899, there was reported to be 4 claims in the Anaconda group. The formation is reported to be in schist and limestone and the ore was reported to assay high in gold and copper. By 1899, a tunnel was in 33 metres.

Refer to the St. Louis (082KNW166) for a discussion of the common recent work history of the area.

BIBLIOGRAPHY

EMPR AR *1898-1063; *1899-675
EMPR ASS RPT 11979, 14063, 17651, 18844, 18845, *22917
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

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RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 881
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MINFILE NUMBER: **082KNW189**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROYAL CANADIAN**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 18 N
LONGITUDE: 117 50 58 W
ELEVATION: 550 Metres

NORTHING: 5613658
EASTING: 439976

LOCATION ACCURACY: Within 5 KM
COMMENTS: IN GALENA BAY

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

GOLD VALUES OBTAINED.

BIBLIOGRAPHY

EMPR AR 1896-538
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW189**

MINFILE NUMBER: **082KNW190**

NATIONAL MINERAL INVENTORY:

NAME(S): **LARDEAU-GOLDSMITH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 48 00 N
LONGITUDE: 117 31 00 W
ELEVATION: 2000 Metres

NORTHING: 5627712
EASTING: 463590

LOCATION ACCURACY: Within 5 KM

COMMENTS: The Lardeau-Goldsmith is located at the head of Pool Creek.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Lardeau-Goldsmith is located at the head of Pool Creek. High grade silver ore is reported. A 15-metre adit was driven in 1899. Underlying rocks are metasediments of the Lower Paleozoic Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1899-673
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW192**

NATIONAL MINERAL INVENTORY: 082K14 Ne,Pb1

NAME(S): **CHIEF OF THE SELKIRKS**, INTERNATIONAL (L.661)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14E
BC MAP:

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 59 01 N
LONGITUDE: 117 09 42 W
ELEVATION: 2332 Metres

NORTHING: 5648015
EASTING: 488652

LOCATION ACCURACY: Within 1 KM

COMMENTS: The reference for the International Crown grant (L.661) is Minister of Mines Annual Report 1896, page 556.

COMMODITIES: Gold Lead Copper

MINERALS

SIGNIFICANT: Galena Pyrite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Massive Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Tabular

MODIFIER: Folded

DIMENSION: Fractured

Metres

STRIKE/DIP:

TREND/PLUNGE: 305/

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic	Horsethief Creek	Unnamed/Unknown Formation	

LITHOLOGY: Quartz Vein
Schist
Quartzite
Slate
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The Chief of the Selkirks prospect is located near the headwaters of Bobbie Burns Creek in International Basin, about 32 kilometres southwest of Golden.

The occurrence is located in the Purcell Mountains and is underlain by northwest trending metasediments of the Upper Proterozoic Horsethief Creek Group. Regionally, this group consists of slates, argillites, quartz-pebble conglomerates, grits and minor limestone.

The formations in International Basin, as well as the adjoining main valley, are folded and fractured across the bedding. Rock types include greenish grey schists, dark slaty schists (in which cubes of pyrite are a characteristic feature), quartzites, slates and conglomerates. In the bluffs and ridges it is evident that the formations have been folded to form a large anticline. Cutting the metasediments are a series of well-defined quartz veins trending north and south. These are intersected by another series of quartz veins trending about 300 degrees. Mineralization occurs at the intersection of the two vein systems. Mineralization in the veins consists mainly of galena and pyrite. However, pyrite is described as occurring in massive form or irregularly disseminated throughout the quartz.

On Crown grant claim International(L.661), there is a tunnel 24 metres in length and several open cuts. There are at least two quartz veins cutting through the Crown grant claim. These are traceable on the surface over 60 metres trending 305 degrees. One quartz vein carries galena, tetrahedrite and pyrite. The pyrite carries gold.

BIBLIOGRAPHY

EMPR AR 1890-373; 1892-536; 1893-1064; 1894-748; 1895-672;

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 884
REPORT: RGEN0100

BIBLIOGRAPHY

1896-530,556; *1898-1050; 1899-594; 1917-F142; 1921-G123; *1922-182
EMPR ASS RPT 11806
EMPR EXPL 1983-133
GSC MEM 369-27
GSC OPEN FILE 288-3

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: DRH

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

MINFILE NUMBER: **082KNW193**

NATIONAL MINERAL INVENTORY:

NAME(S): **DEB 5, MALACHITE**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 58 21 N
LONGITUDE: 117 01 17 W
ELEVATION: 1650 Metres

NORTHING: 5646767
EASTING: 498498

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Sulphur Galena Arsenopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Unknown
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Proterozoic

GROUP

Windermere

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Shale
Limestone
Quartzite
Sandstone
Grit

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

The property consists of a repeating sequence of dark-grey to black shales with interbedded limestones, alternating with thick bedded, coarse-grained, grey to brown orthoquartzite sandstone and grits. Mineralization consists of disseminated to massive stratabound sphalerite, galena, pyrite and arsenopyrite in the dark black shale sequence.

BIBLIOGRAPHY

EMPR ASS RPT *11806
EMPR EXPL 1983-133
Chevron File
EMPR OF 2000-22

DATE CODED: 1985/08/29
DATE REVISED: / /

CODED BY: AFW
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW193**

MINFILE NUMBER: **082KNW194**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOYD, ZINC**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 50 51 N
LONGITUDE: 117 29 36 W
ELEVATION: 1600 Metres

NORTHING: 5632982
EASTING: 465270

LOCATION ACCURACY: Within 500M

COMMENTS: Located at anomalous sample location T529R on "Camp Creek"
(Assessment Report 6496).

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Quartzitic/Quartzose Sericite Phyllite
Chloritic Phyllite
Schist
Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1976

SAMPLE TYPE: Grab

COMMODITY

GRADE

Lead

0.2250

Per cent

Zinc

1.0900

Per cent

REFERENCE: Assessment Report 6496.

CAPSULE GEOLOGY

In 1976, a reconnaissance geochemical program revealed a large lead-zinc anomaly along the north side of upper Boyd Creek and the Boyd claims were staked by a consortium consisting of Dome Exploration Canada, Salsigne Exploration Ltd. and Union Oil Company of Canada Ltd. An electromagnetic survey (6.3 kilometres) was conducted in 1976. In 1977, the consortium collected 25 silt and soil samples, 13 rock samples and conducted mapping and prospecting surveys. In 1984, J.R. Woodcock, who conducted the earlier work, staked the same area as the Zinc claims. He collected 190 soil samples for analysis.

The Boyd area is underlain by rocks of the Lower Cambrian Badshot Formation and Cambrian to Devonian Index Formation (Lardeau Group). White limestone, quartzite and phyllite are reported to belong to the Badshot Formation. Limy phyllite containing minor dark grey or black limestone is correlated with the Index Formation. The strata strikes between 130 and 140 degrees with steep dips ranging from 80 degrees southwest to 70 degrees northeast.

The Dome consortium collected a number of rock samples from "Camp Creek". The most significant sample came from the contact area of a quartzose sericite phyllite and darker chloritic phyllite. The sample yielded 0.225 per cent lead and 1.09 per cent zinc (Assessment Report 6496).

In 1984, it was reported that exposures of weathered schist in

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CAPSULE GEOLOGY

the bed of a small creek were thought to host disseminations of lead and zinc, which gave rise to the significant lead-zinc geochemical anomaly. Sparse galena was observed in dolomite-quartz rock (outcrop?).

BIBLIOGRAPHY

EMPR ASS RPT *6496, *14592
EMPR EXPL 1977-71, 1985-C84
EM GEOFILE 2003-2
GSC MEM 161

DATE CODED: 2003/02/22
DATE REVISED: 2003/02/22

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW195**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOST CUP (L.1870)**, PHYLLIS (L.3755), GOLD STANDARD (L.12482),
GOLDEN EAGLE (L.12479), VIMEY RIDGE (L.12483), NINA (L.4239),
WINDFLOWER, DOE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:
LATITUDE: 50 49 54 N
LONGITUDE: 117 39 40 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See Goldfinch (082KNW076).

Underground

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5631314
EASTING: 453443

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

A quartz vein containing pyrite and galena, occurs in phyllite of the Lardeau Group. The property is part of the Windflower Project; see Goldfinch (082KNW076).

BIBLIOGRAPHY

EM FIELDWORK 1998, pp. 193-222
EMPR AR 1898-1064; 1899-676; 1905-252
EMPR ASS RPT 12895, 13920, 16582, 17929
GSC MEM 161
GSC OPEN FILE 288-17; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/15

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW196**

NATIONAL MINERAL INVENTORY:

NAME(S): **PAYMASTER**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 50 30 N
LONGITUDE: 117 37 04 W
ELEVATION: 700 Metres

NORTHING: 5632400
EASTING: 456504

LOCATION ACCURACY: Within 1 KM

COMMENTS: The Paymaster, on Lexington Creek, is just beyond the
12 mile bridge on Incomappleux River, northeast of Camborne.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cambrian	Lardeau	Index	

LITHOLOGY: Limestone
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Paymaster, on Lexington Creek, is just beyond the 12 mile bridge on Incomappleux River, northeast of Camborne. Underlying rocks are metasediments of the Lower Paleozoic Index Formation (Lardeau Group). A 64-metre crosscut has been driven on the property. Silver, lead and zinc values are reported. Lardeau Mines Exploration Limited held the property in the mid-1920's.

BIBLIOGRAPHY

EMPR AR 1925-A263; 1926-H270; 1927-C293; 1928-C318
EMPR PF (RPT BY D.B. STERRETT 1930)
GSC MEM 161
GSC OPEN FILE 288-19

DATE CODED: 1985/07/24
DATE REVISED: 1998/11/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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MINFILE NUMBER: **082KNW197**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAFFODIL**, WILD FLOWER, PRIMROSE,
BLUE BELL

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

LATITUDE: 50 49 48 N
LONGITUDE: 117 34 58 W
ELEVATION: 1280 Metres

LOCATION ACCURACY: Within 5 KM
COMMENTS: SITUATED ON LEXINGTON CREEK

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5631082
EASTING: 458958

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1899-579,675,679; 1900-814
GSC MEM 161
GSC OPEN FILE 288-23

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW197**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

MINFILE NUMBER: **082KNW198**

NATIONAL MINERAL INVENTORY:

NAME(S): **UNITED VICTORY**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 54 36 N
LONGITUDE: 117 33 52 W
ELEVATION: 1280 Metres

NORTHING: 5639968
EASTING: 460317

LOCATION ACCURACY: Within 1 KM
COMMENTS: FROM SYMBOL 25A, OPEN FILE MAP 288.

COMMODITIES: Tungsten

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Skarn
TYPE: K05 W skarn

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE, 1979.

BIBLIOGRAPHY

EMPR AR 1942-79; 1943-78
EMPR BULL 1-130 (REVISED)
EMPR OF 1991-17
EMPR PF (RPT BY M.S. HEDLEY 1943)
GSC OPEN FILE 288-25A

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: AFW

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW198**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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REPORT: RGEN0100

MINFILE NUMBER: **082KNW199**

NATIONAL MINERAL INVENTORY:

NAME(S): **YELLOWJACKET**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 18 N
LONGITUDE: 117 38 28 W
ELEVATION: 762 Metres

NORTHING: 5626483
EASTING: 454809

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on the edge of the Camborne townsite.

COMMODITIES: Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Broadview	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

A quartz vein contains disseminated galena and chalcopyrite, within phyllites of the Lardeau Group. The location is described as on the edge of the Camborne townsite.

BIBLIOGRAPHY

EMPR AR 1925-263
GSC MAP 235A
GSC MEM 161
GSC OPEN FILE 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1999/09/17

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW199**

MINFILE NUMBER: **082KNW200**

NATIONAL MINERAL INVENTORY:

NAME(S): **CENTRE STAR (L.4239)**, HORNE, HORNE LEDGE

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 44 N
LONGITUDE: 117 25 10 W
ELEVATION: 1981 Metres

NORTHING: 5623468
EASTING: 470418

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the centre of former Crown grant Centre Star (Lot 4239) (Assessment Reports 22917, Plate No.8).

COMMODITIES: Lead Silver Gold Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Pyrrhotite Chalcopyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Limestone
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1983
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		172.1600	Grams per tonne
Gold		0.2400	Grams per tonne
Lead		10.4000	Per cent
Zinc		8.8600	Per cent

REFERENCE: Assessment Report 11979, page 24.

CAPSULE GEOLOGY

The Centre Star extinguished Crown grant (Lot 4239) is located on the upper reaches of Galena Creek.

In 1993, Assessment Report 22917, reports that the Horne Ledge group included Crown grants Rob Roy (Lot 4288) (082KNW201), Highland Chief (Lot 4290) (082KNW201), Centre Star (Lot 4239) and Morgan (Lot 1301) (082KNW210). This report further states that according to prospector Eric Denny, there are at least five mineralized zones along the Horne ledge. These four non-contiguous claims may represent some of the mineralized locals.

In each year from 1893 to 1898 some mention is made of the Horne ledge or Horne group (082KNW210). The only early mention of the Centre Star claim is made in 1898 when it is reported to be on the Horne ledge along with numerous other claims, all having a heavy iron capping.

The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. Please see Silver Leaf (082KNW204) for a description of the recent history of the area.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation. It is now thought that all these bands are part of the Lower Cambrian Badshot

CAPSULE GEOLOGY

Formation, repeated by folding. These bands are interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

The character of the Horne ledge mineralization is reported to be almost impossible to determine due to the heavy oxidation and leaching of the mineralized zone. Only at certain localities did the samples show visible mineralization. These samples were taken at existing workings where they were able to intersect the mineralization below the oxidized cap. Where observed, the mineralization appeared as massive galena with sphalerite and minor pyrite, pyrrhotite and trace amounts of chalcopyrite.

A sample from the Centre Star claim yielded 10.4 per cent lead, 8.86 per cent zinc, 172.16 grams per tonne silver and 0.24 grams per tonne gold (Assessment Report 11979, page 24).

BIBLIOGRAPHY

EMPR AR 1893-1050; 1894-745; 1895-694; 1896-543; 1897-551; 1898-1069
EMPR ASS RPT *11979, 14063, 17651, 18844, 18845, *22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC MEM 161

DATE CODED: 2003/02/27
DATE REVISED: 2003/02/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW201**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROB ROY (L.4288)**, HIGHLAND CHIEF (L.4290), HORNE,
HORNE LEDGE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 46 36 N
LONGITUDE: 117 26 01 W
ELEVATION: 1676 Metres

UTM ZONE: 11 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5625079
EASTING: 469428

COMMENTS: The location is for the centre of former Crown grant Rob Roy (Lot 4288).

COMMODITIES: Lead Silver Gold Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Pyrrhotite Chalcopyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Limestone
Slate
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Rob Roy and Highland Chief Crown grants are located on Galena Creek about 1 kilometre up from Ferguson Creek.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation. It is now thought that all these bands are part of the Lower Cambrian Badshot Formation, repeated by folding. These bands are interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

In 1993, Assessment Report 22917 reported that the Horne Ledge group included Crown grants Rob Roy (Lot 4288), Highland Chief (Lot 4290), Centre Star (Lot 4239) and Morgan (Lot 1301) (082KNW210). This report further states that according to prospector Eric Denny, there are at least five mineralized zones along the Horne ledge. These four non-contiguous claims may represent some of the mineralized locals.

In each year from 1893 to 1898 some mention is made of the Horne ledge or Horne group (082KNW210). In 1899, the Rob Roy and Highland Chief were acquired by the Scottish Canadian Mining and Development Company. The main vein is about 3.7 metres wide with a heavy iron capping and lies at the contact of limestone and slate. Two smaller leads run parallel about 15 metres apart and contain small veins of galena. By 1900, a 91-metre crosscut had been done and "concentrating ore" was encountered in the workings.

In general, the character of the Horne ledge mineralization is reported to be almost impossible to determine due to the heavy oxidation and leaching of the mineralized zone. Only at certain localities did the outcrop show visible mineralization. Where observed, the mineralization appeared as massive galena with sphalerite and minor pyrite, pyrrhotite and trace amounts of chalcopyrite.

The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny,

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CAPSULE GEOLOGY

through purchase or staking. Please see Silver Leaf (082KNW204) for a description of the common work history of the area.

BIBLIOGRAPHY

EMPR AR 1893-1050; 1894-745; 1895-694; 1896-543; 1897-551; 1898-1069;
*1899-683; 1900-824
EMPR ASS RPT *11979, 14063, 17651, 18844, 18845, *22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC MEM 161

DATE CODED: 2003/02/27
DATE REVISED: 2003/02/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 897
REPORT: RGEN0100

MINFILE NUMBER: **082KNW202**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROYAL**, UTOPIA, LARDEAU KING,
KISMET, LARDEAU QUEEN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

LATITUDE: 50 48 54 N
LONGITUDE: 117 34 04 W
ELEVATION: 2100 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: THE ROYAL GROUP CONSISTS OF THE LARDEAU KING, LARDEAU QUEEN AND THE LARDEAU PRINCE. KISMET AND UTOPIA ARE OTHER NAMES FOR LARDEAU QUEEN AND LARDEAU KING RESPECTIVELY. SEE ALSO 082KNW129. SEE ALSO 082KNW129. NEAR THE HEAD OF LEXINGTON CREEK.

MINING DIVISION: Revelstoke

UTM ZONE: 11 (NAD 83)

NORTHING: 5629406
EASTING: 460001

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

LOW GRADE ORE OCCURS IN 2 PARALLEL VEINS.
SULPHIDE ORE .8 METERS WIDE CARRYING LOW VALUES IN
GOLD AND SILVER. SEE OPEN FILE 82K/13E OLD CLAIM
MAP INCOMMUPLEUX RIVER.

BIBLIOGRAPHY

EMPR AR 1899-675,679; 1900-814; 1927-C293
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW202**

MINFILE NUMBER: **082KNW203**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUNSET (L.5339)**, MAUD (L.5338), JOSEPH (L.5337),
ANNA (L.5336), COMSTOCK, SILVER BULLION,
WONDERFUL

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K14W

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 46 29 N
LONGITUDE: 117 27 51 W

NORTHING: 5624876
EASTING: 467272

ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located from information provided by Agincourt Exploration Inc.
(Assessment Report 13919, Figure 7).

COMMODITIES: Silver Lead Gold Copper

MINERALS

SIGNIFICANT: Galena Pyrite Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Phyllitic Schist
Dolomitic Schist
Carbonate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1901
SAMPLE TYPE: Grab
COMMODITY GRADE

Silver	1028.5800	Grams per tonne
Gold	17.1400	Grams per tonne

REFERENCE: Minister of Mines Annual Report 1901, page 1019.

CAPSULE GEOLOGY

The Sunset group, comprising the Sunset (Lot 5339), Maud (Lot 5338), Joseph (Lot 5337) and Anna (Lot 5336) claims, is located about 1 kilometre to the northwest of the confluence of Ferguson and Parisian creeks. The Comstock and Silver Bullion, not part of the Sunset group, adjoined the group downhill and the Wonderful adjoined the Sunset group on the southwest.

Bands of Lower Cambrian Badshot Formation limestone are repeated by folding. These bands are interlayered with metasediments of the Cambrian to Devonian Index Formation, Lardeau Group.

Rocks on the property are described as phyllitic schist, dolomitic schist and carbonates. The Sunset lead is poorly exposed within the gradational contact of the green and grey phyllitic schist.

The Sunset group was first staked in 1899 by H.M. Carter. The group was sold to the Golden Link Mining Company in 1900. During the next year, 33.5 metres of tunnel was driven along the Sunset lead. The lead was described as a quartz ledge (vein), mineralized throughout with galena and pyrite. Where the ledge was in contact with calcareous rocks, a 15 to 30-centimetre thick band of galena was encountered. The lead was reported to be traceable for eight claim lengths and to consist of a 1.2 to 1.5-metre thickness of quartz. In

CAPSULE GEOLOGY

1901, the Comstock and Silver Bullion claims were owned by the Comstock Gold Mining Company Limited. A 15-metre tunnel had been driven on a vein measuring 60 centimetres in width and containing chalcopyrite. Samples from this vein were as high as 17.14 grams per tonne gold and 1028.58 grams per tonne silver (Minister of Mines Annual Report 1901, page 1019). On the Wonderful, a crosscut tunnel was driven over 30 metres in 1901.

Work done on the Sunset claim area in 1985 by Agincourt Explorations Inc. determined that the main workings were actually on the Maud claim, which adjoined the Sunset on the southeast. Further, the company determined that the Crown grant did not show up accurately on claim and topographic maps. It was in fact about 500 metre to the northwest.

BIBLIOGRAPHY

EMPR AR 1900-825; 1901-1019; 1905-J253
EMPR ASS RPT *13919
EMPR EXPL 1985-C85
EM GEOFILE 2003-2
GSC OF 288 (occurrence 72); 432 (occurrence 72)
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/01

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW204**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER LEAF (L.4699)**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 37 N
LONGITUDE: 117 21 56 W
ELEVATION: 1828 Metres

NORTHING: 5623231
EASTING: 474217

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Silver Leaf Crown Grant 4699 from claim map.

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Limestone
Graphitic Schist
Chlorite Schist
Sericite Pyrite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

3096.0300

Grams per tonne

Gold

1.3000

Grams per tonne

Lead

79.9500

Per cent

REFERENCE: Assessment Report 18845.

CAPSULE GEOLOGY

The Silver Leaf Crown-grant (Lot 4699) is located on the ridge above Marsh Adams Creek about 6 kilometres from its confluence with the Westfall River.

In 1899, Guinea Gold Mines of BC began development work on 3 claims called the Silver Leaf group. Three small crosscuts were made cutting the ledge which carries several small veins of galena and 91 centimetres of "concentrating ore". Another crosscut was being developed at that time. In 1907 and 1908, Guinea Gold was still active but no reports of work were available.

The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. The two rehabilitated many of the access trails and workings in the area of Galena Creek and to the east (to Marsh Adam Creek) and north. Some of the historically documented mineral occurrences were found and examined during this period but the mineralization was examined more as a whole than as individual showings. The following summarizes the ownership of and general work done in and around the property in question.

The Dennys commissioned geologist Gordon Turner to investigate the "Horne Ledge" and the Ellsmere zones and the first report on the area was written. In 1985, the large claim group was optioned briefly to Nakusp Resources Ltd. who did claim staking, mapping, collected 86 rock and 64 soil samples, excavated 18 metres of trench and conducted an electromagnetic survey. They referred to their

CAPSULE GEOLOGY

project as the Silver Horn. In 1987, the Dennys optioned the property to Golden Range Resources Ltd. who conducted 150 kilometres of airborne VLF-EM resistivity and magnetic surveys and, geological mapping and sampling throughout their Black Warrior and Silver Leaf groups. In 1988, Golden Range investigated the Silver Leaf Crown-grant and area, unsuccessfully attempting to relocate the workings. However, they did find some massive galena float which assayed 79.95 per cent lead, 3096.03 grams per tonne silver and 1.30 grams per tonne gold (Assessment Report 18845). The property reverted to the Dennys in 1989. In 1991, the property was optioned to Jopec Resources Ltd. who conducted mapping and collected 30 samples.

The area is underlain by units of the Cambrian to Devonian Index Formation, Lardeau Group including grey phyllite, grey limestone, graphitic schist, chlorite schist and sericite pyrite schist. Field observations suggest complex folding and faulting within the property area.

BIBLIOGRAPHY

EMPR AR *1899-684; 1907-96; 1908-94
EMPR ASS RPT 11979, 14063, 17651, *18844, 18845, 22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW205**

NATIONAL MINERAL INVENTORY:

NAME(S): **EDNA AND GRACE C**, EDNA (L.4703), GRACE C (L.4074),
EDNA NO. 2 (L.5698)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 45 11 N
LONGITUDE: 117 21 20 W
ELEVATION: 1400 Metres

UTM ZONE: 11 (NAD 83)

LOCATION ACCURACY: Within 1 KM

NORTHING: 5622425
EASTING: 474919

COMMENTS: The location is for the Edna No. 2 Crown Grant (Lot 5698). However, Golden Range Resources places the Primrose adit immediately southwest of the Silver Leaf Crown grant (Lot 4699) (Assessment Report 18884). It was the Primrose Gold Mining Company that originally owned the Edna and Grace C claims.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Tetrahedrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Phyllite
Limestone
Graphitic Schist
Chlorite Schist
Sericite Pyrite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Edna and Grace C is located in the vicinity of the Edna No. 2 Crown grant (Lot 5698). This Crown grant is near the west shore of Marsh Adams Creek about 6 kilometres from its confluence with the Westfall River.

It was reported in 1898 that the Primrose Gold Mining Company of Rossland were the owners of the promising Endora and Grace C claims. The Endora fraction (Lot 4716) is located about 2 kilometres north of where the Edna and Grace C are thought to be. In 1899, the Edna and Grace C had about 100 metres of underground development. The No.1 crosscut was driven to tap the lead at 91 metres. The other work consisted of a drive on the lead with the face being in white quartz impregnated with galena and with a 15 centimetre vein of grey copper (tetrahedrite) on the hanging wall. The Edna and Grace C were both Crown-granted in 1901 as Lot 4703 and Lot 4704 respectively.

The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. The two rehabilitated many of the access trails and workings in the area of Galena Creek and to the east (to Marsh Adam Creek) and north. Some of the historically documented mineral occurrences were found and examined during this period but the mineralization was examined more as a whole than as individual showings. In 1988, Gold Range Resources Inc. held the property under option. They investigated the "Primrose adit" just southwest of the Silver Leaf Crown grant (Lot 4699). See the Silver Leaf (082KSW204) for further details.

The area is underlain by units of the Cambrian to Devonian Index Formation, Lardeau Group including grey phyllite, grey limestone, graphitic schist, chlorite schist and sericite pyrite schist. Field observations suggest complex folding and faulting within the property area.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 903
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1898-1071; *1899-684; 1901-1123,1224
EMPR ASS RPT 11979, 14063, 17651, *18844, 18845, 22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 904
REPORT: RGEN0100

MINFILE NUMBER: **082KNW207**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAUBERT LAKE**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 24 N
LONGITUDE: 117 36 58 W
ELEVATION: 933 Metres

NORTHING: 5613680
EASTING: 456465

LOCATION ACCURACY: Within 500M
COMMENTS: FROM SYMBOL 93, OPEN FILE MAP 288.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

GALENA AND SPHALERITE IN QUARTZ STRINGERS IN
CARBONATIZED BLACK PHYLLITE.

BIBLIOGRAPHY

EMPR BULL 45-86
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW207**

MINFILE NUMBER: **082KNW208**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN RULE (L.7441)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 50 N
LONGITUDE: 117 25 47 W
ELEVATION: 2100 Metres

NORTHING: 5627364
EASTING: 469715

LOCATION ACCURACY: Within 500M

COMMENTS: Location is for the cancelled Golden Rule (Lot 7441) Crown grant from old claim map. Joker (Lot 13478) and Jutland (Lot 13844) adjoined the Golden Rule on its northeast and the Victoria (Lot 13479) adjoined on its southeast.

COMMODITIES: Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Limestone
Argillite
Schist
Phyllite
Quartzite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1928
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		2221.7300	Grams per tonne
Gold		1.7100	Grams per tonne
Lead		64.7000	Per cent
Zinc		2.6000	Per cent

REFERENCE: Minister of Mines Annual Report 1928, page 309.

CAPSULE GEOLOGY

The Golden Rule area is underlain by limestone of the Lower Cambrian Badshot Formation and metasediments of the Cambrian to Devonian Index Formation (Lardeau Group) consisting of schist, phyllite, quartzite, slate and limestone.

The stratigraphy in the area Golden Rule Crown-granted claim consists of alternating bands of limestone, schist and argillite. Superficial workings, including a short tunnel at about 2070 metres elevation develop a sheared, silicified zone in limestone near the contact with argillite. The mineralization is irregular, consisting chiefly of stringers and disseminations of galena associated with quartz and siliceous phases in the limestone. A sample of selected ore from the tunnel assayed 1.71 grams per tonne gold, 2221.73 grams per tonne silver, 64.7 per cent lead and 2.6 per cent zinc (Minister of Mines Annual Report 1928, page 310). The claim was acquired by J.M. Ennes and G.S. McCarter around 1928 and some further prospecting was done.

The Golden Rule is adjacent the Blue Jay group (082KNW079).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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CAPSULE GEOLOGY

Please refer to the Blue Jay for details of the common property history after 1980.

BIBLIOGRAPHY

EMPR AR *1928-C309
EMPR ASS RPT 11979, 14063, 17651, 18844, 18845, 22917
EM GEOFILE 2003-2
EM OF 2000-22
GSC OF 288; 432
GSC MAP 235A
GSC MEM 161

DATE CODED: 2003/03/10
DATE REVISED: 2003/03/10

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 907
REPORT: RGEN0100

MINFILE NUMBER: **082KNW209**

NATIONAL MINERAL INVENTORY:

NAME(S): **ABRAHAMSON**, NORTH STAR, QUEEN OF THE HILLS,
CRYSTAL

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 42 N
LONGITUDE: 117 27 28 W
ELEVATION: 1000 Metres

NORTHING: 5614155
EASTING: 467656

LOCATION ACCURACY: Within 5 KM
COMMENTS: NEAR THE FORKS IN LARDEAU RIVER

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EMPR AR 1893-1050; 1894-744; 1902-141; 1903-112,126; 1904-118; 1911-
290
GSC MEM 161-19

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW209**

MINFILE NUMBER: **082KNW210**

NATIONAL MINERAL INVENTORY:

NAME(S): **HORNE**, HORNE LEDGE, MORGAN (L.1301)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 45 20 N
LONGITUDE: 117 24 24 W
ELEVATION: 2133 Metres

NORTHING: 5622721
EASTING: 471315

LOCATION ACCURACY: Within 500M

COMMENTS: The Horne occurrence location is for the centre of former Crown grant Morgan (Lot 1301) (Assessment Reports 11979 and 22917).

COMMODITIES: Lead Silver Gold Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Pyrrhotite Chalcopyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian Paleozoic	Unnamed/Unknown Group Lardeau	Badshot Index	

LITHOLOGY: Limestone
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis SAMPLE TYPE: Grab COMMODITY	YEAR: 1983
Silver	77.4900 Grams per tonne
Gold	0.0700 Grams per tonne
Lead	10.8000 Per cent
Zinc	0.0500 Per cent

REFERENCE: Assessment Report 11979.

CAPSULE GEOLOGY

The Horne occurrence probably consists of several claims and showings between Galena and Dave Morgan Creek. In each year from 1893 to 1898 some mention is made of the Horne ledge or Horne group. The Minister of Mines Annual Report for 1898 seems to indicate that there was a claim by that name but it is not certain.

The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. Please see Silver Leaf (082KNW204) for a description of the recent history of the area.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation. It is now thought that all these bands are part of the Lower Cambrian Badshot Formation, repeated by folding. These bands are interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

While the location of the historic Horne showing is not accurately known, it may be assumed that it occurs on the Horne Ledge, a name that local prospectors have given to one of five limestone bands that can be traced for several kilometres, mainly between Galena and Dave Morgan Creek.

CAPSULE GEOLOGY

In 1983, the location of a Horne Ledge zone is presented in Assessment Report 11979 and expanded on in 1993 in Assessment Report 22917. This location is accepted as the best fit for the Horne. The heavy oxidation of the zone, mentioned in the earliest reports, is corroborated in these later reports.

In 1993, Assessment Report 22917, reports that the Horne Ledge group included Crown grants Rob Roy (Lot 4288), Highland Chief (Lot 4290), Centre Star (Lot 4239) and Morgan (Lot 1301). This report further states that according to prospector Eric Denny, there are at least five mineralized zones along the Horne ledge.

The character of the mineralization is reported to be almost impossible to determine due the heavy oxidation and leaching of the mineralized zone. Only at certain localities did the samples show visible mineralization. These samples were taken at existing workings where they were able to intersect the mineralization below the oxidized cap. Where observed, the mineralization appeared as massive galena with sphalerite and minor pyrite, pyrrhotite and trace amounts of chalcopyrite.

A sample from an old opencut on the Morgan claim yielded 10.8 per cent lead, 0.05 per cent zinc, 77.49 grams per tonne silver and 0.07 grams per tonne gold (Assessment Report 11979, page 24).

BIBLIOGRAPHY

EMPR AR 1893-1050; 1894-745; 1895-694; 1896-543; 1897-551; 1898-1069
EMPR ASS RPT *11979, 14063, 17651, 18844, 18845, *22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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PAGE: 910
REPORT: RGEN0100

MINFILE NUMBER: **082KNW211**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUMBO**, UNION JACK

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 18 N
LONGITUDE: 117 25 04 W
ELEVATION: 1300 Metres

NORTHING: 5613397
EASTING: 470478

LOCATION ACCURACY: Within 500M
COMMENTS: STRADDLES UNION JACK CREEK

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

SMALL VEIN OF GALENA, THE REST OF THE LEDGE BEING
COMPOSED OF IRON SULPHIDES, CARRYING SMALL GOLD
VALUES, AND QUARTZ, WITH CONSIDERABLE GALENA
SPRINKLED THROUGH.

BIBLIOGRAPHY

EMPR AR 1898-1068,1073; 1899-685; 1900-824; 1903-124; 1904-G117;
1907-L218; 1924-B368
EMPR BULL 45
GSC MEM 161
GSC OPEN FILE 288-188

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW211**

MINFILE NUMBER: **082KNW212**

NATIONAL MINERAL INVENTORY: 082K11 Pb6

NAME(S): **WAGNER**, DUNCAN (L.3472), DUNCAN KNOB,
SILVEX, LARDEAU (L.3470), MCCARTNEY FR. (L.3471),
OULD JIM FR. (L.3473), ELLA (L.3474), LARDEAU FR. (L.3477),
QUEEN MARY (L.3469), PRINCESS MARIE (L.3475)

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 40 04 N
LONGITUDE: 117 12 25 W
ELEVATION: 2438 Metres

NORTHING: 5612902
EASTING: 485375

LOCATION ACCURACY: Within 500M

COMMENTS: The original adit (Silvex) is located on a small knoll which protrudes through the Wagner Glacier at the head of the north fork of Hall Creek, 2.3 kilometres south of Mount Templeman, 17.5 kilometres northeast of Trout Lake (Engineering and Inspection - Underground plans). See also Sheep Creek (082KNW050), Abbott (082KNW056) and Jewell (082KNW057).

COMMODITIES: Silver Tin Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite Pyrite Chalcopyrite
ASSOCIATED: Quartz Calcite Ankerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
E14 Sedimentary exhalative Zn-Pb-Ag
SHAPE: Bladed
MODIFIER: Fractured
DIMENSION: STRIKE/DIP: 295/65S TREND/PLUNGE:
COMMENTS: Shear zone

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE Lower Cambrian GROUP Lardeau FORMATION Index IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Carbonaceous Phyllite
Carbonaceous Phyllitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: WAGNER REPORT ON: Y
CATEGORY: Indicated YEAR: 1989
QUANTITY: 25887 Tonnes
COMMODITY GRADE
Gold 0.1000 Grams per tonne
Silver 234.8000 Grams per tonne
Lead 4.5800 Per cent
Zinc 4.7800 Per cent
COMMENTS: Indicated also stated as 23,287 tonnes grading 0.13 gram per tonne gold, 302.6 grams per tonne silver, 8.71 per cent lead and 2.24 per cent zinc.
REFERENCE: Filing statement 99/89, Golden Arch Resources.

INVENTORY

ORE ZONE: WAGNER

REPORT ON: Y

CATEGORY:	Measured	YEAR:	1989
QUANTITY:	99802 Tonnes		
COMMODITY		GRADE	
Silver		416.5000	Grams per tonne
Gold		0.3000	Grams per tonne
Lead		8.7500	Per cent
Zinc		3.7000	Per cent

COMMENTS: Measured.

REFERENCE: Filing statement 99/89, Golden Arch Resources.

CAPSULE GEOLOGY

The Duncan claim is located at 2438 metres elevation on the summit at the head of a north fork of Hall Creek, some 24 kilometres east of the north end of Trout Lake and 75.6 kilometres southeast of Revelstoke.

The Wagner group of 5 claims, including the Lardeau, McCartney Fr., Duncan, Ould Jim Fr., Ella and Lardeau Fr. (Lots 3470-3474, 3477 respectively) were owned by C.T. Porter and associates from about 1893. Development work in an adit at about 2500 metres elevation on the Duncan claim above the glacier totalled 50.9 metres of drift and crosscuts and a 16.7 metre winze. This work was done prior to the Crown-granting of these claims in 1900.

Wagner Mines, Limited was incorporated in May 1903 by C.T. Porter, of Spokane, one of the original owners of the property, but little work of importance was done in subsequent years. Additional ground on strike to the southeast was acquired as the Queen Mary (Lot 3469) and Princess Marie (Lot 3475) claims.

Leadridge Mining Company, Limited a subsidiary of St. Joseph Lead Company of New York held this and adjacent properties in 1949. Work on the Wagner included trenching and diamond drilling in 6 holes in the vicinity of the workings and on the Duncan and McCartney claims some 914 metres to the southeast; two holes intersected mineralization but core recovery was poor and no worthwhile results were obtained.

Sheep Creek Mines Limited optioned the property in 1951. In September 1952 a new adit (Sheep Creek adit) was begun at 2225 metres elevation on the Lardeau claim, on the far side of the glacier some 914.4 metres southeast of the original workings to explore what was presumed to be the same vein. The adit was driven as a crosscut and drift for 184.4 metres.

The Granby Consolidated Mining, Smelting and Power Company, Limited optioned the Wagner and adjacent groups, totalling 76 claims, from Agent J. Gallo of Howser in 1955. No work was reported on the Wagner group and the agreement terminated at the end of the year. In 1958 owner J. Gallo carried out some surface stripping on a portion of vein exposed by recession of the glacier.

Silvex Resources Corporation optioned the property in 1981. A lower drift adit (Silvex adit) was driven into the "Duncan Knob" at about 2468.8 metres elevation and 38 metres below the original adit. The adit was driven 39.6 metres and a raise begun; diamond drilling (330 metres) was done in 6 holes. This work gave indications of at least 20,000 tonnes averaging 15 per cent lead and 685.7 grams per tonne silver (Northern Miner October 10, 1981, page 20). In 1982 the raise was extended 12.1 metres and a small ore shipment made by lessees.

Turner Energy & Resources Ltd. acquired the Wagner property from a diverse ownership in early 1985 following several years of negotiation. In a subsequent joint venture agreement Mikado Resources Ltd. acquired a 70 per cent interest in the property. Work in 1985 included trenching, sampling, extending the Silvex adit, rehabilitation of the Sheep Creek adit, and shipping high-grade development ore.

Silver State Resources Inc. held the adjacent Redcliff 1 and 2 claims in 1985 and carried out geological mapping and geochemical rock sampling. Turner Energy & Resources acquired the property from Silver State (S.M.R. Technologies Limited) in October 1985.

Work in the Silver adit in 1985-86 included 14.3 metres of drifting, 10.7 metres of raising and underground diamond drilling in 7 holes; development ore totalling 72.5 tonnes was shipped to Trail. The "Sheep Creek" adit was rehabilitated.

Lower Cambrian and younger Lardeau Group metasedimentary and sedimentary rocks form a northwest trending, southwest dipping broad belt northeast of the Kuskanax batholith. This belt in part, straddles the northern end of the Kootenay Arc which is comprised of highly deformed sedimentary and volcanic rocks. To the east of the Lardeau Group, Hadrynian-Lower Cambrian quartzite of the Hamill Group

CAPSULE GEOLOGY

and Lower Cambrian limestone of the Badshot Formation forms a distinctive sequence of marker horizons that outline major structures in the Kootenay Arc.

The Wagner property is underlain by deformed carbonaceous phyllites and phyllite schists of the Index Formation (Lardeau Group). The rocks strike 310 degrees and dip 40 to 70 degrees to the southwest. A contact with the underlying north-west trending, southwest dipping Badshot Formation limestone is 183 metres east of the adit on the Duncan claim (Lot 3472). The only intrusive rock in the vicinity is an aplite sill which occurs 146 metres northeast of the adit.

A quartz vein is exposed on a knoll that juts out of Wagner Glacier. An adit is driven in a shear zone which is 9 to 123 metres wide, strikes 295 degrees and dips 65 degrees southwest. The zone is comprised of mixed quartz veins, veinlets and phyllite fragments. The zone trend approximates the strike and dip of the enclosing phyllites. Minor calcite and ankerite is associated with the quartz veining. In general, the quartz veins are commonly fractured and average 1.5 to 3 metres in width. Some smaller veinlets are extensively boudinaged. Local graphitic schist has been developed along the shear zone. On the top of the knoll above the adit, a 3 metre wide quartz vein with bands and small inclusions of phyllite is exposed. It lies on strike with the adit and dips steeply west. A lens of heavy galena-sphalerite mineralization 0.6 metres wide occurs near the hanging wall. Fifteen metres to the west a small band of galena with some pyrite is evident.

Mineralization generally consists of disseminated and massive veins of galena-sphalerite and tetrahedrite with pyrite and lesser chalcopyrite, hosted by the quartz veins. The massive galena-sphalerite-tetrahedrite veins commonly occur throughout the quartz veining and range from 7 to 91 centimetres in width. High grade shoots varying from 1 to 2.4 metres in width and 24 to 30 metres strike length also occur. Polished sections of ore show rounded residual grains of pyrite and dark brown or black sphalerite which is cut and replaced by argentiferous tetrahedrite and galena. Chalcopyrite is found in small amounts as disseminated specks in the sphalerite. The gangue is quartz with minor calcite. Spectrographic analysis indicates the presence of tin (George Cross News Letter #163, 1981).

The main vein can be traced on the surface 18 metres to the top of the glacier. At the level of the top of the glacier and 7.6 metres southwest, an irregular 1.5 metre wide quartz vein is slightly mineralized with pyrite and galena. Below the glacier at the 2133 metre elevation and 1000 metres southeast along strike, similar quartz veins and mineralization occurs on the Sheep Creek (082KNW050).

On the Wagner property, development ore has been mined from a lower adit (Silvex adit) which was driven 46 metres in 1981 and 68 metres in 1985. This adit is 38 metres below the original adit. Recoveries from custom ore from 1982 to 1989, totalled 198,484 grams silver, 622 grams gold, 160,484 kilograms lead and 83,620 kilograms zinc from 2654 tonnes.

Measured reserves for the Wagner property are 99,802 tonnes grading 8.75 per cent lead, 3.70 per cent zinc, 0.3 gram per tonne gold and 416.5 grams per tonne silver. Indicated reserves for the Wagner property are 25,887 tonnes grading 4.58 per cent lead, 4.78 per cent zinc, 0.10 gram per tonne gold and 234.8 grams per tonne silver. Indicated reserves for the Wagner property are also 23,287 tonnes grading 8.71 per cent lead, 2.24 per cent zinc, 0.13 gram per tonne gold and 302.6 grams per tonne silver (Filing Statement 99/89, Golden Arch Resources). Silver Peak Resources Ltd. hold 70 per cent and Golden Arch Resources Ltd. hold 30 per cent of the Abbott (082KNW056) and Wagner property. See also Jewell (082KNW057).

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- EMPR BC METAL MM00160
- EMPR ENG INSP (Geology, underground plans, drillhole locations; 1949, 1952)
- EMPR EXPL 1985-A38; 1986-A58
- EMPR INF CIRC 1986-1, pp. 41, 43, 47; 1987-1, pp. 17, 55
- EMPR IR 1984-4, p. 122
- EMPR MAP 65 (1989)
- EMPR MIN STATS 1985, p. 50; 1990, pp. 28, 31
- EMPR OF 1992-1
- EMPR PF (082KNW056; *082KNW212; Regional File)

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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EMR MP CORPFILE (Sheep Creek Mines Limited; Silvex Resources
Corporation; Turner Energy & Resources Ltd.; Mikado Resources Ltd.)
GSC MEM *161, pp. 19, 28, 30, 79-82, 116, 127
GSC OF 288; 432; 464
GSC SUM RPT 1904, pp. 87A, 88A; 1907, pp. 87, 88
GCNL #46, #85, #120, #141, #158, #161, #174, #180, #189, #198, #207,
1985; #14 (Jan.21), 1999
MIN REV Sept./Oct. 1981, p. 6
WWW <http://www.infomine.com/>
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1999/04/28

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 916
REPORT: RGEN0100

MINFILE NUMBER: **082KNW214**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALPINE**

MINING DIVISION: Revelstoke

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 35 18 N
LONGITUDE: 117 21 34 W
ELEVATION: 2300 Metres

NORTHING: 5604109
EASTING: 474555

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

VEIN OF QUARTZ, 1 METER WIDE, STRIKING NORTH IN A SERIES OF MUCH ALTERED GREENISH SCHISTS THAT CONTAIN MANY QUARTZ LENSES. THE VEIN CONTAINS MANY VUGS AND IS MINERALIZED WITH PYRITE, SPHALERITE, GALENA, AND CHALCOPYRITE.

BIBLIOGRAPHY

EMPR AR 1905-250; 1914-307; 1930-267
GSC BULL 193
GSC MAP 1277A
GSC MEM 161-27,47
GSC SUM RPT 1904-87A

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW214**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 917
REPORT: RGEN0100

MINFILE NUMBER: **082KNW215**

NATIONAL MINERAL INVENTORY:

NAME(S): **AMERICAN**

MINING DIVISION: Revelstoke

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 33 42 N
LONGITUDE: 117 16 16 W
ELEVATION: 2233 Metres

NORTHING: 5601117
EASTING: 480798

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

VEIN 1 TO 3 FEET WIDE CARRYING GALENA AND
CARBONATES. THE GALENA WAS CONTINUOUS OVER A
DISTANCE OF 70 FEET.

BIBLIOGRAPHY

EMPR AR 1895-694; 1896-543; 1897-569; 1898-1067; 1899-602; 1900-825;
1901-1019; 1902-141; 1903-126; 1914-311
EMPR PF (RPTS BY T.R. TOUGH)
GSC BULL 193, 1973
GSC MAP 1929-24, 235A, 1973-1277A
GSC SUM RPT 1904-87A

DATE CODED: 1985/07/24
DATE REVISED: / /

CODED BY: GSB
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW215**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 918
REPORT: RGEN0100

MINFILE NUMBER: **082KNW216**

NATIONAL MINERAL INVENTORY:

NAME(S): **ADVENTURE**, CASCADE, IRON CAP,
GOLD CAP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:
LATITUDE: 50 54 00 N
LONGITUDE: 117 44 58 W
ELEVATION: 2233 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS:

MINING DIVISION: Revelstoke
UTM ZONE: 11 (NAD 83)
NORTHING: 5638972
EASTING: 447299

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

SILICEOUS PYRITIC MATERIAL CONTAINING VALUES IN
GOLD.

BIBLIOGRAPHY

EMPR ASS RPT 12851
GSC MEM 161-95

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW216**

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 919
REPORT: RGEN0100

MINFILE NUMBER: **082KNW217**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIN**, MCDUGAL CK

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 59 54 N
LONGITUDE: 117 37 58 W
ELEVATION: 2233 Metres

NORTHING: 5649830
EASTING: 455597

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Tin

MINERALS

SIGNIFICANT: Cassiterite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I13 Sn veins and greisens

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

PEGMATITE DYKES CROSS THE CREEK HAVING AN EAST-WEST STRIKE WITH ALMOST VERTICAL DIP. IN WIDTH THEY VARY FROM 4 TO 10 FEET AND THE LOWER ONE SHOWS A FEW SCATTERED CRYSTALS OF CASSITERITE AND A LITTLE LIGHT-COLORED PEARLY MICA.

BIBLIOGRAPHY

EMPR AR 1914-271
EMPR PF, SEE 82K BIG BEND ETC (RPT BY C.B. NEWMARCH 1942)

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: AFW

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW217**

MINFILE NUMBER: **082KNW219**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPOKANE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 47 06 N
LONGITUDE: 117 26 40 W
ELEVATION: 1676 Metres

NORTHING: 5626011
EASTING: 468670

LOCATION ACCURACY: Within 500M

COMMENTS: These showings are just above Ferguson Creek and may be the old Spokane workings (Assessment Report 22917, page 10, Plate 7).

COMMODITIES: Lead Silver Copper Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite

COMMENTS: Significant minerals are assumed from assays.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Unnamed/Unknown Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Limestone
Slate
Schist
Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1900
SAMPLE TYPE:	Channel		
COMMODITY		GRADE	
Silver		5.4900	Grams per tonne
Copper		0.7100	Per cent
Lead		1.2300	Per cent
Zinc		18.1900	Per cent

COMMENTS: From a 0.91-metre channel sample.
REFERENCE: Assessment Report 22917, page 48.

CAPSULE GEOLOGY

The Spokane area is underlain by limestone of the Lower Cambrian Badshot Formation and metasediments of the Cambrian to Devonian Index Formation (Lardeau Group) consisting of schist, phyllite, quartzite, slate and limestone.

In 1900 on the Spokane group, the property of the Canadian Lardeau Mining and Development Company, a crosscut tunnel was driven about 30 metres when the ledge was intersected. Drifts were then run 60 metres. The ledge was found to be very broken and a new tunnel was started in order to cut the lead at a greater depth. It was in 30 metres in 1900.

In 1993, Jopec Resources Ltd. examined some old workings that they felt might be those of the old Spokane group. Mineralization was described as being 9 metres thick in thin-bedded, coarse-grained limestone. Unfortunately, the mineralogy was not given. A 0.91-metre channel sample yielded 0.71 per cent copper, 1.23 per cent lead, 18.19 per cent zinc and 5.49 grams per tonne silver. Another sample (grab) taken at the same time assayed 10.36 per cent lead, 3.41 per cent zinc and 81.60 grams per tonne silver (Assessment Report 22917, page 48).

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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 921
REPORT: RGEN0100

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EMPR AR *1900-824
EMPR ASS RPT *22917
EM GEOFILE 2003-2
EM OF 2000-22
GSC OF 288; 432
GSC MAP 235A
GSC MEM 161

DATE CODED: 2003/03/13
DATE REVISED: 2003/03/13

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 922
REPORT: RGEN0100

MINFILE NUMBER: **082KNW220**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 34 42 N
LONGITUDE: 117 18 04 W
ELEVATION: 2233 Metres

NORTHING: 5602979
EASTING: 478680

LOCATION ACCURACY: Within 500M
COMMENTS: EMMENS. (SEE OLD CLAIM MAPS).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

COPPER DEPOSIT

BIBLIOGRAPHY

EMPR AR 1914-320,MAP
EMPR BULL 2 (1914)

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW220**

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
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ENERGY AND MINERALS DIVISION

PAGE: 923
REPORT: RGEN0100

MINFILE NUMBER: **082KNW221**

NATIONAL MINERAL INVENTORY:

NAME(S): **CULKEEN**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 39 42 N
LONGITUDE: 117 21 10 W
ELEVATION: 2233 Metres

NORTHING: 5612261
EASTING: 475066

LOCATION ACCURACY: Within 500M
COMMENTS: EMMENS. (SEE OLD CLAIM MAPS).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

GOLD PLACER DEPOSIT.

BIBLIOGRAPHY

EMPR AR 1914-320,MAP
EMPR ASS RPT 7324
EMPR BULL 2(1914), 28-72, 45-56,78
EMPR EXPL 1979-90

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW221**

MINFILE NUMBER: **082KNW222**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER CUP**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 36 00 N
LONGITUDE: 117 20 34 W
ELEVATION: 1800 Metres

NORTHING: 5605401
EASTING: 475741

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on Silver Cup ridge, northeast of Trout Lake, about 50.0 kilometres northeast of Nakusp.

COMMODITIES: Talc Asbestos

MINERALS

SIGNIFICANT: Talc Asbestos

ALTERATION TYPE: Serpentin'zn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive

CLASSIFICATION: Hydrothermal Industrial Min.

TYPE: E08 Carbonate-hosted talc

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Cambrian	Windermere	Undefined Formation	
Upper Cambrian	Lardeau	Undefined Formation	

LITHOLOGY: Talc Schist
Phyllite
Quartzite
Limestone
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
COMMENTS: Windermere Terrane.

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

Showings of brittle amphibole asbestos fibre and pale green micaceous talc were noted in the vicinity of several outcrops of rusty talc schist.

The talc is hosted in the Lardeau series of the Upper Cambrian Windermere Group, which consists of schist, phyllite, quartzite, slate and limestone.

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EMPR OF *1988-19, pp. 65-69; *1995-25
GSC EG #2, pp. 51,52
GSC MAP 235A
GSC SUM RPT 1903, p. 80A

DATE CODED: 1985/07/24
DATE REVISED: 1988/01/21

CODED BY: GSB
REVISED BY: MM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW223**

NATIONAL MINERAL INVENTORY:

NAME(S): **VERA (L.4283)**, JOSIE (L.4284), ALBERTA (L.4285)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K14W
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 46 16 N
LONGITUDE: 117 26 39 W
ELEVATION: 1676 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5624466
EASTING: 468680

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the centre of the former Vera Crown grant. The Alberta Crown grant was located between the Vera and Rob Roy (082KNE201) Crown grants and the Josie was located adjacent and northwest of the Vera.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Paleozoic

GROUP

Unnamed/Unknown Group
Lardeau

FORMATION

Badshot
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Vera group of former Crown grants is located between Ferguson and Galena creeks, between 1 and 2 kilometres up from their confluence. Besides the Vera, the group consisted of the Josie, adjacent the Vera on its northwest, and the Alberta, adjacent the Vera on its southeast. The Rob Roy (082KNW201), not part of the group, was to the immediate southwest of the Alberta boundary.

There are five major bands of limestone in the area which are known locally as the Black Warrior, Silver Leaf, Ellsmere Ledge, Horne Ledge and Surprise limestone. The Black Warrior was mapped by the Geological Survey of Canada as the Badshot Formation. It is now thought that all these bands are part of the Lower Cambrian Badshot Formation, repeated by folding. These bands are interlayered with schist and phyllites of the Cambrian to Devonian Index Formation, Lardeau Group.

The Vera group lies along the trend of the Horne ledge which stretches for several kilometres and contains several documented mineral prospects to the southeast, such as the Centre Star (082KNW200) and Horne (082KNW210). At some of these neighboring locals, the character of the ledge mineralization is reported to be almost impossible to determine due to the heavy oxidation and leaching of the mineralized zone. Only at certain localities did the outcrop show visible mineralization. Where observed, the mineralization appeared as massive galena with sphalerite and minor pyrite, pyrrhotite and trace amounts of chalcopyrite.

By 1898, a crosscut had been developed on the Vera for 55 metres. Two veins were traced on the surface, running parallel to one another about 30 metres apart. The first vein was intersected by the crosscut at 36 metres and found to be 1.2 metres wide consisting of quartz, iron pyrites and a small seam of galena. The crosscut was to be pushed through another 7.6 metres, where it was expected to cut a larger vein.

The Commonwealth Mining and Development Company, which owned the properties did not follow up on the development as was expected. The

CAPSULE GEOLOGY

only work done on the group during 1899 were unspecified surveys. The area was largely inactive until the 1980s when a number of the old workings came into the possession of Jack and Eric Denny, through purchase or staking. Golden Range Resources Inc. held the Horne claim under option in 1987, which would have contained most of the defunct Vera group claims. The company took 9 rock samples and conducted a mapping program. Field investigation failed to locate the old workings or any area of mineralization.

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EMPR AR 1897-545,550; 1898-1070; 1899-683; 1901-1222,1225,1227
EMPR ASS RPT 11979, 14063, *16643, 17651, 18844, 18845, *22917
EMPR EXPL 1985-C82; 1987-C84; 1989-C49
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/28

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 927
REPORT: RGEN0100

MINFILE NUMBER: **082KNW224**

NATIONAL MINERAL INVENTORY:

NAME(S): **UPPER ARROW TALC**

MINING DIVISION: Revelstoke

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 44 00 N
LONGITUDE: 117 48 28 W
ELEVATION: 600 Metres

NORTHING: 5620482
EASTING: 442995

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located 3.5 kilometres southwest of Comaplix dock on northeast arm of Arrow Lake.

COMMODITIES: Talc

MINERALS

SIGNIFICANT: Talc Serpentine

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Lardeau	Undefined Formation	

LITHOLOGY: Serpentinite
Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

A band, less than 30 centimetres wide, of fairly pure light greenish white talc occurs in serpentinite.

BIBLIOGRAPHY

GSC MEM 161-P113

DATE CODED: 1985/07/24
DATE REVISED: 1998/10/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW224**

MINFILE NUMBER: **082KNW225**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRINCESS MARIE (L.3475)**, QUEEN MARY (L.3469)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K11E
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 39 17 N
LONGITUDE: 117 11 24 W
ELEVATION: 1905 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5611447
EASTING: 486569

LOCATION ACCURACY: Within 500M

COMMENTS: A quartz vein on the east side of the north fork of Hall Creek on Lot 3475 (Princess Marie) 4.0 kilometres south of Mount Templeman below the Wagner Glacier, 18.5 kilometres northeast of Trout Lake (Minister of Mines Annual Report 1949, page A193).

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Pyrite Galena
ASSOCIATED: Quartz Calcite Ankerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Undefined Formation	
Paleozoic	Undefined Group	Index	

LITHOLOGY: Carbonaceous Phyllite
Carbonaceous Phyllitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

Paleozoic Lardeau Group metasedimentary and sedimentary rocks form a northwest trending, southwest dipping broad belt northeast of the Kuskanax Batholith. This belt in part, straddles the northern end of the Kootenay Arc which is comprised of highly deformed sedimentary and volcanic rocks. To the east of the Lardeau Group, Hadrynian and/or Lower Cambrian quartzite of the Hamill Group and Lower Cambrian limestone of the Badshot Formation forms a distinctive sequence of marker horizons that outline major structures in the Kootenay Arc.

A narrow mineralized belt extending in part from Mount Templeman southeast to Mount Abbott is comprised of Index Formation phyllites proximal to the contact of underlying Badshot Formation limestone. The Index and Badshot Formation form part of the Paleozoic Lardeau Group. Numerous parallel quartz veins with disseminated and massive galena-sphalerite-pyrite-tetrahedrite mineralization occur in shear/fault/fracture zones. Replacement-type deposits occur in limestone along or near their contact with the adjoining phyllites. Mineralization is typically galena-sphalerite-pyrite. Quartz veins that cross-cut the phyllites form replacement-type deposits along the strike of limestone beds which they traversed.

The Princess Marie and Queen Mary claims are underlain by deformed northwest striking, southwest dipping carbonaceous phyllite and phyllite schist of the Lower Cambrian to Lower Mississippian Index Formation which forms part of the Paleozoic Lardeau Group.

A strong rusty quartz vein up to 6.0 metres wide outcrops on the east side of a small stream and is composed of banded, coarsely crystalline quartz with significant amounts of calcite and ankerite. It is exposed for 274 metres from the 1853 to 1973 metre elevation. The vein is very slightly mineralized with pyrite and galena. Locally heavy pyrite-sphalerite mineralization with minor galena occurs.

The vein is presumed to be related to the shear/fault zone hosted quartz vein system of the Wagner property (082KNW212) and Sheep Creek property (082KNW050), 1.9 kilometres and 1.0 kilometre northwest respectively. The vein composition and mineralization slightly

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CAPSULE GEOLOGY

differs from that of the Wagner and Sheep Creek. An increase of pyrite and sphalerite relative to galena is evident and calcite is more abundant as gangue.

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EMPR AR 1897-552; 1898-1072; 1901-1226; 1918-K165; *1949-A193
EMPR PF (082KNW212, The Kootenaian, Sept. 9, 1909; Regional File)
GSC MEM *161, pp. 80,81
GSC OF 288; 432; 464

DATE CODED: 1989/01/18
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082KNW226**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIDMOUTH**

MINING DIVISION: Revelstoke

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082K12W

BC MAP:

LATITUDE: 50 43 30 N

LONGITUDE: 117 57 34 W

ELEVATION: 488 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location centered on quarry just northeast of Sidmouth, as plotted on Map 235A (Industrial Mineral File - J.W. McCammon; 1968, 1973).

UTM ZONE: 11 (NAD 83)

NORTHING: 5619684

EASTING: 432280

COMMODITIES: Limestone

Marble

Building Stone

MINERALS

SIGNIFICANT: Calcite

MINERALIZATION AGE: Cambrian

DEPOSIT

CHARACTER: Stratiform

Massive

CLASSIFICATION: Sedimentary

Industrial Min.

TYPE: R09 Limestone

DIMENSION: 400 x 30

Metres

STRIKE/DIP: R04 Dimension stone - marble
 170/35E TREND/PLUNGE:

COMMENTS: Limestone bed dips 35 to 50 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Cambrian

Lardeau

Undefined Formation

LITHOLOGY: Limestone

Marble

Amphibolite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE:

INVENTORY

ORE ZONE: QUARRY

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

55.0600

Per cent

COMMENTS: oxide.

REFERENCE: Industrial Mineral File - McCammon, J.W. 1968.

CAPSULE GEOLOGY

Limestone outcrops on the east side of the Columbia River (Upper Arrow Lake) near the mouth of Wallace Creek, just northeast of Sidmouth.

A bed of limestone of the Lower Cambrian Lardeau Group, at least 30 metres thick, is exposed for 400 metres along the steep mountain side. The limestone and overlying dark green amphibolite schist of the Juwett Formation strike 170 degrees and dip 35 to 50 degrees east. A well developed set of joints strike 040 degrees and dip 80 degrees northwest, while a second set strike 120 degrees and dip 80 degrees northeast.

The bed contains fine to coarse grained, mostly white limestone with some sporadic bluish grey banding and brownish streaks developed parallel to the stratification. A 1.2-metre thick band of yellowish magnesian limestone is developed near the centre of the bed. The rest of the rock is high in calcium composition. Two chip samples analysed as follows (in per cent):

	Sample A	Sample B
CaO	55.06	54.52
MgO	0.24	0.99
SiO2	-	0.36
Insol.	0.65	-
Al2O3		0.24

CAPSULE GEOLOGY

R2O3	0.25	-
Fe2O3	0.15	0.12
MnO	0.02	-
P2O5	0.02	-
Sulphur	0.070	trace
Ig. Loss	43.62	-
Water	0.01	-

Sample A is comprised of chips taken at 1.52 metre intervals across an 18.3 metre wide quarry face (Property File - J.W. McCammon, 1968). Sample B was taken across the full width of the limestone bed, excluding the magnesian limestone band (CANMET Report 811, p. 207, Sample 78).

An unsuccessful attempt was made to quarry the limestone for stucco chips sometime between 1944 and 1968, no production figures are available.

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EMPR IND MIN FILE (*Field Notes 1968-Block 3" by McCammon, J.W. 1968; Limestone Occurrences in B.C. by McCammon, J.W. 1973, p. 5)
GSC MAP 235A
GSC MEM 161
GSC OF 288; 432; 464; 481
CANMET RPT *452, Vol.5, pp. 139,140; *811, Part 5, pp. 206,207

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/04

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KNW227**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAMBLER (L.6470)**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K11E 082K11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 37 25 N
LONGITUDE: 117 08 20 W
ELEVATION: 2590 Metres

NORTHING: 5607980
EASTING: 490176

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Rambler Crown grant (Lot 6470) immediately southwest of Abbot peak.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound Massive Disseminated
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Unnamed/Unknown Group	Badshot	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Rambler Crown grant (Lot 6470) is located adjacent to Abbot Peak, on its immediate southwest. The area is underlain by grey and white limestone of the Lower Cambrian Badshot Formation. This local represents the " high grade bunches of galena found high up on the limestone peaks east of the Abbot" that are mentioned by Gunning (Memoir 161, page 81). Work had been done on some of these showings prior to 1929. Other than being Crown-granted in 1906, the Rambler itself has no other documentation. It was confused with another Rambler property (082KNW019) on Lardeau Creek, some 21 kilometres to the west-northwest.

BIBLIOGRAPHY

EMPR AR 1906-253
EMPR BULL 45
EM GEOFILE 2003-2
GSC OPEN FILE 288; 432
GSC MEM *161, pp. 81

DATE CODED: 2003/03/27
DATE REVISED: 2003/03/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

couple of hundred metres of interbedded dolomite and siliceous argillite.

The Toby Formation unconformably overlies the Mount Nelson and Gateway formations. It is comprised of mainly conglomerate and is found only in a zone of complicated structure.

In the Mineral King area the rocks are complexly folded and are transected by many faults. The regional structure consists of relatively open folds plunging gently to the northwest, which together form a broad geanticline extending across most of the Purcell Mountains. Southwesterly dipping thrust faults and north to northwesterly trending normal faults are common.

Many north and northwesterly trending faults (nine have been recognized) are present at the Mineral King mine. They are mainly steeply dipping normal faults downthrown on the west. Two important faults and several smaller faults are westerly dipping thrusts. The pattern of folding and of thrust faulting has resulted from a relative movement of west over east. The rocks have been folded, faulted, crushed and brecciated with subordinate shearing and flowage.

The Mineral King mine can be divided into three parts - a western, central and an eastern part, separated by faults. In the western part, the formations dip steeply to the northeast and are on the northeast limb of an asymmetrical anticline. A broad anticline is outlined in the eastern part of the area and plunges approximately 10 degrees northwest; the axial plane is essentially vertical. This anticline is one of a series of open folds which result in a low cumulative easterly dip extending several kilometres east. Between the eastern and western parts of the area the structure is dominated by a series of folds and related thrust faults in which the western side has tended to move upward and to the east over the eastern side. The folds have the form of dragfolds on the western limb of an open anticline, and because in section (looking northwest) they resemble a letter "N", they are referred to as N-shaped dragfolds. The pattern of folding and faulting is important because mineralization at the mine has been partly controlled by N-shaped dragfolds.

Widely scattered dark green fine-grained dikes, up to 4.5 metres wide, transect the area. They appear to be altered diorites and commonly strike north or northwest, dip steeply and are fairly continuous.

The Mineral King orebodies are replacements of dolomite in the upper Hg2 member of the Lower Gateway Formation, called the "mine dolomite", by sphalerite, galena, pyrite, barite and quartz. The orebodies plunge gently to the northwest, have a relatively low dip, and mainly appear to conform to fold structures within the dolomite. Toward the northwest the plunge steepens, and the orebodies are more or less continuous with other orebodies in the lower part of the mine which follow steeply dipping faults. The faults strike to the north, and sulphides and quartz occur along them as replacements and fillings.

The principal sulphides are sphalerite, galena, pyrite and minor bournonite, in a gangue of dolomite, barite and quartz. In the upper part of the mine, sphalerite and galena commonly occur as irregular masses and lenses or in more or less regular bands in dolomite. In barite their distribution is much more irregular. Pyrite is found closely associated with galena and sphalerite as well as in separate bands and lenses within or on the margins of the orebodies. Bournonite is most conspicuous in barite, where it occurs as intersecting veinlets and less commonly as massive clusters several centimetres across. Meneghinite occurs rarely with siliceous ore.

The "mine dolomite" in general is synclinal with the axis plunging 325 degrees at 30 to 35 degrees and axial plane dipping steeply to the west. The syncline is almost isoclinal. Conglomerate and dark grey argillite form the trough lying above the dolomite. Slate and argillite of the Dutch Creek Formation occur on the east on what is known as the footwall side of the syncline and are in fault contact with the dolomite. Rocks to the west, known as the hangingwall sequence, are calcareous phyllites, greenish sericitic and chloritic phyllites and argillites. At the hangingwall contact of the "mine dolomite" or at some place within the hangingwall sequence is another fault parallel to the formations. Thus the "mine dolomite" and conglomerate form a synclinal wedge between two faults.

The form of the orebodies is extremely complex. The ore above 3 level (elevation 1661 metres) occur in four trough-like structures varying from a tight V-shape on the west to an open syncline on the east. These were called the A, B, C and D zones. Below 3 level the form of the orebodies changes. The A zone loses the V-shape and becomes a northerly trending tabular body with a steep dip, apparently controlled by replacement along a fault or fracture zone. Other orebodies were found down the projected plunge of the upper

CAPSULE GEOLOGY

zones, which were called B, C and D, although they were more or less isolated orebodies with no connection with the upper zones. Fractures, vertical fault zones, and incipient shattering of the dolomite controlled replacement. Orebodies below 3 level in general were higher grade than those above, but some zones in the lowest levels were too low grade to mine.

Ore was mined for almost 1219 metres down the plunge of the structure and through a vertical interval of approximately 457 metres.

Barite is scattered irregularly through most of the ore, and much of it contains sulphides. Zones of fairly pure barite found between the C and D zones have been mined for the barite alone. Masses of barite mined were very irregular, in general having a gentle plunge to the northwest. They are a couple of tens of metres thick in section and a couple of hundred metres long parallel to the plunge. Sulphides are more abundant around the margins than in the central parts of the barite zones.

The production of barite began in 1959 and was mined from the upper levels. Barite production for the period 1959-1967 totalled 22,780 tonnes of crude barite. During the period 1970-1973 inclusive, 38,818 tonnes of barite concentrate was shipped (barite was recovered from the tailings pond of the Mineral King mine). Barite has been recovered on a seasonal basis until 1982.

The Mineral King mine produced continuously from 1954 until 1967 and is developed by several adits and extensive underground workings.

BIBLIOGRAPHY

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- EMPR ASS RPT 19891
- EMPR BC METAL MM00568
- EMPR FIELDWORK 1989, p. 36
- EMPR GEM 1969-383; 1970-489; 1971-454; 1972-578; 1973-537; 1974-82, 83,371
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- EMPR LMP (Mineral King, Fiche No. 61001-61025, 248002-248010)
- EMPR MAP 23; 65; (1989)
- EMPR OF 1990-20; 1990-26, p. 25
- EMPR PF (Starr, C.C. (1928): Report of Examination of the Mineral King Mine, 7 p.; Newspaper clipping - Nelson Daily News, Feb. 10, 1958; Photographs; Surface geology maps, surface plan maps, property plan map, longitudinal and vertical sections and mine plan map; 82KSE General File - Geology map by P. Billingsley, 1958)
- EMR MIN BULL MR 223 B.C. 49
- EMR MP CORPFILE (Aetna-Goldale Investments Limited; Purcell Development Co. Ltd.)
- GSC MAP 12-1957; 1326A
- GSC MEM 148; 369
- GSC OF 481
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- CIM Vol.53, No.578, pp. 389-391 (1960)
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- EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/28

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE002**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOG**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 14 18 N
LONGITUDE: 116 54 36 W
ELEVATION: 1500 Metres

NORTHING: 5565134
EASTING: 506418

LOCATION ACCURACY: Within 500M
COMMENTS: Location of trenches.

COMMODITIES: Lead Zinc Silver Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrrhotite
ASSOCIATED: Quartz Fluorite Calcite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: E12 Mississippi Valley-type Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Undefined Group	Badshot	
Cambrian	Hamill	Mohican	

LITHOLOGY: Dolomite
Limestone
Micaceous Quartzite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies. GRADE: Greenschist

CAPSULE GEOLOGY

The Fog property is located 2.5 kilometers southeast of the Duncan Dam, at 1500 metres elevation above sea level, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The Fog prospect is on the western limb of the Duncan anticline within dolomite and limestone of the Lower Cambrian Badshot Formation which forms a narrow complexly folded band that separates micaceous quartzite of the Mohican Formation (Hamill Group) to the east from the phyllites of the Lardeau Group to the west. On the property, the Badshot Formation is overturned, dips at low angle to the northeast and plunges northwest.

Mineralization is exposed in roadcuts and trenches over a strike length of at least four claims. It consists of a 3 to 8 metre wide quartz vein which is subparallel to the foliation of the enclosing dolomite. The vein is mostly of pure white quartz but locally contains fluorite, calcite, azurite, malachite, galena, sphalerite, chalcopyrite and pyrrhotite (Assessment Report 3323).

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EMPR ASS RPT 1015, 1561, 3323, *3923, 13504
EMPR BULL 49, pp. 76-77

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

PAGE: 937
REPORT: RGEN0100

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EMPR FIELDWORK 1992, pp. 9-16
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Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE003**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER KING (L.9988)**, M4, TATLER,
 PHOENIX, WR, FARNHAM

STATUS: Prospect	Underground	MINING DIVISION: Golden
REGIONS: British Columbia		
NTS MAP: 082K08W		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 25 00 N		NORTHING: 5585092
LONGITUDE: 116 28 26 W		EASTING: 537378
ELEVATION: 2622 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Location of trenches on Reverted Crown grant Lot 9988.		

COMMODITIES: Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Freibergite
 ASSOCIATED: Quartz Barite
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Replacement Hydrothermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 DIMENSION: Metres STRIKE/DIP: 150/90 TREND/PLUNGE:
 COMMENTS: Strike and dip of main vein on Copper King property.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America	
METAMORPHIC TYPE: Regional	RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1990
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	75.0000 Grams per tonne
Copper	1.2200 Per cent
Lead	0.2500 Per cent
Zinc	1.0800 Per cent

COMMENTS: A 1.0 metre chip sample across a 40 centimetre wide vein exposed in a trench.

REFERENCE: Assessment Report 21066.

CAPSULE GEOLOGY

The Copper King prospect is located at the headwaters of Farnham Creek, on the west flank of Black Diamond Mountain in the Golden Mining Division. The property consists of a single Reverted Crown grant (Lot 9988).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper

CAPSULE GEOLOGY

quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect consists of a 40 centimetre wide quartz-barite vein containing galena, sphalerite, tetrahedrite and freibergite. The vein has been explored with two small adits and some trenches for a distance of 6 metres. The vein, hosted by the middle dolomite member of the Mount Nelson Formation, strikes southeast and dips vertically (Open File 1990-26).

A 1.0 metre wide chip sample across the vein assayed 75 grams per tonne silver, 1.22 per cent copper, 1.08 per cent zinc and 0.25 per cent lead (Assessment Report 21066).

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1923-191; 1924-181; 1925-223; 1926-448; 1968-266
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EMPR EXPL 1976-E48; 1977-E66; 1985-C78
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEM 1969-343, Fig. 41,#7; 1970-469
EMPR GEOS MAP 1995-1
EMPR OF 1990-26
EMPR PF (*Jumbo Mines Ltd., Second Prospectus, Jan. 31, 1972 -
Geological Report on the Tatler Group by E.P. Sheppard, 1971;
*Geological Report on the Tatler Group by T.R. Tough, 1967; 82KSE
General File - Geology map by P. Billingsley, 1958)
GSC MAP 12-1957; 1326A
GSC MEM 148, p. 50; 369, p. 115
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England.

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/01

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE004**

NATIONAL MINERAL INVENTORY:

NAME(S): **IMPERIAL (L.9993)**, TATLER, WR,
FARNHAM

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 30 N
LONGITUDE: 116 28 33 W
ELEVATION: 2993 Metres

NORTHING: 5586017
EASTING: 537233

LOCATION ACCURACY: Within 500M
COMMENTS: Location of main vein and chip sample.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Tetrahedrite
ASSOCIATED: Quartz Barite
ALTERATION: Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Strike and dip of main vein in trenches.

STRIKE/DIP: 155/80W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Middle Proterozoic

GROUP Purcell

FORMATION Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY Silver
Copper

GRADE
210.0000 Grams per tonne
4.0300 Per cent

YEAR: 1990

COMMENTS: A 1.22 metre sample across the main vein.
REFERENCE: Assessment Report 21066.

CAPSULE GEOLOGY

The Imperial prospect is located at the headwaters of Farnham Creek, on the west flank of Black Diamond Mountain in the Golden Mining Division. The property consists of a single Reverted Crown grant (Lot 9993).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

CAPSULE GEOLOGY

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Imperial prospect consists of five quartz-barite veins containing some tetrahedrite and azurite. The main vein is 90 to 130 centimetres wide and has been exposed for approximately 30 metres along strike. The veins strike 155 degrees and dip 80 degrees west. All veins are within the middle dolomite member of the Mount Nelson Formation. Mineralization appears to be associated with tensional fractures on the crest of a northwest-trending anticline. A 1.22 metre wide chip sample across the main vein assayed 210 grams per tonne silver and 4.03 per cent copper (Assessment Report 21066).

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- EMPR AR 1920-114; 1926-448; 1968-266
EMPR ASS RPT 1614, 1977, 2515, 6099, 14574, *21066, 21789
EMPR EXPL 1976-E48; 1977-E66; 1985-C78
EMPR GEM 1969-343; 1970-469
EMPR GEOS MAP 1995-1
EMPR OF 1990-26, pp. 29-37
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958;
*see Copper King (082KSE003), Report on the Tatler Group by T.R.
Tough, 1967; *Sheppard, E.P. (1971): Geological Report on the
Tatler Group)
GSC MAP 1957-12; 1326A
GSC MEM 148, p. 50; 369, p. 115
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/01

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE005**

NATIONAL MINERAL INVENTORY:

NAME(S): **BROKEN HILL (L.9992)**, TATLER, WR,
FARNHAM

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 19 N
LONGITUDE: 116 28 26 W
ELEVATION: 2378 Metres

NORTHING: 5585678
EASTING: 537374

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Reverted Crown grant Lot 9992.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Tetrahedrite Azurite
ASSOCIATED: Quartz Barite
ALTERATION: Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Broken Hill prospect is located at the headwaters of Farnham Creek, on the west flank of Black Diamond Mountain in the Golden Mining Division. The property consists of a single Reverted Crown grant (Lot 9992).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Broken Hill prospect consists of small quartz-barite veins containing some tetrahedrite and azurite. All veins are within the middle dolomite member of the Mount Nelson Formation. Mineralization appears to be associated with tensional fractures on the crest of a northwest-trending anticline (Assessment Report 21066).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 943
REPORT: RGEN0100

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EMPR EXPL 1976-E48; 1977-E66; 1985-C78
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EMPR GEM 1969-343, Fig.41,#71
EMPR GEOS MAP 1995-1
EMPR OF 1990-26
EMPR PF (*see Imperial, 082KSE004 - Geological Report on the Tatler Group by E.P. Sheppard, 1971; see Copper King 082KSE003 - Geological Report on Tatler Group by T.R. Tough, 1967; 82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1957-12; 1326A
GSC MEM 148, p. 50; 369, p. 115
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/05

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE005**

MINFILE NUMBER: **082KSE006**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREAT NORTHERN (L.5358)**, TATLER, BJ,
FARNHAM

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 29 N
LONGITUDE: 116 29 21 W
ELEVATION: 2043 Metres

NORTHING: 5585980
EASTING: 536286

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Reverted Crown grant Lot 5358.

COMMODITIES: Copper Silver Lead

MINERALS

SIGNIFICANT: Tetrahedrite Galena Chalcopyrite Freibergite Pyrite
ASSOCIATED: Quartz Barite
ALTERATION: Malachite Azurite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Middle Proterozoic
GROUP: Purcell
FORMATION: Mount Nelson
IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Siliceous Dolomitic Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Purcell Mountains
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1971
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 35.0000 Grams per tonne
Copper 1.0500 Per cent
Lead 4.3700 Per cent

COMMENTS: Sample is 1.2 metres wide across several 30 centimetre wide veins.
REFERENCE: Property File - see Imperial, 082KSE004 - Report by Sheppard, 1971.

CAPSULE GEOLOGY

The Great Northern prospect is located at the headwaters of Farnham Creek, on the west flank of Black Diamond Mountain in the Golden Mining Division. The property consists of a single Reverted Crown grant (Lot 5358). Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1). The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1). In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26). Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster

CAPSULE GEOLOGY

formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect consists of vertical fissure veins up to 30 centimetres wide within silicified dolomitic limestone of the Mount Nelson Formation. The veins have been exposed by trenching for a distance of 200 metres along a northwest strike. Mineralization includes galena, pyrite, chalcopyrite, fribergite, azurite and malachite in a gangue of quartz and barite. A 1.2 metre chip sample across the mineralized vein assayed 35 grams per tonne silver, 4.37 per cent lead and 1.05 per cent copper (Property File - See 082KSE004, Sheppard, E.P. (1971): Geological Report on the Tatler Group).

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- EMPR AR 1900-806; 1903-245; 1920-114; 1968-266
EMPR ASS RPT 1614, 1977, 2515, 6099, 14574, *21066, 21789, 23880
EMPR EXPL 1976-E48; 1977-E66; 1985-C78
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR OF 1990-26
EMPR PF (*see Imperial, 082KSE004 - Geological Report on the Tatler Group by E.P. Sheppard, 1971; *see Copper King, 082KSE003 - Geological Report on Tatler Group by T.R. Tough, 1967; 82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1957-12; 1326A
GSC MEM 148, p. 50; 369, p. 115
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/05

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE007**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER SPRAY**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 19 55 N
LONGITUDE: 116 22 37 W
ELEVATION: 2290 Metres

NORTHING: 5575724
EASTING: 544344

LOCATION ACCURACY: Within 500M

COMMENTS: Location approximate from air photograph BC 7536 n 228.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite
ASSOCIATED: Malachite Cerussite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Gateway	
Middle Proterozoic	Purcell	Dutch Creek	

LITHOLOGY: Dolomite
Quartzite
Siltstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Silver Spray occurrence is located 3.5 kilometres southeast of Toby Creek in the Golden Mining Division. The occurrence is between Coppercrown and Stark creeks on the north face of Coppercrown Mountain.

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Dutch Creek Formation of the Proterozoic Purcell Supergroup. The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Dutch Creek Formation includes green and black laminated argillite, quartzite, siltstone and buff dolomitic siltstone. The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite and correlates with the strata of the Lower Kitchener Formation.

The Gateway Formation consists of an interbedded sequence of quartzite, green siltstone and buff dolomite that correlates with the lower portion of the Dutch Creek Formation. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Silver Spray occurrence is within the upper Hg2 member of the Gateway Formation immediately below the contact with the unconformably overlying Dutch Creek Formation in the crest of an anticline parasitic to the major Coppercrown anticline (Open File 1990-26).

Mineralization consists of galena, tetrahedrite and cerussite with minor sphalerite and malachite in vertical and bedding-parallel fractures in the order of 5 to 20 centimetres wide (Minster of Mines

CAPSULE GEOLOGY

Annual Report 1926).

BIBLIOGRAPHY

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1929-293; 1930-237
EMPR ASS RPT 1897, *13657, 15101, 21207
EMPR EXPL 1985-C79
EMPR GEOS MAP 1995-1
EMPR OF 1990-20; 1990-26, p. 41
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1961-35; 1326A
GSC MEM 148, p. 49; 369, p. 113
GCNL #185,p.3,#210, 1985
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/29

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE008**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUTLER (L.9989)**, MASTER (L.9990), TATLER,
WR, FARNHAM

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:
LATITUDE: 50 25 09 N
LONGITUDE: 116 28 58 W
ELEVATION: 2317 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adits.

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5585365
EASTING: 536744

COMMODITIES: Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Freibergite Pyrite
ASSOCIATED: Quartz Barite
ALTERATION: Malachite Azurite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Purcell Mount Nelson

LITHOLOGY: Siliceous Dolomitic Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 250.0000 Grams per tonne
Copper 3.0000 Per cent
Lead 1.2600 Per cent
Zinc 0.5000 Per cent
COMMENTS: Sample across 50 centimetre wide vein.
REFERENCE: Assessment Report 21066.

CAPSULE GEOLOGY

The Butler prospect is located at the headwaters of Farnham Creek, on the west flank of Black Diamond Mountain in the Golden Mining Division. The property consists of two Reverted Crown grants (Lots 9989 and 9990). Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1). The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1). In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

CAPSULE GEOLOGY

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect consists of a vertical fissure vein within silicified dolomitic limestone of the Mount Nelson Formation. Mineralization includes galena, pyrite, chalcopyrite, freibergite, azurite and malachite in a gangue of quartz and barite.

The vein has been explored with two adits and a 150 metre long crosscut. A 50 centimetre chip sample across the mineralized vein assayed 250 grams per tonne silver, 3.0 per cent copper, 1.26 per cent zinc and 0.5 per cent lead (Assessment Report 21066).

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- EMPR AR 1920-114; 1926-448
EMPR ASS RPT 1614, 1977, 2515, 6099, 14574, *21066, 21789
EMPR EXPL 1976-E48; 1977-E66
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR OF 1990-26
EMPR PF (*see Copper King, 082KSE003 - Geological Report on Tatler Group by T.R. Tough, 1967; 82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1957-12; 1326A
GSC MEM 148, p. 50; 369, p. 115
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/05

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE009**

NATIONAL MINERAL INVENTORY:

NAME(S): **YORNOC**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 19 17 N
LONGITUDE: 116 14 27 W
ELEVATION: 2423 Metres

NORTHING: 5574641
EASTING: 554043

LOCATION ACCURACY: Within 500M
COMMENTS: Location of trenching.

COMMODITIES: Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz Barite Malachite Azurite
ALTERATION: Azurite Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Helikian Purcell Dutch Creek

LITHOLOGY: Argillite
 Quartzite
 Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1989
 SAMPLE TYPE: Grab
 COMMODITY GRADE
 Copper 2.7300 Per cent
REFERENCE: Open File 1990-20.

CAPSULE GEOLOGY

The Yornoc occurrence is located 40 kilometres southwest of Invermere in the Golden Mining Division. The occurrence is near the headwaters of Ben Abel Creek, a tributary of Dutch Creek, north of Mount Abel in the Purcell Mountains.

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Dutch Creek Formation of the Proterozoic Purcell Supergroup. The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Dutch Creek Formation includes green and black laminated argillite, quartzite, siltstone and buff dolomitic siltstone. The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite and correlates with the strata of the Lower Kitchener Formation.

The Gateway Formation consists of an interbedded sequence of quartzite, green siltstone and buff dolomite that correlates with the lower portion of the Dutch Creek Formation. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

CAPSULE GEOLOGY

The Yornoc occurrence consists of a number of pits that have been cut on a zone of quartz-barite veining up to 2 metres wide. The veins contain chalcopyrite, galena, and pyrite with considerable malachite and azurite. The mineralized section of this vein system extends over 500 metres. However, outcrops of vein material can be traced across an overburden-covered valley for a distance of over a kilometre (Assessment Report 2051). A grab sample collected from the vein assayed 2.73 per cent copper (Open File 1990-20).

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EMPR OF 1990-20; 1990-26
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GSC MAP 1326A
GSC MEM 369
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DATE CODED: 1985/07/24
DATE REVISED: 1995/08/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE010**

NATIONAL MINERAL INVENTORY:

NAME(S): **EASY M**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 15 18 N
LONGITUDE: 116 57 21 W
ELEVATION: 580 Metres

NORTHING: 5566984
EASTING: 503149

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralized veins from Assessment Report 1211.

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn

Hydrothermal
E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	
Cambrian	Hamill	Marsh Adams	

LITHOLOGY: Dolomitic Marble
Micaceous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

RELATIONSHIP: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

CAPSULE GEOLOGY

The Easy M occurrence is located on the access road to the Duncan Dam, 500 metres west of the dam, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

Excavation associated with the construction of the Duncan Dam exposed stringers of sphalerite with minor galena in quartz veinlets. The veinlets are hosted in grey-blue crystalline dolomitic marble of the Lower Cambrian Badshot Formation near its lower contact with a micaceous schist of the Marsh Adams Formation of the Hamill Group. A 10 centimetre wide veinlet of massive sphalerite strikes northwest and dips 70 degrees to the east.

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/22

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE010**

MINFILE NUMBER: **082KSE011**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOONSHINE (L.1881)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:
LATITUDE: 50 08 04 N
LONGITUDE: 116 57 28 W
ELEVATION: 833 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Crown grant Lot 1881.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5553580
EASTING: 503017

COMMODITIES: Silver Zinc Lead Gold Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Massive
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	
Cambrian	Hamill	Marsh Adams	

LITHOLOGY: Limestone
Micaceous Quartzite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Trench
GRADE: Greenschist

CAPSULE GEOLOGY

The Moonshine prospect is located on Crown grant Lot 1881, one kilometre south of the Davis Creek bridge on Highway 31, south of Lardeau, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The mineralization is hosted by grey and white crystalline limestone of the Lower Cambrian Badshot Formation which is overlain by brown micaceous quartzite of the Marsh Adams Formation of the Hamill Group and phyllite of the Index Formation of the Lardeau Group. The rocks strike northwest and dip 15 to 20 degrees southwest. The limestone forms steep bluffs above and south of the workings.

Massive galena, sphalerite and minor chalcopyrite occur with minor quartz in a narrow discontinuous fractures that strike northeast and dip 65 degrees northwest. The sulphides are present both as fillings of the fracture and as replacement of the limestone, near the base of the unit. Quartz is mainly along the footwall of the fracture. The mineralized fracture ranges in thickness from a few centimetres up to almost 2 metres. Lenses of coarse massive sulphides, up to 1.5 metres long and 30 centimetres, wide occur along the fracture and constitute the best ore.

Limited mining between 1951 and 1968 produced 188,868 grams of silver, 98,366 kilograms of zinc, 86,748 kilograms of lead, 437 kilograms of copper and 31 grams of gold from 573 tonnes milled.

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE012**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRESIDENT (L.2006)**, TWO BROTHERS (L.2005), PRESIDENT FR. (L.2007),
HOUSER (L.2008), HOUSER FR. (L.2009), HAUSER,
RUBY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:
LATITUDE: 50 24 51 N
LONGITUDE: 116 59 58 W
ELEVATION: 1311 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of trenches on Reverted Crown grant Lot 2006.

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5584681
EASTING: 500039

COMMODITIES: Silver Zinc Copper

MINERALS

SIGNIFICANT: Tetrahedrite Argentite Sphalerite Pyrite
ASSOCIATED: Quartz Chlorite Mariposite
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epithermal Replacement
TYPE: E13 Irish-type carbonate-hosted Zn-Pb E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Chloritic Brecciated Quartzite
Altered Limestone
Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies. GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 260.0000 Grams per tonne
COMMENTS: Two metre chip sample across mineralized shear.
REFERENCE: Assessment Report 9480.

CAPSULE GEOLOGY

The President occurrence is located on Gallop Creek, west of Duncan Lake in the Slocan Mining Division. The showing is situated on Reverted Crown grant Lot 2006 which is part of a contiguous group of three Reverted Crown grants and two fractional Reverted Crown grants (Lots 2005 to 2009).

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The property is underlain by quartzite, limestone and volcanic rocks of the Index Formation of the Paleozoic Lardeau Group. The quartzite is locally brecciated and chloritic within north-trending shears. A 2 metre chip sample across a mineralized shear assayed 260 grams per tonne silver (Assessment Report 9480). Ore minerals within the shear consist of argentite and sphalerite. Trenching work in

CAPSULE GEOLOGY

1970 uncovered a 3.5 metre wide area of quartz veining within altered limestone (see Two Brothers, 082KSW123). This area of mineralization consists of mariposite, pyrite and tetrahedrite occurring as stringers in the narrow quartz veins but containing only low silver values (Exploration in British Columbia 1977).

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EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/22

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE013**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAG**, BRUCE, JRF

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 15 29 N
LONGITUDE: 116 54 48 W
ELEVATION: 1110 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5567327
EASTING: 506178

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drillhole C1, and surface trenching.

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	
Cambrian	Hamill	Mohican	

LITHOLOGY: Dolomite
Limestone
Micaceous Quartzite
Phyllite
Gossan

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Trench
GRADE: Greenschist

CAPSULE GEOLOGY

The Mag prospect is located at 1110 metres elevation above sea level, northeast of Mount Lavina in the Slocan Mining Division. Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1). The prospect is on the western limb of the Duncan anticline within dolomite and limestone of the Lower Cambrian Badshot Formation which forms a narrow complexly folded band that separates micaceous quartzite of the Mohican Formation (Hamill Group) to the east from the phyllites of the Lardeau Group to the west. On the property, the Badshot Formation is overturned, dips at low angle to the northeast and plunges northwest. Mineralization is exposed in roadcuts and trenches over a strike length of 1.5 kilometres. It consists of gossanous zones locally containing galena and sphalerite in fractures. A total of 25 tonnes were mined between 1970 and 1984 to produce 26,062 grams of silver, 24 grams of gold, 11,208 kilograms of lead, 89 kilograms of zinc and 18 kilograms of copper.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 958
REPORT: RGEN0100

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England
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE014**

NATIONAL MINERAL INVENTORY: 082K2,7 Pb1

NAME(S): **LAVINA (L.3784)**, IRON CAP (L.3785), RUTHIE BELL (L.3786),
ST. JOSEPH (L.3787), BUTE FR. (L.3789), GIANT

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:
LATITUDE: 50 14 48 N
LONGITUDE: 116 53 37 W
ELEVATION: 2030 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Crown grant Lot 3784.

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5566062
EASTING: 507585

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Cerussite
ASSOCIATED: Quartz Calcite
ALTERATION: Cerussite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Limestone
Biotite Schist
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

CAPSULE GEOLOGY

The Lavina prospect is situated near the peak of Mount Lavina in the Slocan Mining Division. The property consists of five Crown grants, Lot 3785 (Iron Cap), Lot 3786 (Ruthie Bell), Lot 3787 (St. Joseph), Lot 3789 (Bute Fraction) and Lot 3784 (Lavina). The main workings are on Crown grant Lot 3784.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The occurrence is in limestone and dolomite of the Lower Cambrian Badshot Formation on the eastern limb of the Duncan anticline (Geological Survey of Canada Map 1326A). The formation strikes northwest and dips between 35 and 60 degrees to the east. The main workings consist of two interconnecting adits on the north slope of Lavina Ridge. Mineralization within the workings consisted of a series of lenticular quartz and calcite veins less than 10 centimetres wide containing fine to medium-grained galena and cerussite. The ore was best developed in the limestone below a narrow band of dark grey biotite schist.

Two hundred and twenty-nine tonnes of ore were mined from this property to produce 276,754 grams of silver, 124,340 kilograms of lead and 2335 kilograms of zinc.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 960
REPORT: RGEN0100

BIBLIOGRAPHY

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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE015**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAL C**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 09 16 N
LONGITUDE: 116 50 38 W
ELEVATION: 2350 Metres

NORTHING: 5555814
EASTING: 511152

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 1326A.

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
ASSOCIATED: Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Stratabound Disseminated
CLASSIFICATION: Replacement Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	
Cambrian	Hamill	Mohican	

LITHOLOGY: Dolomite
Limestone
Micaceous Quartzite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Mountains
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1964
SAMPLE TYPE: Chip
COMMODITY GRADE
Lead 0.5900 Per cent
Zinc 6.3000 Per cent
COMMENTS: One metre wide chip sample across disseminated mineralization.
REFERENCE: Bulletin 49, page 78.

CAPSULE GEOLOGY

The Sal C showing is located at 2350 metres elevation above sea level, on the north face of Mount Willet in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The occurrence is on the eastern limb of the Duncan anticline within dolomite and limestone of the Lower Cambrian Badshot Formation which forms a narrow complexly folded band that separates micaceous quartzite of the Mohican Formation (Hamill Group) to the east from the phyllites of the Lardeau Group to the west. On the property, the Badshot Formation is overturned, strikes northwest and dips 60 to 70 degrees southwest. Lineations in the rocks plunge to the north 5 to 10 degrees, and it is presumed that the long axis of the mineralized zones are parallel to this plunge (Bulletin 49).

CAPSULE GEOLOGY

Mineralization consists of bands of fine grained disseminated pyrite with minor sphalerite and galena with white crystalline calcite separated by barren grey dolomite. Small, well-defined folds plunging at low angles to the north contain some of the mineralization. The main mineralized zone is 3 metres wide and is exposed at a number of places for a distance of about 100 metres. A 1 metre wide chip sample across the main mineralized zone assayed 0.59 per cent lead and 6.3 per cent zinc (Bulletin 49).

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EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE016**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAL B**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 08 33 N
LONGITUDE: 116 50 10 W
ELEVATION: 2360 Metres

NORTHING: 5554488
EASTING: 511711

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 1326A.

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite

ASSOCIATED: Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Stratabound Disseminated

CLASSIFICATION: Replacement Sedimentary

TYPE: E12 Mississippi Valley-type Pb-Zn E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Cambrian

GROUP

Undefined Group
Hamill

FORMATION

Badshot
Mohican

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Limestone
Micaceous Quartzite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Mountains

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1964

SAMPLE TYPE: Chip

COMMODITY

GRADE

Lead

1.2700

Per cent

Zinc

4.8000

Per cent

COMMENTS: A 70 centimetre chip sample across a mineralized zone in dolomite.

REFERENCE: Bulletin 49, page 78.

CAPSULE GEOLOGY

The Sal B showing is located at 2360 metres elevation above sea level, at the headwaters of Bulmer Creek in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The occurrence is on the eastern limb of the Duncan anticline within dolomite and limestone of the Lower Cambrian Badshot Formation which forms a narrow complexly folded band that separates micaceous quartzite of the Mohican Formation (Hamill Group) to the east from the phyllites of the Lardeau Group to the west. On the property, the Badshot Formation is overturned, strikes northwest and dips 60 to 70 degrees southwest. Lineations in the rocks plunge to the north 5 to 10 degrees, and it is presumed that the long axis of the mineralized zones are parallel to this plunge (Bulletin 49).

CAPSULE GEOLOGY

Mineralization consists of bands of fine grained disseminated pyrite with minor sphalerite and galena with white crystalline calcite separated by barren grey dolomite. Small, well-defined folds plunging at low angles to the north contain some of the mineralization. The mineralized bands are 1 to 1.5 metres wide and together make up a mineralized zone 10 to 12 metres thick. A 70 centimetre chip sample assayed 4.8 per cent zinc and 1.27 per cent lead (Bulletin 49).

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EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE017**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAL A**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 08 14 N
LONGITUDE: 116 50 00 W
ELEVATION: 2330 Metres

NORTHING: 5553901
EASTING: 511910

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 1326A.

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite

ASSOCIATED: Calcite Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Stratabound Disseminated

CLASSIFICATION: Replacement Sedimentary

TYPE: E12 Mississippi Valley-type Pb-Zn E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Cambrian

GROUP

Undefined Group
Hamill

FORMATION

Badshot
Mohican

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Siliceous Dolomite
Limestone
Micaceous Quartzite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Mountains

GRADE: Greenschist

CAPSULE GEOLOGY

The Sal A showing is located at 2330 metres elevation above sea level, at the headwaters of Salisbury Creek in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The occurrence is on the eastern limb of the Duncan anticline within dolomite and limestone of the Lower Cambrian Badshot Formation which forms a narrow complexly folded band that separates micaceous quartzite of the Mohican Formation (Hamill Group) to the east from the phyllites of the Lardeau Group to the west. On the property, the Badshot Formation is overturned, strikes northwest and dips 60 to 70 degrees southwest. Lineations in the rocks plunge to the north 5 to 10 degrees, and it is presumed that the long axis of the mineralized zones are parallel to this plunge (Bulletin 49).

Mineralization consists of bands of fine to medium grained disseminated pyrite with minor sphalerite and galena with white crystalline calcite separated by barren grey dolomite. One mineralized zone is at the contact between dolomite and siliceous dolomite and can be followed for 100 metres along strike. The zone has a maximum thickness of 6 metres. Quartz veinlets near the mineralized zone locally contain medium-grained galena (Bulletin 49).

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 966
REPORT: RGEN0100

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EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE018**

NATIONAL MINERAL INVENTORY:

NAME(S): **SURPRISE (L.6334)**, ELATED (L.6333), LOT 6335,
LOT 6336

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:
LATITUDE: 50 18 49 N
LONGITUDE: 116 53 20 W
ELEVATION: 990 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit portal.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5573506
EASTING: 507911

COMMODITIES: Silver Zinc Lead Gold Copper

MINERALS

SIGNIFICANT: Tetrahedrite Sphalerite Galena Chalcopryite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	

LITHOLOGY: Fine Grained Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Trench
GRADE: Greenschist

CAPSULE GEOLOGY

The Surprise prospect is situated on Glacier Creek at 990 metres elevation above sea level in the Slocan Mining Division. The property consists of three forfeited Crown grants, (Lots 6334 to 6336) and one Reverted Crown grant (Elated, Lot 6333). The main showing is on Lot 6334.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The prospect consists of three short adits driven along quartz veins within fine grained, dark grey and green schists of the Index Formation of the Lardeau Group. On the property, rocks of the Lardeau Group strike northwest and dip 60 degrees east. The occurrence is on the east limb of an overturned syncline that plunges 10 to 15 degrees northwest.

Mineralization consists of clusters and irregular masses of tetrahedrite in milky white quartz. Sphalerite, galena, pyrite and chalcopryite occur in minor amounts. The veins are subparallel to the schistosity and dip at slightly shallower angles. Between 1923 and 1954, a total of 1196 tonnes of ore were mined from the prospect which yielded about 1.23 million grams of silver, 560 grams of gold, 10,108 kilograms of zinc, 9798 kilograms of lead and 289 kilograms of copper.

BIBLIOGRAPHY

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EMPR ASS RPT *12370

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 968
REPORT: RGEN0100

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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/21

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE019**

NATIONAL MINERAL INVENTORY: 082K7 Pb2

NAME(S): **DUNCAN (NO. 1)**, GLACIER, J.G.

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 17 30 N
LONGITUDE: 116 54 26 W
ELEVATION: 790 Metres

NORTHING: 5571064
EASTING: 506609

LOCATION ACCURACY: Within 500M

COMMENTS: Location of portal. See also Duncan (No.2) (082KSE020), Duncan (No.3) (082KSE021), Duncan (No.4) (082KSE022), Duncan (No. 5 to 8) 082KSE023.

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
ASSOCIATED: Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Layered
CLASSIFICATION: Replacement Hydrothermal
TYPE: E12 Mississippi Valley-type Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Massive Banded Marble
Schist
Dolomitic Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Trench
GRADE: Greenschist

INVENTORY

ORE ZONE: NO. 1 REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1952
SAMPLE TYPE: Channel
COMMODITY GRADE
Lead 2.4600 Per cent
Zinc 6.3600 Per cent

COMMENTS: Average of No. 1 zone for a strike length of 70 metres and an average width of 1.1 metres.

REFERENCE: Berens River Mines Annual Report, 1952.

CAPSULE GEOLOGY

The Duncan (No. 1) zone is located at 790 metres elevation above sea level on the north side of Glacier Creek, east of Duncan Lake in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The No. 1 zone is in grey, massive, banded or flecked marble of the Lower Cambrian Badshot Formation which overlies the Hamill Group. The Badshot Formation is characterized by cliff-forming, white to medium grey, commonly laminated marble or dolomitic marble. The marble horizons are tens of metres thick and usually separated by grey, locally calcareous schist. The marble is overlain by a thick succession of fine grained, dark grey and green schists of the Index Formation (Lardeau Group).

CAPSULE GEOLOGY

The mineralization consists of fine to medium-grained pyrite, sphalerite and galena in bands, lenses and locally irregular veins of white calcite. The calcite is coarse grained and associated with coarse crystalline sphalerite and pyrite deposited in vein cavities.

In 1952, an adit exposed the No. 1 zone for a distance of 70 metres along strike. Within the workings, the zone, up to 3 metres wide, dips steeply to the east and plunges at low angles to the north. Average grade over the entire length of the zone is 2.46 per cent lead and 6.36 per cent zinc for an average width of 1.1 metres (Berens River Mines Annual Report, 1952).

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1926-267; 1927-283; 1928-310; 1946-169; 1950-133,151; 1951-180;
*1952-192; 1953-146; 1955-68; 1956-106; 1957-60; 1958-50; 1959-71;
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England
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/20

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE020**

NATIONAL MINERAL INVENTORY: 082K7 Pb2

NAME(S): **DUNCAN (NO. 2)**, GLACIER, J.G.

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 17 50 N
LONGITUDE: 116 55 31 W
ELEVATION: 1100 Metres

NORTHING: 5571681
EASTING: 505322

LOCATION ACCURACY: Within 500M

COMMENTS: Location of trenches. See also Duncan (No.1) (082KSE019),
Duncan (No.3) (082KSE021), Duncan (No.4) (082KSE022) and Duncan (No.
5 to 8) (082KSE023).

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Massive
CLASSIFICATION: Hydrothermal Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn

E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Massive Banded Marble
Schist
Dolomitic Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

CAPSULE GEOLOGY

The Duncan (No. 2) zone is located at 1100 metres elevation above sea level on the north side of Glacier Creek, east of Duncan Lake in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The No. 2 zone is in grey, massive, banded or flecked marble of the Lower Cambrian Badshot Formation which overlies the Hamill Group. The Badshot Formation is characterized by cliff-forming, white to medium grey, commonly laminated marble or dolomitic marble. The marble horizons are tens of metres thick and usually separated by grey, locally calcareous schist. The marble is overlain by a thick succession of fine grained, dark grey and green schists of the Index Formation (Lardeau Group).

Mineralization consists of fine-grained galena, sphalerite and pyrite in thin tightly folded layers. The sulphides occur as lenticular masses along the crests and troughs of small folds which plunge 10 to 15 degrees northwest. Trenching has exposed several mineralized zones several metres in diameter extending tens of metres along the plunge. Drilling has indicated that the mineralized zones do not extend in the third dimension, and that no significant mineralization existed below the surface (Bulletin 49).

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1927-283; 1928-310; 1950-133,151; 1951-180; *1952-192; 1953-146;
1955-68; 1956-106; 1957-60; 1958-50; 1959-71

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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 972
REPORT: RGEN0100

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EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/20

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE021**

NATIONAL MINERAL INVENTORY: 082K7 Pb3

NAME(S): **DUNCAN (NO. 3)**, AMATO, J.G.,
RUBY, EILEEN, MARJORIE,
ANN

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K07W

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 19 20 N
LONGITUDE: 116 55 08 W
ELEVATION: 640 Metres

NORTHING: 5574461
EASTING: 505774

LOCATION ACCURACY: Within 500M

COMMENTS: Small ridge on the east shore of Duncan Lake at the south end of Lower Arm. See also Duncan (No.1) (082KSE019), Duncan (No.2) (082KSE020), Duncan (No.4) (082KSE022) and Duncan (No.5 to 8) (082KSE023).

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Massive
CLASSIFICATION: Hydrothermal Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Massive Banded Marble
Schist
Dolomitic Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Trench
GRADE: Greenschist

CAPSULE GEOLOGY

The Duncan (No. 3) zone is located at 640 metres elevation above sea level on the east shore of Duncan Lake in the Slocan Mining Division. The Duncan Dam, completed in 1967, raised the lake level and flooded a good portion of the property.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The No. 3 zone is in grey, massive, banded or flecked marble of the Badshot Formation which overlies the Hamill Group and is characterized by cliff-forming, white to medium grey, commonly laminated marble or dolomitic marble. The marble horizons are tens of metres thick and usually separated by grey, locally calcareous schist. The marble is overlain by a thick succession of fine grained, dark grey and green schists of the Index Formation (Lardeau Group).

The sulphides are fine-grained sphalerite, galena and pyrite in thin tightly folded layers. Mineralization occurs as lenticular masses along the crests and troughs of small folds which plunge 10 to 15 degrees northwest (Bulletin 49).

BIBLIOGRAPHY

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1927-283; 1928-310; 1950-133,151; 1951-180; *1952-192; 1953-146;
1956-106; 1957-60; 1958-50; 1959-71
EMPR BULL 49, p. 71
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RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

PAGE: 974
REPORT: RGEN0100

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EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/21

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE022**

NATIONAL MINERAL INVENTORY: 082K7 Pb1

NAME(S): **DUNCAN (NO. 4)**, GRIZZLY (L.14371), J.G.,
LAKESIDE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 20 00 N
LONGITUDE: 116 55 47 W
ELEVATION: 640 Metres

UTM ZONE: 11 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5575696
EASTING: 505002

COMMENTS: Centre of Crown grant Lot 14371. See also Duncan (No.1)
(082KSE019), Duncan (No.2) (082KSE020), Duncan (No. 3) (082KSE021),
and Duncan (No.5 to 8) (082KSE023).

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Massive
CLASSIFICATION: Hydrothermal Sedimentary
TYPE: E12 Mississippi Valley-type Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Massive Banded Marble
Schist
Dolomitic Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Trench
GRADE: Greenschist

CAPSULE GEOLOGY

The Duncan (No. 4) zone is located at 640 metres elevation above sea level on the south shore of the small island in Duncan Lake, in the Slocan Mining Division. The Duncan Dam, completed in 1967, raised the lake level and flooded a good portion of the property. The property consists of a single Crown grant (Lot 14371).

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The No. 4 zone is in grey, massive, banded or flecked marble of the Badshot Formation which overlies the Hamill Group and is characterized by cliff-forming, white to medium grey, commonly laminated marble or dolomitic marble. The marble horizons are tens of metres thick and usually separated by grey, locally calcareous schist. The marble is overlain by a thick succession of fine grained, dark grey and green schists of the Index Formation (Lardeau Group).

The sulphides are fine-grained sphalerite, galena and pyrite in thin tightly folded layers. Mineralization occurs as lenticular masses along the crests and troughs of small folds which plunge 10 to 15 degrees northwest (Bulletin 49).

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 976
REPORT: RGEN0100

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/21

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE023**

NATIONAL MINERAL INVENTORY: 082K7 Pb1

NAME(S): **DUNCAN (NO. 5 TO 8)**, DUNCAN LAKE, DUNCAN MINE,
 J.G., ROSCO

STATUS: Developed Prospect	Underground	MINING DIVISION: Slocan
REGIONS: British Columbia		
NTS MAP: 082K07W		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 21 50 N		NORTHING: 5579092
LONGITUDE: 116 57 05 W		EASTING: 503457
ELEVATION: 610 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Centre of main portal, on the west side of an island (formerly a peninsula) in Duncan Lake. See also Duncan (No.1) (082KSE019), Duncan (No.2) (082KSE020), Duncan (No.3) (082KSE021), Duncan (No.4) (082KSE022).		

COMMODITIES: Lead Zinc Copper Silver

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Pyrrhotite Chalcopyrite
 Marcasite Pyrrargyrite Meneghinite

COMMENTS: Very minor pyrrhotite, chalcopyrite, marcasite, pyrrargyrite and meneghinite.

ASSOCIATED: Dolomite

ALTERATION: Silica

ALTERATION TYPE: Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated	Layered	Massive	Stratabound
CLASSIFICATION: Epigenetic	Hydrothermal	Sedimentary	Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn		E13	Irish-type carbonate-hosted Zn-Pb
E14 Sedimentary exhalative Zn-Pb-Ag			
SHAPE: Tabular			
MODIFIER: Folded	Faulted		

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Dolomite
 Siliceous Dolomite
 Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca		PHYSIOGRAPHIC AREA: Purcell Trench
TERRANE: Kootenay	Ancestral North America	
METAMORPHIC TYPE: Regional	RELATIONSHIP:	GRADE: Greenschist
COMMENTS: Medium to upper grade greenschist facies.		

INVENTORY

ORE ZONE: DUNCAN	REPORT ON: Y
CATEGORY: Indicated	YEAR: 1962
QUANTITY: 9000000 Tonnes	
COMMODITY	GRADE
Lead	2.7000 Per cent
Zinc	2.9000 Per cent
REFERENCE: CIM Bulletin April 1982, page 125.	

CAPSULE GEOLOGY

The Duncan mine is located on a small island in Duncan Lake in the Slocan Mining Division.

Regionally, the area is underlain by strongly deformed Late Proterozoic to early Paleozoic metasedimentary and metavolcanic rocks and by numerous plutonic bodies (Paper 1992-1).

The oldest rocks exposed in the area belong to the middle and upper portions of the Upper Proterozoic Horsethief Creek Group which has been divided in five mappable units. In ascending order these are: (Ht1) a dark limestone and calcareous argillite; (Ht2) a light green-grey argillite and muscovite quartz schist; (Ht3) a coarser grained, dark grey-green, micaceous quartzite and quartzose schist; (Ht4) a sequence of interbedded light grey to white grits, quartzite

CAPSULE GEOLOGY

and thin carbonates; and (Ht5) a sequence of interbedded grits and dolostone-clast conglomerate. The lower units are laterally continuous, but the upper units are not. The total thickness of these units is estimated at 2.0 to 2.5 kilometres (Paper 1992-1). The contact between the Horsethief Creek Group and the overlying Hamill Group is marked by a distinctive transitional unit, which is included in the base of the Hamill Group. The transitional unit is characterized by quartz and feldspar grit and pebble conglomerate in a quartz sand matrix. The remainder of the Hamill Group, overlying the transitional unit, is divided into four map units, including the Mohican Formation. The lowermost unit (Hm1) is a clean, crossbedded quartzite, with minor quartz grit and pebble conglomerate. It lies conformably on the transitional unit. The middle Hamill Group (Hm2) contains pelitic schist, impure quartzite, minor carbonate and volcanic rocks. The upper part of the Hamill Group (Hm3) consists of clean, white quartzite at the base, and interbedded light and dark quartzite and pelite near the top. It is overlain by the Mohican Formation, a calcareous schist which is transitional between the Hm3 unit and the Badshot Formation (Paper 1993-1).

The Badshot Formation overlies the Hamill Group and is characterized by cliff-forming, white to medium grey, commonly laminated marble or dolomitic marble. The marble horizons are tens of metres thick and usually separated by grey, locally calcareous schist. The marble is overlain by a thick succession of fine grained, dark grey and green schists of the Index Formation (Lardeau Group).

The Index Formation is overlain by dark grey argillite and argillaceous quartzite of the Triune Formation. Grey blocky quartzite, the Ajax Formation quartzite, overlies the Triune Formation, and dark grey to black argillite of the Sharon Creek Formation overlies the Ajax. Schist grading into blocky greenstone of the Jowett Formation overlies the Sharon Creek Formation. Green and locally grey micaceous quartzites, greywackes, grits and fine grained mica schists of the Broadview Formation overlie the Jowett. All formations (Index to Broadview) form the Lardeau Group (Bulletin 49).

Structurally, the area is divided into three domains. From east to west, these are the western Purcell anticlinorium; a transitional domain; and the western Kootenay Arc. The Purcell anticlinorium is dominated by open to locally tight, upright folds, which deform an upward-facing stratigraphic sequence (Phase I folds). The dominant regional schistosity is axial planar to the folds and locally developed shear zones are parallel to the foliation. Rock of the Purcell anticlinorium have undergone regional metamorphism to lower greenschist facies.

The transitional domain is characterized by a belt of subvertical rocks. The stratigraphic sequence is deformed by upright isoclinal folds and ductile high-strain zones (Phase II folds). These structures deform earlier outcrop-scale isoclinal folds. The deformation was accompanied by upper greenschist to amphibolite facies metamorphism.

The Kootenay Arc is dominated by more intense and complex deformation and by amphibolite facies metamorphism. Large-amplitude (10 kilometre scale) west-verging recumbent folds were deformed by two phases of upright, tight to isoclinal folds which overturned much of the stratigraphic sequence. The boundary between the transitional and Kootenay Arc terranes is marked by a subvertical, locally mylonitic fault, which separates the Purcell anticlinorium from the Kootenay Arc (Paper 1993-1).

The Duncan Lake area contains complex folds which plunge to the north at low angles. In general, the areas in which rocks of the Hamill Group are exposed are anticlinal and those in which the Lardeau Group are exposed are synclinal - the trace of the Badshot and Mohican formations outlines the folds.

The oldest folds recognized are isoclinal and plunge at low angles to the north (Phase I folds). The limbs and axial planes of these folds are curved and have been folded by Phase II structures. The principal Phase I folds in the area are the Howser syncline, the Duncan anticline, the St. Patrick syncline and the Meadow Creek anticline. No well-defined faults clearly related to Phase I folds are recognized.

Phase II folds are more open than Phase I folds. They are clearly visible in many outcrops. The folds plunge mainly to the north and northwest at angles as great as 30 degrees, but most plunge between 335 to 345 degrees at 5 to 10 degrees. The largest Phase II folds include the Lavina synform, the Comb Mountain antiform, the Glacier Creek synform, the Lake Creek antiform and the Kootenay Lake antiform. Several large faults are known, some of which may be related to the Phase II deformation. They strike north or north-northwest and dip steeply; commonly the apparent dip-slip is west-side-down and the strike-slip is thought to be small (Bulletin

CAPSULE GEOLOGY

49).

Rocks on the Duncan property belong mainly to the Mohican and Badshot formations but include the upper part of the Hamill Group and lowermost rocks of the Index Formation (Lardeau Group). These formations are on the eastern limb of the Duncan anticline, a major Phase I isoclinal fold. The Hamill Group is a succession of grey to brown micaceous quartzites with minor schist and platy white quartzite. It is overlain by the Mohican Formation of interlayered carbonates, mica schist and very fine grained micaceous quartzite. The Badshot is a succession of limestone and dolomite with siliceous dolomite at the top. The lowermost part of the Index Formation which overlies the Badshot is dark grey to black siliceous argillite and fine grained mica schist.

Virtually all structures seen on the property are Phase II folds. These are relatively tight asymmetric or overturned folds, well displayed in the Mohican Formation in crosscuts in the Duncan underground workings. Most of the folds are a metre across, but some are larger. On the peninsula, an anticline with Hamill Group quartzite in the core lies east of a shallow syncline with Mohican Formation in the trough. The anticline, somewhat modified by steep westerly dipping strike faults, probably passes just west of the portal leading to the underground workings. It is not the Duncan anticline, but a Phase II fold on the eastern limb of the Duncan anticline. In cross-section, the exposed folds have steeply dipping axial planes and have the shape of a reversed "N", rising more or less step-like to the west. The axial planes, defined by a well-marked cleavage in micaceous rocks of the Mohican Formation, dip steeply to the east near Glacier Creek and dip steeply to the west on the peninsula. The axes of the folds plunge 340 degrees at 5 to 10 degrees. The folds are important in determining the average dip of the formations and in controlling at least part of the mineralization.

Two important westerly dipping strike faults and several smaller ones are recognized in the underground workings. The faults exposed strike 340 degrees and dip steeply to the west. The apparent dip-slip is a couple of hundred metres down on the west.

Mineralized zones comprise the Duncan No. 1 zone (082KSE019) on the north side of Glacier Creek, the Duncan No. 2 zone (082KSE020) on the crest and western side of the ridge between Glacier Creek and Duncan Lake, the Duncan No. 3 zone (082KSE021) on the south side of the entrance to the Lower Arm of Duncan Lake, the Duncan No. 4 zone (082KSE022) on the peninsula (now an island due to the Duncan Dam and subsequent flooding of the valley) on the north side of the entrance to the Lower Arm, and the main Duncan zone (No. 5 - 8 zones), midway up the peninsula and the subject of this report.

Underground development at the Duncan property began in June 1959 with the driving of a crosscut adit at the 565 metre elevation, 12 metres above Duncan Lake. The crosscut passed through No. 6 zone and drifts followed No. 7 and 8 zones. No. 5 zone is beneath the level. In 1966, the crosscut adit above the lake level was sealed. The Duncan Dam, completed in 1967, raised the level of the lake approximately 27 metres, flooding a portion of the property.

Mineralized zones consist of pyrite, sphalerite, galena and minor pyrrhotite disseminated in dolomite and siliceous dolomite of the Badshot Formation. They are lenticular zones with gradational but in general well-defined margins. The attitude of the zones is essentially parallel to that of the enclosing formations with steep dips. Drilling has shown that the longest axes of the mineralized zones plunge at a low angle to the north - an average plunge of 7 degrees at 340 degrees. This plunge is parallel to the most prominent lineation and to the axes of Phase II folds in the surrounding rocks.

The mineralized zones are in dolomite and siliceous dolomite of the Badshot Formation. The lithologic succession consists of a lower and an upper dolomite separated by a thin layer of crystalline limestone. The uppermost part of the upper dolomite is siliceous. Mineralized zones are found in both the lower and the upper dolomites and along the contact between the upper dolomite and the siliceous dolomite.

In general, pyrite is the most abundant sulphide, and sphalerite is more abundant than galena. Pyrrhotite in minor amounts is present in one zone and minute amounts of chalcocopyrite, marcasite, pyrargyrite and meneghinite are reported by Muraro (1962). The sulphides in general are very fine grained. They form disseminated grains, lenticular clusters, or fairly massive layers in dolomite.

The No. 7 zone is a steeply dipping tabular body averaging 4.5 to 6 metres thick along the western contact of the siliceous dolomite. The zone as indicated by drilling plunges about 7 degrees to the north and is approximately 122 metres high. It has been

CAPSULE GEOLOGY

followed for 914 metres in the drift and found in drilling beyond. The zone is layered, with a western layer in which dolomite, pyrite and sphalerite are found in fairly well-marked bands; a central layer with lenticular masses of pyrite, galena and sphalerite in carbonate layers associated with fine-grained quartz; and an eastern siliceous layer in which pyrite and sphalerite are the dominant sulphides. Some bands of sulphides within the layers follow small discontinuous, nearly isoclinal folds which plunge to the north at low angles. Bands of sulphides are a fraction of a centimetre to a couple of centimetres thick, and the grains of sulphides within them are generally less than 1 millimetre across.

No. 5 zone is below and to the south of No. 7 zone along the same western contact of siliceous dolomite. It has the same plunge as No. 7 zone and is separated from it by a zone along the contact approximately 61 metres high in which there is only scattered sulphide mineralization.

No. 8 zone is a relatively small lens in the upper dolomite approximately 30 metres west of No. 7 zone. It dips at moderate angles to the east and, although not fully outlined, is 91 to 122 metres high parallel to the dip. It plunges to the north and appears to be offset on a steeply dipping strike fault above the main crosscut. Pyrite and sphalerite are the main sulphides, and galena has been found only in polished sections.

No. 6 zone is 91 to 122 metres west of No. 7 zone and is the most westerly and the largest zone found. The dominant sulphide is pyrite, with minor amounts of sphalerite and galena. Pyrrhotite is present locally in bands two to several centimetres wide. The zone is lenticular in cross-section, approximately 91 metres high and 6 to 30 metres thick. The zone has been found in drilling for 914 metres along the plunge which is at low angles to the north, parallel to that of the other zones. The zone in the main crosscut is bounded on the east and probably offset by a westerly dipping fault. Most of the mineralization is uniformly fine-grained pyrite with varying small amounts of galena and sphalerite disseminated in closely-spaced thin lenses or bands in siliceous dolomite. The siliceous dolomite appears to form a tight syncline. Pyrite near the fault on the eastern side locally forms rounded clusters resembling a sheared breccia. In the trough of the syncline it occurs in massive layers associated with limestone and siliceous dolomite.

Studies by Muraro (1962) of the textures of the sulphides have shown that the pyrite is older than the galena and sphalerite, and that the pyrite is crushed and deformed, whereas the galena and sphalerite are not. The pyrrhotite in No. 6 zone is not obviously deformed and at least is partly formed by replacement of pyrite (Bulletin 49).

Indicated reserves for the property are 9 million tonnes grading 2.7 per cent lead and 2.9 per cent zinc (CIM Bulletin April 1982, page 125). The crosscut adit was sealed prior to the completion of the Duncan Dam, which raised the lake level about 27 metres, flooding a portion of the property.

Cominco Ltd. drilled about 4000 metres in six holes in 1997.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/20

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE024**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARGENTA**, CLINTON (L.1032), MATILDA P (L.1035),
BUTTE (L.1038)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:
LATITUDE: 50 14 16 N
LONGITUDE: 116 54 03 W
ELEVATION: 1550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Crown grant Lot 1032.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5565073
EASTING: 507072

COMMODITIES: Lead Zinc Copper Silver Gold

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Replacement Epigenetic
TYPE: E12 Mississippi Valley-type Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	
Paleozoic	Lardeau	Index	

LITHOLOGY: Siliceous Dolomite
Limestone
Phyllite
Micaceous Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA RELATIONSHIP:
PHYSIOGRAPHIC AREA: Purcell Trench
GRADE: Greenschist

CAPSULE GEOLOGY

The Argenta prospect is located at 1550 metres elevation above sea level, on a north branch of Hamill Creek in the Slocan Mining Division. The property consists of three Crown grants, Clinton (Lot 1032), Matilda P (Lot 1035) and Butte (Lot 1038). The main workings are on Lot 1032.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The prospect is on the western limb of the Duncan anticline within dolomite and limestone of the Lower Cambrian Badshot Formation which forms a narrow complexly folded band that separates micaceous quartzite of the Mohican Formation (Hamill Group) to the east from the phyllites of the Lardeau Group to the west. On the property, the Badshot Formation is overturned, dips at low angle to the northeast and plunges northwest.

The Argenta occurrence consists of two veins located on Lot 1032. The veins strike northwest and dip 55 degrees west. The main vein consists of quartz with pyrite and chalcopyrite carrying silver and minor gold values. The vein occurs in a fissure zone 3 to 6 metres in width. The second vein consists of disseminated pyrite, sphalerite and galena in grey quartz. Both veins are within siliceous dolomite of the Badshot Formation near the contact with the underlying phyllites of the Index Formation (Lardeau Group). The two veins have been explored by trenching and with at least 300 metres of underground workings.

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RUN TIME: 16:43:39

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE025**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARN**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 10 47 N
LONGITUDE: 116 17 30 W
ELEVATION: 2320 Metres

NORTHING: 5558853
EASTING: 550574

LOCATION ACCURACY: Within 500M
COMMENTS: Location of chip sample.

COMMODITIES: Copper Tungsten Molybdenum Lead

MINERALS

SIGNIFICANT: Chalcopyrite Scheelite Molybdenite Galena
ASSOCIATED: Quartz Carbonate Muscovite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Kitchener	
Cretaceous			Frying Pan Creek Stock

LITHOLOGY: Dolomite Calcareous Argillite
Granodiorite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip
COMMODITY GRADE

Copper	0.4000	Per cent
Lead	0.2300	Per cent

COMMENTS: A 2 metre wide chip sample.
REFERENCE: Open File 1990-20.

CAPSULE GEOLOGY

The Barn occurrence is located on the west flank of Barn Mountain in the Golden Mining Division.

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is near the contact between the Creston and the Kitchener formations of the Proterozoic Purcell Supergroup.

The Creston Formation consists of an interbedded sequence of quartz siltstone and argillite with some quartz arenite and minor quartz wacke, and the Kitchener Formation consists of laminated, buff weathering dolomitic and calcareous argillite with minor quartzite (Open File 1990-26). The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Mineralization consists of chalcopyrite, scheelite, galena and molybdenite, all occurring in minor quantities in irregular quartz-carbonate veins within the Kitchener Formation near the eastern border of the Cretaceous Frying Pan Creek stock. Traces of scheelite were also noted in the intrusive rocks in this area.

Within and to the west of the Frying Pan Creek stock (granodiorite), quartz veins up to 2 metres wide can be traced across a ridge for hundreds of metres. The veins generally have muscovite selvages or contain vugs filled with quartz and muscovite crystals. Some veins have brecciated contacts with the wallrocks. A sample collected from the main vein yielded 0.4 percent copper and 0.23 per

CAPSULE GEOLOGY

cent lead (Open File 1990-20).

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

mineralogy. The best developed shear (F2 shear) transects a layer of limestone near the crest of a fold. The limestone is contorted, but in general has a low dip to the north corresponding to the plunge of the fold. It is somewhat micaceous and is cut by a poorly developed cleavage. Replacement of the limestone by fine-grained siderite and medium-grained sphalerite and galena has taken place both along the cleavage and layers within the limestone (Bulletin 49).

The shear is mineralized over a width of as much as 1 metre and a length of 15 metres. It has been exposed in several small adits, trenches and shafts. Between 1919 and 1938, 38 tonnes of ore were extracted from the four mineralized shears to produce 38,164 grams of silver, 13,967 kilograms of lead and 6708 kilograms of zinc.

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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE027**

NATIONAL MINERAL INVENTORY: 082K2 Pb2

NAME(S): **RAD**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 24 47 N
LONGITUDE: 116 24 36 W
ELEVATION: 1676 Metres

NORTHING: 5584724
EASTING: 541920

LOCATION ACCURACY: Within 500M

COMMENTS: Location of veining and fractures.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Rad occurrence is located 37 kilometres along the Toby Creek road west of Invermere, in the Golden Mining Division. The property is at 1676 metres elevation above sea level on the south side of Delphine Creek.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence is hosted within the lower dolomite member of the Mount Nelson Formation and consists of narrow veins and fractures within the crest of an anticline. The veins and fractures are parallel to the axis of the anticline. Mineralization consisting of galena, sphalerite and tetrahedrite occurs in white quartz veins (Assessment Report 9983).

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 989
REPORT: RGEN0100

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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/30

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE028**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUTCHY, DUCHESS**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 15 37 N
LONGITUDE: 116 22 34 W
ELEVATION: 2104 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5567756
EASTING: 544470

LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit portal.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Tabular

DIMENSION: 300 x 5 Metres STRIKE/DIP: 360/90

TREND/PLUNGE: /

COMMENTS: Vein is within a 5.5 metre wide shear that strikes north and dips vertically.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP
Helikian Purcell

FORMATION
Gateway

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1969

SAMPLE TYPE: Chip

COMMODITY

GRADE

Copper

0.7000

Per cent

REFERENCE: Assessment Report 14232.

CAPSULE GEOLOGY

The Dutchy occurrence is located 35 kilometres southwest of Invermere in the Golden Mining Division. The occurrence is near the headwaters of Copper Creek, a tributary of Dutch Creek, south of Coppercrown Mountain.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by Cretaceous intrusive rocks (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26). The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite. The beds have consistent thickness of between 20 to 50 centimetres with slightly undulose bases and truncated tops. The Van Creek Formation grades upwards into thinly bedded quartzite of the Gateway Formation.

The Gateway Formation is subdivided into the Hg1 and Hg2 members. The Hg1 member consists of an interbedded sequence of quartzite, green siltstone and buff dolomitic siltstone and dolomite. Bed thicknesses vary from generally 2 to 10 centimetres in the fine-

CAPSULE GEOLOGY

grained quartzite to 10 to 50 centimetres in the upper dolomite. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The Hg2 member consists of a 90 metre thick, cream to buff weathering dolomite unit. The dolomite displays stromatolitic laminations, cream-chert intercalations and rare salt casts. Bed thickness varies between 50 centimetres to 2 metres.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

At the turn of the century, the prospect was explored with a 10 metre long adit and several small pits and trenches. An additional 60 metres of trenching was carried out in 1969.

Mineralization is hosted within siltstone of the Gateway Formation and consists of chalcopyrite and pyrite associated with centimetre wide quartz veins within a narrow vertical shear that strikes north. The sulphide mineralization averages 5.5 metres in width and has been followed in surface trenches for a distance of 300 metres along strike. Average assays from the prospect were 0.7 and 0.49 per cent copper over 3.6 and 5.6 metres respectively (Assessment Report 14232).

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GSC MEM 369
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Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE029**

NATIONAL MINERAL INVENTORY: 082K8 Pb2

NAME(S): **PARADISE (L.4341)**, PARADISE MINE, SHAMROCK (L.4344),
ROYAL STAG (L.4343), MOUNTAIN-TOP MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:
LATITUDE: 50 28 18 N
LONGITUDE: 116 18 09 W
ELEVATION: 2300 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of 7800 Level.

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5591307
EASTING: 549497

COMMODITIES: Lead Zinc Silver Cadmium Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Cerussite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive Vein
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Middle Proterozoic

GROUP

Purcell
Windermere

FORMATION

Mount Nelson
Toby

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Sandstone
Chert
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Paradise mine is situated near the head of Springs Creek on the ridge between Springs and Bruce creeks, at 2300 metres elevation above sea level, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Paradise mine orebody is within the upper dolomite member of the Mount Nelson Formation, immediately below the Windermere unconformity near the core of an east-verging anticline which is transected to the west by a north-trending fault (Open File 1990-26). Differing thicknesses of the Windermere Supergroup on either side of the fault indicate that it was active during Hadrynian extension. The host dolomite is light grey and fine grained with abundant black

CAPSULE GEOLOGY

chert layers which preferentially replace cryptalgal structures and thin, carbonaceous black shale interbeds.

The orebody consists of a series of replacement mantos near the upper contact of the dolomite with the overlying sandstone of the Toby Formation. The ore in the upper levels of the mine was strongly oxidized and consisted mainly of lead carbonate (cerussite) with minor residual pyrite and sphalerite. At depth, the mineralization changed to mainly fracture controlled pyrite-galena-cerussite-sphalerite veins. Samples from the Paradise mine consist of massive panidiomorphic galena, sphalerite, pyrite, sucrosic cerussite and banded dolomite, galena, sphalerite and pyrite (Open File 1990-26).

Between 1901 and 1953, the mine produced about 22.9 million grams of silver, 7.2 million kilograms of lead, 3.6 million kilograms of zinc, 9999 kilograms of cadmium and 995 grams of gold from a total of 66,760 tonnes milled.

The Shamrock (Lot 4344) adjoins the Paradise Crown grant to the north, but no in-situ mineralization was detected in early exploration.

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1919-113,145; 1920-109,138; 1921-124; 1922-183; 1923-199; 1924-180;
1925-221,231; 1926-239; 1927-264; 1928-275; 1929-284,293;
1930-112,237; 1943-75; 1944-74; 1946-174; 1948-152; *1949-196;
1950-156; 1951-40,190; 1952-43,200; 1953-151; 1955-A48,70;
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EMPR EXPL 1980-117
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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE030**

NATIONAL MINERAL INVENTORY: 082K8 Ag1

NAME(S): **PTARMIGAN**, REDLINE NO.1 (L.5345)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 29 46 N
LONGITUDE: 116 24 25 W
ELEVATION: 2683 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5593961
EASTING: 542063

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit. Lot 5345 is not properly located on NTS 82 K/8, Series A721, Edition 2MCE.

COMMODITIES: Silver Gold Copper Lead Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Podiform

CLASSIFICATION: Replacement

TYPE: E12 Mississippi Valley-type Pb-Zn J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Ptarmigan mine is situated at 2683 metres elevation above sea level near the headwaters of Red Line Creek, a tributary of MacDonald Creek, in the Golden Mining Division. The property consists of a single Crown grant (Lot 5345) which is incorrectly located on the 1:50,000 scale topographic map (Toby Creek 82K/8) (Assessment Report 11739).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Ptarmigan mine consists of a series of adits driven along a fault that downthrows the Windermere Supergroup rocks to the east against rocks of the lower dolomite member of the Mount Nelson Formation (Open File 1990-26, Figure 19b). Mineralization consisting of galena and tetrahedrite occurs as narrow, interconnecting quartz veins and as large pods of stratabound manto replacement zones of massive crystalline pyrite. All mineralization is situated below the Windermere unconformity and usually occurs below a less permeable

CAPSULE GEOLOGY

strata such as quartzite (Open File 1990-26).

A total of 657 tonnes of high-grade ore were selectively mined from the Ptarmigan deposit between 1900 and 1959. This production yielded about 2.7 million grams of silver, 3546 grams of gold, 3812 kilograms of copper, 3519 kilograms of lead and 848 kilograms of zinc.

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1919-113,146; 1920-113,139; 1923-199; 1925-223; 1927-265; 1955-71;
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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/08

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE031**

NATIONAL MINERAL INVENTORY:

NAME(S): **CUBA**, RUTH

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 02 11 N
LONGITUDE: 116 54 45 W
ELEVATION: 600 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5542680
EASTING: 506266

LOCATION ACCURACY: Within 500M

COMMENTS: Location of underground workings.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Replacement

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Cambrian

GROUP

Undefined Group
Lardeau

FORMATION

Badshot
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Quartz Mica Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

Ancestral North America

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1978

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

423.0000 Grams per tonne

COMMENTS: Sample of 25 centimetre wide quartz vein exposed near the shaft.

REFERENCE: Assessment Report 9598.

CAPSULE GEOLOGY

The Cuba occurrence is located on the west shore of Duncan Lake, just north of Schroeder Creek in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The property is underlain by quartz mica schist of the Index Formation of the Lardeau Group. A narrow band of crystalline limestone of the Badshot Formation is exposed on the eastern part of the property. Quartz veins with minor amounts of pyrite and galena occur within the limestone exposures. Pyritic lenses also occur within the micaceous schist. Locally, sulphide content can amount up to 20 per cent of the rock volume.

The property has been explored with a 20 metre deep shaft and a 45 metre long adit. The underground workings focused on a 25 centimetre wide quartz vein carrying galena, sphalerite and pyrite. The vein has a strike of 040 degrees and a dip of 50 degrees southwest. A grab sample from the vein near the shaft assayed 423 grams per tonne silver (Assessment Report 9598).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 997
REPORT: RGEN0100

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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/27

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE032**

NATIONAL MINERAL INVENTORY:

NAME(S): **DELPHINE (L.4334)**, 616 (L.4333), EUREKA (L.4335)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 25 33 N
LONGITUDE: 116 24 07 W
ELEVATION: 1950 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5586149
EASTING: 542481

LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit portal.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite Chalcopyrite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Purcell Mount Nelson

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Delphine property consists of three Crown grants (Lots 4333, 4334 and 4335). The Delphine mine is located on Lot 4334 which is on the southeast flank of Mount Catherine in the Golden Mining Division, at an elevation of 1950 metres above sea level.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Delphine mine occurrence consists of a quartz-carbonate vein 0.3 to 1 metre wide within a normal fault. The fault strikes 150 degrees, dips 78 degrees northeast and cuts the middle dolomite member of the Mount Nelson Formation. Ore minerals include galena and tetrahedrite with minor sphalerite, pyrite and chalcopyrite (Open File 1990-26, page 32). The vein, where it has been stoped for 60 metres, had an average width of 1 metre and was of solid galena (Minister of Mines Annual Report 1898). Total production from the Delphine yielded 614,315 grams of silver, 3025 kilograms of copper and 46,880 kilograms of lead from 170 tonnes mined.

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EMPR AR 1898-1041,1055; 1899-595,666; 1900-805; 1901-1013;
1902-135,303; 1903-97; 1904-113; 1905-145; 1906-248; 1909-100;
*1915-94,95; 1919-114; 1951-190; 1963-85, 1964-135
EMPR ASS RPT 2502, *18094
EMPR BC METAL MM00556
EMPR GEOS MAP 1995-1
EMPR INDEX 3-194
EMPR OF *1990-26, p. 32
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148, p. 48; 369, p. 112
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/31

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE033**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOTENAY QUEEN**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 24 27 N
LONGITUDE: 116 23 40 W
ELEVATION: 1980 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5584115
EASTING: 543030

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Open File 1990-26.

COMMODITIES: Lead Silver Copper Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1915
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	2400.0000 Grams per tonne
Lead	65.0000 Per cent

COMMENTS: Sample was of massive galena.

REFERENCE: Minister of Mines Annual Report 1915, page 93.

CAPSULE GEOLOGY

The Kootenay Queen prospect is located at an elevation of 1980 metres in a small cirque on the south side of Delphine Creek in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence consists of a small adit driven for a distance of

CAPSULE GEOLOGY

43 metres along a 30 centimetre wide quartz vein. The vein is hosted in cream to buff dolomite of the upper dolomite member of the Mount Nelson Formation immediately below the Windermere unconformity (Open File 1990-26).

The main ore minerals are galena, tetrahedrite and sphalerite. Analyses of pure galena yielded 2400 grams per tonne silver and 65 per cent lead (Minister of Mines Annual Report 1915) and tetrahedrite contains 9 to 10 weight per cent silver (Open File 1990-26). The ore displays evidence of intense deformation and fine grained polygonal galena is common.

BIBLIOGRAPHY

EMPR AR 1899-666; 1900-805; 1901-1013; 1902-135; *1915-93

EMPR GEOS MAP 1995-1

EMPR OF 1990-20; *1990-26, p. 37

EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)

GSC MAP 1326A

GSC MEM 148, p. 48; 369

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-

Horsethief Creek Area, Purcell Mountains, Southeast British

Columbia, Canada, unpublished Ph.D. Thesis, University of London,

England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/28

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

and geophysical work, resulting in defining mineralization over a strike length of 600 metres. Miner River amalgamated in May 1999 with Eagle Plains Resources Ltd.

BIBLIOGRAPHY

EMPR AR 1898-1040,1055; 1899-595,666; 1902-135; 1903-103; 1904-295;
1905-145; 1908-89,246; 1909-100,272; 1914-236; *1915-93; 1916-188;
1917-145; 1918-151,186; 1926-241; *1949-199
EMPR ASS RPT 23500
EMPR BC METAL MM00561
EMPR FIELDWORK 1989, p. 29-37
EMPR GEOS MAP 1995-1
EMPR LMP (Hot Punch, Fiche No. 60774,60775)
EMPR OF 1990-26, p. 36
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148, p. 48; 369, p. 112
N MINER July 31, 2000
WWW <http://www.eagleplains.bc.ca/bc.htm>
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/30

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE035**

NATIONAL MINERAL INVENTORY:

NAME(S): **DOMINION**, LUCKY BOY (L.9180), BLACK BIRD (L.9178),
GREY EAGLE (L.9179), DELIGHT (L.9181)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:
LATITUDE: 50 21 05 N
LONGITUDE: 116 21 58 W
ELEVATION: 1615 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5577893
EASTING: 545097

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite Pyrite
ASSOCIATED: Malachite Azurite Arsenopyrite
ALTERATION: Silica Malachite Azurite
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Purcell Dutch Creek

LITHOLOGY: Siliceous Dolomite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 160.0000 Grams per tonne
Lead 3.8000 Per cent
REFERENCE: Assessment Report 17008.

CAPSULE GEOLOGY

The Dominion occurrence is located 37 kilometres southwest of Invermere in the Golden Mining Division, at 1615 metres elevation above sea level. The occurrence is on the north side of the ridge that separates Coppercrown and Stark creeks and consists of four Reverted Crown grants: Lot 9178 (Black Bird), Lot 9179 (Grey Eagle), Lot 9180 (Lucky Boy) and Lot 9181 (Delight).

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Dutch Creek Formation of the Proterozoic Purcell Supergroup. The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Dutch Creek Formation includes green and black laminated argillite, quartzite, siltstone and buff dolomitic siltstone. The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite and correlates with the strata of the Lower Kitchener Formation.

The Gateway Formation consists of an interbedded sequence of quartzite, green siltstone and buff dolomite that correlates with the

CAPSULE GEOLOGY

lower portion of the Dutch Creek Formation. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Dutch Creek Formation, which hosts the occurrence, consists of buff to cream coloured dolomite, siliceous dolomite and grey to black argillite.

Mineralization is primarily located within narrow shears within siliceous dolomite near the argillite contact. Mineralization consists of pyrite, galena, malachite, azurite, arsenopyrite and tetrahedrite.

The prospect has been explored by at least seven small adits that were driven on a shear that marks the contact between the argillite and the dolomite.

Adit 1 was driven on the contact of the dolomite and argillite and followed the contact for 6 metres. Malachite, azurite and galena occur in a siliceous shear zone. A chip sample from the shear assayed 72 grams per tonne silver over a width of 0.2 metre (Assessment Report 17008).

Adit 2 was driven on a shear zone within the dolomite for a distance of 27 metres. A stope was developed within the zone but no production records are available. It is estimated that possibly as much as 36 tonnes may have been mined (Property File - Quantum Resources Prospectus, 1989). Within adit 2, the mineralization is 0.3 to 0.6 metre wide and consists of brecciated, silicified dolomite with disseminated galena, malachite, azurite, pyrite and tetrahedrite. A representative grab sample from the mineralized shear assayed 728 grams per tonne silver, 2.7 per cent copper and 5.1 per cent lead (Assessment Report 17008).

Adit 4 was driven on a shear zone within the dolomite for 66 metres. The mineralization is similar to that of adit 2 and is 0.5 to 1.1 metres wide. A grab sample from the adit assayed 38 grams per tonne silver (Assessment Report 17008).

Adit 6 was driven on a shear that follows the contact between the dolomite and argillite for 15 metres. The adit followed a narrow shear 0.2 to 0.7 metre wide that contained disseminated galena, pyrite, sphalerite and minor tetrahedrite. A grab sample from the shear assayed 160 grams per tonne silver, 3.8 percent lead and 1.3 per cent zinc (Assessment Report 17008).

Adit 7 was driven perpendicular to the contact but did not intersect it. Adits 3 and 5 are caved and were inaccessible (Property File - Quantum Resources Prospectus, 1989).

BIBLIOGRAPHY

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EMPR ASS RPT *17008, 23241
EMPR EXPL 1993-48, Fig. 20
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR OF 1990-20; 1990-26
EMPR PF (Quantum Resources Corp. Prospectus, 1989; Quantum Resources Corp. Statement of Material Fact #14/93, 1993; Verley, C.G. (1991): Geological Report on the Lucky Boy Property; 82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148, p. 49; 369
WWW <http://www.infomine.com/>
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/22

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE036**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON CAP (L.5347)**, HELL DIVER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 29 17 N
LONGITUDE: 116 24 19 W
ELEVATION: 2745 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5593066
EASTING: 542189

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit. Lot 5347 is not properly located on NTS 82K/8, Series A721, Edition 2MCE.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear

CLASSIFICATION: Replacement

TYPE: E12 Mississippi Valley-type Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Purcell Mountains

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1920

SAMPLE TYPE: Chip

COMMODITY

GRADE

COMMODITY	GRADE	Units
Silver	800.0000	Grams per tonne
Lead	17.3000	Per cent
Zinc	0.6000	Per cent

COMMENTS: Sample of mineralized portion of quartz vein within north trending fault zone.

REFERENCE: Minister of Mines Annual Report 1920, page 113.

CAPSULE GEOLOGY

The Iron Cap occurrence is situated at 2745 metres elevation above sea level near the headwaters of Red Line Creek which is a tributary of MacDonald Creek, in the Golden Mining Division. The property consists of a single Crown grant (Lot 5347) which is incorrectly located on the 1:50,000 scale topographic map (Toby Creek 82K/8) (Assessment Report 11739).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

CAPSULE GEOLOGY

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Iron Cap occurrence consists of three small adits driven along a fault that downthrows the Windermere Supergroup rocks to the east against rocks of the middle dolomite member of the Mount Nelson Formation (Open File 1990-26, Figure 19b). Mineralization consisting of galena, sphalerite and tetrahedrite occurs as narrow interconnecting quartz veins in dolomite. The veins are replacement structures within a north trending fault zone. A 1 metre chip sample across a mineralized section of the quartz vein assayed 800 grams per tonne silver, 17.3 per cent lead, 0.6 per cent zinc and only trace gold (Minister of Mines Annual Report 1920).

In 1920, 32 tonnes of ore were mined from the Hell Diver claim by J. L. MacKay and G. Larrabee. This production yielded 27,184 grams of silver and 8774 kilograms of lead. The ore was probably extracted from the upper adit on the Iron Cap property (Minister of Mines Annual Report 1920).

BIBLIOGRAPHY

- EMPR AR 1900-806; 1901-1014; 1902-136,303; 1903-97,99; 1917-452;
*1920-113
EMPR ASS RPT *11739
EMPR BC METAL MM00559
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEM 1971-425
EMPR GEOS MAP 1995-1
EMPR OF 1990-26, Figs.19a,b
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148; 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/08

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

bodies of manganiferous siderite and pyrite, with variable amounts of galena, sphalerite, tetrahedrite and stibnite. The galena has numerous inclusions of polybasite and freieslebenite and some native antimony (Open File 1990-26). The second type, represented by the No. 2 and 4 veins, is as quartz veinlets containing tetrahedrite and galena within dolomitized limestone. The host carbonate rocks have been replaced by manganiferous siderite and pyrite (Assessment Report 11739).

The East vein lies on the east limb of a fold and the No. 1 vein is situated in a fault zone cutting the crest of the fold parallel to its axis. The No. 2 vein is approximately 30 metres west of the No. 1 vein and consists of disseminated mineralization within dolomitized limestone. The No. 3 vein is a body of altered limestone, 5 to 6 metres wide, containing disseminated pyrite and galena. The area is southeast of the No. 2 vein. The No. 4 vein lies between the No. 1 and 2 veins. The area of veining is 4 to 6 metres across and extends for 150 metres (Assessment Report 11739).

Sporadic production from the No. 1 vein from 1904 to 1923 yielded 460,603 grams of silver, 82,315 kilograms of lead and 31 grams of gold from 161 tonnes mined.

BIBLIOGRAPHY

- EMPR AR 1900-806; 1902-136; 1903-140; 1904-114; 1905-146;
1906-135,248; 1907-90,213; 1908-89; 1915-82,97; 1916-516;
1919-113,146; 1920-113,139; 1922-184; 1927-265; 1928-277
EMPR ASS RPT *11739
EMPR BC METAL MM00572
EMPR EXPL 1980-117
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR INDEX 3-207,215
EMPR OF *1990-26, p. 32, Figs. 19a,b
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
EMR MP CORPFILE (Golden Gate Exploration Ltd.)
GSC MAP 12-1957
GSC MEM 148, p. 50; 369
GCNL #12, 1980; #125, 1981; #9, 1984
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/08

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE038**

NATIONAL MINERAL INVENTORY:

NAME(S): **RED LEDGE**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 19 15 N
LONGITUDE: 116 25 04 W
ELEVATION: 2267 Metres

NORTHING: 5574465
EASTING: 541448

LOCATION ACCURACY: Within 500M
COMMENTS: Trenches.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Pipe Vein Massive
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Gateway	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 706.0000 Grams per tonne
Copper 0.2200 Per cent
Lead 27.2000 Per cent
Zinc 1.8900 Per cent

REFERENCE: Assessment Report 8639.

CAPSULE GEOLOGY

The Red Ledge occurrence is located 4.25 kilometres south of Toby Creek in the Golden Mining Division. The occurrence is on the north flank of the ridge just west of Stark Creek.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by Cretaceous intrusive rocks (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite. The beds have consistent thickness of between 20 to 50 centimetres with slightly undulose bases and truncated tops. The Van Creek Formation grades upwards into thinly bedded quartzite of the Gateway Formation.

The Gateway Formation is subdivided into the Hg1 and Hg2 members. The Hg1 member consists of an interbedded sequence of quartzite, green siltstone and buff dolomitic siltstone and dolomite. Bed thicknesses vary from generally 2 to 10 centimetres in the fine-

CAPSULE GEOLOGY

grained quartzite to 10 to 50 centimetres in the upper dolomite. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The Hg2 member consists of a 90 metre thick, cream to buff weathering dolomite unit. The dolomite displays stromatolitic laminations, cream chert intercalations and rare salt casts. Bed thickness varies between 50 centimetres to 2 metres. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Red Ledge prospect consists of seven small veins and fractures containing galena, tetrahedrite, sphalerite and pyrite within the Hg1 member of the Lower Gateway Formation. The most important sulphide occurrence is in dolomite and has been exposed by trenching. Here, massive galena and tetrahedrite are found within an irregular, steep, northerly plunging pipe-like body with an average diameter of 0.5 metre. A chip sample across 1 metre of the mineralized pipe assayed 706 grams per tonne silver, 27.2 per cent lead, 1.89 per cent zinc and 0.22 per cent copper (Assessment Report 8639).

BIBLIOGRAPHY

- EMPR AR 1956-110; 1959-899
- EMPR ASS RPT *8639, 9829
- EMPR EXPL 1980-115
- EMPR FIELDWORK 1989, pp. 29-37
- EMPR GEOS MAP 1995-1
- EMPR OF 1990-26, pp. 27,41
- EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958; McMillan, W.J. (1968): Property Examination Report, Red Ledge Claims, Cominco Ltd., Aug. 14, 1968, 6 pages)
- GSC MAP 1326A
- GSC MEM 369, p. 114
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/24

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE039**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALD EAGLE** BURMAN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 28 20 N
LONGITUDE: 116 18 45 W
ELEVATION: 2560 Metres

NORTHING: 5591362
EASTING: 548787

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate location relative to the Paradise mine (082KSE029) from Minister of Mines Annual Report 1920, page 109.

COMMODITIES: Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive

CLASSIFICATION: Replacement

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	
Middle Proterozoic	Windermere	Toby	

LITHOLOGY: Dolomite
Sandstone
Chert
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1920
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Silver		391.0000	Grams per tonne
Gold		0.6000	Grams per tonne
Lead		33.5000	Per cent
Zinc		20.0000	Per cent

COMMENTS: A 60 centimetre wide chip sample across massive mineralization.
REFERENCE: Minister of Mines Annual Report 1920, page 109.

CAPSULE GEOLOGY

The Bald Eagle is situated near the head of Springs Creek on the ridge between Springs and Bruce creeks, at 2560 metres elevation above sea level, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper

CAPSULE GEOLOGY

quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Bald Eagle deposit is within the upper dolomite member of the Mount Nelson Formation, immediately below the Windermere unconformity (Open File 1990-26). The host dolomite is light grey and fine grained with abundant black chert layers which preferentially replace cryptalgal structures and thin carbonaceous black shale interbeds. The strata are folded in northwest-trending anticlines and synclines which vary from isoclinal to more open, broader folds. The occurrence consists of two shallow adits excavated in dolomite near the contact with the overlying sandstone of the Toby Formation. The ore consists of massive galena and sphalerite mineralization occurring with pyrite as replacement of the dolomite. A 60 centimetre chip sample across massive mineralization assayed 391 grams per tonne silver, 33.5 per cent lead, 20 per cent zinc and 0.6 gram per tonne gold (Minister of Mines Annual Report 1920).

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1922- 185; 1927-482; 1929-292; 1930-237

EMPR GEM 1974-83

EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)

GSC MAP 1326A

GSC MEM 148, p. 47

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE040**

NATIONAL MINERAL INVENTORY: 082K8 Pb1

NAME(S): **WHITE CAT (L.7555)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 40 N
LONGITUDE: 116 23 04 W
ELEVATION: 2287 Metres

NORTHING: 5590082
EASTING: 543692

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Crown grant Lot 7555.

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	
Middle Proterozoic	Purcell	Dutch Creek	

LITHOLOGY: Dolomite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The White Cat mine is located near the headwaters of Bruce Creek at 2287 metres elevation above sea level in the Golden Mining Division. The property consists of a single Crown grant (Lot 7555).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence is within the middle dolomite member of the Mount Nelson Formation below a north trending overthrust fault that separates the Mount Nelson and Dutch Creek formations (Open File 1990-26). Mineralization is associated with a quartz vein 0.6 to 2.5 metres wide that follows an open gouge zone for 75 metres along strike. The vein strikes 050 degrees and dips 70 degrees northwest. Massive galena with minor tetrahedrite occurs throughout the vein in lenses 2 to 3 metres long and 0.5 metre wide. The vein has been developed with several small adits and trenches. Limited production between 1924 and 1928 yielded 154,893 grams of silver and 80,644 kilograms of lead from 152 tonnes mined.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1015
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1900-805; 1901-1015; 1908-249; *1923-199; 1924-180; 1925-222;
1926-241; 1927-265; 1928-276; 1929-292; 1930-237
EMPR ASS RPT 16811
EMPR BC METAL MM00587
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR INDEX 3-218
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC EC GEOL 8, p. 321
GSC MAP 1326A
GSC MEM 148, p. 47; 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/06

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE041**

NATIONAL MINERAL INVENTORY:

NAME(S): **ST. ANTHONY, ACE, FINDLAY CREEK,
SOUTH FINDLAY, FINDLAY SOUTH**

STATUS: Prospect Open Pit
REGIONS: British Columbia
NTS MAP: 082K01E
BC MAP:
LATITUDE: 50 00 50 N
LONGITUDE: 116 11 39 W
ELEVATION: 2286 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of drillholes. See also Doc (082KSE060).

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5540486
EASTING: 557735

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrrhotite
ASSOCIATED: Pyrite Pyrrhotite Magnetite Goethite Tourmaline
ALTERATION: Hematite Goethite Albite Biotite Chlorite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound
CLASSIFICATION: Hydrothermal Sedimentary
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Aldridge	Moyie Intrusions
Proterozoic			

LITHOLOGY: Gabbro
Quartz Wacke
Quartz Arenite
Siltstone
Argillite
Granodiorite
Gabbroic Dike

HOSTROCK COMMENTS: Granodiorite of the White Creek batholith.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America Slide Mountain
METAMORPHIC TYPE: Regional Contact RELATIONSHIP: GRADE: Greenschist
PHYSIOGRAPHIC AREA: Purcell Mountains

CAPSULE GEOLOGY

The St. Anthony (Ace) property is situated 3.5 kilometres south of Doctor Peak of the Purcell Mountain Range, at the headwaters of Doctor Creek, a south tributary of Findlay Creek. The occurrence is hosted within the Lower Aldridge Formation of the Proterozoic Purcell Supergroup. In the vicinity of Doctor Creek, the Aldridge Formation consists of quartz wacke, quartz arenite, siltstone and lesser argillite that are intruded by thick gabbroic sills of the Proterozoic Moyie intrusions. The sedimentary rocks are characteristically rusty weathering, fine to medium grained and thin to medium bedded. Individual beds range from a few millimetres to 30 centimetres thick. Discontinuous horizons of intraformational conglomerate were noted in a number of localities (Assessment Report 6413). Finely disseminated pyrrhotite is common. The sedimentary rocks of the Lower Aldridge have undergone both thermal and regional metamorphism to at least greenschist facies. Biotite alteration in the argillaceous units and quartz-sericite alteration in the arenite and wacke have generated widespread phyllitic and schistose textures. The Moyie sills cutting the Lower Aldridge Formation are sill-like in overall form but often crosscut bedding or appear as irregular lenses. Some are in excess of 100 metres thick and can be traced almost 10 kilometres. The thicker sills have coarse grained gabbroic cores and finer dioritic margins. They are all primarily composed of hornblende and plagioclase phenocrysts set in a matrix of similar composition (Paper 1990-1). The White Creek batholith is a well-differentiated Cretaceous granitic intrusion which cuts the Lower Aldridge rocks just southeast of the mineral occurrence. Along the northern border of the

CAPSULE GEOLOGY

batolith, a megacrystic granodiorite phase is common. Plagioclase phenocrysts are commonly 3 to 5 centimetres long, set in a matrix of fine to medium-grained plagioclase, potassium feldspar, quartz and biotite. Magnetite and pyrite occur locally. Aplite and pegmatite dikes are common within the Lower Aldridge sedimentary rocks (Geological Survey of Canada Memoir 369).

On the property, the Purcell sedimentary rocks strike 060 degrees and dip gently (25 degrees) northwest. Deformation of the strata is minimal but minor northwest trending symmetrical folds have been documented (Assessment Report 3287). The occurrence consists of pyrite, pyrrhotite, magnetite, goethite, sphalerite and chalcopyrite which occur both as disseminations and in centimetre-wide veins in the Aldridge sedimentary rocks and in the gabbroic sills. Minor amounts of pyrite and arsenopyrite occur in talus near a small pit, 3 metres long by 2.5 metres wide. Five tonnes of material were mined from the small pit in 1963, producing some 12,006 grams of silver, 25 kilograms of copper, 82 kilograms of lead and 25 kilograms of zinc. Geological mapping in 1971 and 1973 failed to outline any significant reserves (Assessment Report 3287).

Kennecott Canada Exploration Inc. optioned the property from Eagle Plains Resources Ltd. and Miner River Resources Ltd. in 1997. In May 1999, Eagle Plains and Miner River amalgamated to form Eagle Plains Resources Ltd. Mineralization associated with tourmalinite unit was drilled previously. Kennecott drilled 5 holes in 1998; they terminated the option in February 1999. Rio Algom Explorations Inc. optioned the property in March 1999. Following a sampling and geological mapping program in 1999, Rio Algom commenced a 2000-metre diamond drilling program in June of 2000.

In 2000, Rio Algom drilled 2,578 metres in three holes and subsequently terminated their option with Eagle Plains.

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- EMPR AR 1963-A49; 1965-201
- EMPR ASS RPT 3287, 4705, *6413, 11737, 16925, 18169, 24380, 26120
- EMPR BC METAL MM00577
- EMPR EXPL 1977-E62; 1998-5,66
- EMPR FIELDWORK 1989, pp. 29-37; 1994, p. 73
- EMPR GEM 1971-420; 1973-86
- EMPR GEOS MAP 1995-1
- EMPR INDEX 4-124
- EMPR OF 1999-26, 2000-22
- EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
- GSC MAP 12-1957; 1712A; 1713A; 1326A
- GSC MEM 369
- N MINER May 31, 1999; June 5, July 31, 2000
- WWW <http://www.eagleplains.bc.ca/bc.htm>
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England
- EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE042**

NATIONAL MINERAL INVENTORY:

NAME(S): **LISA, A**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 23 25 N
LONGITUDE: 116 27 37 W
ELEVATION: 1833 Metres

NORTHING: 5582164
EASTING: 538366

LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of claim block.

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite
ASSOCIATED: Quartz Barite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Podiform Vein
CLASSIFICATION: Replacement Epigenetic
TYPE: E12 Mississippi Valley-type Pb-Zn
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Gateway	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Lisa occurrence is situated at 1833 metres elevation above sea level, 3.25 kilometres south of Black Diamond Peak in the Purcell Mountains, in the Golden Mining division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Lisa occurrence is hosted within dolomite of the Gateway Formation. Economic mineralization occurs in quartz and barite veins in dolomite, dolomite breccia and quartzite. Galena, tetrahedrite, sphalerite and talc chalcopyrite occur as pods or crystals in veins. Some sulphides with no gangue occur as stockworks in dolomite breccia or as massive pods. A 9-metre chip is reported to have yielded 30.86 grams per tonne silver, 2.1 per cent copper, 0.48 per cent lead, 0.63 per cent zinc (McMillan, 1968 (Property File)).

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EMPR AR 1967-267

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1019
REPORT: RGEN0100

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EMPR GEOS MAP 1995-1
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Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/28

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE043**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUMBO**, TOBY CREEK BARITE

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 22 18 N
LONGITUDE: 116 25 33 W
ELEVATION: 1833 Metres

NORTHING: 5580113
EASTING: 540831

LOCATION ACCURACY: Within 500M

COMMENTS: See also Mineral King mine (082KSE001) for references to barite production from 1959 to 1967.

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Bournonite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Gateway	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Purcell Mountains	
TERRANE: Ancestral North America		
METAMORPHIC TYPE: Regional	RELATIONSHIP:	GRADE: Greenschist

CAPSULE GEOLOGY

The Jumbo occurrence is located 3.5 kilometres north of Toby Creek in the Golden Mining Division. The occurrence is on the south flank of Monument Peak at 1900 metres elevation above sea level. Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1). The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1). In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26). Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies. The occurrence is hosted within dolomite of the Gateway Formation and comprises galena, sphalerite, pyrite and minor bournonite as replacement. Mineralization is believed to be of similar character to that found at the Mineral King (082KSE001) (Geology, Exploration and Mining in British Columbia 1971). In 1970, a plant was installed on the property to recover barite from the old tailings pond of the Mineral King mine. For records of this production please see 082KSE001.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1021
REPORT: RGEN0100

BIBLIOGRAPHY

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P. Billingsley, 1958)
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Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE044**

NATIONAL MINERAL INVENTORY:

NAME(S): **EXCELDA**, EXCALIBUR (L.14920), DEVELOPMENT NO.01 (L.14918),
 DEVELOPMENT NO.02 (L.14919), DEVELOPMENT FR. (L.14921)

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K08W
 BC MAP:
 LATITUDE: 50 26 49 N
 LONGITUDE: 116 22 44 W
 ELEVATION: 2591 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Centre of Lot 14918 (Development No.01).

Underground
 MINING DIVISION: Golden
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5588510
 EASTING: 544099

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite
 ASSOCIATED: Quartz
 ALTERATION: Malachite
 ALTERATION TYPE: Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Replacement Hydrothermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Middle Proterozoic
 GROUP: Purcell
 FORMATION: Mount Nelson
 IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Dolomitic Limestone
 Argillite
 Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Ancestral North America
 METAMORPHIC TYPE: Regional
 PHYSIOGRAPHIC AREA: Purcell Mountains
 RELATIONSHIP:
 GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1935
 SAMPLE TYPE: Chip
 COMMODITY GRADE
 Silver 2571.0000 Grams per tonne
 Gold 100.0000 Grams per tonne
 Copper 1.0000 Per cent
 Lead 22.7000 Per cent
 Zinc 1.9000 Per cent
 COMMENTS: Sample of 5 centimetre wide massive vein.
 REFERENCE: Minister of Mines Annual Report 1935.

CAPSULE GEOLOGY

The Excelda occurrence is located 1 kilometre southwest of Sultana Peak in the Golden Mining Division at 2591 metres elevation above sea level. The property consists of four Reverted Crown grants, Lot 14918 (Development No.01), Lot 14919 (Development No.02), Lot 14920 (Excalibur) and Lot 14921 (Development Fraction).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek

CAPSULE GEOLOGY

Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Rocks in the vicinity of the prospect include dolomitic limestone, quartzite and argillite of the lower dolomite member of the Mount Nelson Formation. The strata, which strike southeast and dip northeast, are cut by several reverse faults. Mineralization consisting of galena, sphalerite, tetrahedrite and pyrite occurs in limestone associated with a tightly-spaced fracture system filled with quartz. Malachite is common on the surface exposures. The occurrence has been explored by a series of adits and trenches. Most veins are less than a centimetre wide but can be high grade. A chip sample across a 5 centimetre massive sulphide vein assayed 100 grams per tonne gold, 2571 grams per tonne silver, 22.7 per cent lead, 1.9 per cent zinc and 1 per cent copper (Minister of Mines Annual Report 1935).

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- EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
- GSC MAP 1326A
- GSC MEM 148; 369
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/06

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE045**

NATIONAL MINERAL INVENTORY:

NAME(S): **OUTLET**, OUTLOOK, OUTCROP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 23 59 N
LONGITUDE: 116 25 03 W
ELEVATION: 2134 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5583237
EASTING: 541399

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location of mineralized vein.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic

GROUP

Purcell

FORMATION

Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1924

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	187.0000	Grams per tonne
Lead	16.0000	Per cent
Zinc	8.0000	Per cent

COMMENTS: A 60 centimetre wide chip sample across a mineralized section of the vein.

REFERENCE: Minister of Mines Annual Report 1924, page 181.

CAPSULE GEOLOGY

The Outlet prospect is situated at the head of Delphine Creek at an elevation of 2134 metres above sea level on the south side of Delphine Creek, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism

CAPSULE GEOLOGY

to at least greenschist facies.

The Outlet occurrence consists of a single vertical quartz vein, 30 to 90 centimetres wide, containing galena, sphalerite and pyrite. The vein is hosted within Mount Nelson dolomite and appears to follow bedding which strikes southeast and dips nearly vertical. A chip sample from the vein yielded 187 grams per tonnes silver, 16 per cent lead and 8 per cent zinc across 60 centimetre of width (Minister of Mines Annual Report 1924).

BIBLIOGRAPHY

EMPR AR 1902-135; 1903-103; 1905-144; 1908-89; 1921-165; *1924-181;
1926-241; 1927-265; 1928-276; 1929-293; 1930-237

EMPR ASS RPT 5542, 9983

EMPR FIELDWORK 1989, pp. 29-37

EMPR GEOS MAP 1995-1

EMPR OF 1990-26

EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)

GSC MAP 1326A

GSC MEM 369

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/29

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE046**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUNYAN (L.9696)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08E
BC MAP:
LATITUDE: 50 27 33 N
LONGITUDE: 116 06 12 W
ELEVATION: 1212 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

NORTHING: 5590069
EASTING: 563647

COMMODITIES: Barite Silver Copper

MINERALS

SIGNIFICANT: Barite
ASSOCIATED: Siderite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I10 Vein barite I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Middle Proterozoic GROUP Horsethief Creek FORMATION Undefined Formation IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Bunyan occurrence is located 8 kilometres southwest of Invermere, at the head of Goldie Creek, in the Golden Mining Division. The property consists of a single Crown grant (Lot 9696).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26). The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Massive barite occurs in pods and veinlets within argillite and phyllite of the Horsethief Creek Group. Malachite and siderite are associated with the barite veins usually at the vein margins. Fourteen tonnes were mined in 1904 from the property to produce 3266 grams of silver and 1268 kilograms of copper; approximately 500 tonnes of barite were extracted from the property in 1920 (Assessment Report 10367).

BIBLIOGRAPHY

EMPR AR 1902-137; 1903-103; 1904-114; 1905-146; 1911-228; 1915-100;
*1920-112,139; 1921-125; 1922-185
EMPR ASS RPT 8897, *10367

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1027
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BC METAL MM00549
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR INDEX 3-190
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE047**

NATIONAL MINERAL INVENTORY: 082K8 Pb3

NAME(S): **MAPLE**, SILVER KING, TIME

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 29 35 N
LONGITUDE: 116 26 13 W
ELEVATION: 2134 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5593605
EASTING: 539938

LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	
Middle Proterozoic	Windermere	Toby	

LITHOLOGY: Dolomitic Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Maple property is situated on the southwest bank of Red Line Creek in the Golden Mining Division at 2134 metres elevation above sea level.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect consists of a single adit driven for 80 metres along a narrow fault that marks the contact between dolomitized limestone of the middle dolomite member of the Mount Nelson Formation and quartzite of the Toby Formation (Open File 1990-26). Mineralization consisting of galena and sphalerite is hosted in 5 to 30 centimetres wide quartz veins. The sulphide minerals occur as massive lenses 1 to 2 metres long where the fault zone is pyritized and the wallrocks are strongly oxidized (Assessment Report 11739).

Limited mining from the prospect in 1915 and 1925 produced 26 tonnes of high-grade material which yielded 25,878 grams of silver and

CAPSULE GEOLOGY

8256 kilograms of lead.

BIBLIOGRAPHY

EMPR AR 1902-136; 1915-82,98,444; 1919-146; 1920-111,139; 1921-165;
1922-354; *1925-223,231
EMPR ASS RPT *11739, 22370, 23182
EMPR BC METAL MM00579
EMPR FIELDWORK 1989, pp. 29-72
EMPR GEOS MAP 1995-1
EMPR INDEX 3-213
EMPR OF 1990-26, Figs. 19a,19b
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148; 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
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CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE048**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER BELT**, SILVER BELL (L.3696)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 28 11 N
LONGITUDE: 116 18 37 W
ELEVATION: 2400 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5591086
EASTING: 548947

LOCATION ACCURACY: Within 500M

COMMENTS: Location of small shafts.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Replacement

TYPE: E12 Mississippi Valley-type Pb-Zn

J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic

Middle Proterozoic

GROUP

Purcell

Windermere

FORMATION

Mount Nelson

Toby

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Sandstone
Chert
Carbonaceous Shale

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Silver Belt is situated near the head of Springs Creek on the ridge between Springs and Bruce creeks, at 2400 metres elevation above sea level, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Silver Belt deposit is within the upper dolomite member of the Mount Nelson Formation, immediately below the Windermere unconformity (Assessment Report 9842). The host dolomite is light grey and fine grained with abundant black chert layers which preferentially replace cryptalgal structures and thin carbonaceous black shale interbeds. The strata are folded in northwest-trending anticlines and synclines which vary from isoclinal to more open, broader folds. The occurrence consists of two shallow shafts excavated in an area of limonitic dolomite near the contact with the

CAPSULE GEOLOGY

overlying sandstone of the Toby Formation. Within limonitic dolomite, galena and sphalerite mineralization occurs in quartz veinlets 1 to 10 millimetres in width.

Sporadic production from the occurrence between 1901 and 1918 yielded 148,735 grams of silver and 17,950 kilograms of lead from 98 tonnes mined.

BIBLIOGRAPHY

EMPR AR 1900-804; 1901-1013; 1902-134; 1903-101,103; 1905-144;
1907-217; 1916-516; 1917-144; 1918-151; 1920-111

EMPR ASS RPT *9842

EMPR BC METAL MM00578

EMPR FIELDWORK 1989, pp. 29-37

EMPR GEOS MAP 1995-1

EMPR INDEX 3-212

EMPR OF 1990-26

EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)

GSC MAP 12-1957; 1326A

GSC MEM 148; 369

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE049**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK DIAMOND**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:
LATITUDE: 50 22 13 N
LONGITUDE: 116 23 35 W
ELEVATION: 2300 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of upper adit.

Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

NORTHING: 5579977
EASTING: 543163

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Gateway	

LITHOLOGY: Argillite
Gabbro
Gabbroic Dike

HOSTROCK COMMENTS: Gabbro dike forms the hangingwall of the vein.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Black Diamond occurrence is located 4 kilometres northeast of Toby Creek in the Golden Mining Division. The occurrence is on the south flank of the mountain that separates Delphine and Toby creeks at 2320 metres elevation above sea level.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect consists of at least five small adits driven on a vertical quartz vein within argillite of the Hg1 member of the Gateway Formation. Mineralization includes pyrite, sphalerite and galena disseminated in white quartz. A 3 to 5 metre wide northwest trending gabbroic dike follows the vein structure for some distance. The dike is usually 1 to 3 metres northeast of the vein but in places it forms the hangingwall of the vein (Assessment Report 23184).

Limited production from the adits in 1906 and 1907 yielded 60,028 grams of silver and 26,672 kilograms of lead from 43 tonnes

CAPSULE GEOLOGY

mined.

In 1995, with support from the Explore B.C. Program, C. Downie, T. Termuende and R. Walker mapped old workings along the Black Diamond structure and diamond drilled 4 short holes totalling 179.1 metres. This work confirmed the existence of strong quartz veins with high grade silver, lead and zinc, and anomalous gold mineralization similar to the nearby Mineral King mine (082KSE001). The veins follow the Black Diamond fault which has been traced for 4 kilometres and 760 metres vertically (Explore B.C. Program 95/96 - M94).

BIBLIOGRAPHY

- EMPR AR 1899-595; 1902-135; 1903-103; 1904-113; 1905-145;
1906-135,248; 1907-90,213; 1913-117; 1914-236; *1915-90;
1927-265; 1959-74
EMPR ASS RPT 23184, *23352
EMPR BC METAL MM00548
EMPR Explore B.C. Program 95/96 - M94
EMPR GEOS MAP 1995-1
EMPR INDEX 3-189
EMPR OF 1990-26, p. 26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE050**

NATIONAL MINERAL INVENTORY:

NAME(S): **MABEL R**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 29 10 N
LONGITUDE: 116 23 51 W
ELEVATION: 2744 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5592854
EASTING: 542742

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is approximate from Minister of Mines Annual Report 1915.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
COMMENTS: Mineralogy inferred from Maple occurrence (082KSE047).

ASSOCIATED: Quartz

COMMENTS: Mineralogy inferred from Maple occurrence (082KSE047).

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Mabel R occurrence is located on the ridge that separates Law and Red Line creeks in the Golden Mining Division at 2745 metres elevation above sea level.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Although 15 tonnes of ore were mined to produce 4137 grams of silver and 9028 kilograms of lead in 1918, no geological description of the deposit is available. The deposit is probably hosted in a narrow fault within Mount Nelson dolomite and probably has similar mineralogy to the Maple occurrence (082KSE047).

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EMPR AR 1907-217; *1915-97; 1917-146,178; 1918-185
EMPR ASS RPT 15334, 16811
EMPR BC METAL MM00567

RUN DATE: 25-Jun-2003
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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1035
REPORT: RGEN0100

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EMPR EXPL 1986-C90
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR INDEX 3-204
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148; 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
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CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE051**

NATIONAL MINERAL INVENTORY:

NAME(S): **SITTING BULL (L.4097)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 56 N
LONGITUDE: 116 19 52 W
ELEVATION: 2300 Metres

NORTHING: 5594316
EASTING: 547439

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Crown grant Lot 4097.

COMMODITIES: Silver Lead Antimony

MINERALS

SIGNIFICANT: Galena Stibnite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Sitting Bull occurrence is situated on Bruce Creek at 2300 metres elevation above sea level in the Golden Mining Division. The property consists of a single Crown grant (Lot 4097).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect consists of galena and stibnite occurring in 5 to 30 centimetre wide quartz veins which are emplaced parallel to the bedding of the host Mount Nelson dolomite (Minister of Mines Annual Report 1915). The prospect has been explored with several adits and a vertical shaft driven to a depth of 25 metres. In 1919, 12 tonnes of high-grade ore was mined from the workings to produce 32,472 grams of silver and 3841 kilograms of lead.

BIBLIOGRAPHY

EMPR AR 1899-595,667; 1902-303; 1915-96; 1916-187; *1817-145,178;
1918-151; 1919-113; 1925-222
EMPR BC METAL MM00580

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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1037
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR INDEX 3-213
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/15

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE052**

NATIONAL MINERAL INVENTORY:

NAME(S): **LARRABEE**, CHRISTIAN (L.10116)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08E
BC MAP:

Open Pit

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 56 N
LONGITUDE: 116 06 38 W
ELEVATION: 1295 Metres

NORTHING: 5590773
EASTING: 563126

LOCATION ACCURACY: Within 500M
COMMENTS: Location of quarry.

COMMODITIES: Barite Copper

MINERALS

SIGNIFICANT: Barite Pyrite Malachite Azurite
ASSOCIATED: Siderite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform Shear
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I10 Vein barite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Middle Proterozoic GROUP Horsethief Creek FORMATION Undefined Formation IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Larrabee occurrence is located 8 kilometres southwest of Invermere, at the head of Goldie Creek, in the Golden Mining Division. The property consists of a single Crown grant (Lot 10116).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26). The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Massive barite occurs in pods and veinlets within argillite and phyllite of the Horsethief Creek Group. Pyrite, malachite, azurite and siderite are associated with the barite veins usually at the vein margins. The barite is partly white and nearly pure but most is discoloured and iron-stained. The vein is faulted, 3 to 5 metres wide, and exposed for a distance of 130 metres.

Between 1959 and 1960, 9000 tonnes of barite were mined from the occurrence (Assessment Report 10367). The material shipped had a specific gravity ranging from 4.06 to 4.41 (Geology, Exploration and mining in British Columbia 1971).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1039
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1958-86; 1960-135; 1962-147; 1963-138
EMPR ASS RPT 8897, *10367
EMPR EXPL 1979-327
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEM *1971-452, Fig.54
EMPR GEOS MAP 1995-1
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148, p. 50; 369, p. 117
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE053**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER KEY**, KEY, SILVER,
SOUTH FINDLAY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K01E
BC MAP:
LATITUDE: 50 00 46 N
LONGITUDE: 116 10 17 W
ELEVATION: 2320 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5540380
EASTING: 559368

COMMODITIES: Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: Metres STRIKE/DIP: 180/45W TREND/PLUNGE: /
COMMENTS: Mineralization follows narrow, north-trending shears in quartzite.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Lower Aldridge	

LITHOLOGY: Quartzite
Quartz Arenite
Siltstone
Granodiorite
Quartz Wacke
Argillite

HOSTROCK COMMENTS: Granodiorite of the White Creek batholith.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: GRADE: Hornfels
Greenschist
COMMENTS: Area has been affected by both regional and contact metamorphism.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1938
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 14.0000 Grams per tonne
Lead 0.4000 Per cent
REFERENCE: Minister of Mines Annual Report 1938, page E29.

CAPSULE GEOLOGY

The Silver Key property is situated 4.5 kilometres southeast of Doctor Peak of the Purcell Mountain Range, at the headwaters of the east fork of Doctor Creek, a south tributary of Findlay Creek (Minister of Mines Annual Report 1935).
The occurrence is hosted within the lower division of the Aldridge Formation of the Proterozoic Purcell Supergroup of southeastern British Columbia.
In the vicinity of the occurrence, the Aldridge Formation consists of quartz wacke, quartz arenite, siltstone and lesser argillite that are intruded by thick gabbroic sills of the Proterozoic Moyie intrusions. The sedimentary rocks are characteristically rusty weathering, fine to medium grained and thin to medium bedded. Individual beds range from a few millimetres to 30 centimetres thick. Discontinuous horizons of intraformational conglomerate were noted

CAPSULE GEOLOGY

in a number of localities. Finely disseminated pyrrhotite is common. The sedimentary rocks of the Lower Aldridge Formation have undergone both thermal and regional metamorphism to at least greenschist facies. Biotite alteration in the argillaceous units and quartz-sericite alteration in the arenite and wacke have generated widespread phyllitic and schistose textures.

The Moyie sills cutting the Lower Aldridge Formation are sill-like in overall form but often crosscut bedding or appear as irregular lenses. Some are in excess of 100 metres thick and can be traced almost 10 kilometres. The thicker sills have coarse grained gabbroic cores and finer dioritic margins. They are all primarily composed of hornblende and plagioclase phenocrysts set in a matrix of similar composition (Paper 1990-1).

The White Creek batholith is a well-differentiated Cretaceous granitic intrusion which cuts the Lower Aldridge rocks just southeast of the mineral occurrence. Along the northern border of the batholith, a megacrystic granodiorite phase is common. Plagioclase phenocrysts are commonly 3 to 5 centimetres long, set in a matrix of fine to medium-grained plagioclase, potassium feldspar, quartz and biotite. Magnetite and pyrite occur locally. Aplite and pegmatite dikes are common within the sedimentary rocks of the Lower Aldridge Formation (Geological Survey of Canada Memoir 369).

On the property, the Purcell sedimentary rocks strike 060 degrees and dip gently (25 degrees) northwest. Deformation of the strata is minimal but minor northwest trending symmetrical folds have been documented.

The occurrence consists of several opencuts and a small adit 130 metres long. Mineralization consists of disseminated galena and pyrite within structurally controlled quartz veins 2 to 5 centimetres wide that strike due north and dip 45 degrees west. The veins are within tightly folded and sheared quartzite. At least six veins are known to exist. A 1.2 metre wide chip sample taken across one of the exposed veins in the trenches assayed 14 grams per tonne silver and 0.6 per cent lead (Minister of Mines Annual Report 1938).

The prospect is very close to the edge of the White Creek batholith, however, the relationship to the intrusion is unknown.

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- EM GEOS MAP 1998-4
- EMPR AR 1931-E11; 1934-E28; 1935-E11; *1938-E28; 1958-52; 1939-38; 1940-27
- EMPR ASS RPT 6413
- EMPR BC METAL MM00563
- EMPR FIELDWORK 1989, pp. 29-37
- EMPR GEOS MAP 1995-1
- EMPR INDEX 3-202
- EMPR OF 1990-20; 1990-26
- EMPR PF (Sketch map; 82KSE General File - Geology map by P. Billingsley, 1958)
- GSC MAP 1326A; 1712A; 1713A
- GSC MEM 369
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/15

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE054**

NATIONAL MINERAL INVENTORY:

NAME(S): **RELIEF**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 57 N
LONGITUDE: 116 20 25 W
ELEVATION: 2745 Metres

NORTHING: 5594341
EASTING: 546789

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location from description in Minister of Mines Annual Report 1917,
page 146, and from Open File 1990-26, figure 31.

COMMODITIES: Silver Lead Antimony

MINERALS

SIGNIFICANT: Galena Stibnite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Replacement Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Purcell Mountains

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Relief occurrence is situated on Bruce Creek at 2745 metres elevation above sea level in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The showing consists of galena and stibnite occurring in narrow quartz veins cutting Mount Nelson dolomite. An 18-tonne sample was mined from the occurrence in 1918 but recoveries proved to be uneconomical (Minister of Mines Annual Report 1919).

BIBLIOGRAPHY

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1927-265
EMPR ASS RPT 16811
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR OF 1990-26

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
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ENERGY AND MINERALS DIVISION

PAGE: 1043
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BIBLIOGRAPHY

EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/15

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REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1045
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1901-1013; 1902-135; 1909-101; 1911-289; *1919-114
EMPR ASS RPT 2502, 8429, 9738, 12112, *18049
EMPR BC METAL MM00570
EMPR EXPL 1980-116
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR INDEX 3-204
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148; 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/11

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE056**

NATIONAL MINERAL INVENTORY:

NAME(S): **B.C. (L.1732)**, TILBURY (L.1733)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 26 29 N
LONGITUDE: 116 23 43 W
ELEVATION: 2744 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5587883
EASTING: 542940

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Crown grant.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The B.C. occurrence consists of two Crown grants (Lots 1732 and 1733) located on the south side of Mount Catherine in the Golden Mining Division, at 2744 metres elevation above sea level.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence consists of a 30 to 50 centimetre wide quartz vein containing galena and tetrahedrite within Mount Nelson dolomite (Open File 1990-26). The vein has been explored with a small, 15 metre deep shaft and a 75 metre long drift. A total of 79 tonnes were sporadically mined from the vein between 1905 and 1927. Total production yielded 198,873 grams of silver, 41,415 kilograms of lead and 427 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1900-805; 1902-135; 1904-295; 1905-145; 1906-135,248;
1908-246; 1909-100; *1915-82,95; 1919-114; 1927-265
EMPR BC METAL MM00547

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1047
REPORT: RGEN0100

BIBLIOGRAPHY

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EMPR GEOS MAP 1995-1
EMPR INDEX 3-188
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 148; 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/31

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE057**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEULAH**, LAST HOPE, KEY,
HOMESTAKE, LAST CHANCE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:
LATITUDE: 50 26 56 N
LONGITUDE: 116 23 43 W
ELEVATION: 2897 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location from Open File 1990-26.

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5588717
EASTING: 542934

COMMODITIES: Silver Lead Copper Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Bournonite Tetrahedrite
ASSOCIATED: Quartz Barite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Purcell Mount Nelson

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1926
SAMPLE TYPE: Bulk Sample
COMMODITY GRADE
Silver 2000.0000 Grams per tonne
Gold 3.4000 Grams per tonne
Copper 0.8000 Per cent
Lead 57.0000 Per cent

COMMENTS: Sample was 52 tonnes of high-grade ore.
REFERENCE: Property File - Galloway, J.D. (1926): Report on Key Group.

CAPSULE GEOLOGY

The Beulah occurrence is located at 2897 metres elevation above sea level, near the summit of Mount Catherine in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster

CAPSULE GEOLOGY

formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect has been explored with several trenches and a 45 metre long adit. Mineralization is hosted within a sheared quartz-barite vein cutting the middle dolomite member of the Mount Nelson Formation (Open File 1990-26). The vein varies in width from 5 to 60 centimetres and has been followed along strike for a distance of 150 metres. Galena, bournonite, sphalerite and tetrahedrite occur as narrow streaks and massive pockets the entire length of the vein. Malachite and azurite are common in surface exposures.

In 1926, a 52 tonne ore bulk sample was collected from the adit and shipped to the Trail smelter. Although recovery from the bulk sample is not known, the average grade of the shipment was 2000 grams per tonne silver, 57 per cent lead, 0.8 per cent copper and 3.4 grams per tonne gold (Property File - Galloway, J.D. (1926): Report on Key Group).

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- EMPR FIELDWORK 1989, pp. 29-23
- EMPR GEOS MAP 1995-1
- EMPR OF 1990-26, p. 36
- EMPR PF (*Galloway, J.D. (1926): Report on Key Group; 82KSE General File - Geology map by P. Billingsley, 1958)
- GSC MAP 1326A
- GSC MEM 148; 369
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/06

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE058**

NATIONAL MINERAL INVENTORY: 082K2 Au 1

NAME(S): **LOOKOUT**, RAINBOW, FRY CREEK

STATUS: Past Producer Open Pit

MINING DIVISION: Slocan

REGIONS: British Columbia

NTS MAP: 082K02W

BC MAP:

LATITUDE: 50 05 17 N

LONGITUDE: 116 46 30 W

ELEVATION: 885 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: North side of Fry Creek just east of Carney Creek junction.

UTM ZONE: 11 (NAD 83)

NORTHING: 5548445

EASTING: 516096

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold Pyrite

ASSOCIATED: Quartz

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Unconsolidated

CLASSIFICATION: Epigenetic Placer

TYPE: I01 Au-quartz veins C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Proterozoic Horsethief Creek

Lower Cambrian Hamill

Cretaceous

ISOTOPIC AGE: 83.5 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Muscovite

Quaternary

FORMATION

Undefined Formation

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Fry Creek Intrusion

Glacial/Fluvial Gravels

LITHOLOGY: Slate
Schist
Quartzite
Gravel
Muscovite Quartz Monzonite

HOSTROCK COMMENTS: Average age of intrusion from four determinations.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional Contact

COMMENTS: Contact metamorphism from Fry Creek intrusion.

PHYSIOGRAPHIC AREA: Purcell Mountains

Ancestral North America

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1926

SAMPLE TYPE: Chip

COMMODITY

GRADE

Gold

97.0000 Grams per tonne

COMMENTS: A 15 centimetre chip sample across an oxidized pyritic seam.

REFERENCE: Minister of Mines Annual Report 1926, page 260.

CAPSULE GEOLOGY

The Lookout occurrence is situated at 885 metres elevation above sea level on the north side of Fry Creek, just east of the junction with Carney Creek, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The occurrence is situated near the contact of the Cretaceous Fry Creek intrusion within slate and schist of the Proterozoic Horsethief

CAPSULE GEOLOGY

Creek Group and quartzites of the Lower Cambrian Hamill Group.

The Fry Creek intrusion, in the vicinity of the occurrence, is a coarse muscovite quartz monzonite that shows some evidence of post-crystalline deformation. Potassium/argon age determinations of four separate muscovite samples from the intrusion yielded ages ranging from 97 to 63 Ma with an average age of 83.5 Ma (Geological Survey of Canada Memoir 369).

A placer claim was established on Fry Creek in 1893 but the area remained inactive until the early 1920s when prospecting work by D.M. Wadams traced the source of the placer to a bedrock occurrence near the junction of Fry and Carney creeks.

The bedrock mineralization consists mainly of masses and disseminations of auriferous pyrite associated with quartz veins emplaced parallel to the foliation of the sedimentary rocks. Gold is also associated with narrow pyritic seams and fractures within the monzonite. A 15-centimetre chip sample taken across an oxidized mineralized seam assayed 97 grams per tonne gold (Minister of Mines Annual Report 1926).

In 1935, an attempt was made to recover placer gold from Fry Creek below the bedrock occurrence. This effort yielded 31 grams of gold (Minister of Mines Annual Report 1935).

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EMPR AR 1893-1046; 1901-1031; 1925-237; *1926-259-260; 1929-325;
1930-256; *1935-E36

EMPR BULL 28, p. 15

EMPR FIELDWORK 1992, pp. 9-16

EMPR GEOS MAP 1995-1

EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)

GSC MAP 1326A

GSC MEM 369

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1995/09/29
DATE REVISED: 1995/09/29

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE059**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHELLY, CAROLLE**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 19 09 N
LONGITUDE: 116 15 50 W
ELEVATION: 2378 Metres

NORTHING: 5574377
EASTING: 552405

LOCATION ACCURACY: Within 500M
COMMENTS: Location of chip sample.

COMMODITIES: Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz Barite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Dutch Creek

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomitic Siltstone
Argillite
Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY

YEAR: 1989

Lead

GRADE

1.6000

Per cent

REFERENCE: Open File 1990-20.

CAPSULE GEOLOGY

The Shelly occurrence is located 24 kilometres southwest of Invermere in the Golden Mining Division. The occurrence is near the headwaters of Ben Abel Creek, a tributary of Dutch Creek, north of Mount Abel in the Purcell Mountains.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by Cretaceous intrusive rocks (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite. The beds have consistent thickness of between 20 to 50 centimetres with slightly undulose bases and truncated tops. The Van Creek Formation grades upwards into thinly bedded quartzite of the Gateway Formation.

The Gateway Formation is subdivided into the Hg1 and Hg2 members. The Hg1 member consists of an interbedded sequence of quartzite, green siltstone and buff dolomitic siltstone and dolomite.

CAPSULE GEOLOGY

Bed thicknesses vary from generally 2 to 10 centimetres in the fine-grained quartzite to 10 to 50 centimetres in the upper dolomite. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The Hg2 member consists of a 90 metre thick, cream to buff weathering dolomite unit. The dolomite displays stromatolitic laminations, cream chert intercalations and rare salt casts. Bed thickness varies between 50 centimetres to 2 metres. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence consists of quartz-barite veins up to 2 metres wide containing galena, chalcopyrite and pyrite with varying amounts of malachite and azurite. The veins trend north to northeasterly and are hosted in dolomitic siltstones and argillites. In the vicinity of the occurrence, the Dutch Creek Formation strikes north and dips 15 degrees to the west. A vertically dipping, southeast trending andesite dike cuts the Dutch Creek rocks in the area where the veins are exposed (Assessment Report 2611).

A two metre chip sample across the mineralized vein assayed 1.6 per cent lead (Open File 1990-20).

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- EMPR ASS RPT *2611
- EMPR FIELDWORK 1989, pp. 29-37
- EMPR GEM 1970-471; 1971-425
- EMPR GEOS MAP 1995-1
- EMPR OF 1990-20; 1990-26
- EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
- GSC MAP 1326A
- GSC MEM 369
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE060**

NATIONAL MINERAL INVENTORY:

NAME(S): **DOC, TOURMALINITE RIDGE, TOURMALINE RIDGE,
FINDLAY CREEK NORTH, NORTH FINDLAY, COTTON**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K01E
BC MAP:
LATITUDE: 50 06 17 N
LONGITUDE: 116 10 10 W
ELEVATION: 2440 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of chip sample. See also St. Anthony (082KSE041).

MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5550605
EASTING: 559394

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz Ankerite
ALTERATION: Silica Albite Tourmaline
ALTERATION TYPE: Silicific'n Albitic Tourmalin'z'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound
CLASSIFICATION: Hydrothermal Sedimentary
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E14 Sedimentary exhalative Zn-Pb-Ag
SHAPE: Tabular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian	Purcell	Creston	
Middle Proterozoic	Purcell	Aldridge	

LITHOLOGY: Argillite
Quartz Arenite
Quartz Wacke
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Purcell Mountains
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 150.0000 Grams per tonne
Copper 0.2000 Per cent
Lead 3.0000 Per cent
Zinc 0.8000 Per cent
REFERENCE: Assessment Report 21275.

CAPSULE GEOLOGY

The Doc occurrence is located 30 kilometres west of Canal Flats in the Golden Mining Division at 2440 metres elevation above sea level.
The occurrence is near the contact between the Creston Formation and the upper division of the Aldridge Formation, of the Proterozoic Purcell Supergroup.
In the vicinity of the occurrence, the Aldridge Formation consists of quartz wacke, quartz arenite, siltstone and lesser argillite that are intruded by thick gabbroic sills of the Moyie intrusions. The sedimentary rocks are characteristically rusty weathering, fine to medium grained and thin to medium bedded. Individual beds range from a few millimetres to 30 centimetres thick. Discontinuous horizons of intraformational conglomerate were noted in a number of localities. Finely disseminated pyrrhotite is common. The sedimentary rocks of the Lower Aldridge have undergone both thermal and regional metamorphism to at least

CAPSULE GEOLOGY

greenschist facies. Biotite alteration in the argillaceous units and quartz-sericite alteration in the arenite and wacke have generated widespread phyllitic and schistose textures.

The Proterozoic Moyie sills cutting the Lower Aldridge Formation are sill-like in overall form but often crosscut bedding or appear as irregular lenses. Some are in excess of 100 metres thick and can be traced almost 10 kilometres. The thicker sills have coarse grained gabbroic cores and finer dioritic margins. They are all mainly composed of hornblende and plagioclase phenocrysts set in a matrix of similar composition (Paper 1990-1).

The White Creek batholith is a well-differentiated Cretaceous granitic intrusion which cuts the Lower Aldridge rocks just southeast of the mineral occurrence. Along the northern border of the batholith, a megacrystic granodiorite phase is common. Plagioclase phenocrysts are commonly 3 to 5 centimetres long, set in a matrix of fine to medium-grained plagioclase, potassium feldspar, quartz and biotite. Magnetite and pyrite occur locally. Aplite and pegmatite dikes are common within the Lower Aldridge sedimentary rocks (Geological Survey of Canada Memoir 369).

The Doc occurrence consists of disseminations and streaks of galena, sphalerite, pyrite and ankerite associated with northwest trending quartz veins cutting argillite of the Creston Formation. At least a dozen have been mapped. The largest vein is 0.2 to 2 metres wide and exposed for 100 metres in a series of trenches. The footwall is silicified, albitized and commonly mineralized with disseminated pyrite, sphalerite and galena. A chip sample from the main vein assayed 3 per cent lead, 0.8 per cent zinc, 0.2 per cent copper and 150 grams per tonne silver (Assessment Report 21275).

Kennecott Canada Exploration Inc. covered the property with mapping, soil geochemistry and UTEM and gravity surveys. A hole was drilled adjacent to an area of extensive tourmalinization, intersected significant silver and lead mineralization over an interval of 105.2 metres. Within that interval there are 46 narrow, stratabound sulphide horizons in thin-bedded siliciclastic rocks, tentatively identified as uppermost Middle Aldridge or Upper Aldridge. An ICP analysis of the total interval yielded 5.5 ppm silver, 1460 ppm lead, and 42 ppm ppm zinc. Kennecott dropped the option in February 1999.

Eagle Plains Resources Ltd. and Miner River Resources Ltd. hold the area as North Findlay. Eagle Plains and Miner River amalgamated to form Eagle Plains Resources Ltd. in May 1999. In May 1999, Billiton Exploration Canada Ltd. optioned the North Findlay and Hap (10 kilometres to the northeast) properties. As part of the agreement, Eagle Plains completed 1617 metres of drilling in 6 holes during 1999. Although the results were reported to be encouraging, Billiton elected not (March 2000) to proceed with its option.

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- EMPR EXPL 1983-111; 1985-C72; 1998-5,66
- EMPR FIELDWORK 1989, p. 29-37
- EMPR GEM 1972-68; 1973-87
- EMPR GEOS MAP 1995-1
- EMPR OF 1990-20
- EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
- GSC MAP 1712A; 1713A; 1326A
- GSC MEM 369
- GCNL #176(Sept.14), #212(Nov.4), 1998
- N MINER May 31, 1999; July 31, 2000
- PR REL Eagle Plains Resources Ltd., July 28, 1999
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE061**

NATIONAL MINERAL INVENTORY:

NAME(S): **SEC**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 26 45 N
LONGITUDE: 116 31 46 W
ELEVATION: 1830 Metres

NORTHING: 5588308
EASTING: 533410

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Open File 1990-26.

COMMODITIES: Tungsten Molybdenum Copper

MINERALS

SIGNIFICANT:	Scheelite	Chalcopyrite	Powellite	Pyrrhotite
ASSOCIATED:	Quartz	Tremolite		
ALTERATION:	Quartz	Tremolite		
ALTERATION TYPE:	Skarn			
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K05 W skarn K01 Cu skarn
 K07 Mo skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Cretaceous

GROUP

Horsethief Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Hanging Glacier Stock

LITHOLOGY:

Limestone
Skarn
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional Contact

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Sec occurrence is located approximately 40 kilometres southwest of Invermere in the Golden Mining Division. The property is situated at 1830 metres elevation above sea level near the headwaters of Farnham Creek.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Near the occurrence, the sedimentary rocks of the Dutch Creek and Toby formations and of the Horsethief Creek Group have been intruded by the Cretaceous Hanging Glacier stock.

The Hanging Glacier stock is 1.5 kilometres in diameter and consists of quartz, biotite, plagioclase and potassium feldspar phenocrysts. The overall composition is that of quartz monzonite.

CAPSULE GEOLOGY

A coarse-grained granodiorite phase is developed near the contact of the stock and a number of small porphyritic quartz monzonite plugs have intruded the stock near its eastern contact.

Quartz-tremolite skarn is developed within limestone strata of the Horsethief Creek Group in the vicinity of the Hanging Glacier stock. Minor scheelite mineralization occurs with chalcopyrite, powellite and pyrrhotite within the skarn rocks.

BIBLIOGRAPHY

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- EMPR EXPL 1979-88; 1980-115
- EMPR FIELDWORK 1989, pp. 29-37
- EMPR GEM 1972-73
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- EMPR OF 1990-26; 1991-17
- EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
- GSC MAP 1326A
- GSC MEM 369
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/12

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE062**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUNCAN LAKE QUARTZITE** DUNCAN ROAD

STATUS: Past Producer Open Pit

MINING DIVISION: Slocan

REGIONS: British Columbia

NTS MAP: 082K07W

BC MAP:

LATITUDE: 50 26 42 N

LONGITUDE: 116 54 42 W

ELEVATION: 610 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry along Duncan Lake road (Z.D. Hora, Personal Communication).

UTM ZONE: 11 (NAD 83)

NORTHING: 5588113

EASTING: 506272

COMMODITIES: Flagstone Dimension Stone Building Stone Quartzite

MINERALS

SIGNIFICANT: Quartz Mica

MINERALIZATION AGE: Lower Cambrian

DEPOSIT

CHARACTER: Massive Stratiform Stratabound
CLASSIFICATION: Metamorphic Sedimentary Industrial Min.
TYPE: R08 Flagstone

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Hamill	Undefined Formation	

LITHOLOGY: Micaceous Quartzite
Quartz Feldspar Grit
Pebble Conglomerate
Calcareous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

ANCESTRAL NORTH AMERICA
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist
Amphibolite

CAPSULE GEOLOGY

The Duncan Lake Quartzite quarry is located on the east shore of Duncan Lake, between Little Glacier and Howser creeks, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The quarry is within micaceous quartzite of the Lower Cambrian Hamill Group, near the axis of an overturned syncline (Geological Survey of Canada Map 1326A).

In the vicinity of the quarry, the Hamill Group is characterized by quartz and feldspar grit and pebble conglomerate overlain by clean, crossbedded quartzite. The quartzite of the Hamill Group is overlain by the Mohican Formation, a calcareous schist which is transitional with the overlying marble of the Badshot Formation (Paper 1993-1).

Several truck loads of quartzite were quarried by B. Logan in 1972 for use as facing stone but no figures are available.

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EMPR FIELDWORK 1992, pp. 9-16
EMPR GEM *1972-581
EMPR GEOS MAP 1995-1
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A; 12-1957
GSC MEM 161; 369, pp. 54-58
GSC OF 481
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1059
REPORT: RGEN0100

BIBLIOGRAPHY

Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/20

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE063**

NATIONAL MINERAL INVENTORY:

NAME(S): **ECHO LAKE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 05 N
LONGITUDE: 116 12 21 W
ELEVATION: 2485 Metres

NORTHING: 5540940
EASTING: 556894

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of claim block.

COMMODITIES: Tungsten Zinc Lead

MINERALS

SIGNIFICANT: Scheelite Sphalerite Galena
ASSOCIATED: Muscovite Tourmaline Actinolite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I12 W veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Helikian Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Quartz Wacke
Gabbro
Gabbro Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional Contact

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Echo Lake occurrence is located 3 kilometres south of Doctor Peak of the Purcell Mountain Range, on a small ridge near a tarn locally known as Echo Lake at the headwaters of east Doctor Creek.

The occurrence is hosted within a small gabbroic dike that cuts the Lower Aldridge Formation of the Proterozoic Purcell Supergroup.

In the vicinity of the occurrence, the Aldridge Formation consists of quartz wacke, quartz arenite, siltstone and lesser argillite that are intruded by thick gabbroic sills of the Moyie intrusions. The sedimentary rocks are characteristically rusty weathering, fine to medium grained and thin to medium bedded. Individual beds range from a few millimetres to 30 centimetres thick. Discontinuous horizons of intraformational conglomerate were noted in a number of localities. Finely disseminated pyrrhotite is common. The sedimentary rocks of the Lower Aldridge have undergone both thermal and regional metamorphism to at least greenschist facies. Biotite alteration in the argillaceous units and quartz-sericite alteration in the arenite and wacke have generated widespread phyllitic and schistose textures.

The Proterozoic Moyie sills cutting the Lower Aldridge Formation are sill-like in overall form but often crosscut bedding or appear as irregular lenses. Some are in excess of 100 metres thick and can be traced almost 10 kilometres. The thicker sills have coarse grained gabbroic cores and finer dioritic margins. They are all mainly composed of hornblende and plagioclase phenocrysts set in a matrix of similar composition (Paper 1990-1).

The White Creek batholith is a well-differentiated Cretaceous granitic intrusion which cuts the Lower Aldridge rocks just southeast of the mineral occurrence. Along the northern border of the batholith, a megacrystic granodiorite phase is common. Plagioclase phenocrysts are commonly 3 to 5 centimetres long, set in a matrix of fine to medium-grained plagioclase, potassium feldspar, quartz and biotite. Magnetite and pyrite occur locally. Aplite and pegmatite dikes are common within the Lower Aldridge sedimentary rocks (Geological Survey of Canada Memoir 369).

CAPSULE GEOLOGY

On the property, the Purcell sedimentary rocks strike 060 degrees and dip gently (25 degrees) northwest. Deformation of the strata is minimal but minor northwest trending symmetrical folds have been documented.

The occurrence consists of scheelite, sphalerite and minor galena in a narrow muscovite-tourmaline-actinolite vein cutting the gabbroic sill on the west ridge above Echo Lake. The mineralization is erratic and uneconomic. Geological mapping in 1971 and 1973 failed to outline any significant reserves (Assessment Report 3287).

BIBLIOGRAPHY

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- EM GEOS MAP 1998-4
- EMPR ASS RPT 3287, 4705, *6413, 11737
- EMPR FIELDWORK 1989, pp. 29-37
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- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1995/08/17
DATE REVISED: 1995/09/04

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE064**

NATIONAL MINERAL INVENTORY:

NAME(S): **REDMAC**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 11 N
LONGITUDE: 116 26 13 W
ELEVATION: 2320 Metres

NORTHING: 5592863
EASTING: 539944

LOCATION ACCURACY: Within 500M
COMMENTS: Location of drillholes.

COMMODITIES: Zinc Lead Silver

MINERALS

SIGNIFICANT: Sphalerite Galena
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Stratiform
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic
Devonian

GROUP

Horsethief Creek
Undefined Group

FORMATION

Undefined Formation
Mount Forster

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzite
Siltstone
Dolomite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel
COMMODITY

YEAR: 1985

	GRADE	
Silver	3.0000	Grams per tonne
Lead	0.2300	Per cent
Zinc	1.6400	Per cent

COMMENTS: Drill core sample over a 5.1 metre interval.
REFERENCE: Assessment Report 14114.

CAPSULE GEOLOGY

The Redmac prospect is located 30 kilometres west of Invermere. The main showing is at 2320 metres elevation above sea level on the southwest bank of Red Line Creek in the Golden Mining Division. Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1). The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1). In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26). Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster

CAPSULE GEOLOGY

formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The claim group is underlain by argillite, siltstone and quartzite of the Devonian Mount Forster Formation which are in fault contact with upper dolomite and upper quartzite members of the Mount Nelson Formation and dolomite, siltstone and quartzite of the Horsethief Creek Group.

Several types of mineralization are documented for the Redmac, these include:

- 1) Galena and sphalerite occurring in 5 to 10 centimetre wide veins perpendicular to bedding in quartzite and siltstone of the
- 2) Sphalerite with minor galena in quartz-carbonate fractures in grey-blue dolomite of the Horsethief Creek Group.
- 3) Argentiferous galena and sphalerite veins associated with normal faults cutting cryptalgal dolomite of the upper dolomite member of the Mount Nelson Formation.
- 4) Galena with minor sphalerite in narrow discontinuous quartz veins within Mount Forster quartzite.
- 5) Sphalerite and galena in fractures in dolomitic quartzite of the Mount Forster Formation (Assessment Report 10167).

A total of five diamond-drill holes were drilled to evaluate the property in 1985. The best drill intersection assayed 0.23 per cent lead, 1.64 per cent zinc and 3 grams per tonne silver over an average width of 5.1 metres (Assessment Report 14114).

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DATE CODED: 1995/09/11
DATE REVISED: 1995/09/11

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE065**

NATIONAL MINERAL INVENTORY:

NAME(S): **IMP**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 00 N
LONGITUDE: 116 26 42 W
ELEVATION: 2337 Metres

NORTHING: 5546191
EASTING: 539720

LOCATION ACCURACY: Within 1 KM
COMMENTS: Location is centre of claim block.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Cretaceous	Purcell	Creston	Fry Creek Intrusion

ISOTOPIC AGE: 77 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite-muscovite

LITHOLOGY: Quartz Siltstone
Argillite
Quartz Arenite
Quartz Monzonite

HOSTROCK COMMENTS: Average age for the intrusion from seven determinations (GSC Memoir 369).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional Contact

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The IMP occurrence is located near the headwaters of Granite Creek, a west tributary of Findlay Creek, in the Golden Mining Division.

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Creston Formation of the Proterozoic Purcell Supergroup which consists of an interbedded sequence of quartz siltstone and argillite with some quartz arenite and minor quartz wacke (Open File 1990-26).

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Mineralization consists of molybdenite occurring in minor quantities in irregular veins within the Creston Formation near the eastern border of the Fry Creek intrusion.

The Fry Creek intrusion is characterized by leuco-quartz monzonite of medium grain size and uniform texture. The northwest portion of the pluton is a coarse, muscovite quartz monzonite with minor tourmaline. Potassium/argon age determinations for the Fry Creek intrusion yielded values ranging from 45 to 97 million years with an average of 77 million years for the intrusion (Geological Survey of Canada Memoir 369).

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GSC MEM 369

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1065
REPORT: RGEN0100

BIBLIOGRAPHY

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DATE CODED: 1985/07/24
DATE REVISED: 1995/08/28

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE066**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHARLEMONT**, MELODY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 19 05 N
LONGITUDE: 116 21 32 W
ELEVATION: 1980 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

UTM ZONE: 11 (NAD 83)

NORTHING: 5574191
EASTING: 545643

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite Malachite Azurite
ASSOCIATED: Quartz Carbonate
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 70 x 30 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Vein was followed 70 metres laterally and 30 metres vertically.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Purcell Dutch Creek

LITHOLOGY: Dolomite
Argillite
Siliceous Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 120.0000 Grams per tonne
Lead 3.6500 Per cent
REFERENCE: Assessment Report 21207.

CAPSULE GEOLOGY

The Charlemont occurrence is located 25 kilometres southwest of Invermere in the Golden Mining Division. The occurrence is between Coppercrown and Toby creeks on the north face of Coppercrown Mountain. The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Dutch Creek Formation of the Proterozoic Purcell Supergroup. The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations (Paper 1990-1). In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26). The Dutch Creek Formation includes green and black laminated argillite, quartzite, siltstone and buff dolomitic siltstone. The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite and correlates with the strata of the Lower Kitchener Formation. The Gateway Formation consists of an interbedded sequence of quartzite, green siltstone and buff dolomite that correlates with the lower portion of the Dutch Creek Formation. The contact with the

CAPSULE GEOLOGY

underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

At the Charlemont occurrence, the Dutch Creek Formation which hosts the occurrences, consists of northwest trending, isoclinally folded, buff to cream coloured dolomite, siliceous dolomite and grey to black argillite crosscut by north-northwest trending shear zones.

Mineralization is of two principal types. The first of these consists of galena, sphalerite and tetrahedrite in quartz-carbonate veins which occur along steeply dipping, northwest-trending shears. This structure has been exposed through a series of trenches, pits and three small adits. The mineralized vein ranges in width from 0.1 to 1.0 metre. Surface trenches traced the mineralization for 70 metres laterally and 30 metres vertically. Near the surface, the vein material is very oxidized and stained with malachite and azurite. Fine-grained galena occurs as 2 to 10 centimetre wide vertical seams within the quartz-carbonate vein. Sphalerite occurs as fine euhedral disseminated grains within the gangue.

Adit 1 extends for 18.5 metres along a 25 centimetre wide shear hosting a quartz-carbonate vein. Adit 2 extends for 5 metres and is driven on the same structure as adit 1 but here the mineralization is as two conjugate veins, a 60 centimetre wide quartz vein at the portal and a 50 centimetre vein near the face. Adit 3 is caved but it is believed to be driven off the same structure as the other two adits (Assessment Report 13657).

The second type of mineralization consists of galena with abundant malachite and azurite staining on joint and fracture planes in blocky grey-green dolomite. This mineralization occurs 50 metres southwest of the vein exposed in the adits. The structure is at the contact between argillite and dolomite. It has been followed along strike for 120 metres and has an average width of 1.5 metres. A 1.5 metre channel sample across the best section of the mineralization assayed 120 grams per tonne silver and 3.65 per cent lead (Assessment Report 13657).

A total of 12 tonnes mined from the adits in 1907 produced 26,780 grams of silver and 5555 kilograms of lead.

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EMPR GEOS MAP 1995-1

EMPR INDEX 3-192

EMPR OF 1990-26

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GSC MEM 369

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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/29

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE067**

NATIONAL MINERAL INVENTORY:

NAME(S): **COMSTOCK (L.4342)**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 28 33 N
LONGITUDE: 116 18 40 W
ELEVATION: 2560 Metres

NORTHING: 5591765
EASTING: 548881

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Crown grant Lot 4342.

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Chert
Carbonaceous Shale

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: Regional GRADE: Greenschist

CAPSULE GEOLOGY

The Comstock property is situated near the head of Springs Creek on the ridge between Springs and Bruce creeks, at 2560 metres elevation above sea level, in the Golden Mining Division. The property consists of a single Crown grant (Lot 4342).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The deposit is within the upper dolomite member of the Mount Nelson Formation, immediately below the Windermere unconformity (Open File 1990-26). The host dolomite is light grey and fine grained with abundant black chert layers which preferentially replace cryptalgal structures and thin carbonaceous black shale interbeds. The strata are folded in northwest-trending anticlines and synclines which vary from isoclinal to more open, broader folds. The occurrence consists of a 1 metre wide massive galena vein occurring as replacement of the dolomite. A 19 tonne bulk sample taken from the vein in 1907 yielded 21,461 grams of silver and 11,189 kilograms of lead.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1069
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BIBLIOGRAPHY

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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/08/30

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE068**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREEN RIDGE**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 35 N
LONGITUDE: 116 15 08 W
ELEVATION: 2130 Metres

NORTHING: 5593720
EASTING: 553041

LOCATION ACCURACY: Within 500M

COMMENTS: From Open File 1990-26, page 42.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Horsethief Creek	Undefined Formation	

LITHOLOGY: Quartz Arenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Green Ridge prospect is situated near the headwaters of Springs Creek at an elevation of 2130 metres elevation in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The prospect consists of a number of small veins of massive white quartz and siderite with chalcopyrite hosted in coarse grained quartz arenite of the Horsethief Group. The occurrence is in the immediate footwall of a major north trending compressional fault known as the Panorama-Groto fault (Open File 1990-26). Drilling in 1980 indicated minor gold and silver values associated with the quartz veining (Exploration in British Columbia 1980).

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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PAGE: 1071
REPORT: RGEN0100

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/14

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE069**

NATIONAL MINERAL INVENTORY: 082K2 Mo1

NAME(S): **PEGLEG**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 54 N
LONGITUDE: 116 42 50 W
ELEVATION: 1370 Metres

NORTHING: 5545897
EASTING: 520477

LOCATION ACCURACY: Within 1 KM
COMMENTS: West side of Gillis Creek, south of Fry Creek.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz Pyroxene Fluorite Pyrite
ALTERATION: Garnet Pyroxene Titanite Scapolite Fluorite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Skarn
TYPE: K07 Mo skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Unknown	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Cretaceous			Fry Creek Intrusion

ISOTOPIC AGE: 83.5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Muscovite

LITHOLOGY: Limestone
Calcareous Quartzite
Muscovite Quartz Monzonite
Skarn

HOSTROCK COMMENTS: Average of four separate determinations (Geological Survey of Canada Memoir 369).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional Contact
COMMENTS: Contact metamorphism from Fry Creek intrusion.

PHYSIOGRAPHIC AREA: Purcell Mountains
GRADE: Greenschist

CAPSULE GEOLOGY

The Pegleg occurrence is situated at 1370 metres elevation above sea level on the west side of Gillis Creek, a south branch of Fry Creek, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The occurrence is hosted within a large, linear limestone and quartzite inclusion rafted within the Cretaceous Fry Creek intrusion. The limestone and calcareous quartzite have been extremely altered to a mass of garnet, titanite, fluorite, quartz, pyroxene and scapolite. Molybdenite and some pyrite are sparingly distributed, particularly along irregular quartz veins.

The Fry Creek intrusion, in the vicinity of the occurrence, is a coarse muscovite quartz monzonite that shows some evidence of post-crystalline deformation. Potassium/argon age determinations on four separate muscovite samples from the intrusion yielded ages ranging from 97 to 63 Ma with an average age of 83.5 Ma (Geological Survey of Canada Memoir 369).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1073
REPORT: RGEN0100

BIBLIOGRAPHY

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Horsethief Creek Area, Purcell Mountains, Southeast British
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England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/28

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE070**

NATIONAL MINERAL INVENTORY:

NAME(S): **HAT**, HAT BARITE

MINING DIVISION: Golden

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082K08W

BC MAP:

LATITUDE: 50 29 57 N

LONGITUDE: 116 17 02 W

ELEVATION: 2285 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of exposed barite vein.

UTM ZONE: 11 (NAD 83)

NORTHING: 5594378

EASTING: 550788

COMMODITIES: Barite

Copper

MINERALS

SIGNIFICANT: Barite Tetrahedrite

ASSOCIATED: Tetrahedrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

Shear

CLASSIFICATION: Hydrothermal

Industrial Min.

TYPE: 110 Vein barite

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION: 20 x 6 x 2 Metres

STRIKE/DIP: 147/55W

TREND/PLUNGE:

COMMENTS: The vein, which is 2.4 metres wide, has been traced for 20 metres along strike and 6 metres downdip.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Middle Proterozoic

Horsethief Creek

Undefined Formation

LITHOLOGY: Quartzite

Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Purcell Mountains

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1977

QUANTITY: 2700 Tonnes

COMMODITY

GRADE

Barite

92.4000

Per cent

COMMENTS: Barite with specific gravity of 4.37 and less than 0.1 per cent copper. Preliminary reserve calculations indicate a resource of 1468 tonnes of barium.

REFERENCE: Assessment Report 6893.

CAPSULE GEOLOGY

The Hat property is situated near the head of Springs Creek on the ridge between Springs and Bruce creeks, at 2285 metres elevation above sea level, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper

CAPSULE GEOLOGY

quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence consists of a massive barite vein within a northwest-trending fault that offsets quartzite and conglomerate of the Horsethief Creek Group. The vein has been trenched for a distance of 20 metres along strike and 6 metres downdip. It has an average thickness of 2.4 metres and consists of pure barite with less than 0.1 per cent copper as tetrahedrite. Preliminary reserve calculations indicate a resource of 2700 tonnes of 92.4 per cent BaSO₄ with a specific gravity of 4.37 (Assessment Report 6893).

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GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/14

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE071**

NATIONAL MINERAL INVENTORY:

NAME(S): **DRAGON, OK**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 22 27 N
LONGITUDE: 116 21 42 W
ELEVATION: 1646 Metres

NORTHING: 5580428
EASTING: 545391

LOCATION ACCURACY: Within 1 KM
COMMENTS: Location of drillholes.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Gateway	

LITHOLOGY: Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1924

COMMODITY	GRADE	
Silver	15.0000	Grams per tonne
Copper	13.3600	Per cent

REFERENCE: Minister of Mines Annual Report 1924, page 182.

CAPSULE GEOLOGY

The Dragon occurrence is located 6 kilometres northeast of Toby Creek in the Golden Mining Division. The occurrence is situated on the northern side of a small unnamed tributary of Toby Creek at an elevation of 1646 metres above sea level.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Dragon prospect was explored with a 12 metre long adit in

CAPSULE GEOLOGY

1924 and by four drillholes in 1965 (Minister of Mines Annual Reports 1924 and 1965). The occurrence consists of a quartz vein 1.2 to 1.5 metres wide containing disseminated pyrite and chalcopyrite concentrated in erratic pockets the entire length of the adit. The vein is hosted in argillite of the Gateway Formation. A grab sample from a mineralized section of the vein assayed 13.36 per cent copper and 15 grams per tonne silver (Minister of Mines Annual Report 1924).

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GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/22

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE072**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOHNSONS LANDING, DUNCAN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 05 N
LONGITUDE: 116 53 01 W
ELEVATION: 580 Metres

NORTHING: 5548057
EASTING: 508327

LOCATION ACCURACY: Within 500M

COMMENTS: The showing is on S.G. Lake's farm, north of Johnsons Landing.

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Unknown
ALTERATION TYPE: Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cambrian	Hamill	Undefined Formation	
Lower Cambrian	Undefined Group	Badshot	

LITHOLOGY: Quartzite
Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Purcell Trench
RELATIONSHIP: Ancestral North America

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1967
SAMPLE TYPE: Chip
COMMODITY GRADE
Lead 1.8000 Per cent
Zinc 0.8000 Per cent

COMMENTS: A 3.6 metres wide chip sample across a mineralized leached zone.
REFERENCE: Minister of Mines Annual Report 1967, page 259.

CAPSULE GEOLOGY

The Johnsons Landing showing is located on the east shore of Kootenay Lake in the Slocan Mining Division. The property is situated on Mr. S.G. Lake's farm just north of Johnsons Landing. Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1). The property is underlain by quartzite of the Lower Cambrian Hamill Group and marble of the Badshot Formation. No geological description of the showing is available but a chip sample taken across a 3.6 metres wide section of leached mineralization at the end of the drift assayed 1.8 per cent lead and 0.8 per cent zinc (Minister of Mines Annual Report 1967).

BIBLIOGRAPHY

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EMPR FIELDWORK 1992, pp. 9-16

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1079
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEOS MAP 1995-1
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/29

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE073**

NATIONAL MINERAL INVENTORY:

NAME(S): **HI-LO**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 45 N
LONGITUDE: 116 54 49 W
ELEVATION: 700 Metres

NORTHING: 5543730
EASTING: 506185

LOCATION ACCURACY: Within 500M

COMMENTS: Location of vertical drillhole.

COMMODITIES: Lead Zinc Copper Tungsten

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Scheelite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Replacement

TYPE: E12 Mississippi Valley-type Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Cambrian

GROUP

Undefined Group
Lardeau

FORMATION

Badshot
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartz Mica Schist
Calcareous Schist
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

CAPSULE GEOLOGY

The Hi-Lo occurrence is located on the west shore of Duncan Lake, 1.5 kilometres northwest of Schroeder Point in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The property is underlain by quartz mica schist and calcareous schist of the Index Formation of the Lardeau Group. A narrow band of crystalline limestone of the Badshot Formation is exposed on the eastern part of the property. Two types of mineralization are present. The first consists of galena and scheelite with traces of chalcopyrite occurring in quartz veins replacing limestone of the Badshot Formation. The second type of mineralization consists of sphalerite and pyrrhotite as replacement of calcareous schist layers within the Index Formation.

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GSC MEM 369, p. 116
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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1081
REPORT: RGEN0100

BIBLIOGRAPHY

Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England
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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/27

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE074**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUNCAN LAKE**

MINING DIVISION: Slocan

STATUS: Developed Prospect

REGIONS: British Columbia

NTS MAP: 082K07W

BC MAP:

LATITUDE: 50 24 17 N

LONGITUDE: 116 56 59 W

ELEVATION: 735 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located 1.2 kilometres north of North Creek, on the east shore of Duncan Lake.

UTM ZONE: 11 (NAD 83)

NORTHING: 5583632

EASTING: 503573

COMMODITIES: Talc

Magnesite

MINERALS

SIGNIFICANT: Talc

Magnesite

ASSOCIATED: Quartz

Chlorite

Muscovite

Feldspar

Biotite

ALTERATION TYPE: Talc

Leaching

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform

Massive

CLASSIFICATION: Hydrothermal

Industrial Min.

TYPE: E08 Carbonate-hosted talc

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cambrian
Devonian-Mississipp.

GROUP

Hamill
Lardeau

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY:

Mica Schist
Chlorite Muscovite Schist
Biotite Muscovite Schist
Chlorite Feldspar Schist
Mica Quartzite
Slate
Phyllite
Quartzite
Marble

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Medium to upper greenschist facies.

Ancestral North America

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1993

SAMPLE TYPE: Bulk Sample

COMMODITY

GRADE

Magnesite

67.0000

Per cent

Talc

95.0000

Per cent

COMMENTS: Results are from metallurgical flotation tests to produce a 95 per cent talc concentrate. Recoveries were 59.24 per cent and a byproduct grading 67 per cent magnesite and 32 per cent talc was also produced.

REFERENCE: Assessment Report 23285.

CAPSULE GEOLOGY

The showings are located 1.2 kilometres north of North Creek, on the east shore of Duncan Lake, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The talc occurs on the eastern limb of the Howser syncline,

CAPSULE GEOLOGY

within the Index Formation of the Lardeau Group. The rocks are mostly schists (chlorite-muscovite, biotite-muscovite, chlorite-feldspar), and micaceous quartzite. A band of northwest trending Badshot-Mohican Formation marble, phyllite and muscovite quartz schist separates the Lardeau Group from Lower Cambrian Hamill Group slates, phyllites and quartzite (Open File 1988-19).

On the Duncan Lake property, two talc zones exposed on the logging road, both approximately 5.0 metres wide, occur in a mica schist striking northwest and dipping 65 to 70 degrees east. The talc is reported to be hydrothermally leached and contaminated with 5.0 per cent iron and quartz? fragments.

A magnetometer survey identified three talc zones just above the road showings in an open clearing. The zones are approximately 10 metres thick and range from 20 to 70 metres in length. The length of the zones has not been determined. The talc bodies are found both crosscutting and parallel to bedding.

The talc has been collected by locals for carving, but apparently it is of inferior quality and has not been worked for several years (G. Addie, personal communication, 1987).

Work in 1993 outlined an area of 3 kilometres strike length where industrial quality talc occurs in vertically dipping bands 6 to 45 metres wide. Within the talcose bands, talc content ranges from 52 to 75 per cent. Preliminary metallurgical flotation tests confirmed that a 95 per cent talc concentrate can be produced with a simple process on the talcose material. Recovery was 59.24 per cent and a byproduct grading 67 per cent magnesite and 32 per cent talc was also produced (Assessment Report 23285).

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/20

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE075**

NATIONAL MINERAL INVENTORY:

NAME(S): **PICO**

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 14 N
LONGITUDE: 116 12 56 W
ELEVATION: 2440 Metres

NORTHING: 5539358
EASTING: 556214

LOCATION ACCURACY: Within 500M
COMMENTS: Location of chip sample.

COMMODITIES: Tungsten

MINERALS

SIGNIFICANT: Scheelite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Pegmatite
TYPE: 112 W veins
DIMENSION: 210 x 2 Metres
COMMENTS: Quartz vein.

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian Middle Proterozoic	Purcell	Aldridge	Moyie Intrusions

LITHOLOGY: Pegmatite Dike
Quartz Wacke
Siltstone
Quartz Arenite
Argillite
Gabbroic Sill

HOSTROCK COMMENTS: Vein is associated with pegmatite cutting the Purcell rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1977
SAMPLE TYPE: Chip
COMMODITY: Tungsten GRADE
0.1000 Per cent
COMMENTS: Sample is calculated average grade for the vein.
REFERENCE: Assessment Report 6413.

CAPSULE GEOLOGY

The Pico occurrence is located 4.75 kilometres south of Doctor Peak of the Purcell Mountain Range, in a small cirque locally known as Pico Basin. The occurrence is hosted within a small pegmatite dike that cuts the Lower Aldridge Formation of the Proterozoic Purcell Supergroup. In the vicinity of the occurrence, the Aldridge Formation consists of quartz wacke, quartz arenite, siltstone and lesser argillite that are intruded by thick gabbroic sills of the Moyie intrusions. The sedimentary rocks are characteristically rusty weathering, fine to medium grained and thin to medium bedded. Individual beds range from a few millimetres to 30 centimetres thick. Discontinuous horizons of intraformational conglomerate were noted in a number of localities. Finely disseminated pyrrhotite is common. The sedimentary rocks of the Lower Aldridge have undergone both thermal and regional metamorphism to at least greenschist facies. Biotite alteration in the argillaceous units and quartz-sericite alteration in the arenite and wacke have generated widespread phyllitic and schistose textures.

CAPSULE GEOLOGY

The Proterozoic Moyie sills cutting the Lower Aldridge Formation are sill-like in overall form but often crosscut bedding or appear as irregular lenses. Some are in excess of 100 metres thick and can be traced almost 10 kilometres. The thicker sills have coarse grained gabbroic cores and finer dioritic margins. They are all mainly composed of hornblende and plagioclase phenocrysts set in a matrix of similar composition (Paper 1990-1).

The White Creek batholith is a well-differentiated Cretaceous granitic intrusion which cuts the Lower Aldridge rocks just southeast of the mineral occurrence. Along the northern border of the batholith, a megacrystic granodiorite phase is common. Plagioclase phenocrysts are commonly 3 to 5 centimetres long, set in a matrix of fine to medium-grained plagioclase, potassium feldspar, quartz and biotite. Magnetite and pyrite occur locally. Aplite and pegmatite dikes are common within the Lower Aldridge sedimentary rocks (Geological Survey of Canada Memoir 369).

On the property, the Purcell sedimentary rocks strike 060 degrees and dip gently (25 degrees) northwest. Deformation of the strata is minimal but minor northwest trending symmetrical folds have been documented (Assessment Report 3287). The occurrence consists of scheelite associated with a quartz vein cutting the Aldridge sedimentary rocks. The vein is 2 metres wide and has been traced for 210 metres along strike. A calculated average assay for the vein assayed 0.13 per cent WO₃ (Assessment Report 6413). Geological mapping in 1971 and 1973 failed to outline any significant reserves.

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DATE CODED: 1995/08/16
DATE REVISED: 1995/08/28

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE076**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARBLEHEAD MARBLE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:

Open Pit Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 15 29 N
LONGITUDE: 116 58 14 W
ELEVATION: 610 Metres

NORTHING: 5567324
EASTING: 502099

LOCATION ACCURACY: Within 500M

COMMENTS: Three kilometres north of the Meadow Creek bridge on Highway 31
(Fieldwork 1986, page 313).

COMMODITIES: Marble Limestone Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Calcite

COMMENTS: Marble.

ASSOCIATED: Mica Graphite Silica Quartz

MINERALIZATION AGE: Lower Cambrian

ISOTOPIC AGE: DATING METHOD: Fossil

MATERIAL DATED: Archaeocyathids

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R04 Dimension stone - marble R09 Limestone
DIMENSION: 150 Metres STRIKE/DIP: 123/40N

COMMENTS: Attitude of bedding. The limestone unit is estimated to be 150 metres thick. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u> Lower Cambrian	<u>GROUP</u> Undefined Group	<u>FORMATION</u> Badshot	<u>IGNEOUS/METAMORPHIC/OTHER</u>
<u>DATING METHOD:</u> Fossil			
<u>MATERIAL DATED:</u> Proterozoic-Paleoz.	Archaeocyathids Hamill	Marsh Adams	

LITHOLOGY: Marble
Limestone
Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Purcell Trench

Ancestral North America

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: UNDERGROUND WORKINGS

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

55.4800

Per cent

COMMENTS: Taken across 1.8 metres in underground workings. Grade given for calcium oxide.

REFERENCE: CANMET Report 811, page 212, Sample 81B.

CAPSULE GEOLOGY

The Marblehead Marble occurrence consists of four quarries in a band of limestone of the Lower Cambrian Badshot Formation that outcrops between 0.4 and 1.6 kilometres north of Marble Head, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

CAPSULE GEOLOGY

The limestone is bounded to the west by schist and quartzite of the underlying Marsh Adams Formation (Hamill Group). Bedding strikes 120 to 125 degrees and dips 40 degrees northeast. The unit is estimated to be 150 metres thick at this locality.

The band of limestone is comprised of fine to medium grained, white to bluish grey and white striped limestone containing a few siliceous streaks, a few flakes of golden mica and some graphite. In one instance, a few veins of white quartz cut the limestone. A sample taken across 8.5 metres of bluish grey and white limestone, exposed 400 metres north of Marble Head, analysed 50.83 per cent CaO, 4.01 per cent MgO, 0.36 per cent SiO₂, 0.01 per cent Al₂O₃, 0.45 per cent Fe₂O₃ and 0.01 per cent sulphur (CANMET Report 811, page 212, Sample 81). A sample taken across 1.8 metres of bluish white, medium-grained limestone in underground workings 1.1 kilometres north of Marble Head analysed 55.48 per cent CaO, 0.34 per cent MgO, 0.24 per cent SiO₂, trace Al₂O₃, 0.16 per cent Fe₂O₃ and 0.02 per cent sulphur (CANMET Report 811, page 212, Sample 81B).

Limestone was produced for marble from a quarry 450 metres north of Marble Head and from an underground chamber 650 metres further north, by the Canadian Granite and Marble Company Ltd. between 1909 and 1936; no production figures are available.

About 1900, 4 quarries located about 3 kilometres north of Meadow Creek bridge on Highway 31 south of Duncan Lake, produced white to grey banded crystalline marble known as "Light Kootenay" and "Dark Kootenay". The marble is banded and medium grained. Joint and fracture density varies with location but large blocks are available. Reserves extend west of all four quarries. This marble was used in the Bank of Commerce building in Nelson.

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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/22

CODED BY: GSB
REVISED BY: GWV

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSE077**

NATIONAL MINERAL INVENTORY:

NAME(S): **LARDEAU**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:
LATITUDE: 50 09 40 N
LONGITUDE: 116 57 36 W
ELEVATION: 549 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location is centre of quarry 1.6 kilometres north of Lardeau (Bulletin 49, Figure 3).

Open Pit

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5556545
EASTING: 502857

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica
MINERALIZATION AGE: Lower Cambrian
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Archaeocyathids

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
DIMENSION: 4400 Metres
COMMENTS: Limestone strikes north, dips gently west.

Massive
Industrial Min.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cambrian	Undefined Group	Badshot	
Proterozoic-Paleoz.	Hamill	Marsh Adams	

LITHOLOGY: Limestone
Siliceous Limestone
Schist
Quartzite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

RELATIONSHIP: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Limestone
GRADE: 51.1100 Per cent

YEAR: 1944

COMMENTS: Taken across 15.2 metres just south of quarry. Grade given for calcium oxide.

REFERENCE: CANMET Report 811, page 212, Sample 82A.

CAPSULE GEOLOGY

The Lardeau limestone occurrence is situated along a cliff on the west side of Kootenay Lake, 1.6 kilometres north of Lardeau on Highway 31, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

A narrow band of limestone of the Lower Cambrian Badshot Formation trends northward along the west side of Kootenay Lake near

CAPSULE GEOLOGY

its north end for 4.4 kilometres. The bed dips gently westward on the east limb of a tight, overturned antiform cored by schist of the overlying Lardeau Group and flanked by underlying quartzite and schist of the Marsh Adams Formation (Hamill Group).

A quarry at the north end of the band displays medium grained, dark bluish grey to bluish grey and white striped limestone containing some interbeds of highly siliceous limestone 5 centimetres to at least 0.6 metre thick. Quartz stringers and thin streaks of brown weathering slate are also evident. A sample comprised of chips taken at 0.6-metre intervals across a 15.2-metre section of light and dark bluish grey limestone just south of the quarry analysed 51.11 per cent CaO, 3.21 per cent MgO, 1.96 per cent SiO₂, 0.27 per cent Al₂O₃, 0.21 per cent Fe₂O₃ and 0.01 per cent sulphur (CANMET Report 811, page 212, Sample 82A).

The limestone was quarried for flux for the smelter at Nelson between 1896 and 1907. The quarry is developed at the foot of a cliff formed by the limestone, 1.6 kilometres north of Lardeau. No production figures are available.

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- EMPR BULL 49, pp. 24,25, Fig.3
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- EMPR FIELDWORK 1992, pp. 9-16
- EMPR GEOS MAP 1995-1
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- CANMET RPT *811, Part 5, pp. 210,212
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/03

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE078**

NATIONAL MINERAL INVENTORY: 082K8 Pb1

NAME(S): **BJ**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 42 N
LONGITUDE: 116 26 48 W
ELEVATION: 2320 Metres

NORTHING: 5586403
EASTING: 539302

LOCATION ACCURACY: Within 500M
COMMENTS: Location of trenches.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Smithsonite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Horsethief Creek Monk

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 88.0000 Grams per tonne
Copper 0.0500 Per cent
Lead 8.9500 Per cent
Zinc 4.3600 Per cent

COMMENTS: Sample across 0.1 metre wide quartz vein containing galena and tetrahedrite.

REFERENCE: Assessment Report 8514.

CAPSULE GEOLOGY

The BJ occurrence consists of two small trenches located near the south shore of Shamrock Lake at an elevation of 2320 metres above sea level in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson

CAPSULE GEOLOGY

Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Mineralization on the BJ showing is of two types. The first type consists of galena, sphalerite and tetrahedrite in fractures and quartz-carbonate veins. Smithsonite occurs in minor amounts as fracture coating. The second type of mineralization consists of only galena and tetrahedrite occurring in subvertical quartz veins. Both types of mineralization are within dolomite of the Monk Formation of the Horsethief Creek Group associated with tensional fractures near a fold axis.

A 0.5 metre rock channel sample collected across a 0.1 metre wide galena-tetrahedrite vein assayed 88 grams per tonne silver, 8.95 per cent lead, 4.36 per cent zinc and 0.05 per cent copper (Assessment Report 8514).

BIBLIOGRAPHY

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- EMPR FIELDWORK 1989, pp. 29-37
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- EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
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- GSC MEM 148; 369
- Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/01

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE079**

NATIONAL MINERAL INVENTORY:

NAME(S): **HATSOFF**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K07E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 26 30 N
LONGITUDE: 116 34 10 W
ELEVATION: 2900 Metres

NORTHING: 5587828
EASTING: 530573

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drillhole collars for holes HO-1 and 2.

COMMODITIES: Molybdenum Zinc

MINERALS

SIGNIFICANT: Molybdenite Pyrite Sphalerite
ASSOCIATED: Quartz Fluorite
ALTERATION: Sericite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Proterozoic Cretaceous	Horsethief Creek	Undefined Formation	Hanging Glacier Stock

LITHOLOGY: Argillite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Contact Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Hornfels
Greenschist

CAPSULE GEOLOGY

The Hatsoff occurrence is located approximately 40 kilometres southwest of Invermere in the Golden Mining Division. The property is situated at 2900 metres elevation above sea level 2 kilometres east of a lake locally known as the Lake of the Hanging Glacier.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Near the occurrence, the sedimentary rocks of the Dutch Creek and Toby formations and of the Horsethief Creek Group have been intruded by the Cretaceous Hanging Glacier stock.

The Hanging Glacier stock is 1.5 kilometres in diameter and consists of quartz, biotite, plagioclase and potassium feldspar phenocrysts. The overall composition is that of quartz monzonite. A coarse-grained granodiorite phase is developed near the contact of the stock and a number of small porphyritic quartz monzonite plugs

CAPSULE GEOLOGY

have intruded the stock near its eastern contact. Molybdenite mineralization occurs in pyritic quartz stockwork associated with the porphyritic quartz monzonite plugs and within argillite of the Horsethief Creek Group rocks next to the intrusion. The stockwork is structurally controlled and associated with strong phyllic alteration of the quartz monzonite. Fluorite and sphalerite are also present in minor amounts within the stockwork (Assessment Report 7534).

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GSC MEM 148; 369
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DATE CODED: 1985/07/24
DATE REVISED: 1995/09/12

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE080**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIGH EAGLE** WASHBURN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 28 N
LONGITUDE: 116 21 14 W
ELEVATION: 1677 Metres

NORTHING: 5586024
EASTING: 545896

LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit portal.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcocite Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Middle Proterozoic GROUP Purcell FORMATION Gateway IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Grab
COMMODITY GRADE
Gold 7.0000 Grams per tonne
COMMENTS: A grab sample of a 3 metre wide vein only assayed for gold.
REFERENCE: Assessment Report 9362.

CAPSULE GEOLOGY

The High Eagle showing is located 4 kilometres south of Mount Nelson, at 1677 metres elevation north of Delphine Creek in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism

CAPSULE GEOLOGY

to at least greenschist facies.

The occurrence consists of a 3 metre wide quartz vein that contains pyrite and minor amounts of chalcocite, malachite and azurite. The vein is at the contact between orange weathering dolomite and argillite of the Gateway Formation. The prospect has been explored with a 20 metre long adit and a five metre deep shaft. A grab sample from the vein assayed 7 grams per tonne gold (Assessment Report 9362).

BIBLIOGRAPHY

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EMPR ASS RPT *9362, 12893
EMPR EXPL 1984-92
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
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GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/05

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE081**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROCKY TOP**, ALPINE

MINING DIVISION: Golden

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 07 39 N
LONGITUDE: 116 09 54 W
ELEVATION: 2378 Metres

NORTHING: 5553141
EASTING: 559683

LOCATION ACCURACY: Within 500M
COMMENTS: Location of drillholes.

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz Ankerite
ALTERATION: Albite Silica
ALTERATION TYPE: Albitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic Purcell Creston

LITHOLOGY: Pyritic Argillite
Siltstone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Purcell Mountains
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 3.0000 Grams per tonne
Lead 0.5000 Per cent
Zinc 1.5000 Per cent

COMMENTS: Two metre wide sample of mineralized zone.
REFERENCE: Assessment Report 21275.

CAPSULE GEOLOGY

The Rocky Top occurrence is located 22 kilometres west of Canal Flats in the Golden Mining Division. The occurrence is within the Creston Formation near the contact with the Upper Aldridge Formation of the Proterozoic Purcell Supergroup (Open File 1990-26). On the Rocky Top property, the oldest rocks belong to the Upper Aldridge Formation and consist of interbedded black argillite, minor siltstone and bedded white quartzite. The contact with the overlying Creston Formation is gradational and defined as an area where greenish argillite, green siltstone and quartzite predominate. Intrusive rocks consist of metadiorite or diabase sills of the Proterozoic Moyie intrusions. Numerous faults appear to control and localize areas of albitization, sericitization and mineralization. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies. Bulldozer trenching has exposed a mineralized zone of approximately 10 metres in width over a 100 metre strike length. The prospect consists of a flat lying, shallow dipping albitized and silicified zone one to three metres thick within siltstone and pyritic argillite of the Lower Creston Formation. The mineralized zone is cut by near-vertical faults with minor left-lateral offsets.

CAPSULE GEOLOGY

Pyrite, galena, sphalerite and ankerite occur as thin, high grade crosscutting bands and as coarse crystalline aggregates associated with late-stage quartz veins that parallel and crosscut the zone. In addition, mineralized quartz veins also occur within the overlying unaltered black, pyritic argillite. A two metre chip sample taken across the best area of mineralization assayed 3 grams per tonne silver, 1.5 per cent zinc and 0.5 per cent lead (Assessment Report 15195).

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EM EXPL 1999-40-52
EM FIELDWORK 1999, pp. 185-192
EM GEOS MAP 1998-4
EMPR ASS RPT 12635, 14576, *15195, 21275
EMPR FIELDWORK 1989, pp. 29-37
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EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1712A; 1713A; 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1987/02/18
DATE REVISED: 1995/08/18

CODED BY: AFW
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE082**

NATIONAL MINERAL INVENTORY:

NAME(S): **SCHROEDER CREEK**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

Open Pit

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 50 N
LONGITUDE: 116 54 35 W
ELEVATION: 620 Metres

NORTHING: 5542032
EASTING: 506466

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on limestone band (Bulletin 53, Figure 2B).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Lower Cambrian
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Archaeocyathids

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
DIMENSION: 2000 Metres
COMMENTS: Limestone trends north-northwest for 2.0 kilometres and dips steeply east.

Massive
Industrial Min.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Lower Cambrian
GROUP: Undefined Group
DATING METHOD: Fossil
MATERIAL DATED: Archaeocyathids
Proterozoic-Paleoz. Hamill

FORMATION: Badshot
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

RELATIONSHIP: Ancestral North America

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Limestone

YEAR: 1934

GRADE: 96.0700 Per cent

COMMENTS: Sample of light grey limestone. Grade given for calcium carbonate.
REFERENCE: Geological Survey of Canada Memoir 173, page 34.

CAPSULE GEOLOGY

The Schroeder Creek limestone quarry is situated just south of the mouth of Schroeder Creek, on the west shore of Kootenay Lake, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margin of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

Limestone was quarried and used as flux for the smelter at Nelson earlier this century. The quarry lies in a band of light grey to dark grey, massive, coarse-grained limestone of the Lower Cambrian Badshot Formation that trends north-northwest for 2.0 kilometres, crossing the creek 0.4 kilometre above its mouth. The bed dips steeply to the east. Underlying quartzites of the Lower Cambrian Hamill Group outcrop to the west. Two grab samples assayed as

CAPSULE GEOLOGY

follows in per cent (Geological Survey of Canada Memoir 173, page 34):

Sample	CaCO3	MgCO3	Insolubles	Fe2O3+Al2O3
1	89.28	6.81	2.91	0.48
2	96.07	2.50	0.52	0.56

Sample 1 is of dark grey limestone, and Sample 2 is of light grey limestone.

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EMPR AR 1959-172
EMPR BULL 49; *53, p. 23, Fig.2B
EMPR FIELDWORK 1992, pp. 9-16
EMPR GEOS MAP 1995-1
EMPR OF 1992-18, p. 104
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 12-1957; 235A; 1326A
GSC MEM *173, p. 34; 369, pp. 58-59
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1989/10/03
DATE REVISED: 1995/09/22

CODED BY: PSF
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE083**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALIMONA QUARTZITE**, ALIMONA 1, ALIMONA 2

STATUS: Past Producer Open Pit

MINING DIVISION: Slocan

REGIONS: British Columbia

NTS MAP: 082K07W

BC MAP:

LATITUDE: 50 17 14 N

LONGITUDE: 116 55 07 W

ELEVATION: 700 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry location (Z.D. Hora, personal communication).

UTM ZONE: 11 (NAD 83)

NORTHING: 5570569

EASTING: 505798

COMMODITIES: Flagstone Dimension Stone Building Stone Quartzite

MINERALS

SIGNIFICANT: Quartz Mica

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratiform Stratabound

CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R08 Flagstone

DIMENSION: Metres

STRIKE/DIP: 165/65E

TREND/PLUNGE:

COMMENTS: Structural data are for the limestone of the Hamill Group.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Proterozoic-Paleoz.	Hamill	Marsh Adams	

LITHOLOGY: Micaceous Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

ANCESTRAL NORTH AMERICA

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Purcell Trench

GRADE: Greenschist

CAPSULE GEOLOGY

The Alimona Quartzite occurrence is located between Glacier Creek and the Duncan Lake road on the southeast side of Duncan Lake, in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

This area, on the east side of Duncan Lake, is underlain by metasedimentary rocks of the Hamill Group and Badshot Formation which are warped into a series of north to northwest-trending folds. At the quarry, the strata strike 165 degrees and dip 65 degrees east.

Micaceous quartzite of the Hadrynian to Lower Cambrian Marsh Adams Formation (Hamill Group) is quarried seasonally by Porcupine Mines Ltd. of Salmo to produce flagstone for building facings and a variety of other architectural and decorative purposes. No production figures are available.

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GSC MEM 369, pp. 54-58

GSC OF 481

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-

Horsethief Creek Area, Purcell Mountains, Southeast British

Columbia, Canada, unpublished Ph.D. Thesis, University of London,

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RUN TIME: 16:43:39

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REPORT: RGEN0100

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England

DATE CODED: 1991/03/07
DATE REVISED: 1995/09/21

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE084**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRYAN**, FREE SILVER

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 20 09 N
LONGITUDE: 116 17 29 W
ELEVATION: 1800 Metres

NORTHING: 5576211
EASTING: 550429

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location plotted from Open File 1990-26, Figure 31.

COMMODITIES: Silver

Copper

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown

CLASSIFICATION: Unknown

TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Helikian

Purcell

Dutch Creek

LITHOLOGY: Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Bryan occurrence is located on the north flank of Coppercrown Mountain near the headwaters of Mineral Creek at 1800 metres elevation above sea level, in the Golden Mining Division.

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Dutch Creek Formation of the Proterozoic Purcell Supergroup. The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Dutch Creek Formation includes green and black laminated argillite, quartzite, siltstone and buff dolomitic siltstone. The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite and correlates with the strata of the Lower Kitchener Formation.

The Gateway Formation consists of an interbedded sequence of quartzite, green siltstone and buff dolomite that correlates with the lower portion of the Dutch Creek Formation. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence consists of several small pits dug in 1905 to expose a narrow zone containing silver and copper values over 1.2 metres in width. The occurrence is probably in argillite of the Dutch Creek Formation (Open File 1990-26).

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EMPR OF 1990-26, Fig.31

EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)

GSC MAP 1326A

GSC MEM 369

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-

Horsethief Creek Area, Purcell Mountains, Southeast British

Columbia, Canada, unpublished Ph.D. Thesis, University of London,

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1103
REPORT: RGEN0100

BIBLIOGRAPHY

England

DATE CODED: 1995/08/25
DATE REVISED: 1995/09/04

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE085**

NATIONAL MINERAL INVENTORY:

NAME(S): **MORNING GLORY**, MOUNTAIN GOAT

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 21 21 N
LONGITUDE: 116 19 59 W
ELEVATION: 1675 Metres

NORTHING: 5578408
EASTING: 547444

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location plotted from Open File 1990-26.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Helikian

GROUP

Purcell

FORMATION

Dutch Creek

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Ancestral North America

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

SAMPLE TYPE: Grab

YEAR: 1905

COMMODITY

Silver

Copper

GRADE

200.0000

21.0000

Grams per tonne

Per cent

REFERENCE: Minister of Mines Annual Report 1905, page 805.

CAPSULE GEOLOGY

The Morning Glory occurrence is located on the north flank of Coppercrown Mountain near Coppercrown Creek, at 1675 metres elevation above sea level in the Golden Mining Division.

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Dutch Creek Formation of the Proterozoic Purcell Supergroup. The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Dutch Creek Formation includes green and black laminated argillite, quartzite, siltstone and buff dolomitic siltstone. The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite and correlates with the strata of the Lower Kitchener Formation.

The Gateway Formation consists of an interbedded sequence of quartzite, green siltstone and buff dolomite that correlates with the lower portion of the Dutch Creek Formation. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence consists of three quartz veins 5 to 20 centimetres wide that contain chalcopyrite. A grab sample from one of the veins assayed 21 per cent copper and 200 grams per tonne silver

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REPORT: RGEN0100

CAPSULE GEOLOGY

(Minister of Mines Annual Report 1905). The veins are hosted within Dutch Creek argillite and quartzite (Open File 1990-26).

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EMPR GEOS MAP 1995-1
EMPR OF 1990-26, Fig. 31
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1995/08/25
DATE REVISED: 1995/09/05

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE086**

NATIONAL MINERAL INVENTORY:

NAME(S): **NETTIE M**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 20 26 N
LONGITUDE: 116 23 35 W
ELEVATION: 1707 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5576672
EASTING: 543190

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location plotted from Open File 1990-26.

COMMODITIES: Silver Gold Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcocite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Gateway	

LITHOLOGY: Argillite
Dolomite
Quartzite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Nettie M occurrence is located 2.5 kilometres east of Toby Creek in the Golden Mining Division. The occurrence is at 1710 metres elevation above sea level on the north face of Coppercrown Mountain of the Purcell Mountains.

The area is underlain by Proterozoic clastic sedimentary rocks and Cretaceous intrusive rocks. The occurrence is within the Dutch Creek Formation of the Proterozoic Purcell Supergroup. The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations (Open File 1990-26).

The Dutch Creek Formation includes green and black laminated argillite, quartzite, siltstone and buff dolomitic siltstone. The Van Creek Formation consists mainly of coarse to medium grained, light grey to dark green quartzite, siltstone and silty argillite and correlates with the strata of the Lower Kitchener Formation.

The Gateway Formation consists of an interbedded sequence of quartzite, green siltstone and buff dolomite that correlates with the lower portion of the Dutch Creek Formation. The contact with the underlying Van Creek Formation is gradational or marked by the basaltic flows of the Nicol Creek Formation.

The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

On the Nettie M occurrence, the Gateway Formation consists of black siltstone, buff coloured dolomite and minor quartzite. The occurrence consists of a quartz vein that follows a north-trending fracture or fault. The vein has an average width of 30 centimetres but does exceed 1 metre in places. Mineralization consisting of galena with minor chalcocite occurs in white quartz.

The vein has been explored with seven small adits. Past production from the occurrence yielded 261,483 grams of silver, 591 grams of gold, 19,141 kilograms of lead and 3170 kilograms of copper from 61 tonnes mined.

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England

DATE CODED: 1995/08/28
DATE REVISED: 1995/08/28

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE087**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIN 4**

MINING DIVISION: Golden

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 21 46 N
LONGITUDE: 116 27 57 W
ELEVATION: 1357 Metres

NORTHING: 5579104
EASTING: 537993

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralized veins (Assessment Report 9846).

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Dutch Creek	
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Min 4 occurrence is located 4 kilometres north of Toby Creek in the Golden Mining Division. The occurrence is on the north flank of the ridge that separates Pharaoh and Jumbo creeks.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

On the Min 4 property, galena, sphalerite and tetrahedrite occur in small southeast-trending veins within dolomite of the Mount Nelson and Dutch Creek formations. All veins are very small and considered to be uneconomical (Assessment Report 9846).

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REPORT: RGEN0100

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Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1995/08/24
DATE REVISED: 1995/09/05

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE088**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAR**, STAR NO.2 (L.11437)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:

Underground

MINING DIVISION: Golden

LATITUDE: 50 24 55 N
LONGITUDE: 116 25 37 W
ELEVATION: 1737 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5584962
EASTING: 540714

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Reverted Crown grant Lot 11437.

COMMODITIES: Silver

Lead

Zinc

Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Tetrahedrite

COMMENTS: Inferred from the nearby Hot Punch (082KSE034) occurrence.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Proterozoic

GROUP

Purcell

FORMATION

Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Star occurrence is located at the head of Delphine Creek at an elevation of 1737 metres. The property consists of one Reverted Crown grant (Lot 11437).

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Star is hosted within dolomite of the Mount Nelson Formation and is similar to the Hot Punch (082KSE034) which is just up the slope from this prospect (Minister of Mines Annual Report 1949). Mineralization occurs as fissure veins in sheared dolomite. A total of 3 tonnes were mined in 1921 to produce 4821 grams of silver and 1333 kilograms of lead. The occurrence consists of a single caved adit.

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RUN TIME: 16:43:39

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REPORT: RGEN0100

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Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
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England

DATE CODED: 1995/08/30
DATE REVISED: 1995/09/18

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE089**

NATIONAL MINERAL INVENTORY:

NAME(S): **VIN**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 16 51 N
LONGITUDE: 116 54 10 W
ELEVATION: 1340 Metres

NORTHING: 5569860
EASTING: 506927

LOCATION ACCURACY: Within 1 KM

COMMENTS: South of Glacier Creek on the north slope of Mount Lavina.

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cambrian	Undefined Group	Badshot	
Lower Cambrian	Hamill	Undefined Formation	

LITHOLOGY: Siliceous Dolomitic Marble
Quartzite
Schist
Calcareous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Vin occurrence is located at 1340 metres elevation above sea level on the south side of Glacier Creek, east of Duncan Lake in the Slocan Mining Division.

Regionally, the area lies within the Kootenay Arc near the margins of the Ancestral North American Terrane. The Kootenay Arc is a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Eocambrian Hamill Group, the Lower Cambrian Badshot Formation, and the lower Paleozoic Lardeau Group. The volcano-sedimentary sequence is intruded by numerous Ordovician, Devonian and Mississippian granitoid plutons. The rocks have undergone regional metamorphism to middle or upper greenschist facies (Paper 1993-1).

The Vin occurrence is in grey, massive, banded or flecked marble of the Lower Cambrian Badshot Formation which overlies the Hamill Group. The Badshot Formation is characterized by cliff-forming, white to medium grey, commonly laminated marble or dolomitic marble. The marble horizons are tens of metres thick and usually separated by grey, locally calcareous schist. The marble is overlain by a thick succession of fine grained, dark grey and green schists of the Index Formation (Lardeau Group).

Mineralization consists of disseminated pyrite, sphalerite and galena in siliceous dolomitic marble. The property has been explored with a series of trenches and seven diamond-drill holes totalling 575 metres.

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Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-

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RUN TIME: 16:43:39

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PAGE: 1113
REPORT: RGEN0100

BIBLIOGRAPHY

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England

DATE CODED: 1995/09/29
DATE REVISED: 1995/11/02

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE090**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOBY CREEK**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08E
BC MAP:

Open Pit

MINING DIVISION: Golden

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 55 N
LONGITUDE: 116 04 54 W
ELEVATION: 870 Metres

NORTHING: 5594474
EASTING: 565131

LOCATION ACCURACY: Within 500M

COMMENTS: Located 1.5 kilometres west of Invermere on Toby Creek.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Proterozoic
Proterozoic
Quaternary

GROUP

Horsethief Creek
Purcell

FORMATION

Toby
Mount Nelson

IGNEOUS/METAMORPHIC/OTHER

Glacial/Fluvial Gravels

LITHOLOGY: Gravel
Conglomerate
Dolomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Purcell Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Toby Creek occurrence is located 1.5 kilometres west of Invermere, on Toby Creek, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26). The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

Placer gold was first recovered in Toby Creek in August of 1885 and limited production between 1885 and 1887 yielded some 218 grams of gold. The gold produced had an average fineness of 938 which is average for the district (Bulletin 28). No other production has been reported since 1887.

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EMPR GEOS MAP 1995-1
EMPR OF 1990-26
EMPR PF (82KSE General File - Geology map by P. Billingsley, 1958)

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1115
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 235A; 1326A
GSC MEM 148; 369

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

DATE CODED: 1995/10/05
DATE REVISED: 1995/10/06

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSE091**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER QUEEN**, SILVER THREAD, RAMBLER,
LUCKY JIM

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K08W
BC MAP:
LATITUDE: 50 29 44 N
LONGITUDE: 116 22 19 W
ELEVATION: 2659 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit about 24 kilometres west of the community of
Invermere (Open File 1990-26, figure 24).

Underground
MINING DIVISION: Golden
UTM ZONE: 11 (NAD 83)
NORTHING: 5593920
EASTING: 544546

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Proterozoic	Purcell	Mount Nelson	

LITHOLOGY: Dolomite
Meta Diabase
Meta Diabase Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Ancestral North America
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Purcell Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Silver Queen occurrence is situated near the base of a cliff on the west face of Mount Slade, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The occurrence consists of a system of small veins hosted by the lower dolomite member of the Mount Nelson Formation. Near the occurrence, the sedimentary rocks strike northwest and dip steeply northeast. The underground workings consists of an adit driven on a vein about 20 centimetres wide that follows the lower contact of a northwest trending metadiabase dike. The mineralization comprises galena and sphalerite with minor chalcopyrite and pyrite. Chalcopyrite commonly occurs as intergrowths in sphalerite.

In 1961, 4.5 tonnes were mined from the property to produce 6936 grams of silver, 2329 kilograms of lead and 72 kilograms of zinc.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1117
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BIBLIOGRAPHY

EMPR AR 1899-595,667; 1902-136; 1903-104; 1961-A49
EMPR ASS RPT 11739, 16811
EMPR BC METAL MM00566
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1
EMPR OF *1990-26, pp. 37,41, Figs. 24,31
GSC MAP 1326A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-
Horsethief Creek Area, Purcell Mountains, Southeast British
Columbia, Canada, unpublished Ph.D. Thesis, University of London,
England

DATE CODED: 1995/12/18
DATE REVISED: / /

CODED BY: GJA
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082KSE092**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEDGEND**, LEGEND

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K02W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 30 N
LONGITUDE: 116 57 04 W
ELEVATION: 1000 Metres

NORTHING: 5548824
EASTING: 503497

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of Ledgend claims, on Lost Ledge Creek, west of Kootenay Lake.
Known as Ledgend, not Legend.

COMMODITIES: Nickel Cobalt Copper

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Pentlandite
ASSOCIATED: Tremolite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Volcanogenic
DIMENSION: 6 x 1 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Unnamed/Unknown Formation	

LITHOLOGY: Talc Schist
Calc-silicate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Purcell Trench

CAPSULE GEOLOGY

Massive pyrrhotite with local massive pyrite occurs over a 1 by 6 metre outcrop in a stream bed. Hangingwall rocks are talc schists and footwall rocks are calc-silicate metasediments (Lardeau Group?). Minerals identified include pentlandite and tremolite.

BIBLIOGRAPHY

PERS COMM T. Schroeter, Aug. 1998

DATE CODED: 1998/08/17
DATE REVISED: 1998/08/17

CODED BY: TGS
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW001**

NATIONAL MINERAL INVENTORY:

NAME(S): **FERRY NO. 2 (L.3668)**, LEONTOWICZ CLAIM BLOCK, JEANETTE, LEMAX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:
LATITUDE: 50 03 23 N
LONGITUDE: 117 21 57 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adits on figure 3, Assessment Report 7514.

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5544964
EASTING: 473813

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Unknown			Rosebery Stock

LITHOLOGY: Quartzite
Argillite
Limestone
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Ferry No. 2 veins are within and east of Lot 3668, located 4 kilometres northeast of Rosebery on the east side of Wilson Creek, east of Slocan Lake.

Vertical galena-sphalerite quartz veins are exposed in adits on and east of Lot 3668. The veins crosscut quartzites (figure 3, Assessment Report 7514) of the Triassic Slocan Group which is composed of quartzites, argillites and limestones. Slocan Group sedimentary rocks are intruded by quartz monzonite of the Rosebery stock of unknown age (GSC Open File 432). There is no additional published information on the occurrence.

The earliest recorded work on the property was the registration of Crown grant Lot 3668 (Ferry No. 2) in 1900 (Minister of Mines Annual Report 1900). Prospecting work is mentioned in 1935 (GSC Memoir 184) and "development work" by "hand steel" in 1942 (Minister of Mines Annual Report 1942). In 1970, the ground was staked by Peter Leontowicz and optioned to United Bata Resources Limited (later Pan Ocean Oil Limited), who in 1970 (Assessment Report 2944) undertook reconnaissance soil sampling (875 samples analysed for molybdenum and copper). In 1979, Amax Potash Limited optioned the property and undertook a program of geological mapping and collected 369 soil and stream sediment samples which were analysed for 11 elements including lead, zinc and silver (Assessment Report 7514).

BIBLIOGRAPHY

EMPR AR 1900-983
EMPR ASS RPT 3565, 3113, 2944, 7514, 7848
EMPR EXPL 1979-84
EMPR GEM 1971-423
GSC MEM 184, p. 41
GSC OF 432; 464, #258

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

veins within distinctive zones and trends, and replacement deposits where limestone or limy strata have been locally or extensively replaced by ore minerals.

At the Molly Hughes property, the quartz monzonite of the Mount Carpenter stock is coarse to medium grained and occasionally porphyritic. A series of northwest trending quartz veins cut the quartz monzonite with moderate to steep northeast dips. The veins consist of lenses of quartz and brecciated wallrock mineralized with disseminated argentiferous tetrahedrite, galena, sphalerite, pyrite, lesser chalcopyrite and possibly freibergite carrying gold and silver values. The quartz veins are massive and white or shows ribbon and comb structure (GSC Memoir 184). Vein widths vary from 7 centimetres to 2.4 metres but average in the range 10 centimetres to 0.5 metre. Mineralization occurs throughout the veins but is generally concentrated on the hangingwall side of the vein. Laterally, the veins have barren sections but continuity downdip is generally good.

Post-vein faulting has resulted in vertical and horizontal offsets, with slickensides indicating movement parallel to vein dip. The vertical displacement ranges to up 24 metres. It is believed that the movement is left-lateral and normal, with downdropping towards the east.

Numerous quartz veins are evident on the Molly Hughes property and two subparallel veins, the Kinkora and the Real Idea, appear to be of most interest. The bulk of early production was derived from the Kinkora, which is south of and lower than the Real Idea. The Real Idea vein strikes 140 degrees, dipping 49 degrees northeast (Sadlier-Brown and Nevin, 1978). Other veins (Assessment Report 4390) on the property include the Pinto, East Section, West Section, General, Northerly Lode, Southerly Lode, P.H.P. 2 Lodes and Tryon Lode.

Inferred ore reserves of 9072 tonnes at a grade of 5.8 grams per tonne gold and 1282 grams per tonne silver were estimated by Sadlier-Brown and Nevin (1978), based on a sampling program, assuming a deposit dimension of 122 by 122 by 0.2 metres, and allowing for dilution over a 1.2-metre mining width.

Production was first recorded in 1899 and continued until 1940, when production was stopped due to the war (Assessment Report 4390). An unsuccessful attempt was made to revive production in 1978 and 1979. Production from 1899 to 1940, and intermittent from 1957 to 1980, totalled 2578 tonnes, resulting in 25,790 grams of gold, 9,448,400 grams of silver, 2 kilograms of copper, 17,610 kilograms of lead and 16,869 kilograms of zinc.

BIBLIOGRAPHY

- EMPR AR 1898-1192; 1899-688; 1900-827; 1901-1026; 1903-H137; 1904-G178,G179,G201; 1905-J161; 1906-H249; 1907-L99,L214; 1908-J98; 1909-K112,K273; 1910-K99,K244; 1911-K284; 1915-K121,K124,K445; 1916-K198,K516; 1918-K170; 1920-N125; 1921-G138; 1922-N200,N201, N202; 1923-A227; 1924-B198; 1925-A245;A246; 1926-A255; 1927-C276, C277; 1928-C293,C294; 1929-C285,C316; 1933-A200,A206; 1934-A26, E34; 1935-A26,E33,G51; 1936-E52; 1937-A37; 1938-A37,E42; 1939-A39, A42,A92; 1940-A26,A77; 1957-A46,54; 1979-130
EMPR ASS RPT *4390
EMPR BC METAL MM01311
EMPR GEM 1972-71; 1980-109
EMPR INDEX 3-206; 4-123
EMPR IR 1984-2, p. 102
EMPR LMP Fiche No. 61027
EMPR PF (Report by Sadlier-Brown and Nevin, 1978)
GSC MAP 1667
GSC MEM 173, p. 99; *184, pp. 85-87
GSC OF 288; 432; 464, #314
GSC SUM RPT 1925, Part A, pp. 188A,198A,199A,216A
GCNL #198,#224,#244, 1979; #73,#102,#138, 1980; #51, 1983
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/12

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REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

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MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1123
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CAPSULE GEOLOGY

Report 16112).

Intermittent production from 1899 to 1980, totalled 177 tonnes, resulting in 2,464,602 grams of silver, 1337 grams of gold, 386 kilograms of lead and 121 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1899-688; 1901-1026; 1902-H149,H297; 1903-H137; *1904-G179,
G180,G202; 1908-J250; 1919-N154,N366; 1937-A29; 1938-A27,A37,E44;
1939-A29,A39,95; 1940-A17,A26,80; 1941-A19; 1942-A21; 1943-A38
EMPR ASS RPT 16112
EMPR BC METAL MM00630
EMPR INDEX 3-191
EMPR IR 1984-2, p. 102
GSC MAP 1667
GSC MEM *184, pp. 27,28,162
GSC OF 288; 432; 464, #317

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW004**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONITOR (L.1916)**, MONITOR GROUP, MONITOR MINE,
MIN GROUP, CORK GROUP, HUSTLER FR. (L.2619),
PORTLAND NO. 5 (L.2620), OURAY (L.3109), OURAY FR. (L.1017),
NELLIE FR. (L.3108), KEEWATIS (L.5671), FRIDAY FR. (L.5757),
WEST FR. (L.14810), CORK (L.14811), LOPE (L.14812),
TIP (L.14813)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W

Underground

MINING DIVISION: Slocan

BC MAP:
LATITUDE: 50 00 26 N
LONGITUDE: 117 16 46 W
ELEVATION: 964 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5539471
EASTING: 479976

LOCATION ACCURACY: Within 500M

COMMENTS: No. 2 level is 500 metres south-southeast of the junction of Kane
and Carpenter creeks, Three Forks area (Property File - Lakes,
A. (1951): Plan maps). Also includes Taw Fr. (Lot 14807), Horn Fr.
(Lot 14808), Min Fr. (Lot 14809) and Guf (Lot 14814) Reverted Crown
grants.

COMMODITIES: Lead Zinc Silver Gold Cadmium

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz Siderite Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted Sheared

DIMENSION: 122 x 30 Metres STRIKE/DIP: 045/60S

TREND/PLUNGE:

COMMENTS: A nearly contiguous ore block from the No. 2 level was 122 by 30
metres, stoped to surface.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic-Jurassic
Unknown

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Slaty Argillite
Quartzite
Limestone
Tuffaceous Sediment/Sedimentary
Quartz Diorite Dike
Quartz Diorite Sill
Quartz Porphyry Dike
Quartz Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Monitor mine is located immediately south of Three Forks, British Columbia on the south side of Carpenter Creek. The Slocan mining camp is dominated by fine grained to aphanitic clastic sedimentary rocks of the Triassic Slocan Group and consists of argillites, quartzites, limestones and some tuffaceous rocks. These sediments are frequently intruded by dikes, sills and stocks of varied composition and origin. Locally, southwest dipping slaty argillites with interbedded quartzite are intruded by quartz diorite and quartz porphyry dikes or sills. The majority of the deposits are predominantly fault-fissure veins within distinctive zones and trends and replacement deposits where limestone or limy strata have been locally or extensively replaced by ore minerals. The Monitor lode occurs in a strong fault zone that cuts the sediments and displaces some dikes 2 metres. It has a general strike of 045 degrees, dips 60 degrees southeast to vertical and varies from a few centimetres to 1.2 metres in width. The widths have a tendency to decrease where it crosses a dike. The

CAPSULE GEOLOGY

zone consists of brecciated hostrocks with lenses and veins of quartz, siderite and calcite mineralized with disseminated and massive galena, sphalerite and pyrite. The Monitor lode contains more gold on average than ore from any other lode in the area, producing 31,820 grams over 58 years. Some post-mineralization brecciation and shearing is evident.

Fault slickensides indicate an oblique normal-dextral movement to the northwest with later faults displacing the vein 7 to 20 metres which persists from surface to the lowest level of workings. The southwest extremity of the vein is terminated by a fault. Mineralization is more concentrated where the vein has been offset by later faults. Ore controls are not understood, however.

The Monitor lode is developed by five adit levels through a vertical range of 143 metres. The upper levels contained considerable oxidized mineralization with some lower levels containing increased pyrite content that carried high gold values. The best stoping area was above the No. 2 level, consisting of a nearly contiguous block 122 by 30 metres, stoped to surface. A second block at portal No. 3 was 61 metres long and a third, 40 metres long at the end of No. 3 level, was stoped up to the No. 2 level. The lode narrows at lower levels and the tenor of mineralization varies throughout its vertical extent.

Over its 56 year mine life, the Monitor mine produced 12,783,836 grams silver, 31,820 grams gold, 1,379,705 kilograms lead and 420,668 kilograms zinc from 18,308 tonnes ore.

The Min and Cork lodes are 580 and 730 metres southeast of the Monitor lode, respectively. They are short exploratory adits first driven in 1937.

BIBLIOGRAPHY

- EMPR AR 1896-53; 1897-534; 1899-598,688; 1900-827,986; 1901-1026; 1902-H148; 1903-H135; 1904-G181,G182,G201; 1905-J160; 1906-H145, H249; 1911-K144; 1917-F159; 1922-N202; 1923-A222; 1924-B197; 1925-A245; 1926-A252; 1927-C275; 1928-C289; 1929-C285,C308; 1934-E33; 1935-E34; 1937-A30,E51; 1938-A28,A37,E43; 1939-A30,A39; 1940-A18,A80; 1941-A19,A27,75; 1942-A21; 1943-A38; 1950-A143; 1951-A43,166,168; 1952-A44,173; 1953-A141; 1956-93,94; 1958-45
EMPR ASS RPT 12246
EMPR BC METAL MM01312
EMPR BULL 2, pp. 37,47,53,73; *29, pp. 57,91-93
EMPR INDEX 3-206
EMPR PF (Lakes, A. (1951): Claim map of Slocan Monitor Mines and adjoining properties 1"=300 ft.; Lakes, A. (1951): Geologic Plan map of Slocan Monitor Mines and adjoining properties 1"=600 ft.; Lakes, A. (1951): Mine Plan map of Slocan Monitor Mine 1"=1000 ft.)
GSC MAP 1667
GSC MEM 173, p. 86; *184, pp. 87-88
GSC OF 288; 432; 464
GSC SUM RPT 1925, Part A, p. 199A

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/28

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **OCEAN (L.1723)**, OCEAN GROUP, OCEAN MINE,
RECIPROCITY (L.1722), LILLIAN NO. 4 (L.1724)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:
LATITUDE: 50 00 12 N
LONGITUDE: 117 14 28 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineral occurrence location (Geological Survey of Canada Memoir 173,
Map 273A).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5539029
EASTING: 482721

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Tetrahedrite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Deposit character given as vein (Geological Survey of Canada Open File
464).

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Carbonaceous Slate
Argillaceous Slate
Diorite
Felsic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Ocean occurrence, consists of workings on three Reverted Crown grants, Reciprocity (Lot 1722), Ocean (Lot 1723) and Lillian No. 4 (Lot 1724). It is located on the northeast side of Carpenter Creek valley, 7.5 kilometres northeast of New Denver, British Columbia.

Underlying rocks at the Ocean occurrence are predominantly carbonaceous and argillaceous slates of the Triassic Slocan Group. These slates are intruded by a small diorite stock and numerous felsic dikes. A more detailed description of the local geology is given in the Monitor occurrence (082KSW004).

Mineralization consists of dikes with tetrahedrite and galena (Minister of Mines Annual Report 1896, page 72) and a mineralized shear zone in the diorite stock (Geological Survey of Canada Memoir 184, page 98).

Workings consisted of five or more adits, three or more of which were thought to intersect an extension of the Payne lode (082KSW006).

A small shoot of silver-lead ore was discovered on the Ocean Reverted Crown grant in 1919 from which 3 tonnes of ore was mined, grading 3600 grams per tonne silver and 60 per cent lead (GSC Memoir

BIBLIOGRAPHY

EMPR AR *1896-72; 1898-1192; 1924-367
EMPR BC METAL MM01339
EMPR INDEX 3-207
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 97-98
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW006**

NATIONAL MINERAL INVENTORY: 082K3 Ag8

NAME(S): **PAYNE (L.499)**, PAYNE GROUP, PAYNE MINE,
TWO JACKS (L.497), MOUNTAIN CHIEF (L.498), MAID OF ERIN (L.500),
ST. KEVERNE, TELEPHONE (L.3185)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 00 25 N
LONGITUDE: 117 13 53 W
ELEVATION: 1830 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adits and dumps (Geological Survey of Canada Memoir 173, Map 273A). See St. Keverne, 082KSW007.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5539428
EASTING: 483419

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite
ASSOCIATED: Siderite Calcite
ALTERATION TYPE: Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Massive Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Faulted Sheared
DIMENSION: 380 Metres STRIKE/DIP: 055/60S TREND/PLUNGE:
COMMENTS: Average attitude of the lode. The main ore shoot averages 300 metres with a maximum length of 380 metres. Massive galena lenses are 10 to 15 centimetres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Limy Argillite
Quartzite
Slate
Limestone
Quartz Feldspar Porphyry Dike
Quartz Feldspar Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y
CATEGORY: Inferred YEAR: 1972
QUANTITY: 27215 Tonnes
COMMODITY GRADE
Silver 41.1300 Grams per tonne
Zinc 7.5300 Per cent
COMMENTS: Possible reserves.
REFERENCE: Silvex Resources Corp. Statement of Material Facts 254/80, page 24.

CAPSULE GEOLOGY

The Payne occurrence is located on the northwest end of a ridge extending northwesterly from Mount Payne, east of Carpenter Creek. New Denver, British Columbia is 10 kilometres to the southwest.
First discovered in 1891, the Payne mine was covered by 4 Crown grants: Two Jacks (Lot 497), Mountain Chief (Lot 498), Payne (Lot 499) and Maid of Erin (Lot 500). Mining was first carried out by the newly formed Payne Mining Company of British Columbia, Limited. One-half interest in the company was purchased by A.W. McCune in 1896. Operations continued under the direction of the Tom Payne

CAPSULE GEOLOGY

Consolidated Mining Company, Limited Liability from 1897 to 1899, stoping high-grade ore from the upper levels. The Payne Consolidated Mining Company continued production from 1899 to 1904 when operations were temporarily ceased. During this time a 120 tonne per day concentrator was constructed and put into operation. Payne Mines Limited was formed in 1907. Exploration and development work was carried out below the No. 8 level. A deep adit, the No. 15 level, was begun in 1911. The east-neighbouring St. Keverne Group (082KSW007) was purchased at this time. The Slocan Payne Mines, Limited was formed in 1912 and under lease and bond completed the No. 15 level and raise to the No. 8 level. The Nos. 9 and 10 levels were completed by 1916, intersecting low grade, sporadic ore. Several other lessees continued intermittent exploration and work on the property from 1920 to 1939. The Kelowna Exploration Company Limited held the property from 1941 to 1942, conducting considerable surface work including trenching. Some underground work was done in 1948 and 1949 by R.A. Grimes. The No. 8, 9 and 10 levels were reopened in 1951, under option to the Kootenay Belle Gold Mines Limited. The most recent option, 1980, was to Silvex Resources Corporation. Property exploration on and adjacent to the Payne property has been conducted by Minotaur Resources from 1986 to 1988 and Touchstone Resources Ltd. from 1988 to 1992. Several trenches explored geochemical soil anomalies 300 metres northwest of the former Payne mine in 1992. Trench 1 uncovered numerous quartz veins and lenses in folded slate and argillite. Sample 1+01S 5+51E, a 1-metre chip sample, yielded 0.06 per cent zinc, the best of nine rock samples taken from two trenches (Assessment Report 22628).

Production from the Payne mine spanned 46 years from 1893 to 1939, with the bulk of production from 1898 to 1906. From a total of 110,604 tonnes mined, 116,386,525 grams silver, 17,376,637 kilograms lead and 1,024,416 kilograms zinc were recovered. The nearby St. Keverne mine (082KSW007) produced 14 tonnes, from which 71,538 grams silver and 11,384 kilograms lead were recovered (NMI 082K3 Ag8). Property evaluation in 1972 indicated the possibility of 27,215 tonnes ore averaging 7.53 per cent zinc, 41.13 grams per tonne silver and minor lead between the No. 6 and 10 veins (NMI 082K3 Ag8; Silvex Resources Corp. Statement of Material Facts 254/80, page 24 - in Energy, Mines and Resources Canada Mineral Bulletin 223, B.C. 46).

Workings at the Payne occurrence included seven adits and four intermediate levels, 6 to 10, to a depth of 440 metres below surface. The original workings included five adits, the upper three passing through the ridge.

The Payne mine is hosted by limy argillite, quartzite, slate and limestone of Triassic Slocan Group, intruded by various dikes and sills of quartz feldspar porphyry. The structure of the upper part of the Payne mine is a recumbent fold open to the northeast. The fold has a near horizontal axial plane and plunges a few degrees to the southeast. A second recumbent fold, open to the northeast, is believed to occur below the No. 15 level. Ore shoots lie within the zone of maximum curvature of these folds.

The deposit consists of a single vein to a series of closely-spaced veins passing downward to a 2.0 to 2.5-metre wide shear zone with considerable gouge in places. The main ore shoot, averaging 300 metres length and a maximum length of 380 metres, was mined from just below the No. 5 level. The lode has an average strike of 055 degrees and dips 60 degrees south. The vein is terminated by a northwest fault at its northeast end. The vein curves to the northwest close to this fault suggesting some sinistral movement. The ore consists of massive galena lenses averaging 10 to 15 centimetres length. Lenses also carry tetrahedrite and sphalerite in a gangue of siderite and minor calcite. The ore was almost continuous along the vein of the upper workings but became more discontinuous and of lower grade in the lower sheared portion of the vein. Some leaching of hostrocks close to veinlets of the Payne veins was observed in the trench crossing the ridge over the vein.

The ore zone at the Payne mine is considered to have occurred in response to: (1) gouge-free fractures in the zone of maximum curvature in a pronounced fold and (2) competent lithologies including quartzite (Bulletin 29, page 98).

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A26,E35; 1936-E52; 1938-A37; 1939-39; 1941-74; 1942-72; 1946-152,
153; 1948-144; 1949-187; 1951-166,174; 1967-252; 1968-252
EMPR ASS RPT 13060, *22628
EMPR BC METAL MM01356
EMPR BULL *29, pp. 11,84,96-98
EMPR GEM 1972-68
EMPR INDEX 3-208
EMPR LMP Fiche No. 61154
EMPR MIN BULL MR 223 (B.C. 46)
EMPR PF (Mayo, E.B. (1940): Geological Section of the Payne mine,
1"=200'; Mayo, E.B. (1940): Payne mine plan; Mayo, E.B. (1940):
Payne mine workings, 1"=40'; Mayo, E.B. (1940): Claim map of
Payne and St. Keverne properties, 1"=200').
EMR MP CORPFILE (Payne Consolidated Min. Co. Ltd.)
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 98-100
GSC OF 432; 464
CANMET RPT 1906 (Report of Zinc Commission)
GCNL #211, 1980
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/18

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSW007**

NATIONAL MINERAL INVENTORY: 082K3 Ag8

NAME(S): **ST. KEVERNE (L.2642)**, ST. KEVERNE GROUP, ST. KEVERNE MINE,
DOMINION (L.2641), FELIX NO. 3 (L.2643), EXETER (L.2645),
PAYNE FR. (L.2646), SMOKE 1-4

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 00 36 N
LONGITUDE: 117 13 28 W
ELEVATION: 1554 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir, Map 273A).
See Payne, 082KSW006.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5539767
EASTING: 483918

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite
COMMENTS: Sphalerite, tetrahedrite and pyrite reported from a stockpile near the
portal.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic Unknown	Slocan	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Limy Argillite
Quartzite
Slate
Limestone
Quartz Feldspar Porphyry Dike
Quartz Feldspar Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: STOCKPILE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY

COMMODITY	GRADE	
Silver	225.0000	Grams per tonne
Copper	0.4500	Per cent
Lead	1.4000	Per cent
Zinc	49.8000	Per cent

COMMENTS: Sample 8611-3, from an ore stockpile at the St. Keverne portal.
REFERENCE: Assessment Report 15472.

CAPSULE GEOLOGY

The St. Keverne occurrence is located on the upper northeast slope of a high ridge, northwest of Mount Payne and between McGuigan and Carpenter creeks. New Denver, British Columbia lies 10 kilometres to the southwest. The claims covering the St. Keverne occurrence lie 1 kilometre northeast of the Payne occurrence (082KSW006).

The St. Keverne occurrence is hosted by limy argillite, quartzite, slate and limestone of the Triassic Slocan Group, intruded by various dikes and sills of quartz feldspar porphyry. The structure of the upper part of the nearby Payne mine is a recumbent fold open to the northeast. The fold has a near horizontal axial plane and plunges a few degrees to the southeast. A second recumbent fold, open to the northeast, is believed to occur below the No. 15

CAPSULE GEOLOGY

level. Ore shoots lie within the zone of maximum curvature of these folds. For a more detailed description of the geology refer to the Payne occurrence.

Information regarding the mode of occurrence and mineralogy at the St. Keverne occurrence are scant. Galena is reported (Minister of Mines Annual Report 1899, page 688). Sphalerite, galena, tetrahedrite and pyrite hosted in quartz are reported in samples taken from stockpiled ore at the portal to the former St. Keverne mine (Assessment Report 15472). It has been classified as a vein-type deposit (Geological Survey of Canada Open File 464). Several of the samples taken from the ore stockpile contained significant zinc and silver values. Sample 8611-3 yielded 225 grams per tonne silver, 49.8 per cent zinc, 1.40 per cent lead and 0.45 per cent copper (Assessment Report 15472).

The St. Keverne group of claims were first staked in 1894, with lessees beginning work on the property in the following year. The St. Keverne occurrence was operated by the St. Keverne Mining Company Limited in 1897. The property was transferred to a new St. Keverne Mining Company Limited in 1901. Known production for the St. Keverne consisted of small shipments in 1902 (6.35 tonnes) and 1905 (8.16 tonnes). About 140 metres of tunnel and a 13-metre raise and winze were driven before operations closed in 1901. The property was then purchased in 1907 by Payne Mines Limited, owners of the neighbouring Payne occurrence. A new portal was collared below the old portal in 1951 under direction of Kootenay Belle Gold Mines Limited. In 1986, exploration was conducted by Boa Services Ltd. for Kobold Resources Ltd. on the old St. Keverne property. The program included soil and rock geochemistry sampling, and electromagnetic and magnetic ground surveys.

Production totalled 14 tonnes of ore with recovery of 71,538 grams silver and 11,384 kilograms lead (NMI 082K3 Ag8), grading 5015 grams per tonne silver and 78 per cent lead (Geological Survey of Canada Memoir 184, page 141).

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EMPR ASS RPT *15472
EMPR BC METAL MM01420
EMPR BULL *29, pp. 96-98
EMPR INDEX 3-211
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 98,141
GSC OF 432; *464
CANMET RPT 1906
GCNL #211, 1980

DATE CODED: 1985/07/24
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CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Workings at the Washington mine included a shaft near the top of the ridge and six adits over 170 vertical metres. These adits were driven from the McGuigan Creek side of the ridge and extend into the Slocan Boy claim, ranging from 30 to 238 metres length. For further information refer to the Slocan Boy mine.

Lithologies hosting the Washington mine include interbedded quartzite, argillite and limy shale of the Triassic Slocan Group. Their general strike is 110 degrees, dipping 51 degrees southwest. These are locally intruded by quartz feldspar porphyry dikes and sills. Workings are hosted in the upper limb of the recumbent fold hosting the Payne mine. Northeast of the principal workings the structure is complicated by faulting with strata dipping northeast in a syncline. These strata are equivalent to those in the underground workings and on either side beneath the centre of the ridge.

Ore is hosted in a fault-fissure zone, along which considerable shearing has occurred. The zone has a general strike of 050 degrees and dips steeply southeast in most places. In the productive zone the load was composed of brecciated wallrock, quartz, calcite and siderite hosting galena, sphalerite, tetrahedrite, chalcopyrite and pyrite. Ore minerals were interbanded, or with quartz, or occurred as streaks and bunches in quartz. Lode thickness varied from 5 centimetres to 3.66 metres. Mineralization has been controlled by bedding and jointing, with the general trend of the Washington-Slocan Boy lode following jointing. No one fissure was continuously mineralized.

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1904-H136,196; 1905-G196; 1907-100; 1908-L100; 1910-98; 1911-K98;
1919-125; 1920-N125; 1921-N125; 1922-200; 1923-N200,225;
1924-A225; 1926-A246; 1927-C274; 1939-A39; 1941-A74; 1942-A72;
1964-123; 1965-A56,190; 1967-253; 1968-A55,255; 1969-A56; 1970-
A55; 1971-A55; 1973-A55; 1974-A121
EMPR ASS RPT 22961
EMPR BC METAL MM01456
EMPR BULL *29, pp. 121-122
EMPR GEM 1969-330,331; 1970-455; 1971-423
EMPR INDEX 3-218; 4-126
EMPR LMP Fiche No. 61761
EMPR MINING IN BC 1975, Vol. I, p. 33
EMPR PF (Millar, J.F.V. (1966?): Report on the Washington mine)
GSC ANN RPT 1895, p. 31
GSC MAP 273A, 1667
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GSC OF 432; *464

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CAPSULE GEOLOGY

Report 1927, page 274).

Production records are incomplete for the Great Western occurrence. Thirty-three tonnes were on the dump in 1893 and nearly 40 tonnes were shipped to the Trail smelter in 1906. A small tonnage was mined in 1927. Records indicate 58 tonnes produced 172,684 grams silver, 19,038 kilograms lead and 12,204 kilograms zinc in 1930.

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*1927-274; 1928-294; 1930-230
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EMPR INDEX 3-198
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GSC OF 432; *464

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FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW010**

NATIONAL MINERAL INVENTORY:

NAME(S): **GALENA (L.593)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 00 01 N
LONGITUDE: 117 12 17 W
ELEVATION: 2286 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5538682
EASTING: 485328

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

COMMODITIES: Zinc Lead Silver

MINERALS

SIGNIFICANT: Sphalerite Galena
ASSOCIATED: Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 055/52S

TREND/PLUNGE:

COMMENTS: The lode strikes 055 degrees and dips 52 degrees southeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Quartz Porphyry Dike
Quartz Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Galena prospect is located on the summit of the divide at the head of the south fork of McGuigan Creek and east of Payne Mountain. The former Washington mine (082KSW008) lies 1.1 kilometres to the northwest. The area is roughly 10 kilometres from New Denver, British Columbia.

Hostrocks of the Galena prospect are mainly argillites of the Triassic Slocan Group. These are intruded by numerous quartz porphyry dikes and sills. For a more detailed description of the local geology refer to the former Washington mine (082KSW008).

The Galena vein-lode strikes nearly south and dips 35 to 55 degrees southeast and is discordant with bedding. The vein-lode itself is crosscut by many quartz porphyry dikes and sills. The vein is composed mainly of siderite with sphalerite and very little galena. The vein-lode extends northeastward into the Antoine basin, in the vicinity of the former Antoine mine (082KSW011).

The Galena prospect has been explored by at least 150 metres of adit driven through the ridge but no production was ever recorded. The Galena lode was explored from the No. 4 level of the former Last Chance mine (082FNW020). The presumed extension of the Galena lode was intersected at 485 metres from the portal. The shear was drifted and veins within this shear carried sphalerite and very little galena.

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GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 43
GSC OF 432; *464

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FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

5 level.

The Antoine workings and adjacent ground lay dormant from 1927 until 1962 when L.N. Garland and Associates purchased the Antoine Group consisting of the 5 Crown and Reverted Crown grants previously mentioned and 3 recorded claims. They also attained an option on the adjacent Soho property (082KSW019). Development work was carried out in 1962 and 1963. Mr. Garland and Associates incorporated as the Antoine Silver Mines Limited in 1964. An ore shoot, 38 metres long, on the Ogema vein was opened up in 1964. The Ogema vein lies 76 metres southwest of the Antoine vein. Ore from the Ogema vein and old dumps was shipped to the Carnegie mill in 1965. In this year, mining operations were moved to the nearby Old Tom Moore adit (082KSW019) to intersect the Ogema and Antoine veins at 150 metres below the No. 5 level. This work was carried out from 1966 to 1967 and included some 90 metres of diamond drilling. During 1968 an additional 150 metres underground work and 460 metres diamond drilling was carried out with ore shipped to a mill in Silverton. Operations were discontinued in this year with 550 tonnes of ore remaining in stockpile at the bottom of the mine road. The mine was operated by W. Turley in 1979 and Arley Mines Ltd. in 1980 (Jack Hale, pers. comm., 2001).

The Antoine lode is hosted by massive argillites and quartzites with minor limestones of the Triassic Slocan Group. The general strike of these lithologies is southeast and dips are 35 to 60 degrees southwest. These sediments are intruded by irregular quartz to feldspar porphyry bodies and lamprophyre dikes. Lamprophyre dikes are cut by the vein and both are displaced by faults. Immediately to the east, rocks of Slocan Group are slates and fissile argillites with occasional narrow beds of limestone.

The Antoine lode strikes northeast and dips 65 degrees southeast but curves eastward as it approaches the Red Fox claim. The lode consists of quartz, locally crusty, and siderite with two orebodies of galena, sphalerite, tetrahedrite, pyrargyrite and native silver in leaf and wire form. The lodes contain fragments of pyritized hostrocks. At the northeast end of the lode it rolls flatly into the bedding. To the southwest the lode continues, in part, in a steeply dipping fracture but also flattens into bedding. Continuation of the vein to the southwest is uncertain. The lamprophyre dike has been offset 12 metres by faulting; the lode is not offset.

Two important ore shoots have been mined on the Antoine lode. The eastern shoot lies on either side of the Antoine and Red Fox claims. It was about 60 metres long and does not go much below the intermediate level. The western shoot continued from near surface to below the No. 5 level. Its pitch was south, was 75 to 90 metres long and carried an ore streak ranging from 2 to 90 centimetres thick. Most of the ore mined has come from the footwall of a 60 to 150 centimetres wide lamprophyre dike that follows the vein for 50 metres.

It is important that mineralization occurs where the lode vein is coincident with jointing, particularly where Slocan sediments are folded or are intruded by porphyry dikes.

Total production from the former Antoine mine amounted to 9601 tonnes mined producing 10,613,059 grams silver, 124 grams gold, 1486 kilograms cadmium, 1012 kilograms copper, 735,548 kilograms lead and 232,454 kilograms zinc over its two productive periods, which were from 1895 to 1917 and 1963 to 1975.

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- EMPR BC METAL *MM01368, MM01416 (1979 and 1980, incorrectly assigned to Spokane)
- EMPR GEM 1969-331, Figure 41; 1970-455
- EMPR INDEX 3-188,210,211; 4-119
- EMPR IR 1984-2, p. 103 (Antoine, not Spokane)
- EMPR LMP Fiche No. 60018,61829-61831
- EMPR MINING 1975-1980, Vol.1, pp. 32,56
- EMPR PF (Tyler, W.W. (1964): Antoine-Silver Bell mine plan; Antoine-Silver Mines Ltd. (1964): Antoine mine plan)
- EMR MP CORPFILE (Antoine Silver Mines Ltd.)
- GSC ANN RPT 1963, pp. 74-76
- GSC MAP 1667
- GSC MEM *173, Map 273A; *184, pp. 11-14

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GSC OF 432; 464

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FIELD CHECK: Y

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312
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EMPR INDEX 3-212
GSC MAP 1667
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GSC OF 288; 432; 464

DATE CODED: 1985/07/24
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REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW013**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIO (L.2093)**, RIO MINE, HELENITA

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 00 25 N
LONGITUDE: 117 10 55 W
ELEVATION: 2133 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5539419
EASTING: 486962

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

COMMODITIES: Lead Silver Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 200 Metres STRIKE/DIP: 065/45S

TREND/PLUNGE:

COMMENTS: The surface trace of the vein-lode system is 200 metres. The vein strikes 065 degrees and dips 45 degrees southeast. A dry ore shoot in the upper adit was 6 metres by 15 centimetres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic
Unknown

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Siliceous Slaty Argillite
Quartzite
Limestone
Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Rio occurrence is in the Rambler Creek basin, 900 metres northeast of the former Antoine mine (082KSW011). New Denver, British Columbia lies 11 kilometres to the southwest.

Workings of the former Rio mine included a 60 metre upper adit, a shaft, a lower crosscut adit and 122 metres of drift. The lower crosscut adit was 54 vertical metres below the upper adit.

Siliceous slaty argillites, quartzites and limestone of the Triassic Slocan Group crosscut by quartz porphyry dikes comprise host strata at the former Rio mine. For a more complete description of the local geology refer to the Antoine occurrence.

Workings of the former Rio mine explored a vein-lode system striking 065 degrees and dipping 45 degrees southeast. In the upper adit a dry ore shoot was intersected near the portal. Farther in, a shoot of galena was discovered. The shoot was 6 metres long by 15 centimetres thick. A long drift from the lower adit also intersected two ore shoots corresponding roughly to those discovered in the upper adit but overall carrying more galena. The first of these two shoots was 15 metres long. This was roughly 152 metres from the lower portal. The principal ore minerals are galena and tetrahedrite.

Production records indicate the first shipment of ore was in 1903 with intermittent shipments following up to 1937. In total, 170 tonnes were produced from which 1,364,273 grams silver, 62 grams gold, 52,952 kilograms lead and 10,224 kilograms zinc were recovered.

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GSC OF 432; 464

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FIELD CHECK: N

CAPSULE GEOLOGY

former Era Claim Group. In 1951 and 1952 ore was mined from the Winona-Boon lodes. The Winona-Boon lodes and Boon tunnel were reopened in 1966 and a small amount of ore was recovered. Work was done under option by Hilroy Mines Ltd. Work was continued in 1967 with 30 metres of surface stripping and two diamond-drill holes totalling 46 metres completed. Two tonnes of sorted ore from old dumps were shipped to the Trail smelter. A 15.24-metre diamond-drill hole was drilled in 1975 on the Craigie claim, then owned by R. Saalfeld. No significant mineralization was found (Assessment Report 5644).

The Corrigan occurrence is underlain by strata of the Triassic Slocan Group, having a general strike of 330 to 320 degrees, dipping either northeast or southwest. Along the northeastern flank of the Corrigan Claim Group and midway between Jackson Creek and the westerly ridge lie massive quartzite and argillite. Elsewhere, strata are mainly fissile slate interbedded with limestone and quartzite. The area has been intruded by many quartz porphyry dikes, particularly in slates on the Winona and Boon fractions.

Orientation of the vein-lodes of the Corrigan occurrence are irregular. The Jackson lode at the adjacent Jackson occurrence (082KSW015) appears to continue westerly to northwesterly onto the Craigie and Custer claims. Two crosscuts explored the Jackson lode immediately west of the Jackson occurrence. Here, the lode strikes 140 to 145 degrees and dips 60 degrees southwest. Hostrocks are blocky carbonaceous argillite are intruded by several quartz porphyry dikes. A crossfissure, striking 115 degrees and dipping steeply northeast, was discovered in the upper crosscut. Galena was found within this crossfissure.

The lode, exposed in the old New Era shaft on the Custer claim, strikes 250 degrees and dips steeply southeast hosting fine galena. The lode is well defined with altered basic dike in the hangingwall. Two other closely parallel lodes to the southwest near the Winona-Dublin Queen claim boundary, are possibly continuous. Jointly these lodes are referred to as the Winona-Boon lodes. The more southeasterly of these two lodes is also called the Dublin Queen vein of the Jackson occurrence. The other lode, striking 065 degrees and dipping steeply to the southeast, is developed by two adits. The lode contains a vein composed primarily of galena. It varies in thickness from 5 to 25 centimetres and follows jointing in host argillites. Towards the face of the upper adit the vein changes orientation along bedding striking 320 degrees. Calcite, brecciated argillite and pyrite comprise the vein at this location. In 1951, these lodes were developed by opencuts and two adits 18 to 24 metres long. The lodes in both adits are terminated by faults. The adits were connected by a raise near the end of the workings. Ore was mined from a bench off this raise.

The Boon tunnel was driven along a fissure that strikes nearly east within slaty argillites and quartz porphyry dikes and sills. Occasional limestone lenses were observed. A narrow stringer of clean galena was found in this fissure near the portal but farther in sphalerite was the main ore mineral. The high grade of silver reported was attributed to tetrahedrite and pyrargyrite.

While total recorded production from the Corrigan occurrence amounts to 132 tonnes, this record is incomplete. No information is available for tonnage or grade on ore shipments made from the Custer and Craigie claims. Operations on the Winona and Boon fractions in 1902, 1917 and 1918 are reported to have yielded three ore shipments of silver-lead ore (Geological Survey of Canada Memoir 184, page 211). Some 12 tonnes of ore is reported shipped from the workings on the old New Era shaft and the two lodes near the Winona-Dublin Queen boundary between 1916 and 1935 (Geological Survey of Canada Memoir 184, page 212). It was claimed 3.3 tonnes ore was shipped from the Boon vein (Geological Survey of Canada Memoir 184, page 212). Production in 1951 was from the Winona-Boon lodes on the Winona claim. The ore was sent to the Trail smelter in this year and subsequent years (Minister of Mines Annual Reports 1952, page 273; 1966, page 223; 1967, page 254; 1970, page A55). A total of 215,326 grams silver, 44,681 kilograms lead and 3367 kilograms zinc were recovered from the 131 tonnes of recorded production.

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EMPR ASS RPT 5644
EMPR BC METAL MM01195; *MM01463
EMPR INDEX 3-196,218
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 210-212

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1146
REPORT: RGEN0100

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GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/02

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REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The former Jackson mine was first discovered in 1892 by R. Jackson. Development was conducted by R. Jackson for several years. In 1893, the Northern Belle Mining Company held the property under bond. The property was then bonded to G. Alexander and associates who formed the Jackson Mining Limited in 1897. A 44 tonne (per day) lead mill was built; it was later modified to also produce zinc. Production temporarily ceased in 1905 with property development occurring in 1906. Lessees continued intermittent production from 1906 to 1929 when the Silver Basin Mines Limited took an option from the Alexander estate. The option was dropped shortly thereafter. More intermittent work was carried out by lessees from 1944 to 1949. In 1951, the Selkirk Mining Co. Ltd. was formed to acquire assets of the the former Selkirk Mining Co. Ltd. A 55-tonne per day mill was partially constructed when work ceased in 1952. The mine was finally put into production again in 1954 with ore shipped to the Western Exploration Company mill. All operations were shut down in late 1955. In 1967, Iskut Silver Mines Limited acquired nine Crown grants. Lessees worked the property in 1968 to 1973. In addition to 11 tonnes of ore mined in 1969, a geochemical survey, 3252 square metres surface stripping and 40 metres of underground exploration were done. The upper levels were cleared out in 1973 and ore hand picked for shipment. The face of the Lucky Jack Fraction tunnel was cleaned and 55 tonnes of ore recovered from the dump but not shipped. Commonwealth Minerals Limited worked on the property in 1979.

Workings at the former Jackson mine include 5 adits and a 45 degree incline extending down to the No. 6 level, covering 122 vertical metres. A 37-metre drillhole explored a new vein, the Ore Bin vein; mineralization was discovered in 1954. Zinc grades were insufficient to warrant mining. The No. 6 level was extended 38 metres to the southeast and 76 metres to the northwest in 1955. Five exploratory raises were also driven and three holes drilled, totalling 39 metres; no new ore was found. A diamond drill program was undertaken in 1988 by Locke Rich Minerals Ltd. on the Northern Belle claim. A fan of six holes, totalling 367.32 metres, was drilled 45 metres east of the Northern Belle adit to test the southeasterly dipping Northern Belle vein and to test mineralization in a deeper parallel vein.

Hostrocks at the former Jackson mine are slate, interbedded argillite and a few narrow limestone beds of the Triassic Slovan Group. Numerous quartz porphyry dikes and sills intrude this stratigraphic sequence. Highly altered basic dikes were also found crosscutting strata but are nearly parallel to lodes. Dikes are highly sheared and altered to carbonate, quartz and mariposite.

The main lode, the Jackson lode on the Northern Belle Crown grant, was the most productive lode. The lode is defined as a vein-fissure. The lode generally strikes 075 to 085 degrees but changes over its exposed length to 340 degrees, nearly conforming to bedding. Overall, the lode dips 40 degrees easterly. Along the more productive sections the lode is 60 to 180 centimetres wide. Ore minerals include galena, sphalerite, chalcopyrite and pyrite in a matrix of siderite, quartz and brecciated basic dike hostrock. Blebs and irregular streaks of mineralization were up to 25 centimetres wide, occurring next to the hangingwall. Most commonly, a near solid band of sphalerite, 5 to 60 centimetres wide, followed closely along the footwall. Overall, the lode is well defined.

A number of other vein exposures were found on the Dublin Queen Crown grant and the adjoining Corrigan occurrence (082KSW014). On the Dublin Queen Crown grant the main vein has been traced for over 60 metres. It was explored by several short adits, crosscuts and opencuts. This lode strikes 065 degrees and dips steeply to the southeast.

The Ore Bin vein was discovered in 1954 near the ore bin of the No. 5 portal but ore grades were found to be uneconomic at that time.

The former Jackson mine operated intermittently from 1894 to 1975. During its mine life, 5847 tonnes of ore were mined with 3,106,070 grams silver, 373 grams gold, 3060 kilograms cadmium, 856,632 kilograms lead and 638,284 kilograms zinc recovered. Most of the early production came from near surface down to the No. 3 level. The point 30 metres east of where the lode changes strike abruptly was also a zone of high production. The lode was followed for 76 metres. The best results from the 1988 drill program on the Northern Belle claim were from drillhole 88-5, where up to 0.3 metre of massive pyrite-sphalerite were intersected. A 1.43-metre chip sample, including massive sphalerite, yielded 15.40 per cent zinc, 0.07 per cent lead, 53.83 grams per tonne silver and 0.23 gram per tonne gold (Assessment Report 18016). Silver values were warranted uneconomic at that time and no further work was done.

The basic dikes are thought to have some genetic and structurally significance to mineralization at the former Jackson

CAPSULE GEOLOGY

mine.

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1896-37,49,63; 1897-570; 1898-1083; 1899-687,707; 1900-985;
1904-160,199; 1906-144; 1923-226; 1927-288; 1928-304; 1929-319;
1934-A26; 1935-E35; 1944-70; 1948-144; 1949-186; 1950-142;
1951-39,167; 1952-173; 1954-50,138-139; 1955-60,A49; 1965-189;
1967-A55,254; 1968-256; 1969-A55; 1971-A55; 1973-A55; 1975-A95
EMPR ASS RPT 10228, 11260, *18016, 21688
EMPR BC METAL MM01337;
EMPR BULL 3(1896), p. 63
EMPR GEM 1969-332, Fig. 41; 1971-421; 1973-98; 1974-81,82
EMPR INDEX 3-201; 4-122
EMPR LMP Fiche No. 60849-60851
EMPR MINING 1975-1980, Vol.1, p. 56
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 224-227
GSC OF 432; 464
GSC SUM RPT 1916, pp. 56,57

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/07

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW016**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEXAS (L.4889)**, TEXAS-COWBOY GROUP, TEXAS MINE, COW BOY (L.4888), SILVER CHALICE, FOURTH OF JULY (L.2052), GARLAND FR. (L.5603), MINNIE (L.4890), CARBONET NO. 2, CLEAR WATER, TORONTO (L.6000), LUCKY EDD (L.5999), SPRING NO. 1, SPRING NO. 2

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:
LATITUDE: 50 00 01 N
LONGITUDE: 117 08 06 W
ELEVATION: 1798 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5538670
EASTING: 490325

COMMODITIES: Lead Zinc Silver Cadmium

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz Calcite Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 1 Metres STRIKE/DIP: 120/69S TREND/PLUNGE:
COMMENTS: The Texas vein is 1.2 metre wide and strikes 120 degrees, dipping 69 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	
Middle Jurassic			Nelson Intrusions

ISOTOPIC AGE: 169 +/- 3 Ma
DATING METHOD: Zircon
MATERIAL DATED: Zircon

LITHOLOGY: Slaty Argillite
Andalusite Schist
Limestone
Slate
Aplite Dike
Biotite Diorite
Biotite Granodiorite

HOSTROCK COMMENTS: Zircon age date (Carr et al., 1987).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Texas occurrence is located near the headwaters of Robb Creek, 3.5 kilometres southwest of its confluence with the Kaslo River. Kaslo, British Columbia lies some 24 kilometres to the southeast.

Underlying rocks of the Texas occurrence include slaty argillite and andalusite schist interbedded with limestone of the Triassic Slocan Group. Limestone beds range from 0.60 to over 30 metres in thickness. The general strike of the strata is northwesterly and dips are mostly to the southwest at 55 degrees. Intrusions include aplitic dikes and irregular bodies of medium grained, biotite diorite and granodiorite related to Middle Jurassic emplacement of the Nelson batholith; bodies are up to 60 metres thick.

The principal workings are on the Texas Crown grant (Lot 4889). Workings consist of a shaft and three adits at intervals over 44 vertical metres. The shaft was sunk down to the Texas vein lode. The Texas lode has a strike of 120 degrees and a dip of 69 degrees southwest. The maximum thickness is 1.2 metres. Mineralization consisted of minor sphalerite and a little galena in quartz and calcite and siderite. Clean galena formed small, irregular pockets.

CAPSULE GEOLOGY

Two other adits are located about 26 metres below these workings. They are known as the Old and New Lower adits. The Old Lower adit was driven northwesterly 21 metres. Near the face, a wide shear zone 3 metres wide was intersected striking nearly east and dipping 60 degrees south. A little galena hosted in veins was evident in the hangingwall of the shear zone. The shear zone intersects limestone at this location. Little or no mineralization was intersected in the Lower New adit.

The relationship between the lode in the upper workings and the shear zone in the lower workings is not clear. It is speculated that they are part of the same lode system and follow the contact of a large granodiorite body.

Work was also carried out on a vein on the Fourth of July claim. The vein has a strike of 310 to 320 degrees with a vertical dip. Ore was first found at the surface in a sheared fissure in slates near a contact with diorite. The vein was drifted a short distance in both directions. The vein is 1.2 to 1.5 metres wide, well defined and carries galena and sphalerite in the footwall as a 10-centimetre stringer. At surface, the vein can be traced for 60 metres by surface cuts. A small amount of production may have occurred from stoping at either end of the drift along this vein. A small northeasterly vein was explored on the Carbonet No. 2 claim.

The property was optioned by the newly incorporated Lucky Edd Mines Limited from 1958 to 1960 with only development work being done. The No. 2 tunnel was reopened and the No. 3 tunnel extended in 1961. The Texas occurrence produced 454 tonnes of ore in 1969. From this ore, 28,521 grams silver, 78 kilograms cadmium, 2893 kilograms lead and 11,269 kilograms zinc were recovered. Further work was done in 1970 consisting of surface exploration and diamond drilling totalling 500 metres in six drillholes. The downward extension of mineralization was proven for at least 60 metres.

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EMPR BC METAL MM01436
EMPR GEM 1969-331, Fig. 41, Table 12; 1970, pp. 455-456
EMPR LMP Fiche No. 61660
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 250-251
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/07

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REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

silver-lead ore. The second is the Okanagan lode on the Okanagan claim, some 76 metres from the Diamond Cross lode. This lode consists of a quartz vein up to 30 or more centimetres wide, from which high silver values were obtained. Most of the development work was carried out on the third, the Dardenelles lode, on the Dardenelles claim. This lode strikes 025 degrees and dips 38 degrees southeast. The lode is traceable on surface for 60 or more metres. The Dardenelles lode is very flat and up to 1.5 metres wide. An ore shoot was stoped out along the footwall from nine drifts. The shoot extended continuously from the surface to the No. 8 level, some 128 metres below. The maximum stoping length was 30 metres along the vein, averaging 9 to 12 metres. The lode had an average width of 4.5 to 6.0 metres. The central portion of the vein appeared to consist of decomposed dike, with evidence of shearing on either side. Galena and high grade silver minerals, most likely tetrahedrite and pyrargyrite, were reported hosted in a quartz vein. The lode has a strong continuity with depth and had encouraging mineralization over 122 to 152 metres length.

The first reported shipment of ore was made in 1892, when 9 tonnes were shipped averaging 6857 grams per tonne silver and 30 per cent lead (Geological Survey of Canada Memoir 184, page 36). Intermittent work was continued until 1902. In 1893, 181 tonnes from the Dardenelles and Antelope claims was shipped. A total of 3079 grams of silver and 28,050 kilograms lead were recovered (Minister of Mines Annual Report 1893, page 1054). In 1896, 296 tonnes of ore were reported mined and shipped, averaging 9086 grams per tonne silver and 26 per cent lead (Minister of Mines Annual Report 1896, page 63). A second grade ore grading 2571 grams per tonne silver and 16 per cent lead was stockpiled on the dump (Minister of Mines Annual Report 1896, page 63); 84 tonnes of this ore was sent to the Pilot Bay smelter. In 1898, 62 tonnes of ore are reported shipped (Minister of Mines Annual Report 1898, page 1074). Galena was reported as the chief sulphide over 60 centimetres at 152 metres depth. The property was optioned to S. Ross and H. Lazier in 1938 and 1939. In 1939, the main shaft was de-watered but no further work was reported. The property was leased to L.P. Gormerly in 1949 who made a shipment of 7 tonnes to the Trail smelter. A total of 10,046 grams silver, 1395 kilograms lead and 648 kilograms zinc were recovered (Minister of Mines Annual Report 1949, page A187).

Total recorded production from the former Dardenelles mine amounted to 690 tonnes with 4,468,050 grams silver, 5 grams gold, 190,077 kilograms lead and 4232 kilograms zinc recovered.

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1902-149; *1938-A35; 1939-95; 1947-187; 1949-187
EMPR BC METAL *MM01163; MM01340
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EMPR INDEX 3-193
EMPR IR 1984-3, p. 108
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 35,36
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/05

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW018**

NATIONAL MINERAL INVENTORY: 082K3 Ag2

NAME(S): **RAMBLER (L.1246)**, RAMBLER-CARIBOO GROUP, RAMBLER MINE,
CARIBOO (L.720), ANTELOPE (L.452), BEST FR. (L.3164),
JENNIE NO. 3 (L.1713), LAST CHANCE NO. 4 (L.3516), HUMPHREY (L.3165),
KENO (L.530), TIGER, RAMBLER-CARIBOO

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 00 36 N
LONGITUDE: 117 11 47 W
ELEVATION: 1829 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5539761
EASTING: 485928

LOCATION ACCURACY: Within 500M

COMMENTS: Rambler mine; location of old mill and buildings. Adits on slope
circling this location (Geological Survey of Canada Memoir 173, Map
273A). See also the Best (Lot 451) occurrence (082KSW156).

COMMODITIES: Silver Lead Zinc Cadmium Gold
Copper Antimony

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcocite Pyrite Tetrahedrite
Pyrargyrite Silver Jamesonite Owyheeite Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Massive Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Fractured
DIMENSION: 610 x 61 x 5 Metres STRIKE/DIP: 040/80S TREND/PLUNGE:
COMMENTS: The lode system strikes 040 degrees and dips 50 to 80 degrees to the
southeast. Three ore shoots were discovered over a horizontal distance
of 610 metres. The main shoot was stoped over 61 by 5 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Quartz Diorite
Aplite Dike
Aplite Sill
Calcareous Quartzite
Argillite
Slate
Limestone
Quartz Porphyry Dike
Aplite Dike
Limestone

HOSTROCK COMMENTS: The quartz diorite stock is informally known as the Best-Antelope
stock.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The former Rambler mine is located in the Rambler Creek basin, a southern tributary to McGuigan Creek. The Rambler occurrence is hosted by calcareous, massive quartzite, argillite, with interbedded fissile slate and limestone of the Triassic Slocan Group. The average strike of these strata is 115 degrees dipping 57 degrees southwest. Folding and faulting are prominent along northwest axes. Axial planes of most of the folds and major faults dip steeply southwest. Other small-scale anticline-syncline pairs are of short amplitude with east striking axial planes and dipping southward. The plunge of these folds is 15 degrees west. These strata are intruded by an elliptical-shaped quartz diorite stock, the Best-Antelope porphyry, and numerous quartz porphyry dikes. The quartz diorite stock occurs almost in the centre

CAPSULE GEOLOGY

of the mine workings and is the principal ore host.

The former Rambler mine was one of the more consistent producers from the Slocan mining district. It was first operated by the Rambler-Cariboo Consolidated Gold and Silver Mines Ltd. and was opened up by three crosscut tunnels, connecting with levels about 30 metres apart. In 1899, it was taken over by the Rambler-Cariboo Mines Ltd. Prior to 1904 development work and mining were confined to the upper eight levels. The No. 3 was the main working level in 1911. All ore above this level had been mined by this time. A shaft was sunk down from this level, with Nos. 4, 5, 6, 7 and 8 levels opened up at 30 metre intervals from which some very good ore was obtained. The downward continuation of the orebody was also proven with ore being mined down to the Nos. 9 and 10 levels. The lower three levels were connected with each other and the No. 3 level via a 140-metre shaft. The No. 14 level was a crosscut driven from the valley of McGuigan Creek 158 metres below the No. 8 level, and was subsequently connected to this level by a raise. The Nos. 9, 10, 11 and 12 levels were also connected to this raise and lie vertically above the No. 12 level. After 1921, work was carried on at the former Rambler mine by various lessees; the first, W.A. Cameron, the former mine manager. In 1928, P.W. Lawrence became operating lessee of the mine and production continued. In 1929, the Slocan-Rambler Mining Company Limited acquired the former Rambler mine. Intermittent production continued and in 1935 was leased to the Ross Mining Syndicate, who also leased the former Wellington mine (082KSW030). Tailings were trammed and trucked from the old dump to the Whitewater mill with production in 1935, 1937 and 1940 when the lease expired. An option was acquired on the property in 1946 by G.A. McMillan and associates. A preliminary geological examination was conducted on the property. In 1947, the shaft below the No. 3 level was restored under the direction of the newly formed Slocan Rambler Company. A total of 1370 metres of diamond drilling was conducted underground in 1948, except for some 244 metres done on surface. Some ore from the No. 3 dump was milled at the Whitewater mill. Tailings from the former Rambler mine at the confluence of McGuigan Creek with Seaton Creek were owned by the Sheep Creek Gold Mines Ltd. and optioned to Kootenay Belle Gold Mines Limited in 1950. Some of these tailings were shipped and processed at the Whitewater mill in 1950 and 1951.

The lode system of the former Rambler mine has a strike of 040 degrees and a dip of 50 to 80 degrees to the southeast. A series of crosscutting fissure-veins, known as the Rambler veins, strike about 080 degrees. The Rambler veins are best developed in more competent rocks. Three main ore shoots were discovered, the Main, North and South. They occur over a horizontal distance of about 610 metres. The North shoot lies entirely within the Rambler claim. The North shoot extends from near the north end of the No. 4 level to somewhere below the No. 9 level with a maximum stoped length of 61 metres above the No. 8 level. The Main shoot straddles the boundary between the Rambler and Cariboo claims. It extended from the No. 3 level to the No. 8 level with a maximum length of about 46 metres. The South shoot lies some distance south of the Rambler claim. It was best developed between the No. 9 and 10 levels but continued to above the No. 7 and below the No. 12 levels. Its maximum length was about 49 metres. The shoots were up to 5 metres in width, consisting of up to 2.0 metres of massive, commonly sheared galena in a gangue of drusy quartz. Some of the lower levels contained considerable sphalerite but no general increase of sphalerite with depth is recorded. Other associated mineralization included pyrite, chalcocite, native silver, pyrrargyrite, tetrahedrite, jamesonite, owyheeite and a little chalcopyrite.

In 1927, mining was confined to an ore shoot between the No. 10 and No. 11 levels where ore mineralization was exposed over 21 metres length. In 1929, a narrow ore shoot was opened up on the 1400 foot level. The shoot was 76 to 150 centimetres wide and about 60 metres long. Mineralization consisted of sphalerite, pyrite and galena in a well defined fissure vein striking 050 degrees and dipping 55 degrees west.

At the former Rambler mine ore has been correlated to aplitic dikes and sills because of their affect on the course of the lode. The steeply dipping lode crosses bedding at a steep angle and is deflected at each sill or dike, passing through nearly at right angles. The ore appears closely related to nearly east-west dilation jogs and crossfractures.

The former Rambler mine produced continuously for 34 years from 1895 to 1935, then intermittently to 1951. During its mine life a total of 189,421 tonnes of ore was mined from which 108,959,934 grams silver, 839 grams gold, 327 kilograms copper, 10,527,871 kilograms lead and 2,654,696 kilograms zinc were recovered.

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1902-149; 1903-136; 1904-194,201; 1905-25,160; 1906-145,214; 1907-
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140-142,285; 1912-149,322; 1913-126,420; 1914-287,399,510; 1915-
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E34,G51; 1937-A38; 1940-27,79; 1946-160; 1947-169; 1948-143; 1950-
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EMPR ASS RPT 5883
EMPR BC METAL MM01366
EMPR BULL 29, p. 57
EMPR INDEX 3-210
EMPR PF (*Ambrose, J.W. (1946): Report on the Rambler mine, with
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EMR MP CORPFILE (Slocan Rambler Mining Co. Ltd.)
GSC MAP 1667
GSC MEM 139, p. 145; *173, Map 273A; *184, pp. 103-107
GSC OF 432; 464
GSC SUM RPT 1920, p. 34A; 1925, p. A200; 1935, pp. 200,201

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FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSW019**

NATIONAL MINERAL INVENTORY: 082K3 Ag4

NAME(S): **SOHO (L.3175)**, SOHO GROUP, SOHO MINE,
OLD TOM MOORE (L.11125), SPOKANE (L.3515), MARY RYAN,
LIBERATOR NO. 2 (L.11124), NORTHERN PACIFIC (L.3174), RED CROSS (L.3176),
LAUGHING WATERS (L.11127), BOXER NO. 2 (L.11128), FARAWAY NO. 2 FR.,
ABEY JONES FR. (L.11126), RYAN, ST. LAWRENCE,
TOM MOORE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 00 17 N
LONGITUDE: 117 12 05 W
ELEVATION: 2042 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Soho mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5539175
EASTING: 485568

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Tetrahedrite Pyrrargyrite
COMMENTS: Tetrahedrite and pyrrargyrite reported from the Ryan vein.
ASSOCIATED: Quartz Siderite
COMMENTS: Siderite reported for the Old Tom Moore and Soho veins only.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Massive Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Regular
MODIFIER: Sheared
DIMENSION: 200 x 100 x 2 Metres STRIKE/DIP: 055/70S TREND/PLUNGE:
COMMENTS: The Old Tom Moore vein strikes 050 to 055 degrees and dips 60 to 70 degrees southeast. It has been developed over 200 metres length and 100 metres vertical depth. The vein width is up to several metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Slocan Undefined Formation

LITHOLOGY: Argillite
Phyllite
Quartzite
Limestone
Quartz Porphyry Dike
Quartz Porphyry Sill
Basic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Soho occurrence is located at 2042 metres on a sharp ridge separating the headwaters of Rambler Creek from McGuigan Creek. Kaslo, British Columbia is located roughly 28 kilometres to the east-southeast. The main workings are on the Old Tom Moore claim at about 2072 metres elevation. The Soho claim is located roughly 610 metres north of the Old Tom Moore claim at 2042 metres elevation. Development began in 1893 with work on the Tom Moore and St. Lawrence claims, by M.C. Monaghan, G. Hamley and T. Hennessy. The ground was then later re-staked as the Soho and Old Tom Moore claims. Early work on the Soho claim consisted of two inclined shafts 18 metres apart and totalling 40 metres. Drifts were run east and west off the deeper shaft for 37 metres. A shipment of ore was claimed to have been made in 1901 from the Soho claim. Several adits were developed on the Old Tom Moore claim. By 1913, the Soho Group consisted of eight Crown grants and the Soho Mines Limited was incorporated. Development work was carried out from 1915 to 1917. In the following years intermittent work was carried out by lessees. The company was reorganized as the Soho Consolidated Mines Limited in

CAPSULE GEOLOGY

1923 with activity reported in early 1924. By 1926, the Mary Ryan Mines Limited acquired the Soho Group. More development work was carried out from 1927 to 1929 on the Old Tom Moore adits. Workings now consisted of 4 adits on the western side of the ridge and an intermediate level, the No. 4 level, with its portal on the eastern side of the ridge. Level No. 5 was a crosscut driven 61 metres to the Old Tom Moore vein. Drifts were driven east and west along the vein. The Mary Ryan vein was developed by two adits, 14 vertical metres apart. The company folded in 1942 and the property was acquired at a tax sale by J.R. Cassin. Property activity lapsed until 1962 when L.N. Garland and associates took an option on the property, as well as acquiring the adjacent Antoine occurrence (082KSW011). From 1966 to 1967, the Old Tom Moore No. 5 level was extended to reach the Antoine lode. All operations ceased in 1968.

The Soho occurrence is underlain by a belt of thinly bedded argillaceous rocks of the Triassic Slocan Group. This belt is flanked by more massive, blocky and banded phyllite, argillites, quartzite and narrow limestone beds of the Slocan Group. The rocks trend northwest and dip moderately to steeply southwest. They are intruded by numerous quartz porphyry dikes and sills. Some basic dikes are also present.

Three roughly parallel lodes, trending northeast and dipping southeasterly, are mineralized with galena, sphalerite, pyrite, and minor tetrahedrite and pyrargyrite. Gangue minerals are quartz, siderite and those associated with sheared and brecciated hostrock.

The largest vein, referred to as the Tom Moore, strikes 050 to 055 degrees and dips about 60 to 70 degrees southeast, but in places is near vertical. The vein ranges from several metres to a few centimetres wide over a vertical depth of 100 metres. It has been developed by mine workings for roughly 200 metres length. Most of the ore has been mined from a number of stopes, from 18 metres length and 12 metres depth, above the No. 4 level. These stopes occupy a central position under the summit ridge. Below the No. 4 level, the lode tightens following a fracture with no more than 8 to 10 centimetres width of mineralized vein. A sample assayed 2386 grams per tonne silver, 46.4 per cent lead and 24.5 per cent zinc (Minister of Mines Annual Report 1923). The ore was principally galena and sphalerite hosted in siderite, quartz and brecciated hostrock.

The Ryan vein, about 130 metres northwest of the Tom Moore, strikes about 045 degrees and dips about 37 degrees southeast. The lode is not well defined except in the vicinity of a winze, sunk 18 metres below the lower level. Mineralization consisted of galena, sphalerite, pyrite and minor tetrahedrite and pyrargyrite in a quartz gangue.

The Soho vein is 1000 metres northwest and 300 metres vertically below the outcrop of the Tom Moore. It strikes about 055 degrees and dips steeply southeast. Ore specimens contained galena and sphalerite in a gangue of siderite, quartz and brecciated hostrock.

Production from the former Soho mine occurred primarily near the turn of the century. Total recorded production amounted to 815 tonnes with 2,483,427 grams silver, 67,584 kilograms lead and 2,584 kilograms zinc recovered.

BIBLIOGRAPHY

- EMPR AR 1893-1060; 1895-679; 1900-827; 1901-1026; 1902-149; 1913-424; 1917-162; *1923-225-226,384; 1924-197; 1928-294; *1929-285,310-311; 1931-142; 1962-79; 1963-74; 1965-190; 1966-222-223; 1967-253; 1968-254-255
EMPR BC METAL MM01413
EMPR INDEX 3-214
EMPR MINING 1975-1980, Vol.1, pp. 71-75
EMR MP CORPFILE (Antoine Silver Mines Ltd.; Mary Ryan Mines Ltd.)
GSC MAP 1667 (in 1916 Summary Report)
GSC MEM *173, Map 273A; *184, pp. 133-135
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/09

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW020**

NATIONAL MINERAL INVENTORY:

NAME(S): **BON TON (L.636)**, BONTON, BON TON MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 06 N
LONGITUDE: 117 10 10 W
ELEVATION: 2000 Metres

NORTHING: 5540683
EASTING: 487861

LOCATION ACCURACY: Within 500M

COMMENTS: Bon Ton mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Shear

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: Metres STRIKE/DIP: 055/50S

TREND/PLUNGE:

COMMENTS: The lode has a strike of 055 degrees and a dip of 50 degrees to the southeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Argillite
Quartz Porphyry Dike
Basic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Bon Ton occurrence is situated on the eastern slopes of the north-trending ridge separating Stenson (Jackson) Creek from McGuigan Creek. Kaslo, British Columbia lies roughly 26 kilometres to the east-southeast.

The showing was first staked on the Bon Ton claim in 1892. A small shipment of ore is reported for 1893. Small shipments of high-grade ore are also reported for 1915 to 1919 with records for 1917 to 1919. Recorded production from the later three years was 12 tonnes with 86,000 grams silver and 2675 kilograms lead recovered. Average grades were 7303 grams per tonne silver and 28 per cent lead. Little work has been done since 1919. Workings consisted of four short adits and a 12-metre shaft.

Hostrocks of the Bon Ton occurrence are mainly argillites of the Triassic Slocan Group, striking 125 degrees and dipping 50 degrees southwest. Argillites are intruded by quartz porphyry dikes and a basic dike with a green mica, possibly mariposite.

The workings intersected a fissure-vein lode, consisting of quartz with galena and tetrahedrite. The lode has a strike of 055 degrees and a dip of 50 degrees southeast.

BIBLIOGRAPHY

EMPR AR 1893-1057; 1896-64,557; 1897-528; 1915-445; 1917-448; 1927-484
EMPR BC METAL MM01138
EMPR INDEX 3-190
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 199
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/11

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW020**

MINFILE NUMBER: **082KSW021**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEORIA (L.3318)**, PEORIA GROUP, SNOWFLAKE (L.3320),
HARRIET (L.3319), CODY FR.

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 01 27 N
LONGITUDE: 117 10 55 W
ELEVATION: 2103 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Peoria mineral occurrence (Geological Survey of Canada Memoir 173,
Map 273A).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5541334
EASTING: 486967

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Slate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Peoria prospect is located on the northern slopes of the divide between Stenson Creek and McGuigan Creek. The former Lucky Jim mine (082KSW023) is located 2.5 kilometres to the northwest. Kaslo, British Columbia lies some 27 kilometres to the east-southeast.

Lithologies underlying and surrounding the Peoria prospect include limestone and slate of the Triassic Slocan Group. A thick limestone bed on the Snowflake claim is thought to be correlative with limestone intimately associated with orebodies at the former Lucky Jim mine.

Workings on the Peoria claim group consist of a 16-metre shaft on the Snowflake claim, two short adits on the Harriet claim and numerous opencuts and shallow trenches on these and the other claims.

Some small fissure veins were exposed in workings on the Peoria claim group. These fissure veins strike northeast, intersecting limestone and slate. Veins were mainly quartz with argentiferous galena.

BIBLIOGRAPHY

EMPR AR 1899-846
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 240
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/11

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW022**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRINGO (L.6813)**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 48 N
LONGITUDE: 117 11 11 W
ELEVATION: 1829 Metres

NORTHING: 5541983
EASTING: 486650

LOCATION ACCURACY: Within 500M

COMMENTS: Gringo mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Slate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Gringo prospect is located on the northern slopes of the divide between Stenson Creek and McGuigan Creek. The former Lucky Jim mine (082KSW023) is located 1.5 kilometres to the northwest. Kaslo, British Columbia lies some 27 kilometres to the east-southeast.

Lithologies underlying and surrounding the Gringo prospect include limestone and slate of the Triassic Slocan Group. A thick limestone bed on the Gringo claim is an extension of limestone intimately associated with orebodies at the former Lucky Jim mine.

Workings on the Gringo claim group consist of a shaft and opencuts on a narrow vein or veins composed of quartz carrying galena.

BIBLIOGRAPHY

EMPR AR 1905-251
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 221
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/11

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Jim mine area, is part of a major west-northwest plunging crossfractured fold structure. Brecciation, especially evident in the limestone, suggests that considerable differential movement has occurred.

Where undeformed, the "Lucky Jim" limestone has an average thickness of approximately 9 metres and a horizontal width of 6 to 61 metres. It has a faintly banded to massive appearance, a finely crystalline texture, and dark grey to black colour. Where strongly deformed, as it is throughout the productive section of the mine, it has been significantly thickened by folding. As a result, most of the limestone has been brecciated and, locally fractured.

The general structure controlling the Lucky Jim mineralization is the west-northwest plunging fold complex which can be traced from the highest to lowest levels of the mine. On successive cross-sections, the "mine fold" varies considerably in size and outline. Within the upper, southeasterly parts of the mine, it is essentially an irregular dragfolded, buckled and thickened interval of the limestone bed with a general southwesterly dip of approximately 40 degrees. Within the lower, northwesterly workings, it is a wide, complexly folded, pinching and swelling mass of limestone relating to a broad, flat wrap in the generally southwesterly dipping section. The resulting deformation has produced a characteristic breccia structure, with thicknesses ranging from 15 to 45 metres or more.

The most apparent structural controls of the ore mineralization are: (a) vertical crossfractures, or crossfracture zones striking at approximately 090 degrees (right angles) to the average regional strike of the bedding and are themselves mineralized to varying degrees; (b) plunging fold or buckle axes, with the replacement mineralization occurring as streaks, masses and disseminations within the limestone (breccia); (c) vertical longitudinal fractures, or zones of fracturing roughly parallel to the general strike of the limestone within the lower mine workings and (d) combinations of the above noted controls. Pervasive replacements on zones or crossfractures are produced near vertical tabular orebodies with widths of up to 12 metres, and lengths related to the local widths of limestone traversed by the crossfractures. Vertical longitudinal fractures are apparently less important as ore controls than (a) and (b). These probably account for the bulk of the mineralization below the No. 5 level.

The orebodies at the Lucky Jim mine are the result chiefly of replacement of limestone. Mineralization predominantly consists of sphalerite, pyrite, calcite and very minor quartz in a limestone (calcite) gangue. The relative proportion of pyrite and sphalerite varies considerably, and some mineralization is composed dominantly of pyrite. The ore in any body occurs as pods, lenses, stringers and irregular masses, locally forming a systematic pattern but more often not. The boundaries of an orebody are commonly distinct, with very little gradation from ore through low-grade material, into barren rock. Small, isolated patches of mineralization are rare. Galena is common in the crossfracture zones of the upper levels (above No. 5 level), but has not been a recoverable constituent of the ore below the No. 5 level. Tin occurs as minute amounts within the sphalerite and partly in the form of cassiterite. Other minerals include pyrrhotite and, locally, very minor arsenopyrite.

Three important fracture zones have been explored and developed at the former Lucky Jim mine, each hosting significant orebodies. From northwest to southeast these are the Glory Hole fracture zone, the Central or Main fracture zone and the Big or New fracture zone. The zones are 38 to 53 metres wide and 84 to 91 metres apart. In the Glory Hole and Central or Main fractures, ore was hosted in irregular, chimney-shaped ore shoots, up to 15 metres diameter, in limestone on either side of the fissure or within narrow zones of closely-spaced fractures or fissures. Four important and distinct fracture zones were discovered and mined in the Central or Main zone, which was 46 metres wide. In the Big fracture zone, mineralization was hosted in replacement bodies developed along strike of the limestone. The largest mineralized zone of this mine, the Larson stope, extends from 61 metres above the No. 3 level to the No. 4 level, maintaining an average width of 3 metres over 46 metres length. The zone contained considerable high grade lead ore.

The Lucky Jim mine is developed by six adits at elevations ranging from 1083 metres at the portal of the No. 9 level (haulage level) to 1420 metres at the No. 1 level. The orebodies have been mined through a vertical range of approximately 365 metres. Most of the development work has been, and most of the production has come from above No. 5 level at the 1220 metre elevation. Early operations were confined to the Glory Hole and Central fracture zones while after 1926 most was from the Big fracture zone. Production from the Lucky Jim mine began with the first shipment of ore in 1893 and

CAPSULE GEOLOGY

continued intermittently until 1959. Total recorded production amounts to 1,065,798 tonnes with 18,634,368 grams silver, 2799 grams gold, 194,847 kilograms cadmium, 3,697,184 kilograms lead and 79,798,689 kilograms zinc recovered.

Interest in the former Lucky Jim mine since 1959 has been expressed by exploration by Swim Lake Mines Ltd. in 1971, J. Bell in 1983 and J. Ross in 1987. No further underground development or production was done. A rock sample taken near the upper adit on the St. George claim in 1983, under option to Nomad Energy and Resources Ltd., yielded 32.8 per cent zinc, 66.17 grams per tonne silver, 0.49 per cent lead and 0.18 per cent cadmium (Assessment Report 12249). The sample, ZR-003, was a 50-centimetre chip sample across a fracture zone in limestone containing sphalerite, pyrite and galena in a gangue of calcite and ankerite.

BIBLIOGRAPHY

EMPR AR 1892-531; 1893-1047,1056,1057,1083; 1895-677,679; 1896-37,49,66; 1897-572; 1899-596; 1903-136; 1904-G196; 1911-K138-K140; 1925-A241; 1927-C272; 1928-C283,C284; 1940-A26,A80; 1941-A27,A74; 1942-A27,A71; 1943-A45; 1944-A42,A70,A71; 1945-A44,A104; 1946-A35,A153,A160; 1947-A169; 1948-A143; 1949-A187; 1950-A142,A143; 1951-A43,A168; 1952-A44,A173; 1953-A46,A138; 1957-52; 1958-45; 1959-68
EMPR ASS RPT 3650, *12249, 15137, 15472, 15552, 16472, *16615, 18311
EMPR BC METAL MM01280
EMPR BULL 7; *22, pp. 31-45; 49; 53, pp. 66-68
EMPR INDEX 3-204; 4-123
EMPR LMP Fiche No. 60943-60949
EMPR MAP 65 (1989)
EMPR PF (Hedley, M.S. (1943): Outline Report on Lucky Jim Mine; Photograph, numerous underground level plans and sections, surface plans, underground and surface geological plans and mineral claim location map; *Snell, J.C. (1977): The Geology and Mineralization of the Triassic Basal Slate Member, Slocan Sediments, Whitewater District of British Columbia, in 082K General File)
EMR MP CORPFILE (Lucky Jim Zinc Mines, Limited; Lucky Jim Lead and Zinc Company, Limited; Zincton Mines, Limited; Aetna-Goldale Investments Limited; Swim Lake Mines Ltd.)
GSC MEM 161; *173, Map 273A; *184, pp. 69-73
GSC OF 288; 432; 464
GSC SUM RPT 1921 Part A, pp. 107-110; 1925 Part A, pp. 195,196
WWW http://www.infomine.com/index/properties/LUCKY_JIM.html

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/19

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSW024**

NATIONAL MINERAL INVENTORY:

NAME(S): **NIL DESPERANDUM (L.2806)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 28 N
LONGITUDE: 117 11 13 W
ELEVATION: 1250 Metres

NORTHING: 5543218
EASTING: 486614

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Nil Desperandum Reverted Crown grant (Lot 2806).

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Tetrahedrite

ASSOCIATED: Quartz

COMMENTS: Copper carbonate staining present.

ALTERATION TYPE: Leaching

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic
Unknown

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY:

Slate
Quartz Porphyry Dike
Quartz Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Nil Desperandum occurrence is located 500 metres south of Fish Lake and 1.25 kilometres east-northeast of the former Lucky Jim mine (082KSW023). Kaslo, British Columbia lies roughly 28 kilometres to the southeast.

A couple of short adits, 46 vertical metres apart, were driven on the Nil Desperandum Reverted Crown grant. These explored at depth several irregular vein quartz outcrops in slates of the Triassic Slocan Group. Numerous quartz porphyry dikes and sills crosscut Slocan strata.

The quartz is stained with copper carbonates and is sparsely mineralized with pyrite, galena, sphalerite and a little tetrahedrite.

BIBLIOGRAPHY

EMPR AR 1898-1192

EMPR PF (Snell, J.C. (1977): The Geology and Mineralization of the Triassic Basal Slate Member, Slocan Sediments, Whitewater District of British Columbia, in 082K General File)

GSC MAP 1667

GSC MEM *184, p. 238

GSC OF 432; *464

Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/11

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW025**

NATIONAL MINERAL INVENTORY: 082K3 Ag5

NAME(S): **MCALLISTER**, MCALLISTER GROUP, MCALLISTER MINE,
RIDGEWAY (L.11898), SILVER QUEEN (L.11899), SILVER KING (L.11900),
ROUSE FR. (L.11901), PROVINCE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 03 16 N
LONGITUDE: 117 13 59 W
ELEVATION: 1768 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: McAllister mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5544710
EASTING: 483316

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Tetrahedrite Chalcopyrite
COMMENTS: Other silver minerals are reported but not identified.
ASSOCIATED: Quartz
COMMENTS: Carbonates or sulphates of copper and manganese occur in certain parts of the orebody.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Disseminated Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Fractured
DIMENSION: 488 x 3 Metres STRIKE/DIP: 036/35S TREND/PLUNGE:
COMMENTS: Quartz-filled fissures strike 037 degrees and dip 35 to 60 degrees.
The main quartz vein is 0.90 to 2.73 metres wide and has been explored over 488 metres length on the No. 3 level.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Slocan	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Quartzite
Argillaceous Quartzite
Limestone
Argillite
Quartz Porphyry Dike
Quartz Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The former McAllister mine is situated on the northwest slopes of London Ridge at 1768 metres elevation. The former Lucky Jim mine (082KSW023) is located 2.75 kilometres to the southeast.

The initial showing of the McAllister Group was staked in 1902. In 1903 and 1904, Hunter and Fairburn owned and operated the property. The McAllister Group Company worked the property in 1906. Then in 1907, Bennett and Clark assumed property work. From 1912 to 1917 work was abandoned. In 1917, the McAllister Mining and Milling Co. acquired the property. The property changed owners again in 1919 to the Slocan Silver Mines Ltd. The Standard Silver-Lead Mining Co. acquired a controlling interest in 1926. Mining operations were then intermittent by either the owner or leasers, until about 1947. At this time the Allan Nelson Mining Co. Ltd. acquired the property. In 1949, Noonday Mines Ltd., a subsidiary of Alpine Gold Ltd., optioned the property. The option was dropped soon afterwards and the former mine has remained inactive since 1950. Ore from the dumps was shipped in 1958 and 1980. Premier Resources Ltd. conducted surface and underground exploration of the former McAllister mine in 1975. Mine workings consisted of 6 levels over 122 vertical metres. Roughly 1829 metres of drifting and crosscutting was done in 6 adits.

CAPSULE GEOLOGY

The McAllister occurrence is hosted by massive to argillaceous quartzite, argillite and some limestone of the Triassic Slocan Group. This strata dips 40 degrees to the west and is intruded by numerous quartz porphyry dikes and sills which strike nearly conformable to bedding.

Mineralization is hosted in quartz-filled fissures that strike 036 degrees and dip 35 to 60 degrees southeast. The deposit consists of a quartz vein 0.90 to 2.73 metres wide where hosted in massive quartzite. The vein has been explored over 488 metres length on the No. 3 level. The vein is composed of quartz and angular fragments of hostrocks. Pyrite with some galena, sphalerite, tetrahedrite (and other unknown silver minerals), and chalcopyrite are disseminated in the quartz or form small, massive ore shoots where a crossfissure intersects the main vein at about 30 degrees. Carbonates or sulphates of copper and manganese occur in certain parts of the orebody.

The most persistent and productive part of the lode is where it crosses a 200 metre thick sequence of massive quartzites. Where the vein enters more argillaceous rocks on both sides of the quartzite sequence, the vein becomes more difficult to follow with small faulting and branching.

Production from the former McAllister mine was significant but intermittent, spanning 77 years from 1903 to 1980. Production peaked in the period 1926 to 1938. Total production figures are 21,564 tonnes mined with 32,790,962 grams silver, 3099 grams gold, 16,419 kilograms lead and 4253 kilograms zinc recovered. Most of the ore came from the No. 2 level but significant amounts of high-grade ore were mined down to the No. 4 and 5 levels. The ore is typical of dry ores found at other mines in the Slocan mining camp.

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EMPR BC METAL MM01299
EMPR GEM 1969-330, Fig.41; 1970-454,455; 1975-E44
EMPR INDEX 3-204; 4-123
EMPR IR 1984-2, p. 102
EMPR LMP Fiche No. 60953
EMPR MINING 1975-1980, Vol.1, pp. 32,74
EMPR PF (Mill, G.L. (1974): Report on the McAllister Mine; Premier Resource Ltd. (1974): Prospectus)
EMR MP CORPFILE (Standard Silver-Lead Min. Co.)
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 79-81
GSC OF 432; 464
GSC SUM RPT 1916, p. 56
GCNL #223(Nov.21), 1975

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/11

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSW026**

NATIONAL MINERAL INVENTORY: 082K3 Ag7

NAME(S): **JO-JO (L.1839)**, JO JO, JO JO GROUP,
JO JO MINE, HALTON CHIEF (L.2158), JOE JOE,
JO-JO, MINER BOY GROUP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 03 49 N
LONGITUDE: 117 14 14 W
ELEVATION: 1554 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Jo Jo mineral occurrence (Geological Survey of Canada Open File 464).
See Miner Boy (082KSW027) and Milton (082KSW135).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5545730
EASTING: 483021

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Argentite Silver
Pyrite
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Disseminated Massive
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Slate
Calcareous Argillite
Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Jo Jo occurrence is located at 1554 metres elevation on O.K. Creek, a tributary to Kane Creek on the northwestern slopes of London Ridge. The former McAllister mine (082KSW025) is located 1.0 kilometre to the south-southeast.

The Jo Jo claim group, reported to consist of four claims, has been worked intermittently since 1904. In 1946, Trimetals Mining Incorporated purchased the Jo Jo and Miner Boy (082KSW027) mineral claims but no work was reported. In the following year, work under the Miner Boy Incorporated included 5 metres of drifting in the No. 1 adit and 48 metres of crosscutting in the No. 3 adit. No further work was done until 1966, when exploration work was conducted by the Banjo Syndicate of Vananda Exploration Limited. Underground drilling was done on the No. 3 level without success. Caving ground was encountered and prevented drilling from reaching the expected extension of the Jo Jo vein. A second drill program was conducted by the London Silver Corporation in 1981 with no further success. Four diamond-drill holes totalling 399 metres were drilled. Some small quartz veins with silver-bearing sulphides hosted in quartz porphyry were intersected in drillhole J-4. No significant metal values were determined, however, the western extension of the Jo Jo vein beyond the No. 2 level was implied.

The Jo Jo occurrence is underlain by slate and thinly bedded, calcareous argillite of the Triassic Slocan Group. Several quartz porphyry dikes intrude this Slocan strata.

At the Jo Jo occurrence, a quartz vein was explored in O.K. Creek. The vein was explored by two adit-tunnels, 40 vertical metres apart. High grade silver-bearing minerals, pyrite, galena and sphalerite are disseminated throughout the quartz and also occur as small, rich ore shoots. Argentite, tetrahedrite and native silver in a quartz gangue comprise mineralization found in the lower adit.

Ore was first extracted from the upper adit, where a 27-metre

CAPSULE GEOLOGY

crosscut intersected a narrow quartz vein. This was drifted for 34 metres easterly. At 20 metres from the crosscut, a high-grade ore shoot was stoped to near the surface. The vein was followed for a considerable distance in the lower adit, intersecting a little ore. Production records for the Jo Jo occurrence indicate 131 tonnes mined with 603,087 grams silver, 62 grams gold, 9655 kilograms lead and 528 kilograms zinc recovered intermittently between 1904 and 1947.

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EMPR AR 1899-844; 1904-182,202; 1905-161; 1906-249; 1907-214; 1910-99; 1911-134; 1916-516; *1918-167; 1922-200; 1924-197; 1929-312; 1936-E52; 1946-161; *1947-169; 1964-122; *1966-223
EMPR ASS RPT *9804
EMPR BC METAL MM01308
EMPR GEM 1969-330, Fig. 41
EMPR INDEX 3-201
EMPR PF (Cairn Mines Ltd. (1971): Prospectus)
EMR MP CORPFILE (Vananda Exploration Ltd.)
GSC ANN RPT 1918, p. 167
GSC MAP 1667
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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PAGE: 1171
REPORT: RGEN0100

CAPSULE GEOLOGY

of native silver, argentite and tetrahedrite. The vein material is very similar to that exposed at the former McAllister mine.

Production records for the Miner Boy occurrence indicate 3 tonnes mined in 1893 yielded 36,857 grams silver.

BIBLIOGRAPHY

EMPR AR 1893-1061; 1902-300; 1920-127; 1929-312; 1946-161; 1947-169
EMPR ASS RPT *9804
EMPR BC METAL MM01308
EMPR INDEX 3-205
EMR MP CORPFILE (Vananda Exploration Ltd.)
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 83
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

metres. The later discovered New lode was explored by several opencuts and a 12-metre adit by 1928. Most of the work has been done on the Old lode.

The Old lode cuts across the granite stock, with most of the work being done within the stock. The lode is a sheared and mineralized fissure zone, striking 025 to 045 degrees and dipping 40 degrees southeast. The average width is 60 centimetres and is composed of brecciated hostrock, quartz with galena and tetrahedrite in nests, streaks and patches. Stephanite and argentite are also reported from picked samples. The quartz occurs as a series of lenses, bands, streaks and irregular masses.

The New lode is a fairly well-defined fissure cutting sediments of the Slocan Group and quartz porphyry dikes. The lode has a strike of 225 degrees and a dip of 45 degrees northwest. It carries lenses and bands of quartz ranging from a few centimetres to 1 metre thick. Disseminated tetrahedrite is the principal ore mineral. Mineralization seems to be more pronounced where the lode intersects quartz porphyry dikes.

Production records indicate 1,575,336 grams silver, 404 grams gold and 26 kilograms lead were recovered from a total of 276 tonnes.

BIBLIOGRAPHY

- EMPR AR 1892-531; 1893-1046,1061; 1901-1025; 1902-153; 1904-199;
1905-160; 1906-144,248; 1907-96; 1908-94,247; 1917-186; 1919-125;
1920-127; 1950-143; 1951-160; 1964-122
EMPR BC METAL MM01395
EMPR EXPL 1977-E64
EMPR GEM 1970-457; 1974-82
EMPR INDEX 3-213
EMPR MINING 1975-1980, Vol.1, p. 35
EMPR PF (Snell, J.C. (1977): The Geology and Mineralization of the
Triassic Basal Slate Member, Slocan Sediments, Whitewater District
of British Columbia, in 082K General File)
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 246
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW029**

NATIONAL MINERAL INVENTORY: 082K3 Ag12

NAME(S): **HILLSIDE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 32 N
LONGITUDE: 117 09 33 W
ELEVATION: 1190 Metres

NORTHING: 5543337
EASTING: 488603

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 9659.

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT:
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Slocan	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Calcareous Argillite
Shale
Slate
Limestone
Quartzite
Quartz Porphyritic Dike
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Hillside occurrence is located west of Retallack and east of Jackson creek at 1190 metres elevation above sea level, in the Slocan Mining Division.

Regionally, the area lies on the western margin of the Kootenay Arc, in allochthonous rocks of the Quesnel Terrane. In the vicinity of the occurrence, the Quesnel Terrane is dominated by the Upper Triassic Slocan Group, a thick sequence of deformed and metamorphosed shale, argillite, siltstone, quartzite and minor limestone. Rocks of the Slocan Group are tightly and disharmonically folded. Early minor folds are tight to isoclinal with moderate east plunging, southeast inclined axial planes and younger folds are open, southwest plunging with subhorizontal axial planes. The sedimentary sequence has been regionally metamorphosed to lower greenschist facies.

South of the occurrence, the Slocan Group has been intruded by the Middle Jurassic Nelson intrusions which comprise at least six texturally and compositionally distinct phases ranging from diorite to lamprophyre. The most dominant phase is a medium to coarse grained potassium feldspar porphyritic granite. Several feldspar porphyritic granodiorite dikes, apparently related to the Nelson intrusions, also cut the sedimentary sequence near the occurrence (Paper 1989-5).

The property is underlain by thinly bedded calcareous argillite, shale and slate of the Slocan Group. Minor limestone and quartzite beds are also present. The sedimentary rocks strike northwest and dip southwest. A small granodiorite stock and several quartz porphyritic dikes cut the sedimentary sequence just west of the occurrence. The area is cut by east and northwest-trending faults.

On the Hillside property three small adits totalling about 180 metres explore a quartz vein that follows a northwest trending fault zone. The vein is narrow and dips southeast. Vein mineralogy is not know, but silver and copper were recovered from the occurrence in 1900.

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CAPSULE GEOLOGY

Production from the vein yielded 13,654 grams of silver and 424 kilograms of copper from a total of 2 tonnes mined.

BIBLIOGRAPHY

EMPR AR 1911-290; 1926-248; 1966-223
EMPR ASS RPT *9659
EMPR BC METAL MM01233
EMPR EXPL 1980-105
EMPR INDEX 3-200
EMPR P 1989-5
GSC MAP 273A; 1667
GSC MEM 173; *184, p. 223; 309
GSC OF 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW030**

NATIONAL MINERAL INVENTORY: 082K3 Ag13

NAME(S): **WELLINGTON (L.553)**, WELLINGTON MINE, WELLINGTON GROUP,
BLEUCHER, BLUTCHER (L.3633), IC (L.2283),
IVANHOE (L.1195), OTTAWA (L.1196), METIS (L.3636),
TIGER NO. 2 (L.2273), AY (L.2272), HAZEL (L.2639),
HOMESTAKE (L.12414), PORCUPINE, LEO #1,
HS FR.

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 03 24 N
LONGITUDE: 117 08 58 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of the Wellington Crown grant (Lot 553).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5544942
EASTING: 489302

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite
ASSOCIATED: Quartz Siderite Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 660 x 1 Metres STRIKE/DIP: 090/70N TREND/PLUNGE:
COMMENTS: Most production was from the north lode, intersected by the Matheson
adit over 660 metres total length. Up to 1.5 metres massive galena
was mined between the 40 and 80 foot levels. South lode is 050/60SE.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Slocan Undefined Formation

LITHOLOGY: Argillite
Slate
Calcareous Slate
Argillaceous Slate
Quartzitic/Quartzose Slate
Graphitic Slate
Limestone
Lamprophyre Dike
Basic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Wellington occurrence is situated between Murray and
Whitewater creeks, 1.5 kilometres north-northwest of the historic
mining town of Retallack, British Columbia. It was a significant
past producer for this area, spanning 42 years from 1892 to 1934. A
total of 1779 tonnes of ore produced 3,653,134 grams silver, 124
grams gold, 231,478 kilograms lead and 87,286 kilograms zinc.

The Wellington past producer was first staked in 1892 by W.
Matheson. Shortly thereafter (1894) the property was sold to a
syndicate of Ottawa lumbermen who formed the Kootenay and Columbia
Prospecting and Mining Company (Limited). This same year the claim
was Crown granted. The property was explored along the Wellington
lode, thought to be the western extension of the Whitewater lode
(082KSW033). In 1896, the AY adit was driven to reach the Hazel
vein, and the Ivanhoe adit was driven. The property was transferred
to the Wellington Silver Mining Company Limited in June 1897. From
1908 to 1910, the Wellington property was leased during which time
production continued. At that time the workings consisted of four
shallow shafts, two crosscuts and two intermediate levels. The lower
crosscut intersected the vein which was drifted along for over 300
metres east. The western extension of the Wellington lode was
explored for on the Ivanhoe Crown grant (Lot 1195). In 1920, Slocan

MINFILE NUMBER: **082KSW030**

CAPSULE GEOLOGY

Consolidated Silver Mines Limited optioned the property, restoring some of the old workings. The Wellington group was consolidated with the Homestake group which adjoins to the south. Work was focused on the extension of the Whitewater lode with the opening of the East Matheson adit. Ore was shipped in 1934 by lessee S. Marzoli. By 1937, the workings consisted of the Hazel adit, AY adit, three Homestake adits, two Matheson adits and two IC shafts. Later in 1950, the Waddington Mining Corporation Limited held an option but no work was reported. New Wellington Mines Limited was incorporated in 1953 which acquired the Wellington and Homestake properties. From 1958 to 1967, work extended the Matheson adit to the north some 670 metres. The vein was drifted for 91 metres before the option was dropped. In 1976, the company changed from New Wellington Mines Limited to International Wellington Resources Ltd.

The Wellington occurrence is underlain mainly by argillite and slate of the Triassic Slovan Group. The slates are distinctly fissile with a wide variation in composition from calcareous to argillaceous to graphitic to quartzitic. There are five principal limestone bands; the central band referred to as the Whitewater band. Average thickness of this central band is 15 metres, with the whole assemblage being roughly 90 metres thick. The upper two bands are 3 to 9 metres thick, lying within the calcareous zone of slate. The lower bands are 9 to 30 metres thick. These lithologies are intruded by a few small basic dikes. A lamprophyre dike, exposed in the Whitewater canyon, extends south across hostrocks of the Wellington occurrence to the Metlakahtla occurrence (082KSW034). Folding of these rocks has resulted in a series of anticlines and synclines which dip predominantly to the south or southwest.

The Wellington lode is considered part of an east-west lode system consisting of the Wellington-Sunset-Colorado lodes (082KSW140, 031). At the Wellington occurrence, the lode comprises a hangingwall lode (south lode) and a footwall lode (north lode). The south lode strikes 050 degrees and dips 60 degrees southeast. The north lode strikes 090 degrees and dips 70 degrees north. Most the ore came from the north lode, where up to 1.5 metres of galena was mined in the winze between the 40 and 80 foot levels. The Matheson adit, intersecting the north lode, was extended to a total length of 660 metres by 1963. The lodes consist of stringers and pockets of quartz, siderite and carbonate which contained galena, with lesser tetrahedrite and sphalerite containing good silver content.

The Wellington and Blucher lodes are strongly sheared, mineralized fissure zones, crosscutting at very shallow angles, mainly across slaty argillaceous sediments of the Slovan Group. The ore shoots rake to the east, consisting of lenses of sphalerite, galena and tetrahedrite in a gangue of brecciated wallrock, quartz and siderite. The proportion of quartz is generally high. A grab sample, SSRk 42, taken from the upper Wellington lode yielded 830.99 grams per tonne silver, 21.12 per cent lead and 0.19 per cent zinc (Assessment Report 13465).

The Homestake (Porcupine) adit was driven to explore the presumed western extension of the Whitewater lode from the adjoining IC claim. The lode is highly sheared and is concordant or slightly discordant with slaty argillaceous sediments and limestone of the Slovan Group. The limestone has a general strike of 090 degrees and dips south at about 70 degrees. Principal workings consisted of two adits at the same elevation and connected underground, totalling about 380 metres length. Trenching was done in the vicinity of the former Homestake mine in 1984, during an exploration program by Rex Silver Mines. Trench 84-2 was excavated to determine whether quartz veins increased in abundance. A gossan in phyllite was trenched and sampled. Sample SSRk 33 yielded 71.53 grams per tonne silver, 2.00 per cent lead and 4.00 per cent zinc (Assessment Report 13465).

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- EMPR AR 1892-532; 1893-1046,1058,1083; 1894-737; *1896-37,47,49,65,561; 1901-1028,1029; 1902-302; 1904-191; 1908-94,297; 1909-106,272; 1910-243; 1915-445; 1920-122; 1927-287; 1928-303; 1929-319; 1930-252; 1932-180; 1933-208; 1935-E34; 1937-E54; *1946-153; 1950-142; 1957-52; 1958-44; 1962-79; 1963-74; 1967-253
- EMPR BC METAL MM01457
- EMPR BULL *22, pp. 15-27
- EMPR INDEX 3-218
- EMPR PF (Claim map showing Wellington and Whitewater workings, 1920's; Dawson, H.D. (1927): Plan view of claims and workings map; (1944): Wellington Mine Plan view Map; Hedley, M.S. (1946): Wellington Mine Plan view Map, 1 inch equals 40 feet; Hedley, M.S. (1946): Geological Plan and Section of the Wellington-Hazel Tunnel; Hedley, M.S. (1946): Geological Plan and Section of the Wellington-Matheson Tunnel; Hedley, M.S. (1946): Brunton Survey of

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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the Wellington-Hazel Tunnel; Starr, C.C. (1950): Report of Examination of the Wellington Mine (with sketches of mine workings); Grove, E.W. (1975): Geological Report on Leo #1 - Application for Limited Production Lease; Snell, J.C. (1977): The Geology and Mineralization of the Triassic Basal Slate Member, Slocan Sediments, Whitewater District of British Columbia, in 082K General File)
GSC MAP 1667
GSC MEM *184, pp. 200,258-259
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/07

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW031**

NATIONAL MINERAL INVENTORY: 082K3 Ag3

NAME(S): **CHARLESTON (L.2091)**, CHARLESTONE, KEYSTONE (L.2179),
COLORADO (L.1476), COREAN (L.6288), KINGSTON (L.3104)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 03 24 N
LONGITUDE: 117 07 58 W
ELEVATION: 1494 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5544940
EASTING: 490495

COMMODITIES: Zinc Silver Lead Gold Cadmium
Copper

MINERALS

SIGNIFICANT: Sphalerite Tetrahedrite Galena Pyrite
COMMENTS: Tetrahedrite is argentiferous.
ASSOCIATED: Quartz Siderite Calcite
COMMENTS: Calcite is reported for the Keystone and Colorado veins.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 46 x 1 Metres STRIKE/DIP: 115/55S TREND/PLUNGE:
COMMENTS: Mineralization is pronounced over 46 metres in the Charleston vein.
An ore shoot 90 metres from No. 5 portal was 1.2 metres wide.
Colorado vein strikes 115 degrees and dips 55 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Slocan Undefined Formation

LITHOLOGY: Slate
Limestone
Quartzite
Argillaceous Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Charleston past producer lies on the west side of Whitewater Creek, 1 kilometre north of the Whitewater occurrence (082KSW033) and 1.75 kilometres north of Retallack, British Columbia.

Intermittent production from the Charleston mine spans 68 years from 1898 to 1966. A total of 2324 tonnes is reported to have yielded 1,038,623 grams silver, 155 grams gold, 390 kilograms cadmium, 80,871 kilograms lead and 87,444 kilograms zinc.

The Charleston occurrence began underground development in 1894 on the Charleston Crown grant (Lot 2091). The Colorado Crown grant (Lot 1476) was added to the Charleston Group in 1898. In 1899, the Keystone Crown grant (Lot 2179) was also added to the group. Very little work was done on these claims between 1898 and 1914. A.J. Harris acquired a lease on the property in 1914 and carried out small development work. Later that year Harris became owner. The property was held by the Keystone Development Co., the Charleston Silver Mines Co. and the Northern Trust Co. during 1920 to 1923. Operations were returned to Harris in 1924. E.J. Edwards of Seattle optioned the property in 1926. The Keystone Charleston Mining Co. was formed to operate the mine in 1928 with operations ceasing in the following year. The property was intermittently worked by Harris in 1930, 1938 and 1939 and otherwise lay idle until 1946 when the Slocan Charleston Mining Co. Ltd. purchased the property. The underground workings were reopened and production occurred in 1950, 1951 and 1955. Buchanan Mines Ltd. began exploration on the property in 1965. Surface trenching is reported to have uncovered a new vein. Production is reported for this and the following year.

CAPSULE GEOLOGY

Three, well defined individual veins comprise the Charleston occurrence: one each on the Charleston, Keystone and Colorado Crown grants. The veins are hosted in shear and fissure zones concordant to slightly discordant with the hostrocks. Black slate interbedded with narrow bands of limestone comprise host lithologies of the Triassic Slocan Group. Narrow bands of quartzite and massive argillaceous slate occur occasionally. The Charleston vein was developed over 5 levels and 200 metres horizontal distance and 105 metres along strike of the vein.

The veins are of variable thickness, from 5 to 50 or more centimetres, containing shoots of zinc-lead-silver ore. Sphalerite is the most abundant sulphide and is locally associated with argentiferous tetrahedrite. Galena is irregularly distributed throughout the ore. Quartz and siderite are the main gangue minerals and veins frequently contain abundant brecciated wallrock. A 1.2-metre wide ore shoot was found 90 metres from the portal of the No. 5 adit in 1896, on the Charleston vein. Ore consisted of a mixture of galena, sphalerite and tetrahedrite in a gangue of quartz, siderite and brecciated wallrock over 46 metres strike length. Until 1935, the Charleston vein received the majority of work, although some important mineralization had been reported on the Keystone vein. The Keystone vein is located 365 to 460 metres south of the Charleston vein and was explored by 2 adits. Sphalerite with lesser galena and pyrite hosted in siderite, calcite and brecciated wallrock comprised mineralization in the Keystone vein. The Colorado vein, 260 metres from the Keystone vein, yielded some rich silver ore. Some samples carried lumps of tetrahedrite, sphalerite, galena and pyrite associated within stringers of quartz, siderite and calcite. The Colorado vein strikes 115 degrees and dips 55 degrees to the southwest.

Since the successes of early miners, the area has undergone exploration by various companies without success. In 1965 to 1967, Buchanan Mines Ltd. conducted trenching, induced polarization surveys and drilled a series of shallow vertical diamond-drill holes. This was followed, in 1979 to 1981, by a soil geochemical survey. In 1983, a diamond-drill hole explored a possible extension of the Colorado lode on the Colorado claim. The drillhole intersected a very strong fault zone and an unmineralized quartz vein. Results were discouraging, with the highest geochemical results (Sample 3316) yielding 2.3 parts per million silver, 500 parts per million lead and 250 parts per million zinc over the interval 34.0 to 36.0 metres (Assessment Report 11222).

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EMPR ASS RPT *11222
EMPR BC METAL MM01140
EMPR GEM 1970-449
EMPR INDEX 3-192; 4-122
EMPR LMP Fiche No. 60280,60281
EMPR PF (Robinson, M. (1945): Workings plan Charleston mine; Snell, J.C. (1977): The Geology and Mineralization of the Triassic Basal Slate Member, Slocan Sediments, Whitewater District of British Columbia, in 082K General File)
EMR MP CORPFILE (Slocan Charleston Min. Co. Ltd.)
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 201-203
GSC OF 432; 464
GSC SUM RPT 1925, p. 192

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/09

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW032**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD QUARTZ**, GOLD QUARTZ NO. 1-9, COTTON TAIL,
COTTON TAIL FR. NO. 1-2, WHITEWATER, WHITEWATER 1-3

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 04 30 N
LONGITUDE: 117 07 28 W
ELEVATION: 2500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineral occurrence location (Geological Survey of Canada Open File 464).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5546977
EASTING: 491095

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Albite Chlorite

COMMENTS: Albitic alteration in second vein at southeast exposure. Greenstone at higher exposure is highly chloritic altered.

ALTERATION TYPE: Albitic Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 180 x 2 Metres

STRIKE/DIP: 335/60E

TREND/PLUNGE:

COMMENTS: Quartz vein system strikes 335 to 340 degrees and dips 60 to 70 degrees east. Total lode is 60 to 210 centimetres wide. A second vein is 200 metres higher and traceable over 180 metres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Greenstone
Serpentinite
Diorite
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1940

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

24.0000

Grams per tonne

Gold

3.4300

Grams per tonne

COMMENTS: Channel sample across 70 centimetres of massive pyrite, chalcopyrite, galena and sphalerite.

REFERENCE: Bulletin 7, page 45.

CAPSULE GEOLOGY

The Gold Quartz prospect is situated 1 kilometre south of Mount Brennan and 1.75 kilometres northwest along strike of the Highland Surprise occurrence (082KSW037).

Veins are exposed in greenstone on the northeast side of a serpentinite body, both of the Permian Kaslo Group. The greenstones are generally more massive in character than at the nearby Highland Surprise occurrence. Near veins, the greenstone is intruded by diorite and feldspar porphyry dikes. The veins that have been the target of development strike northwesterly. Differing from the Highland Surprise occurrence, veins here contain conspicuous amounts of galena and sphalerite with pyrite and chalcopyrite. There are several veins having a northeast or easterly strike.

CAPSULE GEOLOGY

Development has occurred in two general areas. Southeast at roughly 1920 metres, surface stripping exposed a quartz vein system striking 335 to 340 degrees and dipping 60 to 70 degrees east. One or two regular quartz bands vary in width from 15 to 60 centimetres, with irregular quartz stringers in between. Sulphides are disseminated in quartz veins and greenstone, with total lode width ranging from 60 to 210 centimetres. Wider quartz bands have longitudinal openings. Immediately southeast, a short adit has intersected quartz stringers with a general strike of 330 degrees. Greenstone on the footwall and hangingwall is highly sheared. The best assay from in situ sampling across 70 centimetres of narrow bands of massive pyrite and chalcopyrite with lesser galena and sphalerite yielded 3.43 grams per tonne gold and 24 grams per tonne silver (Bulletin 7, page 45). A second vein is exposed 200 metres to the northeast. This vein strikes 325 degrees and dips 75 degrees and is traceable over 180 metres. The vein occurs in diorite for part of its length and is bordered by a feldspar porphyry dike on the hangingwall side for most of its length. Vein width varies from 10 to 120 centimetres and hosts a sulphide mineralogy consisting of pyrite, chalcopyrite, sphalerite and galena. Albite alteration occurs locally within the vein. Samples yielded poorer gold and silver contents than the previous vein.

About 600 metres to the northwest, a series of quartz veins and stringers are hosted in massive and sheared greenstones. Shears strike 130 degrees and dip 60 degrees southwest. The greenstone is highly chlorite altered. Total width of the zone is as much as 9 metres. An adit was driven on the westernmost of these veins. North of the adit, a series of opencuts exposes quartz in schistose greenstone. Shears strike 340 degrees and dip steeply southeast. There is a diorite body immediately to the east. Opencuts expose weakly pyrite-bearing quartz. Calcite is also locally present in veins. The best sample (No. 13) yielded 6.8 grams per tonne gold and trace silver over 145 centimetres (Bulletin 7, page 47). At this location, a feldspar porphyry dike lies in the diorite and is well exposed for over 60 metres.

Property exploration covering the Gold Quartz occurrence area has been conducted intermittently from the 1960s to 1980s. Numerous trenches and pits have explored the surface exposure of the shear known to host mineralization of the Gold Quartz occurrence. Several rock samples were taken from near the portal to the main adit of the southeast group in 1987. Sample MR-54 yielded 0.37 gram per tonne gold and 3.10 grams per tonne silver (Assessment Report 19475). The chip sample was taken across 1.6 metres of semimassive andesite with 40 per cent quartz stringers, hosting 4 per cent fine-grained sulphides. Similarly, Sample SH-61 taken across 1 metre of outcrop beside the adit yielded 0.73 gram per tonne gold and 8.10 grams per tonne silver (Assessment Report 19475).

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EMPR EXPL *1979-83
GSC MAP 1667
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

to 1980, by various owners and lease holders. The Irene claim and perhaps others were added to the Whitewater Group in 1898 and the first concentrator was built on-site under the direction of the newly formed Whitewater Co. Ltd. Ground covering the Whitewater Deep group was acquired during this year by the Whitewater Deep Company and the No. 9 and 10 levels were tunnelled. A zinc-rich orebody was discovered below the No. 10 level but little or no work was done on it. Work was carried out independently on the Whitewater and Whitewater Deep groups until J. Retallack and associates acquired a lease on the Whitewater Deep group. At this time the workings were connected. Fire destroyed the mining camp in July 1910 and the following year Retallack and associates purchased the combined property. Operations continued on a reduced scale until 1922. The nine claims of the Whitewater group and 15 of the Whitewater Deep group were combined under the Whitewater Mines Ltd. in 1922, the final consolidation. Work was concentrated on the No. 11, 12 and 13 levels. The Metal Recovery Co. erected a small concentrator on the Kaslo River to treat tailings from the old Whitewater mill. A new mill was installed in 1928 which operated until July 1929, when operation by the company ceased. From 1932 to 1935 and briefly in 1937, the S.N. Ross Mining Syndicate operated the mine, mainly on the 1472 level. A 40-60 per cent partnership was agreed to between Whitewater Mines Ltd. and Kootenay Bell Gold Mines Ltd. under the name Retallack Mines Ltd. in 1943. Mill capacity was increased from 114 tonnes to 272 tonnes and put into operation in March 1944. Ore was mined from the 14 and 1472 levels in 1944, then in the vicinity of the No. 12 and 13 levels. Operations continued until 1952 during which considerable ore was recovered from the old Whitewater dumps. The Canada Trust Co. bought out Kootenay Bell Gold Mines Ltd. in 1953. The mill was sold in 1956 at which time the property was acquired by the Consolidated Mining and Smelting Co. of Canada. Over its mine life a total of 11 adits and 14 levels were mined over a distance of 550 metres down dip along the lode.

The Whitewater deposit consists of an upper zone characterized by veins and a lower zone characterized by structurally controlled replacement of limestone and lamprophyre. There are few surface outcrops at the Whitewater lode and most of the geology is known from exploration of the lode by adits. Mining occurred on 14 levels and several sublevels. The No. 14 adit was the principal working adit. Bulletin 22 gives a full description of the underground workings on Figure 5. The Whitewater lode is hosted by carbonaceous slates, slaty argillites, impure limestones and few quartzite beds of the Triassic Slocan Group. This strata is intruded by at least one porphyritic lamprophyre dike that is highly altered to carbonate and sericite and locally mariposite.

The upper zone occurs in a zone of shearing and fracturing in slates. The lamprophyre dike occurs as sheets and lenses within the lode and locally within the walls and intruded pre-mineralization. Above the No. 7 level the productive zone is up to 20 metres thick in sheared and brecciated hostrocks. Carbonaceous gouge and slickensides are well developed along vein walls. The productive zone extended down to the No. 9 level and one small stope on the 9.5 level. Ore consists of galena and sphalerite with minor tetrahedrite and trace pyrite and chalcopyrite, and occurs as streaks up to 20 centimetres wide, lenses and irregular pods up to 12 metres wide. Ore is hosted in a gangue of mostly siderite, as much as 1.5 metres, and some quartz. Ore in the uppermost levels is oxidized. Sphalerite contains cadmium in small amounts. The structure of the hangingwall was thought to be an important factor in localization of the ore as well as the flatter dip of the lode at this level.

The structure of the lower zone is complex. The Whitewater lode flattens abruptly below the No. 13 level from an average dip of 60 degrees to 20 degrees northward towards the lode. The footwall consists of slates and the hangingwall consists of limestone. Local silicification occurs around the replacement bodies. There are three ore types in the lower zone. The first type occurs as masses and lenses within the lode. The second ore type consists of massive replacement of limestone by sphalerite and siderite gangue. It constitutes the majority of lower zone ore and is referred to as the "spathic ore". Disseminated and locally massive galena comprises roughly one-fifth of orebodies. Pyrite and chalcopyrite are rare. Spathic ore occurs in overlapping lenses up to 10 metres thick, conformable to bedding with minor local silicification observed. On the No. 12 level the main orebody was 137 metres long by 2.4 metres wide, on average. The replacement bodies appear to be controlled by irregular-spaced fractures. The third ore type consists of sphalerite and galena in a gangue of magnetite, pyrrhotite, pyrite and other silicate minerals, replacing the lamprophyre dike. This ore, referred to as the "magnetic ore", occurs in relatively large

CAPSULE GEOLOGY

bodies between the No. 12 and 14 levels. The maximum width is 12 metres and length 76 metres. Between No. 12 and 13 levels the limestone-slate contact is dragfolded, the dominant structural control localizing ore in the lower zone. These levels produced most of the ore between 1925 and 1935.

Northern Crown Mines Ltd. optioned the property in 1989 and conducted sampling.

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- EMPR BC METAL MM01304
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- EMPR EXPL 1975-E44
- EMPR INDEX 3-218; 4-126
- EMPR IR 1984-2, p. 103
- EMPR LMP Fiche No. 61766-61771
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- EMR MP CORPFILE (Kootenay Belle Gold Mines Ltd.; Whitewater Mines Ltd.)
- GSC MAP 273A; 1667
- GSC MEM 173, pp. 79,100; *184, p. 260
- GSC OF 432; 464
- CANMET IR 261 (1906), p. 174; 688 (1926), p. 87
- WWW <http://www.infomine.com/index/properties/WHITEWATER.html>
- EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/26

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSW034**

NATIONAL MINERAL INVENTORY:

NAME(S): **METLAKAHTLA (L.3334)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 02 25 N
LONGITUDE: 117 08 05 W
ELEVATION: 1005 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5543118
EASTING: 490353

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena
ASSOCIATED: Siderite Quartz Pyrite
COMMENTS: Exposures are heavy iron oxide stained.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Vein Concordant Shear
CLASSIFICATION: Replacement Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
DIMENSION: 1 Metres STRIKE/DIP: /50S TREND/PLUNGE: /
COMMENTS: Mineralization occurs over widths of 45 to 90 centimetres. The zone of weak fracturing hosting this lode is subparallel to bedding which dips 40 to 60 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Limestone
Limy Slate
Slate
Lamprophyre Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Metlakahtla prospect lies immediately to the south and east of the Whitewater mine (082KSW033), on the east side of Whitewater Creek near its mouth.

The Metlakahtla prospect is crossed by the Whitewater limestone as well as two other limestone bands. Intercalated slates are calcareous, hosting several additional limestone bands. The strata dip 40 to 60 degrees to the south. A lamprophyre dike, 2.4 metres wide, is exposed further north in the bed of Whitewater Creek. For a detailed description of the geology refer to the Whitewater occurrence.

The Metlakahtla prospect lies on a zone of weak fracturing about 6 metres wide that is subparallel to bedding. Both quartz and replacement mineralization tend to follow the walls of the fracture zone or lode, occurring principally in limestone and limy slate. Siderite and quartz containing sphalerite, pyrite and galena comprise mineralization, over 45 to 90 centimetres width. The exposures are heavy stained with iron oxide. Nearby, a narrow siliceous zone or vein about 1 metre above the lamprophyre dike, contains disseminated pyrite and galena.

Workings consisted of two short adits, about 8 metres apart vertically. These workings concentrated on the main lode, the lower adit along the footwall, and the upper adit along the hangingwall of the lode.

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RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1187
REPORT: RGEN0100

BIBLIOGRAPHY

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GSC MEM *184, p. 235
GSC OF 432; *464
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/07

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

of siderite containing sphalerite and galena.
Mining of the Doherty occurrence did not commence until 1948.
During the following two years surface drilling and blasting was used to remove 5476 tonnes of material from which 121,333 grams silver, 218 grams gold, 1267 kilograms cadmium, 23,227 kilograms lead and 355,200 kilograms zinc were recovered.
Intermittently from 1951 to 1967, the Doherty property was optioned to several different companies. Drilling and clearings-out of the old underground workings was done but all companies dropped their options and no further production was recorded.

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EMPR INDEX 3-194
EMPR PF (Hedley, M.S. (1953): Property report)
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 213
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/07

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW036**

NATIONAL MINERAL INVENTORY:

NAME(S): **OHIO**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 58 N
LONGITUDE: 117 06 50 W

NORTHING: 5544134
EASTING: 491846

ELEVATION: 1372 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

COMMODITIES: Copper Silver Gold Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite Tetrahedrite

ASSOCIATED: Quartz Siderite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 3 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: The lode is variable in thickness from a streak to 3 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Slate
Phyllite
Limestone
Calcareous Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Ohio occurrence is located on the west side of Lyle Creek, 1.75 kilometres from its confluence with the Kaslo River. The Whitewater occurrence (082KSW033) is 1.5 kilometres to the west.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

Three short adits in black slates comprise workings of the Ohio occurrence. Mineralization observed in dump material consisted of pyrite and lesser chalcopyrite in a gangue of crushed slate, quartz and siderite. Cairnes (1934) reports a fourth adit which could not be relocated. The adits are spaced vertically over about 45 vertical metres, the middle two connected by raises and stopes. The lode is concordant with enclosing slates and variable in thickness from a streak to 3 metres. Some small lenses run oblique to the main lode along tributary fissures. Pockets, disseminations and streaks of tetrahedrite, pyrite, galena and conspicuous chalcopyrite comprise mineralogy.

While no provincial records exist, Cairnes (1934) indicates one shipment of ore in 1909. The shipment was 9.5 tonnes averaging 5485 grams per tonne silver, 2 per cent copper and \$4.55 (ca. 1909) in gold (Geological Survey of Canada Memoir 184, page 239).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1191
REPORT: RGEN0100

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GSC MEM *184, p. 239
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/07

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW037**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIGHLAND SURPRISE**, PHOENIX (L.3336), FLETCHER (L.5608),
CUBA (L.5609), PAISLEY (L.5612), WHISTLER (L.5614),
CONNIE FR. NO. 2 (L.5818), COLUMBIA FR., HAVANA (L.5610)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 03 36 N
LONGITUDE: 117 06 46 W
ELEVATION: 1676 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Phoenix mineral occurrence location (Geological Survey of Canada
Memoir 173-Map 273A).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5545308
EASTING: 491928

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Gold
COMMENTS: Free gold observed microscopically.
ASSOCIATED: Quartz Chalcopyrite Albite Pyrite
ALTERATION: Chlorite Talc Asbestos
ALTERATION TYPE: Chloritic Talc
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 45 x 1 Metres STRIKE/DIP: 335/90E TREND/PLUNGE:
COMMENTS: Original surface exposure of 60 centimetre vein was traceable for 45
metres. Orientation was parallel to foliation and contact with
serpentinite unit.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Kaslo Undefined Formation

LITHOLOGY: Greenstone
Serpentinite
Feldspar Porphyry Dike
Granitic Dike
Diorite Dike
Andesite
Andesite Flow
Andesite Pyroclastic
Tuffaceous Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 19.8400 Grams per tonne
Gold 34.1900 Grams per tonne
COMMENTS: Sample No. 3A.
REFERENCE: George Cross News Letter No.210 (October 31), 1979.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

4.9800

Grams per tonne

Gold

33.0600

Grams per tonne

COMMENTS: Sample No. 1.

REFERENCE: George Cross News Letter No.210 (October 31), 1979.

CAPSULE GEOLOGY

The Highland Surprise consists of a group of old Reverted Crown grants situated between Whitewater Creek and the headwaters of Lyle Creek, some 28 kilometres northwest of Kaslo, British Columbia. The Fletcher and Phoenix Reverted Crown grants comprise the main two of eight with extensive workings that produced 1903 tonnes of ore from 1938 to 1942. Excellent detailed descriptions of the workings and associated mineralized quartz veins are provided in Minister of Mines Annual Report 1937 and Bulletin 7.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows, pyroclastics and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Underground workings at the Highland Surprise provide one of the best locations for pyroclastic and sedimentary textures in the area. The volcanics and sediments are generally oriented 320 degrees and the contact between these two units has a strike of 350 degrees. Sediments and volcanics have been intruded by a granitic dike, exposed on the No. 1 and No. 2 levels. The dike appears to increase in size with depth and outcrops to the east of the workings. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. This faulted contact has a strike of 350 degrees and a steep westerly dip. The surface trace of this fault can be traced for several kilometres. Underground, this fault is marked by a heavy talc gouge. Dikes and sills in the area are dioritic and feldspar porphyry dikes are common.

Veins at the Highland Surprise occurrence are of two types, both fracture hosted in Kaslo Group greenstone adjacent to serpentinite. One type has a quartz and calcite gangue containing auriferous sulphides, principally pyrite and chalcopryrite with minor amounts of sphalerite, galena and a little free gold, and the other veinlets in shear fractures consisting of quartz and albite. Pyrite is sparsely disseminated in the quartz, albite and adjacent greenstone wallrock. The two types may be found to occupy the same fracture along strike. Mineralization is foliation parallel, however, the zone swings east where the serpentinite body is intersected.

Underground workings at the Highland Surprise occurrence follow the contact between serpentinite and veins and feldspar porphyry dikes. Veins have extremely irregular contacts and pinch and swell from a stringer to within one-half metre and change dips as much as 90 degrees. Briefly, the workings consisted of three adits, the 100, 110 and 120 levels at 1667, 1706 and 1663 metres elevation respectively. See Bulletin 7, Figure 4 for a detailed plan-view drawing of underground workings. The original surface exposure consisted of a 60 centimetre wide quartz vein in sheared greenstone. The vein strikes 335 degrees and dips 90 degrees northeast and is sparsely mineralized with pyrite and chalcopryrite. The vein is traceable on surface for some 45 metres.

By 1940, the 100 level produced 94 tonnes containing 2034 grams silver and 2668 grams gold (Bulletin 7). Production records for other stopes on the 110 and 120 levels are also provided (Bulletin 7). Total production amounted to 1903 tonnes containing 50,947 grams gold, 29,765 grams silver, 145 kilograms lead and 145 kilograms zinc over its 5 year life. Most of this ore was treated at the Whitewater mill or shipped directly to the Trail smelter. Up to 1942, a total of 990 metres of underground work and 231 metres diamond drilling was done on four adit levels.

In the 1970s, this property was re-examined by MCP Resources Corp. Chip samples taken across the vein structure showed significant gold and silver values. Sample No. 1 analysed 33.06 grams per tonne gold and 4.98 grams per tonne silver; sample No. 3A of dump material yielded 34.19 grams per tonne gold and 19.84 grams per tonne gold. Plans were made to begin shipment of selected mineralization on a 18,144-tonne dump (George Cross News Letter No.210, October 31, 1979).

CAPSULE GEOLOGY

The area surrounding the Highland Surprise was explored again in 1987 with several rock samples yielding significant results. Sample MR-8 was sampled across 0.5 metre of a quartz vein hosted in sheared andesite. The strike of the vein is 145 degrees dipping vertical. The average width of the vein is 45 centimetres. The orientation of the vein is irregular and it pinches and swells over its exposed length. Assay results yielded 15.36 grams per tonne gold and 6.7 grams per tonne silver (Assessment Report 19475). A second sample, Sample MR-11, yielded 54.8 grams per tonne gold and 44.0 grams per tonne silver. This sample was a grab sample of the best looking quartz vein material, hosting up to 5 per cent sulphides consisting of pyrite, chalcopyrite, magnetite and sphalerite? with little or no carbonate. Similarly, samples SH-4 and SH-5 yielded anomalous assay results of a quartz-carbonate vein with disseminated pyrite and minor chalcopyrite (Assessment Report 19475).

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EMPR AR 1899-846; 1900-1028; 1901-1028; 1902-298; 1918-473; 1920-122;
1928-304; 1929-320; 1933-208; 1936-E51; 1937-E5; *1938-A35,E3,41;
*1939-A78,37,42; 1940-25,A64; 1941-25,62; 1942-26,60
EMPR ASS RPT 4126, 5401, 16758, 17158, *19475, 21838
EMPR BC METAL MM01230
EMPR BULL *7, pp. 19-42
EMPR GEM 1972-70
EMPR INDEX 3-200
EMPR LMP Fiche No. 60755-60758
EMPR PF (Starr, C.C. (1934): Report on the Phoenix Mine, 11 p.;
Map of Phoenix Mine, Tunnel and Assays, 1934; Lynch, H. G.
(1938): Property description letter, Highland Surprise Mining Co.,
Nov. 16, 1938)
GSC MAP 1667
GSC MEM *173-Map 273A, p. A49; 184, p. 241
GSC OF 432; 464
GSC SUM RPT 1917 Part A, p. 33
GCNL *#210(Oct.31), 1979

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/08

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

The occurrence is underlain by greenstone and basalt of the Kaslo Group crosscut by quartz porphyry and granitic dikes. Mineralization, consisting primarily of clean galena, is associated with quartz in discontinuous veins lying within a straight, narrow fault-fissure. Pay streaks of galena range from 2 to 5 centimetres width by 5 centimetres to greater than 15 metres length.

The ground covering the old Eureka occurrence was re-examined in 1986 by Havilah Gold Mines Ltd. and Rawhide Minerals Ltd. Work consisted of trenching of the vein structure, revealing a mineralized zone more than 13 metres wide. A channel sample of the vein in an old exploration adit 79 metres below yielded assay values of 16.8 grams per tonne gold (George Cross News Letter No.23, February 3, 1986). Exploration work in 1989 re-examined felsic dikes and shear zones in the area. A number of old trenches and adits were located. Samples from a number of these dikes and shears yielded low gold and silver values. One of the highest samples, BB-33, yielded 0.70 gram per tonne gold and 1.69 grams per tonne silver (Assessment Report 19475).

BIBLIOGRAPHY

- EMPR AR 1892-532; 1893-1046; 1894-737; 1897-528; 1898-1079-1080;
1899-707; 1900-850; 1901-1031; 1902-153,299,300; 1912-148;
1913-124; 1917-156; 1937-E51; 1938-E41
EMPR BC METAL MM01185
EMPR BULL 7, pp. 48-49
EMPR INDEX 3-195
EMPR LMP Fiche No. 60555
EMPR PF (Eureka Copper Mines Ltd. (1909): Workings plan)
GSC ANN RPT 1895, Pt. A, p. 33
GSC MEM 173, Map 273A, p. 82; *184, p. 216
GSC OF 432; *464
GCNL *#23(Feb.3), 1986

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/01

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1198
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR *1926-263; 1928-305
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 256
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW040**

NATIONAL MINERAL INVENTORY:

NAME(S): **LINCOLN (L.1413)**, LINCOLN GROUP, CELEBRATION (L.1414),
DEATHS HEAD (L.2178)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Open Pit Underground

MINING DIVISION: Slocan

LATITUDE: 50 00 29 N
LONGITUDE: 117 07 16 W
ELEVATION: 1524 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5539533
EASTING: 491322

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence location (Geological Survey of Canada Memoir 173,
Map 273A).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Cerussite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Vein
CLASSIFICATION: Replacement Hydrothermal
TYPE: J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Limestone
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Lincoln is a small past producer located on the south side of Robb Creek, a tributary of the Kaslo River. It is 22.5 kilometres west-northwest of Kaslo, British Columbia.

Hostrocks of the Lincoln occurrence are metasediments of the Triassic Slocan Group. Mineralization is limestone-hosted where fissures intersect a 15-metre thick limestone bed and overlying slates. Ore consists of galena and lead carbonates carrying good silver values. The gangue is heavily decomposed and iron oxide stained.

Workings consisted of an adit and surface exploration. Attempts to crosscut this zone at depth were unsuccessful. Two years of recorded production, 1918 and 1922, yielded 50 tonnes ore containing 82,143 grams silver and 26,248 kilograms lead. Additionally, 33 to 44 tonnes of clean galena and some carbonate ore were extracted during the summer of 1918 (Minister of Mines Annual Report 1918, page 164). A forest fire completely destroyed the camp buildings in 1925.

BIBLIOGRAPHY

EMPR AR 1894-737; 1897-572; *1918-162; 1919-122; 1920-122; 1922-194;
*1925-235
EMPR BC METAL MM01272
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 229
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW041**

NATIONAL MINERAL INVENTORY: 082K3 Zn4

NAME(S): **CALEDONIA**, CALADONIA (L.15415)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 01 40 N
LONGITUDE: 117 06 06 W
ELEVATION: 975 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5541724
EASTING: 492718

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence location (Geological Survey of Canada Memoir 173-Map 273A). See Monte Christo, 082KSW147.

COMMODITIES: Silver Lead Zinc Gold Cadmium

MINERALS

SIGNIFICANT: Galena Sphalerite Arsenopyrite
ASSOCIATED: Calcite Siderite Quartz Pyrite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Vein Discordant
CLASSIFICATION: Replacement Epigenetic Hydrothermal
TYPE: J01 Polymetallic manto Ag-Pb-Zn 105 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Faulted Fractured
DIMENSION: 61 Metres STRIKE/DIP: 095/75S TREND/PLUNGE:
COMMENTS: Mineralized fissure zone strikes a little south of east and dips 75 degrees southwest. A limestone bed with over 61 metres surface exposure has been replaced with ore mineralization.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Slocan Undefined Formation

LITHOLOGY: Slate
Limestone
Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Caledonia occurrence is located on the east side of Rossiter Creek, 250 metres from its confluence with the Kaslo River, and 23.5 kilometres northwest of Kaslo, British Columbia. It has been a significant past producer in this area with intermittent recorded production totalling 10,013 tonnes mined, spanning 1914 to 1967. Recovery totalled 1,854,827 grams silver, 1990 grams gold, 1702 kilograms cadmium, 409,697 grams lead and 473,968 grams zinc. The reader should be aware that production figures listed in BC METAL MM00688 included production from the nearby Monte Christo (082KSW147) but have been separated here.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

The Caledonia occurrence is composed of a mineralized fault-fissure zone striking 095 degrees and dipping 75 degrees south. It cuts across laminated, slaty rocks and three or more beds of limestone varying from 1 to 5 metres in thickness, of the Slocan Group. The limestone bed is exposed at the surface and has been traced northwesterly for several tens of metres, in which it is

CAPSULE GEOLOGY

intersected by a number of small crossfractures striking a few degrees north of east and carrying little sulphide mineralization. Minor gold-bearing arsenopyrite was also noted in a few places.

The ore has resulted mainly from replacement of the limestone, but also in fractures in slate, cutting the limestone beds at almost right angles. Significant mineralization is composed of lenses of galena or galena-sphalerite-pyrite in a gangue of vein calcite and siderite with locally some quartz. Faulting along the hangingwall of the vein has abruptly terminated mineralization in limestone. The intersection of the vein with the widest limestone bed was the locus of an early mined orebody.

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1927-288; 1937-A37;E51; 1938-A35,E43; 1939-37,94; 1940-25,80;
1941-25,74; 1942-26,72; 1943-71; 1952-172; 1953-45,137; 1954-50,
134,139; 1955-A49,59,61; 1956-A50,93; 1957-52; 1958-A46,44; 1959-
A48,67; 1961-A49,75; 1962-A49,79; 1966-A51,224; 1967-A55,254
EMPR BC METAL MM00688
EMPR BULL 22, p. 31
EMPR EXPL 1978-E74
EMPR FIELDWORK 1978, pp. 92-96
EMPR INDEX 3-191; 4-120
EMPR LMP Fiche No. 60188
GSC MEM *173 Map 273A; 184, p. 200
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/26

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082KSW042**

NATIONAL MINERAL INVENTORY: 082K3 Zn1

NAME(S): **LUCKY BOY**, FOURTH OF JULY, JOCKER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 06 N
LONGITUDE: 117 05 46 W
ELEVATION: 975 Metres

NORTHING: 5540674
EASTING: 493115

LOCATION ACCURACY: Within 500M

COMMENTS: Occurrence on Kaslo Creek (Geological Survey of Canada Open File 464).

COMMODITIES: Silver Lead Zinc Cadmium

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Epigenetic Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Limestone
Argillite
Phyllite
Quartzite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Lucky Boy occurrence is a past producer, located 4 kilometres southwest of Retallack, British Columbia on the south side of Kaslo Creek. Production for 1938 and 1948 totalled 150 tonnes, resulting in 9455 grams of silver, 43 kilograms of cadmium, 2440 kilograms of lead and 14,059 kilograms of zinc. Three drillholes in 1950 failed to reveal further mineralization and further property work was abandoned.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

Little geological information is available for this occurrence. Country rocks consist of limestone, argillite, quartzite and slate of the Slocan Group.

Property work in 1935 consisted of surface workings and an adit, 23 metres long, driven along a contact between limestone and thin-bedded argillite. Massive galena and sphalerite mineralization were noted in fissures crosscutting the limestone. Further details of property development can be found in National Mineral Inventory 082K3 Zn1.

BIBLIOGRAPHY

EMPR AR 1935-E34,142; 1937-E51; 1938-A35; 1939-94; 1940-79; 1941-74;
1948-142; 1950-142
EMPR BC METAL MM01279 (includes 082FNW025 data, a different Lucky Boy)
EMPR INDEX *3-204

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1203
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR MINING 1975-1980, Vol.1, pp. 32,60
EMR MP RESFILE
GSC MAP 235A
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/26

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW043**

NATIONAL MINERAL INVENTORY: 082K3 Mn1

NAME(S): **CONTACT (L.14943)**, BLACK PRINCE NO. 2, LIME,
CLIFF, LIBERTY HILL, CON (L.14944),
CONTACT NO. 1 (L.14945)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 00 57 N
LONGITUDE: 117 05 24 W
ELEVATION: 975 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit location (Geological Survey of Canada Memoir 173-Map 273A).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5540395
EASTING: 493552

COMMODITIES: Manganese Silver Lead Zinc

MINERALS

SIGNIFICANT: Siderite Galena Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Vein
CLASSIFICATION: Replacement Epigenetic Industrial Min.
TYPE: J01 Polymetallic manto Ag-Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au
J03 Mn veins and replacements
DIMENSION: 180 x 6 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Replacement has occurred over an average width of 6 metres and has an indicated probable strike length of greater than 180 metres (NMI 083K3 Mn1).

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Slocan Undefined Formation

LITHOLOGY: Limestone
Slaty Argillite
Phyllite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: CONTACT REPORT ON: Y
CATEGORY: Inferred YEAR: 1918
QUANTITY: 9070 Tonnes
COMMODITY GRADE
Manganese 40.0000 Per cent
COMMENTS: Manganese potential evaluated during World War I.
REFERENCE: Property File - National Mineral Inventory 082K3 Mn1.

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1918
SAMPLE TYPE: Unknown
COMMODITY GRADE
Manganese 10.0300 Per cent
COMMENTS: Sample from the face of the No. 1 adit (NMI 082K3 Mn1). Year uncertain.
REFERENCE: Property File - National Mineral Inventory 082K3 Mn1.

CAPSULE GEOLOGY

The Contact prospect is located on a southern tributary to the Kaslo River, 21.5 kilometres northwest of Kaslo, British Columbia. Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty

CAPSULE GEOLOGY

quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

A limestone bed roughly 46 metres thick is interbedded with shaly and slaty argillaceous rocks of the Slocan Group. The limestone has been extensively replaced, particularly along the hangingwall, by manganiferous siderite over widths averaging 6 metres and up to 27 metres. Surface workings indicate a probable strike length of greater than 180 metres.

A sample from the face of No. 1 adit was analysed and found to contain 10.03 per cent Mn, 43.56 per cent Fe₂O₃, 15.86 per cent MnO₂ calculated (National Mineral Inventory 082K3 Mn1). Other samples analysed averaged 12 to 20 per cent metallic manganese (NMI 82K3 Mn1).

Several small sulphide-bearing veins were found to intersect the limestone bed. These veins host galena, sphalerite and pyrite. Surface workings exposed siderite and galena over 6.5 by 2.5 metres, along the footwall side of the limestone bed. Assay values from select samples were 17 to 1959 grams per tonne silver, 0.2 to 80.2 per cent lead and 0.3 to 23.4 per cent zinc (NMI 082K3 Mn1).

During World War 1, the manganese potential of the property was examined. Estimated reserves were 9070 tonnes grading 12 to 15 per cent metallic manganese and 40 to 45 per cent iron based on the above assays (NMI 082K3 Mn1). Subsequent property work was suspended until a change of ownership in 1931 with further work during the periods 1931 to 1933 and 1939 to 1941.

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EMPR FIELDWORK 1978, pp.92-96
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EMPR PF (Starr, C.C. (1928): Report of Preliminary Examination of the Contact Group, 3 p.; Starr, C.C. (1928): Report of Examination of the Contact Group, 4 p.; Letter from A.J. Curle to C.C. Starr, 1936; General Statement of the Contact Group by owner A.J. Curle, 1936; Workings, Contact Group (sketch) (1"=50'), 1942)
GSC MEM *173, Map 273A; 184, p. 204
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/21

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW044**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOOTENAY BELLE (L.13475)**, CROWN POINT (L.13424)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 12 N
LONGITUDE: 117 03 28 W
ELEVATION: 915 Metres

NORTHING: 5539003
EASTING: 495860

LOCATION ACCURACY: Within 500M

COMMENTS: Kootenay Belle adit (Geological Survey of Canada Memoir 173-Map 273A).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
ALTERATION: Siderite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Two small fissures exposed in lower adit; one bedding parallel the other crosscutting at 082 degrees dipping 50 degrees east.

STRIKE/DIP: J01 082/50E
Trend/Plunge: Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Limestone
Limy Quartzite
Argillite
Slaty Argillite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Kootenay Belle showing is located 18 kilometres from Kaslo, British Columbia, immediately south of the confluence of Twelve Mile Creek with the Kaslo River. The showing consists of the two old Crown Grants on old adits and surface workings, Kootenay Belle and Crown Point circa 1915.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common. Limestone, limy quartzite, fissile and slaty argillite comprise hostrocks at this showing.

The Kootenay Belle workings consisted of two adits and surface opencuts exploring two small fissures. One fissure is coincident with bedding while the other crosscuts at 082 degrees dipping 50 degrees east. Quartz veins follow these fissures and are most prominent at the intersection of these two fissures. Mineralization was observed in outcrop above the adits, consisting of minor disseminated galena over 0.45 to 0.60 metre width. Elsewhere, galena and siderite were observed in oxidized outcrop replacing limy quartzite along bedding planes. No mineralization was noted in 38 metres of adit on the Crown Point.

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ENERGY AND MINERALS DIVISION

PAGE: 1207
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BIBLIOGRAPHY

EMPR AR 1900-982; 1902-297; 1927-483
EMPR FIELDWORK 1978, pp. 92-96
GSC MEM *173, Map 273A; *184, pp. 212-213
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/25

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1209
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1897-571; 1907-213; 1946-157; *1953-45; 1979-130
EMPR BC METAL MM01179
EMPR FIELDWORK 1978, pp. 92-96
EMPR INDEX 3-195
EMPR MINING 1975-1980, Vol.1, pp. 32,71
GSC MAP *1917-1667
GSC MEM *173, Map 273A; *184, pp. 215-216
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/21

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW046**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEAVER (L.2504)**, COMET, LONE STAR
LONE STAR FR., CLIFF, VANCOUVER,
METEOR, KEY FR., JARDINE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 02 30 N
LONGITUDE: 117 03 38 W
ELEVATION: 2250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of silver-lead-copper quartz veins exposed in lower adit
(Geological Survey of Canada Memoir 173 - Map 273A).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5543265

EASTING: 495664

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite
ASSOCIATED: Quartz Pyrite Anglesite Linarite Malachite
Azurite
ALTERATION: Anglesite Linarite Malachite Azurite Quartz
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 15 x 3 Metres STRIKE/DIP: 055/60E TREND/PLUNGE:
COMMENTS: Quartz vein is up to 3.65 metres wide with mineralized sections up to
15.25 metres long (Geological Survey of Canada Memoir 184, page 193).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Kaslo Undefined Formation

LITHOLOGY: Siliceous Greenstone
Trachyte
Tuffaceous Sediment/Sedimentary
Serpentinized Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional Contact
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
Post-mineralization
GRADE: Greenschist
Hornfels

CAPSULE GEOLOGY

The Beaver occurrence consists of silver-lead-copper bearing veins exposed in two adits. The area surrounding the adits were originally staked as part of the Jardine Camp in 1891. The occurrence is located about 21 kilometres northwest of Kaslo, British Columbia, on the south-facing slopes of Beaver Mountain.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

Hostrocks of the Beaver showing consist of trachyte and greenstone and intercalated, dark tuffaceous sedimentary beds of the Kaslo Group with later serpentinized dikes.

Quartz veins exposed in the lower adit, at 2250 metres elevation, have an average strike of 055 to 060 degrees and dip 60 degrees to the southeast. Veins are discontinuous and lie within a narrow, straight fault-fissure.

Mineralization consists principally of argentiferous galena and

CAPSULE GEOLOGY

lesser chalcopyrite within an alteration gangue of malachite, azurite, anglesite, linarite, pyrite and quartz hosted in silicified greenstone. Galena was observed in clusters and pods up to 5 centimetres thick and 60 centimetres up to 15 metres long. The host vein itself is up to 3.5 metres wide.

Selected galena samples yielded 737.1 to 5783.4 grams per tonne silver (Geological Survey of Canada Memoir 184, page 193). Ore assayed as high as 1.13 per cent lead (Geological Survey of Canada Memoir 184, page 193). The majority of property work occurred between 1891 to 1893. Stockpiles containing 45,359 to 544,308 kilograms of ore were found at the entrance to the lower adit but no government production records exist. A grab sample taken in 1922 yielded 1.37 grams per tonne gold, 857 grams per tonne silver, 49.2 per cent lead and 0.9 per cent zinc (Starr, 1928 (Property File)).

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EMPR AR 1892-532; 1893-1046,1059; 1894-738; 1897-570; 1919-154
EMPR FIELDWORK 1978, pp. 92-96
EMPR PF (*Starr, C.C. (1928): Report of Preliminary Examination of the Beaver Group, 2 p.)
GSC MAP 1667
GSC MEM *173, p. 82; *184, p. 192
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/19

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW047**

NATIONAL MINERAL INVENTORY:

NAME(S): **HECLA (L.13576)**, OLE CLAIM GROUP, OLE 1-22

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 24 N
LONGITUDE: 117 02 28 W
ELEVATION: 2195 Metres

NORTHING: 5543079
EASTING: 497056

LOCATION ACCURACY: Within 500M

COMMENTS: Vein (Geological Survey of Canada Open File 464, Property No. 311).

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Carbonate Siderite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 30 Metres STRIKE/DIP: 028/90 TREND/PLUNGE:
COMMENTS: Fissure hosting vein traced northward (uphill) for 30 metres
(Geological Survey of Canada Memoir 184, page 222).

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Greenstone
Tuffaceous Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Hecla showing is located on the southwestern slopes of Mount Jardine, Blue Ridge area, 20 kilometres northwest of Kaslo, British Columbia.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

The showing consists of a crystalline quartz-carbonate vein hosted in a narrow, vein-bearing fissure. The fissure has a strike of 028 degrees and a vertical dip. It has been traced northward (uphill) some 30 metres. The vein width varies from 3 to 5 or more centimetres with galena streaks up to 10 centimetres in width. Sparse iron-bearing carbonates within the vein are limonite altered. The vein is hosted in tuffaceous sediments and greenstones of the Kaslo Group.

No assay values are reported from this vein and subsequent property work in 1969 consisted of a geochemical soil survey.

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EMPR AR 1910-247
EMPR ASS RPT 1997
EMPR FIELDWORK 1978, pp. 92-96
EMPR GEM 1969-332, Fig. 41 #5
GSC MEM *184, p. 222
GSC OF 432; *464

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BIBLIOGRAPHY

GSC SUM RPT 1916

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/19

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW048**

NATIONAL MINERAL INVENTORY: 082K3 Pb1

NAME(S): **VOYAGEURE (L.3585)**, VOYAGEUR

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 01 25 N
LONGITUDE: 117 00 49 W
ELEVATION: 1980 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5541256
EASTING: 499025

LOCATION ACCURACY: Within 500M

COMMENTS: Abandoned adit immediately north of Reverted Crown grant Lot 3585 (NTS 082K/3 Roseberry topographic map).

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
ASSOCIATED: Quartz Pyrite Ankerite Carbonate Mariposite
ALTERATION: Quartz Carbonate Mariposite
ALTERATION TYPE: Quartz-Carb.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Highly irregular shear zone hosts quartz stringers with erratic mineralization across widths up to 45 centimetres (Minister of Mines Annual Report 1946, page 156).

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Greenstone
Quartz Carbonate Altered Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Voyageure occurrence is located in the Blue Ridge area, 2 kilometres southeast of Mount Jardine and roughly 20 kilometres northwest of Kaslo, British Columbia.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

The past producer lies within the Kaslo Group. Three adits comprise workings at the Voyageure. Numerous quartz stringers and lenses are hosted in ankerite, carbonate, quartz and mariposite altered and sheared greenstone. Mineralization within quartz veins consists of sphalerite, galena and chalcopyrite. Pyrite is also present. Sphalerite has a resinous appearance akin to many other occurrences in the Kaslo Group.

In 1946, samples of galena were reported to contain 4.54 grams per tonne gold, 297.7 grams per tonne silver, 53.3 per cent lead and 6.4 per cent zinc. Samples of chalcopyrite were determined to contain 9.1 grams per tonne gold, 96.4 grams per tonne silver, 4 per cent lead and 0.5 per cent zinc (Minister of Mines Annual Report 1946, page 156). At this time surface stripping was found to be a more favourable mining method and in 1949 the first shipment was made to the Trail smelter. A total of 54 tonnes of crude ore yielded gross contents of 312 grams gold, 14,175 grams silver, 8036 kilograms lead and 6451 grams zinc (Minister of Mines Annual Report 1946, page 156).

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BIBLIOGRAPHY

EMPR AR 1900-989; 1942-68; 1943-67; 1945-103; *1946-156; *1949-185
EMPR ASS RPT 11416
EMPR BC METAL MM01450
EMPR INDEX 3-218
GSC MAP 235A
GSC MEM *184, pp. 257-258
GSC OF 432; 464
GSC SUM RPT 1916

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/20

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW049**

NATIONAL MINERAL INVENTORY: 082K3 Sb1

NAME(S): **ALPS-ALTURAS**, LIEF, ALPS (L.1923),
ALTURAS (L.1924), ALPS FR. (L.1925)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:
LATITUDE: 50 07 16 N
LONGITUDE: 117 15 58 W
ELEVATION: 2450 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of centre of Lot 1925 (Alps Fraction).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5552130
EASTING: 480977

COMMODITIES: Antimony

MINERALS

SIGNIFICANT: Stibnite
ASSOCIATED: Quartz Mariposite
ALTERATION: Carbonate Silica
ALTERATION TYPE: Quartz-Carb. Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I09 Stibnite veins and disseminations

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian-Triassic	Kaslo	Undefined Formation	
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Serpentinized Ultramafic
Mafic Volcanic
Clastic Sediment/Sedimentary
Listwanite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Alps-Alturas property is located on the east side of Dolly Varden Peak, 14 kilometres northeast of Slocan Lake. Access can be gained by bush road leading up the east side of Wilson Creek from the town of Rosebery on Slocan Lake. The last portion of the route is a footpath.

There is little geological information on the occurrence, however the 1928 Minister of Mines Annual Report describes a 1.2-metre quartz vein which carries disseminated to massive stibnite hosted in (or associated with) serpentinized ultramafic rock described in Assessment Report 20939 as "locally altered to listwanite quartz-carbonate-mariposite". Ninety-five tonnes of shipped ore averaged 57.2 per cent antimony. Gold values are low. The showing is close to the contact between Permo-Triassic Kaslo Group mafic volcanic rocks and Triassic Slocan Group clastic sedimentary strata (GSC Open File 432).

Twenty four and one-half tonnes of antimony ore grading 50 to 60 per cent antimony is reported to have been shipped from the property in 1916 (Minister of Mines Annual Report 1916). The information regarding activity between 1916 and 1926 is sparse. However, in the 1928 Minister of Mines Annual Report it is estimated that there had been a cumulative production of 95 tonnes averaging 57.2 per cent antimony. The 1928 Minister of Mines Annual Report states that two adits tested the vein, the lower one advanced 73 metres and the upper one, 30 metres higher on the mountain, advanced 30 metres. The ore was extracted from the first 20 metres of the lower adit.

In 1990, Black Tusk Explorations Limited (Assessment Report 20939) completed reconnaissance lithogeochemical sampling (40 samples analysed for gold, silver, copper and antimony), geological mapping and prospecting. In 1994, additional prospecting was undertaken (Assessment Report 23235).

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PAGE: 1217
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1899-842; 1906-141; 1908-99; 1909-276; 1915-228, 121;
1916-26, 198; 1917-27, 162; 1926-254, 1927-275, *1928-289
EMPR ASS RPT 20939, 23235
EMPR INDEX 3-187
GSC MEM 173, pp. 49,129
GSC OF 432; 464, #243; 1148
GSC SUM RPT 1926, Part A, p. 45

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/11

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW050**

NATIONAL MINERAL INVENTORY:

NAME(S): **POORMAN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 10 N
LONGITUDE: 117 45 49 W
ELEVATION: 1110 Metres

NORTHING: 5542925
EASTING: 445316

LOCATION ACCURACY: Within 1 KM

COMMENTS: Workings are located at the 1110 metre elevation, 1.6 kilometres up the west side of Blue Grouse Creek (Minister of Mines Annual Report 1930, page 262).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Graphitic Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: UNDERGROUND REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1930
SAMPLE TYPE: Grab	
COMMODITY	<u>GRADE</u>
Silver	570.0000 Grams per tonne
Gold	15.1000 Grams per tonne
Lead	3.0000 Per cent
Zinc	11.0000 Per cent

REFERENCE: Minister of Mines Annual Report 1930, page A26.

CAPSULE GEOLOGY

The Poorman workings are reported (Minister of Mines Annual Report 1930, page A262) to be located on the west side of Blue Grouse Creek, approximately 10 kilometres northeast of Burton.

This area is underlain by east trending metasedimentary rocks (mainly argillites) and mafic volcanic rocks of the Triassic Slocan Group. Quartz monzonite of the Cretaceous Halifax Creek stock outcrops south of the area.

The showing is said to be a "crushed zone of graphitic slate" (Minister of Mines Annual Report 1930, page A262) containing "small lenses of zinc and lead sulphides carrying good silver values". A selected sample assayed 15.1 grams per tonne gold, 570 grams per tonne silver, 3 per cent lead and 11 per cent zinc (Minister of Mines Annual Report 1930, page 262).

Physical work on the property consists of an 8-metre adit, a shallow shaft and several trenches (Minister of Mines Annual Report 1930, page 262).

BIBLIOGRAPHY

EMPR AR 1929-342; 1930-262
GSC BULL 161
GSC OF 432; 464,#246

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REPORT: RGEN0100

BIBLIOGRAPHY

GCNL #178, 1989

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/15

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

and Great Western) within an area measuring approximately 750 by 1200 metres comprise the Millie Mack property. The showings are exposed in trenches and underground workings. The main occurrence, the Millie Mack, is a deformed and boudinaged quartz vein hosted in graphitic schist of the Triassic Slocan Group. The Billie P quartz veins are reportedly (Paper 1986-1, page 351) deformed in a similar manner, while the quartz veins in the Black Bear open pit follow the bedding planes and are not strongly deformed. Bedding attitudes are shallowly dipping and undulating.

The Millie Mack veins are located at the base of a section of Slocan Group clastic sedimentary rocks which overlie mafic volcanic rocks. There are two interpretations regarding the structural relationships: Geological Survey of Canada Bulletin 161 shows the contact as a low angle thrust, and the Slocan Group strata a klippe thrust over younger volcanic rocks of the Jurassic Rossland Group (Elise Formation). The second interpretation would have the Slocan sedimentary strata in normal (unfaulted) contact with older volcanic rock (Geological Survey of Canada Open File 432). Slocan Group strata include sandstone, siltstone, argillite, tuff, andesite and volcanic breccia. They are locally calcareous and contain local pods of limestone. Rossland Group volcanics include volcanic breccia, feldspar porphyry and basalt.

Basal Slocan Group strata are highly sheared graphitic argillite which contains blocks or boudins of vein quartz mineralized with galena, sphalerite, arsenopyrite, chalcopyrite and pyrite. The graphitic schist hostrocks range from three to ten metres in thickness and the tectono-clasts of vein quartz are erratically distributed within the unit. There is little record in the literature regarding the grade of the various mineralized showings at the Millie Mack. In 1981, an assay on samples from a 2.83-tonne shipment of mill concentrate from the Millie Mack was 12.8 grams per tonne gold, 768 grams per tonne silver, 0.16 per cent copper, 2.5 per cent lead, 3.0 per cent zinc and 3.9 per cent arsenic (Assessment Report 9965, Paper 1986-1). More recently, in 1989, the results from seven percussion-drill holes were reported in the George Cross News Letter (number 178, 1989), with the highest assay being 3.5 grams per tonne gold and 419 grams per tonne silver across 3.05 metres in drillhole 89-15.

There are potential reserves of 1,542,070 tonnes grading 4.79 grams per tonne gold and 222.82 grams per tonne silver (George Cross News Letter 01/05/89).

Recently it was reported that the Millie Mack property contains a large graphitic shear zone consisting of a mixture of extremely fine particles of 70 per cent minus 400 mesh graphitic sericite, sericite and silica. This graphitic shear zone contains 8,889,580 tonnes of which about 1,814,200 tonnes are deemed open pitable (George Cross News Letter No.95 (May 17), 1995). Micro Minerals Resources Inc. worked the property in 1995.

For a good work history see NMI entry 82K/4 Aul and Assessment Report 9965.

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- EMPR AR 1899-601,845; 1902-164; 1903-150; 1904-146; 1905-170; 1906-151,249; 1907-105; 1908-111,247; 1910-114; 1911-170; 1912-160; 1915-175; 1916-207,517; 1917-174,196; 1918-158,199; 1919-138; 1920-134; 1921-163; 1922-218; 1923-234; 1924-204; 1935-E34; 1960-A55,77; 1967-249; 1968-248; 1969-A55
EMPR ASS RPT 3226, 8813, *9965
EMPR BC METAL MM01307
EMPR EXPL 1979, p.85
EMPR GEM 1969-323,429; 1971-423; 1972-72; 1973-90
EMPR INDEX 3-205; 4-123
EMPR INF CIRC 1996-1, p. 20
EMPR MINING 1975-1980, Vol.1, pp. 33,71
EMPR P 1986-1, pp. 351-355
EMPR PF (Addie, G.G. (1988): Notes and maps)
EMR MIN BULL MR 223 (B.C. 47)
GSC BULL 161
GSC MAP 1234A
GSC OF 432; 464,#250
GCNL #198, 1980; #83,#155,#178,#214,#242, 1989; #95, 1995
N MINER Jul.3, 1989, p.21
W MINER Nov. 1964
Placer Dome File
EMPR OF 1998-10

MINFILE NUMBER: **082KSW052**

NATIONAL MINERAL INVENTORY:

NAME(S): **PROMESTORA (L.3788)**, PROMESTORA, PROMISTORIA

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082K04W
 BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 46 N
 LONGITUDE: 117 47 56 W
 ELEVATION: 1525 Metres

NORTHING: 5545916
 EASTING: 442821

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Promestora Reverted Crown grant (Lot 3788).

COMMODITIES: Gold Silver Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Sphalerite
 ASSOCIATED: Quartz Pyrite
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Stratabound
 CLASSIFICATION: Hydrothermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Argillite
 Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
 TERRANE: Quesnel
 METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT REPORT ON: N
 YEAR: 1985
 CATEGORY: Assay/analysis
 SAMPLE TYPE: Chip
 COMMODITY

Silver	34.3000	Grams per tonne
Gold	46.7900	Grams per tonne

COMMENTS: Sample across 34 centimetres.
 REFERENCE: Assessment Report 13797.

CAPSULE GEOLOGY

The Promestora adit is located near the headwaters of Mineral Creek on the west side. The area is underlain by east-trending argillite and mafic volcanic rocks of the Triassic Slocan Group. Quartz diorite of the Jurassic Ruby Range stock outcrops north of the area. The Promestora vein system is composed of single or multiple quartz veins which reach maximum thicknesses of 50 centimetres, but average 20 centimetres (Assessment Report 13797). They occur discontinuously within a "shear zone" developed in Slocan Group argillites. Massive and disseminated pyrrhotite and minor disseminated sphalerite and pyrite occur over a strike length of 40 metres in the adit which extends for a total length of 83 metres. Sampling by Falconbridge in 1984 (Assessment Report 13797) yielded assays as high as 46.79 grams per tonne gold and 34.3 grams per tonne silver across 34 centimetres.

In 1896, 23 metres of drifting were completed and 8 tonnes of ore produced and shipped to the Trail smelter, yielding 762 grams of gold. Between 1896 and 1920, the adit was extended to a total length of 83 metres. In 1956, an additional 8 tonnes was shipped to the Trail smelter, yielding 840 grams of silver, 715 grams of gold, 84 kilograms of lead and 116 kilograms of zinc. In 1983, Falconbridge completed 60 kilometres of airborne magnetic and electromagnetic surveying. In 1984, Falconbridge took 9 underground samples which were assayed for gold and silver.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1223
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1896-73; 1899-601; 1900-987; 1920-135; 1928-357; 1929-342;
1956-A51,99
EMPR ASS RPT 7829, 11122, *13797
EMPR BC METAL MM01362
EMPR EXPL 1979-86
EMPR INDEX 4-124
GSC BULL 161
GSC OF 432; 464,#247

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/13

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW053**

NATIONAL MINERAL INVENTORY:

NAME(S): **CARIBOU ACE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 52 N
LONGITUDE: 117 45 19 W
ELEVATION: 1700 Metres

NORTHING: 5544216
EASTING: 445925

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located 3.2 kilometres west of the Millie Mack (082KSW051)
(Minister of Mines Annual Report 1930, page 262).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Argillite
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Caribou Ace showings are reported (Minister of Mines Annual Report 1930, page 262) to be located 3.2 kilometres west of the Millie Mack property (082KSW051), approximately 10 kilometres northeast of Burton.

This area is underlain by east trending metasedimentary rocks (mainly argillites) and mafic volcanic rocks of the Triassic Slocan Group. Quartz monzonite of the Cretaceous Goat Canyon-Halifax Creek stock outcrops south of the area.

Surface prospecting has been undertaken "on quartz veins carrying gold" (Minister of Mines Annual Report 1930, page 262).

BIBLIOGRAPHY

EMPR AR 1930-262
GSC BULL 161
GSC OF 432; 464, #249

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/15

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW054**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHIEFTAIN (L.5845)**, MAMMOTH NO. 2 (L.5841), DUNDAS (L.5843),
DUCHESS (L.5846), SILVER TIP NO. 2 (L.5847)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:
LATITUDE: 50 02 23 N
LONGITUDE: 117 41 22 W
ELEVATION: 1350 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adits located from Drawing 7-3, Assessment Report 12375.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5543275
EASTING: 450630

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Sphalerite Tetrahedrite
Pyrrhotite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Slocan Undefined Formation

LITHOLOGY: Graphitic Argillite
Andesite
Shale
Andesite Flow
Andesite Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 788.0000 Grams per tonne
Gold 4.1000 Grams per tonne
Lead 0.2900 Per cent
Zinc 0.2100 Per cent
COMMENTS: A 1.9-metre wide chip sample from the vein in the upper adit.
REFERENCE: Assessment Report 12375.

CAPSULE GEOLOGY

The Chieftain adits are located on the south side of Caribou Creek, 14 kilometres east of Burton.
The area containing the Chieftain workings is underlain by the Triassic Slocan Group, which consists of metasedimentary rocks (mainly dark grey to black argillites and shales), intercalated with massive medium grained andesitic flows and tuffs (Assessment Report 12375). Bedding and foliation attitudes strike west to northwest with south dips. Quartz monzonite of the Cretaceous Goat Canyon-Halifax Creek stock outcrops south of the showings area.
The Chieftain vein consists of quartz veinlets and lenses carrying galena, sphalerite, chalcopyrite, tetrahedrite, pyrite and pyrrhotite within a two-metre thick sheared graphitic zone in dark grey argillites. The vein has been developed by two southeasterly directed adits approximately 30 metres apart. The upper adit is 75 metres long and follows the vein for 26 metres after which the vein pinches out. The lower adit, located 10 metres below the upper one, extends for a length of 38 metres following the vein for approximately 20 metres. A third adit, located 100 metres east of

CAPSULE GEOLOGY

the upper adit, is 45 metres in length and although it transected the "shear zone" for 20 metres, it intersected only sparse quartz vein material and insignificant sulphides.

The property was first staked in 1890, and much of the underground development was completed prior to about 1903. The property remained idle until 1920, when it was re-examined by a government engineer. Ministry of Mines reports record attempts to achieve production in the period between 1928 and 1934. Production was recorded in 1934 and 1955. In 1982, an airborne magnetic and VLF-EM survey was completed (Assessment Report 11122). Between 1983 and 1985, the property was geologically mapped and prospected. Soil geochemical, magnetic and VLF-EM surveys were completed. The underground workings were rehabilitated, geologically mapped and re-sampled (Assessment Reports 12375 and 13797).

BIBLIOGRAPHY

EMPR AR 1899-709; 1900-856; 1902-164; 1903-150,242; 1919-138; 1920-135; 1928-357; 1929-429; 1930-262; 1932-180; 1934-A25; 1955-A49,65
EMPR ASS RPT 11122, *12375, 13797
EMPR BC METAL MM01143
EMPR INDEX 3-194
GSC BULL 161
GSC OF 432; 464,#253
GCNL #206, 1984

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/12

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

argillite and quartzite of the Triassic Slocan Group. These strata strike northwest and dip southwest or northeast at low angles and are intruded by numerous quartz porphyry dikes.

The Panama vein strikes easterly and dips 55 degrees to the south and ranges from several centimetres to 60 centimetres width. The vein is composed primarily of quartz hosting tetrahedrite.

Total recorded production from the Panama occurrence is 2666 tonnes yielding 3,838,539 grams silver, 845 grams gold, 919 kilograms copper, 11,759 kilograms lead and 2911 kilograms zinc.

BIBLIOGRAPHY

EMPR AR 1899-846; 1909-106,272; 1910-97,243; 1911-132,284; 1912-322;
1913-124,420; 1914-286,509; 1915-119,445; 1916-196,516; 1917-186;
1919-125; 1920-127,144; 1926-265; 1950-143; 1961-76; 1964-122;
1965-189; 1968-251; 1970-A55; 1974-A121; 1975-A95; 1976-A104;
1979-130
EMPR BC METAL *MM01353; MM01395
EMPR EXPL 1978-E64
EMPR GEM 1965-189; 1968-251; 1969-331; 1970-457; *1974-82
EMPR INDEX 3-208
EMPR IR 1984-2, p. 102
EMPR LMP Fiche No. 61148
EMPR MINING 1975-1980, Vol.1, pp. 35,56,60,71,74
GCNL #121, 1979

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/19

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW056**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRIZZLY (L.15015)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 19 07 N
LONGITUDE: 117 01 32 W
ELEVATION: 885 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5574057
EASTING: 498181

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Reverted Crown grant Lot 15015.

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT: Tetrahedrite Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Calcareous Phyllite
Lamprophyre Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1964

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

815.0000

Grams per tonne

Copper

1.0500

Per cent

COMMENTS: A grab of a 2 centimetre wide sulphide-rich band on the western contact of a quartz vein.

REFERENCE: Bulletin 49, page 75.

CAPSULE GEOLOGY

The Grizzly occurrence is located between Meadow Creek and the Lardeau River in the Slocan Mining Division. The property consists of a single Reverted Crown grant, Lot 15015.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The Grizzly occurrence consists of a shallow shaft, a short adit

CAPSULE GEOLOGY

and two trenches. The workings follow a 1 to 2 metre wide quartz vein that contains a 2 centimetre wide band of tetrahedrite, chalcopyrite and pyrite along its western edge. The vein, which strikes north and dips 85 degrees west, is hosted in green calcareous phyllite of the Index Formation of the Paleozoic Lardeau Group. Its eastern contact follows a 60 centimetre wide green lamprophyre dike. Both the phyllite and the lamprophyre contain minor amounts of disseminated cubic pyrite. Carbonate alteration of the wallrock has stained the green phyllite to a red-brown colour. A grab sample of the sulphide-rich material assayed 815 grams per tonne silver and 1.05 per cent copper (Bulletin 49).

BIBLIOGRAPHY

EMPR ASS RPT 14502, *15541
EMPR BULL 49, p. 75
EMPR PF (Templeman Kluit, D.J. (1961): Plan of surface showings)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/20

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW057**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPYGLASS**

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K06W
 BC MAP:
 LATITUDE: 50 21 54 N
 LONGITUDE: 117 20 07 W
 ELEVATION: 1765 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Location of portal.

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5579268
 EASTING: 476154

COMMODITIES: Silver Lead Gold Zinc Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Pyrite
 ASSOCIATED: Quartz
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Milford	Undefined Formation	

LITHOLOGY: Phyllite
 Marble
 Volcaniclastic
 Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Kootenay
 METAMORPHIC TYPE: Regional Contact
 COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
 SAMPLE TYPE: Grab

YEAR: 1928

COMMODITY	GRADE	
Silver	7572.0000	Grams per tonne
Gold	1.3000	Grams per tonne
Copper	3.6800	Per cent
Lead	23.1000	Per cent
Zinc	5.8000	Per cent

COMMENTS: Grab sample of mineralization. Drilling in 1979 failed to confirm the high-grade assays.

REFERENCE: Minister of Mines Annual Report 1928, page 316.

CAPSULE GEOLOGY

The Spyglass property is located at 1765 metres elevation above sea level near the head of Poplar Creek, 2.5 kilometres southwest of Spyglass Mountain in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Spyglass Mountain area is mainly underlain by grey phyllitic rocks, marble and coarse volcaniclastic rocks of the Milford Group. The layered sequence is tightly folded in a series of northwest-trending folds which are cut to the north and south by the Mesozoic North Fork and Poplar Creek quartz monzonite stocks. The rocks have undergone contact and regional metamorphism to middle or upper greenschist facies (Geological Survey of Canada Bulletin 193).

CAPSULE GEOLOGY

The Spyglass occurrence consists of a quartz vein striking 150 degrees and dipping 50 to 60 degrees southwest, parallel to the schistosity of the enclosing phyllite. The vein has an average width of 60 centimetres and has been followed for about 75 metres. Mineralization, which consisted of pyrite, galena and tetrahedrite, is unevenly distributed and does not appear to extend the entire length of the vein. A grab sample of the mineralized quartz vein assayed 1.3 grams per tonne gold, 7572 grams per tonne silver, 3.68 per cent copper, 23.1 per cent lead and 5.8 per cent zinc (Minister of Mines Annual Report 1928).

The vein has been developed with two short adits and small raise connecting the two adits. In 1979, six diamond-drill holes failed to intersect any economic mineralization from the vein (Assessment Report 7650).

BIBLIOGRAPHY

EMPR AR 1902-141; 1903-112,126; 1904-118; 1907-219; 1914-320;
*1928-316; 1929-336; 1930-264; 1932-182
EMPR ASS RPT *7650
EMPR EXPL 1979-87
EMPR GEM 1970-463
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/23

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW058**

NATIONAL MINERAL INVENTORY:

NAME(S): **REVENUE (L.2826)**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 42 N
LONGITUDE: 117 06 58 W
ELEVATION: 1700 Metres

NORTHING: 5543640
EASTING: 491686

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Revenue Crown grant (Lot 2826).

COMMODITIES: Zinc Silver Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Tetrahedrite Argentite
ASSOCIATED: Quartz Siderite Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Slaty Shale
Carbonaceous Shale
Quartzite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Revenue showing is located on the eastern slopes of a prominent ridge separating Whitewater and Lyle creeks. Kaslo, British Columbia is located about 25 kilometres to the southeast. Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common. The Revenue showing is hosted predominantly by slaty, carbonaceous shales and interbedded quartzite and limestone of the Triassic Slocan Group. Mineralization at the showing consists of quartz-calcite-siderite veins with sphalerite, tetrahedrite and argentite.

BIBLIOGRAPHY

EMPR AR 1898-1192; 1917-157; 1921-133; 1926-260
EMPR ASS RPT 573, 824, 1164, 1922, 2037, 2661
EMPR GEM *1970-457
GSC MAP 1667
GSC OF 432; *464
GSC SUM RPT 1916, p. 56

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/28

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW059**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISLE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 14 55 N
LONGITUDE: 117 07 47 W
ELEVATION: 2256 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of drilling and shear zone.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5566281
EASTING: 490751

COMMODITIES: Silver Lead Zinc Antimony Gold
Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite
ASSOCIATED: Quartz Calcite
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au 109 Stibnite veins and disseminations

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Lardeau Broadview

LITHOLOGY: Sandstone
Limestone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay PHYSIOGRAPHIC AREA: Selkirk Mountains
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies. GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 2358.0000 Grams per tonne
Gold 9.7000 Grams per tonne
Lead 29.0000 Per cent
Antimony 10.4000 Per cent
COMMENTS: A chip sample across a 0.6 metre wide vein within a 20 metre wide shear zone.
REFERENCE: Assessment Report 8532.

CAPSULE GEOLOGY

The Isle occurrence is located on the west side of Meadow Mountain at 2256 metres elevation above sea level, near the headwaters of John Creek in the Slocan Mining Division. Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies. Rocks on the Isle property include phyllite, sandstone and grey limestone of the Broadview Formation (Lardeau Group). The strata strike northwest and dip east between 60 to 80 degrees. Mineralization is hosted within a 20 metre wide shear zone that strikes north and dips subparallel to bedding.

CAPSULE GEOLOGY

A short adit was excavated to evaluate a quartz vein within the shear zone. The rocks within the shear are altered to sericite schist. High silver, lead and antimony values occur with massive sulphides on the apex of dragfolds within the shear. Mineralization consists of galena and tetrahedrite within quartz-calcite veins. A chip sample across 0.6 metre of vein material assayed 2358 grams per tonne silver, 29.9 per cent lead, 10.4 per cent antimony and 9.7 grams per tonne gold (Assessment Report 8532).

In 1970, two tonnes were mined from the vein to produce 31 grams of silver, 12 kilograms of lead and 8 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1970-A55
EMPR ASS RPT *8532
EMPR BC METAL MM01244
EMPR EXPL 1980-108
EMPR GEM 1970-462,482
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW060**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHANNON, A, FAIRY QUEEN, COMMODORE**

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082K04E
 BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 05 37 N
 LONGITUDE: 117 35 30 W
 ELEVATION: 1900 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5549207
 EASTING: 457680

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location from Plate 1, Assessment Report 11203. Although not definitely known, it is assumed that the Commodore property of Charles Starr is the same as the Shannon.

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Sphalerite Galena Tetrahedrite Chalcopyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Porphyry
 Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1970

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Silver	147.0000	Grams per tonne
Copper	0.2700	Per cent
Lead	2.6700	Per cent
Zinc	1.1000	Per cent

COMMENTS: Sample width of 4.4 metres in diamond-drill hole SH-24.
 REFERENCE: Assessment Report 2966.

CAPSULE GEOLOGY

The Shannon property is located near the headwaters of Shannon Creek, 22 kilometres southeast of Nakusp. Good access is available on logging roads from the east via Shannon Creek.

There is little known about the occurrence, however, the George Cross News Letter (number 148, 1970) and Assessment Report 2966 state that the showing is a sulphide-bearing vein carrying galena, sphalerite, chalcopyrite and tetrahedrite cutting porphyry near the contact with argillite. Drillhole SH-24 intersected 4.4 metres grading 147 grams per tonne silver, 2.67 per cent lead, 1.1 per cent zinc and 0.27 per cent copper (Assessment Report 2966).

A 1929 report by Charles Starr discusses the Commodore Group at the head of Shannon Creek. According to Starr the Commodore was worked around the turn of the century when a few tons of ore were packed out. Development on the Commodore is reported as 36 metres of drifts and crosscuts in the 'west' tunnel (within porphyritic granite) and a 6-metre tunnel eastward in barren slate. The average of 3 samples taken in the east tunnel area about 1 metre is 3.09 grams per tonne gold, 603.43 grams per tonne silver, 14.4 per cent lead and 13.8 per cent zinc (Starr, 1929 (Property File)). Starr does not mention any copper mineralization.

Geological Survey of Canada Bulletin 161 shows the area to be underlain by argillite, shale, siltstone and tuff of the Triassic

CAPSULE GEOLOGY

Slocan Group. Augite basalt of the Lower Jurassic Elise Formation of the Rossland Group outcrops 1 kilometre north of the property. Biotite hornblende quartz monzonite of the Jurassic Ruby Range stock outcrops 2 kilometres south of the area.

Documentation of the past work on the property is poor. About 4.5 tonnes of ore was shipped to the mill at New Denver in 1935. In 1970, the adit was extended to about 21 metres, 640 tonnes of "material" (George Cross News Letter number 148, 1970) stockpiled and a VLF-EM survey completed. In 1983, 54 kilometres of airborne magnetic and VLF-EM surveying was completed on the west portion of the property by Western Geophysical Aero Data Ltd. (Assessment Report 11203).

BIBLIOGRAPHY

EMPR AR 1935-A26,E35; 1975-A95
EMPR ASS RPT 2966, 11203
EMPR BC METAL MM01386
EMPR GEM 1970-446
EMPR INDEX 3-212
EMPR PF (Starr, C.C. (1929): Report of Preliminary Examination of the Commodore Group, 4 p.)
GSC BULL 161
GSC OF 432; 464,#255
GCNL #148,#220, 1970

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/19

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW061**

NATIONAL MINERAL INVENTORY:

NAME(S): **LINSON VIEW**, LINSON'S VIEW

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 26 09 N
LONGITUDE: 117 24 08 W
ELEVATION: 1830 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5587168
EASTING: 471435

LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Milford	Undefined Formation	
Paleozoic	Lardeau	Broadview	
Lower Jurassic			Kuskanax Batholith

LITHOLOGY: Monzonite
Quartz Mica Schist
Marble
Quartz Monzonite
Amphibolite
Carbonaceous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional Contact

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1914

SAMPLE TYPE: Bulk Sample

COMMODITY

GRADE

Silver

8953.0000

Grams per tonne

Lead

12.3000

Per cent

COMMENTS: Results from a 410 kilogram bulk sample.

REFERENCE: Minister of Mines Annual Report 1914, page 318.

CAPSULE GEOLOGY

The Linson View occurrence is located at 1830 metres elevation above sea level near the head of Mobbs Creek, 3 kilometres northwest of Tenderfoot Lake in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Tenderfoot Lake area is mainly underlain by the Mesozoic Mobbs Creek and Rapid Creek quartz monzonite stocks and the Early Jurassic Kuskanax monzonite batholith to the west. Grey quartz mica schist of the Broadview Formation along with marble, micaceous schist and amphibolite of the Paleozoic Milford Group form tightly folded rafts between the stocks and the batholith. The rocks have undergone contact and regional metamorphism to middle or upper greenschist

CAPSULE GEOLOGY

facies (Geological Survey of Canada Bulletin 193).

The Linson View occurrence consists of three quartz veins within and near the contact of the Kuskanax monzonite batholith. The No. 1 vein is mineralized with galena, sphalerite, pyrite and tetrahedrite. The vein occupies a fault within the monzonite and is between 1 and 2 metres wide. It has been developed by a crosscut and a 10-metre deep shaft. A 410-kilogram high grade bulk sample was sent to a smelter in 1914. The sample assayed 8953 grams per tonne silver and 12.3 per cent lead (Minister of Mines Annual Report 1914). The No. 2 vein is at the contact between micaceous schist and marble. The vein is 10 to 20 centimetres wide and contains galena, pyrite and tetrahedrite. The No. 3 vein is hosted within carbonaceous schist 15 metres above the No. 2 vein; it is up to 3 metres wide and sparsely mineralized with galena and pyrite.

BIBLIOGRAPHY

EMPR AR 1901-1020; 1905-154; *1914-318,320
EMPR ASS RPT 564, 2315, 2322
EMPR GEM 1970-463
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/24

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW062**

NATIONAL MINERAL INVENTORY:

NAME(S): **VICTIM MOLYBDENITE #1**, SHANNON CREEK, ANTON,
NOLY, MALY, VICTOR,
NORTH, BOBBIE

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 04 18 N
LONGITUDE: 117 29 50 W
ELEVATION: 925 Metres

NORTHING: 5546717
EASTING: 464419

LOCATION ACCURACY: Within 500M
COMMENTS: Location of diamond-drill hole 80-SH-03, Figure 4, Assessment Report 9175.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Pyrite Quartz Muscovite
ALTERATION: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Igneous-contact Hydrothermal
TYPE: L05 Porphyry Mo (Low F- type) O PEGMATITE

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Cretaceous			Wragge Creek Stock

ISOTOPIC AGE: 74 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Aplite
Pegmatite
Hornblende Biotite Quartz Monzonite
Granodiorite
Quartz Diorite

HOSTROCK COMMENTS: GSC Open File 432.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY: Molybdenum

YEAR: 1981

GRADE: 0.0420 Per cent

COMMENTS: Assay interval of 1.5 metres.
REFERENCE: Assessment Report 8402.

CAPSULE GEOLOGY

The Victim Molybdenite #1 occurrence is located 2.5 kilometres west of the north end of Slocan Lake and 3.5 kilometres southwest of the town of Hills.

Molybdenite occurs as blebs and rosettes in veins, quartz stringers and fracture fillings generally associated with quartz, muscovite and pyrite in aplites and pegmatitic phases near contact areas and in marginal phases of the Cretaceous Wragge Creek stock (Assessment Report 8402). The best intersection in diamond-drill hole 80-SH-03 was 0.042 per cent molybdenum across 1.5 metres in a weakly altered quartz diorite. The Wragge Creek stock is composed of hornblende biotite quartz monzonite and minor quartz diorite and granodiorite. A potassium-argon date on biotite yielded an age of 74 million years (GSC Open File 432). The stock has intruded and hornfelsed fine grained sedimentary strata and mafic volcanic rocks

CAPSULE GEOLOGY

of the Triassic Slocan Group. The Slocan Group rocks are at low metamorphic rank and include grey to black phyllite, argillite, quartzite and limestone.

In 1970 (Assessment Report 2393), Argem Explorations Limited prepared 1662 metres of line and collected 191 soil geochemical samples which were analysed for zinc and molybdenum. In 1971 (Assessment Report 3004), Argem Explorations Limited prepared an additional 6344 metres of line, collected 178 soil samples and again analysed them for zinc and molybdenum. In 1980 (Assessment Report 8042), Cyprus Anvil Mining Corporation optioned the property and cut 9.2 kilometres of baseline and crossline and collected 1780 soil samples which were analysed for molybdenum, copper, lead, zinc and silver. In 1981 (Assessment Report 9175), Cyprus Anvil completed some trenching and four diamond-drill holes totalling 1042 metres. Molybdenite was intersected at this occurrence as well as at another 2 kilometres to the west (Victim Molybdenite #2, 082KSW188) and a vein containing galena and sphalerite was intersected 1 kilometre to the north (Victim Silver, 082KSW189). In 1983 (Assessment Report 11646), Shannon Creek Resources Limited collected 168 soil samples which were analysed for gold, silver, lead, zinc and copper. In 1986 (Assessment Report 14947), Silvera Resources Incorporated analysed 226 of the Cyprus Anvil soil geochemical samples for gold.

BIBLIOGRAPHY

EMPR ASS RPT 2393, 3004, 8402, *9175, 11646, 14947
GSC BULL 161
GSC OF 432; 464, #256

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/05

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW063**

NATIONAL MINERAL INVENTORY:

NAME(S): **WILSON CREEK MO. CU, V. AND G.,
LEONTOWICZ CLAIM BLOCK, LEMAX**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 59 N
LONGITUDE: 117 23 22 W
ELEVATION: 963 Metres

NORTHING: 5544232
EASTING: 472118

LOCATION ACCURACY: Within 500M
COMMENTS: Collar of drillhole WC-79-1, figure 3, Assessment Report 7848.

COMMODITIES: Molybdenum Zinc Lead

MINERALS

SIGNIFICANT: Molybdenite Sphalerite Galena
ASSOCIATED: Quartz Pyrrhotite Pyrite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Vein
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic Unknown	Slocan	Undefined Formation	Rosebery Stock

LITHOLOGY: Intrusive Breccia
Quartz Monzonite
Granite
Quartzite
Argillite
Limestone
Hornfels

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Wilson Creek breccia molybdenum occurrence is located 3 kilometres northeast of Rosebery, on the east side of Wilson Creek, east of Slocan Lake.

Traces of molybdenite mineralization are associated with minor quartz-pyrrhotite-pyrite veinlets in hornfels and minor quartz-pyrrhotite-sphalerite-galena veinlets in intrusive breccia (Assessment Report 7848). The highest molybdenum assay in a drillhole (Assessment Report 7848) into the breccia was 8 parts per million. The intrusive breccia is light grey to pale green in colour and contains fragments of purple and bleached hornfels, limestone, quartz monzonite and bull quartz in a calcareous, comminuted rock matrix. The breccia is related to the Rosebery stock which is composed of granite and quartz monzonite (GSC Open File 432). The Rosebery stock intrudes quartzites, argillites and limestones of the Triassic Slocan Group.

The earliest recorded work was "development work" by "hand steel" presumably on silver-lead veins in 1942 (Minister of Mines Annual Report 1942). In 1970, the ground was staked by Peter Leontowicz and optioned by United Bata Resources Limited (later Pan Ocean Oil Limited), who in 1970 (Assessment Report 2944) undertook reconnaissance soil sampling (875 samples analysed for molybdenum and copper). In 1979, Amax Potash Limited optioned the property and undertook a program of geological mapping and collected 369 soil and stream sediment samples which were analysed for 11 elements including molybdenum (Assessment Report 7514). They also completed a 203 metre diamond-drill hole (Assessment Report 7848).

BIBLIOGRAPHY

EMPR AR 1942-77

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1243
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 2944, 3113, 3565, 7514, 7848
EMPR EXPL 1979-84
EMPR GEM 1971-423
EMPR OF 1991-17
GSC BULL 161
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW064**

NATIONAL MINERAL INVENTORY:

NAME(S): **SB 78, SB, BETTY JO,
BJ, ELAINE, LOIS,
PAM, DDS, RITA**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 05 04 N
LONGITUDE: 117 09 43 W
ELEVATION: 2103 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5548032
EASTING: 488414

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of SB 78 claim on which 11 surface diamond-drill holes were drilled to explore nickel-copper mineralization in serpentinite (Geology, Exploration and Mining in British Columbia 1971, page 422).

COMMODITIES: Nickel Copper

MINERALS

SIGNIFICANT: Pyrrhotite Pentlandite Garnierite
ALTERATION: Chlorite Talc Asbestos
ALTERATION TYPE: Chloritic Talc
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Shear
CLASSIFICATION: Hydrothermal
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu
DIMENSION: 76 x 2 Metres STRIKE/DIP:
COMMENTS: Mineralization occurs along a shear zone in a serpentinite body 75 metres long. The best assay from a drillhole yielded 0.26 per cent nickel over 1.5 metres. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Serpentinite
Serpentinized Peridotite
Greenstone
Andesite Flow
Andesite Pyroclastic
Tuffaceous Sediment/Sedimentary
Diorite Dike
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1971
SAMPLE TYPE: Drill Core
COMMODITY: Nickel GRADE: 0.2600 Per cent
COMMENTS: Best assay over 1.5 metres.
REFERENCE: Assessment Report 3225.

CAPSULE GEOLOGY

The SB 78 showing is located at the headwaters of Whitewater Creek, approximately 1.5 kilometres southwest of Whitewater Mountain. New Denver, British Columbia lies some 19 kilometres to the southwest.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows and pyroclastics (greenstone), and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Sediments and volcanics have been locally intruded by diorite and feldspar porphyry dikes and sills. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and

CAPSULE GEOLOGY

extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. The surface trace of this fault can be traced for several kilometres. Underground, this fault is marked by a heavy talc gouge.

The showing is underlain by sheared and highly serpentinized peridotite. Mineralization consists of massive pods of pyrrhotite, pentlandite and garnierite (Ni-silicate) along a shear zone in a serpentinite body roughly 75 metres long.

A drill program in 1971 completed 11 holes totalling 607 metres. Drilling intersected a shear zone at 49 metres depth containing disseminated sulphides. The best assay yielded 0.26 per cent nickel over 1.5 metres (Assessment Report 3225). Two surface channel samples yielded up to 5 per cent nickel over 2.4 to 3.6 metres width (Assessment Report 3225). A ground magnetometer survey of this serpentinite body revealed 7 additional anomalies.

BIBLIOGRAPHY

EMPR ASS RPT *3225, 3921
EMPR GEM 1971-422; *1972-71
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW065**

NATIONAL MINERAL INVENTORY: 082K3 Pb2

NAME(S): **RED FOX (L.2413)**, RED FOX MINE, RED FOX GROUP,
 RED FOX FR. (L.2414), CENTRAL (L.2415), SOHO GROUP,
 ANTOINE

STATUS: Past Producer	Underground	MINING DIVISION: Slocan
REGIONS: British Columbia		
NTS MAP: 082K03E 082F14E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 00 10 N		NORTHING: 5538957
LONGITUDE: 117 11 35 W		EASTING: 486165
ELEVATION: 2316 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A). Also see the Antoine (082KSW011) and Ruby Silver (Lot 515) (082KSW138) mineral occurrences.		

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena	Sphalerite	Tetrahedrite	Pyrargyrite	Silver
ASSOCIATED: Siderite	Quartz			
ALTERATION: Pyrite				
MINERALIZATION AGE:				

DEPOSIT

CHARACTER: Vein	Discordant	Shear
CLASSIFICATION: Epigenetic	Hydrothermal	
TYPE: I05	Polymetallic veins	Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Slate
 Argillite
 Limestone
 Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The former Red Fox mine is located at 2316 metres elevation between the headwater of the south fork of McGuigan Creek and Rambler Creek. New Denver, British Columbia is 10 kilometres to the southwest.

The Red Fox group, consisting of the Red Fox (Lot 2413), Red Fox Fr. (Lot 2414) and Central (Lot 2415) Crown grants was first staked in about 1893. Development commenced in 1895 with the first production in 1901. In 1902, the Red Fox workings included 206 metres of drifts and crosscuts, 130 metres of raises and winzes, 91 metres of stoping and 61 metres of opencuts. Subsequent work by G. Aylard in 1903 and lessees Gething and Henderson from 1904 to 1906 was then discontinued. The Red Fox, Red Fox Fr. and Central claims were partially developed by extending the Red Fox workings of the Antoine (082KSW011) into the Red Fox claim. The Ogema Reverted Crown grant (Lot 3163) adjoins the Red Fox claim group to the south.

The Red Fox occurrence is hosted by contorted slates and thinly bedded argillites interbedded with occasional limestone beds of the Triassic Slocan Group. The general dip of these strata is to the southwest. These rocks are crosscut by numerous quartz porphyry dikes, about 60 centimetres wide.

The vein system at the Red Fox occurrence is similar to the former Antoine mine. The Antoine lode strikes northeast and dips 65 degrees southeast but curves eastward as it approaches the Red Fox claim. The lode consists of quartz, locally crusty, and siderite with two orebodies of galena, sphalerite, tetrahedrite, pyrargyrite and native silver in leaf and wire form. The lodes contain fragments of pyritized hostrocks. At the northeast end of the lode it rolls flatly into the bedding. To the southwest the lode continues, in part, in a steeply dipping fracture but also flattens into bedding.

CAPSULE GEOLOGY

Continuation of the vein to the southwest is uncertain. The lamprophyre dike has been offset 12 metres by faulting which the lode does not.

Two important ore shoots have been mined on the Antoine lode. The eastern shoot lies on either side of the Antoine and Red Fox claims. It was about 60 metres long and does not go much below the intermediate level. The western shoot continued from near surface to below the No. 5 level. Its pitch was south, was 75 to 90 metres long, and carried an ore streak ranging from 2 to 90 centimetres thick. Most of the ore mined has come from the footwall of a 60 to 150 centimetre wide lamprophyre dike that follows the vein for 50 metres.

It is important to note that mineralization occurs where the lode vein is coincident with jointing, particularly where Slocan sediments are folded or are intruded by porphyry dikes.

Total production from the former Red Fox mine amounted to 517 tonnes with 3,507,020 grams silver, 234,737 kilograms lead and 153 kilograms zinc recovered over seven years.

BIBLIOGRAPHY

EMPR AR 1893-1074; *1895-679; 1899-687; *1900-829; 1901-1026;
1902-148,301; *1903-137; 1904-196,202; *1905-160; 1906-249
EMPR BC METAL *MM01368
EMPR INDEX 3-210
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 112
GSC OF 432; 464

DATE CODED: 1995/11/28
DATE REVISED: 1995/11/28

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW066**

NATIONAL MINERAL INVENTORY:

NAME(S): **EK 78910**, EK, TOM,
CHRIS, TAM, TIM,
TIP, OLYMPUS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 04 27 N
LONGITUDE: 117 09 07 W
ELEVATION: 2255 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Shaft location at the corner of EK 7, 8, 9 and 10 claims (Assessment Report 3227). See Olympus East (082KSW174) and Olympus West (082KSW175).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5546888

EASTING: 489127

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sternbergite
COMMENTS: Silver chloride reported by C.D. McKenzie in 1899 (Assessment Report 3227).
ASSOCIATED: Carbonate Chlorite Talc Asbestos
ALTERATION: Carbonate Chlorite Talc
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Quartzite
Andesite Flow
Andesite Pyroclastic
Tuffaceous Sediment/Sedimentary
Diorite Dike
Feldspar Porphyry Dike
Serpentinite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The EK 78910 showing is located near the headwaters of Whitewater Creek, approximately 2.75 kilometres southwest of Whitewater Mountain. New Denver, British Columbia lies some 19 kilometres to the southwest.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows and pyroclastics (greenstone), and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Sediments and volcanics have been locally intruded by diorite and feldspar porphyry dikes and sills. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. The surface trace of this fault can be traced for several kilometres. Underground this fault is marked by a heavy talc gouge.

The showing is underlain by sheared, argillaceous quartzite of the Triassic Slocan Group. A collapsed shaft at the intersection of the EK 7, 8, 9 and 10 claims is reported to be 20 metres deep. Seventy-one centimetres of "pay ore" is reported consisting of 46 centimetres of intermixed galena, tetrahedrite, sternbergite and silver chloride and 25 centimetres of carbonates. The galena yielded assay values of 2580 grams per tonne silver and 78 per cent lead to

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1249
REPORT: RGEN0100

CAPSULE GEOLOGY

6322 grams per tonne silver and 74 per cent lead (Assessment Report 3227). Carbonates yielded 992 to 3402 grams per tonne silver (Assessment Report 3227).

BIBLIOGRAPHY

EMPR ASS RPT 434, *3227, 12167
EMPR GEM 1971-421
GSC MAP 1667
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: 082KSW067

NATIONAL MINERAL INVENTORY: 082K4 Ag2

NAME(S): **SHAKESPEARE (L.5720)**, SKYLARK (L.5719), MOUNTAIN M (L.3604),
 MEADOW QUEEN (L.3605), MEADOW (L.5862), STAR

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K04W
 BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 04 46 N
 LONGITUDE: 117 47 52 W
 ELEVATION: 1890 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5547769
 EASTING: 442920

LOCATION ACCURACY: Within 500M

COMMENTS: Location of shaft number 1, on the northeast boundary of Lot 5720
 (Plate Number 2, Assessment Report 3301).

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Galena Sphalerite Argentite
 Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Discordant
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 SHAPE: Tabular
 DIMENSION: 250 x 1 Metres
 COMMENTS: Quartz vein.

STRIKE/DIP: 360/40E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Ruby Range Stock

ISOTOPIC AGE: 123 Ma
 DATING METHOD: Potassium/Argon
 MATERIAL DATED: Biotite

LITHOLOGY: Hornblende Diorite
 Quartz Diorite

HOSTROCK COMMENTS: Age date from GSC Open File 432.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: UNDERGROUND

REPORT ON: N

CATEGORY: Assay/analysis
 SAMPLE TYPE: Chip

YEAR: 1985

COMMODITY	GRADE	
Silver	377.0000	Grams per tonne
Gold	52.8000	Grams per tonne

REFERENCE: Assessment Report 13797.

CAPSULE GEOLOGY

The Shakespeare (Skylark) vein is located on Meadow Mountain near the head of Mineral Creek. Good access is available on gravel roads from Burton, which is located 11 kilometres to the southwest.

The showing is a quartz vein carrying galena, sphalerite, argentite and minor chalcopyrite, pyrite and pyrrhotite. The vein ranges from a few centimetres to 1.2 metres in thickness and, although discontinuous, has been traced for a length of 250 metres. The vein strikes north, dipping 40 degrees east. Hostrocks are hornblende diorite and quartz diorite of the Jurassic Ruby Range stock which has yielded a potassium-argon age date of 123 million years (Geological Survey of Canada Open File 432). The Ruby Range stock intrudes lightly metamorphosed clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group.

Between 1901 and 1905 the vein was stripped, and a nine metre shaft was sunk. Fifteen metres of crosscutting and 45 metres of drifting were completed on the vein. Seventy-three tonnes of ore was stockpiled. In 1917, 1.4 tonnes were shipped to Trail in a trial

CAPSULE GEOLOGY

shipment. In 1949 and 1950, some sampling and prospecting was undertaken. Between 1967 and 1973, bulldozer stripping, soil geochemical and geophysical surveys (VLF-EM and magnetic surveys) were completed. In 1987, 8.2 kilometres of magnetic and VLF-EM surveys were completed and 376 soil samples were collected (Assessment Report 17112). In 1988, magnetic and VLF-EM surveying (1.8 kilometres), roadbuilding (0.2 kilometre), trenching (357.8 metres) and channel sampling (76 samples) were completed on the property (Assessment Report 11865).

BIBLIOGRAPHY

EMPR AR 1901-1036; 1902-164; 1903-150; 1904-146; 1905-253; 1916-207; 1917-175,196
EMPR ASS RPT *3301, 3302, *13797, 17112, 18445
EMPR GEM 1971-424; 1973-91
EMPR PF (Tapin Copper Mines Limited Prospectus, 28 February 1972)
GSC BULL 161
GSC OF 432; 464, #245
GCNL #179,#182,#193,#198,#200,#224, 1982; #101, 1983

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/14

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW068**

NATIONAL MINERAL INVENTORY:

NAME(S): **SB 9, SB, PAM,
BJ, BETTY JO, ELAINE,
LOIS, DDS**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 05 54 N
LONGITUDE: 117 12 22 W
ELEVATION: 2200 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5549584
EASTING: 485259

LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate location of a sulphide-bearing quartz vein on the SB 9 claim.

COMMODITIES: Copper Lead Silver

MINERALS

SIGNIFICANT: Chalcopyrite Galena
ASSOCIATED: Quartz Pyrite
ALTERATION: Serpentine Talc Asbestos
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Serpentinite
Serpentinized Peridotite
Felsic Dike
Andesite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain PHYSIOGRAPHIC AREA: Selkirk Mountains
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The SB 9 showing is located at the headwaters of Whitewater Creek, approximately 2 kilometres northwest of Whitewater Mountain. New Denver, British Columbia lies some 18 kilometres to the southwest.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows and pyroclastics (greenstone), and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Sediments and volcanics have been locally intruded by diorite and feldspar porphyry dikes and sills. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. The surface trace of this fault can be traced for several kilometres. Underground this fault is marked by a heavy talc gouge. Late fractures in the area are healed with calcite and ankerite.

The showing lies along the contact between sheared and highly serpentinized peridotite and andesite and dacite of the Permian Kaslo Group. The showing consists of one of several quartz veins associated with felsic dikes and shearing along the serpentinite contact in the immediate area. Mineralization consists of minor pyrite, chalcopyrite and galena.

Property work conducted in the early 1970s is the only recorded exploration on this property. The nearby SB 78 showing (082KSW064) was examined by the same company for the nickel and copper potential of the serpentinite body.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1253
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 3225, *3921
EMPR GEM 1971-422; 1972-71; 1977-E67
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW069**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOM, TOM 3, TIM,
TIP, TAM, CHRIS,
OLYMPUS**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 04 30 N
LONGITUDE: 117 08 52 W
ELEVATION: 2333 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of Tom 3 claim (Assessment Report 3926).

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5546980
EASTING: 489426

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite inferred from the copper mineralization.
ALTERATION: Serpentine Talc Asbestos
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Chlorite Biotite Schist
Greenstone
Andesite Flow
Andesite Pyroclastic
Tuffaceous Sediment/Sedimentary
Diorite Dike
Feldspar Porphyry Dike
Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Copper
GRADE: 1.8600 Per cent
COMMENTS: Chip sample over 33 metres along strike of copper mineralization zone.
REFERENCE: Assessment Report 3926.

CAPSULE GEOLOGY

The Tom 3 showing is located near the headwaters of Whitewater Creek, approximately 3 kilometres southwest of Whitewater Mountain. New Denver, British Columbia lies some 19 kilometres to the southwest.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows and pyroclastics (greenstone), and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Sediments and volcanics have been locally intruded by diorite and feldspar porphyry dikes and sills. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. The surface trace of this fault can be traced for several kilometres. Underground this fault is marked by a heavy talc gouge. Intense local metamorphism has locally formed chlorite biotite schist

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1255
REPORT: RGEN0100

CAPSULE GEOLOGY

in the Kaslo Group. Foliation is parallel with the trend of the neighbouring serpentinite body.

Copper is known to occur in chlorite biotite schist, restricted to areas where shears or faults intersect the serpentinite. The Tom 3 showing comprises one such occurrence. A 33-metre chip sample of this material along strike of the copper zone yielded assay values of 1.86 per cent copper (Assessment Report 3926).

BIBLIOGRAPHY

EMPR ASS RPT *3926, 12167
EMPR GEM 1971-421
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW070**

NATIONAL MINERAL INVENTORY:

NAME(S): **SENORITA**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 28 26 N
LONGITUDE: 117 18 32 W
ELEVATION: 1000 Metres

NORTHING: 5591368
EASTING: 478081

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Minister of Mines Annual Report 1914, page 320.

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Broadview	
Paleozoic	Lardeau	Index	

LITHOLOGY: Phyllite
Mica Schist
Pillow Lava
Volcanic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

CAPSULE GEOLOGY

The Senorita occurrence is located on Mobbs Creek at 1000 metres elevation above sea level, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The occurrence consists of a 30 to 90 centimetre wide quartz vein hosted in a narrow shear. The quartz is mineralized with massive galena and tetrahedrite. No geological description of the occurrence could be located but it is probably hosted within grey phyllite of the Broadview Formation of the Paleozoic Lardeau Group close to the Mobbs fault (Geological Survey of Canada Map 1277A).

BIBLIOGRAPHY

EMPR AR 1901-1020; 1909-118; *1914-318,320; *1933-217
EMPR ASS RPT 564
EMPR GEM 1972-72
GSC BULL 193
GSC MAP 235A; 1277A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1257
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW071**

NATIONAL MINERAL INVENTORY:

NAME(S): **JESSE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 04 18 N
LONGITUDE: 117 21 12 W
ELEVATION: 1150 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5546659
EASTING: 474715

LOCATION ACCURACY: Within 500M

COMMENTS: Location of caved adit, Geology Map, Assessment Report 8899.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Dolomitic Sandstone
Siltstone
Slate
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Jesse property is located on a logging road 6.5 kilometres northeast of Rosebery, east of the north end of Slocan Lake.

Sparsely mineralized quartz veins are hosted in dolomitic sandstones and siltstones and interbedded slate and sandstone of the Triassic Slocan Group (Assessment Report 8899). The hostrocks have been isoclinally folded along northeast and east trending fold axes. Little sulphide mineralization other than pyrite is present, although some fine-grained galena could be present (Assessment Report 8899).

Veins were uncovered about 1975 during construction of a logging road and Mr. Wener Mengler drove a short adit to test the veins (Assessment Report 8899). Reported production from the Jesse in 1975 and 1976 totalled 26 tonnes, resulting in 10,450 grams of silver, 188 kilograms of lead, 70 kilograms of zinc and 11 kilograms of copper. Dupont of Canada Exploration Limited optioned the property in 1980 (Assessment Report 8899) and undertook a soil sampling program (178 samples which were analysed for copper and silver), geological mapping and sampling of the veins (6 samples were assayed for lead, zinc and silver).

BIBLIOGRAPHY

EMPR AR 1975-A95; 1976-A104
EMPR ASS RPT 8899
EMPR BC METAL MM01249
EMPR MINING 1975-1980, Vol. 1, pp. 32, 56, 60
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW072**

NATIONAL MINERAL INVENTORY:

NAME(S): **LUCKY JACK (L.4731)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 24 39 N
LONGITUDE: 117 07 04 W
ELEVATION: 715 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5584317
EASTING: 491631

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Reverted Crown grant Lot 4731.

COMMODITIES: Gold Lead Zinc Nickel Uranium

MINERALS

SIGNIFICANT: Gold Pyrite Arsenopyrite
COMMENTS: Zinc, nickel and uranium reported in the area (Minister of Mines
Annual Report 1952).

ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Lardeau Index

LITHOLOGY: Carbonaceous Phyllite
Meta Diorite Dike
Meta Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay PHYSIOGRAPHIC AREA: Selkirk Mountains
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies. GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1982
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Gold 0.7800 Grams per tonne
COMMENTS: Average assay for 7.8 and 8.2 metres of true width.
REFERENCE: Assessment Report 10129.

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Chip
COMMODITY GRADE
Gold 3.0000 Grams per tonne
COMMENTS: Sample taken over a 12.5-metre length across a 9-metre wide zone.
REFERENCE: Assessment Report 9801.

CAPSULE GEOLOGY

The Lucky Jack prospect is located on a Reverted Crown grant (Lot 4731) in the Slocan Mining division. The property is situated at 715 metres elevation above sea level, 500 metres southeast of the Poplar Creek bridge on Highway 31.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

CAPSULE GEOLOGY

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

On the Lucky Jack property carbonaceous phyllitic rocks of the Index Formation are cut by Mesozoic meta-andesite and metadiorite dikes. The dikes are fine grained, massive, and usually contain disseminated pyrite. Quartz veins are emplaced along joints and fractures within the intrusive rocks. The veins pinch out and do not continue within the phyllitic rocks. Free gold occurs with pyrite and arsenopyrite within the quartz veins. Oxidation and leaching of the sulphide minerals has resulted in secondary enrichment of gold with some assays being as high as 144 grams per tonne gold (Geological Survey of Canada Memoir 161). The quartz veins are numerous and irregular. Gold content is irregular within the veins and smaller veins appear to be higher grade than the larger ones. The prospect has been explored with two adits excavated on two separate veins 60 and 90 centimetres wide (GSC Memoir 161).

Work in 1952 outlined the presence of lead, zinc, nickel and uranium from the Lucky Jack property as well as the previously known gold occurrences (Minister of Mines Annual Report 1952).

Chip sampling in 1981 of a 9-metre wide zone of disseminated arsenopyrite within a meta-andesite yielded 3.0 grams per tonne gold for a total length of 12.5 metres (Assessment Report 9801). Diamond drilling of the arsenopyrite zone in 1982 assayed 0.78 gram per tonne gold over 7.7 and 8.2 metres of true width (Assessment Report 10129).

BIBLIOGRAPHY

EMPR AR 1903-112,114,116,126; 1904-119; 1905-252; *1914-319,320;
1929-336; 1932-181; 1952-191
EMPR ASS RPT 8483, 8862, *9801, 10129
EMPR EXPL 1980-113
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM *161, p. 43
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/10

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW073**

NATIONAL MINERAL INVENTORY:

NAME(S): **PINGSTON CREEK LIMESTONE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 24 46 N
LONGITUDE: 117 56 03 W
ELEVATION: 549 Metres

NORTHING: 5584944
EASTING: 433627

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the centre of Lot 11329 on the west side of Upper Arrow Lake.

COMMODITIES: Limestone Marble Building Stone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Triassic

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
COMMENTS: Limestone trends west-northwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	Kuskanax Batholith
Jurassic			

LITHOLOGY: Limestone
Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

Limestone of the Triassic Slocan Group outcrops on Lot 11329, 3 kilometres south of Pingston Creek, on the west side of Upper Arrow Lake. The bed continues northwest for 400 metres where it is truncated by a monzonite stock of the Jurassic Kuskanax batholith. The deposit is comprised of fine to medium grained, white to bluish grey, banded limestone containing a considerable amount of pyrite along partings. Some pink banding is also evident. The area was staked in 1914 by Mrs. Howieson

BIBLIOGRAPHY

GSC MAP 235A
GSC MEM 161
GSC OF 288; 432; 464; 481
CANMET RPT *452, p. 140; 811, p. 205

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/04

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW074**

NATIONAL MINERAL INVENTORY:

NAME(S): **STARLITE** HILLS

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 06 49 N
LONGITUDE: 117 27 25 W
ELEVATION: 1300 Metres

NORTHING: 5551363
EASTING: 467329

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Travertine Hotspring

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Industrial Min. Epithermal Hydrothermal
TYPE: H01 Travertine T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Recent Unnamed/Unknown Group Unnamed/Unknown Formation

LITHOLOGY: Travertine
Tufa

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Starlite travertine deposit is located on Arthur Creek, 2 kilometres northeast of the highway and the village of Hills. The area is 2.5 kilometres north of Slocan Lake. Travertine deposits are actively precipitating from warm springs and are exposed in several waterfalls on Arthur Creek. Textures of the travertine (Grove, 1975) range from open and spongy to massive and banded. Some of the travertine has encapsulated rock fragments and is termed "conglomerate". The colour is "uniformly amber or banded light/dark amber" (Grove, 1975). The deposits are exposed discontinuously over a vertical interval of approximately 100 metres. An estimated 370,000 tonnes of travertine is reported to be of low quality (Northcote, 1982). The Starlite deposit is one of several travertine deposits in the area between Slocan Lake and Kaslo. Better exposed examples are in highway cuts at Ainsworth Hot Springs and on the highway a few kilometres west of Kaslo. According to D. Hora the deposits have little economic potential (D. Hora, personal communication, 1995).

BIBLIOGRAPHY

EMPR PF Travertine test results, 1979; Exner, G. (1978): Report on Commercial Development of Travertine Deposits at Hills, BC; Report on Makortoff Travertine Proposal: Memo by E.W. Groves, September 3, 1975; Letter from G.A. Addie, November 7, 1975 George Addie; Northcote, K.E. (1982): Slocan Valley Planning Area Program Mineral Resources Technical Report, p. 15, in 082F General File
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/05

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW075**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUNLITE** HILLS

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 43 N
LONGITUDE: 117 27 07 W
ELEVATION: 980 Metres

NORTHING: 5549322
EASTING: 467675

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Travertine Hotspring

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Industrial Min. Epithermal Hydrothermal
TYPE: H01 Travertine T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Recent Unnamed/Unknown Group Unnamed/Unknown Formation

LITHOLOGY: Travertine
Tufa

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Sunlite travertine deposit is located in an unnamed creek bottom 750 metres northeast of the north end of Slocan Lake. Travertine deposits are actively precipitating from warm springs in several areas in the area east of the village of Hills. Good exposures are available at several waterfalls in the creek. Little information is available on the deposit, although George Addie (1975) describes it as being more "homogeneous" than the Starlite deposits on Arthur Creek (082KSW074), two kilometres to the north. The Sunlite and Starlite deposits are part of a group of several travertine deposits in the area between Slocan Lake and Kaslo. Better exposed examples are in highway cuts at Ainsworth Hot Springs and on the highway a few kilometres west of Kaslo. According to D. Hora the deposits have little economic potential (D. Hora, personal communication, 1995). An estimated 1,100,000 tonnes of travertine is reported (Northcote, 1982).

BIBLIOGRAPHY

EMPR PF (Northcote, K.E. (1982): Slocan Valley Planning Area Program Mineral Resources Technical Report, p. 15, in 082F General File; See 082KSW074 file - Starlite)
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/05

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW076**

NATIONAL MINERAL INVENTORY:

NAME(S): **GARNET-CUBA**, GARNETT (L.2842), CUBA (L.5609),
CONNIE FR. NO. 2 (L.5818), WHISTLER (L.5614), PAISLEY (L.5612),
EMERALD FR. (L.5821), RUBY FR. (L.5820), ROBIN (L.2509),
WILD SWAN (L.2510), MAYFLOWER (L.4458), VIRGINIA (L.3337)

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 54 N
LONGITUDE: 117 07 04 W
ELEVATION: 2072 Metres

NORTHING: 5545864
EASTING: 491571

LOCATION ACCURACY: Within 500M

COMMENTS: Along boundary between Garnett (Lot 2842) and Cuba (Lot 5609)
Reverted Crown grants.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Gold Chalcopyrite Pyrite

COMMENTS: Chalcopyrite occurs in joints and near them veins carry chalcopyrite,
pyrite and free gold.

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Faulted

G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Greenstone
Andesite
Serpentinite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Garnet-Cuba showing is located 750 metres northwest of the Highland Surprise (082KSW037), on the east side of Whitewater Creek. Kaslo lies some 27 kilometres to the southeast of the showing.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows and pyroclastics (greenstone), and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Slates of the Triassic Slocan Group outcrop on the neighbouring Mayflower (Lot 4458) Reverted Crown grant. Sediments and volcanics have been locally intruded by diorite and feldspar porphyry dikes and sills. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. The surface trace of this fault can be traced for several kilometres. Underground this fault is marked by a heavy talc gouge.

During prospecting in 1975, northeast-trending fractures or joints were found to carry chalcopyrite with nearby veins hosting pyrite, chalcopyrite and some free gold, along the boundary between the Garnett (Lot 2842) and Cuba (Lot 5609) claims.

BIBLIOGRAPHY

EMPR AR 1900-984
EMPR ASS RPT *5401, 12053
EMPR GEM *1975-E44

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1265
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/11

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW077**

NATIONAL MINERAL INVENTORY:

NAME(S): **WILD SWAN (L.2510)**, ROBIN (L.2509), GARNETT (L.2842),
CONNIE FR. NO. 2 (L.5818), WHISTLER (L.5614), PAISLEY (L.5612),
EMERALD FR. (L.5821), RUBY FR. (L.5820), MAYFLOWER (L.4458),
VIRGINIA (L.3337), CUBA (L.5609)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 04 05 N
LONGITUDE: 117 07 56 W
ELEVATION: 1828 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Eastern side of Wild Swan (Lot 2510) Reverted Crown grant.

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5546206
EASTING: 490537

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Chalcopyrite occurs along joints and nearby quartz veins host pyrite,
chalcopyrite and free gold.

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au G04 Besshi massive sulphide Cu-Zn
SHAPE: Bladed
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Andesite
Greenstone
Serpentinite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Wild Swan showing is located 1.5 kilometres northwest of the Highland Surprise (082KSW037), on the west side of Whitewater Creek. Kaslo lies some 27 kilometres to the southeast of the showing.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows and pyroclastics (greenstone), and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Slates of the Triassic Slocan Group outcrop on the neighbouring Mayflower (Lot 4458) Reverted Crown grant (082KSW078). Sediments and volcanics have been locally intruded by diorite and feldspar porphyry dikes and sills. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. The surface trace of this fault can be traced for several kilometres. Underground this fault is marked by a heavy talc gouge.

During prospecting in 1975, northeast-trending fractures or joints were found to carry chalcopyrite with nearby veins hosting pyrite, chalcopyrite and some free gold, along the eastern boundary of the Wild Swan (Lot 2510) claim.

BIBLIOGRAPHY

EMPR AR 1898-1192,1194
EMPR ASS RPT *5401
EMPR GEM *1975-E44

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1267
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/11

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW078**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAYFLOWER (L.4458)**, GARNETT (L.2842), CUBA (L.5609),
CONNIE FR. NO. 2 (L.5818), WHISTLER (L.5614), PAISLEY (L.5612),
EMERALD FR. (L.5821), RUBY FR. (L.5820), ROBIN (L.2509),
WILD SWAN (L.2510), VIRGINIA (L.3337)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 03 40 N
LONGITUDE: 117 07 47 W
ELEVATION: 1554 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Slocan-Kaslo groups contact on the Mayflower (Lot 4458) Reverted
Crown grant.

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5545433
EASTING: 490715

COMMODITIES: Zinc Lead Silver Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Tetrahedrite
COMMENTS: Pods of sphalerite, galena and tetrahedrite occur along the Slocan-
Kaslo groups contact.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Greenstone
Slate
Andesite Flow
Andesite Pyroclastic
Tuffaceous Sediment/Sedimentary
Diorite Dike
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
Quesnel
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY
Silver 267.1500 Grams per tonne
Lead 7.7500 Per cent
Zinc 10.2000 Per cent
COMMENTS: Sample SSRk 47, a grab sample from the Mayflower lode.
REFERENCE: Assessment Report 13465.

CAPSULE GEOLOGY

The Mayflower showing is located 1.25 kilometres west of the Highland Surprise (082KSW037), on the west side of Whitewater Creek. Kaslo lies some 27 kilometres to the southeast of the showing. The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows and pyroclastics (greenstone), and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. Slates of the Triassic Slocan Group outcrop on the Mayflower (Lot 4458) Reverted Crown grant. Sediments and volcanics have been locally intruded by diorite and feldspar porphyry dikes and sills. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this

CAPSULE GEOLOGY

serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. The surface trace of this fault can be traced for several kilometres. Underground this fault is marked by a heavy talc gouge.

During prospecting in 1975, pods of sphalerite, galena and tetrahedrite were found along the contact between Slocan Group slate and stratigraphically underlying Kaslo Group greenstone. A grab sample was taken from the Mayflower lode during an exploration program by Rex Silver Mines in 1984. The sample, SSRk 47, yielded 267.15 grams per tonne silver, 7.75 per cent lead and 10.2 per cent zinc (Assessment Report 13465).

BIBLIOGRAPHY

EMPR AR 1900-986
EMPR ASS RPT *5401
EMPR GEM *1975-E44
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW079**

NATIONAL MINERAL INVENTORY:

NAME(S): **PERTH (L.8794)**, PYRITE (L.8793), COPPER CLIFF

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K03E
 BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 09 43 N
 LONGITUDE: 117 10 42 W
 ELEVATION: 1533 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5556652
 EASTING: 487262

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit on Reverted Crown grant Lot 8794.

COMMODITIES: Copper Zinc Lead Silver Gold

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite Sphalerite Galena
 ALTERATION: Sericite Chlorite Silica
 ALTERATION TYPE: Chloritic Silicific'n Sericitic
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
 CLASSIFICATION: Volcanogenic
 TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	
Paleozoic	Milford	Undefined Formation	

LITHOLOGY: Tuffaceous Andesite
 Mafic Intrusive
 Intermediate Intrusive
 Limestone
 Argillite
 Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Kootenay
 METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
 SAMPLE TYPE: Chip

YEAR: 1981

COMMODITY	GRADE	
Silver	23.0000	Grams per tonne
Gold	1.5000	Grams per tonne
Copper	3.1000	Per cent
Zinc	1.2200	Per cent

COMMENTS: Weighted average of samples taken across a 0.6 metre wide section of massive sulphide mineralization exposed at surface.

REFERENCE: Assessment Report 9697.

CAPSULE GEOLOGY

The Perth occurrence is situated near the headwaters of Copper Creek, on Reverted Crown grant Lot 8794 at 1533 metres elevation above sea level, in the Slocan Mining Division. The property also includes the Pyrite Reverted Crown grant (Lot 8793).

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, the Permian to Carboniferous Kaslo Group and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The property is underlain by andesitic volcanic rocks and intermediate to mafic intrusive rocks of the Kaslo Group that generally strike northwest and dip west. Limestone, argillite and chert of the Milford Group are exposed east of the property. Further

CAPSULE GEOLOGY

east, overlying the Kaslo Group are the sedimentary rocks of the Upper Triassic Slokan Group.

The occurrence consists of bands of massive to semimassive sulphide mineralization enclosed within a strongly silicified, sericitized and chloritized tuffaceous andesite. The sulphide body varies from a few centimetres up to 2 metres in width and extends discontinuously for about 150 metres. The massive sulphide body comprises pyrrhotite, pyrite, chalcopyrite, sphalerite and minor galena. A weighted average of chip samples of the mineralization at surface assayed 3.1 per cent copper, 1.22 per cent zinc, 23 grams per tonne silver and 1.5 grams per tonne gold over an average width of 0.6 metre (Assessment Report 9697).

Two short adits were driven to explore the potential of the massive sulphide body. The upper adit intersected a 2 metre wide sulphide body while the lower adit failed to reach the mineralization. Diamond drilling in 1981 failed to identify a lateral or vertical continuity to the surface mineralization (Assessment Report 9697).

BIBLIOGRAPHY

EMPR AR 1907-96; 1908-250
EMPR ASS RPT 5636, 6051, 8019, *9697
EMPR GEM 1975-E45; 1976-E46
EMPR OF 1999-2
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432; 464
GSC SUM RPT 1908, pp. 86-87

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/14

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW080**

NATIONAL MINERAL INVENTORY:

NAME(S): **BS, SNOWBALL**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 24 N
LONGITUDE: 117 05 37 W

NORTHING: 5589411
EASTING: 493355

ELEVATION: 2135 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The occurrence is on the same geological contact as the PHD, 082KSW081.

COMMODITIES: Lead Zinc Silver Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite

ALTERATION: Silica

ALTERATION TYPE: Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered

CLASSIFICATION: Replacement

TYPE: J01 Polymetallic manto Ag-Pb-Zn

E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Siliceous Limestone
Phyllite
Arenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

CAPSULE GEOLOGY

The BS occurrence is situated between Hope and Lake creeks, 1.5 kilometres east of Mount Johnson in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The occurrence is underlain by limestone, schist and arenites of the Index Formation of the Lardeau Group. The strata are overturned on the limb of an anticline. Drag folds plunge northwest and the area is cut by two northwest trending transverse faults.

At the BS showing, pyrite, galena, sphalerite and tetrahedrite occur in bands of silicified limestone near the phyllite contact. The bands are lenticular in shape and can attain up to 4.5 metres in width. Most of the mineralization is low grade. The occurrence is identical to, and on the same geological contact as the PHD, 082KSW081, one kilometre to the northwest.

BIBLIOGRAPHY

EMPR AR *1914-324

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1273
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *86, 5736, 6461
EMPR EXPL 1977-E65
EMPR GEM 1975-E45
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM 161
GSC OF 432; 464
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW081**

NATIONAL MINERAL INVENTORY:

NAME(S): **PHD, JOHN, STAR**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 28 00 N
LONGITUDE: 117 05 58 W
ELEVATION: 2100 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5590524
EASTING: 492942

LOCATION ACCURACY: Within 500M
COMMENTS: Location of vein at surface.

COMMODITIES: Lead Silver Gold Zinc Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Siliceous Limestone
Phyllite
Arenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: HIGH-GRADE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1914
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 1039.0000 Grams per tonne
Gold 7.0000 Grams per tonne
Lead 29.6000 Per cent

COMMENTS: Grab sample of high-grade mineralization from quartz vein.
REFERENCE: Minister of Mines Annual Report 1914, page 324.

CAPSULE GEOLOGY

The PHD occurrence is situated between Hope and Lake creeks, 1.5 kilometres northeast of Mount Johnson in the Slocan Mining Division. Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons. The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193). The occurrence is underlain by limestone, schist and arenites of

CAPSULE GEOLOGY

the Index Formation of the Lardeau Group. The strata are overturned on the limb of an anticline. Drag folds plunge northwest and the area is cut by two northwest trending transverse faults.

At the PHD showing, pyrite, galena, sphalerite and tetrahedrite occur in bands of silicified limestone near the phyllite contact. The bands are lenticular in shape and can attain up to 4.5 metres in width. Most of the mineralization is low grade. Mineralization is also present in a 1 metre wide quartz vein cutting the phyllite parallel to the foliation. A grab sample taken in 1914 assayed 7 grams per tonne gold, 1039 grams per tonne silver and 29.6 per cent lead. The property has been explored with several trenches and a small adit driven along the quartz vein, formerly known as the Star occurrence (Minister of Mines Annual Report 1914).

BIBLIOGRAPHY

EMPR AR *1914-320,324
EMPR ASS RPT *86, 5736, 6461
EMPR EXPL 1977-E65
EMPR GEM 1975-E45
EMPR PF (Hecate Gold Corp., Prospectus (1977))
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM 161
GSC OF 432; 464
EMPR OF 2000-22

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW082**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK GROUSE** KANE, KANE 1-3

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 11 N
LONGITUDE: 117 16 49 W
ELEVATION: 1067 Metres

NORTHING: 5542714
EASTING: 479928

LOCATION ACCURACY: Within 500M

COMMENTS: Adit, 2.25 kilometres north-northeast along Kane Creek from Three Forks on the east-facing slope (GSC Map 273A).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Argentite Silver Sphalerite Tetrahedrite

Arsenopyrite

ASSOCIATED: Quartz Graphite

ALTERATION: Limonite Malachite Graphite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant Shear

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Sheared

DIMENSION: 3 Metres STRIKE/DIP: 285/45N TREND/PLUNGE:

COMMENTS: Lensoidal quartz veinlets and veins vary from 12 centimetres to 3 metres width. The general strike is 285 degrees and the dip 45 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Slaty Argillite
Quartz Feldspar Porphyritic Dike
Quartzite
Limestone
Tuffaceous Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Black Grouse occurrence is located on the northwestern side of Kane Creek, 4 kilometres west of the former McAllister mine (082KSW025). New Denver, British Columbia lies about 23 kilometres to the south-southwest.

The Slocan mining camp is dominated by fine grained to aphanitic clastic sedimentary rocks of the Triassic Slocan Group and consists of locally weakly metamorphosed argillites, quartzites, limestones and some tuffaceous rocks. These sediments are frequently intruded by dikes, sills and stocks of varied composition and origin.

The majority of the deposits are predominantly fault-fissure veins within distinctive zones and trends and replacement deposits where limestone or limy strata have been locally or extensively replaced by ore minerals.

The Black Grouse property was first staked in 1896; it was later operated under lease. Much of the work was done from one crosscut adit. The adit runs in an easterly direction into the hill for 58 metres.

Hostrocks of the Black Grouse property are very fine grained, dark grey-black slaty argillite of the Slocan Group intruded by a quartz feldspar porphyry dike. Strong, northwest trending lensoidal quartz veins and veinlets are developed along the dike/sediment contact. The veins generally strike 285 degrees, dip 45 degrees north and occur in the footwall of the dike. The hangingwall is

CAPSULE GEOLOGY

sheared and brecciated. Vein widths vary from 12 centimetres to 3 metres. Oxidation has developed as limonitic coatings along cleavage planes in the hangingwall and footwall of the dike as well as inclusions in the dike itself. Graphitic gouge is also prevalent in both the hangingwall and footwall.

Argentite, galena, native silver, sphalerite, possibly tetrahedrite, arsenopyrite and rare malachite are developed as shoots or pods of mineralization within the sheared hangingwall and to a lesser extent in the footwall of the dike. The quartz veins carry minor mineralization.

The Black Grouse occurrence has four years of recorded production; 1915 to 1917 and 1935. A total of 108,736 grams silver, 31 grams gold, 241 kilograms lead and 442 kilograms zinc were recovered from 31 tonnes of ore.

BIBLIOGRAPHY

EMPR AR 1915-K121,K445; 1916-K198,K516; 1917-F162,F163,F189,F448;
1918-K169; 1922-N200; *1927-C274; 1928-C294; 1935-A26,E33
EMPR ASS RPT 7171, 11266
EMPR BC METAL MM01132
EMPR EXPL 1978-E75; 1982-89
EMPR INDEX 3-189
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 17
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/13

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW083**

NATIONAL MINERAL INVENTORY: 082K3 Ag1

NAME(S): **SLOCAN BOY (L.626)**, SLOCAN MINE, SLOCAN GROUP,
 WASHINGTON (L.541), WASHINGTON FR. (L.4894), WANACOTTI (L.404),
 WANACOTT, CHARLOTTE (L.2631), CROSS ROADS (L.4116),
 MAJOR FR. (L.4896), CARBONATE KING (L.919), I.C. (L.4893),
 LONE JACK (L.2633)

STATUS: Past Producer	Underground	MINING DIVISION: Slocan
REGIONS: British Columbia		
NTS MAP: 082K03E 082F14E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 50 00 18 N		NORTHING: 5539210
LONGITUDE: 117 13 23 W		EASTING: 484016
ELEVATION: 1950 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A). See Washington, 082KSW008.		

COMMODITIES: Lead Silver Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
 ASSOCIATED: Quartz Siderite
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Epigenetic Hydrothermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 DIMENSION: Metres STRIKE/DIP: 050/75S TREND/PLUNGE:
 COMMENTS: The Slocan Boy lode is parallel to the Washington-Slocan Boy lode.
 Also see the Washington occurrence (082KSW008).

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Quartzite
 Argillite
 Limy Slate
 Limestone
 Quartz Feldspar Porphyry Dike
 Quartz Feldspar Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Slocan Boy past producer is located on the western slopes of a divide between Carpenter and McGuigan creeks, between 1767 and 1950 metres elevation. The Payne past producer (082KSW006) is located 1.5 kilometres to the west. The area lies roughly 10 kilometres northeast of New Denver, British Columbia.

The Slocan Boy claim, covering the Slocan Boy mine, was first located in 1891 and mining commenced almost immediately. The majority of production occurred between 1896 and 1905. Recorded production for this period totalled 346 tonnes yielding 1,374,380 grams silver and 222,824 kilograms lead (BC METAL MM01408).

Workings of the Slocan Boy mine included 3 adits driven from the Carpenter Creek slope, averaging 68 metres length and covering 90 vertical metres from the top of the ridge. Workings of the Washington mine (Washington-Slocan Boy lode) extended onto the Slocan Boy claim. See 082KSW008 for further reference of the Washington mine.

Lithologies hosting the Slocan Boy mine include interbedded quartzite, argillite and limestone of the Triassic Slocan Group. These are locally intruded by quartz feldspar porphyry dikes and sills. Workings are hosted in the upper limb of the recumbent fold hosting the Payne mine.

The Slocan Boy lode lies 1828 metres to the northwest of the Washington-Slocan Boy lode. Ore is hosted in a fault-fissure zone, along which considerable shearing has occurred. The zone has a

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CAPSULE GEOLOGY

general strike of 050 degrees and dips steeply southeast. The lode was composed of brecciated wallrock, quartz and siderite hosting galena, sphalerite and pyrite. Mineralization has been controlled by bedding and jointing. Although narrow, the mineralization appeared to have a silver to lead ratio of nearly 5 to 1.

BIBLIOGRAPHY

EMPR AR 1892-531; 1893-1058,1074; 1895-676,679; 1896-37,49,60,560;
1897-534; 1899-599; 1901-1024; 1902-148; 1905-161; 1921-136;
1941-74; 1942-72
EMPR BC METAL MM01408
EMPR BULL *29, pp. 121-122
EMPR INDEX 3-214
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 159-162
GSC OF 432; *464
GSC SUM RPT 1916, p. 56

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/23

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW084**

NATIONAL MINERAL INVENTORY:

NAME(S): **UPPER COMSTOCK**, COMSTOCK

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 19 12 N
LONGITUDE: 117 08 37 W
ELEVATION: 2635 Metres

NORTHING: 5574221
EASTING: 489776

LOCATION ACCURACY: Within 500M

COMMENTS: Location of trenches. See also Noonday, 082KSW127.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Broadview	
Paleozoic	Lardeau	Index	

LITHOLOGY: Arenite
Sandstone
Siltstone
Andesitic Tuff
Andesitic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Grab

COMMODITY

Silver

GRADE

800.0000

Grams per tonne

Lead

26.7000

Per cent

COMMENTS: Selected grab from mineralized vein.

REFERENCE: Assessment Report 18149.

CAPSULE GEOLOGY

The Upper Comstock occurrence is located at the head of Cascade Creek at 2635 metres elevation above sea level in the Slocan Mining Division. The property is on the ridge between Cascade and Mat creeks.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The oldest rocks on the Comstock property are andesitic tuffs and flows of the Index Formation of the Lardeau Group. A northwest-trending fault which passes through the centre of the Comstock property separates the volcanic rocks of the Index Formation from sandstone, siltstone and phyllite of the Broadview Formation to the west. The rocks are deformed in a series of northwest-trending folds

CAPSULE GEOLOGY

that are cut at oblique angles by faults.
The Upper Comstock occurrence consists of two vertically dipping quartz veins striking 275 and 295 degrees respectively. The veins consist of white milky quartz sparsely mineralized with disseminated to massive galena with traces of sphalerite. The veins are exposed in a series of surface trenches. A selected grab sample from the mineralized portion of the vein assayed 800 grams per tonne silver and 26.7 per cent lead (Assessment Report 18149).

BIBLIOGRAPHY

EMPR AR 1904-296; 1918-161; *1919-122; 1925-237; 1928-308; 1930-257
EMPR ASS RPT 16480, 16433, 18136, *18149
EMPR PF (Starr, C.C. (1928): Report of Examination of the Comstock Group, 5 p.; see Noonday, 082KSW127 - Tully, D.W., November 1987, Geological Report on the Comstock Property in Prospectus, Ambergate Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1995/10/18
DATE REVISED: 1995/10/19

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW085**

NATIONAL MINERAL INVENTORY:

NAME(S): **SURE THING (L.4891)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 03 36 N
LONGITUDE: 117 07 57 W
ELEVATION: 1646 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Sure Thing Crown grant (Lot 4891).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5545310
EASTING: 490516

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Siderite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 120/80S TREND/PLUNGE:
COMMENTS: The fissure reaches a maximum width of 20 to 30 centimetres. The fissure strikes 120 degrees and dips 80 degrees southeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Slate
Calcareous Shale
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Sure Thing prospect adjoins the Charleston claim of the Keystone-Charleston group. The prospect is 1.25 kilometres north of the former Charleston mine (082KSW031). Kaslo, British Columbia lies 26 kilometres to the southeast.

The claims were staked to cover the contact between slates, calcareous shales and interbedded limestone bands of the Triassic Slocan Group. This contact strikes 120 degrees and dips 80 degrees southwest and is well defined.

In 1930, workings consisted of two adits and an intermediate level. The upper adit is 21 metres long striking 120 degrees. Small amounts of low-grade ore were exposed intermittently along its length. The lower adit is 87 metres long and runs along a narrow siderite and quartz-filled fissure striking 120 degrees, for most of the adit length. Several raises connect the two adits and the intermediate level. The fissure reached a maximum width of 20 to 30 centimetres and for a length hosts galena. A second similar lens of siderite and galena was exposed near the face of the lower adit.

BIBLIOGRAPHY

EMPR AR 1901-1028; *1930-253
GSC MAP 1667
GSC OF 432; *464
GSC SUM RPT 1916, p. 56

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/14

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW086**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNOWSTORM**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 18 01 N
LONGITUDE: 117 09 55 W
ELEVATION: 2255 Metres

NORTHING: 5572031
EASTING: 488229

LOCATION ACCURACY: Within 500M

COMMENTS: Location of vein in surface trenches.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Broadview	

LITHOLOGY: Siltstone
Andesite
Sandstone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

572.0000

Grams per tonne

COMMENTS: Grab sample from quartz vein in trenches.

REFERENCE: Assessment Report 16433.

CAPSULE GEOLOGY

The Snowstorm occurrence is located at the head of Cascade Creek at 2255 metres elevation above sea level in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The property is underlain by andesite, sandstone, siltstone and phyllite which forms the lower portion of the Broadview Formation of the Lardeau Group. The rocks have been folded in a series of northwest-trending folds that were subsequently thrust in a northeasterly direction along local faults (Geological Survey of Canada Bulletin 193).

The occurrence consists of quartz veins containing minor galena and sphalerite mineralization hosted within siltstone of the Broadview Formation. The veins are exposed in 26 trenches covering an area of about 7.5 hectares. The largest vein is about 1 metre wide, strikes

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CAPSULE GEOLOGY

313 degrees and dips 39 degrees to the east. Grab samples have assayed 572 grams per tonne silver (Assessment Report 16433).

BIBLIOGRAPHY

EMPR AR 1930-257
EMPR ASS RPT *16433, 18136
EMPR PF (See Noonday, 082KSW127 - Tully, D.W., November 1987,
Geological Report on the Amber Property in Prospectus, Ambergate
Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432

DATE CODED: 1995/10/18
DATE REVISED: 1995/10/19

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW087**

NATIONAL MINERAL INVENTORY:

NAME(S): **BULLOCK**, GOLDEN BULLOCK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 23 52 N
LONGITUDE: 117 07 23 W
ELEVATION: 1065 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5582866
EASTING: 491254

LOCATION ACCURACY: Within 500M

COMMENTS: Location of surface exposures from Assessment Report 9801.

COMMODITIES: Gold Silver Lead Zinc Nickel
 Uranium

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Arsenopyrite Gold Galena
 Sphalerite

COMMENTS: Uranium reported in the area (Minister of Mines Annual Report 1952).

ASSOCIATED: Quartz Ankerite Mariposite

ALTERATION TYPE: Oxidation Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Lardeau Index

LITHOLOGY: Mica Schist
 Graphitic Schist
 Calcareous Schist
 Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1927

SAMPLE TYPE: Chip

COMMODITY GRADE
Silver 10.0000 Grams per tonne
Gold 14.0000 Grams per tonne

COMMENTS: Chip sample across 50 centimetre wide quartz vein.

REFERENCE: Minister of Mines Annual Report 1927, page 284.

CAPSULE GEOLOGY

The Bullock prospect is located at 1065 metres elevation above sea level, 1 kilometre south of the Poplar Creek bridge on Highway 31 in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of

CAPSULE GEOLOGY

the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

Rocks on the Bullock property consist of grey mica schist, phyllite and carbonaceous to graphitic schist. The strata strike northwest and dip 20 to 60 degrees northeast and are cut by Mesozoic meta-andesite and metadiorite dikes. Milky white quartz veins, all less than 1.5 metres in width, cut the schist parallel to the foliation but dip at various angles to the southeast. Pyrrhotite, pyrite and arsenopyrite are irregularly distributed throughout the veins and small amounts of ankerite and mariposite are also present. The veins locally carry minor amounts of galena and sphalerite and occasionally free gold is found in small pockets of decomposed iron-stained material and along the contact of the quartz with the schist. A 50-centimetre chip sample taken across a mineralized quartz vein assayed 14 grams per tonne gold and 10 grams per tonne silver (Minister of Mines Annual Report 1927). The property has been explored by numerous trenches and at least 6 adits totalling 365 metres in length.

Work in 1952 identified the presence of lead, zinc, nickel and uranium values from the Bullock property as well as the previously known gold occurrences (Minister of Mines Annual Report 1952).

BIBLIOGRAPHY

EMPR AR 1919-124; 1920-123; 1922-193; 1926-269,449; *1927-284,285;
1928-309; 1952-191
EMPR ASS RPT 8483, 8862, *9801
EMPR EXPL 1980-113
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM *161, pp. 42,120
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/10

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW088**

NATIONAL MINERAL INVENTORY:

NAME(S): **SWEDE**, GOLDSMITH (L.4738), GOLD HILL (L.4739),
GREAT NORTHERN MINES

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:
LATITUDE: 50 23 58 N
LONGITUDE: 117 07 53 W
ELEVATION: 1160 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit No. 3.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5583053
EASTING: 490662

COMMODITIES: Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Galena Sphalerite Chalcopyrite
Gold
ASSOCIATED: Quartz Ankerite
ALTERATION: Cerussite
ALTERATION TYPE: Oxidation Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au 101 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Carbonaceous Phyllite
Meta Andesite Dike
Meta Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Swede property is situated at 1160 metres elevation above sea level on the south bank of Poplar Creek in the Slocan Mining Division. The property consists of two Reverted Crown grants (Lots 4738 and 4739).

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

On the Swede property carbonaceous phyllitic rocks of the Index Formation are cut by Mesozoic meta-andesite and metadiorite dikes. The dikes are fine grained, massive and usually contain disseminated pyrite. Quartz veins carrying pyrite, arsenopyrite and ankerite cut black carbonaceous phyllite. Some of the arsenopyrite is very coarse grained. A massive sulphide vein, 10 centimetre wide, is hosted within a meta-andesite dike. The vein consists of galena, sphalerite, chalcopyrite and pyrite. Free gold occurs in the vein with lead sulphate and carbonate where the sulphides have been leached (Geological Survey of Canada Memoir 161).

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RUN TIME: 16:43:39

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CAPSULE GEOLOGY

In 1904, Great Northern Mines mined 8 tonnes of high-grade ore from the occurrence to produce 778 grams of gold.

BIBLIOGRAPHY

EMPR AR 1903-112,114,116,126; 1904-118; 1908-101; 1910-101;
1914-320,323; 1929-336
EMPR ASS RPT 8483, 8862, *9801
EMPR BC METAL MM00608
EMPR INDEX 3-198 (Great Northern Mines)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM *161, p. 41
GSC OF 432; 464
GSC SUM RPT *1903, p. 75

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/10

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW089**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOTHER LODE (L.1497)**, MOTHERLODE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 23 21 N
LONGITUDE: 117 09 54 W

UTM ZONE: 11 (NAD 83)

NORTHING: 5581915
EASTING: 488271

ELEVATION: 1035 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 235A. Located on Poplar Creek.

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Shear

CLASSIFICATION: Replacement

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Calcareous Schist
Volcanic Breccia
Phyllite
Mica Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1919

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver	1190.0000	Grams per tonne
Gold	5.5000	Grams per tonne
Lead	15.0000	Per cent
Zinc	10.0000	Per cent

COMMENTS: Grab sample of mineralized zone near adit portal.

REFERENCE: Minister of Mines Annual Report 1919, page 123.

CAPSULE GEOLOGY

The Mother Lode prospect is located at 1035 metres elevation above sea level between Poplar and Cascade creeks, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism

CAPSULE GEOLOGY

(Geological Survey of Canada Bulletin 193).

The main showing consists of quartz with coarse-grained pyrite, galena and sphalerite as replacement of calcareous schist of the Index Formation. The mineralization has been exposed in two short adits driven 15 metres apart for a total length of 45 metres. Replacement has taken place parallel to the foliation for at least 12 metres along strike. The mineralization has an average thickness less than 45 centimetres. A grab sample of the replacement vein assayed 5.5 grams per tonne gold, 1190 grams per tonne silver, 15 per cent lead and 10 per cent zinc (Minister of Mines Annual Report 1919).

One tonne of ore was mined from the adits in 1924 to produce 1649 grams of silver and 396 kilograms of lead.

BIBLIOGRAPHY

EMPR AR 1904-118,297; 1905-115; *1919-123; 1925-450
EMPR ASS RPT 8483, 8862
EMPR BC METAL MM01317
EMPR INDEX 3-206
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM *161, p. 96
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW090**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIO TINTO**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 23 39 N
LONGITUDE: 117 10 12 W
ELEVATION: 975 Metres

NORTHING: 5582471
EASTING: 487917

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 235A. Located on Poplar Creek.

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz Ankerite
ALTERATION: Talc Silica
ALTERATION TYPE: Talc Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Lardeau Index

LITHOLOGY: Phyllite
Mica Schist
Volcanic Breccia
Calcareous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: UNDERGROUND WORKINGS REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1919
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 68.0000 Grams per tonne
COMMENTS: Sample of talcose material from underground workings.
REFERENCE: Minister of Mines Annual Report 1919, page 123.

CAPSULE GEOLOGY

The Rio Tinto showing is located at 975 metres elevation above sea level between Poplar and Cascade creeks, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1292
REPORT: RGEN0100

CAPSULE GEOLOGY

The showing consists of a quartz vein containing ankerite, pyrite, galena and sphalerite. The mineralization has been exposed in three short adits and in an incline shaft. The underground workings follow a 30 to 60 centimetre wide silicified fault gouge filled with talc. A grab sample of the talcose fault gouge assayed 68 grams per tonne silver (Minister of Mines Annual Report 1919).

BIBLIOGRAPHY

EMPR AR *1919-123; 1920-124; 1922-194
EMPR ASS RPT 8483, 8862
EMPR EXPL 1978-E77
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM *161, p. 62
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW091**

NATIONAL MINERAL INVENTORY:

NAME(S): **ASBESTOS**, POPLAR CREEK

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 22 10 N
LONGITUDE: 117 13 06 W
ELEVATION: 1220 Metres

NORTHING: 5579731
EASTING: 484473

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 235A.

COMMODITIES: Asbestos

MINERALS

SIGNIFICANT: Chrysotile Asbestos
ALTERATION: Serpentine
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: M06 Ultramafic-hosted asbestos

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Broadview	

LITHOLOGY: Serpentinite
Mica Schist
Ultramafic Intrusive

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Asbestos property is located at 1220 metres elevation above sea level on the north side of Poplar Creek, 3 kilometres southwest of Mount Keen in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

Asbestos fibers are found in seams within a band of serpentinite that strikes northwesterly and cuts mica schist of the Broadview Formation. The serpentinite rock probably resulted from the intense alteration of an ultramafic intrusive rock. The asbestos fibers are short and quite brittle (Minister of Mines Annual Report 1914).

BIBLIOGRAPHY

EMPR AR 1895-693; *1914-323
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161, p. 112

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1294
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW092**

NATIONAL MINERAL INVENTORY:

NAME(S): **TELLURIDE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 24 21 N
LONGITUDE: 117 08 58 W
ELEVATION: 1370 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5583765
EASTING: 489380

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 235.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Gold
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Mica Schist
Phyllite
Graphitic Schist
Calcareous Schist
Meta Andesite Dike
Meta Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1919

COMMODITY	GRADE	
Silver	17.0000	Grams per tonne
Gold	387.0000	Grams per tonne

COMMENTS: A selected grab sample from the ore dump.
REFERENCE: Minister of Mines Annual Report 1919.

CAPSULE GEOLOGY

The Telluride showing is located at 1370 metres elevation above sea level on the north side of Poplar Creek in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism

CAPSULE GEOLOGY

(Geological Survey of Canada Bulletin 193).
Rocks on the Telluride property consist of grey mica schist, phyllite and calcareous to graphitic schist. The strata strike northwest and dip 20 to 60 degrees northeast and are cut by Mesozoic meta-andesite and metadiorite dikes. A small milky white quartz vein carrying high gold values has been exposed in a 20-metre long adit. The vein strikes southeast and dips to the northeast. Coarse free gold occurs in iron-stained white quartz. A selected grab sample from the ore dump assayed 387 grams per tonne gold and 17 grams per tonne silver (Minister of Mines Annual Report 1919).

BIBLIOGRAPHY

EMPR AR *1919-124; 1920-124
EMPR ASS RPT 8483, 8862, *9801
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM 161, p. 44
GSC OF 432; 464
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/11

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW093**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROYAL 5**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 13 40 N
LONGITUDE: 117 34 28 W
ELEVATION: 985 Metres

NORTHING: 5564114
EASTING: 459026

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drillhole number 1, Map 2, Assessment Report 11893.

COMMODITIES: Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite
ALTERATION: Siderite Silica
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	
Jurassic			Kuskanax Batholith

LITHOLOGY: Sericite Schist
Argillite
Phyllite
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Royal 5 claim was located on the south side of Little Wilson Lake, 15 kilometres east of Nakusp.

The area is shown on the geological map in Geological Survey of Canada Open File 432 as being underlain by the Jurassic Kuskanax batholith which consists of syenite, leuco-quartz monzonite and leucogranite. Assessment Report 11893, which presents the logs from some drillholes on the Royal 5 claim, has documented the presence of syenitic intrusive rocks, as well as metamorphic rocks which are possibly xenoliths or pendants within the Kuskanax batholith. Lithologies include sericite schist, black argillite and phyllite which were probably derived from the Triassic Slocan Group.

Assessment Report 11893, which documents an 11-hole, 338-metre X-ray drill program completed in 1983, describes an "alteration zone" consisting of "light to dark brown silicified and sideritic breccia with quartz stringers containing 2 per cent sulphides - pyrite, minor galena, chalcopyrite, possibly molybdenite and an unidentified "grey metallic" mineral". No assays are available.

BIBLIOGRAPHY

EMPR ASS RPT 11893
GSC BULL 161
GSC OF 432

DATE CODED: 1995/05/29
DATE REVISED: 1995/10/15

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW094**

NATIONAL MINERAL INVENTORY:

NAME(S): **CALUMET AND HECLA**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:
LATITUDE: 50 25 21 N
LONGITUDE: 117 09 09 W
ELEVATION: 820 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5585619
EASTING: 489167

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Galena Gold Pyrite Arsenopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Lardeau Index

LITHOLOGY: Micaceous Schist
Meta Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1914
SAMPLE TYPE: Chip
COMMODITY GRADE
Gold 3.4000 Grams per tonne
COMMENTS: A 3.6 metre chip sample of pyritic schist from the footwall.
REFERENCE: Minister of Mines Annual Report 1914, page 322.

CAPSULE GEOLOGY

The Calumet and Hecla showings are located south of the Lardeau River, between Poplar and Rapid creeks, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

On the Calumet and Hecla property gold occurs with pyrite and minor arsenopyrite in quartz veins cutting a metadiorite dike. The veins occupy a faulted contact zone between the dike and the enclosing micaceous schist. The quartz veins strike northwest and dip slightly to the east. The largest vein is 1 to 2 metres wide and has been exposed in a shallow vertical shaft. An adit driven 80

CAPSULE GEOLOGY

metres down the hill from the shaft failed to intersect the mineralized vein.

Samples collected in 1914 indicate that gold also occurs within the pyritic micaceous schist hosting the veins. A 1.5-metre wide chip sample of the quartz vein assayed 3.4 grams per tonne gold and 27 grams per tonne silver while a 3.6 metre chip sample of footwall schist assayed 3.4 grams per tonne gold. Gold also occurs in massive sulphide veins less than 5 centimetres wide. Visible gold occurs in massive galena and some specimens were reported to contain as much as 25 per cent gold (Minister of Mines Annual Report 1914).

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-689; 1904-203; 1905-155; 1907-93; 1906-138;
*1914-290,320,322
EMPR ASS RPT 8483, 8862, *14519, 15698
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW095**

NATIONAL MINERAL INVENTORY:

NAME(S): **LARDEAU RIVER**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Open Pit

MINING DIVISION: Slocan

LATITUDE: 50 24 06 N
LONGITUDE: 117 06 02 W
ELEVATION: 630 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5583296
EASTING: 492854

LOCATION ACCURACY: Within 500M

COMMENTS: Located 4.5 kilometres south of Poplar Creek on Lardeau River.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Paleozoic
Quaternary

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

Glacial/Fluvial Gravels

LITHOLOGY: Gravel
Breccia Volcanic
Phyllite
Pillow Lava

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Lardeau River placer occurrence is situated on the Lardeau River between Poplar and Cascade creeks in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The earliest records of placer mining in the Lardeau River dates back to the late 1890s when most of the production was achieved. Placer mining activities continued sporadically in the area between Poplar and Cascade creeks until the mid-1940s but little production was achieved. Gold was being extracted from gravel accumulated in sand bars but the work was hampered because of the presence of abundant large boulders. Total production from the river amounts to 8553 grams of gold with an average fineness of 808 (Bulletin 28). Records also indicate that some gold was extracted from the gravels of Cascade and Poplar creeks although no amounts of production are available (GSC Bulletin 193).

BIBLIOGRAPHY

EMPR AR 1886-205; 1890-363; *1914-325; 1922-193; 1930-257,258

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1301
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BULL 28, pp. 52-54
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM 161, pp. 110-111
GSC OF 432; 464

DATE CODED: 1995/10/06
DATE REVISED: 1995/11/03

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW096**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOBBS**, SILVER CREST, MOBBS MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 26 21 N
LONGITUDE: 117 10 55 W
ELEVATION: 1067 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5587477
EASTING: 487080

LOCATION ACCURACY: Within 500M

COMMENTS: Location of underground workings on G vein.

COMMODITIES: Silver Lead Gold

MINERALS

SIGNIFICANT: Galena Pyrite Gold

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Replacement Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	

LITHOLOGY: Calcareous Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: VEINS

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1914

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

8.0000 Grams per tonne

COMMENTS: Average grade of samples taken from quartz veins oblique to the foliation. Grades ranged from 3.4 to 68 grams per tonne gold.

REFERENCE: Minister of Mines Annual Report 1914, page 321.

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1914

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

3257.0000 Grams per tonne

Lead

77.5000 Per cent

COMMENTS: Grab sample of G vein from underground workings.

REFERENCE: Minister of Mines Annual Report 1914, page 321.

CAPSULE GEOLOGY

The Mobbs mine property is located west of the Lardeau River between Rusty and Rapid creeks, on Lot 6475, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist

CAPSULE GEOLOGY

of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

Sulphide mineralization is present in quartz veins that are both oblique and parallel to the foliation of the enclosing calcareous schists and phyllites of the Index Formation of the Lardeau Group. The G vein, a foliation parallel vein, is the best developed. It has been exposed in surface trenches and a crosscut 10 metres below the surface outcrop. From the crosscut, drifts were driven 20 metres east and 3 metres west along the strike of the vein. A winze was sunk from the crosscut for a depth of 25 metres to explore the downdip extension of the vein. The vein was faulted off 10 metres from the collar of the winze by a northeast-dipping fault and could not be traced beyond the fault.

The G vein within the underground workings varied from a few centimetres up to 1 metre in width and consisted mainly of white quartz with pyrite and galena. Sulphide minerals were concentrated in massive pockets which yielded high silver assays. A grab sample from a mineralized pocket assayed 3257 grams per tonne silver and 77.5 per cent lead (Minister of Mines Annual Report 1914).

Veins which are oblique to the foliation are mostly emplaced along fissures and faults with well-developed gouge. The quartz veins are 60 to 120 centimetres wide and mineralized with pyrite, galena and free gold. At least five veins have been identified and developed by several adits and crosscuts connected to a vertical shaft. Grab samples from the veins yielded gold values ranging from 3.4 to 68 grams per tonne gold with most vein samples averaging about 8 grams per tonne gold (Minister of Mines Annual Report 1914).

Limited production from the Mobbs mine in 1916 and 1939 yielded 40,496 grams of silver, 62 grams of gold and 1769 kilograms of lead from 14 tonnes mined.

BIBLIOGRAPHY

- EMPR AR *1914-320-322; 1920-124; 1939-38; 1940-64; 1941-62
- EMPR ASS RPT 8483, 8862, 11813, 14519, 15698, 16180, 19235
- EMPR BC METAL MM01309
- EMPR INDEX 3-205
- EMPR PF (Maconachie, R. (1941): Geology Report on Mobbs Property; Plan map of workings)
- GSC BULL 193
- GSC MAP 235A; 1277A
- GSC MEM 161, p. 44
- GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/16

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW097**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEDRO**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 25 53 N
LONGITUDE: 117 23 42 W
ELEVATION: 1460 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5586671
EASTING: 471946

LOCATION ACCURACY: Within 500M
COMMENTS: Location of workings.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Milford	Undefined Formation	
Paleozoic	Lardeau	Broadview	
Lower Jurassic			Kuskanax Batholith

LITHOLOGY: Quartz Mica Schist
Monzonite
Marble
Amphibolite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional Contact

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Pedro occurrence is located at 1460 metres elevation above sea level near the head of Mobbs Creek, 2.5 kilometres northwest of Tenderfoot Lake in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Tenderfoot Lake area is mainly underlain by the Mesozoic Mobbs Creek and Rapid Creek quartz monzonite stocks and the Early Jurassic Kuskanax monzonite batholith to the west. Grey quartz mica schist of the Broadview Formation along with marble, micaceous schist and amphibolite of the Paleozoic Milford Group form tightly folded rafts between the stocks and the batholith. The rocks have undergone contact and regional metamorphism to middle or upper greenschist facies (Geological Survey of Canada Bulletin 193).

The Pedro showing consists of two quartz veins, 60 to 90 centimetres wide, mineralized with galena, sphalerite, tetrahedrite and pyrite. The veins, which have been developed with a short adit, are probably hosted in micaceous schist of the Milford Group.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-602,687; 1902-141; 1907-218; *1914-318,320
EMPR ASS RPT 564, 915, 916, 2315, 2322
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1305
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/24

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW098**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAGNET AND MAYBE**, MAYBE, MAGNET

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 15 N
LONGITUDE: 117 17 52 W
ELEVATION: 885 Metres

NORTHING: 5592878
EASTING: 478876

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Map 235A.

COMMODITIES: Silver Gold Lead Zinc Copper
 Graphite

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite Pyrite

ASSOCIATED: Quartz Carbonate Graphite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Broadview	
Paleozoic	Lardeau	Index	

LITHOLOGY: Carbonaceous Schist
Graphitic Schist
Volcanic Breccia
Phyllite
Pillow Lava
Mica Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: HIGH-GRADE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1933

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver	580.0000	Grams per tonne
Gold	3.4000	Grams per tonne
Copper	0.2000	Per cent
Lead	13.0000	Per cent
Zinc	22.0000	Per cent

COMMENTS: Grab sample of high grade tetrahedrite ore.

REFERENCE: Geological Survey of Canada Memoir 161, page 52.

CAPSULE GEOLOGY

The Magnet and Maybe occurrence is located on Mobbs Creek, at 885 metres elevation above sea level, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek,

CAPSULE GEOLOGY

Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The occurrence is in a band of black carbonaceous and graphitic schist of the Broadview Formation of the Lardeau Group. This band has an average width of 15 metres and the zone of alteration has been traced for over 900 metres in a northwesterly direction from the workings.

Mineralization is hosted in a broad, north trending shear zone. Pyrite, sphalerite, galena and tetrahedrite with minor chalcopyrite occur in a gangue of quartz, carbonate and graphitic schist. The schist is also mineralized with disseminated pyrite. A grab sample from high-grade ore assayed 3.4 grams per tonne gold, 580 grams per tonne silver, 0.2 per cent copper, 13 per cent lead and 22 per cent zinc (Minister of Mines Annual Report 1933). The shear has been explored with a narrow adit and a winze.

BIBLIOGRAPHY

EMPR AR 1926-273; 1927-296; *1933-217
EMPR GEM 1972-72
EMPR PF (Letter from R.J. MacOnachie, 1941)
GSC BULL 198
GSC MAP 235A; 1277A
GSC MEM *161, pp. 52,115
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/26

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW099**

NATIONAL MINERAL INVENTORY:

NAME(S): **PINGSTON**, PING PONG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W 082K12W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 29 57 N
LONGITUDE: 117 58 24 W
ELEVATION: 760 Metres

NORTHING: 5594585
EASTING: 430970

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample R-42598, drawing 7, Assessment Report 17979.

COMMODITIES: Zinc Silver Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite

ASSOCIATED: Pyrrhotite Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Syngenetic
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

SHAPE: Tabular

DIMENSION: 240 x 1 Metres

STRIKE/DIP: 090/40S

TREND/PLUNGE:

COMMENTS: Sulphide horizon.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Proterozoic-Paleoz.
Proterozoic-Paleoz.

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Shuswap Metamorphic Complex

LITHOLOGY: Biotite Phyllite
Quartz Feldspar Biotite Schist
Pegmatite
Marble
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Monashee Mountains

RELATIONSHIP:

GRADE: Granulite
Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Grab

COMMODITY

GRADE

Zinc

6.4000

Per cent

REFERENCE: Sample number 42598, Assessment Report 17979.

CAPSULE GEOLOGY

The Pingston zinc showing is located 1.5 kilometres west of Upper Arrow Lake, 75 kilometres south of Revelstoke. Good logging road access is available to the property.

The zinc showings are hosted in a 1.0 to 1.5 metre thick conformable bed of massive pyrrhotite-pyrite containing up to 30 per cent sphalerite and minor chalcopyrite and galena. The horizon has been traced for 240 metres and strikes east, dipping 40 degrees south. The sulphide-rich strata have been isoclinally folded and overturned to the south. Grab samples yielded assay results of up to 6.4 per cent zinc (Sample 42598, Assessment Report 17979). The sulphide layer is hosted within the "Ledge Member", which is composed of biotite phyllite, quartz biotite schist with variable amounts of muscovite and graphite and quartz feldspar biotite schists. The "Ledge Member" contains up to 10 per cent disseminated sulphides (pyrite, pyrrhotite and sphalerite) and is commonly cut by stringers of quartz feldspar pegmatite. Other units mapped on the property (Assessment Report 17979) include marble, amphibolite (foliated andesite) and quartz-feldspar-biotite schist. The property is located near the eastern margin of the Precambrian-Paleozoic Shuswap

CAPSULE GEOLOGY

Metamorphic Complex in the southeastern portion of the Thor-Odin gneiss dome. Metamorphism is generally amphibolite to granulite grade, locally reaching the sillimanite facies.

The earliest record of work is reconnaissance mapping by Metallgesellschaft in 1977 (Assessment Report 17979). Esperanza Explorations Limited completed soil geochemical surveys and geological mapping in 1980. In 1981, Esperanza completed additional geochemical, geophysical and geological surveys (Assessment Report 17979). In 1988, Noranda Exploration Company (Assessment Report 17979) completed a program of linecutting (6.9 kilometres), geochemical surveys (237 soil and 8 silt samples were analysed for copper, zinc, lead, silver, molybdenum and gold), lithogeochemical sampling (30 elements including zinc, lead, copper and silver) and geological mapping (53 hectares).

BIBLIOGRAPHY

EMPR ASS RPT *17979
GSC OF 432
EMPR OF 2000-22

DATE CODED: 1995/10/03
DATE REVISED: 1995/12/31

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW100**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAT**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 38 N
LONGITUDE: 117 06 36 W
ELEVATION: 1372 Metres

NORTHING: 5543516
EASTING: 492124

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Geological Survey of Canada Open File 464).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite Tetrahedrite Argentite
COMMENTS: Significant minerals inferred from the nearby Revenue occurrence (082KSW058).

ASSOCIATED: Quartz Calcite Siderite
COMMENTS: Associated minerals inferred from the nearby Revenue occurrence (082KSW058).

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Slaty Shale
Carbonaceous Shale
Quartzite
Limestone
Phyllite
Greenstone
Ultramafic
Lamprophyre Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Kat showing is located on the east side of Lyle Creek, at about 1375 metres elevation. The showing is about 25 kilometres northwest of Kaslo, British Columbia.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

No geological information could be found for this showing. The Geological Survey of Canada Open File 464 records this occurrence of unknown character. The commodities silver, lead and zinc are reported. The area covering the Kat showing has received considerable geophysical and geochemical exploration from 1963 to 1970 by D.W. Smellie but no geological description is given. The Kat 13 and 15 Fr. claims received the bulk of exploration work.

The Revenue showing (082KSW058) lies 600 metres to the northwest, along strike and may be of similar character. The Revenue showing is hosted predominantly by slaty, carbonaceous shales and interbedded quartzite and limestone of the Slocan Group. Mineralization at the Revenue showing consists of quartz-calcite-siderite veins with sphalerite, tetrahedrite and argentite.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1311
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 573, 824, 1164, 1622, 2037, 2661
EMPR GEM 1969-332; 1970-457
GSC MAP 1667
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/27

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW101**

NATIONAL MINERAL INVENTORY:

NAME(S): **JK, NICO**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 02 54 N
LONGITUDE: 117 03 30 W
ELEVATION: 1676 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5544006
EASTING: 495824

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Geological Survey of Canada Open File 464).

COMMODITIES: Nickel Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Galena Tetrahedrite Chalcopyrite

 Sphalerite

ASSOCIATED: Quartz

ALTERATION: Chlorite Biotite Carbonate Talc

ALTERATION TYPE: Talc

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated Vein
CLASSIFICATION: Magmatic Epigenetic Hydrothermal
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Chlorite Biotite Schist
Talc Carbonate Schist
Serpentinized Peridotite
Andesite
Andesitic Tuff
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The JK showing is located on the western slopes of a prominent ridge separating Lyle and Rossiter creeks. The Highland Surprise occurrence (082KSW037) lies 1.5 kilometres to the northwest. The showing is about 24 kilometres northwest of Kaslo, British Columbia.

Hostrocks of the JK showing include andesite, andesitic tuffs, greenstone and serpentinized peridotite of the Permian Kaslo Group. Localized alteration of the greenstone along the serpentinized peridotite contact has produced chlorite biotite schist and talc carbonate schist. For the more detailed description of the area geology refer to the Highland Surprise occurrence.

Copper mineralization occurs in chlorite biotite schist and consists of weak and sporadic chalcopyrite. Copper and nickel mineralization within the serpentinized peridotite are also reported, although pyrrhotite and pyrite are the only reported sulphides. Elsewhere on the JK claims, along the northeast contact between greenstone and serpentinite, quartz veins contain noticeable amounts of galena, tetrahedrite, chalcopyrite and sphalerite.

Exploration work on this showing to date has not revealed economic concentrations of copper and nickel mineralization in the serpentinized peridotite. Mineralized quartz veins have not received much attention during exploration.

BIBLIOGRAPHY

EMPR ASS RPT *3925, *3930
EMPR GEM 1972-70
GSC MAP 1667

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1313
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/27

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW102**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAGGIE MAY (L.2437)**, INTERLOPER FR. (L.2443), RUBY FR. (L.2444)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 28 21 N
LONGITUDE: 117 13 34 W

NORTHING: 5591192
EASTING: 483955

ELEVATION: 990 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Reverted Crown grant Lot 2437.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Phyllite
Pillow Lava
Breccia Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Maggie May occurrence is located on Reverted Crown grant Lot 2437 near the mouth of Tenderfoot Creek in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The Maggie May occurrence consists of an irregular quartz vein up to 60 centimetres wide. The vein is within grey phyllite of the Index Formation of the Lardeau Group. Argentiferous galena occurs in massive pods throughout the vein which has been explored with several trenches and at least two short adits. Mapping in 1987 failed to locate the old workings (Property File - Geological Report on the John L. and Maggie May Claims, 1987).

In 1987, Northern Crown Mines Ltd. optioned the property and conducted prospecting, mapping, sampling and diamond drilling.

BIBLIOGRAPHY

EMPR AR 1901-1020; *1902-141; 1903-112,243
EMPR ASS RPT 8483, 8862, 12063
EMPR BULL 45, p. 86
EMPR PF (Ikona, C.K. (1987): Geological Report on the John L. and

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1315
REPORT: RGEN0100

BIBLIOGRAPHY

Maggie May Claims in Prospectus, Progressive Minerals Ltd.,
September 30, 1987)
GSC BULL 193
GSC MAP 1277A
GSC MEM 161
GSC OF 288; 432; 464
GSC SUM RPT 1903 Part A, p. 65

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/23

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW103**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOHN L. (L.5898)**, GLENGARNOCK (L.5897), MAREYEN FR. (L.5899),
LIZA FR. (L.5900)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:
LATITUDE: 50 28 14 N
LONGITUDE: 117 14 04 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adits.

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5590978
EASTING: 483363

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Arsenopyrite Pyrite
ASSOCIATED: Quartz Mariposite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Phyllite
Quartzite
Calcareous Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies. GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 257.0000 Grams per tonne
Gold 37.0000 Grams per tonne
Lead 5.0000 Per cent
Zinc 0.7000 Per cent

COMMENTS: Best grab sample of mineralized material from quartz vein.
REFERENCE: Property File - Prospectus, Progressive Minerals Ltd., 1987.

CAPSULE GEOLOGY

The John L. occurrence is located near the mouth of Tenderfoot Creek in the Slocan Mining Division. The property includes four Reverted Crown grants, Lots 5897 to 5900.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

CAPSULE GEOLOGY

The John L. occurrence consists of a massive quartz vein up to 2.5 metres wide. The vein strikes east and dips 80 degrees south, and is hosted within grey phyllite and quartzite of the Index Formation of the Lardeau Group. Galena, pyrite, arsenopyrite and minor sphalerite occur in patches throughout the vein and concentrated near the vein walls. Sulphides are also disseminated within mariposite-bearing calcareous phyllite in the hangingwall. The best grab sample of a mineralized section of the vein assayed 37 grams per tonne gold, 257 grams per tonne silver, 5 per cent lead and 0.7 per cent zinc (Property File - Prospectus, Progressive Minerals Ltd., 1987).

BIBLIOGRAPHY

EMPR AR 1898-1067; 1899-602,687; 1901-1020; 1902-H141; 1903-H126,H242
EMPR ASS RPT 8483, 8862
EMPR PF (See Maggie May, 082KSW102 - *Ikona, C.K. (1987): Geological Report on the John L. and Maggie May Claims in Prospectus, Progressive Minerals Ltd., September 30, 1987)
GSC BULL 193
GSC MAP 1277A
GSC MEM 161
GSC OF 288; 432; 464
GSC SUM RPT 1903 Part A, p. 65

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/23

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW104**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEVERMORE**, NEVERMORE 2, SNUFFY,
LOBO, RED DIAMOND, CUB,
VOYAGEURE (L.3585)

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 01 40 N
LONGITUDE: 117 01 13 W
ELEVATION: 2042 Metres

NORTHING: 5541719
EASTING: 498548

LOCATION ACCURACY: Within 500M

COMMENTS: Vein location (Assessment Report 13246). See also Snuffy, 082KSW141
and Hill 60, 082KSW168.

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Arsenopyrite Chalcopyrite
ASSOCIATED: Quartz Calcite Clay
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 10 Metres STRIKE/DIP: 130/
COMMENTS: On surface the vein varies from 10 to 45 centimetres width along 10
metres strike length. The vein has a strike of 130 to 135 degrees and
dips steeply to the northwest. TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	
Triassic	Slocan	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Andesite Breccia
Greenstone
Serpentinite
Gabbro
Dacite
Tuffaceous Sediment/Sedimentary
Slate
Argillite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain Quesnel PHYSIOGRAPHIC AREA: Selkirk Mountains
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1984
SAMPLE TYPE:	Channel		
COMMODITY		GRADE	
Silver		469.7000	Grams per tonne
Gold		0.0700	Grams per tonne
Copper		0.1100	Per cent
Lead		7.4700	Per cent
Zinc		6.5600	Per cent

COMMENTS: Channel sample from Trench 2.
REFERENCE: Assessment Report 13246.

CAPSULE GEOLOGY

The Nevermore prospect lies in the Blue Ridge area, 500 metres northwest of the Voyaguere occurrence (082KSW048) and some 17 kilometres northwest of Kaslo, British Columbia.

CAPSULE GEOLOGY

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

This prospect lies immediately adjacent to the contact between lithologies of the Kaslo Group volcanics and unconformably overlying Slocan Group metasediments. At this prospect, the Kaslo Group consists of greenstone, mainly andesite, serpentinite, dacite and gabbro. Slocan Group lithologies in the immediate vicinity include tuffaceous sediments, black slate, argillite and schist.

Four trenches and three diamond-drill holes (work by Red Diamond Mines Ltd. in 1984) have intersected sphalerite and galena mineralization occurring within a quartz-calcite vein hosted in an andesite breccia. Minor arsenopyrite and chalcopyrite were also observed. At surface the vein is 10 to 45 centimetres wide over greater than 10 metres strike length. It strikes 040 to 045 degrees east and dips steeply northwest. The hangingwall consists of a 2-centimetre limonitic clay gouge.

Assay values from a channel sample of Trench 2 were 469.7 grams per tonne silver, 7.47 per cent lead, 6.56 per cent zinc, 0.07 gram per tonne gold and 0.11 per cent copper (Assessment Report 13246). The best gold intersection from diamond-drill hole splits was 5.8 grams per tonne gold over the interval 13.1 to 14.2 metres in drillhole 84-1 (Assessment Report 13246).

BIBLIOGRAPHY

EMPR ASS RPT 10779, 11416, *13246
EMPR EXPL 1982-85; 1984-86
EMPR FIELDWORK 1978, pp. 92-96
EMPR INF CIRC 1985-1, p. 41
GSC OF 432; 464

DATE CODED: 1985/08/30
DATE REVISED: 1995/10/02

CODED BY: AFW
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW105**

NATIONAL MINERAL INVENTORY:

NAME(S): **MORNING**, RAPID CREEK, GOLD CREEK MINING

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 25 42 N
LONGITUDE: 117 11 03 W
ELEVATION: 900 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5586273
EASTING: 486919

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location given only as Rapid Creek.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
COMMENTS: Inferred from North Star, 082KSW120.
ASSOCIATED: Quartz
COMMENTS: Inferred from North Star, 082KSW120.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	
Paleozoic	Lardeau	Broadview	

LITHOLOGY: Phyllite
Mica Schist
Calcareous Schist
Breccia Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Morning occurrence is located on Rapid Creek in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

No geological description could be located for this past producer but it is probably in a similar geological setting as the North Star occurrence (082KSW120). Rocks in the vicinity of the occurrence are micaceous schist of the Index Formation of the Lardeau Group. Records indicate that Gold Creek Mining Company mined 3 tonnes of ore from the underground workings in 1909. This production yielded 3732 grams of silver and 1220 kilograms of lead.

BIBLIOGRAPHY

EMPR AR 1904-G118; 1907-L93; 1909-K273
EMPR BC METAL MM01315

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1321
REPORT: RGEN0100

BIBLIOGRAPHY

GSC BULL 193
GSC MAP 1277A
GSC MEM 161
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/16

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW106**

NATIONAL MINERAL INVENTORY:

NAME(S): **HANDY (L.1369)**, CULBERT (L.1367), LYNCH (L.1368),
HANDY NO. 2 (L.1371)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:
LATITUDE: 50 29 19 N
LONGITUDE: 117 15 20 W
ELEVATION: 800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Crown grant Lot 1369.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5592990
EASTING: 481871

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au 101 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Phyllite
Mica Schist
Pillow Lava
Volcanic Breccia
Meta Diorite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Handy occurrence is located west of the Lardeau River between Mobbs and Tenderfoot creeks in the Slocan Mining Division. The property consists of four Crown grants (Lots 1367, 1368, 1369 and 1371).

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

Although the records indicate that the occurrence has been worked extensively in the early 1900s, no geological description could be located for this occurrence. The property is described as a 120 centimetre wide quartz vein carrying gold, silver and copper values (Geological Survey of Canada Summary Report 1903). At least 55 metres of drifting has been carried out on the property from a 15 metre deep shaft. Rocks on Crown grant Lot 1369 are grey phyllite of the Index Formation of the Lardeau Group and Mesozoic metadiorite sills (GSC Map 1277A).

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RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

PAGE: 1323
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1903-H126,H242; 1904-G118; 1905-J251; 1907-L93; 1908-J101
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC SUM RPT *1903 Part A, p. 65

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/07

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW107**

NATIONAL MINERAL INVENTORY:

NAME(S): **COLUMBIA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:
LATITUDE: 50 28 50 N
LONGITUDE: 117 13 26 W
ELEVATION: 750 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5592087
EASTING: 484115

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Phyllite
Pillow Lava
Breccia Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1988
SAMPLE TYPE:	Grab		
COMMODITY	GRADE		
Silver	59.0000	Grams per tonne	
Lead	2.3700	Per cent	
Zinc	21.8000	Per cent	

COMMENTS: Best grab sample of 20 centimetre wide vein.
REFERENCE: Property File - Prospectus, Progressive Minerals Ltd., 1987.

CAPSULE GEOLOGY

The Columbia occurrence is located near the mouth of Tenderfoot Creek in the Slocan Mining Division. Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons. The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193). The Columbia showing consists of a single quartz vein, up to 20 centimetres wide, mineralized with minor sphalerite and galena. The vein strikes southeast and dips 45 degrees southwest. It is hosted

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RUN TIME: 16:43:39

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ENERGY AND MINERALS DIVISION

PAGE: 1325
REPORT: RGEN0100

CAPSULE GEOLOGY

within sheared phyllitic rocks of the Index Formation of the Lardeau Group. The vein has been explored with a shallow incline shaft and surface trenching. A grab sample assayed 21.8 per cent zinc, 2.37 per cent lead and 59 grams per tonne silver (Property File - Prospectus, Progressive Minerals Ltd., 1987).

BIBLIOGRAPHY

EMPR AR 1898-1067; 1903-H126
EMPR ASS RPT 8483, 8862
EMPR PF (See Maggie May, 082KSW102 - *Ikona, C.K., 1987, Geological Report on the John L. and Maggie May Claims in Prospectus, Progressive Minerals Ltd., September 30, 1987)
GSC BULL 193
GSC MAP 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/23

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW108**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROWN KING**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 23 34 N
LONGITUDE: 117 07 04 W
ELEVATION: 1035 Metres

NORTHING: 5582310
EASTING: 491628

LOCATION ACCURACY: Within 500M

COMMENTS: Location of trenches from Assessment Report 9801.

COMMODITIES: Lead Gold

MINERALS

SIGNIFICANT: Galena Pyrite Gold
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Calcareous Schist
Graphitic Schist
Mica Schist
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies. GRADE: Greenschist

CAPSULE GEOLOGY

The Crown King prospect is located at 1035 metres elevation above sea level between Poplar and Cascade creeks in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

Rocks on the Crown King property consist of grey mica schist, phyllite and carbonaceous to graphitic schist. The strata strike northwest and dip 20 to 60 degrees northeast and are cut by Mesozoic meta-andesite and metadiorite dikes.

Gold occurs with oxidized pyrite and galena in narrow quartz veins within calcareous schist. The showing has been explored with several trenches but gold values have not been encouraging (Assessment Report 9801).

BIBLIOGRAPHY

EMPR AR 1903-H126; 1908-J101
EMPR ASS RPT 8483, 8862, *9801

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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PAGE: 1327
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR EXPL 1980-113
GSC MAP 235; 1277A
GSC MEM *161, pp. 42,120
GSC OF 432; 464
GSC SUM RPT 1903 Part A, p. 65
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/11

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW109**

NATIONAL MINERAL INVENTORY:

NAME(S): **STA-TITE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 12 20 N
LONGITUDE: 117 55 44 W
ELEVATION: 830 Metres

NORTHING: 5561899
EASTING: 433714

LOCATION ACCURACY: Within 1 KM

COMMENTS: On a tributary of Arrow Park Creek (Minister of Mines Annual Report 1954, page 142).

COMMODITIES: Uranium Thorium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact Pegmatite
TYPE: 002 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Proterozoic-Paleoz.			Shuswap Metamorphic Complex

LITHOLOGY: Pegmatite
Gneiss
Schist

HOSTROCK COMMENTS: Pinnacle Peaks Nappe.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1954
SAMPLE TYPE: Chip
COMMODITY GRADE
Thorium 0.1200 Per cent
Uranium 0.0070 Per cent

COMMENTS: A 20.0-centimetre sample. Analyses are per cent uranium and thorium oxide.

REFERENCE: Minister of Mines Annual Report 1954, page 142.

CAPSULE GEOLOGY

The Sta-Tite radioactive occurrence is located on the west side of Upper Arrow Lake, approximately 10 kilometres southwest of Nakusp. The area is underlain by schist and gneiss of the Precambrian-Paleozoic Shuswap Metamorphic Complex (Geological Survey of Canada Open File 464). Radioactive pegmatite within these rocks contains values of uranium and thorium. A 20-centimetre sample assayed 0.008 per cent uranium and 0.14 per cent thorium oxide (Minister of Mines Annual Report 1954).

BIBLIOGRAPHY

EMPR AR *1954-142
EMPR MAP 22
EMPR OF 1990-32
GSC BULL 161
GSC MAP 1234A
GSC OF 432; 464, #238; 551

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/22

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW110**

NATIONAL MINERAL INVENTORY:

NAME(S): **SB 1**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 18 N
LONGITUDE: 117 06 50 W
ELEVATION: 2225 Metres

NORTHING: 5589228
EASTING: 491915

LOCATION ACCURACY: Within 500M

COMMENTS: Location of exposed mineralization south of Mount Johnson.

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered Disseminated
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn

E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Siliceous Limestone
Phyllite
Arenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The SB 1 occurrence is situated between Hope and Lake creeks just south of Mount Johnson in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The occurrence is underlain by limestone, schist and arenites of the Index Formation of the Lardeau Group. The strata are overturned on the limb of an anticline. Drag folds plunge northwest and the area is cut by two northwest trending transverse faults.

At the SB 1 showing disseminated galena and sphalerite occur in bands of silicified limestone near the contact with underlying arenite strata. The bands are lenticular in shape and appear to be controlled by the northwest plunging drag folds. Most of the mineralization is low grade (Assessment Report 86).

BIBLIOGRAPHY

EMPR ASS RPT *86, 5736, 6461
EMPR GEM 1975-E45; 1977-E65
GSC BULL 193

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1330
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 235; 1277A
GSC MEM 161
GSC OF 432; 464
EMPR OF 2000-22

DATE CODED: 1995/10/06
DATE REVISED: 1995/11/07

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW111**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER CLIFF**, COPPER KING GROUP, PYRITE (L.8793),
PERTH (L.8794), COPPER KING (L.8791)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 09 45 N
LONGITUDE: 117 10 44 W
ELEVATION: 1584 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of the upper adit (Assessment Report 6051).

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5556714
EASTING: 487223

COMMODITIES: Silver Gold Copper Zinc Lead

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive Concordant
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
DIMENSION: 6 x 2 Metres STRIKE/DIP:
COMMENTS: In the upper adit, a massive sulphide lens is 1.8 metres wide over a
strike length of 6 metres.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Chert
Cherty Argillite
Siliceous Chert
Quartzite
Andesite Tuff
Rhyolite Flow
Rhyolite Breccia
Quartz Monzonite
Felsite Dike
Felsite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1975

COMMODITY	GRADE	
Silver	9.6300	Grams per tonne
Gold	0.3400	Grams per tonne
Copper	2.2200	Per cent
Zinc	0.6000	Per cent

COMMENTS: Sample 14733, taken from the upper portal.
REFERENCE: Assessment Report 5636.

CAPSULE GEOLOGY

The Copper King prospect is located at 1584 metres elevation, on a tributary of Cooper Creek on the southeastern slopes of Mount Cooper. Kaslo, British Columbia lies 37 kilometres to the southeast.

Early work on the property dates back to 1907 when it is reported two adits were driven, the upper adit 4.3 metres long and the lower adit 27 metres long. Property work is also reported in 1908. The property area was re-staked by O. Janout in 1974 and prospected until 1976.

The Copper King prospect is underlain by metavolcanics and metasediments of the Permian Kaslo Group. The Kaslo Group strikes northwest and is folded into a broad anticline plunging moderately to

CAPSULE GEOLOGY

the southeast. Metasediments and volcanics of the Kaslo Group are intruded by quartz monzonite stocks and felsite dikes and sills.

The Copper Cliff prospect consists of four laterally restricted massive sulphide lenses hosted within a lens-shaped felsic metavolcanic-sedimentary sequence within andesite flows. Sediments include laminated chert and cherty argillite, siliceous chert and quartzite. Metavolcanics include andesite tuffs and massive rhyolite flows with rare quartz eyes and rhyolite breccia.

The massive sulphides consist of pyrrhotite, with lesser chalcopyrite, sphalerite, pyrite and galena. The two southernmost lenses are up to 30 centimetres wide and traceable for no more than 60 centimetres. The thickest concentration of massive sulphides is found in the old upper adit. At the back of this adit, 1.8 metres of pyrrhotite-pyrite-chalcopyrite-sphalerite mineralization is hosted within cherty argillite. A second 60-centimetre wide lens of massive sulphide is separated by cherty argillite. The massive sulphide lenses pinch out sharply over 6 metres strike length to a 15 to 30 centimetre horizon traceable on surface for up to 30 metres. In a nearby creek, two 60-centimetre wide massive sulphide lenses consisting of pyrrhotite-pyrite-chalcopyrite outcrop and are separated by 45 centimetres of chert. The lenses have a 4.5 metre strike length.

Several rock chip samples were taken from the property. The best assay results were from samples 14733 to 14735, from the upper adit. Grab sample 14733, from the upper portal over roughly 75 centimetres, yielded 0.34 gram per tonne gold, 9.63 grams per tonne silver, 2.22 per cent copper and 0.6 per cent zinc (Assessment Report 6536).

BIBLIOGRAPHY

EMPR AR 1907-L96; 1908-J250
EMPR ASS RPT *5636, *6051, 8019, 9697
EMPR OF 1999-2
GSC MAP 1667
GSC MEM 161, pp. 21,31
GSC OF 432; 464
GSC SUM RPT 1907, p. 86

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/21

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW112**

NATIONAL MINERAL INVENTORY:

NAME(S): **REDHILL**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 59 N
LONGITUDE: 117 24 24 W
ELEVATION: 1860 Metres

NORTHING: 5586861
EASTING: 471118

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location from Geological Survey of Canada Open File 464.

COMMODITIES: Silver Zinc

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Milford	Undefined Formation	
Paleozoic	Lardeau	Broadview	
Lower Jurassic			Kuskanax Batholith

LITHOLOGY: Monzonite
Quartz Monzonite
Quartz Mica Schist
Marble
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional Contact
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Redhill occurrence is located at 1860 metres elevation above sea level near the head of Mobbs Creek, 3.5 kilometres northwest of Tenderfoot Lake, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Tenderfoot Lake area is mainly underlain by the Mesozoic Mobbs Creek and Rapid Creek quartz monzonite stocks and the Early Jurassic Kuskanax monzonite batholith to the west. Grey quartz mica schist of the Broadview Formation along with marble, micaceous schist and amphibolite of the Paleozoic Milford Group form tightly folded rafts between the stocks and the batholith. The rocks have undergone contact and regional metamorphism to middle or upper greenschist facies (Geological Survey of Canada Bulletin 193).

No geological description could be located for this occurrence, however, it is described as a vein carrying high zinc values and as much as 2400 grams per tonne silver (Minister of Mines Annual Report 1905). The occurrence is probably hosted within the Kuskanax monzonite batholith.

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EMPR AR *1905-154
EMPR ASS RPT 1190, 2315, 2322
GSC BULL 193
GSC MAP 235A; 1277A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1334
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW113**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRAND SOLO**, BLACK JACK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 25 38 N
LONGITUDE: 117 23 20 W
ELEVATION: 1770 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5586205
EASTING: 472377

LOCATION ACCURACY: Within 500M
COMMENTS: Location of upper adit.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Argentite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic
Paleozoic
Lower Jurassic

GROUP

Milford
Lardeau

FORMATION

Undefined Formation
Broadview

IGNEOUS/METAMORPHIC/OTHER

Kuskanax Batholith

LITHOLOGY: Micaceous Schist
Monzonite
Quartz Monzonite
Marble
Quartz Mica Schist
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional Contact
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel

YEAR: 1966

COMMODITY

COMMODITY	GRADE	
Silver	3290.0000	Grams per tonne
Lead	6.4000	Per cent
Zinc	0.8500	Per cent

COMMENTS: Sample from 45 centimetre mineralized vein in upper adit.
REFERENCE: Assessment Report 916.

CAPSULE GEOLOGY

The Grand Solo occurrence is located at 1770 metres elevation above sea level near the head of Mobbs Creek, 2 kilometres west of Tenderfoot Lake, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Tenderfoot Lake area is mainly underlain by the Mesozoic Mobbs Creek and Rapid Creek quartz monzonite stocks and the Early Jurassic Kuskanax monzonite batholith to the west. Grey quartz mica schist of the Broadview Formation along with marble, micaceous schist

CAPSULE GEOLOGY

and amphibolite of the Paleozoic Milford Group form tightly folded rafts between the stocks and the batholith. The rocks have undergone contact and regional metamorphism to middle or upper greenschist facies (Geological Survey of Canada Bulletin 193).

The occurrence consists of a 60 to 120 centimetre wide quartz vein mineralized with galena, sphalerite and argentite. The vein is hosted within micaceous schist of the Milford Group. It has been explored with a 45 metre long adit and surface trenches. Three short adits down the hill expose a quartz vein 20 to 30 centimetres wide which may correlate with the upper vein. The vein exposed in the lower adits is mineralized with galena and carries silver values. The wallrock is silicified and the quartz vein is brecciated. A 45 centimetre channel sample of the mineralized vein in the upper adit assayed 3290 grams per tonne silver, 6.4 per cent lead and 0.85 per cent zinc (Assessment Report 916).

The occurrence may be on the same vein as the Ruby Silver occurrence (082KSW114), one kilometre to the southeast.

BIBLIOGRAPHY

EMPR AR 1898-1067; 1905-155; *1914-318,320
EMPR ASS RPT 915, *916, 1190, 1607
GSC OF 288; 432; 464
GSC BULL 193
GSC MAP 1277A
GSC MEM 161

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW114**

NATIONAL MINERAL INVENTORY:

NAME(S): **RUBY SILVER**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 22 N
LONGITUDE: 117 22 35 W

NORTHING: 5585706
EASTING: 473263

ELEVATION: 2135 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of trenches.

COMMODITIES: Silver

Lead

Zinc

Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Argentite Pyrite
ASSOCIATED: Quartz Calcite Barite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic
Paleozoic
Lower Jurassic

GROUP

Milford
Lardeau

FORMATION

Undefined Formation
Broadview

IGNEOUS/METAMORPHIC/OTHER

Kuskanax Batholith

LITHOLOGY: Monzonite
Quartz Monzonite Dike
Marble
Micaceous Schist
Quartz Mica Schist
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional Contact

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1966

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	280.0000	Grams per tonne
Lead	0.1000	Per cent
Zinc	0.3800	Per cent

COMMENTS: A 1.2 metre wide chip sample of mineralized vein in trench.

REFERENCE: Assessment Report 916.

CAPSULE GEOLOGY

The Ruby Silver occurrence is located at 2135 metres elevation above sea level near the head of Mobbs Creek, 1 kilometre west of Tenderfoot Lake, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Tenderfoot Lake area is mainly underlain by the Mesozoic Mobbs Creek and Rapid Creek quartz monzonite stocks and the Early Jurassic Kuskanax monzonite batholith to the west. Grey quartz mica schist of the Broadview Formation along with marble, micaceous schist

CAPSULE GEOLOGY

and amphibolite of the Paleozoic Milford Group form tightly folded rafts between the stocks and the batholith. The rocks have undergone contact and regional metamorphism to middle or upper greenschist facies (Geological Survey of Canada Bulletin 193).

The occurrence consists of a 60 to 120 centimetre wide brecciated quartz vein mineralized with galena, sphalerite, chalcopryrite, argentite and pyrite in a gangue of calcite and barite. The vein is at the contact between marble of the Milford Group and a quartz monzonite dike. Minor sulphide mineralization is also present within the marble and the wallrock is silicified. The vein has been explored with an adit which is now covered by a landslide. A 1.2 metre wide chip sample of the brecciated quartz vein exposed in a trench assayed 280 grams per tonne silver, 0.10 per cent lead and 0.38 per cent zinc (Assessment Report 916).

The occurrence may be on the same vein as the Grand Solo occurrence (082KSW113), one kilometre to the northwest.

BIBLIOGRAPHY

EMPR AR 1905-155; *1914-318,320
EMPR ASS RPT 915, *916, 1190, 1607
GSC BULL 193
GSC MAP 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW115**

NATIONAL MINERAL INVENTORY: 082K3 Ag10

NAME(S): **LONDON HILL**, LONDON HILL GROUP, LONDON (L.1416),
THIRD OF JULY (L.1417), POMPEII, ROUND-UP FR.

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 03 39 N
LONGITUDE: 117 12 55 W
ELEVATION: 2225 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5545417
EASTING: 484591

LOCATION ACCURACY: Within 500M

COMMENTS: London Hill mineral occurrence (Geological Survey of Canada Memoir
173, Map 273A). See Silver Glance (082KSW028), Panama (082KSW055)
and Empress (082KSW116).

COMMODITIES: Silver

Copper

MINERALS

SIGNIFICANT: Tetrahedrite
COMMENTS: Other silver-bearing minerals are reported.

ASSOCIATED: Quartz Pyrite

COMMENTS: Copper carbonate staining is reported.

ALTERATION TYPE: Leaching

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 1 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: The London Hill lode consists of irregular quartz lenses up to 1.2
metres thick.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic
Unknown

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY:

Slate
Argillite
Quartzite
Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The London Hill occurrence is located at the summit of London Ridge. The former McAllister mine (082KSW025) is 1.5 kilometres to the southwest. New Denver, British Columbia lies some 13.5 kilometres to the southeast.

The London Hill group was first staked in 1896 by the London Hill Development and Mining Co. Ltd. At this time the group consisted of the London, Third of July, Pompeii and Round-Up claims with some 110 metres of underground work in two adits on either side of the ridge. The London (Lot 1416) and Third of July (Lot 1417) were Crown granted in 1897. Ownership of the group was then transferred to Geigerich and Miller with exploration work conducted from 1909 to 1917. The London Crown grant was then transferred to Geigerich in 1918, who worked the property in 1919, 1920 and 1926. The newly incorporated London Hill Mine Ltd. consolidated the Silver Glance (082KSW028) and adjacent properties in 1950. No work was reported and property ownership lapsed in 1957. Vimy Explorations Ltd. acquired options on 13 claims including the Silver Glance, Panama (082KSW055), London Hill and Empress (082KSW116) properties in 1960. In 1961, surface and underground sampling was conducted. Development work was carried out mainly on the former London Hill and Panama mines until 1967 when the company was dissolved. In 1966, a 130-metre crosscut was driven 25 vertical metres below the original adit but the downward projection of the lode was not intersected. The property was then acquired by United Hearne Resources Ltd. in 1974. Lots 1416 and 1417 have now escheated to the Crown.

CAPSULE GEOLOGY

Hostrocks of the London Hill occurrence are slates with interbedded argillite and quartzite of the Triassic Slocan Group. These strata strike northwest and dip southwest or northeast at low angles. These are intruded by numerous quartz porphyry dikes. Three adits, exploring the London Hill lode to a depth of 77 metres from the summit, comprise the London Hill workings.

The London Hill lode consists of irregular quartz lenses up to 1.2 metres thick in a fissure zone. The quartz is mineralized with tetrahedrite and other silver-bearing minerals. At the ridge summit, a quartz vein outcrop is hosted in a quartz porphyry dike and is stained with copper carbonates. Tetrahedrite and pyrite were reported in this vein.

Production at the London Hill occurrence began in 1893 and finished in 1912 with 54 tonnes mined intermittently over 4 years yielding 301,513 grams of silver.

BIBLIOGRAPHY

EMPR AR 1894-737; 1896-37,48,66; 1897-572,574; 1901-1025; 1912-322;
1918-473; 1950-143; 1961-76; 1964-122
EMPR BC METAL MM01277
EMPR INDEX 3-203
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 68
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW116**

NATIONAL MINERAL INVENTORY: 082K3 Ag11

NAME(S): **EMPRESS**, EMPRESS MINE, KING (L.12626),
QUEEN (L.12627), KING AND QUEEN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 03 25 N
LONGITUDE: 117 12 21 W
ELEVATION: 1798 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5544982
EASTING: 485266

LOCATION ACCURACY: Within 500M

COMMENTS: King and Queen mineral occurrence (Geological Survey of Canada Memoir
173, Map 273A). Located on Watson (Pingston) Creek. See Silver
Glance (082KSW028), Panama (082KSW055) and London Hill (082KSW115).

COMMODITIES: Silver

Gold

Lead

Copper

Zinc

MINERALS

SIGNIFICANT: Tetrahedrite Argentite Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

COMMENTS: Quartz veins and lenses vary from a few centimetres to 30 centimetres
thickness.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic
Unknown

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Carbonaceous Slate
Argillite
Quartzite
Granite
Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Empress occurrence is located on the southeastern slopes of London Ridge, 2 kilometres east of the former McAllister mine (082KSW025). New Denver, British Columbia is located 13.5 kilometres to the southeast.

Ground covering the Empress occurrence was staked in the 1890s, with development work beginning in 1901 by Van Moerkerke under lease. Several small adits were driven with ore reported shipped from 1904 to 1909. The King and Queen claims were staked by Giegerich in the 1920s, covering the former Empress property. The newly incorporated London Hill Mine Ltd. consolidated the Silver Glance (082KSW028) and adjacent properties, including the King and Queen claims, in 1950. No work was reported and property ownership lapsed in 1957. Vimy Explorations Ltd. acquired options on 13 claims including the Silver Glance, Panama (082KSW055), London Hill (082KSW115) and Empress properties in 1960. In 1961, surface and underground sampling was conducted. Development work was carried out mainly on the former London Hill and Panama mines until 1967 when the company was dissolved. In 1966, a 130-metre crosscut was driven 25 vertical metres below the original adit but the downward projection of the lode was not intersected. The property was then acquired by United Hearne Resources Ltd. in 1974. Lots 12626 and 12627 have escheated to the Crown.

Hostrocks of the Empress occurrence are mainly black, carbonaceous slates with interbedded argillite and quartzite of the Triassic Slocan Group. These strata strike northwest and dip southwest or northeast at low angles and are intruded by numerous quartz porphyry dikes and a small granitic stock.

The workings on the Empress occurrence have explored a shear

CAPSULE GEOLOGY

zone striking westerly. Within this zone quartz veins and lenses vary from several centimetres to over 30 centimetres thickness. These veins are mostly flat lying. Veins host disseminated or bunches and streaks of tetrahedrite, argentite, pyrite and minor galena and sphalerite.

Production records for the Empress occurrence indicate 7 years consecutive production from 1903 to 1909. During this period, 104 tonnes yielded 784,635 grams silver, 124 grams gold and 2868 kilograms lead.

BIBLIOGRAPHY

EMPR AR 1900-983; 1901-1025; 1904-199; 1905-159; 1906-144,248; 1907-96,213; 1908-94,246; 1909-106,272; 1950-143
EMPR BC METAL MM01183
EMPR INDEX 3-195
EMPR PF (Snell, J.C. (1977): The Geology and Mineralization of the Triassic Basal Slate Member, Slocan Sediments of Whitewater District of British Columbia, in 082K General File)
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 228
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW117**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 52 N
LONGITUDE: 117 21 34 W
ELEVATION: 2135 Metres

NORTHING: 5586627
EASTING: 474471

LOCATION ACCURACY: Within 500M

COMMENTS: Location of outcrops with narrow mineralized quartz veins.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Milford	Undefined Formation	
Paleozoic	Lardeau	Broadview	
Lower Jurassic			Kuskanax Batholith

LITHOLOGY: Marble
Monzonite
Quartz Monzonite Dike
Quartz Mica Schist
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional Contact RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains
GRADE: Greenschist

CAPSULE GEOLOGY

The Joe occurrence is located at 2135 metres elevation above sea level near the head of Mobbs Creek, on the south shore of Tenderfoot Lake, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Tenderfoot Lake area is mainly underlain by the Mesozoic Mobbs Creek and Rapid Creek quartz monzonite stocks and the Early Jurassic Kuskanax monzonite batholith to the west. Grey quartz mica schist of the Broadview Formation along with marble, micaceous schist and amphibolite of the Paleozoic Milford Group form tightly folded rafts between the stocks and the batholith. The rocks have undergone contact and regional metamorphism to middle or upper greenschist facies (Geological Survey of Canada Bulletin 193).

The occurrence consists of galena, chalcopyrite and pyrite occurring in narrow quartz veins hosted in marble of the Milford Group. Near the veins several dikes of quartz monzonite cut the sedimentary rocks and the marble is silicified (Assessment Report 916).

BIBLIOGRAPHY

EMPR AR 1905-252
EMPR ASS RPT 915, *916, 1190, 1607

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1344
REPORT: RGEN0100

BIBLIOGRAPHY

GSC BULL 193
GSC MAP 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW118**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER QUEEN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 25 47 N
LONGITUDE: 117 18 47 W
ELEVATION: 1615 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5586458
EASTING: 477765

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location from Geological Survey of Canada Open File 464 and Minister of Mines Annual Report 1914, page 320.

COMMODITIES: Silver Lead Gold

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Broadview	
Paleozoic	Milford	Undefined Formation	

LITHOLOGY: Mica Schist
Marble
Phyllite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional Contact RELATIONSHIP: GRADE: Greenschist
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Silver Queen occurrence is located at 1615 metres elevation above sea level on Tenderfoot Creek, 2 kilometres northwest of Clark Peak, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Tenderfoot Creek area is mainly underlain by grey-green mica schist of the Broadview Formation and by grey phyllitic rocks and marble of the Milford Group. The Mesozoic Mobbs Creek and Rapid Creek quartz monzonite stocks are exposed to the west of the occurrence. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

No geological description could be located for this occurrence. The property is probably underlain by grey-green mica schist of the Broadview Formation of the Lardeau Group.

BIBLIOGRAPHY

EMPR AR 1901-1020; 1914-320
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/25

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW118**

MINFILE NUMBER: **082KSW119**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROWN POINT**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 42 N
LONGITUDE: 117 11 05 W
ELEVATION: 760 Metres

NORTHING: 5589979
EASTING: 486889

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Open File 464.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Unknown
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	

LITHOLOGY: Pillow Lava
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Crown Point showing is located on Hope Creek east of the Lardeau River in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

There is no record of work on the Crown Point showing since the late 1890s when it was described as a rusty zone carrying good gold values (Minister of Mines Annual Report 1898). The showing is underlain by massive pillow lavas and green phyllite of the Index Formation of the Paleozoic Lardeau Group.

BIBLIOGRAPHY

EMPR AR *1898-1067
GSC BULL 193
GSC MAP 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/23

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW120**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH STAR (L.7859)**, Y.R.U. (L.7860)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 26 05 N
LONGITUDE: 117 10 25 W
ELEVATION: 1070 Metres

NORTHING: 5586981
EASTING: 487670

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit on northwest side of Rapid Creek.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Arsenopyrite Gold

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Meta Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

CAPSULE GEOLOGY

The North Star prospect is situated on the northwest side of Rapid Creek, west of the Lardeau River, in the Slocan Mining Division. The property consists of two Reverted Crown grants (Lots 7859 and 7860).

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

On the North Star property grey phyllitic rocks of the Index Formation are cut by metadiorite dikes. Quartz veins and stringers are developed within the dikes and at the contact with the phyllite. The veins carry arsenopyrite and free gold. Some veins are said to be "rich in gold" (Minister of Mines Annual Report 1914). At least one adit has been excavated to test the potential of the veins. The veins are both parallel and oblique to the foliation and follow a similar pattern to those of the Mobbs mine (082KSW096).

BIBLIOGRAPHY

EMPR AR 1893-1050; 1894-744; 1902-H141; 1903-H112,H126; 1904-G118;
1911-K290; *1914-K320,K322
EMPR ASS RPT 8483, 8862, *10129, 11813, 14519, 15698, 16180, 19235
GSC BULL 193

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1348
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464
GSC SUM RPT 1903 Part A, p. 66

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/16

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW121**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOPSY**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 25 02 N
LONGITUDE: 117 09 25 W
ELEVATION: 1130 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5585033
EASTING: 488850

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Open File 464.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
COMMENTS: Inferred from Calumet and Hecla, 082KSW094.
ASSOCIATED: Quartz
COMMENTS: Inferred from Calumet and Hecla, 082KSW094.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	

LITHOLOGY: Micaceous Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Topsy occurrence is located west of the Lardeau River, between Rapid and Poplar creeks, in the Slocan Mining Division. Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons. The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193). No geological description could be located for this occurrence but it is probably similar to the Calumet and Hecla occurrence (082KSW094). Rocks in the vicinity of the occurrence are micaceous schist of the Index Formation of the Paleozoic Lardeau Group. The property has been explored by at least two small adits and one tonne of material was mined in 1907 to produce 156 grams of silver and 50 kilograms of lead. The adits are located on Lot 6492.

BIBLIOGRAPHY

EMPR AR 1907-214; *1930-385
EMPR ASS RPT 8483, 8862
EMPR BC METAL MM01438
EMPR INDEX 3-216
GSC BULL 193
GSC MAP 235A; 1277A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1350
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/16

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW122**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARQUIS & GILBERT**, KELOWNA, GOLD PARK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 24 11 N
LONGITUDE: 117 08 20 W
ELEVATION: 760 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5583455
EASTING: 490130

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 9801.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Calcareous Schist
Graphitic Schist
Phyllite
Mica Schist
Meta Andesite Dike
Meta Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: VEINS

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1981

SAMPLE TYPE: Chip

COMMODITY

GRADE

Gold

2.0000

Grams per tonne

COMMENTS: Best assay result of 33 chip samples taken from quartz veins.

REFERENCE: Assessment Report 9801.

CAPSULE GEOLOGY

The Marquis & Gilbert prospect is located at 760 metres elevation above sea level on the north side of Poplar Creek in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

Rocks on the Marquis & Gilbert property consist of grey mica

CAPSULE GEOLOGY

schist, phyllite and calcareous to graphitic schist. The strata strike northwest and dip 20 to 60 degrees northeast and are cut by Mesozoic meta-andesite and metadiorite dikes. Milky white quartz veins, 0.1 to 1.5 metres wide, strike parallel to the foliation and dip between 45 degrees northeast through vertical and 45 degrees southwest. The veins have strike continuity over tens of metres and are best developed in the calcareous schist. Sulphide minerals are sparse and include pyrite and arsenopyrite. Sampling in 1981 indicated that the veins carried low gold values with the best sample assaying less than 2 grams per tonne gold over a 1-metre width (Assessment Report 9801).

A total of 15 tonnes were mined from the occurrence in 1903 and 1928. This production yielded 654 grams of gold, 1400 grams of silver and 95 kilograms of lead.

BIBLIOGRAPHY

EMPR AR 1903-*113,126; 1904-118; 1905-155; 1914-323; 1928-*317,318,517
EMPR ASS RPT 8483, 8862, *9801, 10129
EMPR BC METAL MM01295
EMPR INDEX 3-197
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM 161, p. 44
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/11

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW123**

NATIONAL MINERAL INVENTORY:

NAME(S): **TWO BROTHERS (L.2005)**, PRESIDENT (L.2006)

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 25 04 N
LONGITUDE: 117 00 11 W
ELEVATION: 1490 Metres

NORTHING: 5585083
EASTING: 499783

LOCATION ACCURACY: Within 500M

COMMENTS: See also President, 082KSE012.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Pyrite Tetrahedrite

ASSOCIATED: Quartz Mariposite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Altered Limestone
Chloritic Brecciated Quartzite
Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Two Brothers occurrence is located on Gallop Creek, west of Duncan Lake, in the Slocan Mining Division. The showing is situated on Reverted Crown grant Lot 2005 which is part of a contiguous group of three Reverted Crown grants and two fractional Crown grants (Lots 2005 to 2009) (see President, 082KSE012).

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The property is underlain by quartzite, limestone and volcanic rocks of the Index Formation of the Lardeau Group. The quartzite is locally brecciated and chloritic within north-trending shears. A 2-metre chip sample across a mineralized shear on Lot 2007 (President Fr.) (082KSE012) assayed 260 grams silver (Assessment Report 9480). Ore minerals within the shear consist of argentite and sphalerite.

In 1970, trenching work on the Two Brothers Reverted Crown grant uncovered a 3.5 metre wide area of quartz veining within altered limestone. This mineralization consists of mariposite, pyrite and tetrahedrite occurring as stringers in narrow quartz veins. The veins carried only low silver values (Exploration in British Columbia 1977).

BIBLIOGRAPHY

EMPR AR 1898-1084,1190,1192; 1903-244; 1924-368; *1925-236; 1926-269; 1928-310
EMPR ASS RPT 6282, *9480
EMPR BULL 49
EMPR EXPL 1976-E47; *1977-E65; 1978-E77; 1980-114,115
EMPR GEM 1969-336, Fig. 41#79; 1970-462; 1971-424
EMPR GEOS MAP 1995-1
EMPR P 1993-1, pp. 9-16

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
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PAGE: 1354
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PF (See President, 082KSE012 - Canadian Superior Exploration
Ltd., Field notes and assay results)
GSC BULL 193
GSC MAP 1326A
GSC MEM 161; 369
GCNL #213, 1979

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/05

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW124**

NATIONAL MINERAL INVENTORY:

NAME(S): **CORNWALL, RB, NADECO,**
COPPER HORN, CAPE HORN

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 20 34 N
LONGITUDE: 117 52 16 W
ELEVATION: 690 Metres

NORTHING: 5577106
EASTING: 438015

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample Horn 07, Rock Sample and Soil Grid Location
Map, Assessment Report 21289.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Shear
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Jurassic

GROUP

Kaslo

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Kuskanax Batholith

LITHOLOGY:

Amphibolite
Gabbro
Skarn
Felsic Porphyry Dike
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional Contact

Slide Mountain
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Selkirk Mountains

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1991

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

3.1400

Per cent

REFERENCE: Assessment Report 21289.

CAPSULE GEOLOGY

The Cape Horn copper showings are located in a logging cut adjacent to the Dunn Creek access road. The showings are 600 metres east of the highway, 11 kilometres north of Nakusp (Assessment Report 21289).

"Strong copper mineralization", presumably chalcopyrite, with "skarn-like" alteration is reported in the metavolcanic sequence (Assessment Report 21289). Assays as high as 3.14 per cent copper were obtained from the showings (Assessment Report 21289). Earlier reports (Minister of Mines Annual Report 1961, page 79) mention copper mineralization in three "shear zones" in diorite, the widest being 1.2 metres wide. The property is located along the western margin of the Jurassic Kuskanax batholith which is composed mainly of aegirine-augite quartz monzonite (GSC Open File 432). Felsic porphyry dikes, possibly related to the batholith, crosscut the layered rocks in the area of the showing. The metavolcanic rocks, mainly amphibolite and gabbroic rocks, belong to the Paleozoic to Triassic Kaslo Group. The metavolcanic rocks are overlain to the southwest by metasedimentary strata of the Triassic Slocan Group which include phyllite, siltstone and limestone (Assessment Report

The earliest record of work was prospecting in 1903, when "a

CAPSULE GEOLOGY

large showing of low grade copper ore assaying 8 per cent copper and \$2.00 gold per ton" was reported (Minister of Mines Annual Report 1903). Three diamond-drill holes "totalling 144 feet" (47 metres) were reported in 1960 (Minister of Mines Annual Report 1961). Geological mapping and a geochemical survey were reported in 1967 (Minister of Mines Annual Report 1967). In 1978, the area was staked for uranium and three stream sediment samples were taken as well as several scintillometer readings (Property File - Report by Donald W. Tully). In 1979, the property was geologically mapped, 35 kilometres of line prepared and surveyed by scintillometer and magnetometer (Assessment Report 7789). A total of 330 soil samples were collected and analysed for copper and lead.

BIBLIOGRAPHY

EMPR AR 1903-150; 1961-79; 1967-248
EMPR ASS RPT 7789, *21289
EMPR PF (Report by D.W. Tully, 1978)
GSC OF 432; 464, #230, #231

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/03

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW125**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUNO, AMBER**

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K06E
 BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 18 59 N
 LONGITUDE: 117 11 31 W
 ELEVATION: 1525 Metres

NORTHING: 5573827
 EASTING: 486334

LOCATION ACCURACY: Within 500M

COMMENTS: Location of underground workings.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Broadview	

LITHOLOGY: Andesite
 Sandstone
 Siltstone
 Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1925

SAMPLE TYPE: Chip

COMMODITY

	GRADE	
Silver	600.0000	Grams per tonne
Gold	1.4000	Grams per tonne
Lead	29.0000	Per cent
Zinc	29.8000	Per cent

COMMENTS: Sample from 60 centimetre wide quartz vein.

REFERENCE: Minister of Mines Annual Report 1925, page 237.

CAPSULE GEOLOGY

The Juno occurrence is located at the head of Cascade Creek at 1524 metres elevation above sea level in the Slocan Mining Division. Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The Juno property is underlain by andesite, sandstone, siltstone and phyllite which forms the lower portion of the Broadview Formation of the Lardeau Group. The rocks have been folded in a series of northwest-trending folds that were subsequently thrust in a northeasterly direction along local faults (Geological Survey of Canada Bulletin 193).

The occurrence consists of a well defined quartz vein 30 to 60 centimetres in width mineralized with pyrite, galena and sphalerite.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1358
REPORT: RGEN0100

CAPSULE GEOLOGY

The vein strikes east and dips 45 degrees north. A 60 centimetre chip sample from the vein assayed 1.4 grams per tonne gold, 600 grams per tonne silver, 29 per cent lead and 29.8 per cent zinc (Minister of Mines Annual Report 1925). The vein has been explored with several surface trenches and a 12-metre long adit.

BIBLIOGRAPHY

EMPR AR *1925-237; 1928-309
EMPR ASS RPT 16433, *18136
EMPR PF (Starr, C.C. (1928): Report on the June Group of Mining Claims on Cascade Creek, 5 p.; see Noonday, 082KSW127 - Tully, D.W., November 1987, Geological Report on the Amber Property in Prospectus, Ambergate Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/17

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW126**

NATIONAL MINERAL INVENTORY:

NAME(S): **WHITE EAGLE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 17 32 N
LONGITUDE: 117 09 33 W
ELEVATION: 2175 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5571134
EASTING: 488662

LOCATION ACCURACY: Within 500M
COMMENTS: Location of upper adit.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Broadview

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Carbonaceous Siltstone
Sandstone
Phyllite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

SAMPLE TYPE: Channel

YEAR: 1988

COMMODITY

COMMODITY	GRADE	
Silver	298.0000	Grams per tonne
Gold	6.5000	Grams per tonne
Lead	14.8800	Per cent
Zinc	7.5800	Per cent

COMMENTS: Average of 42 samples across 40 centimetre wide vein in upper adit.

REFERENCE: Property File - Ambergate Exploration Inc., Prospectus, page 23.

CAPSULE GEOLOGY

The White Eagle occurrence is located at the head of Cascade Creek at 2175 metres elevation above sea level in the Slocan Mining Division. The occurrence is about 500 metres north of Blue Lake.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The White Eagle property is underlain by andesite, sandstone, siltstone and phyllite which forms the lower portion of the Broadview Formation of the Lardeau Group. The rocks have been folded in a series of northwest-trending folds that were subsequently thrust in a northeasterly direction along local faults (Geological Survey of Canada Bulletin 193).

The White Eagle occurrence consists of quartz veins containing

CAPSULE GEOLOGY

massive sulphide pods 0.6 metre wide and 5 metres long. The quartz veins have been exposed in two adits, an incline shaft and a winze in the upper adit.

A weighted average of 42 channel samples taken from the main vein in the upper adit yielded 14.88 per cent lead, 7.58 per cent zinc, 298 grams per tonne silver and 6.5 grams per tonne gold. The main vein within the upper adit has an average width of 40 centimetres and dips 48 degrees northeast which is subparallel to the enclosing carbonaceous siltstone of the Broadview Formation. Mineralization is unevenly distributed throughout the vein with the higher grades being associated with pods of massive sulphides that appear to plunge to the north. Silver values are highest within the galena-sphalerite rich portions of the massive sulphide while gold is associated with pyrite in the lower portion of the massive sulphide ore shoot (see Noonday, 082KSW127 - Prospectus, Ambergate Exploration Inc., 1988).

In 1928, eight tonnes of ore were mined from the property to produce 6158 grams of silver, 2667 kilograms of lead, 1809 kilograms of zinc and 93 grams of gold.

BIBLIOGRAPHY

EMPR AR 1903-244; 1921-347; 1927-285; 1928-307; *1929-327; 1930-257
EMPR ASS RPT 16433, *18136
EMPR BC METAL MM01460
EMPR INDEX 3-218
EMPR PF (See Noonday, 082KSW127 - Tully, D.W., November 1987,
Geological Report on the Amber Property in Prospectus, Ambergate
Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/17

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW127**

NATIONAL MINERAL INVENTORY:

NAME(S): **NOONDAY**, MAIN COMSTOCK, COMSTOCK,
GARRITY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:
LATITUDE: 50 19 31 N
LONGITUDE: 117 09 17 W
ELEVATION: 2200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of upper adit. See also Upper Comstock, 082KSW084.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5574809
EASTING: 488987

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Broadview	
Paleozoic	Lardeau	Index	

LITHOLOGY: Arenite
Sandstone
Siltstone
Phyllite
Tuffaceous Andesite
Aplite Dike
Andesitic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY
Silver 663.0000 Grams per tonne
Lead 33.1000 Per cent
COMMENTS: Selected grab sample from mineralized vein material.
REFERENCE: Assessment Report 18149.

CAPSULE GEOLOGY

The Noonday occurrence is located at the head of Cascade Creek at 2200 metres elevation above sea level in the Slocan Mining Division. The prospect is on the ridge between Cascade and Mat creeks on the old Comstock claims.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The oldest rocks on the Comstock property are tuffaceous andesite and flows of the Index Formation of the Lardeau Group. A northwest-trending fault which passes through the centre of the

CAPSULE GEOLOGY

Comstock property separates the volcanic rocks of the Index Formation from sandstone, siltstone and phyllite of the Broadview Formation to the west. The rocks are deformed in a series of northwest-trending folds that are cut at oblique angles by faults.

The Noonday occurrence consists of a quartz vein 1.5 metres wide that strikes 342 degrees and dips 25 degrees northeast. The vein is emplaced in fine-grained arenites of the Broadview Formation just below an aplite dike. The vein is composed of white milky quartz with smoky grey bands. Subhedral galena grains, 2 millimetres wide, are disseminated and concentrated in small patches with minor sphalerite crystals. Selected grab samples from the vein assayed up to 663 grams per tonne silver and 33.1 per cent lead (Assessment Report 18149). The vein has been explored by several surface trenches and at least two adits driven for a total length of 105 metres.

BIBLIOGRAPHY

EMPR AR 1904-296; 1918-161; *1919-122; 1925-237; 1928-308; 1930-257
EMPR ASS RPT 16433, 16480, 18136, *18149
EMPR LMP Fiche No. 61117
EMPR PF (Starr, C.C. (1928): Report of Examination of the Comstock Group, 5 p; Tully, D.W., November 1987, Geological Report on the Comstock Property in Prospectus, Ambergate Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW128**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEBIRD**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 13 33 N
LONGITUDE: 117 46 55 W
ELEVATION: 500 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5564033
EASTING: 444224

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location from occurrence number 239, GSC Open File 464.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Pelitic Phyllite
Silty Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Bluebird showing is located about 2.5 kilometres southeast of Nakusp (Minister of Mines Annual Report 1927; GSC Open File 432). The 1927 Annual Report states that a prospect tunnel was driven east for 88 metres on a faulted and "broken" quartz vein cutting "slate-schists". There is no information regarding the mineralogy of the vein other than "small pieces of ore have been encountered" (Minister of Mines Annual Report 1927). It is tabulated as number 239 in GSC Open File 464, where it is stated to contain silver, lead, zinc and copper. GSC Bulletin 161 shows the area to be underlain by pelitic to silty phyllite and slate of the Triassic Slocan Group.

BIBLIOGRAPHY

EMPR AR 1927-330
GSC BULL 161
GSC OF 288, #239; 432; 464, #239

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/02

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW129**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEPE**, HJ, GOLD VALLEY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 07 24 N
LONGITUDE: 117 46 14 W
ELEVATION: 700 Metres

NORTHING: 5552628
EASTING: 444918

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location from occurrence 241, GSC Open File 464.

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT: Tetrahedrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Pelitic Phyllite
Silty Phyllite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The NePe property is located on the south side of Slewskin Creek and can be reached by 3 kilometres of gravel road that leaves the Nakusp-Needles highway, 11 kilometres south of Nakusp (Minister of Mines Annual Report 1964, page 129).

Underground development on the property consists of two levels which are 15 metres vertically apart (Minister of Mines Annual Report 1964, page 129). The upper level has explored a narrow quartz vein which is sparsely mineralized with pyrite and argentiferous tetrahedrite. The vein was also intersected in the lower adit, but little mineralization was found. There is no other information available.

Geological Survey of Canada Bulletin 161 shows the area to be underlain by lightly metamorphosed clastic sedimentary strata of the Triassic Slocan Group which includes pelitic to silty phyllite and slate.

No details are available on the early work on the property other than the presence of the two adits and that at least 58 metres of drifting was completed on the two adits (Minister of Mines Annual Report 1964, page 129). In 1982, Megaline Resources Limited and North American Power Petroleums Incorporated completed a soil geochemical survey over the property. A total of 298 samples were collected and analysed for gold, silver lead and zinc (Assessment Report 11863). In November of 1982, Starlight Energy Corporation undertook an airborne magnetic and VLF-EM survey over the property (Assessment Report 11869). In 1984, a ground VLF-EM survey was undertaken and another soil sampling program was completed and 403 samples were collected and analysed for copper, lead, zinc, silver and arsenic (Assessment Report 12858).

BIBLIOGRAPHY

EMPR AR *1964-129
EMPR ASS RPT 11863, *11869, *12858
GSC BULL 161

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1365
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432; 464, #241

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/24

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW130**

NATIONAL MINERAL INVENTORY:

NAME(S): **DOLLY VARDEN (L.4101)**, LEIF

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 07 11 N
LONGITUDE: 117 17 01 W
ELEVATION: 2280 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5551981
EASTING: 479725

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Lot 4101.

COMMODITIES: Silver Gold Copper Antimony

MINERALS

SIGNIFICANT: Tetrahedrite Pyrite Chalcopyrite Stibnite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: Metres
COMMENTS: Quartz vein.

STRIKE/DIP: 090/55N

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Permian-Triassic
Triassic

GROUP

Kaslo
Slocan

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Volcanic Rock
Phyllite
Argillite
Quartzite
Limestone
Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1981

COMMODITY

Silver

GRADE

1597.0000

Grams per tonne

Gold

1.3000

Grams per tonne

REFERENCE: Assessment Report 9067.

CAPSULE GEOLOGY

The Dolly Varden property is located on the west side of Dolly Varden Mountain, 13 kilometres northeast of Slocan Lake. Access can be gained by bush road leading up the east side of Wilson Creek from the town of Rosebery at Slocan Lake. The last portion of the route is a footpath.

The showing consists of a persistent quartz vein (Assessment Report 9067) carrying disseminated pyrite and argentiferous tetrahedrite and minor stibnite and chalcopyrite. The vein strikes east, dipping 55 degrees north. It is 0.6 to 3.6 metres thick and has been traced for 600 metres. A four kilogram sample of material selected from the dump assayed 1.3 grams per tonne gold and 1596 grams per tonne silver; however, samples taken from the vein underground yielded low values (Assessment Report 9067). Although the vein crosscuts volcanic rock, it occurs within a bleached and rusty coloured alteration zone approximately 30 metres in thickness at the contact between andesitic volcanic rocks of the Permo-Triassic Kaslo Group and clastic sedimentary rocks (phyllite, argillite, quartzite and minor limestone) of the Triassic Slocan Group. A feldspar porphyry body of unknown age is shown (GSC Open File 432) in

CAPSULE GEOLOGY

the area.

The first mention of the Dolly Varden claim was in the 1893 Minister of Mines Annual Report. The 1900 Minister of Mines Annual Report states that ore "high in silver values and with about \$8.00 in gold per ton" was shipped from the Dolly Varden. The claim was Crown granted in 1901. Assessment Report 9067 reports that the old adit crosscut the mineralized zone for 18 metres and drifted for 15 metres along the vein. In 1982, 3900 metres of grid were established, geological mapping was completed, 72 soil samples were collected and analysed for copper and silver and three rock samples were assayed for gold and silver. In 1990, Black Tusk Explorations Limited (Assessment Report 20939) completed reconnaissance lithogeochemical sampling (40 samples analysed for gold, silver, copper and antimony), geological mapping and prospecting. In 1994, additional prospecting was undertaken (Assessment Report 23235).

BIBLIOGRAPHY

EMPR AR 1893-1061; 1900-827; 1901-1223
EMPR ASS RPT 9067, 10941, 20939, 23235
GSC OF 288, #242; 432; 464, #242
GCNL #146, 1982

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/11

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW131**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN EAGLE (L.3018)**, HARDY

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 22 N
LONGITUDE: 117 47 28 W
ELEVATION: 885 Metres

NORTHING: 5541463
EASTING: 443330

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lot 3018 (Golden Eagle Reverted Crown grant).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Goat Canyon-Halifax Ck. Stock

Cretaceous

ISOTOPIC AGE: 107 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Hornblende Biotite Quartz Monzonite
Clastic Sediment/Sedimentary
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Golden Eagle (Hardy) vein is located on the north side of Caribou Creek, 1 kilometre east of the mouth of Mineral Creek. Good access is available on gravel roads from Burton, which is located 7 kilometres to the southwest.

The showing is a northwest trending quartz vein carrying "minor gold values" (Minister of Mines Annual Report 1896, page 74). The vein is 2.5 to 3 metres in thickness and contains a "mineralized streak" 25 to 45 centimetres in thickness along the hangingwall. No further information is available.

The hostrock is shown to be hornblende biotite quartz monzonite of the Cretaceous Goat Canyon-Halifax Creek stock (Geological Survey of Canada Bulletin 161) which intrudes lightly metamorphosed clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group. The Goat Canyon-Halifax Creek stock has been dated at 107 million years utilizing the potassium-argon method on biotite (Geological Survey of Canada Open File 464).

In 1896, an "opening" 6 metres deep was excavated from which material containing low gold values was extracted (Minister of Mines Annual Report 1896).

BIBLIOGRAPHY

EMPR AR 1896-74; 1907-219
GSC BULL 161
GSC OF 432; 464, #248

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/15

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW132**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRIS**, BROKER (L.4189), VERMONT (L.4107)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 06 N
LONGITUDE: 117 43 34 W
ELEVATION: 1820 Metres

NORTHING: 5544628
EASTING: 448018

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location is from Geological Survey of Canada Open File 432.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	
Jurassic	Rossland	Elise	

LITHOLOGY: Argillite
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Cris claims (Broker, Lot 4189 and Vermont, Lot 4107) are believed to have been located next to the Millie Mack (082KSW051) on Blue Grouse Mountain approximately 16 kilometres east-northeast of Burton. The claims have lapsed so the location is uncertain.

There is little information on the property, however, Geological Survey of Canada Open File 432 (number 251) lists the property as containing silver, lead and zinc. The location is approximately 1 kilometre north of the Millie Mack, so it is likely underlain by clastic sedimentary rocks (mainly argillites) of the Triassic Slocan Group, which are in tectonic contact with and underlain by mafic volcanic strata of the Jurassic Elise Formation of the Rossland Group (Geological Survey of Canada Bulletin 161).

BIBLIOGRAPHY

EMPR AR 1900-981; 1901-1228
GSC BULL 161
GSC MAP 232A
GSC OF 432; 464, #251

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/19

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW133**

NATIONAL MINERAL INVENTORY:

NAME(S): **INDEPENDENCE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 51 N
LONGITUDE: 117 43 08 W
ELEVATION: 990 Metres

NORTHING: 5542306
EASTING: 448513

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location described in the 1896 Minister of Mines Annual Report (page 74) as being on Caribou Creek, 4 kilometres below the Eureka (082KSW171) showing and 6.4 kilometres above the mouth of Mineral Creek. May be same occurrence as the Chieftain, 082KSW054.

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Pyrite Pyrrhotite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Cretaceous			Goat Canyon-Halifax Ck. Stock

ISOTOPIC AGE: 107 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Argillite
Mafic Volcanic
Quartz Monzonite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional Contact
RELATIONSHIP: PHYSIOGRAPHIC AREA: Selkirk Mountains
GRADE: Greenschist

CAPSULE GEOLOGY

The Independence showing is reported in the Minister of Mines Annual Report 1896 (page 74) as being located 6.4 kilometres above the mouth of Caribou Creek. The showing is said to be "a large body of quartz, interspersed with pyrrhotite, iron pyrites and galena."

This location would put the showing in an area underlain by mafic volcanic rocks and clastic metasedimentary rocks (argillites and quartzites) of the Triassic Slocan Group. Quartz monzonite of the Cretaceous Goat Canyon-Halifax Creek stock outcrops south of the area.

It is possible that the showing is the same occurrence as the Chieftain (082KSW054).

BIBLIOGRAPHY

EMPR AR 1896-74
EMPR ASS RPT 12375, 13797
GSC BULL 161
GSC OF 432; 464, #252

DATE CODED: 1995/09/09
DATE REVISED: 1995/09/13

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW134**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIBBON, V. AND G.**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 05 N
LONGITUDE: 117 23 52 W
ELEVATION: 825 Metres

NORTHING: 5544420
EASTING: 471523

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample number 32, Plate 2, Assessment Report 12064.

COMMODITIES: Molybdenum Silver Lead Copper

MINERALS

SIGNIFICANT: Molybdenite Galena
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Rosebery Stock
Unknown			

LITHOLOGY: Porphyritic Biotite Quartz Monzonite
Diorite
Aplite
Intrusive Breccia
Quartzite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1978
SAMPLE TYPE: Drill Core
COMMODITY: Molybdenum GRADE: 0.1150 Per cent
COMMENTS: Across 3.05 metres in percussion drill cuttings from hole number 3.
REFERENCE: Assessment Report 7188.

CAPSULE GEOLOGY

The V. and G. (Ribbon) molybdenum occurrence is located 2 kilometres north of Rosebery, on the west side of Wilson Creek, east of Slocan Lake.

Molybdenite mineralization is present in quartz veins and stringers (Assessment Report 12064) cutting porphyritic biotite quartz monzonite of the Rosebery stock. One grab sample assayed 0.192 per cent molybdenum (sample 32, Assessment Report 12064). The highest assay in the four hole percussion drill program (Assessment Report 7188) was 0.115 per cent molybdenum across 3.05 metres in hole number 3. The Rosebery stock also contains diorite, aplite and an enigmatic intrusive breccia which carries pyrite and has been called "Ribbon Breccia" (Assessment Report 12064). The age of the Rosebery stock is not known (GSC Open File 432). The Rosebery stock intrudes quartzites and argillites of the Triassic Slocan Group. Other metallic mineralization on the property include a white quartz vein carrying galena and pyrite which assayed 70.1 grams per tonne silver and 0.26 per cent lead. At other localities assays of 1.01 per cent copper and 189 grams per tonne silver were reported (Assessment Report 12046), however, no other details were given.

The earliest recorded work was "development work" by "hand steel" presumably on silver-lead veins in 1942 (Minister of Mines Annual Report 1942). In 1970, the ground was staked by Peter

CAPSULE GEOLOGY

Leontowicz and optioned to United Bata Resources Limited (later Pan Ocean Oil Limited), who in 1970 (Assessment Report 2944) undertook reconnaissance soil sampling (875 samples analysed for molybdenum and copper) and in 1971 (Assessment Report 3565) undertook linecutting, geological mapping, geochemical soil sampling (2165 samples analysed for molybdenum), magnetometer (32 kilometres) and induced polarization surveys (24.8 kilometres). In 1978, an 850-metre drill access road was prepared and four 91.4-metre deep percussion holes drilled (Assessment Report 7188). In 1980, geological mapping and prospecting were undertaken along a new logging road (Assessment Report 12064). In 1982, three bulldozer trenches were cut (Assessment Report 12064). In 1983, a program of soil geochemical sampling, lithochemical sampling and geological mapping were completed (Assessment Report 12064).

BIBLIOGRAPHY

EMPR AR 1942-77
EMPR ASS RPT 7188, *12064
EMPR EXPL 1978-E76
GSC OF 432; 464, #257

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/05

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW135**

NATIONAL MINERAL INVENTORY:

NAME(S): **MILTON (L.2159)**, MILTON GROUP, MILTON FR. (L.3825)

STATUS: Prospect

Underground

MINING DIVISION: Slocan

REGIONS: British Columbia

NTS MAP: 082K03E

BC MAP:

LATITUDE: 50 03 39 N

LONGITUDE: 117 14 09 W

ELEVATION: 1706 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Milton Crown grant (Lot 2159). See Jo-Jo, 082KSW026.

UTM ZONE: 11 (NAD 83)

NORTHING: 5545421

EASTING: 483120

COMMODITIES: Silver

Lead

Zinc

Copper

MINERALS

SIGNIFICANT: Galena

Sphalerite

Tetrahedrite

Argentite

Silver

ASSOCIATED: Quartz

Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

Disseminated

Massive

CLASSIFICATION: Hydrothermal

Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Triassic

Slocan

Undefined Formation

Unknown

Unnamed/Unknown Informal

LITHOLOGY: Slate

Calcareous Argillite

Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Milton occurrence is situated 750 metres north of the former McAllister mine (082KSW025). The prospect lies on the northwestern slopes of London Ridge, slightly higher in elevation on O.K. Creek than the Jo-Jo occurrence (082KSW026). New Denver, British Columbia lies some 13 kilometres to the south-southwest.

The Milton prospect is underlain by slate and thinly bedded, calcareous argillite of the Triassic Slocan Group. Several quartz porphyry dikes intrude this Slocan strata.

The Milton Group, consisting of the Milton Crown grant (Lot 2159) and Milton Fr. (Lot 3825), was originally staked to explore quartz veins similar in character to those of the McAllister property. Workings consist of 457 metres of tunnelling and surface work. Several quartz veins were exposed, one similar in character to the Jo Jo vein.

At the Jo Jo occurrence a quartz vein was explored in O.K. Creek. The vein hosted high grade silver-bearing minerals, pyrite, galena and sphalerite, either disseminated throughout the quartz or as small rich ore shoots. Argentite, tetrahedrite and native silver in a quartz gangue comprise mineralization found in the lower adit.

BIBLIOGRAPHY

EMPR AR 1907-218; 1908-250; 1910-99; 1917-162; *1918-169;
1920-127; 1922-200; 1928-294

EMPR LMP Fiche No. 61000

GSC MAP 1667

GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW136**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAGGIE BROWN**, CHICKADEE (L.15018)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 39 N
LONGITUDE: 117 10 57 W
ELEVATION: 1950 Metres

NORTHING: 5541704
EASTING: 486928

LOCATION ACCURACY: Within 500M

COMMENTS: Maggie Brown mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A).

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Two calcite stringers are 2 to 5 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Slate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Maggie Brown prospect is located 1.75 kilometres south of Fish Lake on the divide between Stenson and McGuigan creeks. The prospect is slightly higher in elevation than the Gringo prospect (082KSW022) and nearly 2 kilometres southeast of the former Lucky Jim mine (082KSW023).

The Maggie Brown prospect lies on an extension of the limestone bed at the former Lucky Jim mine. Workings consist of an adit driven southwest towards this limestone bed. The adit intersected slate of the Triassic Slocan Group. Three mineralized calcite stringers were intersected. The two nearest the face are 2 to 5 centimetres wide and host galena.

BIBLIOGRAPHY

GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 230
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/12

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW137**

NATIONAL MINERAL INVENTORY:

NAME(S): **HORSESHOE (L.3634)**, HORSESHOE MINE, HORSE SHOE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 03 14 N
LONGITUDE: 117 09 27 W
ELEVATION: 1386 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5544634
EASTING: 488725

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Horseshoe Crown grant (Lot 3634).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
COMMENTS: Galena inferred from commodities recovered.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Unknown Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Slaty Argillite
Slate
Calcareous Slate
Argillaceous Slate
Quartzitic/Quartzose Slate
Limestone
Lamprophyre Dike
Basic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Horseshoe occurrence is located north of the Kaslo River, between Whitewater and Goat creeks at about 1386 metres elevation. The occurrence lies 600 metres west-southwest of the former Whitewater mine (082KSW033).

The Horseshoe claim was Crown granted to P. McLaren and W. Allan in 1904. In 1936, lead-zinc-silver production was reported from the Horseshoe occurrence, then owned by H. Lind.

The Horseshoe occurrence is located along the western extension of the historically significant Whitewater lode and southwest of the Wellington-Sunset-Colorado lode system (082KSW030, 140).

Production records indicate 2 tonnes ore were mined in 1936 from which 3110 grams silver and 755 kilograms lead were recovered.

BIBLIOGRAPHY

EMPR AR 1904-296; *1936-A36, E51
EMPR BC METAL MM01237
EMPR INDEX 3-200
GSC MAP 1667
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW138**

NATIONAL MINERAL INVENTORY:

NAME(S): **RUBY SILVER (L.515)**, RUBY SILVER MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 04 N
LONGITUDE: 117 11 35 W

NORTHING: 5538772
EASTING: 486165

ELEVATION: 2286 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A). Also see the Antoine (082KSW011) and Red Fox (L.2413) (082KSW065) mineral occurrences.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Slate
Argillite
Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
YEAR: 1935
CATEGORY: Assay/analysis
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 7234.0000 Grams per tonne
Lead 51.0000 Per cent

COMMENTS: Average grade of ore.
REFERENCE: Geological Survey of Canada Memoir 184, page 116.

CAPSULE GEOLOGY

The Ruby Silver occurrence is located at 2286 metres elevation between the headwater of the south fork of McGuigan Creek and Rambler Creek. The occurrence is 450 metres east-southeast of the former Antoine mine (082KSW011). New Denver, British Columbia is 10 kilometres to the southwest.

The former Ruby Silver mine is hosted in slates and argillites of the Triassic Slocan Group. These strata are in turn intruded by quartz porphyry dikes. A small tonnage of high grade silver-lead ore was mined from a fissure-vein lode. The average grade of ore was 7234 grams per tonne silver and 51 per cent lead (Geological Survey of Canada Memoir 184, page 116).

Total recorded production from the former Ruby Silver mine amounted to 36 tonnes with 262,976 grams silver and 18,592 kilograms lead recovered.

BIBLIOGRAPHY

EMPR AR 1893-1060; 1895-676,679; *1896-58,63,560; *1906-249;
*1908-99,247
EMPR BC METAL MM01368
EMPR INDEX 3-211
GSC MAP 1667
GSC MEM *173, Map 273A; *184, p. 116

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1377
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432; *464

DATE CODED: 1995/11/28
DATE REVISED: 1995/11/28

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW139**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOM 3, EK, CHRIS,
TAM, TIM, TIP,
OLYMPUS**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 04 36 N
LONGITUDE: 117 08 52 W
ELEVATION: 1950 Metres

NORTHING: 5547165
EASTING: 489426

LOCATION ACCURACY: Within 500M
COMMENTS: Geological Survey of Canada Open File 464, mineral occurrence number 183.

COMMODITIES: Asbestos Chrysotile

MINERALS

SIGNIFICANT: Asbestos Chrysotile
ASSOCIATED: Serpentine Talc Carbonate Magnetite Mariposite
Brucite
ALTERATION: Serpentine Talc Carbonate Magnetite Brucite
COMMENTS: Pyroxene altered to brucite and magnetite in serpentinized peridotite.
ALTERATION TYPE: Serpentin'zn Talc
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Concordant Shear
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos
DIMENSION: 600 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Minor amounts of chrysotile found over 600 metres in a major shear.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Serpentinite
Greenstone
Talc Carbonate Schist
Quartzite
Pyroxenite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Tom 3 showing is located roughly 3 kilometres northwest of Highland Surprise (082KSW037), 31 kilometres northwest of Kaslo, British Columbia.

A serpentinite belt, about 300 metres wide, cuts through the Kaslo Group adjacent to the Highland Surprise. The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows, pyroclastics and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. The reader is referred to the Highland Surprise for a more detailed description of the geology of the area. The serpentinite is largely altered to talc, chrysotile with grains of magnetite, chromite? and some carbonate. Pyroxene crystals have been altered to brucite and magnetite. Immediately south of the Tom 3 showing, quartzite of the Triassic Slocan Group crops out.

Cairnes (1934) reports "conspicuous amounts of talc" and mariposite developed on the property, where a large body of serpentinite, located in the vicinity of the quartz veins, is largely altered to talc and brownish weathered (Ca-Mg-Fe) carbonate. The surrounding massive greenstones are altered to chlorite, serpentinite, urallite, saussurite and albite. The alteration is believed to be related to intrusion of the Nelson batholith.

Chrysotile forms thin hairline-fracture fillings, 16 to 32 millimetres thick, in areas of intensely sheared serpentinite on the former Tom 1, 3 and 5 claims. The Tom 3 showing consists of chrysotile over 600 metres along the main shear zone. Hairline

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RUN TIME: 16:43:39

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REPORT: RGEN0100

CAPSULE GEOLOGY

fractures are usually perpendicular to jointing and closely spaced with less than 2.54 centimetre separations. Diamond drilling at this showing in 1972 indicated asbestos was concentrated near a narrow pyroxenite dike. No concentrations greater than 5 per cent of 32 millimetre or longer chrysotile were found outside shear zone intersections with serpentinite. Average content was 2 per cent. Based on information obtained, this showing was considered of insufficient size, quality and grade to warrant further exploration (Assessment Report 3926).

BIBLIOGRAPHY

EMPR ASS RPT *3227, *3926, 12167
EMPR GEM 1971-421
EMPR OF 1988-19, pp. 23,24
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/20

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW140**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUNSET (L.970)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 03 17 N
LONGITUDE: 117 08 32 W
ELEVATION: 1540 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5544725
EASTING: 489819

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A). See Wellington, 082KSW030.

COMMODITIES: Silver

Lead

Zinc

Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Tetrahedrite
ASSOCIATED: Quartz Pyrite Siderite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 090/55N

TREND/PLUNGE:

COMMENTS: The Sunset lode strikes 090 degrees and dips 55 degrees north within strata striking 270 to 300 degrees and dipping 50 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Slate
Slaty Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Sunset past producer is located 500 metres east of the Wellington occurrence (082KSW030), between Murray and Whitewater creeks. The historic mining town of Retallack, British Columbia is located 1.5 kilometres to the south.

The Sunset Crown grant (Lot 970), adjoining the Wellington property to the east, was staked in 1896 by R.E. Lemon and associates. Much of the development work was carried out in 1890 and in the following year the Gold Field Syndicate leased the property. It is reported that much of the work was done on the lower level of the Wellington mine from which a considerable tonnage of silver-lead ore was mined. At that time the workings consisted of four shallow shafts, two crosscut adits and two intermediate levels. In 1925, the Sunset claim became entangled in legal disputes and no property work was done since this time. In the 1930s, the Wellington property was owned by the A.H. Buchanan Estate.

Underlying rocks of the Triassic Slocan Group consist of slates and slaty argillites, striking 270 to 300 degrees and dipping 50 degrees northeast. One narrow quartzite bed was observed at the intersection of the lower crosscut with the lode. For a detailed account of the geology see the Wellington occurrence.

At the Sunset occurrence the lode strikes nearly 090 degrees and dips 55 degrees north, at an oblique angle to the enclosing strata. Vein material consists of sphalerite, galena, tetrahedrite and pyrite in a quartz gangue but containing some siderite. Sphalerite appears to have been the chief sulphide mineral, locally having a dense cherty appearance.

According to Cairnes (1935), a 57-tonne shipment of lead-zinc ore made in 1901 yielded 585.76 grams per tonne silver and 26.5 per cent lead (Geological Survey of Canada Memoir 184, page 248). Production in 1901 is reported as 47 tonnes with recoveries of 258,718 grams of silver and 12,522 kilograms of lead (Minister of Mines Annual Report Index 3, page 215).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1381
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1896-65,560; 1899-596; 1900-851; 1901-1028,1029; 1917-156;
1930-253
EMPR INDEX 3-215
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 248-249
GSC OF 288; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/09

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW141**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNUFFY, NEVERMORE, NEVERMORE 2,
LOBO, RED DIAMOND, CUB,
VOYAGEURE (L.3585)**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 50 01 15 N
LONGITUDE: 117 01 36 W
ELEVATION: 1950 Metres

NORTHING: 5540947
EASTING: 498090

LOCATION ACCURACY: Within 500M
COMMENTS: Vein location (Assessment Report 13246). See also Nevermore,
082KSW104.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 10 Metres STRIKE/DIP: TREND/PLUNGE: /
COMMENTS: On surface the vein is 15 centimetres wide and can be traced for 10
metres strike length.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	
Triassic	Slocan	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesite Breccia
Andesite
Greenstone
Serpentinite
Gabbro
Dacite
Tuffaceous Sediment/Sedimentary
Slate
Argillite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization PHYSIOGRAPHIC AREA: Selkirk Mountains
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 165.9000 Grams per tonne
Lead 3.5000 Per cent
COMMENTS: Best assay of sample containing 2 per cent galena and 0.5 per cent
pyrite.
REFERENCE: Assessment Report 13246.

CAPSULE GEOLOGY

The Snuffy prospect lies in the Blue Ridge area, 1 kilometre northwest of the Voyaguere occurrence (082KSW048) and some 17 kilometres northwest of Kaslo, British Columbia.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the

CAPSULE GEOLOGY

Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

This prospect lies immediately adjacent to the contact between lithologies of the Kaslo Group volcanics and unconformably overlying Slocan Group metasediments. At this prospect the Kaslo Group consists of greenstone, mainly andesite, serpentinite, dacite and gabbro. Slocan lithologies in the immediate vicinity include tuffaceous sediments, black slate, argillite and schist.

The vein comprising the Snuffy prospect is 15 centimetres wide over a discontinuous strike length of 10 metres, hosted in andesite breccia. The vein is conformable to the hostrock foliation, similar to the neighbouring Voyageure occurrence. The best assay value from samples of the vein was 165.9 grams per tonne silver and 3.5 per cent lead (Assessment Report 13264). The sample contained 2 per cent galena and 0.5 per cent pyrite.

BIBLIOGRAPHY

EMPR ASS RPT 10779, 11416, *13246
EMPR EXPL 1982-85; 1984-86
EMPR FIELDWORK 1978, pp. 92-96
GSC OF 432; 464

DATE CODED: 1985/08/30
DATE REVISED: 1995/10/02

CODED BY: AFW
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW142**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON DUKE (L.3190)**, DOHERTY (L.12402), IRON HAND

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 18 N
LONGITUDE: 117 07 39 W
ELEVATION: 1068 Metres

NORTHING: 5542901
EASTING: 490870

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate location of mineral occurrence (Geological Survey of Canada Open File 464). See Doherty, 082KSW035.

COMMODITIES: Lead Silver

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Limestone
Slate
Slaty Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Iron Duke prospect is located on the west side of Lyle Creek, 500 metres northwest of the Doherty occurrence (082KSW035). Kaslo, British Columbia lies 24 kilometres to the southeast.

Limestone is the dominant hostrock of the Iron Duke prospect, forming prominent cliff bluffs which form a dip slope of about 60 degrees. Slate and slaty limestone are also present in underground workings at the neighbouring Doherty occurrence. For a detailed description of the geology of this area refer to the Doherty occurrence.

At the Iron Duke prospect, two adits have intersected calcite veins carrying a little galena. Hostrocks are limestone, a continuation of the limestone hosting the Doherty occurrence.

BIBLIOGRAPHY

EMPR AR 1900-984; 1926-449
EMPR ASS RPT 573, 824, 1164, 1622
EMPR BC METAL MM00666
GSC MEM *184, p. 213
GSC OF 288; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/11/07

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW143**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER SPARROW**, PINE TREE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 17 43 N
LONGITUDE: 117 09 48 W
ELEVATION: 2285 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5571475
EASTING: 488366

LOCATION ACCURACY: Within 500M

COMMENTS: Location of incline shaft.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Broadview	

LITHOLOGY: Meta Siltstone
Meta Sandstone
Meta Andesite
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist
COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 1083.0000 Grams per tonne
Gold 27.5000 Grams per tonne
Lead 56.2000 Per cent
Zinc 0.5500 Per cent

COMMENTS: Result of best grab sample from the Silver Sparrow vein.
REFERENCE: Assessment Report 18136.

CAPSULE GEOLOGY

The Silver Sparrow occurrence is located at the head of Cascade Creek at 2285 metres elevation above sea level in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The property is underlain by andesite, sandstone, siltstone and phyllite which forms the lower portion of the Broadview Formation of the Lardeau Group. The rocks have been folded in a series of northwest-trending folds that were subsequently thrust in a northeasterly direction along local faults (Geological Survey of Canada Bulletin 193).

CAPSULE GEOLOGY

The occurrence consists of two separate quartz veins some 90 metres apart. The Silver Sparrow vein consists of iron-stained quartz containing stringers of auriferous pyrite, argentiferous galena and minor sphalerite. The vein strikes 120 degrees, dips 30 degrees northeast and is about 1 metre thick where it is exposed in the trenches. The vein has also been exposed in a 6-metre deep inclined shaft. The best grab sample from the vein assayed 27.5 grams per tonne gold, 1083 grams per tonne silver, 56.2 per cent lead and 0.55 per cent zinc (Assessment Report 18136). The Pine Tree vein is situated 90 metres west of the Silver Sparrow and has similar mineralogy. The vein is exposed for about 20 metres in three trenches. The vein strikes 071 degrees, dips 30 degrees northwest and ranges in width from 7 to 50 centimetres. Both veins are hosted within siltstone of the Broadview Formation.

BIBLIOGRAPHY

EMPR AR 1930-257
EMPR ASS RPT 16433, *18136
EMPR BC METAL MM00697
EMPR PF (See Noonday, 082KSW127 - Tully, D.W., November 1987,
Geological Report on the Amber Property in Prospectus, Ambergate
Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432
WWW <http://www.infomine.com/>

DATE CODED: 1995/10/18
DATE REVISED: 1995/10/19

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW144**

NATIONAL MINERAL INVENTORY:

NAME(S): **VIRGINIA (L.3337)**, ROBIN (L.2509), WILD SWAN (L.2510),
GARNETT (L.2842), MAYFLOWER (L.4458), CUBA (L.5609),
PAISLEY (L.5612), WHISTLER (L.5614), CONNIE FR. NO. 2 (L.5818),
RUBY FR. (L.5820), EMERALD FR. (L.5821)

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 35 N
LONGITUDE: 117 07 22 W
ELEVATION: 1676 Metres

NORTHING: 5545278
EASTING: 491212

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Virginia (Lot 3337) Reverted Crown grant.

COMMODITIES: Talc Asbestos

MINERALS

SIGNIFICANT: Talc Chrysotile
ASSOCIATED: Serpentine Uralite Saussurite
ALTERATION: Serpentine Talc Mariposite Chlorite Albite
ALTERATION TYPE: Serpentin'zn Talc
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Kaslo Undefined Formation

LITHOLOGY: Serpentinite
Andesite Flow
Andesite Pyroclastic
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Virginia showing is located roughly 500 metres west of the Highland Surprise (082KSW037), 28 kilometres northwest of Kaslo, British Columbia.

A serpentinite belt about 300 metres wide cuts through the Kaslo Group, adjacent to the Highland Surprise. The main lithologies of the area are assigned to the Permian Kaslo Group consisting of andesite flows, pyroclastics and tuffaceous sediments. Volcanics are extensively chlorite altered and schistose. The reader is referred to the Highland Surprise for a more detailed description of the geology of the area. The serpentinite is largely altered to talc, chrysotile with grains of magnetite, chromite? and some carbonate.

Conspicuous amounts of talc and mariposite occur at the Virginia showing where a large serpentinite body, located in the vicinity of the quartz veins, is largely altered to talc and brownish weathered (Ca-Mg-Fe) carbonate (Geological Survey of Canada Memoir 173). The surrounding massive greenstones are altered to chlorite, serpentine, uralite, saussurite and albite. The alteration is believed to be related to intrusion of the Nelson batholith. Similar to the Tom 3 showing, 2.5 kilometres to the northwest, the Virginia showing also hosts chrysotile along hairline fractures. Refer to the Tom 3 (082KSW139) for a detailed description of the mode of occurrence for chrysotile.

BIBLIOGRAPHY

EMPR OF *1988-19, pp. 23,24
GSC BULL *7, pp. 31-42
GSC MEM 173, pp. 46-49

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1388
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 266; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/10

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW145**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOTHER LODE (L.15421)**, MOTHERLODE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 01 56 N
LONGITUDE: 117 06 34 W
ELEVATION: 1067 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5542219
EASTING: 492162

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence (Bulletin 22, Figure 15). Located on Rossiter Creek.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Phyllite
Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Mother Lode occurrence is located 1 kilometre northwest of the Caledonia (082KSW041), on the north side of the Kaslo River some 23 kilometres northwest of Kaslo, British Columbia.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

The occurrence has a very brief history of recorded production of silver, lead and zinc in 1951. Little information is available for this occurrence, other than production records. Significant minerals, deposit character and type are inferred from production information and surrounding occurrences.

BIBLIOGRAPHY

EMPR AR 1951-A39
EMPR BC METAL MM 00648, MM01317
EMPR FIELDWORK 1978, pp. 92-96
EMPR INDEX 3-206
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/01

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1390
REPORT: RGEN0100

MINFILE NUMBER: **082KSW146**

NATIONAL MINERAL INVENTORY:

NAME(S): **IBEX (L.1428)**, FLETCHER GROUP, PHOENIX GROUP,
HIGHLAND SURPRISE, WHITEWATER 1-3, PAISLEY (L.5612),
WHISTLER (L.5614), CUBA (L.5609), GARNETT (L.2842),
RUBY FR. (L.5820), EMERALD FR. (L.5821)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 18 N
LONGITUDE: 117 06 41 W

NORTHING: 5546605
EASTING: 492029

ELEVATION: 2286 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Ibez (Lot 1428) Crown grant.

COMMODITIES: Silver

Lead

Copper

Gold

MINERALS

SIGNIFICANT: Galena Pyrite Chalcopyrite Gold
COMMENTS: Free gold reported.
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Quartz veinlets in a shear zone are 0.5 to 1.0 metre wide and explored over 200 metres strike length. The shear strikes 215 to 220 degrees and dips steeply northwest.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP
Permian Kaslo

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Chloritic Andesite
Andesite Flow
Andesite Pyroclastic
Tuffaceous Sediment/Sedimentary
Diorite Dike
Feldspar Porphyry Dike
Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Chip

COMMODITY

Silver

GRADE

340.0000

Grams per tonne

Gold

0.8600

Grams per tonne

COMMENTS: Chip sample over 0.9 metre.

REFERENCE: Assessment Report 19475.

CAPSULE GEOLOGY

The Ibez occurrence is located 1.25 kilometres north of the Highland Surprise (082KSW037), some 29 kilometres northwest of Kaslo, British Columbia. Production records indicate that 9 tonnes of material was mined from the Ibez occurrence in 1906, from which 28,024 grams silver and 7242 kilograms lead were recovered. The Ibez (Lot 1428) Crown grant covers the ground hosting this mineral occurrence, but has been historically recorded under claim group names of neighbouring occurrences. In 1920, it was part of the Fletcher Group, later to become part of the Phoenix Group (1937) and finally associated with the Highland Surprise from 1937 to 1938.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows, pyroclastics and tuffaceous sediments. The volcanics and sediments are generally

MINFILE NUMBER: **082KSW146**

CAPSULE GEOLOGY

oriented 320 degrees and the contact between these two units has a strike of 350 degrees. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. This faulted contact has a strike of 350 degrees and a steep westerly dip. The surface trace of this fault can be traced for several kilometres. Underground this fault is marked by a heavy talc gouge. Dikes and sills in the area are dioritic and feldspar porphyry. For a more detailed geological description of the area the reader is referred to the Highland Surprise occurrence.

Mineralization consists of disseminated chalcopyrite and pyrite with some free gold hosted in quartz veins, adjacent to the serpentinite contact (Minister of Mines Annual Report 1937, page E5). In 1979, a 1850 parts per billion gold soil anomaly was discovered in the vicinity of the Ibex occurrence. The anomaly is underlain by chloritized andesites hosting infrequent quartz veins (Assessment Report 7835). Exploration work on the Ibex showing in 1989 included extensive surface trenching on a sinuous quartz-rich shear. The shear zone strikes 215 to 220 degrees and dips steeply to the northwest and was examined over a strike length of 200 metres. It has a width of 0.5 to 1.0 metre with occasional small folds widening to 3.0 metres over a 15-metre strike length. The quartz vein carries 1 per cent disseminated chalcopyrite, galena and pyrite with infrequent massive galena and chalcopyrite stringers. Two, 2-metre wide feldspar porphyry dikes crosscut the shear at 145 to 160 degrees. A shear-hosted quartz vein occurs adjacent to one of these dikes and is 0.7 to 1.0 metre wide. A 0.9-metre chip sample across this shear zone, consisting of a series of hematitic quartz stringers containing massive galena blebs and trace chalcopyrite and pyrite, yielded 0.86 gram per tonne gold and 340 grams per tonne silver (Assessment Report 19475). A second sample, BB-36, across sheared andesite with numerous quartz stringers, yielded 0.28 gram per tonne gold and 67.0 grams per tonne silver (Assessment Report 19475). Both samples were taken approximately 60 metres north or northwest from the old Ibex adit.

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EMPR AR 1897-528; 1900-984; *1906-249; *1935-E5
EMPR ASS RPT 4126, 5401, *7835, 12053, 13695, 16758, 17158, *19475
EMPR BC METAL MM01239
EMPR INDEX *3-200
GSC MAP 1667
GSC MEM 184, p. 241
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/10

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW147**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONTE CHRISTO (L.4468)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 48 N
LONGITUDE: 117 06 12 W

NORTHING: 5541971
EASTING: 492599

ELEVATION: 1036 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Mineral occurrence location (Geological Survey of Canada Memoir 173-Map 273A). See Caledonia, 082KSW041.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ALTERATION: Siderite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed
MODIFIER: Sheared

DIMENSION: Metres STRIKE/DIP: 065/60S

TREND/PLUNGE:

COMMENTS: Mineralization occurs within a fissure zone with a strike of 065 degrees and a dip of 60 degrees south. The general structural trend is 310 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Limestone
 Limy Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Monte Christo occurrence is located 500 metres northwest of the Caledonia (082KSW041), on the west side of Rossiter Creek.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

Mineralization is hosted in the southern of two main limestone bands which are exposed in the canyon walls of Rossiter Creek. It lies within a fissure zone which has a strike of 065 degrees and a dip of 60 degrees south. Unlike the neighbouring Caledonia, there is no displacement of the limestone band. Galena and sphalerite were observed in sideritic oxidized material hosted in crossfractures in limestone.

A float block at this occurrence was reported to provide 100 sacks of lead ore. Six tonnes of silver-lead ore yielded 1474 grams silver and 4329 kilograms lead in 1907 (Geological Survey of Canada Memoir 184, page 237). In 1946, 19 tonnes production was reported grading 624 grams per tonne silver and 25 per cent lead (Bulletin 22). This production was mostly from 1927 (GSC Memoir 184, page 237).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1393
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1893-1083; 1900-986; 1907-214; 1927-288
EMPR BC METAL MM00688
EMPR BULL *22, pp. 30-31
EMPR FIELDWORK 1978, pp. 92-96
EMPR INDEX 3-206
GSC MEM *173, Map 273A; *184, pp. 236-237
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/20

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW148**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOLLINGER**, WHITEWATER 1-3, PAISLEY (L.5612),
WHISTLER (L.5614), CUBA (L.5609), GARNETT (L.2842),
RUBY FR. (L.5820), EMERALD FR. (L.5821)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 04 18 N
LONGITUDE: 117 05 58 W
ELEVATION: 2333 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Geological Survey of Canada Open File 464, mineral occurrence number 304.

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5546604
EASTING: 492884

COMMODITIES: Gold Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Gold
COMMENTS: Chalcopyrite, galena and free gold are inferred from commodities and mineralogy of neighboring mineral occurrences.

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Andesitic Flow
Andesitic Pyroclastic
Tuffaceous Sediment/Sedimentary
Serpentinite
Diorite Dike
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Bollinger occurrence is located 1.25 kilometres northeast of the Highland Surprise (082KSW037), some 29 kilometres northwest of Kaslo, British Columbia.

The main lithologies of the area are assigned to the Permian Kaslo Group, consisting of andesite flows, pyroclastics and tuffaceous sediments. The volcanics and sediments are generally oriented 320 degrees and the contact between these two units has a strike of 350 degrees. Serpentinite is the most extensive rock type exposed in this area, forming northwesterly trending bands with steep southwest dips and extending up to 750 metres in width. Talc and asbestos are common alteration minerals associated with this serpentinite unit. The contact between the serpentinite and surrounding lithologies is faulted. This faulted contact has a strike of 350 degrees and a steep westerly dip. The surface trace of this fault can be traced for several kilometres. Underground, this fault is marked by a heavy talc gouge. Dikes and sills in the area are dioritic and feldspar porphyry. For a more detailed geological description of the area the reader is referred to the Highland Surprise occurrence.

Quartz veins are common throughout the property. The Bollinger showing is reported to consist of gold, copper and lead mineralization in a quartz vein (Minister of Mines Annual Report 1901 and Geological Survey of Canada Open File 464). No other specific geological information could be located for this mineral occurrence.

BIBLIOGRAPHY

EMPR AR *1901-1028

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1395
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 288; 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/20

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW149**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH STAR AMBER**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:
LATITUDE: 50 15 37 N
LONGITUDE: 117 09 11 W
ELEVATION: 2360 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5567581
EASTING: 489090

COMMODITIES: Silver Copper Lead Antimony

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au 109 Stibnite veins and disseminations

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Broadview	

LITHOLOGY: Meta Siltstone
Meta Andesite
Meta Sandstone
Carbonate Rock
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Channel

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	1978.0000	Grams per tonne
Copper	1.1700	Per cent
Lead	2.7400	Per cent
Antimony	1.1400	Per cent

COMMENTS: Sample of 10 centimetre wide gouge material from quartz vein.
REFERENCE: Assessment Report 1813.

CAPSULE GEOLOGY

The North Star Amber occurrence is located at the head of Meadow Creek at 2360 metres elevation above sea level in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least greenschist facies.

The North Star Amber property is underlain by andesite, sandstone, siltstone and phyllite which forms the lower portion of the Broadview Formation of the Lardeau Group. The rocks have been deformed in a series of northwest-trending folds that were subsequently thrust in a northeasterly direction along local faults (Geological Survey of Canada Bulletin 193).

CAPSULE GEOLOGY

The occurrence consists of a 10-centimetre wide brecciated quartz vein emplaced along a thrust plane that separates metasiltstone and carbonate rocks. The vein, which strikes 155 degrees and dips 60 degrees northeast, consists mainly of broken white quartz mixed in a black sulphide-rich gouge. A channel sample of the gouge material assayed 1978 grams per tonne silver, 1.17 per cent copper, 2.74 per cent lead and 1.14 per cent antimony (Assessment Report 18136). Narrow stringers of pyrite also extend through the metasiltstone. The vein is exposed in two trenches and a short, 9-metre long adit.

BIBLIOGRAPHY

EMPR ASS RPT 16433, *18136
EMPR PF (See Noonday, 082KSW127 - Tully, D.W., November 1987,
Geological Report on the Amber Property in Prospectus, Ambergate
Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1995/10/19
DATE REVISED: 1995/11/08

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW150**

NATIONAL MINERAL INVENTORY:

NAME(S): **CUBA**, CUBA (L.5609)

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 54 N
LONGITUDE: 117 07 12 W
ELEVATION: 1940 Metres

NORTHING: 5545865
EASTING: 491412

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sample BB-41 (Assessment Report 19475).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Quartz Carbonate Albite Biotite
ALTERATION TYPE: Silicific'n Carbonate Carbonate Albitic Biotite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: 1 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Width of the shear zone is about 1 metre.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Andesite Flow
Andesite Breccia
Pillow Andesite
Diorite
Felsic Dike
Hornblende Feldspar Dike
Feldspar Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 1.8500 Grams per tonne
Gold 12.6400 Grams per tonne
COMMENTS: Sample BB-41, a 0.25 metre chip sample across a shear-hosted quartz vein.
REFERENCE: Assessment Report 19475.

CAPSULE GEOLOGY

The Cuba prospect is located 2.25 kilometres south of Mount Brennan and 750 metres northwest of the historic Highland Surprise occurrence (082KSW037). Kaslo, British Columbia lies 29 kilometres to the southeast.

The Cuba prospect is underlain by andesite flows, breccias and pillow andesite of the Permian Kaslo Group. Synvolcanic diorite is also assigned to the Kaslo Group. The andesites are porphyritic with up to 5 per cent hornblende phenocrysts and locally feldspar phenocrysts in a fine grained chloritic groundmass. Kaslo Group volcanics have been intruded by syntectonic coarse grained hornblende diorite and post-tectonic hornblende feldspar and feldspar porphyry dikes. The major structural features of this area are the Dryden anticline and Whitewater fault. The Whitewater fault is a major northwest-trending structure with several ages of movement. The

CAPSULE GEOLOGY

Dryden anticline has resulted in a strong axial planar cleavage. The axial surface is moderately to steeply inclined to the southwest and plunges 15 degrees to the southeast. Regional metamorphism, predominantly of greenschist grade, has affected all lithologies. The common alteration assemblage of Kaslo Group rocks is albite-epidote-actinolite+/-chlorite. Later hydrothermal alteration thought to be related to mineralization includes quartz, albite, iron carbonate and biotite; commonly associated with felsic dikes.

Exploration of the area dates back to the late 1800s when polymetallic silver-lead-zinc veins, such as the Gold Quartz showing (082KSW032) were first discovered. More recent exploration efforts (1970 to present) have been focused on the gold potential of the area.

The Cuba prospect consists of a small area of rusty weathering subcrop to outcrop of quartz stringers in sheared andesite, hosting up to 15 per cent disseminated arsenopyrite. The width of the zone is about one metre.

Two samples were taken from this zone with the following assay results. Sample BB-41, a 25 centimetre chip sample of quartz vein, yielded 12.64 grams per tonne gold and 1.85 grams per tonne silver (Assessment Report 19475). Sample BB-42 yielded 0.31 gram per tonne gold and 4.10 grams per tonne silver (Assessment Report 19475). This sample was also a 25-centimetre chip sample across a quartz vein.

BIBLIOGRAPHY

EMPR ASS RPT 4126, 5401, 7835, 8529, 9060, *16758, *17158, *19475
EMPR BULL 7, p. 42
EMPR EXPL 1979-83
GSC MAP 1667
GSC OF 432; 464

DATE CODED: 1995/11/30
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW151**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOB FR.**, BOB, ROBIN (L.1404),
BOB FRACTION

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:
LATITUDE: 50 00 18 N
LONGITUDE: 117 22 16 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: From symbol 315, GSC Open File 288.

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5539253
EASTING: 473406

COMMODITIES: Silver Gold Copper

MINERALS

SIGNIFICANT: Tetrahedrite Argentite Silver
ASSOCIATED: Quartz Calcite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Mount Carpenter Stock
Mesozoic-Cenozoic			

LITHOLOGY: Biotite Hornblende Quartz Monzonite
Phyllite
Argillite
Quartzite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Bob Fraction claim is reported to be located on Mount Carpenter (Goat Mountain) near the Capello group (082KSW003) of Crown-granted claims (Minister of Mines Annual Report 1904), approximately 1 kilometre northeast of New Denver. Production in 1904 and 1905 totalled 24 tonnes, resulting in 113,028 grams of silver.

There is little information on the property, however, it is likely that it is an extension of the Capello vein system which consists of four or five parallel quartz-calcite veins in faults cutting quartz monzonite of the Mount Carpenter stock. The veins strike 025 degrees, dipping 35 to 40 degrees to the northwest. Vein widths average 15 centimetres, but reach 90 centimetres, which includes brecciated wallrock. Mineralization within the veins consists of tetrahedrite, argentite, native silver and pyrite, with gold apparently associated with the pyrite.

The host Mount Carpenter stock is mainly composed of biotite hornblende quartz monzonite (GSC Open File 432) of Mesozoic to Tertiary age. The stock intrudes Triassic Slocan Group fine grained clastic sedimentary rocks which include phyllite, argillite, quartzite, tuffaceous rocks and minor limestone.

BIBLIOGRAPHY

EMPR AR 1899-846; 1904-201,202; 1905-161
EMPR BC METAL MM01136
EMPR INDEX 3-190
GSC MEM 184
GSC OF 288, #315; 432; 464, #315

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW152**

NATIONAL MINERAL INVENTORY:

NAME(S): **SWEET GRASS (L.8329)**, WILMER FR. (L.8330), SWEETGRASS

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 06 N
LONGITUDE: 117 21 04 W
ELEVATION: 925 Metres

NORTHING: 5538875
EASTING: 474838

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lot 8329.

COMMODITIES: Silver Gold Copper

MINERALS

SIGNIFICANT: Tetrahedrite Argentite Silver
ASSOCIATED: Quartz Carbonate Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	Mount Carpenter Stock
Mesozoic-Cenozoic			

LITHOLOGY: Biotite Hornblende Quartz Monzonite
Phyllite
Quartzite
Argillite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Sweet Grass and Wilmer Crown-granted claims are located on Mount Carpenter (Goat Mountain) southwest of the Capello claim group (082KSW003). The claims are 1 kilometre northwest of the centre of New Denver. Production in 1900 and 1901 totalled 7 tonnes, resulting in 16,733 grams of silver.

There is little information on the property, however, it is likely that the veins on it are extensions of the Capello vein system which consists of four or five parallel quartz-carbonate veins in faults cutting quartz monzonite of the Mount Carpenter stock. The veins strike 025 degrees, dipping 35 to 40 degrees to the northwest. Vein widths average 15 centimetres, but reach 90 centimetres, including brecciated wallrock. Mineralization within the veins consists of tetrahedrite, argentite, native silver and pyrite, with gold apparently associated with the pyrite.

The host Mount Carpenter stock is mainly composed of biotite hornblende quartz monzonite (GSC Open File 432) of Mesozoic to Tertiary age. The stock intrudes Triassic Slocan Group clastic sedimentary rocks which include phyllite, argillite, quartzite, tuffaceous rocks and minor limestone.

BIBLIOGRAPHY

EMPR AR 1900-827; 1901-1026; 1908-250; 1915-124
EMPR BC METAL MM01429
EMPR INDEX 3-215
GSC MEM 184
GSC OF 288, #316; 432; 464, #316

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/13

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW153**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOST ATLANTIS**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 41 N
LONGITUDE: 117 18 10 W
ELEVATION: 884 Metres

NORTHING: 5539941
EASTING: 478306

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Open File 464.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Slocan	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Argillite
Carbonaceous Argillite
Granite Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Lost Atlantis occurrence is situated on the New Denver-Three Forks highway, about 2 kilometres west of Three Forks at 884 metres elevation above sea level, in the Slocan Mining Division.

Regionally, the area lies on the western margin of the Kootenay Arc, in allochthonous rocks of the Quesnel Terrane. In the vicinity of the occurrence, the Quesnel Terrane is dominated by the Upper Triassic Slocan Group, a thick sequence of deformed and metamorphosed shale, argillite, siltstone, quartzite and minor limestone. Rocks of the Slocan Group are tightly and disharmonically folded. Early minor folds are tight to isoclinal with moderate east plunging, southeast inclined axial planes and younger folds are open, southwest plunging with subhorizontal axial planes. The sedimentary sequence has been regionally metamorphosed to lower greenschist facies.

South of the occurrence, the Slocan Group has been intruded by the Middle Jurassic Nelson intrusions which comprise at least six texturally and compositionally distinct phases ranging from diorite to lamprophyre. The most dominant phase is a medium to coarse grained potassium feldspar porphyritic granite. Several feldspar porphyritic granodiorite dikes, apparently related to the Nelson intrusions, also cut the sedimentary sequence near the occurrence (Paper 1989-5).

The property is underlain by massive argillite and carbonaceous argillite of the Slocan Group and by a granite porphyry plug probably related to the Nelson intrusions. Small lenses of galena and sphalerite occur along bedding planes within the argillite near the granite porphyry. Two adits, ten metres apart vertically, were driven to explore the downdip potential of the mineralization.

In 1957, three tonnes of ore were mined from the occurrence to produce 5163 grams of silver, 537 kilograms of lead and 232 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR *1957-A46,52; 1958-45
EMPR BC METAL MM01278
EMPB BULL 29

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1403
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR INDEX 4-123
EMPR P 1989-5
GSC MAP 273A
GSC MEM 173; 184; 309
GSC OF 288; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW154**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEWPORT (L.4521)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:
LATITUDE: 50 00 18 N
LONGITUDE: 117 17 25 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Lot 4521.

Open Pit

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

NORTHING: 5539227
EASTING: 479199

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic
Middle Jurassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Newport occurrence is situated on the south side of Carpenter Creek, immediately south of Three Forks at 1067 metres elevation above sea level, in the Slocan Mining Division. The occurrence is on Reverted Crown grant Lot 4521.

Regionally, the area lies on the western margin of the Kootenay Arc, in allochthonous rocks of the Quesnel Terrane. In the vicinity of the occurrence, the Quesnel Terrane is dominated by the Upper Triassic Slocan Group, a thick sequence of deformed and metamorphosed shale, argillite, siltstone, quartzite and minor limestone. Rocks of the Slocan Group are tightly and disharmonically folded. Early minor folds are tight to isoclinal with moderate east plunging, southeast inclined axial planes and younger folds are open, southwest plunging with subhorizontal axial planes. The sedimentary sequence has been regionally metamorphosed to lower greenschist facies.

South of the occurrence, the Slocan Group has been intruded by the Middle Jurassic Nelson intrusions which comprise at least six texturally and compositionally distinct phases ranging from diorite to lamprophyre. The most dominant phase is a medium to coarse grained potassium feldspar porphyritic granite. Several feldspar porphyritic granodiorite dikes, apparently related to the Nelson intrusions, also cut the sedimentary sequence near the occurrence (Paper 1989-5).

The property is underlain by massive argillite and quartzite of the Slocan Group. No geological description could be located for the occurrence but it is probably similar to the Lost Atlantis (082KSW153) occurrence, situated about one kilometre northwest. At the Lost Atlantis, lenses of galena and sphalerite occur on bedding planes within argillite.

Production from the Newport occurrence in 1940 yielded 14,774 grams of silver, 87 kilograms of lead and 47 kilograms of zinc from 2 tonnes mined.

BIBLIOGRAPHY

EMPR AR 1901-1226; 1940-26,80
EMPR BC METAL MM01329
EMPR BULL 29

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1405
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR INDEX 3-207
EMPR P 1989-5
GSC MAP 273A
GSC MEM 173; 184; 309
GSC OF 288; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW155**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAGLE** GOLDEN SLIPPER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 00 38 N
LONGITUDE: 117 17 31 W
ELEVATION: 884 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5539845
EASTING: 479082

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Geological Survey of Canada Open File 464.

COMMODITIES: Silver Copper Zinc

MINERALS

SIGNIFICANT: Tetrahedrite Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic
Middle Jurassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY: Granite Porphyry
Argillite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Eagle occurrence is situated on the New Denver-Three Forks highway, immediately west of Three Forks at 884 metres elevation above sea level, in the Slocan Mining Division.

Regionally, the area lies on the western margin of the Kootenay Arc, in allochthonous rocks of the Quesnel Terrane. In the vicinity of the occurrence, the Quesnel Terrane is dominated by the Upper Triassic Slocan Group, a thick sequence of deformed and metamorphosed shale, argillite, siltstone, quartzite and minor limestone. Rocks of the Slocan Group are tightly and disharmonically folded. Early minor folds are tight to isoclinal with moderate east plunging, southeast inclined axial planes and younger folds are open, southwest plunging with subhorizontal axial planes. The sedimentary sequence has been regionally metamorphosed to lower greenschist facies.

South of the occurrence, the Slocan Group has been intruded by the Middle Jurassic Nelson intrusions which comprise at least six texturally and compositionally distinct phases ranging from diorite to lamprophyre. The most dominant phase is a medium to coarse grained potassium feldspar porphyritic granite. Several feldspar porphyritic granodiorite dikes, apparently related to the Nelson intrusions, also cut the sedimentary sequence near the occurrence (Paper 1989-5).

The property is underlain by massive argillite and quartzite of the Slocan Group and by a granite porphyry plug probably related to the Nelson intrusions. A small quartz vein cuts the granite porphyry near its eastern contact. The vein is 2 to 20 centimetres wide, strikes east and dips 38 degrees north. A short adit explored the vein for about 25 metres. Near the face the vein appeared to pinch out but still carried conspicuous disseminations of tetrahedrite.

Production from the occurrence in 1928 yielded 11,073 grams of silver from a total of four tonnes mined. The property was held by Golden Slipper Mines Ltd. in the early 1950's.

BIBLIOGRAPHY

EMPR AR 1899-843

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1407
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BC METAL MM01173
EMPR BULL 29
EMPR INDEX 3-194
EMPR P 1989-5
EMPR PF (Starr, C.C. (1951): Golden Slipper Mines Ltd. properties,
4 p.; Golden Slipper Mines Ltd. (1951): Plan Showing Holdings, in
082FNW General)
GSC MAP 273A
GSC MEM 173; *184, p. 37; 309
GSC OF 288; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/18

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW156**

NATIONAL MINERAL INVENTORY: 082K3 Ag2

NAME(S): **BEST (L.451)**, BEST MINE, RAMBLER-CARIBOO GROUP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 46 N
LONGITUDE: 117 11 45 W

NORTHING: 5540070
EASTING: 485969

ELEVATION: 1829 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Best mineral occurrence (Geological Survey of Canada Memoir 173, Map 273A). See also Rambler, 082KSW018.

COMMODITIES: Silver

Lead

Zinc

Copper

Antimony

MINERALS

SIGNIFICANT: Tetrahedrite Jamesonite Galena Sphalerite Pyrite

ASSOCIATED: Chalcopyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 24 x 1 Metres

STRIKE/DIP: 340/28E

TREND/PLUNGE:

COMMENTS: The vein explored in the incline adit is up to 90 centimetres wide.
The vein explored in the crosscut adit was drifted over 24 metres, and strikes 340 degrees and dips 28 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic
Unknown

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite
Calcareous Quartzite
Argillite
Slate
Limestone

HOSTROCK COMMENTS: The stock is informally known as the Best-Antelope stock.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The former Best mine is located in the Rambler Creek basin, a southern tributary to McGuigan Creek. The former Rambler mine (082KSW018) is located 300 metres to the south-southwest. Kaslo, British Columbia lies 28 kilometres to the southeast.

The former Best mine is hosted by an elliptical-shaped quartz diorite stock, known as the Best-Antelope porphyry, occurring almost in the centre of the mine workings. This stock is the principal ore host which has intruded calcareous, massive quartzite, argillite, with interbedded fissile slate and limestone of the Triassic Slocan Group. The average strike of these strata is 115 degrees, dipping 57 degrees southwest. Folding and faulting are prominent along northwest axes. Axial planes of most of the folds and major faults dip steeply southwest. Other small-scale anticline-syncline pairs are of short amplitude with east striking axial planes and dipping southward. The plunge of these folds is 15 degrees west.

Numerous irregular quartz veins, ranging from a few centimetres to 60 centimetres width, occur within the Best-Antelope stock. The more persistent veins follow fault-fissures occurring along joints striking 340 degrees and dipping 25 to 45 degrees northeast.

A 23-metre incline shaft has explored one of these veins. A drift was driven 8 metres from the bottom of this shaft. The vein varied from a few centimetres to 90 centimetres wide and hosted tetrahedrite and jamesonite carrying high silver values. A crosscut adit was driven 37 vertical metres below the shaft. A quartz vein, 15 to 30 centimetres wide and hosting galena and tetrahedrite, was intersected 33 metres from the portal. The vein has a strike of 340

CAPSULE GEOLOGY

degrees and a dip of 28 degrees northeast, and was drifted along for 24 metres. At 70 metres from the portal a raise was started to connect to the incline adit above. A quartz vein at the foot of the raise, 30 centimetres wide, carries galena, tetrahedrite and sphalerite. About 30 metres beyond the raise along the crosscut, several other mineralized fractures were intersected. The fractures had a strike of 075 degrees and a dip of 73 degrees southeast. The more easterly of these two fractures carried up to 15 centimetres width of quartz with galena and pyrite.

Elsewhere on the Best property, quartz veins in outcrop carry small concentrations of silver-bearing minerals, with galena, sphalerite, pyrite and lesser chalcopyrite locally visible.

Records indicate total production on the Best property was 143 tonnes. From this, 371,556 grams silver, 19,090 kilograms lead and 423 kilograms zinc were recovered. Shipments of hand-sorted ore were made to the Trail smelter in 1971 and 1973 (Exploration in British Columbia 1971 and 1973, pages 422 and 89 respectively). The property was under lease from T. Eccles at this time.

BIBLIOGRAPHY

EMPR AR 1892-531; 1893-1060,1083; 1895-676; 1896-37,48,49,557;
1897-534,584; 1899-598; 1933-206; 1934-A26,E34; 1971-A55; 1973-
A55
EMPR BC METAL MM01366
EMPR EXPL 1971-422; 1973-89
EMPR INDEX 3-189
GSC MAP 1667
GSC MEM *173, Map 273A; *184, pp. 15-16
GSC OF 432; 464

DATE CODED: 1995/12/18
DATE REVISED: 1995/12/18

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW157**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEW JACKSON**, JACKSON 1, JACKSON 2,
SILVER DAGGER, SILVER SPUR FR., SILVER CLOUD

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 01 04 N
LONGITUDE: 117 09 02 W
ELEVATION: 1646 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of an old adit near the southern boundary of the Jackson 2 mineral claim (Assessment Report 21688).

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5540618
EASTING: 489214

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT: Tetrahedrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Argillite
Phyllite
Quartzite
Limestone
Granite Dike
Granite Sill
Aplite Dike
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Selkirk Mountains
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Silver
GRADE: 58.0000 Grams per tonne
COMMENTS: Sample 8+99W-16+00N, a 10 centimetre chip sample taken 0.5 metre from the face of an old, 4 metres long adit.
REFERENCE: Assessment Report 21688.

CAPSULE GEOLOGY

The New Jackson showing is located on the east side of Stenson Creek at 1646 metres elevation, approximately 3 kilometres south of its confluence with the Kaslo River. Kaslo, British Columbia is 25 kilometres to the southeast. The hostrocks of the New Jackson showing are argillite, phyllite, quartzite, slate and limestone of the Triassic Slocan Group. Bedding has a general northwest strike and moderate to steep southwest dips. Phyllite and slate are the most abundant rock types. Limestone hosting numerous calcite veins outcrop along Stenson Creek. Granite and aplite dikes and sills are common within the Slocan Group and are common at the New Jackson showing. Slocan strata has been locally tightly folded. The New Jackson showing consists of numerous quartz veinlets hosting trace tetrahedrite, galena and 1 to 2 per cent disseminated pyrite. The veinlets have been explored by a old, 4-metre long adit. Trace malachite was observed. The New Jackson showing lies 2 kilometres

CAPSULE GEOLOGY

north of the former Jackson mine (082KSW015). Refer to this occurrence for a more detailed description of the geology and mineralization style of this area.

A 10-centimetre vertical chip sample taken from the west wall 0.5 metre from the face of a 4-metre long old adit yielded 58 grams per tonne silver and 0.005 gram per tonne gold (Assessment Report 21688). A sample was also taken from the dump at the portal to this old adit. It yielded 8.4 grams per tonne silver and 0.001 gram per tonne gold (Assessment Report 21688).

BIBLIOGRAPHY

EMPR ASS RPT *21688
GSC MAP 1667
GSC OF 432; 464

DATE CODED: 1995/12/25
DATE REVISED: 1995/12/25

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW158**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER REEF (L.3996)**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 05 N
LONGITUDE: 117 13 40 W
ELEVATION: 1828 Metres

NORTHING: 5538810
EASTING: 483676

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Silver Reef Crown grant (Lot 3996). See Washington, 082KSW008.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
COMMENTS: Galena inferred from commodities and mineralogy of the former Washington mine (082KSW008).

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic
Unknown

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Quartzite
Argillite
Limy Shale
Quartz Feldspar Porphyry Dike
Quartz Feldspar Porphyry Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Silver Reef prospect is located on a divide between Carpenter and McGuigan creeks, at 1824 metres elevation. The former Payne mine (082KSW006) is located 1.0 kilometre to the northwest and the former Washington mine (082KSW008) is located 800 metres to the northeast. The area lies roughly 10 kilometres northeast of New Denver, British Columbia.

No geological information could be found on the Silver Reef prospect. Historically, work was reported on the Silver Reef Group in 1919 and 1920. One carload of ore was shipped from the Washington and Silver Reef groups in 1920 (Minister of Mines Annual Report 1920, page 125).

Because of its proximity to the former Washington mine (records lump these two claim groups together), the geological description of the former Washington mine has been provided. Lithologies hosting the Washington mine include interbedded quartzite, argillite and limy shale of the Triassic Slocan Group. Their general strike is 110 degrees, dipping 51 degrees southwest. These are locally intruded by quartz feldspar porphyry dikes and sills. Workings are hosted in the upper limb of the recumbent fold hosting the former Payne mine. Northeast of the principal workings the structure is complicated by faulting with strata dipping northeast in a syncline. These strata are equivalent to those in the underground workings and on either side beneath the centre of the ridge.

At the former Washington mine ore is hosted in a fault-fissure zone, along which considerable shearing has occurred. The zone has a general strike of 050 degrees and dips steeply southeast in most places. In the productive zone the load was composed of brecciated wallrock, quartz, calcite and siderite hosting galena, sphalerite, tetrahedrite, chalcopyrite and pyrite. Ore minerals were interbanded, or with quartz, or occurred as streaks and bunches in quartz. Lode thickness varied from 5 centimetres to 3.66 metres.

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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CAPSULE GEOLOGY

Mineralization has been controlled by bedding and jointing, with the general trend of the Washington-Slocan Boy lode following jointing. No one fissure was continuously mineralized.

BIBLIOGRAPHY

EMPR AR 1901-1227; 1919-125; *1920-125
GSC MAP 1667
GSC OF 288; 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/10

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW159**

NATIONAL MINERAL INVENTORY:

NAME(S): **ZEPHYR**, ZEPHYR 2, LINCOLN II GROUP,
PHASAR 1, PHASAR 2, CATHE,
PURINA FR., LINCOLN (L.326), CELEBRATION,
DEATH'S HEAD (L.1922), TREADWELL (L.1060), KOTTENAY STAR (L.1456),
DEMOCRAT (L.1517), KOOTENAY STAR (L.1518)

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 58 N
LONGITUDE: 117 07 01 W
ELEVATION: 1310 Metres

NORTHING: 5540429
EASTING: 491622

LOCATION ACCURACY: Within 500M

COMMENTS: The location of dozer trenching along the Zephyr and Zephyr 2 claim boundary (Assessment Report 11102).

COMMODITIES: Zinc Lead Silver

MINERALS

SIGNIFICANT: Sphalerite Galena
ASSOCIATED: Calcite Siderite Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Podiform
CLASSIFICATION: Epigenetic Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Slocan Undefined Formation

LITHOLOGY: Silty Argillite
Limestone
Quartz Feldspar Porphyry Sill
Phyllite
Quartzite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Zephyr showing is located on the eastern side of Robb Creek at 1310 metres elevation, 1.5 kilometres southwest of its confluence with the Kaslo River. Kaslo, British Columbia is 22.5 kilometres to the southeast.

The hostrocks of the Zephyr showing are argillite, phyllite, quartzite, slate and limestone of the Triassic Slocan Group. Bedding has a general northwest strike and moderate to steep southwest dips. Phyllite and slate are the most abundant rock types. Quartz feldspar porphyry dikes and sills are common within the Slocan Group and are common at the showing. Slocan strata has been locally tightly folded.

Rocks exposed by dozer trenching at the Zephyr showing are thinly bedded, silty argillites interbedded with a few thin limestone beds. Bedding has a strike of 125 degrees and a dip of 45 degrees to the southwest. A 2.5-metre wide quartz feldspar porphyry sill in argillites, outcrops near the showing.

The Zephyr showing consists of numerous calcite, siderite stringers in limestone and small pockets of replacement by siderite, quartz, sphalerite and galena. Galena and calcite-filled fractures were also noted in the limestone.

BIBLIOGRAPHY

EMPR ASS RPT *11102
GSC MAP 1667
GSC OF 432; 464

DATE CODED: 1995/12/25
DATE REVISED: 1995/12/25

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW159**

MINFILE NUMBER: **082KSW160**

NATIONAL MINERAL INVENTORY:

NAME(S): **MEGAN, MERIT, MERIT CENTRE,
KATE, RICH, FAMOUS FR.**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

MINING DIVISION: Slocan

LATITUDE: 50 01 47 N
LONGITUDE: 117 14 34 W
ELEVATION: 1310 Metres

UTM ZONE: 11 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5541964
EASTING: 482612

COMMENTS: The location of an old adit near the centre of the Megan claim
(Assessment Report 13985).

COMMODITIES: Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Granite Dike
Argillite
Phyllite
Quartzite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1985

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

166.3000

Grams per tonne

Lead

7.2300

Per cent

Zinc

0.1700

Per cent

COMMENTS: Sample 16m, taken from a 50-centimetre wide quartz vein with patches
and blebs of galena.

REFERENCE: Assessment Report 13985.

CAPSULE GEOLOGY

The Megan showing is located along the southwestern spur of London Ridge at 1310 metres elevation. New Denver, British Columbia is located 10 kilometres to the southwest.

Rocks exposed within the Megan claim and surrounding area include argillite, phyllite, quartzite and limestone of the Triassic Slocan Group. Argillite is the dominant hostrock at the Megan showing. These strata strike northwest or west and dips vary from shallowly south to moderately west or south. Fractures strike northwest to north-northwest. Granite dikes and sills are also common throughout the area.

The Megan showing consists of mineralized quartz veins hosted in fractures within a granite dike; it has been explored by an old adit. Patches, blebs and disseminations of galena, pyrite and trace chalcopyrite comprise the mineralogy. Vein widths varied from 50 to 100 centimetres.

Several samples were taken in the old adit. The best of these samples, 16m, yielded 166.3 grams per tonne silver, 7.23 per cent lead and 0.17 per cent zinc across 50 centimetres (Assessment Report

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RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1416
REPORT: RGEN0100

CAPSULE GEOLOGY

13985). Others samples yielded much lower values.

BIBLIOGRAPHY

EMPR ASS RPT *13985, 15552, 16472
GSC MAP 1667
GSC OF 432; 464

DATE CODED: 1995/12/26
DATE REVISED: 1995/12/26

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW161**

NATIONAL MINERAL INVENTORY:

NAME(S): **KUSP**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 07 30 N
LONGITUDE: 117 36 42 W
ELEVATION: 1730 Metres

NORTHING: 5552708
EASTING: 456278

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole 3, figure 3, Assessment Report 7054.

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Jurassic	Rossland	Elise	

LITHOLOGY: Tuffaceous Schist
Quartz Sericite Schist
Argillite
Calcareous Slate
Dacite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1978
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 69.6000 Grams per tonne
Lead 1.0000 Per cent
Zinc 4.1000 Per cent

COMMENTS: A 1.5-metre sample.
REFERENCE: Assessment Report 7054.

CAPSULE GEOLOGY

The Kusp property is located 2.5 kilometres south of the east end of Summit Lake, 18 kilometres southeast of Nakusp. Because of the precipitous terrain, access is by helicopter, although logging roads pass within 1.5 kilometres of the property. Honey-coloured sphalerite and fine galena were intersected in drillhole number 3 (Assessment report 7054) in a carbonate-rich pyritic tuffaceous schist, interlayered with quartz sericite schist, carbonate-rich argillite and calcareous slates (Assessment Report 7054). A 1.5-metre section, between 80.8 and 82.3 metres, analysed 4.1 per cent zinc, 1.0 per cent lead and 69.6 parts per million silver. The hostrocks to the base metal mineralization is a 30 metre thick section of pyritic tuffaceous metasedimentary rock which has been traced for 2400 metres (Assessment Report 20015). The tuffaceous sedimentary hostrocks are interlayered with dacites, andesites and fine clastic rocks of the Triassic Slocan Group and volcanic rocks which are probably part of the Jurassic Elise Formation (Rossland Group). There is a facies change with volcanic rocks interfingering westward into sedimentary strata (Assessment Report 20015). The beds strike 100 degrees, dipping 60 degrees

CAPSULE GEOLOGY

south.

The property was staked by J.R. Woodcock in 1977 after silt samples taken from creeks draining a large gossan were found to contain highly anomalous amounts of copper, lead and zinc. In 1977, geological mapping, soil sampling, gridding, as well as VLF-EM, magnetic and Turam surveys were completed on the property (Assessment Report 6845). In 1978, Dome Exploration (Canada) and Ranworth Explorations Limited optioned the property and completed four diamond-drill holes totalling 308.45 metres (Assessment Report 7054). In 1988, the property was optioned to Adastral Resources Limited, who completed additional ground magnetic (7.2 kilometres) and VLF-EM (7.2 kilometres) surveys, and soil sampling (340 samples with analyses for copper, manganese, silver, arsenic, lead and zinc). In 1989, Adastral Resources Limited completed 1.4 kilometres of linecutting, 40 metres of trenching and collected 16 rock lithochemical samples and 40 soil samples which were analysed for copper, lead, zinc, silver, cobalt, manganese and antimony (Assessment Report 18387). In 1990, trenching (3.7 metres), linecutting (1.35 kilometres), soil sampling (224 samples analysed for silver, arsenic, manganese, lead, zinc and copper) and 3.9 kilometres of induced polarization surveying were completed by Adastral Resources Limited (Assessment Report 20015).

BIBLIOGRAPHY

EMPR ASS RPT 6845, *7054, 11717, 18387, 20015
EMPR EXPL 1978-76
EMPR OF 1999-2
EMPR PF (Adastral Resources Limited prospectus, 18 September 1987)
GSC BULL 161
GSC OF 432
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/29

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW162**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD QUARTZ RIDGE**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 05 N
LONGITUDE: 117 08 17 W
ELEVATION: 2420 Metres

NORTHING: 5548060
EASTING: 490123

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sample SH-28 (Assessment Report 19475).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Quartz Siderite Albite Biotite
ALTERATION TYPE: Silicific'n Carbonate Albitic Biotite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: 4 Metres STRIKE/DIP: 060/
COMMENTS: Strike of vein was 060 degrees. Shear zone widths vary up to 4 metres. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Permian
Unknown

GROUP

Kaslo

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Andesite Flow
Andesite Breccia
Pillow Andesite
Diorite
Felsic Dike
Hornblende Feldspar Dike
Feldspar Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

43.0000

Grams per tonne

Gold

1.7400

Grams per tonne

COMMENTS: Sample SH-28, a 30 centimetre chip sample across a quartz vein.

REFERENCE: Assessment Report 19475.

CAPSULE GEOLOGY

The Gold Quartz Ridge prospect is located 1 kilometre west of Mount Brennan and 1.5 kilometres northwest of the historic Gold Quartz showing (082KSW032). Kaslo, British Columbia lies 29 kilometres to the southeast.

The Gold Quartz Ridge prospect is underlain by andesite flows, breccias and pillow andesite of the Permian Kaslo Group. Synvolcanic diorite is also assigned to the Kaslo Group. The andesites are porphyritic with up to 5 per cent hornblende phenocrysts and locally feldspar phenocrysts in a fine grained chloritic groundmass. Kaslo Group volcanics have been intruded by syntectonic coarse grained hornblende diorite and post-tectonic hornblende feldspar and feldspar porphyry dikes. The major structural features of this area are the Dryden anticline and Whitewater fault. The Whitewater fault is a major northwest-trending structure with several ages of movement.

CAPSULE GEOLOGY

The Dryden anticline has resulted in a strong axial planar cleavage. The axial surface is moderately to steeply inclined to the southwest and plunges 15 degrees to the southeast. Regional metamorphism, predominantly of greenschist grade, has affected all lithologies. The common alteration assemblage of Kaslo Group rocks is albite-epidote-actinolite+/-chlorite. Later hydrothermal alteration thought to be related to mineralization includes quartz, albite, iron carbonate and biotite; commonly associated with felsic dikes.

Exploration of the area dates back to the late 1800s when polymetallic silver-lead-zinc veins, such as the Gold Quartz showing (082KSW032) were first discovered. More recent exploration (1970 to present) efforts have been focused on the gold potential of the area.

The Gold Quartz Ridge prospect is crisscrossed with numerous felsic dikes and shear zones with associated quartz veins. Felsic dikes range from 1 to 2 metres width with trace to 4 per cent disseminated pyrite. Quartz stringers are also common. Shears range from 10 centimetres up to 4 metres wide. The shears generally envelop a sinuous quartz vein or stringers. Gold mineralization is restricted to quartz veining. The best assay results occur where shears intersect felsic dikes where quartz flooding and sulphide content increase.

Sample SH-28, a 30-centimetre chip sample, was taken across the intersection of a shear with a quartz vein and a felsic dike. The vein contained 1 per cent disseminated pyrite and chalcopyrite. The strike of the vein was 060 degrees. Assay results yielded 1.74 grams per tonne gold and 43.0 grams per tonne silver (Assessment Report 19475). Another sample, Sample SH-25, taken 200 metres to the east-northeast along the same shear yielded 1.05 grams per tonne gold and 14.3 grams per tonne silver (Assessment Report 19475). A third sample, Sample SH-35, yielded 1.70 grams per tonne gold and 21.0 grams per tonne silver (Assessment Report 19475).

BIBLIOGRAPHY

EMPR ASS RPT 4126, 5401, 7835, 8529, 9060, *16758, *17158, *19475
EMPR BULL 7, p. 42
EMPR EXPL 1979-83
GSC MAP 1667
GSC OF 432; 464

DATE CODED: 1995/11/30
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW163**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD QUARTZ B ZONE**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 41 N
LONGITUDE: 117 07 54 W
ELEVATION: 2160 Metres

NORTHING: 5547318
EASTING: 490579

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sample MR-18 (Assessment Report 19475).

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
ASSOCIATED: Quartz Carbonate
ALTERATION: Quartz Carbonate Chlorite Albite Biotite
ALTERATION TYPE: Silicific'n Carbonate Chloritic Biotite Albitic Biotite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: 300 x 2 Metres STRIKE/DIP: 160/76S TREND/PLUNGE:
COMMENTS: Quartz veins and shears are 0.4 to 2.0 metres wide. The quartz vein sampled had a strike of 160 degrees and dipped 76 degrees southwest. The shear zone is traceable on surface for 300 metres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian-Triassic	Kaslo	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Andesite Flow
Andesite Breccia
Pillow Andesite
Diorite
Felsic Dike
Feldspar Porphyry Dike
Hornblende Feldspar Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 83.0000 Grams per tonne
Gold 7.9200 Grams per tonne

COMMENTS: Sample MR-18, a 0.4 metre chip sample across a vein.
REFERENCE: Assessment Report 19475.

CAPSULE GEOLOGY

The Gold Quartz B Zone prospect is located 1 kilometre southwest of Mount Brennan and 60 metres northwest of the historic Gold Quartz showing (082KSW032). Kaslo, British Columbia lies 29 kilometres to the southeast.

The Gold Quartz B Zone prospect is underlain by andesite flows, breccias and pillow andesite of the Permian Kaslo Group. Synvolcanic diorite is also assigned to the Kaslo Group. The andesites are porphyritic with up to 5 per cent hornblende phenocrysts and locally feldspar phenocrysts in a fine grained chloritic groundmass. Kaslo Group volcanics have been intruded by syntectonic coarse grained hornblende diorite and post-tectonic hornblende-feldspar and feldspar porphyry dikes. The major structural features of this area are the Dryden anticline and Whitewater fault. The Whitewater fault is a

CAPSULE GEOLOGY

major northwest-trending structure with several ages of movement. The Dryden anticline has resulted in a strong axial planar cleavage. The axial surface is moderately to steeply inclined to the southwest and plunges 15 degrees to the southeast. Regional metamorphism, predominantly of greenschist grade, has affected all lithologies. The common alteration assemblage of Kaslo Group rocks is albite-epidote-actinolite+/-chlorite. Later hydrothermal alteration thought to be related to mineralization includes quartz, albite, iron carbonate and biotite; commonly associated with felsic dikes.

Exploration of the area dates back to the late 1800s when polymetallic silver-lead-zinc veins, such as the Gold Quartz showing (082KSW032) were first discovered. More recent exploration (1970 to present) efforts have been focused on the gold potential of the area.

The Gold Quartz B Zone prospect consists of a weakly sinuous shear-alteration zone up to 5 metres wide, with associated quartz veining. Massive quartz veins and quartz stockworks pinch and swell from 0.4 to 2.0 metres wide within the central part of the shear. Mineralization consists of up to 5 per cent pyrite, chalcopyrite and galena, generally concentrated along vein walls. Feldspar porphyry dikes are occasionally found adjacent to the shear zone. The shear zone strikes 160 degrees and dips steeply to the southwest. Surface trace of the shear zone extends to 300 metres.

Trenching and sampling has been conducted across this shear zone with the following assay results. Sample MR-18, from Trench 2, yielded 7.92 grams per tonne gold and 83.0 grams per tonne silver (Assessment Report 19475). The sample was a 0.4-metre chip sample across the most mineralized part of the vein. Mineralization consisted of 2 to 3 per cent pyrite and minor chalcopyrite in quartz, minor carbonate and chlorite. The strike of the vein is 160 degrees and dips 76 degrees southwest. Sample SH-12, taken immediately to the south, yielded 3.52 grams per tonne gold and 1.54 grams per tonne silver (Assessment Report 19475). A third sample, Sample SH-23, taken 250 metres to the south yielded 5.84 grams per tonne and 81.0 grams per tonne silver (Assessment Report 19475).

BIBLIOGRAPHY

EMPR ASS RPT 4126, 5401, 7835, 8529, 9060, *16758, *17158, *19475
EMPR BULL 7, p. 42
EMPR EXPL 1979-83
GSC MAP 1667
GSC OF 432; 464

DATE CODED: 1995/11/30
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW164**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAGGIE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 19 04 N
LONGITUDE: 117 07 28 W
ELEVATION: 2375 Metres

NORTHING: 5573971
EASTING: 491140

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 18136.

COMMODITIES: Gold

Copper

MINERALS

SIGNIFICANT: Unknown

ASSOCIATED: Unknown

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown

CLASSIFICATION: Unknown

TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic
Paleozoic

GROUP

Lardeau
Lardeau

FORMATION

Broadview
Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Siltstone
Sandstone
Phyllite
Andesitic Tuff
Andesitic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Maggie occurrence is located at the head of Mat Creek at 2375 metres elevation above sea level in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

No geological description could be located for this occurrence, however, it is situated west of a northwest-trending fault that separates sandstone, siltstone and phyllite of the Broadview Formation from andesitic tuffs and flows of the Index Formation to the east. The rocks are deformed in a series of northwest-trending folds. The occurrence is reported to contain gold and copper values (Assessment Report 18136).

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EMPR AR 1904-297; 1916-523; 1927-285
EMPR ASS RPT 16433, *18136
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432

DATE CODED: 1995/10/19
DATE REVISED: / /

CODED BY: GJA
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW165**

NATIONAL MINERAL INVENTORY:

NAME(S): **POCKET LAKE (L.5633)**, WHITE EAGLE (L.5634)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 21 20 N
LONGITUDE: 117 07 08 W
ELEVATION: 2025 Metres

NORTHING: 5578171
EASTING: 491543

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 18136.

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Chloritic Marble
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Regional
GRADE: Greenschist

CAPSULE GEOLOGY

The Pocket Lake occurrence is located between Cascade and Deception creeks at 2025 metres elevation above sea level in the Slocan Mining Division. The property consists of two Crown grants (Lots 5633 and 5634). The Crown grants are incorrectly located on the 1:50,000 scale topographic map (Poplar Creek 82K/6). For the correct field location of the Crown grants please refer to map 82K/W, sheet 4 printed by the British Columbia Department of Lands and Forest on July 1, 1956 (Assessment Report 16433).

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies.

No geological description could be located for this occurrence, however, it is situated in an area underlain by chloritic marble and phyllite of the Index Formation of the Lardeau Group. Significant galena mineralization occurs near the old workings. The showing is also reported to carry silver values (Assessment Report 18136).

BIBLIOGRAPHY

EMPR AR 1903-244
EMPR ASS RPT *16433, 18136
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432

DATE CODED: 1995/10/19
DATE REVISED: 1995/11/08

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW166**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOWSER FRACTION**, TOWSER MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 02 N
LONGITUDE: 117 09 17 W
ELEVATION: 2073 Metres

NORTHING: 5538704
EASTING: 488912

LOCATION ACCURACY: Within 1 KM

COMMENTS: Towser Fraction occurrence (Geological Survey of Canada Open File 464).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: Galena and sphalerite inferred from commodities and mineralogy of the Texas occurrence (082KSW016).

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Slate
Argillite
Limestone
Quartz Porphyry Dike
Quartz Porphyry Sill
Altered Basic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Towser Fraction occurrence lies between the former Jackson mine (082KSW015) and the former Texas mine (082KSW016), at 2073 metres elevation in the headwaters of Stenson Creek. Kaslo, British Columbia is 12 kilometres to the east-southeast of the occurrence.

Hostrocks at the Towser Fraction occurrence are slate, interbedded argillite and a few narrow limestone beds of the Triassic Slocan Group. Numerous quartz porphyry dikes and sills intrude this stratigraphic sequence. Highly altered basic dikes were also found crosscutting strata but are nearly parallel to lodes at the former Jackson mine. Dikes are highly sheared and altered to carbonate, quartz and mariposite.

No records could be found providing a geological description of the vein or mineralization of the former Texas mine. There may be some similarity in mode of occurrence and mineralization style to the former Jackson and Texas mines, therefore a brief geological description of these is provided in the following paragraphs.

At the former Jackson mine, the main lode, the Jackson lode, is defined as a vein-fissure. The lode generally strikes 075 to 085 degrees but changes over its exposed length to 340 degrees, nearly conforming to bedding. Overall, the lode dips 40 degrees easterly. Ore minerals include galena, sphalerite, chalcocopyrite and pyrite in a matrix of siderite, quartz and brecciated basic dike hostrock. Blebs and irregular streaks of mineralization were up to 25 centimetres wide, occurring next to the hangingwall. Most commonly, a near-solid band of sphalerite, 5 to 60 centimetres wide, followed closely along the footwall. Overall, the lode is well defined.

A number of other vein exposures were found on the Dublin Queen Crown grant and the adjoining Corrigan occurrence (082KSW014).

The Texas lode has a strike of 120 degrees and a dip of 69

CAPSULE GEOLOGY

degrees southwest. The maximum thickness is 1.2 metres. Mineralization consisted of minor sphalerite and a little galena in quartz and calcite. Clean galena formed small, irregular pockets.

For a more detailed description of the geology, lodes and occurrences in the area refer to the former Jackson mine and the former Texas mine.

The Towser Fraction occurrence has 11 tonnes of mined ore recorded in 1948. At this time the property was owned and operated by C.J. Garrett. From this 11 tonnes, 8927 grams silver, 2222 kilograms lead and 2339 kilograms zinc were recovered.

BIBLIOGRAPHY

EMPR AR *1948-144
EMPR BC METAL MM01439
EMPR INDEX 3-216
GSC MAP 1667
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/16

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW167**

NATIONAL MINERAL INVENTORY:

NAME(S): **ZUNI (L.4898)**, MOUNTAIN GOAT

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E 082F14E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 00 00 N
LONGITUDE: 117 08 51 W
ELEVATION: 2195 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5538641
EASTING: 489429

LOCATION ACCURACY: Within 500M

COMMENTS: The Zuni Crown grant (Lot 4898).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: Galena and sphalerite inferred from the commodities and the mineralogy of the Jackson (082KSW015) and Texas (082KSW016) occurrences.

COMMENTS: Siderite, quartz and calcite occur as associated gangue minerals at the Jackson and Texas occurrences.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Shaly Slate
Shaly Limestone
Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Zuni prospect is located at 2195 metres on the ridge crest that divides the Robb and Stenson creeks drainages. The former Texas (082KSW016) and Jackson (082KSW015) mines are to the east and west a short distance, respectively. Kaslo, British Columbia lies 12 kilometres to the east-southeast.

The prospect is mainly underlain by shaly limestones and slates of the Triassic Slocan Group. These strata are intruded by quartz porphyry dikes.

A vein was exposed by shallow surface workings on the Zuni claim and was worked many years prior to 1935. At that time it is reported that a 95-metre tunnel was driven in an easterly direction, 37 vertical metres below the surface exposure. It was hoped that the underground extension of the vein would be intersected but working fell short of this objective. A second attempt was made in 1933 by L.N. Garland without success.

No records could be found providing a geological description of the vein or mineralization on the Zuni prospect. There may be some similarity in mode of occurrence and mineralization style to the former Jackson and Texas mines, therefore a brief geological description of these is provided in the following paragraphs.

At the former Jackson mine, the main lode, the Jackson lode, is defined as a vein-fissure. The lode generally strikes 075 to 085 degrees but changes over its exposed length to 340 degrees, nearly conforming to bedding. Overall, the lode dips 40 degrees easterly. Ore minerals include galena, sphalerite, chalcocopyrite and pyrite in a matrix of siderite, quartz and brecciated basic dike hostrock. Blebs and irregular streaks of mineralization were up to 25 centimetres wide, occurring next to the hangingwall. Most commonly, a near-solid band of sphalerite, 5 to 60 centimetres wide followed closely along the footwall. Overall, the lode is well defined.

A number of other vein exposures were found on the Dublin Queen Crown grant and the adjoining Corrigan occurrence (082KSW014).

The Texas lode has a strike of 120 degrees and a dip of 69

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1428
REPORT: RGEN0100

CAPSULE GEOLOGY

degrees southwest. The maximum thickness is 1.2 metres. Mineralization consisted of minor sphalerite and a little galena in quartz and calcite. Clean galena formed small, irregular pockets.

BIBLIOGRAPHY

EMPR AR 1901-1228; *1933-210
GSC MAP 1667
GSC OF 432; *464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/16

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW168**

NATIONAL MINERAL INVENTORY:

NAME(S): **HILL 60, NEVERMORE, NEVERMORE 2,
SNUFFY, LOBO, RED DIAMOND,
CUB, VOYAGEURE (L.3585)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:
LATITUDE: 50 01 33 N
LONGITUDE: 117 01 22 W
ELEVATION: 2011 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Hill 60 vein location (Assessment Report 13246). See also Nevermore,
082KSW104.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5541503
EASTING: 498368

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
ASSOCIATED: Quartz Calcite Dolomite Siderite Mariposite
Pyrite
ALTERATION: Quartz Mariposite Limonite Malachite Azurite
ALTERATION TYPE: Quartz-Carb. Oxidation Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 48 x 1 Metres STRIKE/DIP: 195/68W TREND/PLUNGE: /
COMMENTS: On surface the vein varies from 20 to 87 centimetres width along 48
metres strike length. The vein has a strike of 195 to 205 degrees and
dips 68 to 75 degrees; it has 1.25 metres true width in an old adit.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Kaslo	Undefined Formation	
Triassic	Slocan	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Greenstone
Serpentine
Gabbro
Dacite
Tuffaceous Sediment/Sedimentary
Slate
Argillite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains
Quesnel
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Channel
COMMODITY

COMMODITY	GRADE	
Silver	146.7000	Grams per tonne
Lead	8.7800	Per cent
Zinc	6.3100	Per cent

COMMENTS: Weighted average of 16 vein samples over an average width of 50.5
centimetres and 48 metres strike length.
REFERENCE: Assessment Report 13246.

CAPSULE GEOLOGY

The Hill 60 prospect lies in the Blue Ridge area, 1 kilometre
northwest of the Voyaguere (082KSW048) and some 17 kilometres
northwest of Kaslo, British Columbia.
Silver-lead-zinc mineralization occurs in the Triassic Slocan

CAPSULE GEOLOGY

Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

This prospect lies immediately adjacent to the contact between lithologies of the Kaslo Group volcanics and unconformably overlying Slocan Group metasediments. At this prospect the Kaslo Group consists of greenstone, mainly andesite, serpentinite, dacite and gabbro. Slocan lithologies to the immediate southwest include tuffaceous sediments, black slate, argillite and schist.

The Hill 60 prospect consists of a vein hosted in a parallel fault structure to the Nevermore vein (082KSW104). Galena and sphalerite and rare chalcopyrite comprise significant sulphides in a quartz-calcite-dolomite-siderite-mariposite vein. Pyrite is also present. Limonite, malachite and azurite occur locally as alteration of sulphides. Vein width varies from 20 to 87 centimetres over a strike length of 48 metres. The vein is exposed in old underground workings to the north where the true width of the vein is 1.25 metres. Bleaching and quartz-carbonate alteration is extensive along the footwall of the vein. Small veins also extend obliquely from the main vein. The weighted average of 16 channel samples taken at surface over an average width of 50.5 centimetres and a strike length of 48 metres is 6.31 per cent zinc, 8.78 per cent lead and 146.4 grams per tonne silver (Assessment Report 13246).

BIBLIOGRAPHY

EMPR ASS RPT 10779, 11416, *13246
EMPR EXPL 1982-85; 1984-86
EMPR FIELDWORK 1978, pp. 92-96
EMPR PF (Stewart, R.B. (1985): Gold Exploration Review Slocan Camp)
GSC OF 432; 464

DATE CODED: 1985/08/30
DATE REVISED: 1995/10/02

CODED BY: AFW
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW169**

NATIONAL MINERAL INVENTORY:

NAME(S): **EMPIRE (L.1477), RUSTY NO.2, SNUFFY,
 LOBO, RED DIAMOND, NEVERMORE,
 NEVERMORE 2**

STATUS:	Past Producer	Underground	MINING DIVISION:	Slocan
REGIONS:	British Columbia		UTM ZONE:	11 (NAD 83)
NTS MAP:	082K03E		NORTHING:	5539372
BC MAP:			EASTING:	498607
LATITUDE:	50 00 24 N			
LONGITUDE:	117 01 10 W			
ELEVATION:	1600 Metres			
LOCATION ACCURACY:	Within 5 KM			
COMMENTS:	Vein in adit (Minister of Mines Annual Report 1960, page A55).			

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite
 COMMENTS: Mineralogy inferred from commodities recovered.
 ASSOCIATED: Quartz
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER:	Vein			
CLASSIFICATION:	Hydrothermal	Epigenetic		
TYPE:	I05	Polymetallic veins	Ag-Pb-Zn±Au	
DIMENSION:		Metres		
COMMENTS:	The vein is vertical.		STRIKE/DIP: /90	TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Kaslo	Undefined Formation	

LITHOLOGY: Argillite

HOSTROCK COMMENTS: Vein runs along argillite contact.

GEOLOGICAL SETTING

TECTONIC BELT:	Omineca	PHYSIOGRAPHIC AREA:	Selkirk Mountains
TERRANE:	Slide Mountain		

CAPSULE GEOLOGY

The Empire past producer is located 17 kilometres northwest of Kaslo, British Columbia. The occurrence is at 1600 metres elevation between Emerald and Ten Mile creeks, and north of Kaslo Creek. It was first discovered in 1899. Thirty two tonnes production occurred in 1960, from which 9331 grams silver, 31 grams gold, 4411 kilograms lead and 4379 grams zinc were recovered.

Silver-lead-zinc mineralization occurs in the Triassic Slocan Group, locally consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites and brown gritty quartzites. The general structural trend is 310 degrees, dipping generally southwesterly. Greenstones and ultramafic rocks of the Permian Kaslo Group unconformably underlie the Slocan Group to the east, also hosting silver-lead-zinc mineralization. Satellite stocks, dikes and sills are generally correlative with the Nelson batholith to the immediate south. Late stage lamprophyre dikes are also common.

Little geological description is available for the occurrence. But it was known that a drift was extended along a vertical quartz vein along an argillite contact. Maximum width of the vein was 1.5 metres. Inferred mineralogy from commodities recovered and neighbouring occurrences are argentiferous galena and sphalerite. Silver and lead are reported, in order of importance.

BIBLIOGRAPHY

EMPR AR 1899-843; *1960-A55,75; 1961-75
 EMPR ASS RPT 11416
 EMPR BC METAL MM01182
 EMPR INDEX *4-121
 GSC OF 353; 432; 464

DATE CODED: 1985/07/24
 DATE REVISED: 1995/09/21

CODED BY: GSB
 REVISED BY: KJM

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **082KSW169**

MINFILE NUMBER: **082KSW170**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLINKE**, SPYGLASS EXTENSION

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 20 47 N
LONGITUDE: 117 17 15 W
ELEVATION: 1250 Metres

NORTHING: 5577184
EASTING: 479544

LOCATION ACCURACY: Within 1 KM

COMMENTS: On Poplar Creek at 1250 metres elevation above sea level.

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Milford	Undefined Formation	
Mesozoic			Beggerlay Creek Pluton

LITHOLOGY: Marble
Phyllite
Volcaniclastic
Quartz Monzonite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

METAMORPHIC TYPE: Regional Contact

RELATIONSHIP:

GRADE: Greenschist

COMMENTS: Middle to upper greenschist facies.

CAPSULE GEOLOGY

The Blinke occurrence is located at 1250 metres elevation above sea level near the head of Poplar Creek, 3.5 kilometres southeast of Spyglass Mountain in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Spyglass Mountain area is mainly underlain by grey phyllitic rocks, marble and coarse volcaniclastic rocks of the Milford Group. The layered sequence is tightly folded in a series of northwest-trending folds which are cut to the north and south by the Mesozoic North Fork and Poplar Creek quartz monzonite stocks. The rocks have undergone contact and regional metamorphism to middle or upper greenschist facies (Geological Survey of Canada Bulletin 193).

Galena, sphalerite, pyrite and chalcopyrite occur in a quartz vein within a marble unit of the Milford Group which is in contact with a granitic intrusion. The granitic body is probably part of the Mesozoic Poplar Creek quartz monzonite stock. The sulphide minerals also occur as disseminations within the intrusion for a distance of 15 metres from the contact with the marble (Geological Survey of Canada Memoir 161).

BIBLIOGRAPHY

EMPR AR 1929-336
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161, pp. *21,31

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1433
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432
GSC SUM RPT 1917 Part B, p. 38

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/20

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW171**

NATIONAL MINERAL INVENTORY:

NAME(S): **EUREKA**, EUREKA, ORA

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082K04E
 BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 02 15 N
 LONGITUDE: 117 40 12 W

UTM ZONE: 11 (NAD 83)

NORTHING: 5543015
 EASTING: 452021

ELEVATION: 1303 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The middle adit is located 1435 metres east of the southwest corner of Lot 5843 (Plate Number 1, Assessment Report 10175).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite
 COMMENTS: Mineralogy is from quartz-sulphide float.
 ASSOCIATED: Quartz Pyrite Pyrrhotite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Epigenetic Hydrothermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 SHAPE: Tabular
 DIMENSION: Metres

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Cretaceous-Tertiary			Goat Canyon-Halifax Ck. Stock

LITHOLOGY: Graphitic Schist
 Argillite
 Mafic Volcanic
 Quartz Monzonite
 Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
 TERRANE: Quesnel
 METAMORPHIC TYPE: Regional Contact RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: FLOAT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1981
 SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1594.5000	Grams per tonne
Gold	4.8000	Grams per tonne
Lead	12.6000	Per cent
Zinc	3.9000	Per cent

REFERENCE: Assessment Report 8951.

CAPSULE GEOLOGY

The Eureka and Ora claims are located on the south side of Caribou Creek, approximately 12 kilometres east of Burton. The main Eureka showing comprises tectono-clasts or fragments of brecciated galena-bearing white vein quartz within a 3.5 metre thick graphitic shear zone. The graphitic schist is located at the contact between mafic volcanic rocks and clastic metasedimentary rocks (argillites and quartzites), both of which are part of the Triassic Slocan Group. Quartz monzonite of the Cretaceous Goat Canyon-Halifax Creek stock outcrops south of the area. Quartz-sulphide float carrying pyrite, pyrrhotite, sphalerite and galena reportedly assayed 1594.5 grams per tonne silver, 12.6 per cent lead, 3.9 per cent zinc and 4.8 grams per tonne gold (Assessment Report 8951). The showings were explored in 1934 and 1935 by two short adits and an inclined shaft located at the 1310, 1360 and 1390 metre levels respectively. Between 1980 and 1983, R. Allen and Welcome North

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PAGE: 1435
REPORT: RGEN0100

CAPSULE GEOLOGY

Mines Limited conducted prospecting and geological mapping, and collected more than 107 soil samples which were analysed for silver, lead and zinc.

BIBLIOGRAPHY

EMPR AR 1896-74; 1935-E35
EMPR ASS RPT *8951, *10175, *12375, 13797
GSC BULL 161
GSC OF 432; 464, #254

DATE CODED: 1995/09/09
DATE REVISED: 1995/09/11

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW172**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAN**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 08 30 N
LONGITUDE: 117 39 58 W
ELEVATION: 1584 Metres

NORTHING: 5554594
EASTING: 452402

LOCATION ACCURACY: Within 5 KM
COMMENTS:

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: G MARINE VOLCANIC ASSOCIATION

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic	Rossland	Elise	
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Amygdaloidal Basalt
Slate
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Stan showing is located approximately 2 kilometres southwest of Summit Lake, and approximately 16 kilometres southeast of Nakusp.

Little is known about the occurrence other than a personal communication from George Addie describing amygdaloidal basalts with a little molybdenite on some joint surfaces (George Addie, personal communication, 1978).

The basalts probably belong to the Jurassic Elise Formation of the Rossland Group and are stated to occur near the contact with slates and limestone of the Triassic Slocan Group (George Addie, personal communication, 1978).

BIBLIOGRAPHY

GSC BULL 161

DATE CODED: 1985/07/24
DATE REVISED: 1995/09/24

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW173**

NATIONAL MINERAL INVENTORY:

NAME(S): **CASCADE**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 17 04 N
LONGITUDE: 117 13 07 W
ELEVATION: 1980 Metres

NORTHING: 5570280
EASTING: 484425

LOCATION ACCURACY: Within 500M
COMMENTS: Location of mineralized dike.

COMMODITIES: Molybdenum Lead

MINERALS

SIGNIFICANT: Molybdenite Galena Pyrite
ALTERATION: Silica Sericite
ALTERATION TYPE: Silicific'n Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvanian Mesozoic	Milford	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Phyllite
Argillite
Limestone
Quartzite
Aplite Dike
Quartz Monzonite Dike
Quartz Diorite Dike
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional Contact RELATIONSHIP:
COMMENTS: Middle to upper greenschist facies. GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Chip
COMMODITY GRADE
Molybdenum 0.0240 Per cent
COMMENTS: Geochemical sample from two aplite dikes 1 and 2 metres wide,
respectively.
REFERENCE: Assessment Report 7838.

CAPSULE GEOLOGY

The Cascade occurrence is located at the head of Cascade Creek at 1980 metres elevation above sea level, 2 kilometres north of Mount Marion in the Slocan Mining Division. Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization. The rocks underlying the Cascade occurrence are thermally and regionally metamorphosed phyllite, argillite, limestone and quartzite of the Pennsylvanian Milford Group. A small granodiorite to quartz

CAPSULE GEOLOGY

monzonite stock, approximately 1500 metres long by 500 metres wide, is exposed just west of the occurrence. The stock is probably a satellite intrusion of the larger Mesozoic Poplar Creek stock to the northwest.

Numerous dikes, sills and veins intrude the sedimentary rocks and in general are quite conformable with the foliation of the hostrocks. At least three types of dikes are recognized: fine grained, white aplite; grey to pink medium grained quartz monzonite; and light grey medium grained quartz diorite. Disseminated pyrite, galena and molybdenite are associated with the fine grained, white aplite dikes. Alteration associated with the mineralization includes secondary silica and sericitization. Geochemical sampling of two aplite dikes, 1 and 2 metres wide respectively, yielded up to 260 parts per million molybdenum (0.04 per cent MoS₂) (Assessment Report 7838).

BIBLIOGRAPHY

EMPR ASS RPT 7838, *8934
EMPR EXPL 1979-87; 1980-114
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432

DATE CODED: 1995/10/19
DATE REVISED: / /

CODED BY: GJA
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW174**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLYMPUS EAST**, EK, TOM,
CHRIS, TAM, TIM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 04 34 N
LONGITUDE: 117 09 33 W
ELEVATION: 2286 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5547105
EASTING: 488611

LOCATION ACCURACY: Within 500M

COMMENTS: Vein occurrence (Assessment Report 12167). See EK 78910 (082KSW066) and Olympus West (082KSW175).

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz Hematite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Vein is 10 centimetres wide on surface.

STRIKE/DIP: 048/60S

TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Kaslo Undefined Formation

LITHOLOGY: Andesite
Tuffaceous Andesite
Fragmental Andesite
Serpentinite
Hornblende Porphyry
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY GRADE
Lead 0.1900 Per cent
Zinc 0.4100 Per cent

COMMENTS: Rock chip sample of quartz-hematite vein over 5 centimetres, from surface outcrop.

REFERENCE: Assessment Report 12167.

CAPSULE GEOLOGY

The Olympus East showing is situated in the Whitewater Creek basin, 3.5 kilometres northwest of the Highland Surprise occurrence (082KSW037). The town of Kaslo lies 28 kilometres to the southeast. Andesitic volcanics of the Permian Kaslo Group underlie the Olympus West showing (082KSW175). Locally these volcanics may be fragmental or tuffaceous. Serpentinite, locally hosting chrysotile along hairline fractures, occurs to the northeast. Serpentinite contacts appear to be faulted. Small outcrops of coarse grained hornblende porphyry, quartz feldspar porphyry (dikes?) were noted nearby. A major shear zone trending 330 degrees was noted northeast of this showing, intersecting the serpentinite body along its western margin. The Olympus East showing consists of the southeastern vein of two subparallel veins (see Olympus West, 082KSW175), roughly 175

CAPSULE GEOLOGY

metres apart along strike. The EK 78910 occurrence (082KSW066) lies 500 metres to the east and may be the underground extension of this surface vein. The vein strikes 075 degrees and dips 70 to 90 degrees east, and intersects a 340-degree trending shear 4 metres to the east of the sample location indicated below. At this location the vein is 3 to 5 centimetres wide.

A rock chip sample across 5 centimetres of quartz and hematite vein yielded assay values of 0.19 per cent lead, 0.41 per cent zinc and 5.9 parts per million silver (Assessment Report 12167). A select grab sample from the shaft dump (EK 78910, 082KSW066) yielded 435 grams per tonne silver, 12.9 per cent lead and 4.1 per cent zinc (Assessment Report 12167).

BIBLIOGRAPHY

EMPR ASS RPT 3227, *12167
EMPR GEM 1971-421
GSC OF 432; 464

DATE CODED: 1995/10/23
DATE REVISED: 1995/10/24

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW175**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLYMPUS WEST**, EK, TOM,
CHRIS, TAM, TIM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 04 38 N
LONGITUDE: 117 09 45 W
ELEVATION: 2210 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5547229
EASTING: 488373

LOCATION ACCURACY: Within 500M

COMMENTS: Vein occurrence (Assessment Report 12167). See EK 78910 (082KSW066) and Olympus East (082KSW174).

COMMODITIES: Silver

Lead

Zinc

Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
COMMENTS: Minerals observed in old excavated trench material.
ASSOCIATED: Quartz Pyrite Hematite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 048/60S TREND/PLUNGE:
COMMENTS: The vein strikes 048 degrees and dips 60 degrees south. The vein width is 10 centimetres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Kaslo Undefined Formation

LITHOLOGY: Andesite
Tuffaceous Andesite
Fragmental Andesite
Serpentinite
Hornblende Porphyry
Quartz Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 185.0000 Grams per tonne
Copper 0.9500 Per cent
Lead 3.9000 Per cent
Zinc 9.3200 Per cent
COMMENTS: Selected grab sample of excavated vein material in trench.
REFERENCE: Assessment Report 12167.

CAPSULE GEOLOGY

The Olympus West showing is located in the Whitewater Creek basin, 3.75 kilometres northwest of the Highland Surprise occurrence (082KSW037). The town of Kaslo lies 28 kilometres to the southeast. Andesitic volcanics of the Permian Kaslo Group under underlie the Olympus West showing. Locally these volcanics may be fragmental or tuffaceous. Serpentinite, locally hosting chrysotile along hairline fractures, occurs to the northeast. Serpentinite contacts appear to be faulted. Small outcrops of coarse grained hornblende porphyry and quartz feldspar porphyry (dike?) were noted nearby. A major shear zone trending 330 degrees was noted northeast of this showing, intersecting the serpentinite body along its western margin.

CAPSULE GEOLOGY

The Olympus West showing consists of the northwestern vein of two subparallel veins (see Olympus East, 082KSW174), roughly 175 metres apart along strike. The EK 78910 occurrence (082KSW066) lies 850 metres to the south-southeast and may be genetically related. The vein strikes 048 degrees and dips 60 degrees south and is developed by a 15-metre adit. At this location the vein is approximately 10 centimetres wide and composed primarily of quartz and hematite. Dump material from the adit contains traces of galena and pyrite. Dark grey andesite of the Kaslo Group and a quartz feldspar porphyry dike are hostrocks of this vein. The veins have also been exposed by trenching on surface. Here, sulphide concentrations reach 10 per cent sphalerite, 2 per cent galena and 2 per cent chalcopyrite (Assessment Report 12167).

A select grab sample (OLY-P-4-R) of vein material excavated in the trench yielded assay values of 185 grams per tonne silver, 3.90 per cent lead, 9.32 per cent zinc and 0.95 per cent copper (Assessment Report 12167).

BIBLIOGRAPHY

EMPR ASS RPT 3227, *12167
EMPR GEM 1971-421
GSC OF 432; 464

DATE CODED: 1995/10/23
DATE REVISED: 1995/10/24

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW176**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEMAC**, PAUPERS DREAM (L.1163), SLOPER FR. (L.5990),
VANCOUVER (L.2024), KASLO (L.822)

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 02 47 N
LONGITUDE: 117 08 52 W
ELEVATION: 1037 Metres

NORTHING: 5543799
EASTING: 489419

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Reverted Crown grant Lot 822.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: Galena and sphalerite are inferred from the the presence of silver-lead-zinc mineralization and the other occurrences in the area.
ASSOCIATED: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Slocan	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Calcareous Argillite
Shale
Slate
Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Lemac occurrence is located north of Retallack on the north side of the Kaslo River at 1037 metres elevation above sea level, in the Slocan Mining Division. The property includes the Paupers Dream, Sloper Fraction and Vancouver Crown grants and the Kaslo Reverted Crown grant (Lots 1163, 5990, 2024 and 822 respectively).

Regionally, the area lies on the western margin of the Kootenay Arc, in allochthonous rocks of the Quesnel Terrane. In the vicinity of the occurrence, the Quesnel Terrane is dominated by the Upper Triassic Slocan Group, a thick sequence of deformed and metamorphosed shale, argillite, siltstone, quartzite and minor limestone. Rocks of the Slocan Group are tightly and disharmonically folded. Early minor folds are tight to isoclinal with moderate east plunging, southeast inclined axial planes and younger folds are open, southwest plunging with subhorizontal axial planes. The sedimentary sequence has been regionally metamorphosed to lower greenschist facies.

South of the occurrence, the Slocan Group has been intruded by the Middle Jurassic Nelson intrusions which comprise at least six texturally and compositionally distinct phases ranging from diorite to lamprophyre. The most dominant phase is a medium to coarse grained potassium feldspar porphyritic granite. Several feldspar porphyritic granodiorite dikes, apparently related to the Nelson intrusions, also cut the sedimentary sequence near the occurrence. Volcanic rocks of the Permian to Carboniferous Kaslo Group are exposed west of the occurrence (Paper 1989-5).

The property is underlain by thinly bedded calcareous argillite, shale and slate of the Slocan Group. Minor limestone and quartzite beds are also present. The sedimentary rocks strike northwest and dip southwest.

No geological description could be located for this occurrence but over 4400 cubic metres of trenching was carried out in 1978 to

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REPORT: RGEN0100

CAPSULE GEOLOGY

expose some silver-lead-zinc mineralization (Exploration in British Columbia 1978).

BIBLIOGRAPHY

EMPR AR 1890-367; 1896-559,560; 1898-1193; 1899-847; 1905-253;
1927-286
EMPR BULL *22, pp. 14-17; 29
EMPR EXPL *1978-E74
EMPR FIELDWORK *1978, pp. 92,93
EMPR MEIP 78/79
EMPR P 1989-5
GSC MAP 273A; 1667
GSC MEM 173; 184; 309
GSC OF 432; 464

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/14

CODED BY: GSB
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW177**

NATIONAL MINERAL INVENTORY:

NAME(S): **EUREAKA SOUTHEAST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

Underground

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 01 59 N
LONGITUDE: 117 40 02 W

NORTHING: 5542519
EASTING: 452215

ELEVATION: 1500 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate location of two adits located in the southeast corner of the Eureka claim (Assessment Report 16967).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Tabular

DIMENSION: Metres

STRIKE/DIP:

TREND/PLUNGE: /

COMMENTS: Deposit information inferred from data on the Eureka occurrence (082KSW171).

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Mafic Volcanic
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional Contact

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

720.0000

Grams per tonne

Gold

7.9000

Grams per tonne

REFERENCE: Assessment Report 16967.

CAPSULE GEOLOGY

The Eureka claim (082KSW171) is located on the south side of Caribou Creek, approximately 12 kilometres east of Burton.

The Eureka Southeast adits are located approximately 400 metres southeast of the Eureka adits and although the area is shown to be underlain by similar lithologies (Geological Survey of Canada Bulletin 161) there is no information regarding the Eureka Southeast occurrence. A grab sample of quartz vein material containing galena and sphalerite found on the old dumps assayed 720 grams per tonne silver and 7.9 grams per tonne gold (Assessment Report 16967). The area is located near the contact between mafic volcanic rocks and clastic metasedimentary rocks (argillites and quartzites), both of which are part of the Triassic Slocan Group.

No information is available on the early history of the property. The Eureka Southeast adits were re-discovered during a prospecting program in 1987 (Assessment Report 16967). During 1977 and 1988 programs of soil geochemistry (265 samples analysed for lead, zinc, silver, arsenic, gold and tungsten), magnetometer and VLF-EM surveying (7.4 kilometres), prospecting, roadbuilding (0.2 kilometre) and trenching (125 metres in 3 trenches) were completed (Assessment Reports 16967 and 18344).

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1446
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *16967, 18344
GSC BULL 161
GSC OF 432

DATE CODED: 1995/09/09
DATE REVISED: 1995/09/12

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW178**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNTAIN MEADOW MO (EAST)**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 52 N
LONGITUDE: 117 45 51 W
ELEVATION: 2015 Metres

NORTHING: 5547929
EASTING: 445327

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing (Figure 16, Assessment Report 7829).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz Pyrite K-Feldspar
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Ruby Range Stock

ISOTOPIC AGE: 123 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Mountain Meadow Mo (East) showing is located on Meadow Mountain, approximately 15 kilometres northeast of Burton. Good access is available on gravel roads to the western edge of the property.

The showing (Assessment Report 7829) is a set of sheeted quartz veins, ranging from 1 to 30 centimetres in thickness, containing fine-grained pyrite and molybdenite as coarse rosettes and fine seams. Coarse euhedral K-feldspar crystals impart a pegmatitic texture to the veins. The main vein set strikes approximately 160 degrees, generally dipping steeply east and outcrops over a length of 700 metres and a width of 250 metres. A weaker mineralized fracture set strikes 030 degrees, dipping steeply southeast (Assessment Report 11865). Hostrocks are quartz diorites of the Jurassic Ruby Range stock, which intrudes east trending, steeply dipping clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group. Potassium-argon dating of biotite from the Ruby Range stock yielded an age of 123 million years (Geological Survey of Canada Open File 464).

During 1979 (Assessment Report 7829) the property was geologically mapped, prospected and 960 soil and silt geochemical samples collected and analysed for molybdenum, copper, zinc and lead.

BIBLIOGRAPHY

EMPR ASS RPT *7829, 11865
GSC BULL 161
GSC OF 432

DATE CODED: 1995/09/14
DATE REVISED: / /

CODED BY: RMC
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW179**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNTAIN MEADOW MO (NORTH)**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 46 N
LONGITUDE: 117 47 28 W
ELEVATION: 2015 Metres

NORTHING: 5549617
EASTING: 443417

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing (Figure 16, Assessment Report 7829).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic
Jurassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Porphyritic Diorite
Clastic Sediment/Sedimentary
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Mountain Meadow Mo (North) showing is located on Meadow Mountain, approximately 15 kilometres northeast of Burton. Good access is available on gravel roads to the western edge of the property.

The showing (Assessment Report 7829) is a set of quartz veins, ranging from 1 to 5 centimetres in thickness, carrying coarse molybdenite rosettes and fine grained pyrite clusters. The hostrocks are porphyritic diorites probably of Jurassic age, which intrude east trending, steeply dipping clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group.

During 1979 (Assessment Report 7829) the property was geologically mapped, prospected and 960 soil and silt geochemical samples collected and analysed for molybdenum, copper, zinc and lead.

BIBLIOGRAPHY

EMPR ASS RPT *7829, 11865
GSC BULL 161
GSC OF 432

DATE CODED: 1995/09/14
DATE REVISED: 1995/09/14

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW180**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNTAIN MEADOW ARSENOPYRITE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 29 N
LONGITUDE: 117 46 11 W
ELEVATION: 2000 Metres

NORTHING: 5547222
EASTING: 444922

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing (Figure 16, Assessment Report 7829).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Arsenopyrite
ASSOCIATED: Sericite Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic
Jurassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Ruby Range Stock

ISOTOPIC AGE: 123 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite
Clastic Sediment/Sedimentary
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1980

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

26.0000

Grams per tonne

Gold

30.0000

Grams per tonne

COMMENTS: Average of a series of channel samples taken at 90 centimetre intervals from the sericite-arsenopyrite vein which is 50 to 75 centimetres wide.

REFERENCE: Assessment Report 7829.

CAPSULE GEOLOGY

The Mountain Meadow Arsenopyrite showing is located on Meadow Mountain, approximately 15 kilometres northeast of Burton. Good access is available on gravel roads to the western edge of the property.

The showing (Assessment Report 7829) consists of a 50 to 75 centimetre wide sericite-arsenopyrite vein. The vein is vertical and strikes 060 degrees. The vein consists of euhedral to subhedral arsenopyrite crystals in a matrix of sericite blades. A series of channel samples taken at 90 centimetre intervals (Assessment Report 7829) yielded an average assay of 7 parts per million copper, 26 grams per tonne silver and 30 grams per tonne gold. A second narrower sericite-arsenopyrite vein and a parallel quartz vein have been exposed in a trench 1.5 metres north of the main vein. Hostrocks are quartz diorites of the Jurassic Ruby Range stock, which intrudes east trending, steeply dipping clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group. Potassium-argon dating of biotite from the Ruby Range stock yielded an age of 123 million years (Geological Survey of Canada Open File 464).

During 1979 (Assessment Report 7829) the property was

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CAPSULE GEOLOGY

geologically mapped, prospected and 960 soil and silt geochemical samples collected and analysed for molybdenum, copper, zinc and lead. In 1982, a six hole diamond-drill hole program totalling 485.6 metres tested the showing. The highest assay was 11.8 grams per tonne gold across 0.3 metre (Assessment Report 11865).

BIBLIOGRAPHY

EMPR ASS RPT *7829, *11865
GSC BULL 161
GSC OF 432

DATE CODED: 1995/09/14
DATE REVISED: 1995/09/15

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW181**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNTAIN MEADOW GALENA**

MINING DIVISION: Slocan

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 27 N
LONGITUDE: 117 46 59 W
ELEVATION: 1980 Metres

NORTHING: 5547171
EASTING: 443967

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing (Figure 16, Assessment Report 7829).

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic
Jurassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Ruby Range Stock

ISOTOPIC AGE: 123 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite
Clastic Sediment/Sedimentary
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY

YEAR: 1982

COMMODITY	GRADE	
Silver	63.5000	Grams per tonne
Gold	1.8000	Grams per tonne
Lead	4.6000	Per cent

COMMENTS: Average of three grab samples.
REFERENCE: Assessment Report 11865.

CAPSULE GEOLOGY

The Mountain Meadow Galena showing is located on Meadow Mountain, approximately 15 kilometres northeast of Burton. Good access is available on gravel roads to the western edge of the property.

The showing (Assessment Report 7829) is a set of 1 to 6 centimetre thick quartz veins which carry lenses of galena and pyrite within vuggy quartz. The veins strike approximately 160 degrees, generally dipping steeply east and outcrop over a length of 1000 metres. The largest vein of the set carries erratic lenses of massive galena (Assessment Report 7829) and reaches 90 centimetres in thickness. The average of three grab samples taken in 1982 (Assessment Report 11865) was 4.6 per cent lead, 1.8 grams per tonne gold and 63.5 grams per tonne silver.

Hostrocks are quartz diorites of the Jurassic Ruby Range stock, which intrudes east trending, steeply dipping clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group. Potassium-argon dating of biotite from the Ruby Range stock yielded an age of 123 million years (Geological Survey of Canada Open File 464).

During 1979 (Assessment report 7829) the property was geologically mapped, prospected and 960 soil and silt geochemical

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CAPSULE GEOLOGY

samples collected and analysed for molybdenum, copper, zinc and lead.

BIBLIOGRAPHY

EMPR ASS RPT *7829, 11865
GSC BULL 161
GSC OF 432

DATE CODED: 1995/09/14
DATE REVISED: 1995/09/15

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW182**

NATIONAL MINERAL INVENTORY:

NAME(S): **TYEE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 03 N
LONGITUDE: 117 41 18 W
ELEVATION: 1550 Metres

NORTHING: 5544510
EASTING: 450721

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Figure 9, Assessment report 13797.

COMMODITIES: Gold Zinc

MINERALS

SIGNIFICANT: Sphalerite Arsenopyrite Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Carbonate Chlorite Quartz
ALTERATION TYPE: Carbonate Chloritic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Triassic

GROUP

Slocan

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Tuffaceous Mafic Volcanic
Argillaceous Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1984

COMMODITY

GRADE

Gold

1.2000

Grams per tonne

COMMENTS: Sample width of 1.2 metres.
REFERENCE: Assessment Report 13797.

CAPSULE GEOLOGY

The Tyee occurrence is located north of Caribou Creek at the 1550 metre elevation, approximately 700 metres east of Tyee Creek. The town of Burton is 15 kilometres to the southwest.

Diamond drilling by Falconbridge in 1984 intersected sub-economic gold in drillhole 84-3 (Assessment Report 13797). Two metres grading 1.2 grams per tonne gold and 1.7 metres grading 0.95 gram per tonne were intersected in altered tuffaceous mafic volcanic rock near the contact with argillaceous metasedimentary rocks of the Triassic Slocan Group. These values are associated with zones of disseminated pyrite, sphalerite and arsenopyrite. Strong bleaching, chloritization and quartz-carbonate alteration is evident in the area.

In 1984, Ivor Watson and Associates conducted prospecting, geological mapping and soil sampling. In 1985, Falconbridge Ltd. completed some soil sampling and geological mapping and drilled 10 diamond-drill holes totalling 684 metres. In 1988, Ainsworth Jenkins Holdings Inc. conducted soil sampling, and magnetic and electromagnetic surveys.

BIBLIOGRAPHY

EMPR ASS RPT 12375, *13797
GSC BULL 161

RUN DATE: 25-Jun-2003
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REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432

DATE CODED: 1995/09/15
DATE REVISED: / /

CODED BY: RMC
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW183**

NATIONAL MINERAL INVENTORY:

NAME(S): **SLEWISKIN**, DORE, SUNSHINE,
SUB 1, SUB 2

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 05 02 N
LONGITUDE: 117 39 13 W
ELEVATION: 1670 Metres

NORTHING: 5548162
EASTING: 453239

LOCATION ACCURACY: Within 500M
COMMENTS: Location of Sample 89108, Map 1, Assessment Report 13341.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Arsenopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Triassic

Slocan

Undefined Formation

Ruby Range Stock

Jurassic

ISOTOPIC AGE: 123 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Biotite Hornblende Quartz Diorite
Clastic Sediment/Sedimentary
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1984

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

10.1000

Grams per tonne

REFERENCE: Assessment Report 13341.

CAPSULE GEOLOGY

The Slewiskin gold occurrence is located near the head of Slewiskin Creek, 21 kilometres southeast of Nakusp. Good logging road access is available from the east via Shannon Creek.

Quartz veins ranging in width from 2 to 30 centimetres are exposed (Assessment Report 13341) along logging roads on the Dore, Sub 1 and Sub 2 claims. Although most veins are barren of metallic minerals, two were observed to contain arsenopyrite. Samples from several of the veins yielded low gold values, the highest being 10.1 grams per tonne gold in sample 89108 (Assessment Report 13341). The hostrock is biotite hornblende quartz diorite of the Jurassic Ruby Range stock which intrudes east trending, steeply dipping clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group. Quartz veins are also present in Slocan Group strata. Potassium-argon dating of biotite from the Ruby Range stock yielded an age date of 123 million years (Geological Survey of Canada Open File 464).

Between 1983 and 1986, Tillicum Gold Mines Limited conducted soil sampling (339 samples analysed for gold and some for silver), silt sampling (269 samples analysed for gold), and magnetic and VLF-EM surveys (21 kilometres).

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BIBLIOGRAPHY

EMPR ASS RPT 11351, *13341, 14179, 15625
GSC BULL 161
GSC OF 432

DATE CODED: 1995/09/18
DATE REVISED: / /

CODED BY: RMC
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW184**

NATIONAL MINERAL INVENTORY:

NAME(S): **ORO**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 00 24 N
LONGITUDE: 117 46 47 W
ELEVATION: 1220 Metres

NORTHING: 5539663
EASTING: 444128

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Initial claim posts, Figure 4, Assessment Report 11287.

COMMODITIES: Gold Tungsten

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Scheelite

ASSOCIATED: Quartz

ALTERATION TYPE: Skarn

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Breccia

CLASSIFICATION: Hydrothermal

TYPE: K04 Au skarn

I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Triassic

Slocan

Undefined Formation

Goat Canyon-Halifax Ck. Stock

Cretaceous

ISOTOPIC AGE: 107 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Skarn
Quartz Diorite Dike
Amphibolite
Hornblende Biotite Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1983

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

3.6000

Grams per tonne

COMMENTS: Sample width of 30 centimetres (drillhole 83-2).

REFERENCE: Assessment Report 11287.

CAPSULE GEOLOGY

The Oro claims were located on the south side of Caribou Creek, 7 kilometres east of Burton. Good logging road access is available to the property.

A brecciated vein zone of quartz, pyrrhotite and pyrite with minor scheelite was intersected (Assessment Report 11287) in two drillholes in a three hole diamond-drill hole program in 1983. Low grade gold intersections were obtained, the highest being 3.6 grams per tonne across 30 centimetres in hole number 83-2. The hostrocks are described as being skarn near the contact with a biotite hornblende quartz diorite dike. Amphibolite was also intersected in the drillhole (Assessment Report 11287).

The area is shown as being underlain by hornblende biotite quartz diorite of the Cretaceous Goat Canyon-Halifax Creek stock (Geological Survey of Canada Bulletin 161) which intrudes clastic sedimentary and mafic volcanic rocks of the Triassic Slocan Group. Biotite from the Goat Canyon-Halifax Creek stock has been dated by the potassium-argon method at 107 million years (Geological Survey of Canada Open File 464).

The Oro Group of four claims was staked to cover a gossanous

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CAPSULE GEOLOGY

trench uncovered during a logging operation. During 1982, a program of magnetometer, VLF-EM, CEM and soil geochemical surveying was carried out over the claims and followed-up by the three hole (374 metre) diamond-drill hole program in 1983.

BIBLIOGRAPHY

EM OF 1999-3
EMPR ASS RPT *11287
EMPR OF 1999-3
GSC BULL 161
GSC OF 432

DATE CODED: 1995/09/20
DATE REVISED: / /

CODED BY: RMC
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW185**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRINCE**, COACHMAN

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 15 23 N
LONGITUDE: 117 48 49 W
ELEVATION: 500 Metres

NORTHING: 5567454
EASTING: 442002

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drillholes, map number 2, Assessment Report 6296.

COMMODITIES: Lead Silver Gold

MINERALS

SIGNIFICANT: Galena Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Triassic

GROUP

Rossland

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Tuff
Porphyritic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1986

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

3116.0000

Grams per tonne

Gold

7.5000

Grams per tonne

Lead

48.5000

Per cent

REFERENCE: Assessment Report 15785.

CAPSULE GEOLOGY

The Prince showings are located 2 kilometres north of the town of Nakusp. They were exposed during excavation for a trailer court.

Vein-type lead-zinc-silver showings are reported to be present (Assessment Report 20005) with pyrite in showings in the trailer court. Galena is reported in Assessment Report 15875, as is an assay of 48.5 per cent lead, 3116 grams per tonne silver and 7.5 grams per tonne gold. There is no information on the geology of the occurrence other than the rock in a diamond-drill hole on the property which is a phyllitic rock which appears to be volcanic, with a relic texture suggesting either a tuff or a porphyritic flow (Assessment Report 20005). If the hostrocks are volcanic, they likely belong to the Triassic Rossland Group. GSC Open File 432 shows the area to be underlain by pelitic to silty phyllite and slate of the Triassic Slocan Group.

The showing was uncovered in 1974 during excavations for a trailer court and the Coachman mineral claim was staked by J.E. Harris. Five percussion-drill holes were drilled in 1976 (Assessment Report 6296). In 1986, prospecting and a single diamond-drill hole were completed on the property (Assessment Report 15785). During 1990, another diamond-drill hole (38.1 metres) was completed.

BIBLIOGRAPHY

EMPR ASS RPT 6296, 15785, *20005
GSC BULL 161

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BIBLIOGRAPHY

GSC OF 432

DATE CODED: 1995/10/02
DATE REVISED: 1995/10/02

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW186**

NATIONAL MINERAL INVENTORY:

NAME(S): **BULL**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 14 47 N
LONGITUDE: 117 55 14 W
ELEVATION: 980 Metres

NORTHING: 5566431
EASTING: 434365

LOCATION ACCURACY: Within 500M

COMMENTS: Location of samples 27281 and 27282 on Line 6, figure 5, Assessment Report 22651.

COMMODITIES: Zinc

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Syngenetic
TYPE: E14 Sedimentary exhalative Zn-Pb-Ag

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE

Paleozoic
Tertiary

GROUP

Monashee

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Ladyberg Intrusions

LITHOLOGY: Biotite Schist
Quartzite
Marble
Amphibolite
Pegmatite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Monashee Mountains

RELATIONSHIP:

GRADE: Amphibolite
Granulite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1992

COMMODITY

Zinc

GRADE

1.1400 Per cent

REFERENCE: Assessment Report 22651.

CAPSULE GEOLOGY

The Bull claims are located near the west shore of Arrow Lake approximately nine kilometres west of the community of Nakusp. Access is good on several old logging roads which lead north from the Arrow Park ferry landing, 21.4 kilometres by road south of the property.

No base metal sulphide minerals have been identified on the property, however, two lithogeochemical samples (samples 27281 and samples 17282, Assessment Report 22651) from gossanous, pyritic biotite schist assayed 0.48 and 1.14 per cent zinc (Assessment Report 22651). The area is underlain mainly by highly metamorphosed rocks of the Precambrian- Paleozoic Shuswap Metamorphic Complex. On the property, quartzites and biotite schists contain 1-2 per cent disseminated pyrite and pyrrhotite. Marble and amphibolite are also present. The Shuswap metamorphic rocks have been tightly deformed into isoclinal folds, and appear to form a broad synform with a west-northwest trending axial plane and a shallow plunge to the northwest. Pegmatite sills and dikes of the Tertiary Ladyberg intrusions are common on the property (Assessment Report 22651).

Teck Exploration Limited staked the Bull 1 to 6 claims in 1991 and in 1992 completed a program of gridding (19.9 kilometres), soil sampling (412 samples with analyses for 30 elements including zinc, silver and nickel), magnetometer surveying (3 kilometres),

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CAPSULE GEOLOGY

lithogeochemical sampling (12 samples analysed for 30 elements) and geological mapping (23 square kilometres).

BIBLIOGRAPHY

EMPR ASS RPT *22651
GSC BULL 161
GSC OF 432
EMPR OF 2000-22

DATE CODED: 1995/10/02
DATE REVISED: 1995/10/02

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW187**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANNIE**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 18 32 N
LONGITUDE: 117 58 20 W
ELEVATION: 1040 Metres

NORTHING: 5573427
EASTING: 430772

LOCATION ACCURACY: Within 500M

COMMENTS: Location of an 80-centimetre wide mineralized quartz vein, figure 2, Assessment Report 21806.

COMMODITIES: Silver Lead Gold Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Tabular

DIMENSION: Metres

STRIKE/DIP: 148/55W

TREND/PLUNGE:

COMMENTS: Quartz vein.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Triassic

Slocan

Undefined Formation

LITHOLOGY: Quartz Sericite Schist
Graphitic Schist
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Monashee Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Amphibolite

INVENTORY

ORE ZONE: HIGH-GRADE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1991

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

663.0000

Grams per tonne

Gold

0.1900

Grams per tonne

Lead

0.9000

Per cent

COMMENTS: Selected high-grade sample.

REFERENCE: Assessment Report 21806.

CAPSULE GEOLOGY

The Annie claims are located 13 kilometres northwest of Nakusp, on the west side of Upper Arrow Lake. Access is by logging road.

The showing consists of an 80-centimetre wide quartz vein carrying pyrite, galena and a trace of chalcopyrite along the margins of the vein. The vein strikes 148 degrees, dipping 50 to 60 degrees southwest. A selected high-grade sample assayed 0.2 gram per tonne gold, 663 grams per tonne silver and 0.9 per cent lead (Assessment Report 21806).

The vein crosscuts a quartz sericite schist horizon which is interlayered with graphitic schists and argillites of the Triassic Slocan Group. The strata have undergone regional metamorphism which has reached the amphibolite grade. Disseminated pyrrhotite, pyrite and irregular quartz veining are common in both the graphitic and in the quartz sericite schist horizons. The strata strike approximately 320 degrees, dipping moderately northeast.

The showing was discovered and staked in 1991. Twenty-five hectares were geologically mapped and prospected, 24 soil geochemical samples were collected and analysed for silver and zinc, and one rock chip sample assayed.

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EMPR ASS RPT *21806
GSC BULL 161
GSC OF 432

DATE CODED: 1995/10/03
DATE REVISED: 1995/10/03

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW188**

NATIONAL MINERAL INVENTORY:

NAME(S): **VICTIM MOLYBDENITE #2**, SHANNON CREEK, ANTON,
NOLY, MALY, VICTOR,
NORTH, BOBBIE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:
LATITUDE: 50 04 34 N
LONGITUDE: 117 30 45 W
ELEVATION: 1375 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of diamond-drill holes 80-SH-01 and 02, Figure 4, Assessment Report 9175).

MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5547219
EASTING: 463329

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Pyrite Quartz Muscovite
ALTERATION: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Igneous-contact Hydrothermal
TYPE: L05 Porphyry Mo (Low F- type) O PEGMATITE

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	
Cretaceous			Wragge Creek Stock

ISOTOPIC AGE: 74 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Aplite
Pegmatite
Hornblende Biotite Quartz Monzonite
Granodiorite
Quartz Diorite

HOSTROCK COMMENTS: GSC Open File 432.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: DRILLHOLE
CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY: Molybdenum
COMMENTS: Assay interval of 2.1 metres.
REFERENCE: Assessment Report 8402.

REPORT ON: N
YEAR: 1981
GRADE: 0.0580 Per cent

CAPSULE GEOLOGY

The Victim Molybdenite #2 occurrence is located 4.0 kilometres west of the north end of Slocan Lake and 4.0 kilometres southwest of the town of Hills.

Molybdenite occurs as blebs and rosettes in veins, quartz stringers and fracture fillings generally associated with quartz, muscovite and pyrite in aplites and pegmatitic phases near contact areas and in marginal phases of the Cretaceous Wragge Creek stock (Assessment Report 8402). The best intersection in diamond-drill hole 80-SH-02 was 0.058 per cent molybdenum across 2.1 metres in a pegmatite. The Wragge Creek stock is composed of hornblende biotite quartz monzonite and minor quartz diorite and granodiorite. A potassium-argon date on biotite yielded an age of 74 million years (GSC Open File 432). The stock has intruded and hornfelsed fine grained sedimentary strata and mafic volcanic rocks of the Triassic

CAPSULE GEOLOGY

Slocan Group. The Slocan Group rocks are at low metamorphic rank and include grey to black phyllite, argillite, quartzite and limestone.

In 1970 (Assessment report 2393), Argem Explorations Limited prepared 1662 metres of line and collected 191 soil geochemical samples which were analysed for zinc and molybdenum. In 1971 (Assessment Report 3004), Argem Explorations Limited prepared an additional 6344 metres of line, collected 178 soil samples and again analysed them for zinc and molybdenum. In 1980 (Assessment Report 8042), Cyprus Anvil Mining Corporation optioned the property, cut 9.2 kilometres of baseline and crossline and collected 1780 soil samples which were analysed for molybdenum, copper, lead, zinc and silver. In 1981 (Assessment Report 9175), Cyprus Anvil completed some trenching and four diamond-drill holes totalling 1042 metres. Molybdenite was intersected at this occurrence as well as at the Victim Molybdenite #1 (082KSW062), located 2 kilometres to the east. A vein containing galena and sphalerite was intersected 2.5 kilometres to the northeast (Victim Silver, 082KSW189). In 1983 (Assessment Report 11646), Shannon Creek Resources Limited collected 168 soil samples which were analysed for gold, silver, lead, zinc and copper. In 1986 (Assessment Report 14947), Silvera Resources Incorporated analysed 226 of the Cyprus Anvil soil geochemical samples for gold.

BIBLIOGRAPHY

EMPR ASS RPT 2393, 3004, 8402, *9175, 11646, 14947
GSC BULL 161
GSC OF 464; 432, #256

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/05

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW189**

NATIONAL MINERAL INVENTORY:

NAME(S): **VICTIM SILVER**, SHANNON CREEK, ANTON,
NOLY, MALY, VICTOR,
NORTH, BOBBIE

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:
LATITUDE: 50 04 42 N
LONGITUDE: 117 29 38 W
ELEVATION: 960 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of diamond-drill hole 80-SH-04, Figure 4, Assessment Report 9175).

UTM ZONE: 11 (NAD 83)

NORTHING: 5547457

EASTING: 464662

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz Pyrite Pyrrhotite
ALTERATION: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au O PEGMATITE

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Cretaceous			Wragge Creek Stock

ISOTOPIC AGE: 74 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Pyritic Phyllite
Pegmatite
Hornblende Biotite Quartz Monzonite
Granodiorite
Quartz Diorite
Sandstone
Limestone

HOSTROCK COMMENTS: GSC Open File 432.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Victim Silver occurrence is located 2.0 kilometres west of the north end of Slocan Lake and 2.5 kilometres southwest of the town of Hills. Pegmatitic quartz veins carrying pyrite, galena and sphalerite cut Slocan Group black, pyritic phyllite interlayered with black pyritic sandstone and minor limestone (Assessment Report 9175). Diamond-drill hole 80-SH-04 intersected pyrite and pyrrhotite in phyllite and a felsic dike which assayed less than 1 gram per tonne silver. Slocan Group rocks are Triassic in age and are intruded by the Wragge Creek stock which is composed of hornblende biotite quartz monzonite and minor quartz diorite and granodiorite. A potassium-argon date on biotite yielded an age of 74 million years (GSC Open File 432).

In 1970 (Assessment report 2393), Argem Explorations Limited prepared 1662 metres of line and collected 191 soil geochemical samples which were analysed for zinc and molybdenum. In 1971 (Assessment Report 3004), Argem Explorations Limited prepared an additional 6344 metres of line, collected 178 soil samples and again analysed them for zinc and molybdenum. In 1980 (Assessment Report 8042), Cyprus Anvil Mining Corporation optioned the property and cut 9.2 kilometres of baseline and crossline and collected 1780 soil samples which were analysed for molybdenum, copper, lead, zinc and silver. In 1981 (Assessment Report 9175), Cyprus Anvil completed some trenching and four diamond-drill holes totalling 1042 metres. Molybdenite was intersected at the Victim Molybdenite #1 occurrence

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CAPSULE GEOLOGY

(082KSW062) as well as at the Victim Molybdenite #2 occurrence (082KSW188) another two kilometres to the west, and a vein containing galena and sphalerite was intersected at the Victim Silver occurrence. In 1983 (Assessment Report 11646), Shannon Creek Resources Limited collected 168 soil samples which were analysed for gold, silver, lead, zinc and copper. In 1986 (Assessment Report 14947), Silvera Resources Incorporated analysed 226 of the Cyprus Anvil soil geochemical samples for gold.

BIBLIOGRAPHY

EMPR ASS RPT 2393, 3004, 8402, *9175, 11646, 14947
GSC BULL 161
GSC OF 464; 432, #256

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/05

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW190**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROSEBERY GALENA-SPHALERITE** LEONTOWICZ CLAIM BLOCK, WILSON CREEK,
LEMAX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:
LATITUDE: 50 02 28 N
LONGITUDE: 117 23 07 W
ELEVATION: 650 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adits on figure 3, Assessment Report 7514.

Underground
MINING DIVISION: Slocan
UTM ZONE: 11 (NAD 83)
NORTHING: 5543273
EASTING: 472412

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Slocan	Undefined Formation	Rosebery Stock
Unknown			

LITHOLOGY: Quartz Monzonite
Quartzite
Argillite
Limestone
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Rosebery galena-sphalerite veins are located 2 kilometres northeast of Rosebery, on the east side of Wilson Creek, east of Slocan Lake. The Ferry No. 2 occurrence (082KSW001) is located 2 kilometres to the northeast.

Flat lying galena-sphalerite-quartz veins cutting quartz monzonite are exposed in adits on the east side of Wilson Creek. The veins crosscut quartz monzonite (figure 3, Assessment Report 7514) of the Rosebery stock of unknown age (GSC Open File 432). The Rosebery stock is composed of quartz monzonite and granite and intrudes sedimentary rocks of the Triassic Slocan Group which is composed of quartzites, argillites and limestones. There is no additional published information on the occurrence.

Prospecting work is mentioned in 1935 (GSC Memoir 184) and possibly "development work" by "hand steel" in 1942 (Minister of Mines Annual Report 1942). In 1970, the ground was staked by Peter Leontowicz and optioned to United Bata Resources Limited (later Pan Ocean Oil Limited), who in 1970 (Assessment Report 2944) undertook reconnaissance soil sampling (875 samples analysed for molybdenum and copper). In 1979, Amax Potash Limited optioned the property and undertook a program of geological mapping and collected 369 soil and stream sediment samples which were analysed for 11 elements including lead, zinc and silver (Assessment Report 7514).

BIBLIOGRAPHY

EMPR ASS RPT 2944, 3113, 7514
EMPR EXPL 1979-84
EMPR GEM 1971-423
GSC MEM 184, p. 41
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW190**

MINFILE NUMBER: **082KSW191**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEMEX NORTH SPHALERITE** LEONTOWICZ CLAIM BLOCK, LEMAX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

MINING DIVISION: Slocan

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 03 43 N
LONGITUDE: 117 22 04 W

NORTHING: 5545583
EASTING: 473676

ELEVATION: 1070 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Showings on north side of figure 3, Assessment Report 7514.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	
Unknown			Rosebery Stock

LITHOLOGY: Quartzite
Argillite
Limestone
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

The Lemax North sphalerite veins are located 4.5 kilometres northeast of Rosebery, on the east side of Wilson Creek, east of Slocan Lake.

Veinlets carrying quartz, pyrite and sphalerite are shown on figure 3, Assessment Report 7514. The veins are shown to crosscut quartzites (figure 3, Assessment Report 7514) of the Triassic Slocan Group which is composed of quartzites, argillites and limestones. Slocan Group sedimentary rocks are intruded by quartz monzonite of the Rosebery stock of unknown age (GSC Open File 432). There is no additional published information on the occurrence.

Prospecting work is mentioned in 1935 (GSC Memoir 184). The property was staked by Peter Leontowicz and optioned to United Bata Resources Limited (later Pan Ocean Oil Limited), who in 1970 (Assessment Report 2944) undertook reconnaissance soil sampling (875 samples analysed for molybdenum and copper). In 1979, Amax Potash Limited optioned the property and undertook a program of geological mapping and collected 369 soil and stream sediment samples which were analysed for 11 elements including lead, zinc and silver.

BIBLIOGRAPHY

EMPR ASS RPT 2944, 7514
GSC MEM 184, p. 41
GSC OF 432

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW192**

NATIONAL MINERAL INVENTORY:

NAME(S): **FITZSTUBBS CREEK GOLD, C1-C6**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 08 32 N
LONGITUDE: 117 23 12 W
ELEVATION: 1000 Metres

NORTHING: 5554515
EASTING: 472371

LOCATION ACCURACY: Within 500M

COMMENTS: Location of gold showing, Plate 5, Assessment Report 12042.

COMMODITIES: Gold Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Permian-Triassic
Triassic
Unknown

GROUP

Kaslo
Slocan

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Granite
Mafic Volcanic
Clastic Sediment/Sedimentary
Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1984

COMMODITY

Gold

GRADE

6.7000

Grams per tonne

REFERENCE: Assessment Report 12042.

CAPSULE GEOLOGY

The Fitzstubbs Creek Gold property is located 16 kilometres by road from the village of Rosebery on Slocan Lake.

A 0.35 to 1.0 metre thick silicified zone contains disseminated pyrite and galena from which a grab sample assayed 6.7 grams per tonne gold (Assessment Report 12042). Two other samples taken from the zone yielded insignificant assays. The silicified zone crosscuts granitic rocks shown on GSC Open File 432 as feldspar porphyry of unknown age; however, the intrusive body is probably an apophysis related to the Jurassic Kuskanax batholith, located a few kilometres to the northwest. The plutonic rocks intrude mafic volcanic rocks of the Permo-Triassic Kaslo Group and clastic sedimentary rocks of the Triassic Slocan Group.

The property was originally staked by Alex Strebchuck in 1966, and held until 1980. During that time, work programs included stripping, trenching and prospecting. Mr. Strebchuck re-acquired the property in 1983, and undertook additional prospecting, trenching, lithochemical and soil sampling and geological mapping (Assessment Report 12042).

BIBLIOGRAPHY

EMPR ASS RPT 12042

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PAGE: 1472
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 432

DATE CODED: 1995/10/10
DATE REVISED: / /

CODED BY: RMC
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW193**

NATIONAL MINERAL INVENTORY:

NAME(S): **KANE CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03E 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 04 31 N
LONGITUDE: 117 15 02 W
ELEVATION: 1220 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5547031
EASTING: 482071

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Main vein, Plate 1, Assessment Report 18547.

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: Metres STRIKE/DIP: 050/45E TREND/PLUNGE:
COMMENTS: Quartz vein.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Slocan Undefined Formation

LITHOLOGY: Feldspar Porphyry
Phyllite
Argillite
Quartzite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Quesnel

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 457.0000 Grams per tonne
Gold 6.2000 Grams per tonne
Lead 5.9000 Per cent
Zinc 0.4700 Per cent

COMMENTS: Grab sample from the footwall of the Main vein.
REFERENCE: Assessment Report 18547.

CAPSULE GEOLOGY

The Kane Creek property is located on the west side of Kane Creek, 13 kilometres east-northeast of Rosebery on the east side of Slocan Lake. Road access is available via logging and bush roads which leave the highway at Wilson Creek, 0.7 kilometre east of Rosebery.

The showing consists of a quartz vein cutting a feldspar porphyry intrusive plug of Cretaceous-Tertiary age. The quartz vein is 60 metres long and up to 30 centimetres wide. It strikes 050 degrees, dipping 45 degrees to the east. Mineralization consists of galena, tetrahedrite and minor amounts of sphalerite and pyrite. A bleached, silicified zone in the footwall of the vein is also mineralized and a grab sample yielded an assay of 6.2 grams per tonne gold, 457 grams per tonne silver, 5.9 per cent lead and 0.47 per cent zinc (Assessment Report 18547). Other mineralized quartz veins of various orientations are present in the area of the showings. The host feldspar porphyry intrudes Triassic Slocan Group sedimentary

CAPSULE GEOLOGY

rocks which include phyllite, argillite, quartzite and minor limestone (GSC Open File 432).

Little is known about the early history of the property, however, it occurs on a surveyed lot (Lot 1602) which was likely a Crown granted mining claim. Old adits, possibly dating from the last century, are present on the property. In 1979, Amoco Petroleum Limited completed a program of soil geochemical sampling (Assessment Report 7171). In 1988-89, Excellon Resources Incorporated (Assessment Report 18547) completed a program of road building (20 metres), trenching (0.7 kilometre), lithogeochemical sampling (17 samples), soil sampling (55 samples) and silt sampling (5 samples). In 1990, Excellon Resources Incorporated completed additional lithogeochemical sampling (9 samples), soil sampling (954 samples) and silt sampling (27 samples), and geologically mapped 330 hectares (Assessment Report 20913).

BIBLIOGRAPHY

EMPR ASS RPT 7171, *18547, 20913
GSC OF 432

DATE CODED: 1995/10/12
DATE REVISED: 1995/12/31

CODED BY: RMC
REVISED BY: RMC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW194**

NATIONAL MINERAL INVENTORY:

NAME(S): **SB 2**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 48 N
LONGITUDE: 117 07 10 W
ELEVATION: 2256 Metres

NORTHING: 5590155
EASTING: 491522

LOCATION ACCURACY: Within 500M

COMMENTS: Location of exposed mineralization at surface.

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Lardeau	Index	

LITHOLOGY: Limestone
Phyllite
Arenite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The SB 2 occurrence is situated between Hope and Lake creeks just north of Mount Johnson in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The occurrence is underlain by limestone, schist and arenites of the Index Formation of the Lardeau Group. The strata are overturned on the limb of an anticline. Drag folds plunge northwest and the area is cut by two northwest trending transverse faults.

At the SB 2 showing, disseminated galena and sphalerite occur as replacement bands in limestone near the phyllite contact. The bands are lenticular in shape and appear to be controlled by the northwest plunging drag folds. Most of the mineralization is low grade (Assessment Report 86).

BIBLIOGRAPHY

EMPR ASS RPT *86, 5736, 6461
EMPR GEM 1975-E45; 1977-E65
GSC BULL 193
GSC MAP 235; 1277A

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1476
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 161
GSC OF 432; 464
EMPR OF 2000-22

DATE CODED: 1995/10/06
DATE REVISED: 1996/03/01

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW195**

NATIONAL MINERAL INVENTORY:

NAME(S): **SB 5**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 47 N
LONGITUDE: 117 06 37 W
ELEVATION: 2256 Metres

NORTHING: 5590123
EASTING: 492173

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization at surface.

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Layered
CLASSIFICATION: Replacement
TYPE: E12 Mississippi Valley-type Pb-Zn

E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Index	

LITHOLOGY: Calcareous Schist
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The SB 5 occurrence is situated between Hope and Lake creeks 750 metres northeast of Mount Johnson in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

The occurrence is underlain by limestone, schist and arenites of the Index Formation of the Lardeau Group. The strata are overturned on the limb of an anticline. Drag folds plunge northwest and the area is cut by two northwest trending transverse faults.

At the SB 5 showing, disseminated galena and sphalerite occur as replacement bands in a calcareous schist near its lower contact with a green phyllite. The bands are lenticular in shape and appear to be controlled by the northwest plunging drag folds. Most of the mineralization is low grade (Assessment Report 86).

BIBLIOGRAPHY

EMPR ASS RPT *86, 5736, 6461
EMPR GEM 1975-E45; 1977-E65
GSC BULL 193
GSC MAP 235; 1277A
GSC MEM 161
GSC OF 432; 464

RUN DATE: 25-Jun-2003
RUN TIME: 16:43:39

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1478
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 2000-22

DATE CODED: 1995/10/06
DATE REVISED: 1996/03/01

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW196**

NATIONAL MINERAL INVENTORY:

NAME(S): **BROKEN HILL (L.7042)**, CORONATION (L.7861)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 25 41 N
LONGITUDE: 117 10 04 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit.

UTM ZONE: 11 (NAD 83)

NORTHING: 5586239
EASTING: 488083

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Arsenopyrite Gold
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Lardeau

FORMATION

Index

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Meta Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Broken Hill property is situated on the southeast side of Rapid Creek, west of the Lardeau River, in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons.

The Lardeau River area of the Selkirk Mountains is mainly underlain by massive pillow lavas, volcanic breccia and green phyllitic rocks of the Index Formation and by grey-green mica schist of the Broadview Formation. Grey phyllitic rocks and marble of the Milford Group are exposed near the edges of the Mesozoic Mobbs Creek, Rapid Creek and Poplar Creek stocks. All rocks have undergone regional metamorphism to middle or upper greenschist facies. Rocks of the Milford Group have also been affected by thermal metamorphism (Geological Survey of Canada Bulletin 193).

On the Broken Hill property, grey phyllitic rocks of the Index Formation are cut by metadiorite dikes. Quartz veins and stringers are developed within the dikes and at the contact with the phyllite. The veins carry arsenopyrite and gold. The property has been explored by at least one short adit driven on a quartz vein near the southwest boundary of Lot 7042.

BIBLIOGRAPHY

EMPR AR 1903-126; 1905-250; 1912-326
EMPR ASS RPT 8483, 8862, 11813, 14519, *15698, 16180, 19235
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 432; 464

DATE CODED: 1995/10/16
DATE REVISED: 1995/11/08

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW196**

MINFILE NUMBER: **082KSW197**

NATIONAL MINERAL INVENTORY:

NAME(S): **WEST RIDGE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 17 07 N
LONGITUDE: 117 09 40 W
ELEVATION: 2225 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5570362
EASTING: 488522

LOCATION ACCURACY: Within 500M
COMMENTS: Location of shaft.

COMMODITIES: Silver Lead Antimony Copper

MINERALS

SIGNIFICANT: Galena Stibnite Tetrahedrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Lardeau Broadview

LITHOLOGY: Andesite
Sandstone
Siltstone
Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Selkirk Mountains
TERRANE: Kootenay
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist
COMMENTS: Middle to upper greenschist facies.

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 1540.0000 Grams per tonne
Copper 1.5800 Per cent
Lead 41.1000 Per cent
Antimony 16.1000 Per cent

COMMENTS: Selected grab sample of mineralized quartz vein.
REFERENCE: Assessment Report 18136, page 39.

CAPSULE GEOLOGY

The West Ridge occurrence is located at the head of Cascade Creek at 2225 metres elevation above sea level in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The West Ridge property is underlain by andesite, sandstone, siltstone and phyllite which forms the lower portion of the Broadview Formation of the Lardeau Group. The rocks have been folded in a series of northwest-trending folds that were subsequently thrust in a northeasterly direction along local faults (Geological Survey of Canada Bulletin 193).

The occurrence consists of a 30 centimetre wide milky quartz vein

CAPSULE GEOLOGY

striking 119 degrees and dipping 45 degrees southwest. The vein is mineralized with disseminations and pods of argentiferous galena, tetrahedrite and stibnite. A selected grab sample of the mineralized vein assayed 1540 grams per tonne silver, 41.1 per cent lead, 16.1 per cent antimony and 1.58 per cent copper (Assessment Report 18136).

The vein has been explored with several trenches and a 15-metre deep shaft. Boulders of massive galena-stibnite mineralization up to 1 metre across are reported from a dispersion train below the workings for a distance of 137 metres (see Noonday, 082KSW127 - Prospectus, Ambergate Exploration Inc., 1988)

BIBLIOGRAPHY

EMPR ASS RPT 16433, *18136
EMPR PF (See Noonday, 082KSW127 - Tully, D.W., November 1987,
Geological Report on the Amber Property in Prospectus, Ambergate
Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1995/10/17
DATE REVISED: 1995/11/08

CODED BY: GJA
REVISED BY: GJA

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW198**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKEVIEW**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 17 10 N
LONGITUDE: 117 09 15 W
ELEVATION: 2100 Metres

NORTHING: 5570454
EASTING: 489017

LOCATION ACCURACY: Within 500M

COMMENTS: Location of surface trenches.

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E13 Irish-type carbonate-hosted Zn-Pb

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Lardeau	Broadview	

LITHOLOGY: Sandstone
Siltstone
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Kootenay

METAMORPHIC TYPE: Regional

COMMENTS: Middle to upper greenschist facies.

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	158.0000	Grams per tonne
Gold	144.0000	Grams per tonne
Lead	6.0400	Per cent
Zinc	3.4700	Per cent

COMMENTS: Composite of 10 grab samples of vein material taken from soil at the end of a trench.

REFERENCE: Assessment Report 18136, page 40.

CAPSULE GEOLOGY

The Lakeview occurrence is located at the head of Cascade Creek at 2100 metres elevation above sea level in the Slocan Mining Division.

Regionally, the area lies within the Selkirk Mountains of southeastern British Columbia. The occurrence is within the Kootenay Arc, a curving belt of highly deformed metasedimentary and metavolcanic rocks which includes the Upper Proterozoic Horsethief Creek Group, the Upper Proterozoic to Lower Cambrian Hamill Group, the Lower Cambrian Badshot Formation, and the Paleozoic Lardeau and Milford groups. The volcano-sedimentary sequence is intruded by numerous Paleozoic to Mesozoic granitoid plutons and has been metamorphosed to at least middle greenschist facies before the emplacement of the mineralization.

The area is underlain by andesite, sandstone, siltstone and phyllite of the lower portion of the Broadview Formation of the Lardeau Group. The rocks have been folded in a series of northwest-trending folds that were subsequently thrust in a northeasterly direction along local faults (Geological Survey of Canada Bulletin 193).

At the Lakeview showing two trenches expose sparsely mineralized

CAPSULE GEOLOGY

metasandstone between two quartz veins. The quartz veins are mineralized with disseminated and massive galena, pyrite and sphalerite. Some of the mineralization resembles the massive mineralization at the White Eagle (082KSW126). The No. 1 vein strikes 128 degrees and dips steeply southwest. It is 20 centimetres wide in the trenches. A composite chip sample of about 10 blocks of vein material taken from the soil at the western end of the trench assayed 144 grams per tonne gold, 158 grams per tonne silver, 6.04 per cent lead and 3.47 per cent zinc (Assessment Report 18136). The No. 2 vein is exposed in a trench 4.6 metres above the No. 1 vein. This vein strikes 281 degrees and dips 81 degrees north. Mineralization in the sandstone between the veins comprises thin sheets of pyrite and minor galena with sphalerite along cleavage planes.

BIBLIOGRAPHY

EMPR ASS RPT 16433, *18136
EMPR PF (See Noonday, 082KSW127 - Tully, D.W., November 1987,
Geological Report on the Amber Property in Prospectus, Ambergate
Exploration Inc., February 2, 1988)
GSC BULL 193
GSC MAP 235A; 1277A
GSC MEM 161
GSC OF 288; 432; 464

DATE CODED: 1995/10/17
DATE REVISED: / /

CODED BY: GJA
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW199**

NATIONAL MINERAL INVENTORY:

NAME(S): **KANE 4**, KANE, KANE 1-3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K03W
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 50 02 11 N
LONGITUDE: 117 15 59 W
ELEVATION: 1067 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5542711
EASTING: 480923

LOCATION ACCURACY: Within 500M

COMMENTS: Adit, 2.25 kilometres north-northeast along Kane Creek from Three Forks on the east-facing slope (GSC Map 273A).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Argentite Silver Sphalerite Tetrahedrite

ASSOCIATED: Arsenopyrite

ALTERATION: Quartz Graphite

ALTERATION: Limonite Malachite Graphite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant Shear

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Sheared

DIMENSION: 3 Metres

STRIKE/DIP: 285/45N

TREND/PLUNGE:

COMMENTS: Lensoidal quartz veinlets and veins vary from 12 centimetres to 3 metres width. The general strike is 285 degrees and the dip 45 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Slocan	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Slaty Argillite
Quartz Feldspar Porphyritic Dike
Quartzite
Limestone
Tuffaceous Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1981

SAMPLE TYPE: Grab

COMMODITY

Silver

GRADE

922.3000

Grams per tonne

Gold

0.3000

Grams per tonne

COMMENTS: Samples of hand-cobbed ore.

REFERENCE: Assessment Report 11266.

CAPSULE GEOLOGY

The Kane 4 occurrence is located on the northwestern side of Kane Creek, 2.25 kilometres west of the former McAllister mine (082KSW025). New Denver, British Columbia lies about 23 kilometres to the south-southwest.

The Slocan mining camp is dominated by fine grained to aphanitic clastic sedimentary rocks of the Triassic Slocan Group and consists of locally weakly metamorphosed argillites, quartzites, limestones and some tuffaceous rocks. These sediments are frequently intruded by dikes, sills and stocks of varied composition and origin.

The majority of the deposits are predominantly fault-fissure veins within distinctive zones and trends and replacement deposits

CAPSULE GEOLOGY

where limestone or limy strata have been locally or extensively replaced by ore minerals.

The Kane 4 is located near old undated adits. An upper adit was found in 1981, 8.6 metres from the old portal, intersecting a well defined quartz vein. An old exploratory mid-adit was also found.

Hostrocks of the Kane 4 occurrence are very fine grained, dark grey-black slaty argillite of the Slocan Group intruded by a quartz feldspar porphyry dike. Strong, northwest trending lensoidal quartz veins and veinlets are developed along the dike/sediment contact. The veins generally strike 285 degrees, dip 45 degrees north and occur in the footwall of the dike. The hangingwall is sheared and brecciated. Vein widths vary from 12 centimetres to 3 metres. Oxidation has developed as limonitic coatings along cleavage planes in the hangingwall and footwall of the dike as well as inclusions in the dike itself. Graphitic gouge is also prevalent in both the hangingwall and footwall.

Argentite, galena, native silver, sphalerite, possibly tetrahedrite, arsenopyrite and rare malachite are developed as shoots or pods of mineralization within the sheared hangingwall and to a lesser extent in the footwall of the dike. The quartz veins carry minor mineralization. Samples of hand-cobbed ore yielded 922.3 grams per tonne silver and 0.3 gram per tonne gold (Assessment Report 11266).

BIBLIOGRAPHY

EMPR ASS RPT 7171, *11266
EMPR EXPL 1978-E75; 1982-89

DATE CODED: 1985/07/24
DATE REVISED: 1995/12/13

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW200**

NATIONAL MINERAL INVENTORY:

NAME(S): **NAKUSP HOTSPRINGS**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 17 54 N
LONGITUDE: 117 40 23 W
ELEVATION: 800 Metres

NORTHING: 5572018
EASTING: 452063

LOCATION ACCURACY: Within 500M

COMMENTS: Located 15 kilometres east-northeast of Nakusp, along Kuskanax Creek.

COMMODITIES: Hotspring

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Epithermal Hydrothermal
TYPE: T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Jurassic			Kuskanax Batholith

LITHOLOGY: Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

Nakusp Hotsprings are located 15 kilometres east-northeast of Nakusp, along Kuskanax Creek. The springs are 54 degrees Centigrade and flow at 46 litres per minute. Dissolved solids are 510 parts per million and the pH is 7.1.

At the source, three small springs flow from talus. Area geology appears to be monzonite of the Middle Jurassic Kuskanax batholith.

BIBLIOGRAPHY

EMPR MAP Geothermal Potential Map of British Columbia (B.N. Church and K.A. McAdam, 1983)
EMPR PF (see Wilson Lake Spring, 082KSW201 - Report by Northcote, 1982)
GSC OF 2526
*McDonald, J. (1991): Hotsprings of Western Canada, A Complete Guide; Watershed Press, Vancouver, B.C., p. 42

DATE CODED: 1996/12/11
DATE REVISED: / /

CODED BY: LJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW201**

NATIONAL MINERAL INVENTORY:

NAME(S): **WILSON LAKE SPRING**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 13 56 N
LONGITUDE: 117 35 14 W
ELEVATION: 880 Metres

NORTHING: 5564616
EASTING: 458119

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located east of Nakusp, just east of Wilson Lake.

COMMODITIES: Hotspring

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Epithermal Hydrothermal
TYPE: T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Kuskanax Batholith

LITHOLOGY: Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

Wilson Lake Spring is located east of Nakusp, just east of Wilson Lake. The spring is 30 degrees Centigrade and flows at 30.5 litres per minute.

Area geology appears to be monzonite of the Middle Jurassic Kuskanax batholith.

BIBLIOGRAPHY

EMPR MAP Geothermal Potential Map of British Columbia (B.N. Church and K.A. McAdam, 1983)
EMPR PF (Northcote, K.E. (1982): Slocan Valley Planning Area Program Mineral Resources Technical Report, pp. 16,31, Figure 5, in 082F General File)
GSC OF 2526
*McDonald, J. (1991): Hotsprings of Western Canada, A Complete Guide; Watershed Press, Vancouver, B.C., p. 44

DATE CODED: 1996/12/11
DATE REVISED: / /

CODED BY: LJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW202**

NATIONAL MINERAL INVENTORY:

NAME(S): **ST. LEON HOTSPRINGS**, ST. LEON CREEK

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 26 02 N
LONGITUDE: 117 51 11 W
ELEVATION: 730 Metres

NORTHING: 5587222
EASTING: 439416

LOCATION ACCURACY: Within 500M

COMMENTS: Located 2.5 kilometres east of Upper Arrow Lake.

COMMODITIES: Hotspring

MINERALS

SIGNIFICANT: Calcite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Epithermal Hydrothermal
TYPE: T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Kuskanax Batholith

LITHOLOGY: Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

St. Leon Hotsprings is located 2.5 kilometres east of Upper Arrow Lake. Three springs flow from rock fractures. The springs are 49 degrees Centigrade and flow at 122.2 litres per minute. Dissolved solids are 886 parts per million and the pH is between 7.63 and 8.10.

BIBLIOGRAPHY

EMPR MAP Geothermal Potential Map of British Columbia (B.N. Church and K.A. McAdam, 1983)
GSC OF 2526
*McDonald, J. (1991): Hotsprings of Western Canada, A Complete Guide; Watershed Press, Vancouver, B.C., pp. 39,40

DATE CODED: 1996/12/11
DATE REVISED: / /

CODED BY: LJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW203**

NATIONAL MINERAL INVENTORY:

NAME(S): **HALFWAY RIVER HOTSPRING**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 27 26 N
LONGITUDE: 117 52 18 W
ELEVATION: 450 Metres

NORTHING: 5589832
EASTING: 438125

LOCATION ACCURACY: Within 500M

COMMENTS: Located about 25 kilometres north of Nakusp, on the east side of Halfway River.

COMMODITIES: Hotspring

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Epithermal Hydrothermal
TYPE: T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kaslo	Undefined Formation	

LITHOLOGY: Meta Sediment/Sedimentary
Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Slide Mountain

Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

Halfway River Hotspring is located about 25 kilometres north of Nakusp, on the east side of Halfway River.

Numerous springs flow from river gravels and are covered at high water. The springs are 41.8 to 60.5 degrees Centigrade and flow 152.7 litres per minute. The pH ranges from 7.14 to 7.87.

Bedrock geology appears to be metasediments of the Permian-Carboniferous Kaslo Group.

BIBLIOGRAPHY

EMPR MAP Geothermal Potential Map of British Columbia (B.N. Church and K.A. McAdam, 1983)

GSC OF 2526

*McDonald, J. (1991): Hotspots of Western Canada, A Complete Guide; Watershed Press, Vancouver, B.C., p. 39

DATE CODED: 1996/12/11
DATE REVISED: 1996/12/11

CODED BY: LJ
REVISED BY: LJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW204**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOSTHALL**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 23 00 N
LONGITUDE: 117 56 04 W
ELEVATION: 550 Metres

NORTHING: 5581670
EASTING: 433566

LOCATION ACCURACY: Within 5 KM

COMMENTS: Located near Mount Fosthall, on the west side of Upper Arrow Lake.

COMMODITIES: Hotspring

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Epithermal Hydrothermal
TYPE: T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kaslo	Undefined Formation	
Triassic	Slocan	Undefined Formation	

LITHOLOGY: Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Monashee Mountains

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

Old literature mentions two springs near Mount Fosthall, on the west side of Upper Arrow Lake, northwest of Nakusp. No other information is available.

Bedrock geology appears to be sediments of the Permian-Carboniferous Kaslo Group or Triassic Slocan Group.

BIBLIOGRAPHY

EMPR MAP Geothermal Potential Map of British Columbia (B.N. Church and K.A. McAdam, 1983)
GSC OF 2526

*McDonald, J. (1991): Hotsprings of Western Canada, A Complete Guide; Watershed Press, Vancouver, B.C., p. 42

DATE CODED: 1996/12/11
DATE REVISED: 1996/12/11

CODED BY: LJ
REVISED BY: LJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW205**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAYLOR SPRING**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 04 00 N
LONGITUDE: 117 56 04 W
ELEVATION: 450 Metres

NORTHING: 5546461
EASTING: 433124

LOCATION ACCURACY: Within 5 KM

COMMENTS: Located on the west side of Upper Arrow Lake, about 24 kilometres southwest of Nakusp.

COMMODITIES: Hotspring

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Epithermal Hydrothermal
TYPE: T02 Geothermal spring

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Proterozoic-Paleoz.			Monashee Complex

LITHOLOGY: Para Gneiss
Schist
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Monashee Mountains

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

Taylor Spring is located on the west side of Upper Arrow Lake, about 24 kilometres southwest of Nakusp. The spring is 25 degrees Centigrade and flows 30.5 litres per minute. Dissolved solids are 210 parts per million and the pH is 8.44.

Area geology appears to be layered paragneiss, schist and quartzite of the Proterozoic to (?)lower Paleozoic Monashee Complex.

BIBLIOGRAPHY

EMPR MAP Geothermal Potential Map of British Columbia (B.N. Church and K.A. McAdam, 1983)
GSC OF 2526
*McDonald, J. (1991): Hotsprings of Western Canada, A Complete Guide; Watershed Press, Vancouver, B.C., p. 47

DATE CODED: 1996/12/11
DATE REVISED: 1996/12/11

CODED BY: LJ
REVISED BY: LJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082KSW206**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDHILL**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082K06E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 50 23 10 N
LONGITUDE: 117 04 30 W
ELEVATION: 700 Metres

NORTHING: 5581564
EASTING: 494668

LOCATION ACCURACY: Within 5 KM

COMMENTS: From description in Annual Report 1925.

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Syngenetic Industrial Min.
TYPE: F06 Lacustrine diatomite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Tertiary	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Diatomite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

Diatomaceous earth occurs along the flats and bench lands on the east side of the Lardeau River. The beds are up to 2 metres thick and occur over an area of 1.6 by 0.8 kilometres. The material is fine-grained, coherent, grey-white to cream-coloured, and light weight.

BIBLIOGRAPHY

EMPR AR *1925-238-239; 1929-328

DATE CODED: 1998/10/06
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082GNE001		NAME: COAL MOUNTAIN		STATUS: Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
2001	2,500,000	2,500,000	Coal		2,500,000,000
2000	2,300,000	2,300,000	Coal		2,300,000,000
1999	2,100,000	2,100,000	Coal		2,100,000,000
1998	2,500,000	2,500,000	Coal		1,800,000,000
1997	3,629,604	3,629,604	Coal		2,128,517,000
1996	2,673,215	2,673,215	Coal		1,778,447,000
1995	1,998,800	1,859,400	Coal		1,092,800,000
1994	558,000	550,000	Coal		391,000,000
1993	1,031,000	1,028,000	Coal		731,000,000
1992	1,301,000	1,294,000	Coal		927,000,000
1991	1,545,000	1,536,000	Coal		1,094,000,000
1990	2,238,641	2,238,641	Coal		1,480,591,000
1989	2,381,011	2,381,011	Coal		1,582,756,000
1988	1,378,945	1,378,945	Coal		1,049,545,000
1987	1,126,889	1,126,889	Coal		792,126,000
1986	1,058,725	1,058,725	Coal		874,827,000
1985	1,172,518	1,172,518	Coal		1,048,297,000
1984	1,497,582	1,497,582	Coal		1,337,787,000
1983	1,557,240	1,557,240	Coal		1,292,148,000
1982	1,225,214	1,225,214	Coal		1,029,908,000
1981	526,715	526,715	Coal		441,237,000
1980	1,061,703	1,061,703	Coal		902,018,000
1979	893,074	893,074	Coal		775,639,000
1978	540,657	540,657	Coal		519,171,000
1977	372,473	372,473	Coal		365,604,000
1976	357,272	357,272	Coal		350,245,000
1975	339,322	339,322	Coal		313,111,000
1974	198,842	198,842	Coal		189,302,300
1948	136,657	136,657	Coal		136,656,530
1947	89,681	89,681	Coal		89,681,680
1946	1,174	1,174	Coal		1,173,900
1944	168,308	168,308	Coal		168,308,200
1943	36,071	36,071	Coal		36,071,500
1935	10,133	10,133	Coal		10,133,250
1934	247,904	247,904	Coal		247,904,000
1933	22,697	22,697	Coal		22,697,000
1932	285,200	285,200	Coal		285,200,000
1931	216,330	216,330	Coal		216,330,000
1930	216,836	216,836	Coal		216,836,200
1929	170,959	170,959	Coal		170,959,000
1928	182,119	182,119	Coal		182,119,200
1927	132,205	132,205	Coal		132,205,000
1926	120,502	120,502	Coal		120,502,300
1925	69,916	69,916	Coal		69,915,800
1924	28,132	28,132	Coal		28,132,500
1923	49,040	49,040	Coal		49,040,500
1922	46,760	46,760	Coal		46,760,500
1921	69,021	69,021	Coal		69,021,000
1920	153,437	153,437	Coal		153,437,000
1919	81,027	81,027	Coal		81,027,000
1918	125,979	125,979	Coal		125,979,000
1917	102,687	102,687	Coal		102,687,000
1916	70,127	70,127	Coal		70,127,000
1915	63,547	63,547	Coal		63,547,000
1914	75,504	75,504	Coal		75,504,000
1913	73,956	73,956	Coal		73,956,000

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	082GNE001		NAME:	COAL MOUNTAIN		STATUS:	Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>		
1912	124,225	125,225	Coal		124,225,000		
1911	83,025	83,025	Coal		83,025,500		
1910	128,880	128,880	Coal		128,880,610		
1909	61,797	61,797	Coal		61,797,200		
1908	4,177	4,177	Coal		4,176,800		

SUMMARY TOTALS: 082GNE001

NAME: **COAL MOUNTAIN**

Metric Imperial

Mined: 43,511,455 tonnes 47,963,169 tons
 Milled: 43,346,055 tonnes 47,780,846 tons

Recovery:

Coal: 34,635,093,470 kilograms 76,357,289,036 pounds

Comments:

2001: Coal Association www.coal.ca.
 2000: Clean coal production.
 1999: Clean coal production.
 1998: Estimated. 60% coking coal; remaining thermal & PCI coal.
 1997: Metallurgical coal-1,501,695,000 kg; Thermal coal-626,822,000 kg.
 1996: Metallurgical coal-1,084,179,000 kg; Thermal coal-694,268,000 kg.
 1995: Metallurgical coal-398,900,000 kg.; Thermal coal-693,900,000 kg.
 1994: Thermal coal.
 1993: Metallurgical coal-24,000,000 kg, Thermal coal-707,000,000 kg.
 1992: Thermal coal.
 1991: Metallurgical coal-125,000,000 kg; Thermal coal-969,000,000 kg.
 1990: Metallurgical coal-493,529,000 kg; Thermal coal-987,062,000 kg.
 1989: Metallurgical coal-714,148,000 kg; Thermal coal-868,608,000 kg.
 1988: Metallurgical coal-343,174,000 kg; Thermal coal-706,371,000 kg.
 1987: Metallurgical coal-177,454,000 kg; Thermal coal-614,672,000 kg.
 1986: Thermal coal.
 1985: Thermal coal.
 1984: Thermal coal.
 1983: Thermal coal.
 1982: Thermal coal.
 1981: Thermal coal.
 1980: Thermal coal.
 1979: Thermal coal.
 1908: Opened by Corbin Coal and Coke Company in 1908.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	082GNE004		NAME:	TENT MOUNTAIN		STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>		
1980	1,061,703	1,061,703	Coal		902,018,000		
1979	621,359	621,359	Coal		387,483,000		
1978	247,152	247,152	Coal		120,787,000		
1977	258,335	258,335	Coal		153,190,000		
1976	343,467	343,467	Coal		211,077,000		
1975	36,162	36,162	Coal		29,282,000		
1974	139,920	139,920	Coal		97,944,230		
1973	59,634	59,634	Coal		46,280,950		
1972	67,293	67,293	Coal		52,810,000		
1968	9,189	9,189	Coal		5,939,340		
1965	122,642	122,642	Coal		106,162,410		
1964	64,456	64,456	Coal		54,926,420		
1963	454	454	Coal		394,625		
1961	49,103	49,103	Coal		44,305,100		
1960	11,429	11,429	Coal		10,494,300		
1959	25,691	25,691	Coal		23,345,500		
1958	28,253	28,253	Coal		25,960,900		
1957	99,920	99,920	Coal		89,620,800		
1956	103,827	103,827	Coal		88,149,350		
1955	28,209	28,209	Coal		25,348,560		
1954	118,932	118,932	Coal		105,968,270		
1953	119,823	119,823	Coal		102,928,300		
1952	5,626	5,626	Coal		4,951,400		
1951	77,277	77,277	Coal		68,003,500		
1950	22,453	22,453	Coal		19,758,500		

SUMMARY TOTALS: 082GNE004

NAME: **TENT MOUNTAIN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	3,722,309 tonnes	4,103,143 tons
Milled:	3,722,309 tonnes	4,103,143 tons
Recovery:	Coal: 2,777,129,455 kilograms	6,122,520,693 pounds

Comments:

- 1980: Metallurgical coal.
- 1979: Metallurgical coal.
- 1978: Metallurgical coal.
- 1977: Metallurgical coal.
- 1976: Metallurgical coal.
- 1968: No production in B.C. 1966 and 1967.
- 1963: Inactive in 1962 and first ten months of 1963.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082GNE007		NAME: HOSMER WHEELER		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1914	104,110	104,110	Coal		114,110,000
1913	221,000	221,000	Coal		221,000,000
1912	191,260	191,260	Coal		191,260,000
1911	40,029	40,029	Coal		40,029,384
1910	160,653	160,653	Coal		160,652,960
1909	61,289	61,289	Coal		61,289,184
1908	2,669	2,669	Coal		2,669,032

SUMMARY TOTALS: 082GNE007

NAME: **HOSMER WHEELER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	781,010 tonnes	860,916 tons
Milled:	781,010 tonnes	860,916 tons

Recovery: Coal: 791,010,560 kilograms 1,743,879,283 pounds

Comments: 1908: Opened by Hosmer Mines, Limited in 1908.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082GNE012</u>	NAME:	<u>MICHEL CREEK</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1979	8,288,122	8,288,122	Coal		6,498,349,000
1978	7,368,096	7,368,096	Coal		5,662,807,000
1977	6,773,699	6,773,699	Coal		5,254,362,000
1976	7,027,379	7,027,379	Coal		5,299,282,000
1975	8,120,727	8,120,727	Coal		6,320,560,000
1974	7,005,991	7,005,991	Coal		5,533,363,100
1973	6,352,707	6,352,707	Coal		4,836,065,300
1972	5,721,874	5,721,874	Coal		4,855,789,300
1971	5,082,050	5,082,050	Coal		4,206,627,700
1970	3,157,576	3,157,576	Coal		2,867,851,200
1969	984,241	984,241	Coal		809,825,000
1968	995,300	995,300	Coal		806,962,800
1967	858,400	858,400	Coal		638,598,360
1966	960,418	960,418	Coal		759,731,150
1965	837,564	837,564	Coal		695,843,550
1964	888,347	888,347	Coal		756,804,570
1963	800,866	800,866	Coal		686,090,000
1962	747,325	747,325	Coal		664,775,180
1961	796,567	796,567	Coal		718,535,870
1960	663,498	663,498	Coal		610,267,880
1959	516,389	516,389	Coal		469,236,900
1958	584,466	584,466	Coal		537,033,560
1957	587,248	587,248	Coal		526,873,080
1956	806,444	806,444	Coal		721,015,200
1955	748,086	748,086	Coal		672,205,940
1954	687,077	687,077	Coal		612,172,970
1953	741,239	741,239	Coal		664,652,700
1952	806,357	806,357	Coal		728,507,650
1951	772,430	772,430	Coal		708,223,000
1950	733,637	733,637	Coal		677,533,830
1949	816,173	816,173	Coal		709,168,280
1948	766,290	766,290	Coal		667,526,680
1911	116,214	116,214	Coal		116,214,140
1910	464,902	464,902	Coal		464,902,290
1909	396,709	396,709	Coal		396,709,390
1908	418,780	418,780	Coal		418,779,960
1907	359,388	359,388	Coal		359,387,640
1906	277,873	277,873	Coal		277,872,950
1905	314,457	314,457	Coal		314,457,080
1904	239,020	239,020	Coal		239,020,090
1903	239,316	239,316	Coal		239,315,750
1902	11,567	11,567	Coal		11,567,464
1900	10,125	10,125	Coal		10,125,456

SUMMARY TOTALS: 082GNE012

NAME: MICHEL CREEK

	<u>Metric</u>	<u>Imperial</u>
Mined:	84,844,934 tonnes	93,525,529 tons
Milled:	84,844,934 tonnes	93,525,529 tons
Recovery:	Coal: 69,024,992,960 kilograms	152,174,018,029 pounds

Comments:

1979: Metallurgical coal-6,367,471,000 kg; Thermal coal-130,878,000 kg.
 1968: Underground (Balmer North, Balmer No.1); strip(No.3, No.7, Balmer S)
 1967: Underground (Balmer North, Balmer South); strip (Baldy, No.7, No.3).
 1966: Underground (859,020 tonnes); strip mines (101,398 tonnes).
 1965: Underground (656,719 tonnes); strip mines (180,845 tonnes).
 1964: Underground (807,211 tonnes); strip mines (81136 tonnes).
 1963: Underground (711,210 tonnes); Baldy Mtn (27974); "A" South (61681)
 1962: Underground (649,544 tonnes); Baldy Mtn (43270); "A" South (54512).
 1961: Underground (717,079 tonnes); Baldy Mountain strip mine (79488 t).
 1960: Underground (604,240 tonnes); Baldy Mountain strip mine (59258 t).

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MINFILE NUMBER: **082GNE012**

NAME: **MICHEL CREEK**

STATUS: Past Producer

Comments:

1959: Underground (441,527 tonnes); Baldy Mountain strip mine (74862 t).
1958: Underground (487,523 tonnes); Baldy Mountain strip mine (96943 t).
1957: Underground (451,461 tonnes); Baldy Mountain strip mine (135787 t).
1956: Underground (529,308 tonnes); Baldy Mountain strip mine (277136 t).
1955: Underground (536,118 tonnes); Baldy Mountain strip mine (211967 t).
1954: Underground (474,995 tonnes); Baldy Mountain strip mine (212082 t).
1953: Underground (495,196 tonnes); Baldy Mountain strip mine (246043 t).
1952: Underground (574,666 tonnes); Baldy Mountain strip mine (231691 t).
1951: Underground (496,776 tonnes); Baldy Mountain strip mine (275654 t).
1950: Underground (507,958 tonnes); Baldy Mountain strip mine (225679 t).
1949: Underground (533,032 tonnes); Baldy Mountain strip mine (283142 t).
1948: Underground (446,399 tonnes); Michel strip mine (319,892 tonnes).

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MINFILE NUMBER:	082GNE017		NAME:	ELKVIEW		STATUS:	Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>			
2002	6,407,000	6,407,000	Coal		4,253,000,000			
2001	6,500,000	6,500,000	Coal		5,500,000,000			
2000	5,700,000	4,063,000	Coal		4,063,000,000			
1999	4,500,000	4,500,000	Coal		2,700,000,000			
1998	4,586,000	3,212,000	Coal		3,212,000,000			
1997	4,439,664	4,450,849	Coal		2,865,018,000			
1996	4,685,241	4,733,601	Coal		2,797,400,000			
1995	4,730,700	5,083,800	Coal		3,083,600,000			
1994	4,181,000	4,248,000	Coal		2,688,000,000			
1993	2,691,000	2,684,000	Coal		1,736,000,000			
1992	2,757,000	2,841,000	Coal		1,903,000,000			
1991	8,698,000	8,868,000	Coal		5,399,000,000			
1990	9,590,165	9,590,165	Coal		5,595,714,000			
1989	9,997,374	9,997,374	Coal		6,053,180,000			
1988	10,973,072	10,973,072	Coal		6,462,607,000			
1987	7,821,423	7,821,423	Coal		5,060,139,000			
1986	5,320,844	5,320,844	Coal		3,563,360,000			
1985	9,239,642	9,239,642	Coal		5,840,841,000			
1984	7,477,504	7,477,504	Coal		5,208,753,000			
1983	6,645,575	6,645,575	Coal		5,226,199,000			
1982	7,484,735	7,484,735	Coal		5,605,575,000			
1981	9,051,265	9,051,265	Coal		7,505,035,000			
1980	6,666,905	6,666,905	Coal		5,215,877,000			

SUMMARY TOTALS: 082GNE017

NAME: **ELKVIEW**

	<u>Metric</u>	<u>Imperial</u>
Mined:	150,144,109 tonnes	165,505,548 tons
Milled:	147,859,754 tonnes	162,987,478 tons
Recovery:	Coal: 101,537,298,000 kilograms	223,851,360,991 pounds

Comments:

2002: Jan.- Sept. 2002.
 2001: Coal Association www.coal.ca. Milled estimated.
 2000: Coal milled is clean coal production.
 1999: Coal milled is clean coal production/estimates based on past prod.
 1998: Metallurgical coal.
 1997: Metallurgical coal-2,816,057,000 kg; Thermal coal-48,961,000 kg.
 1996: Metallurgical coal-2,780,944,000 kg; Thermal coal-16,456,000 kg.
 1995: Metallurgical coal-3,026,600,000 kg; Thermal coal-57,000,000 kg.
 1994: Metallurgical coal-2,589,000,000 kg; Thermal coal-99,000,000 kg.
 1993: Metallurgical Coal-1,734,000,000 kg; Thermal coal-2,000,000 kg.
 1992: Metallurgical coal-1,665,000,000 kg; Thermal coal-238,000,000 kg.
 1991: Metallurgical coal-4,704,000,000 kg; Thermal coal-695,000,000 kg.
 1990: Metallurgical coal-5,108,685,000 kg; Thermal coal-487,029,000 kg.
 1989: Metallurgical coal-5,727,938,000 kg; Thermal coal-325,242,000 kg.
 1988: Metallurgical coal-6,188,132,000 kg; Thermal coal-274,475,000 kg.
 1987: Metallurgical coal-3,734,298,000 kg; Thermal coal-1,325,841,000 kg.
 1986: Metallurgical coal-3,483,414,000 kg; Thermal coal-79,946,000 kg.
 1985: Metallurgical coal-5,684,176,000 kg; Thermal coal-156,665,000 kg.
 1984: Metallurgical coal-4,968,583,000 kg; Thermal coal-240,170,000 kg.
 1983: Metallurgical coal.
 1982: Metallurgical coal-5,598,756,000 kg; Thermal coal-6,819,000 kg.
 1981: Metallurgical coal-7,101,360,000 kg; Thermal coal-403,675,000 kg.
 1980: Metallurgical coal-5,060,005,000 kg; Thermal coal-155,872,000 kg.

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MINFILE NUMBER:	082GNE020		NAME:	LINE CREEK		STATUS:	Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>		
2001	2,900,000	2,900,000	Coal		2,900,000,000		
2000	3,500,000	3,500,000	Coal		2,500,000,000		
1999	3,500,000	3,500,000	Coal		2,600,000,000		
1998	4,500,000	4,500,000	Coal		3,200,000,000		
1997	4,570,294	4,535,249	Coal		3,207,215,000		
1996	4,468,499	4,421,134	Coal		3,140,405,000		
1995	4,372,100	4,380,000	Coal		3,137,300,000		
1994	4,305,000	4,275,000	Coal		3,039,000,000		
1993	3,890,000	3,914,000	Coal		2,855,000,000		
1992	3,584,000	3,552,000	Coal		2,530,000,000		
1991	3,070,000	3,049,000	Coal		2,188,000,000		
1990	2,775,854	2,775,854	Coal		2,052,762,000		
1989	2,532,490	2,532,490	Coal		1,954,538,000		
1988	2,916,761	2,916,761	Coal		2,094,905,000		
1987	2,473,197	2,473,197	Coal		1,719,880,000		
1986	2,313,608	2,313,608	Coal		1,700,000,000		
1985	2,776,000	2,776,000	Coal		2,041,531,000		
1984	2,708,130	2,708,130	Coal		2,262,854,000		
1983	2,039,105	2,039,105	Coal		1,445,470,000		
1982	1,391,925	1,391,925	Coal		795,297,000		
1972	11,553		Coal		11,553		

SUMMARY TOTALS: 082GNE020

NAME: **LINE CREEK**

	<u>Metric</u>	<u>Imperial</u>
Mined:	64,598,516 tonnes	71,207,674 tons
Milled:	64,453,453 tonnes	71,047,770 tons
Recovery:	Coal: 47,364,168,553 kilograms	104,420,088,004 pounds

Comments:

2001: Coal Association www.coal.ca.
 2000: Tonnes mined/milled are estimates only, based on past years.
 1999: Tonnes mined/milled are estimates only, based on past years.
 1998: Estimated.
 1997: Metallurgical coal-2,455,813,000 kg; Thermal coal-751,402,000 kg.
 1996: Metallurgical coal-2,458,537,000 kg; Thermal coal-681,868,000 kg.
 1995: Metallurgical coal-2,583,700,000 kg; Thermal coal-553,600,000 kg.
 1994: Metallurgical coal-2,565,000,000 kg; Thermal coal-474,000,000 kg.
 1993: Metallurgical coal-2,435,000,000 kg; Thermal coal-420,000,000 kg.
 1992: Metallurgical coal-2,215,000,000 kg; Thermal coal-315,000,000 kg.
 1991: Metallurgical coal-1,856,000,000 kg; Thermal coal-332,000,000 kg.
 1990: Metallurgical coal-1,520,416,000 kg; Thermal coal-532,346,000 kg.
 1989: Metallurgical coal-1,244,512,000 kg; Thermal coal-710,026,000 kg.
 1988: Metallurgical coal-1,369,359,000 kg; Thermal coal-725,546,000 kg.
 1987: Metallurgical coal-1,152,065,000 kg; Thermal coal-567,815,000 kg.
 1985: Metallurgical coal-1,042,704,000 kg; Thermal coal-998,827,000 kg.
 1984: Metallurgical coal-1,114,479,000 kg; Thermal coal-1,148,375,000 kg.
 1983: Metallurgical coal-611,058,000 kg; Thermal coal-834,412,000 kg.
 1982: Thermal coal.
 1972: Raw coal shipped by Crows Nest Industries to Coleman Collieries.

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MINFILE NUMBER: **082GNW002** NAME: **BULL RIVER** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1974	39,381	97,104	Silver	1,980,515	
			Gold	38,941	
			Copper		2,007,402
1973	238,039	187,616	Silver	2,758,587	
			Gold	54,928	
			Copper		3,272,229
1972	172,905	187,179	Silver	1,614,526	
			Gold	32,254	
			Copper		1,976,419
1971	21,574		Silver		
			Gold		
			Copper		

SUMMARY TOTALS: 082GNW002

NAME: **BULL RIVER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	471,899 tonnes	520,180 tons
Milled:	471,899 tonnes	520,180 tons
Recovery:		
Silver:	6,353,628 grams	204,274 ounces
Gold:	126,123 grams	4,055 ounces
Copper:	7,256,050 kilograms	15,996,847 pounds

Comments:

1974: Operations ceased July 18, 1974.
 1971: Operated by Placid Oil Co. No metal recovery.

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MINFILE NUMBER: 082GNW003	NAME: DIBBLE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1934	25		Silver	21,057	
			Gold	342	
1895	4		Silver	16,422	
			Copper		109

SUMMARY TOTALS: 082GNW003

NAME: **DIBBLE**

	Mined:	29 tonnes	Imperial	32 tons
	Milled:	tonnes		tons
Recovery:	Silver:	37,479 grams	1,205 ounces	
	Gold:	342 grams	11 ounces	
	Copper:	109 kilograms	240 pounds	

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MINFILE NUMBER: 082GNW004	NAME: VICTOR	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1921	6		Silver	5,350	
			Gold	31	
			Lead		2,416

SUMMARY TOTALS: 082GNW004

NAME: **VICTOR**

		<u>Metric</u>	<u>Imperial</u>
Mined:	6 tonnes	7 tons	
Milled:	tonnes	tons	
Recovery:	Silver: 5,350 grams	172 ounces	
	Gold: 31 grams	1 ounces	
	Lead: 2,416 kilograms	5,326 pounds	

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MINFILE NUMBER: **082GNW006** NAME: **COPPER KING** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1928	11		Silver	3,110	
			Gold	31	
			Copper		380
1924	1		Silver	156	
			Copper		31

SUMMARY TOTALS: 082GNW006

NAME: **COPPER KING**

	<u>Metric</u>	<u>Imperial</u>
Mined:	12 tonnes	13 tons
Milled:	tonnes	tons
Recovery:		
Silver:	3,266 grams	105 ounces
Gold:	31 grams	1 ounces
Copper:	411 kilograms	906 pounds

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MINFILE NUMBER: 082GNW008		NAME: ESTELLA (L.6411)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1967	36,514	36,514	Silver	2,272,976		
			Gold	871		
			Cadmium		7,251	
			Copper		1,198	
			Lead		1,519,676	
			Zinc		2,587,893	
1966	10,107	10,107	Silver	693,877		
			Gold	93		
			Cadmium		2,769	
			Lead		466,080	
			Zinc		988,672	
1963	2,425	2,425	Silver	514,724		
			Lead		287,090	
			Zinc		559,085	
1959			Silver	964		
			Cadmium		13	
			Lead		778	
			Zinc		4,726	
1958			Silver	15,116		
			Cadmium		81	
			Lead		14,076	
			Zinc		30,345	
1954			Zinc		90,483	
1953	3,592	3,592	Silver	822,457		
			Gold	124		
			Lead		735,723	
			Zinc		517,715	
1952	49,078	49,078	Silver	1,879,212		
			Gold	964		
			Cadmium		129	
			Lead		1,973,498	
			Zinc		4,489,268	
1951	7,802	7,802	Silver	193,523		
			Lead		184,099	
			Zinc		566,106	

SUMMARY TOTALS: 082GNW008

NAME: **ESTELLA (L.6411)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	109,518 tonnes	120,723 tons
Milled:	109,518 tonnes	120,723 tons
Recovery:		
Silver:	6,392,849 grams	205,535 ounces
Gold:	2,052 grams	66 ounces
Cadmium:	10,243 kilograms	22,582 pounds
Copper:	1,198 kilograms	2,641 pounds
Lead:	5,181,020 kilograms	11,422,191 pounds
Zinc:	9,834,293 kilograms	21,680,899 pounds

Comments:
 1959: Clean-up
 1958: Clean-up
 1954: Zinc conc. produced in 1953.

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MINFILE NUMBER: 082GNW009		NAME: KOOTENAY KING (L.7789)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1953	1,138	1,138	Silver	61,460	
			Gold	31	
			Lead		46,733
			Zinc		63,518
1952	12,122	12,122	Silver	820,839	
			Gold	684	
			Cadmium		985
			Lead		664,133
			Zinc		817,865

SUMMARY TOTALS: 082GNW009

NAME: **KOOTENAY KING (L.7789)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	13,260 tonnes	14,617 tons
Milled:	13,260 tonnes	14,617 tons
Recovery:		
Silver:	882,299 grams	28,367 ounces
Gold:	715 grams	23 ounces
Cadmium:	985 kilograms	2,172 pounds
Lead:	710,866 kilograms	1,567,191 pounds
Zinc:	881,383 kilograms	1,943,116 pounds

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MINFILE NUMBER: 082GNW012		NAME: PARK		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1923	13		Silver	2,177		
			Lead		3,358	
1917	9		Silver	1,835		
			Lead		2,737	
1916	109		Silver	18,662		
			Lead		4,536	

SUMMARY TOTALS: 082GNW012

NAME: **PARK**

	<u>Metric</u>	<u>Imperial</u>
Mined:	131 tonnes	144 tons
Milled:		tons
Recovery: Silver:	22,674 grams	729 ounces
Lead:	10,631 kilograms	23,437 pounds

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MINFILE NUMBER: 082GNW019		NAME: DARDENELLE (L.10329)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1975	43		Silver	2,805	
			Gold	1,061	
			Lead		2,110
			Zinc		65
1974	44		Silver	2,550	
			Gold	311	
			Lead		1,930

SUMMARY TOTALS: 082GNW019

NAME: **DARDENELLE (L.10329)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	87 tonnes	96 tons
Milled:	tonnes	tons
Recovery:		
Silver:	5,355 grams	172 ounces
Gold:	1,372 grams	44 ounces
Lead:	4,040 kilograms	8,907 pounds
Zinc:	65 kilograms	143 pounds

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MINFILE NUMBER: 082GNW022	NAME: MIDAS (L.5456)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1968	9		Silver Lead	684	804

SUMMARY TOTALS: 082GNW022

NAME: **MIDAS (L.5456)**

	<u>Metric</u>		<u>Imperial</u>
	Mined:	9 tonnes	10 tons
	Milled:		tons
Recovery:	Silver:	684 grams	22 ounces
	Lead:	804 kilograms	1,773 pounds

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MINFILE NUMBER: 082GNW045	NAME: EMILY-TIGER	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1917	1		Silver Lead	1,866	168

SUMMARY TOTALS: 082GNW045

NAME: **EMILY-TIGER**

	Mined:	1 tonnes	1 tons
	Milled:	tonnes	tons
Recovery:	Silver:	1,866 grams	60 ounces
	Lead:	168 kilograms	370 pounds

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MINFILE NUMBER: 082GSE035		NAME: FERNIE (MORRISSEY RIDGE)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1958	14,728		Coal		13,333,800
1957	215,150		Coal		194,758,100
1956	271,413		Coal		243,546,500
1955	280,066		Coal		254,889,000
1954	255,205		Coal		235,976,000
1953	278,018		Coal		252,225,550
1952	275,090		Coal		251,078,000
1951	283,822		Coal		259,726,150
1950	276,640		Coal		255,215,630
1949	307,444		Coal		284,197,500
1948	266,583		Coal		245,216,640
1947	321,460		Coal		321,460,090
1946	286,344		Coal		286,343,870
1945	284,412		Coal		284,411,560
1944	309,306		Coal		30,930,654
1943	205,708		Coal		205,707,820
1942	182,516		Coal		182,515,640
1941	177,619		Coal		177,618,650
1940	125,953		Coal		125,952,650
1939	105,034		Coal		105,033,870
1938	107,432		Coal		107,432,470
1937	113,051		Coal		113,050,670
1936	93,115		Coal		93,115,280
1935	88,273		Coal		88,272,700
1934	93,074		Coal		93,073,550
1933	54,739		Coal		54,738,600
1932	94,369		Coal		94,369,000
1931	159,223		Coal		159,222,800
1930	213,636		Coal		213,635,700
1929	382,342		Coal		382,342,200
1928	470,158		Coal		470,158,600
1927	427,457		Coal		427,457,400
1926	371,929		Coal		371,928,600
1925	471,581		Coal		471,581,000
1924	99,600		Coal		99,600,000
1923	440,800		Coal		440,800,000
1922	296,352		Coal		296,352,000
1921	420,160		Coal		420,160,000
1920	438,712		Coal		438,712,000
1919	311,105		Coal		311,104,600
1918	408,922		Coal		408,922,000
1917	328,753		Coal		328,753,000
1916	578,264		Coal		578,264,200
1915	520,118		Coal		520,118,200
1914	586,563		Coal		586,563,100
1913	838,427		Coal		838,426,700
1912	708,027		Coal		708,027,000
1911	209,860		Coal		209,860,890
1910	632,525		Coal		632,525,020
1909	418,851		Coal		418,851,070
1908	471,711		Coal		471,710,500
1907	531,371		Coal		531,371,040
1906	454,103		Coal		454,103,220
1905	530,786		Coal		530,785,820
1904	434,268		Coal		434,267,850
1903	360,214		Coal		360,213,650

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082GSE035		NAME: FERNIE (MORRISSEY RIDGE)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1902	284,589		Coal		284,589,720
1901	327,401		Coal		327,400,920
1900	199,986		Coal		199,986,390
1899	104,252		Coal		104,251,760
1898	10,113		Coal		10,113,264

SUMMARY TOTALS: 082GSE035

NAME: **FERNIE (MORRISSEY RIDGE)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	18,808,723 tonnes	20,733,068 tons
Milled:		
Recovery:		
Coal:	18,296,350,158 kilograms	40,336,536,078 pounds

Comments:

- 1958: Mine closed January 31, 1958.
- 1957: No. 1 East, No. 9 and No. 1 mines.
- 1956: No. 1 East, No. 9 and No. 3 mines.
- 1955: No. 1 East, No. 9, No. 3 and No. 4 mines.
- 1954: No. 1 East, No. 9, No. 3 and No. 4 mines.
- 1944: No. 1 East, No. 4, No. 9 mines.
- 1943: Elk River Colliery opens November 1943.
- 1911: Coal Creek Colliery.
- 1910: Coal Creek operated; Carbonado closed.
- 1909: Coal Creek (386,048 tonnes); Carbonado (32,804 tonnes).
- 1908: Coal Creek (448,059 tonnes); Carbonado (23,652 tonnes).
- 1907: Coal Creek (531,148 tonnes); Carbonado (224 tonnes).
- 1906: Coal Creek (433,622 tonnes); Carbonado (20,481 tonnes).
- 1905: Coal Creek (432,301 tonnes); Carbonado (98,485 tonnes).
- 1904: Coal Creek (351,435 tonnes); Carbonado (82,833 tonnes).
- 1903: Coal Creek (219,244 tonnes); Carbonado (140,970 tonnes).
- 1902: Coal Creek (242,596 tonnes); Carbonado (41,993 tonnes).
- 1901: Carbonado Colliery opened by Crow's Nest Pass Coal Company in 1898
- 1898: Coal Creek Colliery opened by Crow's Nest Pass Coal Company -1898.

RUN DATE: 25-Jun-2003
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MINFILE NUMBER: 082GSW013	NAME: RIMROCK	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1918	31		Copper		802
1917	132		Copper		4,390
1916	44		Silver	124	
			Copper		2,565

SUMMARY TOTALS: 082GSW013

NAME: **RIMROCK**

	Mined:	207 tonnes	Imperial	228 tons
	Milled:	tonnes		tons
Recovery:	Silver:	124 grams		4 ounces
	Copper:	7,757 kilograms		17,101 pounds

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MINFILE NUMBER: 082GSW017	NAME: PEACOCK COPPER	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1926	17		Silver	778	
			Copper		4,536
1925	5		Silver	404	
			Copper		781

SUMMARY TOTALS: 082GSW017

NAME: **PEACOCK COPPER**

		<u>Metric</u>	<u>Imperial</u>
	Mined:	22 tonnes	24 tons
	Milled:		
Recovery:	Silver:	1,182 grams	38 ounces
	Copper:	5,317 kilograms	11,722 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082GSW021** NAME: **MIDWAY** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1962	213		Silver	25,380	
			Gold	1,213	
			Lead		709
			Zinc		506
1959	110		Silver	8,616	
			Gold	871	
			Lead		289
			Zinc		440
1940	189		Silver	13,499	
			Gold	995	
1939	268		Silver	14,090	
			Gold	2,582	
1938	300		Silver	17,169	
			Gold	2,146	
			Lead		937
			Zinc		755
1937	52		Silver	3,763	
			Gold	902	
			Copper		108
			Lead		614
1933	36		Silver	3,017	
			Gold	373	

SUMMARY TOTALS: 082GSW021

NAME: **MIDWAY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,168 tonnes	1,287 tons
Milled:	tonnes	tons
Recovery:	Silver: 85,534 grams	2,750 ounces
	Gold: 9,082 grams	292 ounces
	Copper: 108 kilograms	238 pounds
	Lead: 2,549 kilograms	5,620 pounds
	Zinc: 1,701 kilograms	3,750 pounds

Comments: 1937: Operated by Moyie Gold Mines Ltd.
 1933: Operated by B.C. Cariboo Gold Fields Ltd.

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MINFILE NUMBER: **082GSW023** NAME: **AURORA (L.7017)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1927	564		Silver Lead Zinc	66,032	47,313 112,222
1926	1,533		Silver Lead Zinc	110,198	91,283 200,226
1911	91		Silver Lead	93,309	18,144
1910	42		Silver Lead	31,725	26,284
1900	1,533		Silver Lead Zinc	110,199	91,283 200,226

SUMMARY TOTALS: 082GSW023

NAME: **AURORA (L.7017)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	3,763 tonnes	4,148 tons
Milled:	tonnes	tons
Recovery:		
Silver:	411,463 grams	13,229 ounces
Lead:	274,307 kilograms	604,743 pounds
Zinc:	512,674 kilograms	1,130,252 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082GSW025		NAME: ST. EUGENE (L.666)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1929	47,839	47,839	Silver	717,360	
			Gold	7,060	
			Lead		449,470
			Zinc		319,269
1928	198,980	198,980	Silver	4,038,756	
			Gold	28,397	
			Lead		2,787,610
			Zinc		3,938,162
1927	185,747	185,747	Silver	5,561,185	
			Gold	34,711	
			Lead		3,499,687
			Zinc		5,228,358
1926	78,917	78,917	Silver	2,413,313	
			Gold	8,678	
			Lead		1,608,317
			Zinc		4,487,293
1924	591		Silver	38,910	
			Lead		14,124
			Zinc		26,063
1923	15		Silver	6,656	
			Lead		3,709
1920	883		Silver	340,080	
			Lead		205,219
			Zinc		108,334
1919	2,681		Silver	667,564	
			Lead		256,280
			Zinc		375,434
1918	1,080		Silver	672,043	
			Lead		398,383
1917	1,329		Silver	721,807	
			Lead		412,635
1916	323		Silver	225,808	
			Lead		143,358
1915	261		Silver	217,877	
			Lead		118,724
1914	803		Silver	546,573	
			Lead		308,672
1913	1,286		Silver	1,164,590	
			Lead		606,870
1912	914		Silver	740,687	
			Lead		426,497
1911	35,285	35,285	Silver	4,299,741	
			Lead		2,710,590
1910	84,116	84,116	Silver	9,945,620	
			Lead		6,719,636
1909	133,593	132,395	Silver	16,907,435	
			Lead		11,947,695
1908	145,357	143,029	Silver	18,174,198	
			Lead		12,789,031
1907	112,892	112,892	Silver	18,877,935	
			Lead		12,285,052
1906	138,642	138,642	Silver	24,401,143	
			Lead		15,106,535
1905	133,174	133,174	Silver	27,983,556	
			Lead		16,554,207
1904	65,155	65,155	Silver	13,604,359	
			Lead		7,874,302
1901	44,596	44,596	Silver	12,767,937	
			Lead		7,006,892
1900	60,210	60,210	Silver	16,733,725	
			Lead		8,426,940
1899	597		Silver	921,800	
			Lead		374,044

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MINFILE NUMBER: **082GSW025**

NAME: **ST. EUGENE (L.666)**

STATUS: Past Producer

SUMMARY TOTALS: 082GSW025

NAME: **ST. EUGENE (L.666)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,475,266 tonnes	1,626,202 tons
Milled:	1,460,977 tonnes	1,610,451 tons
Recovery:		
Silver:	182,690,658 grams	5,873,633 ounces
Gold:	78,846 grams	2,535 ounces
Lead:	113,034,479 kilograms	249,198,299 pounds
Zinc:	14,482,913 kilograms	31,929,349 pounds

Comments:

1929: Tailings.
1928: Tailings.
1926: Tailings ore treated at Moyie.
1924: Reclaimed zinc conc.

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MINFILE NUMBER: 082GSW027		NAME: GUINDON (L.6127)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1927	19		Silver	1,120	
			Lead		1,378
			Zinc		3,167
1923	4		Silver	871	
			Lead		835
			Zinc		327
1919	5		Silver	1,337	
			Lead		1,099

SUMMARY TOTALS: 082GSW027

NAME: **GUINDON (L.6127)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	28 tonnes	31 tons
Milled:	tonnes	tons
Recovery:		
	Silver: 3,328 grams	107 ounces
	Lead: 3,312 kilograms	7,302 pounds
	Zinc: 3,494 kilograms	7,703 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082GSW030		NAME: SOCIETY GIRL (L.4405)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1952	366		Silver	20,652	
			Lead		26,415
			Zinc		659
1951	829		Silver	44,726	
			Lead		51,016
			Zinc		5,272
1949	607		Silver	36,733	
			Lead		39,976
			Zinc		16,542
1948	302		Silver	22,208	
			Lead		29,313
			Zinc		1,441
1920	17		Silver	4,137	
			Lead		5,085
1913	18		Silver	4,323	
			Lead		5,103
1912	132		Silver	28,801	
			Lead		33,291
1911	487		Silver	173,866	
			Lead		182,123
1910	44		Silver	10,264	
			Lead		15,042
1901	109		Silver	52,440	
			Lead		66,814
1900	73		Silver	33,902	
			Lead		45,477

SUMMARY TOTALS: 082GSW030

NAME: **SOCIETY GIRL (L.4405)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,984 tonnes	3,289 tons
Milled:		
Recovery:		
Silver:	432,052 grams	13,891 ounces
Lead:	499,655 kilograms	1,101,550 pounds
Zinc:	23,914 kilograms	52,721 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082GSW032	NAME: BULL RIVER	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
		Commodity
		Grams Recovered
		Kilograms Recovered
1962	7,947	Limestone
1961	8,800	Limestone
1960	1,089	Limestone

SUMMARY TOTALS: 082GSW032

NAME: **BULL RIVER**

		<u>Metric</u>		<u>Imperial</u>
Mined:	17,836	tonnes	19,661	tons
Milled:		tonnes		tons
Recovery:	Limestone:	17,835,252	kilograms	39,319,989
Comments:	1962:	Minister of Mines Annual Reports 1960 to 1962		

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082GSW037	NAME: PAY ROLL (L.3562)	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1907	16	
		Commodity
		Silver
		Gold
		Grams Recovered
		715
		187

SUMMARY TOTALS: 082GSW037

	NAME: PAY ROLL (L.3562)
	<u>Metric</u>
Mined:	16 tonnes
Milled:	tonnes
	<u>Imperial</u>
	18 tons
Recovery:	tons
	715 grams
Silver:	23 ounces
Gold:	6 ounces
	grams

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082GSW045	NAME: SUNRISE	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1954	95,000	
		Commodity
		Gypsum
		Grams Recovered
		950,000
		Kilograms Recovered
		950,000

SUMMARY TOTALS: 082GSW045

	NAME: SUNRISE	
	<u>Metric</u>	<u>Imperial</u>
Mined:	95,000 tonnes	104,720 tons
Milled:	tonnes	tons
Recovery:		
Gypsum:	950,000 kilograms	2,094,391 pounds
Comments:		
1954:	Production from 1926-1929 and 1948-1954 (Open File 1991-15).	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER:	082JNW001		NAME:	MOUNT BRUSSILOF		STATUS:	Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>		
2001	200,000	200,000	Magnesite		200,000,000		
2000	200,000	200,000	Magnesite		200,000,000		
1999	200,000	200,000	Magnesite		200,000		
1998	200,000	200,000	Magnesite		200,000,000		
1997	180,000	180,000	Magnesite		180,000,000		
1996	180,000	180,000	Magnesite		180,000,000		
1995	175,000	175,000	Magnesite		175,000,000		
1994	175,000	175,000	Magnesite		175,000,000		
1993	175,000	175,000	Magnesite		175,000,000		
1992	159,318	159,318	Magnesite		159,318,000		
1991	170,734	170,734	Magnesite		170,734,000		
1990	169,774	169,774	Magnesite		169,774,000		
1989	162,540	162,540	Magnesite		162,540,000		
1988	155,000	155,000	Magnesite		155,000,000		
1987	141,390	141,390	Magnesite		141,390,000		
1986	124,438	124,438	Magnesite		124,438,000		
1985	114,000	114,000	Magnesite		114,000,000		

SUMMARY TOTALS: 082JNW001

NAME: **MOUNT BRUSSILOF**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,882,194 tonnes	3,177,075 tons
Milled:	2,882,194 tonnes	3,177,075 tons
Recovery: Magnesite:	2,682,394,000 kilograms	5,913,664,825 pounds

Comments:

- 2001: Estimated production.
- 2000: Estimated production.
- 1999: Estimated production.
- 1998: Estimated production.
- 1997: Approximate annual rate.
- 1996: Approximate annual rate.
- 1995: Approximate annual rate (Information Circular 1996-1, page 9).
- 1994: Approximate annual rate (Information Circular 1995-1, page 9).
- 1993: Approximate annual rate (Information Circular 1995-1, page 9).
- 1985: 1982-1985: Shipped 114,000 cubic metres of ore.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER:	082JSE007		NAME:	GREENHILLS		STATUS:	Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>		
2001	4,900,000	4,900,000	Coal		4,900,000,000		
2000	6,000,000	6,000,000	Coal		4,300,000,000		
1999	6,000,000	6,000,000	Coal		4,200,000,000		
1998	6,000,000	6,000,000	Coal		4,000,000,000		
1997	6,565,227	6,135,252	Coal		4,422,022,000		
1996	5,622,096	5,860,298	Coal		4,244,175,000		
1995	5,590,200	5,336,700	Coal		3,795,300,000		
1994	4,370,000	4,500,000	Coal		3,146,000,000		
1993	2,752,000	2,508,000	Coal		1,806,000,000		
1992	3,665,000	3,580,000	Coal		2,744,000,000		
1991	4,001,000	4,038,000	Coal		3,445,000,000		
1990	3,720,116	3,720,116	Coal		2,977,290,000		
1989	3,995,329	3,995,329	Coal		3,087,278,000		
1988	4,153,920	4,153,920	Coal		3,077,724,000		
1987	4,287,514	4,287,514	Coal		3,128,096,000		
1986	2,889,759	2,889,759	Coal		2,435,613,000		
1985	3,088,868	3,088,868	Coal		2,380,263,000		
1984	2,933,000	2,933,000	Coal		2,510,634,000		
1983	1,263,544	1,263,544	Coal		959,266,000		
1982	672,900	672,900	Coal		347,500,000		

SUMMARY TOTALS: 082JSE007

NAME: **GREENHILLS**

	<u>Metric</u>	<u>Imperial</u>
Mined:	82,470,473 tonnes	90,908,134 tons
Milled:	81,863,200 tonnes	90,238,730 tons

Recovery:

Coal: 61,906,161,000 kilograms 136,479,684,476 pounds

Comments:

- 2001: Coal Association www.coal.ca
- 2000: Clean coal production/tonnes are estimated on past production.
- 1999: Clean coal production/tonnes estimated based on past production.
- 1998: Clean coal production.
- 1997: Metallurgical coal-4,131,352,000 kg; Thermal coal-290,670,000 kg.
- 1996: Metallurgical coal-4,079,279,000 kg; Thermal coal-164,896,000 kg.
- 1995: Metallurgical coal-3,468,900,000 kg; Thermal coal-326,400,000 kg.
- 1994: Metallurgical coal-2,788,000,000 kg; Thermal coal-358,000,000 kg.
- 1993: Metallurgical coal-1,609,000,000 kg; Thermal coal-201,000,000 kg.
- 1992: Metallurgical coal-2,240,000,000 kg; Thermal coal-504,000,000 kg.
- 1991: Metallurgical coal-2,931,000,000 kg; Thermal coal-514,000,000 kg.
- 1990: Metallurgical coal-2,756,233,000 kg; Thermal coal-221,057,000 kg.
- 1989: Metallurgical coal-2,456,954,000 kg; Thermal coal-630,324,000 kg.
- 1988: Metallurgical coal-2,505,565,000 kg; Thermal coal-572,159,000 kg.
- 1987: Metallurgical coal-2,255,121,000 kg; Thermal coal-872,775,000 kg.
- 1986: Metallurgical coal-1,694,393,000 kg; Thermal coal-741,220,000 kg.
- 1985: Metallurgical coal-1,793,758,000 kg; Thermal coal-586,505,000 kg.
- 1984: Metallurgical coal-1,782,490,000 kg; Thermal coal-728,144,000 kg.
- 1983: Metallurgical coal-514,360,000 kg; Thermal coal-444,906,000 kg.
- 1982: Thermal coal.

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MINFILE NUMBER:	082JSE012		NAME:	FORDING RIVER		STATUS:	Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>		
2001	9,500,000	9,500,000	Coal		9,500,000,000		
2000	9,000,000	9,000,000	Coal		9,000,000,000		
1999	8,300,000	8,300,000	Coal		8,300,000,000		
1998	12,000,000	12,000,000	Coal		7,900,000,000		
1997	12,435,942	12,435,942	Coal		8,210,730,000		
1996	12,175,623	12,175,623	Coal		7,919,858,000		
1995	11,242,800	11,242,800	Coal		7,256,200,000		
1994	10,326,000	10,326,000	Coal		7,055,000,000		
1993	9,639,000	9,639,000	Coal		6,666,000,000		
1992	3,551,000	3,551,000	Coal		2,554,000,000		
1991	9,587,000	9,617,000	Coal		6,659,000,000		
1990	9,150,384	9,150,384	Coal		6,615,605,000		
1989	7,520,841	7,520,841	Coal		5,755,378,000		
1988	8,645,770	8,645,770	Coal		6,055,185,000		
1987	7,396,721	7,396,721	Coal		5,919,512,000		
1986	7,445,692	7,445,692	Coal		5,120,179,000		
1985	6,683,447	6,683,447	Coal		4,073,632,000		
1984	6,652,416	6,652,416	Coal		4,015,595,000		
1983	4,217,533	4,217,533	Coal		2,756,111,000		
1982	6,368,808	6,368,808	Coal		3,900,155,000		
1981	5,825,076	5,825,076	Coal		3,721,184,000		
1980	5,573,103	5,573,103	Coal		3,476,431,000		
1979	4,824,951	4,824,951	Coal		2,921,954,000		
1978	4,223,002	4,223,002	Coal		2,790,011,000		
1977	4,152,798	4,152,798	Coal		2,807,262,000		
1976	2,401,617	2,401,617	Coal		1,637,551,000		
1975	4,404,880	4,404,880	Coal		2,879,147,000		
1974	2,817,132	2,817,132	Coal		1,919,439,000		
1973	3,441,471	3,441,471	Coal		2,168,359,000		
1972	2,412,584	2,412,584	Coal		1,035,508,000		

SUMMARY TOTALS: 082JSE012

NAME: **FORDING RIVER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	211,915,591 tonnes	233,596,951 tons
Milled:	211,945,591 tonnes	233,630,020 tons
Recovery:	Coal: 150,588,986,000 kilograms	331,991,791,493 pounds

Comments:

2001: Coal Association www.coal.ca.
 2000: Clean coal production.
 1999: Clean coal production.
 1997: Metallurgical coal-8,199,442,000 kg; Thermal coal-11,288,000 kg.
 1996: Metallurgical coal-7,869,351,000 kg; Thermal coal-50,507,000 kg.
 1995: Metallurgical coal-7,211,600,000 kg; Thermal coal-44,600,000 kg.
 1994: Metallurgical coal-6,979,000,000 kg; Thermal coal 76,000,000 kg.
 1993: Metallurgical coal-6,601,000,000 kg; Thermal coal-65,000,000 kg.
 1992: Metallurgical coal-2,527,000,000 kg; Thermal coal-27,000,000 kg.
 1991: Metallurgical coal-6,003,000,000 kg; Thermal coal-656,000,000 kg.
 1990: Metallurgical coal-6,259,581,000 kg; Thermal coal-356,024,000 kg.
 1989: Metallurgical coal-5,569,339,000 kg; Thermal coal-186,039,000 kg.
 1988: Metallurgical coal-5,731,335,000 kg; Thermal coal-323,850,000 kg.
 1987: Metallurgical coal-5,081,895,000 kg; Thermal coal-837,617,000 kg.
 1986: Metallurgical coal-4,627,363,000 kg; Thermal coal-492,816,000 kg.
 1985: Metallurgical coal-3,895,256,000 kg; Thermal coal-178,376,000 kg.
 1984: Metallurgical coal-3,794,670,000 kg; Thermal coal-220,925,000 kg.
 1983: Metallurgical coal-2,695,886,000 kg; Thermal coal-60,225,000 kg.
 1982: Metallurgical coal-3,793,987,000 kg; Thermal coal-106,168,000 kg.
 1981: Metallurgical coal.
 1980: Metallurgical coal.
 1979: Metallurgical coal.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082JSW009		NAME: CANAL FLATS		STATUS: Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
2002	175,000	175,000	Gypsum		175,000,000
2001	100,000	100,000	Gypsum		1,000,000,000
2000	100,000	100,000	Gypsum		100,000,000
1999	100,000	100,000	Gypsum		100,000,000
1991	80,724	80,724	Gypsum		80,724,000
1990	150,119	150,119	Gypsum		150,119,000
1989	132,083	132,083	Gypsum		132,083,000
1988	140,951	140,951	Gypsum		140,951,000
1987	180,858	180,858	Gypsum		180,858,000
1986	180,180	180,180	Gypsum		180,180,000
1985	126,000	126,000	Gypsum		126,000,000
1984	16,536	16,536	Gypsum		16,536,000

SUMMARY TOTALS: 082JSW009

NAME: **CANAL FLATS**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,482,451 tonnes	1,634,122 tons
Milled:	1,482,451 tonnes	1,634,122 tons
Recovery:	Gypsum: 2,382,451,000 kilograms	5,252,403,889 pounds

Comments:
 2002: Estimated production.
 2001: Estimated production.
 2000: Estimated production.
 1999: Estimated production.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082JSW010	NAME: THUNDER HILL	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1971	3,872	
		Commodity
		Shale
		Grams Recovered
		387,200
		Kilograms Recovered
		387,200

SUMMARY TOTALS: 082JSW010

	NAME: THUNDER HILL	
	<u>Metric</u>	<u>Imperial</u>
Mined:	3,872 tonnes	4,268 tons
Milled:	tonnes	tons
Recovery:	Shale: 387,200 kilograms	853,630 pounds
Comments:	1971: Quarried by Alberta Mountain Minerals Ltd. in 1969 and 1971.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082JSW021		NAME: ELKHORN		STATUS: Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
2002	475,000	475,000	Gypsum		475,000,000
2001	500,000	500,000	Gypsum		500,000,000
2000	500,000	500,000	Gypsum		500,000,000
1999	500,000	500,000	Gypsum		500,000,000
1998	500,000	500,000	Gypsum		500,000,000
1997	500,000	500,000	Gypsum		500,000,000
1996	460,000	460,000	Gypsum		460,000,000
1991	283,926	283,926	Gypsum		283,926,000
1990	353,313	353,313	Gypsum		353,313,000
1989	286,548	286,548	Gypsum		286,548,000
1988	303,464	324,208	Gypsum		324,208,000
1987	377,837	367,190	Gypsum		367,190,000
1986	414,570	396,300	Gypsum		396,300,000
1985	400,000	400,000	Gypsum		400,000,000
1984	400,000	400,000	Gypsum		400,000,000
1983	400,000	400,000	Gypsum		400,000,000
1982	400,000	400,000	Gypsum		400,000,000
1981	771,000	771,000	Gypsum		771,000,000
1980	3,886,351	3,886,351	Gypsum		3,886,351,000

SUMMARY TOTALS: 082JSW021

NAME: **ELKHORN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	11,712,009 tonnes	12,910,280 tons
Milled:	11,703,836 tonnes	12,901,271 tons
Recovery:	Gypsum: 11,703,836,000 kilograms	25,802,534,330 pounds

Comments:

- 2002: Estimated production.
- 2001: Estimated production.
- 2000: Estimated production.
- 1999: Estimated production.
- 1980: 1975-1980 total production.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082JSW028	NAME: WINDERMERE	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1988	303,464	
		Commodity
		Gypsum
		Grams Recovered
		303,464,000
		Kilograms Recovered

SUMMARY TOTALS: 082JSW028

	NAME: WINDERMERE	
	<u>Metric</u>	<u>Imperial</u>
Mined:	303,464 tonnes	334,512 tons
Milled:		tons
Recovery:		
	Gypsum: 303,464,000 kilograms	669,023,411 pounds
Comments:		
	1988: Mining in B.C. 1988, p. 86.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KNE009		NAME: RUTH-VERMONT		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1981	12,839	12,839	Silver	1,720,000		
			Gold	1		
			Cadmium			1,359
			Copper			6,521
			Lead			297,874
			Zinc			203,214
1979	62	62	Silver	20,964		
			Gold	26		
			Lead			3,981
			Zinc			5,459
1978	36	36	Silver	75,083		
			Cadmium			166
			Copper			384
			Lead			13,600
			Zinc			21,901
1976	60,725	60,725	Silver	5,025,312		
			Gold	2,830		
			Cadmium			9,003
			Copper			14,435
			Lead			949,099
			Zinc			1,276,240
1975	10,258	10,258	Silver	1,110,066		
			Gold	453		
			Cadmium			1,385
			Copper			3,414
			Lead			210,279
			Zinc			217,213
1973	24,455	24,455	Silver	2,989,154		
			Gold	1,524		
			Cadmium			3,655
			Copper			9,911
			Lead			653,591
			Zinc			551,584
1971	32,177	34,792	Silver	2,208,282		
			Gold	2,861		
			Copper			21,028
			Lead			294,986
			Zinc			2,591,396
1970	35,652	32,864	Silver	3,885,231		
			Gold	1,524		
			Cadmium			7,569
			Lead			797,782
			Zinc			1,073,782
1965	15	15	Silver	32,845		
			Gold	31		
			Lead			4,688
			Zinc			2,914
1951	1	1	Silver	778		
			Lead			179
			Zinc			44
1930	32	32	Silver	107,088		
			Gold	124		
			Lead			14,986
			Zinc			3,428
1927	5	5	Silver	8,647		
			Gold	31		
			Lead			1,617
			Zinc			247
1892	19		Silver	64,539		
			Lead			11,294

SUMMARY TOTALS: 082KNE009

NAME: **RUTH-VERMONT**

	<u>Metric</u>	<u>Imperial</u>
Mined:	176,276 tonnes	194,311 tons
Milled:	176,084 tonnes	194,099 tons
Recovery:		
Silver:	17,247,989 grams	554,535 ounces
Gold:	9,405 grams	302 ounces
Cadmium:	23,137 kilograms	51,008 pounds
Copper:	55,693 kilograms	122,782 pounds
Lead:	3,253,956 kilograms	7,173,743 pounds
Zinc:	5,947,422 kilograms	13,111,817 pounds

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MINFILE NUMBER: **082KNE009**

NAME: **RUTH-VERMONT**

STATUS: Past Producer

Comments:

Comments:

1979: Mill clean-up.
1976: Operated by Ruth-Vermont Mines Ltd.
1973: Operated by Consolidated Columbia River Mines Ltd.

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MINFILE NUMBER: 082KNE012	NAME: BRISCO SILICA	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1991	60,000		Silica		60,000,000
1964	2,450		Silica		2,450,000

SUMMARY TOTALS: 082KNE012

	NAME: BRISCO SILICA	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 62,450 tonnes	68,839 tons
	Milled: tonnes	tons
Recovery:	Silica: 62,450,000 kilograms	137,678,644 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNE013	NAME: BRISCO	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1952	133,000	133,000
		Commodity
		Barite
		Grams Recovered
		133,000,000
		Kilograms Recovered

SUMMARY TOTALS: 082KNE013

	NAME: BRISCO	
	<u>Metric</u>	<u>Imperial</u>
Mined:	133,000 tonnes	146,607 tons
Milled:	133,000 tonnes	146,607 tons
Recovery:		
	Barite: 133,000,000 kilograms	293,214,726 pounds
Comments:		
	1952: Total production from 1952 to 1980.	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNE018		NAME: SILVER GIANT		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1983		1	Barite		2,861,000
1982		1	Barite		1,303,400
1981		1	Barite		4,838,000
1980		1	Barite		5,512,000
1979		1	Barite		4,054,000
1975		1	Barite		12,894,000
1974		54,059	Barite		17,510,000
1973		71,742	Barite		19,927,000
1972		72,400	Barite		16,320,000
1971		51,912	Barite		14,808,000
1970		61,236	Barite		17,543,000
1969		45,635	Barite		13,523,000
1968		23,054	Barite		7,528,000
1967		43,363	Barite		11,510,000
1966		35,688	Barite		11,047,000
1965		19,325	Barite		7,343,000
1964		26,251	Barite		6,857,000
1963		16,245	Barite		3,941,000
1962		9,620	Barite		2,948,000
1961		18,302	Barite		4,796,000
1960	6,949	2,300	Barite		690,227
1959	3,188		Barite		1
1957	68,253	68,253	Silver	1,029,883	
			Cadmium		1,123
			Copper		40,879
			Lead		1,459,557
			Zinc		391,598
1956	168,228	168,228	Silver	3,573,517	
			Cadmium		3,665
			Copper		89,207
			Lead		5,500,381
			Zinc		552,298
1955	153,557	153,557	Silver	3,456,228	
			Cadmium		1,599
			Copper		90,234
			Lead		5,696,312
			Zinc		685,435
1954	170,235	170,235	Silver	4,349,226	
			Cadmium		1,369
			Lead		5,990,240
			Zinc		696,280
1953	159,926	159,926	Silver	3,451,842	
			Lead		5,254,762
			Antimony		17,111
			Zinc		466,902
1952	102,244	102,244	Silver	2,214,036	
			Cadmium		45
			Lead		3,889,103
			Antimony		1,061
			Zinc		296,998
1951	16,567	16,567	Silver	1,137,188	
			Lead		1,456,773
			Zinc		134,028
1948	267		Silver	12,908	
			Lead		17,032
			Zinc		1,844
1947	1,255		Silver	73,901	
			Gold	124	
			Lead		97,846
			Zinc		4,517
1930	1		Silver	529	
			Copper		14
1916	70		Silver	46,655	
			Lead		13,608
1908	455		Silver	13,250	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082KNE018** NAME: **SILVER GIANT** STATUS: Past Producer
 Production Year: 1908 Tonnes Mined: 455 Commodity: Lead Grams Recovered: 50,734 Kilograms Recovered: 50,734

SUMMARY TOTALS: 082KNE018

		NAME: SILVER GIANT	
		<u>Metric</u>	<u>Imperial</u>
Mined:		851,195 tonnes	938,282 tons
Milled:		1,390,148 tonnes	1,532,376 tons
Recovery:	Silver:	19,359,163 grams	622,411 ounces
	Gold:	124 grams	4 ounces
	Barite:	187,753,628 kilograms	413,925,779 pounds
	Cadmium:	7,801 kilograms	17,198 pounds
	Copper:	220,334 kilograms	485,753 pounds
	Lead:	29,426,348 kilograms	64,873,974 pounds
	Antimony:	18,172 kilograms	40,062 pounds
	Zinc:	3,229,900 kilograms	7,120,709 pounds

Comments:

1983: Source (tailings or new mining) not reported on filing statement.
 1982: Source (tailings or new mining) not reported in filing statement.
 1981: Source (tailings or new mining) not reported in filing statement.
 1980: Source (tailings or new mining) not reported in filing statement.
 1979: Source (tailings or new mining) not indicated on filing statement.
 1975: Value milled not reported in filing statements.
 1974: Crude barite concentrate produced from tailings and jigging.
 1973: 71,742t tailings to produce 19,927t of crude barite concentrates.
 1972: 72,400t tailings to produce 16,320t of crude barite concentrate.
 1971: 51,912t tailings to produce 14,808t of crude barite concentrate.
 1970: 61,236t tailings to produce 17,543t of crude barite concentrate.
 1969: 45,635t tailings to produce 13,523t of "crude barite tailings".
 1968: 23,054t tailings to produce 7528t of crude barite concentrate.
 1967: 43,363t tailings to recover 11,510t of crude barite concentrate.
 1966: 35688t of tailings to recover 11,407t of crude barite concentrate.
 1965: 19,325t tailings to recover 7343t of crude barite concentrate.
 1964: 26,251t tailings to recover 6857t of crude barite concentrate.
 1963: 16,245t tailings to recover 3941t of crude barite concentrates.
 1962: 2948t crude barite concentrate recovered from 9620t of tailings.
 1961: 4796 tonnes of crude barite concentrated produced from tailings.
 1960: 6949 tonnes reported mined but 8039 tonnes reported shipped to mil
 1959: 3188t mined but only 2099t reported shipped. No reported recovery.
 1957: Almost all ore mined came from 1957 and before. Value ~ 840,000t.

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MINFILE NUMBER: 082KNE022	NAME: YOUNG	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1917	9		Silver	15,552	
			Copper		454
1916	22		Silver	37,324	
			Copper		1,088

SUMMARY TOTALS: 082KNE022

NAME: **YOUNG**

Mined:
Milled:

Recovery:

Silver:
Copper:

Metric
31 tonnes
tonnes

52,876 grams
1,542 kilograms

Imperial
34 tons
tons

1,700 ounces
3,400 pounds

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MINFILE NUMBER: 082KNE025		NAME: PRETTY GIRL (L.2570)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1928	1		Silver	622	
			Copper		91
1917	2		Silver	3,110	
			Copper		363
1904	5		Silver	10,482	
			Copper		1,214

SUMMARY TOTALS: 082KNE025

NAME: **PRETTY GIRL (L.2570)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	8 tonnes	9 tons
Milled:	tonnes	tons
Recovery:		
Silver:	14,214 grams	457 ounces
Copper:	1,668 kilograms	3,677 pounds

Comments: 1928: Operated by North Kootenay Mines Ltd.
 1904: Operated by R.R. Bruce.

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MINFILE NUMBER: 082KNE028	NAME: LANCASTER (L.1112)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1890	27		Copper		14,968

SUMMARY TOTALS: 082KNE028

	NAME: LANCASTER (L.1112)		
	<u>Metric</u>	<u>Imperial</u>	
	27 tonnes	30 tons	
	Milled: tonnes	tons	
Recovery:			
	Mined:		
	Milled:		
	Copper:	14,968 kilograms	32,999 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082KNE029** NAME: **ISAAC (L.5344)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1924	82		Silver Lead	64,725	32,393
1923	27		Silver Lead	21,959	10,759
1920	56		Silver Lead	53,155	20,359
1918	25		Silver Lead	14,929	6,198
1917	105		Silver Lead	90,105	34,919
1916	136		Silver Lead	163,291	47,173

SUMMARY TOTALS: 082KNE029

NAME: **ISAAC (L.5344)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	431 tonnes	475 tons
Milled:		
Recovery:		
Silver:	408,164 grams	13,123 ounces
Lead:	151,801 kilograms	334,664 pounds

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MINFILE NUMBER: 082KNE030	NAME: DELOS (L. 3790)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1919	40		Silver Copper	218	4,191

SUMMARY TOTALS: 082KNE030

NAME: **DELOS (L. 3790)**

	Mined:	40 tonnes	44 tons
	Milled:		tons
Recovery:	Silver:	218 grams	7 ounces
	Copper:	4,191 kilograms	9,240 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KNE059		NAME: BRISCO TUFA		STATUS: Producer	
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
2002	2,000	2,000	Travertine		2,000,000
2001	1,000	1,000	Travertine		1,000,000
2000	1,000	1,000	Travertine		1,000,000
1999	900	900	Travertine		900,000
SUMMARY TOTALS: 082KNE059		NAME: BRISCO TUFA			
		<u>Metric</u>		<u>Imperial</u>	
	Mined:	4,900 tonnes		5,401 tons	
	Milled:	4,900 tonnes		5,401 tons	
Recovery:	Travertine:	4,900,000 kilograms		10,802,648 pounds	

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MINFILE NUMBER: 082KNE061	NAME: STEELE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1923	200		Silver Lead	159,465	63,749

SUMMARY TOTALS: 082KNE061

	NAME: STEELE	
	<u>Metric</u>	<u>Imperial</u>
	200 tonnes	220 tons
Mined:		
Milled:		
Recovery:		
	159,465 grams	5,127 ounces
Silver:		
Lead:	63,749 kilograms	140,542 pounds

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MINFILE NUMBER: 082KNE063	NAME: HIDDEN TREASURE (L.1108)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1916	6		Silver	10,886	
			Copper		454
1898	9		Copper		4,808

SUMMARY TOTALS: 082KNE063

NAME: **HIDDEN TREASURE (L.1108)**

	<u>Metric</u>	<u>Imperial</u>	
	15 tonnes	17 tons	
	Mined:	tonnes	
	Milled:	tons	
Recovery:	Silver:	10,886 grams	350 ounces
	Copper:	5,262 kilograms	11,601 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER:	<u>082KNW003</u>	NAME:	<u>LUCKY BOY (L.5423)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1976	24		Silver	17,884	
			Copper		49
			Lead		1,675
			Zinc		1,887
1942	20		Tungsten		203
1912	44		Silver	228,856	
			Lead		5,921
1906	21		Silver	127,398	
			Lead		4,027
1905	50		Silver	245,683	
			Lead		10,979
1904	113		Silver	766,998	
			Gold	31	
			Lead		36,835
1903	164		Silver	1,424,143	
			Copper		1,494
			Lead		42,565
1902	37		Silver	286,459	
			Copper		454
			Lead		12,701

SUMMARY TOTALS: 082KNW003

NAME: **LUCKY BOY (L.5423)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	473 tonnes	521 tons
Milled:	tonnes	tons
Recovery:		
Silver:	3,097,421 grams	99,584 ounces
Gold:	31 grams	1 ounces
Copper:	1,997 kilograms	4,403 pounds
Lead:	114,703 kilograms	252,877 pounds
Tungsten:	203 kilograms	448 pounds
Zinc:	1,887 kilograms	4,160 pounds

Comments:

1976: A. Marlow.
 1942: Trout Lake Tungsten Co. Ltd. W03 from dump.
 1912: Operated by Chestnut Hill Mining Co.
 1904: Horseshoe (E. Hillwan) & Lucky Boy (T.E. Ehrehard & J.J. McGlove).
 1903: Horseshoe (E. Hillwan) and Lucky Boy (S.N. Alexander).
 1902: Horseshoe operated by E.A. Hillwan.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KNW004		NAME: COPPER CHIEF (L.4584)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1917	11		Silver Lead	47,059	963
1915	1		Silver Lead	9,082	124
1913	1		Silver Lead	4,386	65
1911	3		Silver Lead	16,360	563
1905	2		Silver Lead	13,157	249
1902	3		Silver Lead	16,453	257
1901	5		Silver Lead	28,522	507

SUMMARY TOTALS: 082KNW004

NAME: **COPPER CHIEF (L.4584)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	26 tonnes	29 tons
Milled:	tonnes	tons
Recovery: Silver:	135,019 grams	4,341 ounces
Lead:	2,728 kilograms	6,014 pounds

Comments:

1917: Operated by Copper Chief Mining Syndicate.
 1915: High Grade operated by J.W. Livingston.
 1913: High Grade operated by J.W. Livingston.
 1911: High Grade operated by J.W. Livingston.
 1905: Operated by M. Matheson.
 1901: Operated by J.W. Livingston.

RUN DATE: 25-Jun-2003
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MINFILE NUMBER: 082KNW012	NAME: RAVEN	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1941	4		Silver Lead Zinc	5,319	1,330 227

SUMMARY TOTALS: 082KNW012

	NAME: RAVEN	
	<u>Metric</u>	<u>Imperial</u>
Mined:	4 tonnes	4 tons
Milled:	tonnes	tons
Recovery:		
Silver:	5,319 grams	171 ounces
Lead:	1,330 kilograms	2,932 pounds
Zinc:	227 kilograms	500 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW018		NAME: CANADIAN BOY		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1980		67	Silver	6,812	
			Gold	230	
			Lead		1,485
			Zinc		1,282

SUMMARY TOTALS: 082KNW018

		NAME: CANADIAN BOY	
		<u>Metric</u>	<u>Imperial</u>
Recovery:	Mined:	67 tonnes	74 tons
	Milled:	67 tonnes	74 tons
	Silver:	6,812 grams	219 ounces
	Gold:	230 grams	7 ounces
	Lead:	1,485 kilograms	3,274 pounds
	Zinc:	1,282 kilograms	2,826 pounds

RUN DATE: 25-Jun-2003
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MINFILE NUMBER: **082KNW025** NAME: **WINSLOW (L.8680)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941			Silver	93	
			Gold	93	
1940	520		Silver	2,644	
			Gold	5,754	
1939	1,039		Silver	4,354	
			Gold	7,776	
			Lead		216
			Zinc		13
1938	63		Silver	2,519	
			Gold	4,821	
1934	1		Silver	93	
			Gold	93	

SUMMARY TOTALS: 082KNW025

NAME: **WINSLOW (L.8680)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,623 tonnes	1,789 tons
Milled:	tonnes	tons
Recovery:		
Silver:	9,703 grams	312 ounces
Gold:	18,537 grams	596 ounces
Lead:	216 kilograms	476 pounds
Zinc:	13 kilograms	29 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KNW026		NAME: TRIUNE (L.5681)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1918	41		Silver	906	
			Gold	7	
			Lead		41
			Zinc		28
1917	25		Silver	1,150	
			Gold	3	
			Lead		50
			Zinc		15
1916	17		Silver	590	
			Lead		25
1905	104		Silver	6,627	
			Gold	8	
			Lead		395
1904	124		Silver	8,430	
			Gold	23	
			Lead		499
1903	103		Silver	8,021	
			Gold	17	
			Lead		422
1902	77		Silver	6,492	
			Gold	12	
			Lead		277
1901	16		Silver	2,570	
			Gold	5	
			Lead		93
1900	84		Silver	10,287	
			Gold	26	
			Lead		437

SUMMARY TOTALS: 082KNW026

NAME: **TRIUNE (L.5681)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	591 tonnes	651 tons
Milled:	591 tonnes	651 tons
Recovery:		
Silver:	45,073 grams	1,449 ounces
Gold:	101 grams	3 ounces
Lead:	2,239 kilograms	4,936 pounds
Zinc:	43 kilograms	95 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KNW027		NAME: SILVER CUP (L.768)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1988	1	1	Silver	267,860		
			Gold	12,356		
			Lead			48,062
			Zinc			126,653
1985	94	94	Silver	269,740		
			Gold	1,613		
			Lead			22,552
			Zinc			13,085
1984	77	77	Silver	130,423		
			Gold	830		
			Lead			20,501
			Zinc			8,505
1974	97	97	Silver	162,918		
			Gold	1,369		
			Copper			485
			Lead			30,436
			Zinc			4,258
1973	399	399	Silver	301,575		
			Gold	2,146		
			Lead			13,160
			Zinc			10,599
1941	1,053	1,053	Silver	264,096		
			Gold	3,546		
			Lead			18,722
			Zinc			14,470
1939	1	1	Silver	498		
			Lead			23
			Zinc			7
1937	1,348	1,348	Silver	710,548		
			Gold	7,123		
			Lead			35,234
			Zinc			35,620
1921	12	12	Silver	29,983		
			Gold	156		
			Lead			2,309
1920	12	12	Silver	33,467		
			Gold	93		
			Lead			2,585
1919	18	18	Silver	49,578		
			Gold	249		
			Lead			5,141
1915	79	79	Silver	418,646		
			Gold	467		
			Lead			20,917
1914	30	30	Silver	167,863		
			Gold	124		
			Lead			13,275
1913	70	70	Silver	191,159		
			Gold	1,182		
			Lead			19,638
1912	290	290	Silver	729,459		
			Gold	1,369		
			Lead			70,810
1911	396	396	Silver	1,595,802		
			Gold	1,773		
			Lead			121,979
1910	881	881	Silver	3,351,442		
			Gold	13,001		
			Lead			210,146
1909	1,468	1,468	Silver	4,918,380		
			Gold	22,394		
			Lead			408,444
1908	1,451	1,451	Silver	5,133,146		
			Gold	20,683		
			Lead			373,828
1907	870	870	Silver	3,698,302		
			Gold	10,886		
			Lead			249,042
1906	443	443	Silver	1,903,752		
			Gold	3,670		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	082KNW027		NAME:	SILVER CUP (L.768)		STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>		
1906	443	443	Lead			133,416	
1905	9,072	9,072	Silver	2,363,050			
			Gold	15,427			
			Lead			71,630	
1903	885	885	Silver	5,107,299			
			Gold	18,413			
			Lead			223,211	
1902	876	876	Silver	5,437,240			
			Gold	15,085			
			Lead			254,689	
1901	174	174	Silver	1,209,533			
			Gold	2,333			
			Lead			57,703	
1900	240	240	Silver	1,188,197			
			Gold	1,742			
			Lead			80,427	
1899	145	145	Silver	869,640			
			Gold	2,115			
			Lead			39,541	
1898	563	563	Silver	3,779,326			
			Gold	10,762			
			Lead			165,589	
1896	18	18	Silver	248,824			
			Gold	560			
1895	54	54	Silver	746,472			
			Gold	1,680			

SUMMARY TOTALS: 082KNW027

NAME: **SILVER CUP (L.768)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	21,117 tonnes	23,278 tons
Milled:	21,117 tonnes	23,278 tons
Recovery:		
Silver:	45,278,218 grams	1,455,726 ounces
Gold:	173,147 grams	5,567 ounces
Copper:	485 kilograms	1,069 pounds
Lead:	2,713,010 kilograms	5,981,162 pounds
Zinc:	213,197 kilograms	470,019 pounds

Comments:

1988: Custom ore; unknown tonnage.
 1985: Concentrates: Lead-75 tonnes, Zinc-19 tonnes.
 1984: Crude ore.
 1941: Ore mined is estimated.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KNW028		NAME: TOWSER (L.1565)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1973	447		Silver	27,488	
			Gold	1,956	
			Lead		13,160
			Zinc		10,600
1917	23		Silver	43,544	
			Gold	156	
			Lead		9,125

SUMMARY TOTALS: 082KNW028

NAME: **TOWSER (L.1565)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	470 tonnes	518 tons
Milled:	tonnes	tons
Recovery:		
Silver:	71,032 grams	2,284 ounces
Gold:	2,112 grams	68 ounces
Lead:	22,285 kilograms	49,130 pounds
Zinc:	10,600 kilograms	23,369 pounds

Comments:

1973: Mine dump

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KNW030		NAME: TRUE FISSURE (L.1097)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1944	25		Silver	17,355	
			Gold	93	
			Lead		6,006
			Zinc		4,622
1940			Silver	46,343	
			Gold	404	
			Lead		9,613
			Zinc		62,737
1938	2,793		Silver	483,061	
			Gold	3,639	
			Lead		123,528
			Zinc		39,275
1937	1,455		Silver	120,742	
			Gold	964	
			Lead		29,959
			Zinc		8,654
1928	49		Silver	20,093	
			Gold	218	
			Lead		5,588
			Zinc		11,983
1927	2		Silver	8,522	
			Lead		293
			Zinc		429
1918	38		Silver	31,445	
			Gold	125	
			Lead		7,608
1917	23		Silver	22,301	
			Lead		4,735
			Zinc		2,286
1909	112		Silver	292,773	
			Gold	373	
			Lead		31,896
1908	108		Silver	268,294	
			Gold	342	
			Lead		22,547

SUMMARY TOTALS: 082KNW030

NAME: **TRUE FISSURE (L.1097)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,605 tonnes	5,076 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,310,929 grams	42,147 ounces
Gold:	6,158 grams	198 ounces
Lead:	241,773 kilograms	533,018 pounds
Zinc:	129,986 kilograms	286,570 pounds

Comments:

1944: Operated by Codan Lead and Zinc Co. Ltd.
 1940: Clean up by V. Soules and partners. Concentrate produced in 1938.
 1937: Operated by New True Fissure Mining & Milling Co. Ltd.
 1908: Operated by True Fissure Mining & Milling Co. Ltd.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW031		NAME: BROADVIEW (L.1550)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1906	197		Silver	240,115	
			Gold	529	
			Copper		519
			Lead		67,955
1901	1		Silver	1,151	
			Lead		254
1900	18		Silver	28,335	
			Gold	62	
			Lead		8,467

SUMMARY TOTALS: 082KNW031

NAME: **BROADVIEW (L.1550)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	216 tonnes	238 tons
Milled:	tonnes	tons
Recovery:		
Silver:	269,601 grams	8,668 ounces
Gold:	591 grams	19 ounces
Copper:	519 kilograms	1,144 pounds
Lead:	76,676 kilograms	169,042 pounds

Comments:

1906: Operated by Broadview Syndicate.
 1900: Didisheim operated for Lillooet Fraser R. Cariboo Gold Fields L.

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MINFILE NUMBER: 082KNW032	NAME: OPHIR LADE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1932	12		Gold	404	

SUMMARY TOTALS: 082KNW032

	NAME: OPHIR LADE	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 12 tonnes	13 tons
	Milled: tonnes	tons
Recovery:	Gold: 404 grams	13 ounces

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MINFILE NUMBER: 082KNW033	NAME: BADSHOT	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1904	25		Silver Lead	120,026	10,977

SUMMARY TOTALS: 082KNW033

	NAME: BADSHOT	
	<u>Metric</u>	<u>Imperial</u>
	25 tonnes	28 tons
Mined:		
Milled:		
Recovery:		
	120,026 grams	3,859 ounces
Silver:		
Lead:	10,977 kilograms	24,200 pounds

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MINFILE NUMBER: 082KNW034	NAME: BLACK PRINCE (L.755)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1904	27		Silver Lead	144,411	3,870

SUMMARY TOTALS: 082KNW034

	NAME: BLACK PRINCE (L.755)	
	<u>Metric</u>	<u>Imperial</u>
	27 tonnes	30 tons
Mined:		
Milled:		
Recovery:		
	144,411 grams	4,643 ounces
	3,870 kilograms	8,532 pounds

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MINFILE NUMBER: 082KNW035	NAME: MOHICAN	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1904	27		Silver Lead	144,411	3,870

SUMMARY TOTALS: 082KNW035

	NAME: MOHICAN	
	<u>Metric</u>	<u>Imperial</u>
	27 tonnes	30 tons
Mined:		
Milled:		
Recovery:		
	144,411 grams	4,643 ounces
Silver:		
Lead:	3,870 kilograms	8,532 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER:	<u>082KNW040</u>	NAME:	<u>BEATRICE (L.4586)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1984	34	34	Silver	93,924	
			Gold	189	
			Lead		5,073
			Zinc		10,894
1917	82		Silver	279,927	
			Lead		16,329
1911	272		Silver	466,545	
			Lead		108,862
1907	24		Silver	60,215	
			Lead		4,335
1905	69		Silver	199,557	
			Lead		14,424
1902	30		Silver	80,059	
			Lead		4,537
1900	54		Silver	326,084	
			Gold	187	
			Lead		14,526
1899	53		Silver	326,058	
			Gold	182	
			Lead		14,844

SUMMARY TOTALS: 082KNW040

NAME: **BEATRICE (L.4586)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	618 tonnes	681 tons
Milled:	34 tonnes	37 tons
Recovery:		
Silver:	1,832,369 grams	58,912 ounces
Gold:	558 grams	18 ounces
Lead:	182,930 kilograms	403,292 pounds
Zinc:	10,894 kilograms	24,017 pounds

Comments:

1984: Crude ore. Operated by W. Tyner.
 1902: Operated by Beatrice Mines Ltd.
 1900: Operated by F. Fullner & O. & J. Boucher.
 1899: From original fiche.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: **082KNW041** NAME: **MOHAWK (L.4571)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1963	8		Silver Lead Zinc	13,499	1,358 1,699

SUMMARY TOTALS: 082KNW041

NAME: **MOHAWK (L.4571)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	8 tonnes	9 tons
Milled:	tonnes	tons
Recovery:	Silver: 13,499 grams	434 ounces
	Lead: 1,358 kilograms	2,994 pounds
	Zinc: 1,699 kilograms	3,746 pounds

Comments: 1963: Operated by Dakota Silver Mines Ltd. (Mohawk Silver Mines Ltd.).

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW045		NAME: SPIDER (L.15752)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1958	10,785	10,359	Silver	4,475,535		
			Gold	35,333		
			Lead			866,015
			Antimony			4,261
			Zinc			914,889
1957	26,630	26,217	Silver	8,732,136		
			Gold	68,738		
			Cadmium			13,340
			Copper			23,320
			Lead			1,866,809
1956	25,575	25,530	Silver	10,379,507		
			Gold	66,218		
			Cadmium			16,340
			Copper			44,352
			Lead			2,355,691
1955	26,358	25,714	Silver	10,165,331		
			Gold	76,980		
			Cadmium			14,074
			Lead			2,332,965
			Zinc			2,543,851
1954	16,242	15,621	Silver	9,307,635		
			Gold	65,845		
			Cadmium			7,972
			Lead			1,774,144
			Zinc			1,487,806
1953	15,656	14,971	Silver	4,810,328		
			Gold	34,307		
			Cadmium			8,645
			Copper			17,676
			Lead			1,007,676
1952	6,458	5,732	Silver	4,594,224		
			Gold	21,959		
			Lead			589,112
			Zinc			379,439
1949	91	24	Silver	29,299		
			Gold	93		
			Lead			4,463
			Zinc			3,188
1941	11	11	Silver	40,247		
			Gold	31		
			Lead			3,689
			Zinc			1,416
1937	82	82	Silver	215,295		
			Gold	249		
			Lead			16,243
			Zinc			15,922
1929	5	5	Silver	14,929		
			Lead			1,162
			Zinc			988
1927	25	25	Silver	60,962		
			Gold	31		
			Lead			4,243
			Zinc			4,102
1926	124	124	Silver	304,934		
			Gold	249		
			Lead			18,036
			Zinc			17,215
1917	5	5	Silver	9,549		
			Lead			741
1912	11	11	Silver	308,200		
			Gold	498		
			Lead			1,877
1911	5	5	Silver	32,689		
			Lead			1,884

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: **082KNW045**

NAME: **SPIDER (L.15752)**

STATUS: Past Producer

SUMMARY TOTALS: 082KNW045

NAME: **SPIDER (L.15752)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	128,063 tonnes	141,165 tons
Milled:	124,436 tonnes	137,167 tons
Recovery:		
Silver:	53,480,800 grams	1,719,445 ounces
Gold:	370,531 grams	11,913 ounces
Cadmium:	60,371 kilograms	133,095 pounds
Copper:	85,348 kilograms	188,160 pounds
Lead:	10,844,750 kilograms	23,908,574 pounds
Antimony:	4,261 kilograms	9,394 pounds
Zinc:	11,519,402 kilograms	25,395,927 pounds

Comments:

- 1958: Antimony statistics are from the period 1911-1958.
- 1956: Includes Eclipse (082KNW044) ore from 1956 to 1958.
- 1949: Operated by Sunshine Lardeau Mines Ltd.
- 1941: Operated by O. Osing & O. Jorgensen.
- 1917: Operated by Multiplex Mining & Milling & Power Co. Ltd.
- 1912: Operated by F.G. Wrightson.
- 1911: Operated by A. Evans.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: **082KNW056** NAME: **ABBOTT (L.765)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1988	1,031	1,031	Silver	10,677	
			Gold	81	
			Lead		4,204
			Zinc		32,887

SUMMARY TOTALS: 082KNW056

NAME: **ABBOTT (L.765)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,031 tonnes	1,136 tons
Milled:	1,031 tonnes	1,136 tons
Silver:	10,677 grams	343 ounces
Gold:	81 grams	3 ounces
Lead:	4,204 kilograms	9,268 pounds
Zinc:	32,887 kilograms	72,503 pounds

Recovery:
 Comments: 1988: Custom ore.

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MINFILE NUMBER: 082KNW058		NAME: CROMWELL (L.13046)		STATUS: Showing	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1953	3		Silver	187	
			Gold	62	
			Lead		6
			Zinc		9
1901	5		Silver	3,017	
			Gold	746	
1900	6		Silver	3,732	
			Gold	1,182	

SUMMARY TOTALS: 082KNW058

NAME: **CROMWELL (L.13046)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	14 tonnes	15 tons
Milled:	tonnes	tons
Recovery:		
Silver:	6,936 grams	223 ounces
Gold:	1,990 grams	64 ounces
Lead:	6 kilograms	13 pounds
Zinc:	9 kilograms	20 pounds

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MINFILE NUMBER: 082KNW059		NAME: ETHEL		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1918	11		Silver	23,421		
			Lead		565	
1917	24		Silver	70,168		
			Lead		1,282	
1915	5		Silver	29,859		
			Lead		568	
1911			Silver	35,053		
			Lead		874	
1909	5		Silver	55,052		
			Lead		1,426	
1903	24		Silver	137,600		
			Lead		2,838	
1899	5		Silver	26,686		
			Lead		492	

SUMMARY TOTALS: 082KNW059

NAME: **ETHEL**

Metric

Imperial

Mined:
Milled:

74 tonnes
tonnes

82 tons
tons

Recovery:

Silver:
Lead:

377,839 grams
8,045 kilograms

12,148 ounces
17,736 pounds

Comments:

1918: Silver Crown operated by Silver Crown Mining Co. Ltd.
 1915: Operated by A. Herman.
 1911: Ethel operated by Ethel Mining Co. Ltd.
 1909: Francis operated by J.T. Lauthers.
 1903: Operated by C.D. Stanwood.
 1899: Operated by T.M. Bird.

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MINFILE NUMBER: 082KNW061	NAME: GREAT NORTHERN (L.1099)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1896	15		Gold	933	

SUMMARY TOTALS: 082KNW061

NAME: **GREAT NORTHERN (L.1099)**

Metric Imperial

Mined: 15 tonnes 17 tons
Milled: tonnes tons

Recovery:

Gold: 933 grams 30 ounces

Comments:

1896: Conflicting reports for tonnage.

MINFILE PRODUCTION REPORT
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<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1899	5		Silver Gold Lead	19,408 31	1,098

SUMMARY TOTALS: 082KNW062

NAME: **ST. ELMO (L.4581)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5 tonnes	6 tons
Milled:	tonnes	tons
Recovery:	Silver: 19,408 grams	624 ounces
	Gold: 31 grams	1 ounces
	Lead: 1,098 kilograms	2,421 pounds
Comments:	1899: Operated by H. McPherson.	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW064		NAME: MERIDIAN		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1941		5	Silver	124		
			Gold	373		
1940		2	Silver	124		
			Gold	249		
1939		18	Silver	1,555		
			Gold	3,857		
1937		2	Silver	156		
			Gold	529		
1936	24,742	24,742	Silver	44,944		
			Gold	85,502		
1935	26,139	26,139	Silver	69,173		
			Gold	168,050		
1908			Gold	4,479		
1907	4,400	4,400	Gold	25,442		
1906	7,212	7,212	Silver	17,138		
			Gold	59,407		
1905	10,183	10,183	Gold	67,494		
1904	14,013	14,013	Silver	18,662		
			Gold	93,340		
1903	2,074	2,074	Silver	13,623		
			Gold	35,177		

SUMMARY TOTALS: 082KNW064

NAME: **MERIDIAN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	88,763 tonnes	97,844 tons
Milled:	88,790 tonnes	97,874 tons
Recovery:		
Silver:	165,499 grams	5,321 ounces
Gold:	543,899 grams	17,487 ounces

Comments:

- 1941: Clean-up. 5 tonnes concentrate shipped.
- 1940: Clean-up. 2 tonnes concentrate shipped.
- 1939: Clean-up by C. Menhinick. 18 tonnes concentrate shipped.
- 1937: Clean-up. 2 tonnes concentrate shipped.
- 1936: 583 tonnes concentrate shipped.
- 1935: Meridian operated by Meridian Mining Co. Ltd. 977 tonnes conc.
- 1908: Concentrate from 1907.
- 1907: Eva operated by Eva Gold Mines Ltd.
- 1906: Eva operated by Eva Gold Mines Ltd.
- 1905: Eva operated by Eva Gold Mines Ltd.
- 1904: Eva(4849 mined,43171 gold,0 silver) & Oyster-Criterion(082KNW065).
- 1903: Eva (082KNW066) operated by Imperial Development Syndicate.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW069		NAME: TEDDY GLACIER		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1929	5	5	Silver	2,302	
			Gold	124	
			Lead		855
			Zinc		1,351

SUMMARY TOTALS: 082KNW069

NAME: **TEDDY GLACIER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5 tonnes	6 tons
Milled:	5 tonnes	6 tons
Recovery:		
Silver:	2,302 grams	74 ounces
Gold:	124 grams	4 ounces
Lead:	855 kilograms	1,885 pounds
Zinc:	1,351 kilograms	2,978 pounds

Comments: 1929: Operated by Teddy Glacier Mines Ltd.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: **082KNW071** NAME: **LEAD STAR** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1930	12		Silver	19,315	
			Gold	31	
			Lead		3,104
			Zinc		1,263

SUMMARY TOTALS: 082KNW071

NAME: **LEAD STAR**

	<u>Metric</u>	<u>Imperial</u>
Mined:	12 tonnes	13 tons
Milled:	tonnes	tons
Recovery:		
Silver:	19,315 grams	621 ounces
Gold:	31 grams	1 ounces
Lead:	3,104 kilograms	6,843 pounds
Zinc:	1,263 kilograms	2,784 pounds

Comments: 1930: Operated by Globe Mining Co. Ltd.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW076		NAME: GOLDFINCH (L.5654)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1989	3,000	3,000	Silver	118,244		
			Gold	29,804		
1980	281	281	Silver	4,013		
			Gold	3,053		
			Silica		190,800	
1979	31	31	Silver	373		
			Gold	156		
			Lead		31	
			Zinc		31	
1904	590	590	Silver	622		
			Gold	4,665		
1903	726	726	Silver	4,976		
			Gold	16,205		

SUMMARY TOTALS: 082KNW076

NAME: **GOLDFINCH (L.5654)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,628 tonnes	5,101 tons
Milled:	4,628 tonnes	5,101 tons
Recovery:		
Silver:	128,228 grams	4,123 ounces
Gold:	53,883 grams	1,732 ounces
Lead:	31 kilograms	68 pounds
Silica:	190,800 kilograms	420,642 pounds
Zinc:	31 kilograms	68 pounds

Comments:

1989: Custom ore, Independence (tonnage unknown, estimated from grade).
 1980: Ore from 1023 Level, Goldfinch (Assessment Report 9137).
 1979: Bulk sample. Operated by R. Bacon.
 1904: Operated by Goldfinch Mining Co. Ltd.
 1903: Operated by Northwestern Development Syndicate.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW077		NAME: MAMMOTH (L.6473)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1907	4		Silver	26,469	
			Lead		1,388
1906	34		Silver	176,883	
			Gold	93	
			Lead		7,336
			Zinc		1,952
1905	38		Silver	280,300	
			Gold	156	
			Lead		14,443

SUMMARY TOTALS: 082KNW077

NAME: **MAMMOTH (L.6473)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	76 tonnes	84 tons
Milled:	tonnes	tons
Silver:	483,652 grams	15,550 ounces
Gold:	249 grams	8 ounces
Lead:	23,167 kilograms	51,074 pounds
Zinc:	1,952 kilograms	4,303 pounds

Recovery:

Comments:

1905: Operated by The Edward Baillie Syndicate Ltd.

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MINFILE NUMBER: 082KNW079		NAME: BLUE JAY (L.13482)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1981	2		Silver	2,768	
			Lead		390
			Zinc		279
1980	1		Silver	1,285	
			Lead		502
			Zinc		158
1979			Silver	9,424	
			Lead		576
			Zinc		721

SUMMARY TOTALS: 082KNW079

NAME: **BLUE JAY (L.13482)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	3 tonnes	3 tons
Milled:	tonnes	tons
Recovery:		
Silver:	13,477 grams	433 ounces
Lead:	1,468 kilograms	3,236 pounds
Zinc:	1,158 kilograms	2,553 pounds

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MINFILE NUMBER: 082KNW083	NAME: METROPOLITAN	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1901	5		Silver Gold Lead	37,821 31	896

SUMMARY TOTALS: 082KNW083

	NAME: METROPOLITAN	
	<u>Metric</u>	<u>Imperial</u>
Mined:	5 tonnes	6 tons
Milled:	tonnes	tons
Recovery:	Silver: 37,821 grams	1,216 ounces
	Gold: 31 grams	1 ounces
	Lead: 896 kilograms	1,975 pounds

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MINFILE NUMBER:	<u>082KNW097</u>	NAME:	<u>MIKE</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1973	2		Silver Lead Zinc	778	195 657

SUMMARY TOTALS: 082KNW097

	NAME:	<u>MIKE</u>
	<u>Metric</u>	<u>Imperial</u>
Mined:	2 tonnes	2 tons
Milled:	tonnes	tons
Recovery:	Silver: 778 grams	25 ounces
	Lead: 195 kilograms	430 pounds
	Zinc: 657 kilograms	1,448 pounds
Comments:	1973:	Operated by H.A. McGowan.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KNW099		NAME: AJAX (L.4955)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1914	46		Silver Lead	47,899	27,933
1913	415		Silver Gold Lead	513,511 404	212,160
1912	28		Silver Lead	26,469	10,604

SUMMARY TOTALS: 082KNW099

NAME: **AJAX (L.4955)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	489 tonnes	539 tons
Milled:	tonnes	tons
Recovery:	Silver: 587,879 grams	18,901 ounces
	Gold: 404 grams	13 ounces
	Lead: 250,697 kilograms	552,692 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: **082KNW100** NAME: **NETTIE L. (L.4954)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1922	18		Silver	55,737	
			Gold	62	
			Lead		1,361
1921	16		Silver	90,416	
			Gold	93	
			Lead		3,905
1920	16		Silver	124,879	
			Gold	124	
			Lead		4,930
1918	28		Silver	171,378	
			Gold	187	
			Lead		7,001
1917	45		Silver	126,340	
			Gold	156	
			Lead		4,164
			Zinc		12,809
1916	44		Silver	239,306	
			Gold	373	
			Lead		19,077
1912	25		Silver	133,992	
			Gold	187	
			Lead		3,909
1904	9,224		Silver	2,715,790	
			Gold	11,259	
			Lead		118,608
1903	924		Silver	4,700,285	
			Gold	4,634	
			Lead		197,587
1902	479		Silver	2,662,106	
			Gold	2,955	
			Lead		105,438
1901	634		Silver	2,622,356	
			Gold	3,546	
			Lead		109,039
1900	162		Silver	423,841	
			Gold	715	
			Lead		17,855
1899	13		Silver	217,721	
			Lead		1,270

SUMMARY TOTALS: 082KNW100

NAME: **NETTIE L. (L.4954)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	11,628 tonnes	12,818 tons
Milled:	tonnes	tons
Recovery:		
Silver:	14,284,147 grams	459,245 ounces
Gold:	24,291 grams	781 ounces
Lead:	594,144 kilograms	1,309,863 pounds
Zinc:	12,809 kilograms	28,239 pounds

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MINFILE NUMBER: <u>082KNW101</u>		NAME: <u>SILVER DOLLAR</u>		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1947	6		Silver Lead Zinc	9,860	1,378 1,009

SUMMARY TOTALS: 082KNW101

NAME: **SILVER DOLLAR**

	<u>Metric</u>	<u>Imperial</u>
Mined:	6 tonnes	7 tons
Milled:	tonnes	tons
Recovery:		
Silver:	9,860 grams	317 ounces
Lead:	1,378 kilograms	3,038 pounds
Zinc:	1,009 kilograms	2,224 pounds
Comments:		
1947:	Operated by Silver Pass Development Syndicate.	

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MINFILE NUMBER: **082KNW114** NAME: **FIDELITY** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1918	5		Silver Lead	10,482	2,903
1917	4		Silver Gold Lead	7,776 31	1,953
1913	10		Silver Gold Lead	18,662 93	4,808
1912	22		Silver Gold Lead	52,253 746	1,306

SUMMARY TOTALS: 082KNW114

NAME: **FIDELITY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	41 tonnes	45 tons
Milled:		
Recovery:		
Silver:	89,173 grams	2,867 ounces
Gold:	870 grams	28 ounces
Lead:	10,970 kilograms	24,185 pounds

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MINFILE NUMBER:	082KNW117	NAME:	FOGGY DAY	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1917	8		Silver Gold	3,888 1,213	

SUMMARY TOTALS: 082KNW117

		NAME:	FOGGY DAY		
		<u>Metric</u>		<u>Imperial</u>	
	Mined:	8 tonnes		9 tons	
	Milled:			tons	
Recovery:	Silver:	3,888 grams		125 ounces	
	Gold:	1,213 grams		39 ounces	

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MINFILE NUMBER: 082KNW118	NAME: IXL	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1905	6		Silver	12,130	
			Gold	249	
			Lead		1,713

SUMMARY TOTALS: 082KNW118

	NAME: IXL	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 6 tonnes	7 tons
	Milled: tonnes	tons
Recovery:	Silver: 12,130 grams	390 ounces
	Gold: 249 grams	8 ounces
	Lead: 1,713 kilograms	3,777 pounds

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MINFILE NUMBER:	082KNW127	NAME:	GILLMAN	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1933	1		Silver	62	
			Gold	62	
			Lead		22
			Zinc		23

SUMMARY TOTALS: 082KNW127

NAME: **GILLMAN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1 tonnes	1 tons
Milled:	tonnes	tons
Recovery:		
Silver:	62 grams	2 ounces
Gold:	62 grams	2 ounces
Lead:	22 kilograms	49 pounds
Zinc:	23 kilograms	51 pounds
Comments:		
1933:	Operated by Pool Mountain Gold Mines Ltd.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: **082KNW128** NAME: **OLD GOLD** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1917	24		Silver	58,163	
			Lead		13,807
1916	22		Silver	62,206	
			Lead		2,722
1907	4		Silver	16,640	
			Lead		1,925

SUMMARY TOTALS: 082KNW128

NAME: **OLD GOLD**

	<u>Metric</u>	<u>Imperial</u>
Mined:	50 tonnes	55 tons
Milled:		
Recovery: Silver:	137,009 grams	4,405 ounces
Lead:	18,454 kilograms	40,684 pounds

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MINFILE NUMBER: 082KNW135	NAME: KOOTENAY CHIEF (L.2147)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1918	19		Silver Lead	32,658	12,965

SUMMARY TOTALS: 082KNW135

	NAME: KOOTENAY CHIEF (L.2147)	
	<u>Metric</u>	<u>Imperial</u>
	19 tonnes	21 tons
Mined:		
Milled:		
Recovery:	32,658 grams	1,050 ounces
	12,965 kilograms	28,583 pounds

RUN DATE: 25-Jun-2003
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MINFILE NUMBER: 082KNW150	NAME: SILVER QUEEN	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1917	24	24	Silver Lead	40,434	9,435

SUMMARY TOTALS: 082KNW150

NAME: **SILVER QUEEN**

		<u>Metric</u>		<u>Imperial</u>
	Mined:	24 tonnes		26 tons
	Milled:	24 tonnes		26 tons
Recovery:	Silver:	40,434 grams		1,300 ounces
	Lead:	9,435 kilograms		20,801 pounds
Comments:	1917:	Operated by Conaway Mining Co.		

RUN DATE: 25-Jun-2003
 RUN TIME: 16:56:50

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MINFILE NUMBER: 082KNW153		NAME: NOBLE FIVE		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1923	4		Silver	7,527	
			Gold	31	
			Lead		325
			Zinc		248
1905	6		Silver	17,169	
			Gold	62	
			Lead		1,425

SUMMARY TOTALS: 082KNW153

NAME: **NOBLE FIVE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	10 tonnes	11 tons
Milled:	tonnes	tons
Recovery:		
Silver:	24,696 grams	794 ounces
Gold:	93 grams	3 ounces
Lead:	1,750 kilograms	3,858 pounds
Zinc:	248 kilograms	547 pounds

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MINFILE NUMBER: 082KNW159	NAME: SILVER BELT (L.5695)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1899	1		Silver	4,137	
			Gold	31	
			Lead		697

SUMMARY TOTALS: 082KNW159

NAME: **SILVER BELT (L.5695)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1 tonnes	1 tons
Milled:	tonnes	tons
Recovery:		
Silver:	4,137 grams	133 ounces
Gold:	31 grams	1 ounces
Lead:	697 kilograms	1,537 pounds

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MINFILE NUMBER: 082KNW187		NAME: LUCKY JACK (L.8715)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1908	454		Silver	373	
			Gold	1,555	
1904	8		Gold	778	

SUMMARY TOTALS: 082KNW187

NAME: **LUCKY JACK (L.8715)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	462 tonnes	509 tons
Milled:		tons
Recovery:	Silver: 373 grams	12 ounces
	Gold: 2,333 grams	75 ounces
Comments:	1908: Operated by W.J. Butler.	
	1904: Operated by The Great Northern Mines Ltd.	

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MINFILE NUMBER: 082KNW212		NAME: WAGNER		STATUS: Developed Prospect		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1989	2,500	2,500	Silver Lead Zinc	4,852	105,099 1,535	
1988			Silver Gold Lead Zinc	119,845 573	38,203 74,792	
1985	43	43	Silver Gold Lead Zinc	16,525 18	3,856 2,014	
1982	110	110	Silver Gold Lead Zinc	57,262 31	13,326 5,279	

SUMMARY TOTALS: 082KNW212

NAME: **WAGNER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,653 tonnes	2,924 tons
Milled:	2,653 tonnes	2,924 tons
Recovery:		
Silver:	198,484 grams	6,381 ounces
Gold:	622 grams	20 ounces
Lead:	160,484 kilograms	353,807 pounds
Zinc:	83,620 kilograms	184,350 pounds

Comments:

1989: Custom ore.
 1988: Custom ore (unknown tonnage).
 1985: Custom ore by Mikado Resources Ltd.
 1982: Crude ore by L. Leighton.

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MINFILE NUMBER:	082KNW215	NAME:	AMERICAN	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1903	13		Silver Lead	27,744	8,234

SUMMARY TOTALS: 082KNW215

		NAME:	AMERICAN		
		<u>Metric</u>		<u>Imperial</u>	
	Mined:	13 tonnes		14 tons	
	Milled:			tons	
Recovery:	Silver:	27,744 grams		892 ounces	
	Lead:	8,234 kilograms		18,153 pounds	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER:	<u>082KSE001</u>	NAME:	<u>MINERAL KING</u>	STATUS:	Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1974	4,536	4,173	Silver	363,283	5,986,000	
			Barite		417	
			Cadmium		144,956	
			Lead		182,079	
			Zinc		14,500,000	
1973		14,500	Barite		23,811,784	
1972		23,812	Barite		4,283,726	
1971		18,197	Barite		8,659,985	
1970		8,660	Barite		366,020	
1968			Silver	366,020	14,760	
			Cadmium		8,887	
			Copper		246,535	
			Lead		3,632,029	
			Zinc		1,627,060	
1967	100,998	100,998	Silver	1,627,060	14,508	
			Cadmium		22,213	
			Copper		1,632,716	
			Lead		3,473,631	
			Zinc		1,469,430	
1966	104,087	104,087	Silver	1,469,430	16,260	
			Cadmium		30,224	
			Copper		1,489,827	
			Lead		3,455,698	
			Zinc		1,845,497	
1965	131,719	131,719	Silver	1,845,497	17,993	
			Cadmium		24,706	
			Copper		1,413,375	
			Lead		4,574,521	
			Zinc		2,824,837	
1964	166,895	166,895	Silver	2,824,837	23,246	
			Cadmium		32,927	
			Copper		2,062,301	
			Lead		6,097,250	
			Zinc		5,799,714	
1963	185,012	185,012	Silver	5,799,714	26,826	
			Cadmium		63,697	
			Copper		3,428,695	
			Lead		8,190,267	
			Zinc		7,118,388	
1962	192,696	192,696	Silver	7,118,388	37,840	
			Cadmium		39,554	
			Copper		4,173,005	
			Lead		9,217,852	
			Zinc		8,996,107	
1961	191,424	191,424	Silver	8,996,107	24,133	
			Cadmium		21,660	
			Copper		4,502,777	
			Lead		10,090,788	
			Zinc		6,178,176	
1960	177,537	177,537	Silver	6,178,176	19,704	
			Cadmium		78,838	
			Copper		4,323,192	
			Lead		7,701,980	
			Zinc		7,104,112	
1959	164,649	164,649	Silver	7,104,112	21,970	
			Cadmium		67,273	
			Copper		3,999,882	
			Lead		6,812,138	
			Zinc		3,078,138	
1958	174,565	174,565	Silver	3,078,138	35,305	
			Cadmium		80,946	
			Copper		2,926,781	
			Lead		8,211,935	
			Zinc		2,229,308	
1957	152,514	152,514	Silver	2,229,308	6,724	
			Cadmium		38,611	
			Copper		1,796,238	
			Lead		6,154,631	
			Zinc		2,081,662	
1956	132,962	132,962	Silver	2,081,662	14,701	
			Cadmium		50,163	
			Copper			

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSE001		NAME: MINERAL KING		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1956	132,962	132,962	Lead		1,695,003	
			Zinc		4,842,679	
1955	146,929	146,929	Silver	3,941,030	27,109	
			Cadmium		65,762	
			Copper		2,237,625	
			Lead		5,160,752	
			Zinc			
1954	76,381	76,381	Silver	2,700,176	13,099	
			Cadmium		36,543	
			Copper		1,364,266	
			Lead		2,573,311	
			Zinc			
1928	1		Silver	156	86	
			Lead		92	
			Zinc			

SUMMARY TOTALS: 082KSE001

NAME: **MINERAL KING**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,102,905 tonnes	2,318,056 tons
Milled:	2,167,710 tonnes	2,389,491 tons
Recovery:		
Silver:	57,723,094 grams	1,855,838 ounces
Barite:	57,241,495 kilograms	126,195,859 pounds
Cadmium:	314,595 kilograms	693,563 pounds
Copper:	662,004 kilograms	1,459,469 pounds
Lead:	37,437,260 kilograms	82,535,007 pounds
Zinc:	90,371,633 kilograms	199,235,290 pounds

Comments:

1974: 1970-1974 production: Barite produced from tailings pond.
 1973: Barite values in Geology, Expl. and Mining in B.C (1970-1974).
 1968: Clean-up after mine closed in December 1967 (unknown tonnage).

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MINFILE NUMBER: 082KSE011		NAME: MOONSHINE (L.1881)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1968	153		Silver	14,650	
			Lead		6,619
			Zinc		9,399
1957	243		Silver	91,225	
			Gold	31	
			Copper		437
			Lead		44,203
			Zinc		42,987
1953	122		Silver	70,355	
			Lead		29,909
			Zinc		41,716
1952	54		Silver	12,006	
			Lead		5,717
			Zinc		4,227
1951	1		Silver	632	
			Lead		300
			Zinc		37

SUMMARY TOTALS: 082KSE011

NAME: **MOONSHINE (L.1881)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	573 tonnes	632 tons
Milled:		
Recovery:		
Silver:	188,868 grams	6,072 ounces
Gold:	31 grams	1 ounces
Copper:	437 kilograms	963 pounds
Lead:	86,748 kilograms	191,247 pounds
Zinc:	98,366 kilograms	216,860 pounds

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MINFILE NUMBER: 082KSE013		NAME: MAG		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1984	3		Silver	2,555		
			Lead			997
1981	13		Silver	13,617		
			Gold	22		
			Lead			5,379
1979	4		Silver	4,354		
			Gold	2		
			Copper			18
			Lead			2,059
			Zinc			38
1970	5		Silver	5,536		
			Lead			2,773
			Zinc			51

SUMMARY TOTALS: 082KSE013

NAME: **MAG**

	<u>Metric</u>	<u>Imperial</u>
Mined:	25 tonnes	28 tons
Milled:	tonnes	tons
Recovery:		
Silver:	26,062 grams	838 ounces
Gold:	24 grams	1 ounces
Copper:	18 kilograms	40 pounds
Lead:	11,208 kilograms	24,709 pounds
Zinc:	89 kilograms	196 pounds

Comments:

1984: Crude ore.
 1970: A 4.5 tonne bulk sample sent to the Trail smelter.

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MINFILE NUMBER: **082KSE014** NAME: **LAVINA (L.3784)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1972	18		Silver	6,843	
			Lead		2,094
			Zinc		2,335
1927	66		Silver	73,714	
			Lead		39,351
1918	59		Silver	66,467	
			Lead		32,172
1902	75		Silver	127,273	
			Lead		49,950
1901	11		Silver	2,457	
			Lead		773

SUMMARY TOTALS: 082KSE014

NAME: **LAVINA (L.3784)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	229 tonnes	252 tons
Milled:		
Recovery:		
Silver:	276,754 grams	8,898 ounces
Lead:	124,340 kilograms	274,123 pounds
Zinc:	2,335 kilograms	5,148 pounds

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MINFILE NUMBER: 082KSE018		NAME: SURPRISE (L.6334)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1954	38		Silver	96,171	
			Gold	31	
			Lead		680
			Zinc		340
1951	885		Silver	914,522	
			Gold	467	
			Lead		7,967
			Zinc		7,941
1950	177		Silver	91,225	
			Gold	31	
			Lead		1,041
			Zinc		1,404
1948	33		Silver	35,675	
			Gold	31	
			Lead		33
			Zinc		392
1946	4		Silver	16,236	
			Lead		77
			Zinc		31
1926	5		Silver	20,341	
1923	54		Silver	118,502	
			Copper		289

SUMMARY TOTALS: 082KSE018

NAME: **SURPRISE (L.6334)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,196 tonnes	1,318 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,292,672 grams	41,560 ounces
Gold:	560 grams	18 ounces
Copper:	289 kilograms	637 pounds
Lead:	9,798 kilograms	21,601 pounds
Zinc:	10,108 kilograms	22,284 pounds

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MINFILE NUMBER: 082KSE026		NAME: ST. PATRICK		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1938	13	13	Silver Lead Zinc	12,877	5,175	576
1937	5	5	Silver Lead Zinc	3,577	1,342	1,183
1927	1	1	Silver Lead Zinc	1,493	347	14
1919	19	19	Silver Lead Zinc	20,217	7,103	4,935

SUMMARY TOTALS: 082KSE026

NAME: **ST. PATRICK**

	<u>Metric</u>	<u>Imperial</u>
Mined:	38 tonnes	42 tons
Milled:	38 tonnes	42 tons
Recovery:		
Silver:	38,164 grams	1,227 ounces
Lead:	13,967 kilograms	30,792 pounds
Zinc:	6,708 kilograms	14,789 pounds

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MINFILE NUMBER: 082KSE029		NAME: PARADISE (L.4341)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1953			Cadmium		84	
1952	17,463	17,463	Silver Gold	1,916,722 498		
			Cadmium		4,043	
			Lead		589,208	
			Zinc		1,207,063	
1951	13,761	13,761	Silver	1,905,556		
			Cadmium		3,102	
			Lead		562,477	
			Zinc		1,172,179	
1950	10,888	10,888	Silver	1,091,684		
			Gold	373		
			Cadmium		2,457	
			Lead		371,549	
			Zinc		800,452	
1949	3,635	3,635	Silver	400,358		
			Cadmium		313	
			Lead		121,021	
			Zinc		135,690	
1929	502	502	Silver	69,857		
			Gold	31		
			Lead		21,708	
			Zinc		2,291	
1928	4,808	6,923	Silver	585,545		
			Gold	93		
			Lead		168,490	
			Zinc		297,459	
1927	53		Silver	18,289		
			Lead		5,011	
			Zinc		8,455	
1926	627		Silver	517,989		
			Lead		149,110	
1925	1,065		Silver	1,212,302		
			Lead		344,010	
1924	1,076		Silver	1,586,409		
			Lead		459,057	
1923	959		Silver	1,203,686		
			Lead		426,573	
1922	605		Silver	811,571		
			Lead		269,373	
1921	399		Silver	575,654		
			Lead		174,632	
1920	956		Silver	1,218,491		
			Lead		413,338	
1919	1,445		Silver	1,656,235		
			Lead		609,245	
1918	2,511		Silver	2,774,170		
			Lead		815,265	
1917	1,598		Silver	1,778,438		
			Lead		552,244	
1916	471		Silver	408,942		
			Lead		121,119	
1906	43		Silver	97,850		
			Lead		30,204	
1905	49		Silver	75,580		
			Lead		24,494	
1904	259		Silver	413,514		
			Lead		159,358	
1903	656		Silver	1,431,516		
			Lead		428,024	
1902	121		Silver	239,306		
			Lead		80,955	
1901	685		Silver	939,124		
			Lead		351,508	

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MINFILE NUMBER: **082KSE029**

NAME: **PARADISE (L.4341)**

STATUS: Past Producer

SUMMARY TOTALS: 082KSE029

NAME: **PARADISE (L.4341)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	64,635 tonnes	71,248 tons
Milled:	53,172 tonnes	58,612 tons
Recovery:		
Silver:	22,928,788 grams	737,177 ounces
Gold:	995 grams	32 ounces
Cadmium:	9,999 kilograms	22,044 pounds
Lead:	7,247,973 kilograms	15,979,041 pounds
Zinc:	3,623,589 kilograms	7,988,644 pounds

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MINFILE NUMBER: 082KSE030		NAME: PTARMIGAN		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1959	39		Silver	132,841		
			Gold	124		
			Lead		194	
			Zinc		90	
1958	164		Silver	1,302,314		
			Gold	1,866		
			Lead		458	
			Zinc		717	
1957	18		Silver	95,113		
			Gold	156		
			Lead		64	
			Zinc		41	
1920	223		Silver	190,786		
			Gold	218		
			Copper		112	
1906	87		Silver	379,301		
			Gold	155		
			Copper		1,649	
1903	64		Silver	362,848		
			Gold	529		
			Copper		1,238	
1902	54		Silver	278,123		
			Gold	498		
			Copper		763	
			Lead		2,803	
1900	8		Silver	27,682		
			Copper		50	

SUMMARY TOTALS: 082KSE030

NAME: **PTARMIGAN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	657 tonnes	724 tons
Milled:		
Recovery:		
Silver:	2,769,008 grams	89,026 ounces
Gold:	3,546 grams	114 ounces
Copper:	3,812 kilograms	8,404 pounds
Lead:	3,519 kilograms	7,758 pounds
Zinc:	848 kilograms	1,870 pounds

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MINFILE NUMBER: <u>082KSE032</u>		NAME: <u>DELPHINE (L.4334)</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1905	54		Silver	155,733		
			Lead			9,280
1904	27		Silver	115,703		
			Lead			8,138
1903	12		Silver	36,422		
			Lead			3,435
1902	44		Silver	220,613		
			Copper			1,922
			Lead			9,071
1900	17		Silver	35,208		
			Copper			923
			Lead			6,681
1899	16		Silver	50,636		
			Copper			180
			Lead			10,275

SUMMARY TOTALS: 082KSE032

NAME: DELPHINE (L.4334)

	<u>Metric</u>	<u>Imperial</u>
Mined:	170 tonnes	187 tons
Milled:		
Recovery:		
	Silver: 614,315 grams	19,751 ounces
	Copper: 3,025 kilograms	6,669 pounds
	Lead: 46,880 kilograms	103,353 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSE034		NAME: HOT PUNCH (L.5100)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1926	12		Silver	22,208	
			Lead		5,026
			Zinc		904
1919	34		Silver	47,868	
			Gold	62	
			Lead		11,488
1909	14		Silver	18,942	
			Lead		5,470
1908	14		Silver	19,564	
			Lead		5,284

SUMMARY TOTALS: 082KSE034

NAME: **HOT PUNCH (L.5100)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	74 tonnes	82 tons
Milled:	tonnes	tons
Recovery:		
Silver:	108,582 grams	3,491 ounces
Gold:	62 grams	2 ounces
Lead:	27,268 kilograms	60,116 pounds
Zinc:	904 kilograms	1,993 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 16:56:50

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MINFILE NUMBER: 082KSE036	NAME: IRON CAP (L.5347)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1920	32		Silver Lead	27,184	8,774

SUMMARY TOTALS: 082KSE036

NAME: **IRON CAP (L.5347)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	32 tonnes	35 tons
Milled:		tons
Recovery:	Silver: 27,184 grams	874 ounces
	Lead: 8,774 kilograms	19,343 pounds
Comments:	1920: Production from Hell Diver claim.	

RUN DATE: 25-Jun-2003
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MINFILE NUMBER: 082KSE037		NAME: NIP AND TUCK		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1923	25		Silver	56,203		
			Gold	31		
			Lead		8,922	
1916	64		Silver	155,857		
			Lead		33,919	
1907	15		Silver	54,430		
			Lead		7,905	
1906	6		Silver	15,769		
			Lead		3,386	
1905	25		Silver	69,266		
			Lead		13,780	
1904	26		Silver	109,078		
			Lead		14,403	

SUMMARY TOTALS: 082KSE037

NAME: **NIP AND TUCK**

	<u>Metric</u>	<u>Imperial</u>
Mined:	161 tonnes	177 tons
Milled:	tonnes	tons
Recovery:		
Silver:	460,603 grams	14,809 ounces
Gold:	31 grams	1 ounces
Lead:	82,315 kilograms	181,473 pounds

RUN DATE: 25-Jun-2003
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MINFILE NUMBER: **082KSE040** NAME: **WHITE CAT (L.7555)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1928	13		Silver	17,107	
			Lead		8,077
1926	31		Silver	32,440	
			Lead		18,837
1925	74		Silver	64,943	
			Lead		28,317
1924	34		Silver	40,403	
			Lead		25,413

SUMMARY TOTALS: 082KSE040

NAME: **WHITE CAT (L.7555)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	152 tonnes	168 tons
Milled:	tonnes	tons
Recovery:		
Silver:	154,893 grams	4,980 ounces
Lead:	80,644 kilograms	177,790 pounds

RUN DATE: 25-Jun-2003
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MINFILE NUMBER:	082KSE041	NAME:	ST. ANTHONY	STATUS:	Prospect
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1963	5	5	Silver	12,006	
			Copper		25
			Lead		82
			Zinc		25

SUMMARY TOTALS: 082KSE041

NAME: **ST. ANTHONY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5 tonnes	6 tons
Milled:	5 tonnes	6 tons
Recovery:		
Silver:	12,006 grams	386 ounces
Copper:	25 kilograms	55 pounds
Lead:	82 kilograms	181 pounds
Zinc:	25 kilograms	55 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSE046		NAME: BUNYAN (L.9696)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1920	500		Barite		500,000
1904	14		Silver	3,266	
			Copper		1,268

SUMMARY TOTALS: 082KSE046

NAME: **BUNYAN (L.9696)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	514 tonnes	567 tons
Milled:		
Recovery:		
Silver:	3,266 grams	105 ounces
Barite:	500,000 kilograms	1,102,311 pounds
Copper:	1,268 kilograms	2,795 pounds

Comments: 1920: Assessment Report 10367.

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MINFILE NUMBER: 082KSE047	NAME: MAPLE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1925	19		Silver	8,180	
			Lead		5,209
1915	7		Silver	17,698	
			Lead		3,047

SUMMARY TOTALS: 082KSE047

NAME: **MAPLE**

	Mined:	26 tonnes	Imperial	29 tons
	Milled:	tonnes		tons
Recovery:	Silver:	25,878 grams	832 ounces	
	Lead:	8,256 kilograms	18,201 pounds	

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MINFILE NUMBER: 082KSE048		NAME: SILVER BELT		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1918	28		Silver	17,200		
			Lead			6,665
1917	23		Silver	12,721		
			Lead			4,835
1916	33		Silver	17,107		
			Lead			6,450
1901	14		Silver	101,707		

SUMMARY TOTALS: 082KSE048

NAME: **SILVER BELT**

	<u>Metric</u>	<u>Imperial</u>
Mined:	98 tonnes	108 tons
Milled:	tonnes	tons
Recovery:		
	Silver: 148,735 grams	4,782 ounces
	Lead: 17,950 kilograms	39,573 pounds

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MINFILE NUMBER: 082KSE049	NAME: BLACK DIAMOND	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1907	13		Silver	20,341	
			Lead		8,845
1906	30		Silver	39,687	
			Lead		17,827

SUMMARY TOTALS: 082KSE049

NAME: **BLACK DIAMOND**

	<u>Metric</u>	<u>Imperial</u>
Mined:	43 tonnes	47 tons
Milled:	tonnes	tons
Recovery:	Silver: 60,028 grams	1,930 ounces
	Lead: 26,672 kilograms	58,802 pounds

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MINFILE NUMBER: 082KSE050	NAME: MABEL R	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1918	15		Silver Lead	4,137	9,028

SUMMARY TOTALS: 082KSE050

	NAME: MABEL R	
	<u>Metric</u>	<u>Imperial</u>
	15 tonnes	17 tons
Mined:		
Milled:		
Recovery:	4,137 grams	133 ounces
	9,028 kilograms	19,903 pounds

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MINFILE NUMBER: 082KSE051	NAME: SITTING BULL (L.4097)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1919	12		Silver Lead	32,472	3,841

SUMMARY TOTALS: 082KSE051

	NAME: SITTING BULL (L.4097)	
	<u>Metric</u>	<u>Imperial</u>
	12 tonnes	13 tons
Mined:		
Milled:		
Recovery:		
	32,472 grams	1,044 ounces
Silver:		
Lead:	3,841 kilograms	8,468 pounds

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MINFILE NUMBER: 082KSE052	NAME: LARRABEE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1960	9,000	9,000	Barite		9,000,000

SUMMARY TOTALS: 082KSE052

NAME: **LARRABEE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	9,000 tonnes	9,921 tons
Milled:	9,000 tonnes	9,921 tons
Recovery:		
Barite:	9,000,000 kilograms	19,841,598 pounds
Comments:		
1960:	Shipped between 1959 and 1960 (Assessment Report 10367).	

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MINFILE NUMBER: 082KSE053		NAME: SILVER KEY		STATUS: Prospect		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1940	1	1	Silver	12,877		
			Lead			5
			Zinc			5
1939	2	2	Silver	23,763		
			Lead			49
			Zinc			14
1936	1	1	Silver	7,527		
1926	25	25	Silver	55,332		
			Lead			11,091
			Zinc			868

SUMMARY TOTALS: 082KSE053

NAME: **SILVER KEY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	29 tonnes	32 tons
Milled:	29 tonnes	32 tons
Recovery:		
Silver:	99,499 grams	3,199 ounces
Lead:	11,145 kilograms	24,571 pounds
Zinc:	887 kilograms	1,955 pounds

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MINFILE NUMBER: 082KSE055		NAME: M.T. FRACTION (L.10110)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1903	1		Silver	4,479	
			Lead		39
1902	17		Silver	130,322	
			Copper		965
1901	15		Silver	119,840	
			Copper		690

SUMMARY TOTALS: 082KSE055

NAME: **M.T. FRACTION (L.10110)**
Metric Imperial

Mined:	33 tonnes	36 tons
Milled:	tonnes	tons
Silver:	254,641 grams	8,187 ounces
Copper:	1,655 kilograms	3,649 pounds
Lead:	39 kilograms	86 pounds

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MINFILE NUMBER: 082KSE056		NAME: B.C. (L.1732)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1927	10		Silver	24,913		
			Lead		4,990	
			Zinc		427	
1908	19		Silver	45,535		
			Lead			10,623
1906	30		Silver	76,607		
			Lead			15,451
1905	20		Silver	51,818		
			Lead			10,351

SUMMARY TOTALS: 082KSE056

NAME: **B.C. (L.1732)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	79 tonnes	87 tons
Milled:	tonnes	tons
Recovery:		
Silver:	198,873 grams	6,394 ounces
Lead:	41,415 kilograms	91,304 pounds
Zinc:	427 kilograms	941 pounds

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MINFILE NUMBER: 082KSE058	NAME: LOOKOUT	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1935			Gold	31	

SUMMARY TOTALS: 082KSE058

NAME: **LOOKOUT**
Metric

	Mined:	tonnes	tons
Recovery:	Milled:	tonnes	tons
	Gold:	31 grams	1 ounces
Comments:	1935:	From placer mining; unknown tonnage (Annual Report 1935-E36).	

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MINFILE NUMBER: 082KSE066	NAME: CHARLEMONT	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1907	12		Silver Lead	26,780	5,555

SUMMARY TOTALS: 082KSE066

	NAME: CHARLEMONT		
	<u>Metric</u>	<u>Imperial</u>	
	12 tonnes	13 tons	
	Milled:	tons	
Recovery:	Silver:	26,780 grams	861 ounces
	Lead:	5,555 kilograms	12,247 pounds

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MINFILE NUMBER: 082KSE067	NAME: COMSTOCK (L.4342)	STATUS: Prospect			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1907	19		Silver Lead	21,461	11,189

SUMMARY TOTALS: 082KSE067

NAME: **COMSTOCK (L.4342)**

	Mined:	19 tonnes	21 tons
	Milled:	tonnes	tons
Recovery:	Silver:	21,461 grams	690 ounces
	Lead:	11,189 kilograms	24,668 pounds

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MINFILE NUMBER: 082KSE086		NAME: NETTIE M		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1906	26		Silver	88,861		
			Gold	156		
			Copper			1,485
			Lead			9,196
1905	35		Silver	172,622		
			Gold	435		
			Copper			1,685
			Lead			9,945

SUMMARY TOTALS: 082KSE086

NAME: **NETTIE M**

	<u>Metric</u>	<u>Imperial</u>
Mined:	61 tonnes	67 tons
Milled:	tonnes	tons
Recovery:		
Silver:	261,483 grams	8,407 ounces
Gold:	591 grams	19 ounces
Copper:	3,170 kilograms	6,989 pounds
Lead:	19,141 kilograms	42,199 pounds

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MINFILE NUMBER: 082KSE088	NAME: STAR	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1926	3		Silver Lead	4,821	1,333

SUMMARY TOTALS: 082KSE088

	NAME: STAR	
	<u>Metric</u>	<u>Imperial</u>
	3 tonnes	3 tons
Mined:		
Milled:		
Recovery:	4,821 grams	155 ounces
	1,333 kilograms	2,939 pounds

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MINFILE NUMBER: 082KSE090	NAME: TOBY CREEK	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1886	218	Gold
		Commodity
		Gold
		Grams Recovered
		218
		Kilograms Recovered

SUMMARY TOTALS: 082KSE090

NAME: **TOBY CREEK**

	<u>Mined:</u>	<u>Metric</u>	218 tonnes	<u>Imperial</u>	240 tons
Recovery:	<u>Milled:</u>		tonnes		tons
	<u>Gold:</u>		218 grams		7 ounces
Comments:	1886:	Placer mining between 1885 and 1887; unknown tonnage.			

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MINFILE NUMBER: 082KSE091		NAME: SILVER QUEEN		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1961	4		Silver Lead Zinc	6,936	2,329	72

SUMMARY TOTALS: 082KSE091

NAME: **SILVER QUEEN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4 tonnes	4 tons
Milled:	tonnes	tons
Recovery:	Silver: 6,936 grams	223 ounces
	Lead: 2,329 kilograms	5,135 pounds
	Zinc: 72 kilograms	159 pounds

Comments: 1961: 4.5 tonnes were mined from the Lucky Jim property on Law Creek.

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MINFILE NUMBER:	<u>082KSW002</u>	NAME:	<u>MOLLY HUGHES (L.2106)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1980	11		Silver Lead Zinc	1,835	264 1,167
1979	3		Silver Gold Copper Lead Zinc	1,768 5	2 26 12
1957			Silver Lead Zinc	4,417	24 4
1940	351		Silver Gold Lead Zinc	994,612 3,328	6,228 7,008
1939	211		Silver Gold Lead Zinc	829,890 3,328	3,860 4,089
1938	124		Silver Gold Lead Zinc	449,532 1,773	2,500 2,750
1937	31		Silver Gold Lead Zinc	28,117 62	86 109
1936	4		Silver Gold Lead Zinc	14,432 31	114 114
1935	55		Silver Gold Lead Zinc	152,342 218	922 674
1934	9		Silver Gold Lead Zinc	36,577 62	188 206
1933	6		Silver Gold Lead Zinc	31,849 31	197 163
1929	91		Silver Gold	358,338 498	
1928	296		Silver Gold	1,297,990 2,550	
1927	30		Silver Gold Lead Zinc	91,754 467	133 573
1926	87		Silver Gold Lead	270,907 2,208	52
1925	31		Silver Gold	156,137 218	
1924	98		Silver Gold Lead	312,056 404	331
1923	67		Silver Gold Lead	263,474 684	527
1922	4		Silver Gold	58,598 311	
1921	24		Silver Gold	103,231 280	
1920	30		Silver Gold Lead	242,416 1,431	373
1919	19		Silver	266,491	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSW002		NAME: MOLLY HUGHES (L.2106)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1919	19		Gold	1,089	
			Lead		829
1918	17		Silver	65,316	
			Gold	187	
1916	23		Silver	82,765	
			Gold	249	
1915	16		Silver	42,704	
			Gold	31	
1911	82		Silver	249,508	
			Gold	498	
			Lead		956
1910	338		Silver	1,126,177	
			Gold	2,115	
1909	345		Silver	1,270,371	
			Gold	2,457	
1907	37		Silver	156,448	
			Gold	218	
1906	36		Silver	165,623	
			Gold	280	
1905	6		Silver	29,921	
			Gold	31	
1904	44		Silver	145,064	
			Gold	560	
1902	10		Silver	38,319	
			Gold	62	
1901	19		Silver	47,619	
1900	2		Silver	19,191	
1899	21		Silver	42,611	
			Gold	124	

SUMMARY TOTALS: 082KSW002

NAME: **MOLLY HUGHES (L.2106)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,578 tonnes	2,842 tons
Milled:		
Recovery:		
Silver:	9,448,400 grams	303,773 ounces
Gold:	25,790 grams	829 ounces
Copper:	2 kilograms	4 pounds
Lead:	17,610 kilograms	38,823 pounds
Zinc:	16,869 kilograms	37,190 pounds
Comments:		
1980:	Crude ore.	
1979:	Crude ore.	
1957:	Ore mined was less than one tonne.	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER:	<u>082KSW003</u>	NAME:	<u>CAPELLO (L.4527)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1980	4		Silver	4,199	
			Lead		34
			Zinc		67
1940	5		Silver	29,019	
			Gold	31	
			Lead		43
1939	13		Silver	74,305	
			Gold	31	
			Lead		163
1938	7		Silver	76,202	
			Gold	62	
			Lead		146
			Zinc		54
1919	3		Silver	30,419	
			Gold	31	
1903	60		Silver	1,192,738	
			Gold	560	
1902	39		Silver	574,566	
			Gold	311	
1901	38		Silver	415,349	
			Gold	280	
1900	5		Silver	42,891	
			Gold	31	
1899	3		Silver	24,914	

SUMMARY TOTALS: 082KSW003

NAME: **CAPELLO (L.4527)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	177 tonnes	195 tons
Milled:		
Recovery:		
Silver:	2,464,602 grams	79,239 ounces
Gold:	1,337 grams	43 ounces
Lead:	386 kilograms	851 pounds
Zinc:	121 kilograms	267 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: <u>082KSW004</u>		NAME: <u>MONITOR (L.1916)</u>		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1958	54		Silver Gold Lead Zinc		
1952	7		Silver Gold Lead Zinc	4,883 31	762 1,649
1951	8,898		Silver Lead Zinc	747,872	39,866 89,353
1950	4,979	4,979	Silver Gold Lead Zinc	62,890 467	12,240 27,234
1941	4		Silver Gold Lead Zinc	8,740 31	1,625 315
1940	5		Silver Gold Lead Zinc	30,792 31	2,357 462
1939	1		Silver Lead Zinc	6,345	617 109
1938	42		Silver Gold Lead Zinc	153,804 62	13,866 800
1937	65		Silver Gold Lead Zinc	92,905 187	24,274 8,036
1936	6		Silver Gold Lead	11,508 31	3,091
1929	73		Silver Gold Lead Zinc	171,253 218	15,328 6,255
1928	182		Silver Gold Lead Zinc	70,697 249	13,957 53,481
1927	336		Silver Gold Lead Zinc	301,575 2,333	74,703 55,190
1926	210		Silver Gold Lead Zinc	162,762 809	23,114 28,787
1925	165		Silver Gold Lead Zinc	157,941 778	25,949 32,814
1924	178		Silver Gold Lead Zinc	185,312 871	33,504 12,991
1923	60		Silver Gold Lead	154,271 280	24,983
1922	3		Silver Gold Lead	19,439 31	1,815
1909	295		Zinc		103,192
1906	169		Silver Gold	290,662 746	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSW004		NAME: MONITOR (L.1916)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1906	169		Lead		71,160	
1905	142		Silver	264,376		
			Gold	1,089		
			Lead		65,913	
1904	56		Silver	128,331		
			Gold	342		
			Lead		26,968	
1903	664		Silver	2,125,424		
			Gold	3,950		
			Lead		282,585	
1902	1,031		Silver	3,819,977		
			Gold	9,922		
			Lead		384,691	
1901	405		Silver	1,715,984		
			Gold	5,661		
			Lead		143,369	
1899	181		Silver	1,057,502		
			Gold	3,110		
			Lead		63,503	
1896	97		Silver	1,038,591		
			Gold	591		
			Lead		29,465	

SUMMARY TOTALS: 082KSW004

NAME: **MONITOR (L.1916)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	18,308 tonnes	20,181 tons
Milled:	4,979 tonnes	5,488 tons
Recovery:		
Silver:	12,783,836 grams	411,009 ounces
Gold:	31,820 grams	1,023 ounces
Lead:	1,379,705 kilograms	3,041,728 pounds
Zinc:	420,668 kilograms	927,414 pounds

Comments: 1958: No record of gross metal content.

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MINFILE NUMBER: 082KSW005	NAME: OCEAN (L.1723)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1919	3		Silver Lead	9,797	1,660

SUMMARY TOTALS: 082KSW005

NAME: **OCEAN (L.1723)**

	Mined:	3 tonnes	3 tons
	Milled:	tonnes	tons
Recovery:	Silver:	9,797 grams	315 ounces
	Lead:	1,660 kilograms	3,660 pounds

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MINFILE NUMBER: **082KSW006** NAME: **PAYNE (L.499)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	1		Silver Lead Zinc	5,723	919 103
1938	2		Silver Lead Zinc	5,039	682 258
1935	2		Silver Lead Zinc	9,673	936 65
1922	1		Silver Lead	3,701	566
1920	5		Silver Lead	23,949	3,106
1918	44		Silver Lead	147,428	20,754
1917	17		Silver Lead	65,472	7,428
1916	48		Silver Lead	148,019	26,369
1910	11		Silver Lead	23,016	4,817
1907	71		Silver Lead	204,285	31,281
1906	7,847		Silver Lead	551,425	87,044
1905	36,986		Silver Lead Zinc	1,622,457	239,398 75,547
1904	29,949		Silver Lead Zinc	3,747,445	511,430 442,163
1903	2,346		Silver Lead Zinc	4,906,592	774,952 506,280
1902	1,533		Silver Lead	4,901,895	773,942
1901	1,316		Silver Lead	4,276,196	628,483
1900	8,451		Silver Lead	25,969,014	4,310,667
1899	9,467		Silver Lead	26,543,425	4,104,897
1898	12,389		Silver Lead	42,438,644	5,767,319
1895	27		Silver Lead	93,309	18,144
1893	91		Silver Lead	699,818	63,503

SUMMARY TOTALS: 082KSW006

NAME: **PAYNE (L.499)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	110,604 tonnes	121,920 tons
Milled:		
Recovery:		
Silver:	116,386,525 grams	3,741,908 ounces
Lead:	17,376,637 kilograms	38,308,916 pounds
Zinc:	1,024,416 kilograms	2,258,450 pounds

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MINFILE NUMBER: 082KSW007		NAME: ST. KEVERNE (L.2642)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1905	8		Silver	40,434	
			Lead		5,941
1902	6		Silver	31,103	
			Lead		5,443

SUMMARY TOTALS: 082KSW007

NAME: **ST. KEVERNE (L.2642)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	14 tonnes	15 tons
Milled:	tonnes	tons
Recovery:		
Silver:	71,537 grams	2,300 ounces
Lead:	11,384 kilograms	25,097 pounds

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MINFILE NUMBER: 082KSW008		NAME: WASHINGTON (L.541)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1974	26		Silver	111,069	
			Copper		26
			Lead		19,576
			Zinc		706
1973	15		Silver	66,934	
			Lead		11,714
			Zinc		457
1971	1		Silver	5,194	
			Lead		891
			Zinc		29
1970	732	732	Silver	146,122	
			Gold	31	
			Cadmium		587
			Lead		16,513
			Zinc		76,281
1969	3	1,742	Silver	328,199	
			Cadmium		1,585
			Lead		1,853
			Zinc		198,767
1968	155		Silver	78,722	
			Gold	249	
			Cadmium		145
			Lead		11,135
			Zinc		23,881
1964	36	36	Silver	1,555	
			Cadmium		10
			Lead		47
			Zinc		1,207
1939	19		Silver	73,527	
			Lead		12,411
			Zinc		1,255
1925	2		Silver	20,248	
			Lead		1,110
1923	35		Silver	96,264	
			Lead		16,972
1920	33		Silver	83,574	
			Lead		18,181
1907	20		Silver	35,924	
			Lead		6,336
1902	170		Silver	457,898	
			Lead		95,999
1901	113		Silver	349,722	
			Lead		60,320
1896	5,443		Silver	3,250,263	
			Lead		598,739
1894	1,361		Silver	6,531,630	
			Lead		816,462
1893	508		Silver	2,438,475	
			Lead		304,813

SUMMARY TOTALS: 082KSW008

NAME: **WASHINGTON (L.541)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	8,672 tonnes	9,559 tons
Milled:	2,510 tonnes	2,767 tons
Recovery:		
Silver:	14,075,320 grams	452,531 ounces
Gold:	280 grams	9 ounces
Cadmium:	2,327 kilograms	5,130 pounds
Copper:	26 kilograms	57 pounds
Lead:	1,993,072 kilograms	4,393,970 pounds
Zinc:	302,583 kilograms	667,081 pounds

Comments:

1974: Crude ore.
 1973: Crude ore.
 1971: Crude ore.
 1969: Ore from stockpile.
 1968: Seven tonnes of crude ore.

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MINFILE NUMBER: 082KSW009	NAME: GREAT WESTERN (L.548)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1930	58		Silver Lead Zinc	172,684	19,038 12,204

SUMMARY TOTALS: 082KSW009

	NAME: GREAT WESTERN (L.548)
	Metric Imperial
Mined:	58 tonnes 64 tons
Milled:	tonnes tons
Recovery:	
Silver:	172,684 grams 5,552 ounces
Lead:	19,038 kilograms 41,972 pounds
Zinc:	12,204 kilograms 26,905 pounds

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MINFILE NUMBER: 082KSW011		NAME: ANTOINE		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1980	463		Silver	203,697		
			Lead			10,128
			Zinc			27,354
1979	1,979		Silver	98,522		
			Cadmium			75
			Lead			3,025
			Zinc			11,716
1975	144		Silver	92,127		
			Lead			5,191
			Zinc			13,217
1968	6,051	6,051	Silver	2,288,497		
			Gold	93		
			Cadmium			1,418
			Copper			1,012
			Lead			165,336
			Zinc			189,629
1967	1,452		Silver	132,312		
			Lead			13,105
			Zinc			2,828
1965	453		Silver	170,040		
			Gold	31		
			Cadmium			68
			Lead			8,297
			Zinc			9,982
1964	8		Silver	36,702		
			Lead			3,025
			Zinc			2,065
1963	70		Silver	414,105		
			Lead			32,844
			Zinc			12,026
1927	5		Silver	28,615		
			Lead			2,323
			Zinc			348
1925	6		Silver	23,980		
			Lead			271
			Zinc			2,359
1920	5		Silver	64,321		
			Lead			1,280
1914	18		Silver	117,569		
			Lead			5,744
1905	62		Silver	425,365		
			Lead			23,572
1904	62		Silver	227,581		
			Lead			11,699
1903	188		Silver	1,235,287		
			Lead			89,886
1902	197		Silver	1,283,372		
			Lead			108,063
1901	64		Silver	395,381		
			Lead			20,695
1900	14		Silver	69,795		
			Lead			5,437
1899	222		Silver	182,046		
			Lead			9,548
1898	317		Silver	1,621,990		
			Lead			97,691
1896	227		Silver	1,555,150		
			Lead			113,397
1895	36		Silver	248,824		
			Lead			18,144

SUMMARY TOTALS: 082KSW011

NAME: **ANTOINE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	12,043 tonnes	13,275 tons
Milled:	6,051 tonnes	6,670 tons
Recovery:		
Silver:	10,915,278 grams	350,934 ounces
Gold:	124 grams	4 ounces
Cadmium:	1,561 kilograms	3,441 pounds

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MINFILE NUMBER: **082KSW011**

NAME: **ANTOINE**

STATUS: Past Producer

Copper:	1,012 kilograms	2,231 pounds
Lead:	748,701 kilograms	1,650,603 pounds
Zinc:	271,524 kilograms	598,608 pounds

Comments:

1980: Operated by Arley Mines Ltd. MM01416 Antoine, not Spokane.
1979: Operated by W. Turley. MM01416, Antoine, not Spokane.
1975: Crude ore.
1968: Ore mined; Minister of Mines Annual Report 1968.
1967: Crude ore.
1964: Crude ore.
1963: Crude ore.
1927: MM01368 figures combined with Red Fox, 082KSW065.
1905: MM01368 figures combined with Red Fox, 082KSW065.
1904: MM01368 figures combined with Red Fox, 082KSW065.
1903: MM01368 figures combined with Red Fox, 082KSW065.
1902: MM01368 figures combined with Red Fox, 082KSW065.
1901: MM01368 figures combined with Red Fox, 082KSW065.
1899: MM01368 figures combined with Red Fox, 082KSW065.
1896: MM01368 figures combined with Ruby Silver, 082KSW138.

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MINFILE NUMBER:	082KSW012	NAME:	SILVER BELL NO. 2 (L.2092)	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1899	69		Silver	305,867	
			Lead		25,781
1898	27		Silver	186,618	
			Lead		18,143

SUMMARY TOTALS: 082KSW012

NAME: **SILVER BELL NO. 2 (L.2092)**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	96 tonnes		106 tons	
	Milled:				
Recovery:	Silver:	492,485 grams		15,834 ounces	
	Lead:	43,924 kilograms		96,836 pounds	

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MINFILE NUMBER: 082KSW013		NAME: RIO (L.2093)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1937	5		Silver	15,894	
			Lead		659
			Zinc		272
1936	2		Silver	28,801	
			Lead		381
			Zinc		137
1935	13		Silver	104,475	
			Lead		3,408
			Zinc		1,399
1934	3		Silver	31,570	
			Lead		1,002
			Zinc		181
1933	34		Silver	255,698	
			Gold	31	
			Lead		10,151
			Zinc		3,349
1932	38		Silver	259,244	
			Gold	31	
			Lead		10,490
			Zinc		4,622
1929	4		Silver	20,995	
			Lead		1,379
			Zinc		264
1915	12		Silver	109,669	
			Lead		4,710
1912	38		Silver	326,084	
			Lead		17,132
1908	14		Silver	177,132	
			Lead		3,640
1903	7		Silver	34,711	

SUMMARY TOTALS: 082KSW013

NAME: **RIO (L.2093)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	170 tonnes	187 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,364,273 grams	43,862 ounces
Gold:	62 grams	2 ounces
Lead:	52,952 kilograms	116,739 pounds
Zinc:	10,224 kilograms	22,540 pounds

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MINFILE NUMBER: 082KSW014		NAME: CORRIGAN		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1970	4		Silver	684		
			Lead		234	
			Zinc		258	
1967	2		Silver	4,417		
			Lead		885	
			Zinc		295	
1966			Silver	2,519		
			Lead		123	
			Zinc		6	
1952	3		Silver	10,668		
			Lead		1,631	
			Zinc		896	
1951	6		Silver	20,839		
			Lead		3,438	
			Zinc		896	
1948	6		Silver	18,009		
			Lead		2,120	
			Zinc		1,016	
1900	110		Silver	158,190		
			Lead		36,250	

SUMMARY TOTALS: 082KSW014

NAME: **CORRIGAN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	131 tonnes	144 tons
Milled:	tonnes	tons
Recovery:	Silver: 215,326 grams	6,923 ounces
	Lead: 44,681 kilograms	98,505 pounds
	Zinc: 3,367 kilograms	7,423 pounds

Comments: 1966: Crude ore.
 1900: Florida; MM01195.

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MINFILE NUMBER: 082KSW015		NAME: JACKSON		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1975	57		Silver	6,376		
			Lead		2,284	
			Zinc		17,245	
1973	7		Silver	12,659		
			Lead		2,977	
			Zinc		1,152	
1971	16		Silver	4,572		
			Lead		1,584	
			Zinc		4,658	
1969	11		Silver	19,004		
			Lead		3,422	
			Zinc		1,739	
1967	29		Silver	67,369		
			Lead		10,394	
			Zinc		6,734	
1955	540	540	Silver	19,097		
			Lead		5,289	
			Zinc		66,826	
1954	1,206	1,206	Silver	131,099		
			Gold	187		
			Cadmium		907	
			Lead		35,698	
			Zinc		128,485	
1951	818		Silver	26,158		
			Gold	31		
			Cadmium		617	
			Lead		2,636	
			Zinc		104,583	
1950	1,395		Silver	51,693		
			Cadmium		1,536	
			Lead		9,823	
			Zinc		195,521	
1949	6		Silver	9,020		
			Lead		2,832	
			Zinc		733	
1948	23		Silver	4,883		
			Lead		1,688	
			Zinc		768	
1937	116		Silver	63,668		
			Gold	31		
			Lead		16,228	
			Zinc		37,793	
1936	54		Silver	25,691		
			Lead		8,713	
			Zinc		17,236	
1934	82		Silver	203,600		
			Gold	93		
			Lead		49,990	
			Zinc		7,638	
1928	36		Silver	55,488		
			Gold	31		
			Lead		15,017	
1905	272		Silver	263,816		
			Lead		81,646	
			Zinc		47,173	
1903	98		Silver	194,829		
			Lead		49,780	
1899	775		Silver	1,401,719		
			Lead		403,442	
1898	79		Silver	125,438		
			Lead		39,792	
1895	136		Silver	233,273		
			Lead		68,038	
1894	91		Silver	186,618		
			Lead		45,359	

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MINFILE NUMBER: **082KSW015**

NAME: **JACKSON**

STATUS: Past Producer

SUMMARY TOTALS: 082KSW015

NAME: **JACKSON**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5,847 tonnes	6,445 tons
Milled:	1,746 tonnes	1,925 tons
Recovery:		
Silver:	3,106,070 grams	99,862 ounces
Gold:	373 grams	12 ounces
Cadmium:	3,060 kilograms	6,746 pounds
Lead:	856,632 kilograms	1,888,550 pounds
Zinc:	638,284 kilograms	1,407,175 pounds

Comments: 1975: 1967-1975 production is crude ore.

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MINFILE NUMBER: **082KSW016** NAME: **TEXAS (L.4889)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1969	454		Silver	28,521	78
			Cadmium		2,893
			Lead		11,269
			Zinc		

SUMMARY TOTALS: 082KSW016

NAME: **TEXAS (L.4889)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	454 tonnes	500 tons
Milled:	tonnes	tons
Recovery:		
Silver:	28,521 grams	917 ounces
Cadmium:	78 kilograms	172 pounds
Lead:	2,893 kilograms	6,378 pounds
Zinc:	11,269 kilograms	24,844 pounds

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MINFILE NUMBER: 082KSW017		NAME: DARDENELLES (L.453)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1981	26		Silver	3,090	
			Gold	5	
1949	7		Silver	10,046	
			Lead		1,395
			Zinc		648
1938	25		Silver	59,780	
			Lead		2,634
			Zinc		3,584
1902	18		Silver	49,267	
			Lead		834
1899	66		Silver	225,248	
			Lead		16,490
1898	62		Silver	111,442	
			Lead		32,049
1896	296		Silver	2,237,861	
			Lead		69,998
1893	181		Silver	1,709,110	
			Lead		63,956
1892	9		Silver	62,206	
			Lead		2,721

SUMMARY TOTALS: 082KSW017

NAME: **DARDENELLES (L.453)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	690 tonnes	761 tons
Milled:	tonnes	tons
Recovery:		
Silver:	4,468,050 grams	143,651 ounces
Gold:	5 grams	ounces
Lead:	190,077 kilograms	419,048 pounds
Zinc:	4,232 kilograms	9,330 pounds

Comments: 1949: BC METAL MM01340.

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MINFILE NUMBER: 082KSW018		NAME: RAMBLER (L.1246)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1951	24,528		Silver	510,431	
			Cadmium		1,681
			Lead		22,473
			Zinc		193,517
1950	10,342		Silver	336,223	
			Gold	62	
			Cadmium		1,076
			Lead		14,300
			Zinc		122,338
1948	582		Silver	201,174	
			Gold	62	
			Cadmium		193
			Lead		7,422
			Zinc		33,014
1940	256		Silver	203,787	
			Gold	62	
			Lead		6,594
			Zinc		37,369
1937	7		Silver	20,839	
			Lead		1,241
			Zinc		1,133
1935	8,165	8,165	Silver	1,014,082	
			Gold	280	
			Lead		18,395
			Zinc		218,287
1930	70		Silver	47,774	
			Gold	31	
			Lead		3,546
			Zinc		15,180
1929	165		Silver	160,616	
			Gold	31	
			Lead		8,771
			Zinc		39,326
1927	532		Silver	756,021	
			Gold	249	
			Lead		65,439
			Zinc		147,492
1926	74		Silver	255,822	
			Gold	31	
			Lead		15,743
1925	3,266		Silver	152,747	
			Lead		22,717
			Zinc		87,381
1924	2,903		Silver	193,398	
			Lead		25,500
			Zinc		16,727
1923	8		Silver	18,786	
			Gold	31	
			Lead		3,261
1922	627		Silver	1,031,562	
			Lead		140,728
			Zinc		98,212
1921	1,814		Silver	160,865	
			Lead		26,907
1920	357		Silver	765,880	
			Lead		82,073
			Zinc		45,724
1919	7,348		Silver	1,662,611	
			Lead		202,403
			Zinc		191,287
1918	6,475		Silver	2,123,184	
			Lead		203,111
			Zinc		97,306
1917	10,373		Silver	3,574,668	
			Lead		328,184
			Zinc		183,083
1916	22,187		Silver	5,180,516	
			Lead		557,659
			Zinc		202,181
1915	19,013		Silver	5,428,375	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082KSW018** NAME: **RAMBLER (L.1246)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1915	19,013		Lead Zinc		700,049 245,237
1914	15,379		Silver Lead Zinc	5,135,323	711,995 273,671
1913	32,599		Silver Lead Zinc	7,693,545	936,092 406,231
1912	1,045		Silver Lead	3,336,481	463,215
1911	1,536		Silver Lead	4,764,358	667,977
1910	3,148		Silver Lead	2,666,149	300,136
1909	3,329		Silver Lead	3,090,798	297,161
1908	1,081		Silver Lead	4,287,797	497,109
1907	501		Silver Lead	1,628,273	242,272
1906	19		Silver Lead	73,839	9,340
1905	57		Silver Lead	324,964	25,149
1904	738		Silver Lead	3,204,418	315,092
1903	2,298		Silver Lead	11,167,625	812,772
1902	3,480		Silver Lead	15,716,999	1,145,567
1901	2,690		Silver Lead	12,726,881	1,123,581
1900	1,232		Silver Lead	3,937,858	84,572
1899	583		Silver Lead	2,472,066	199,271
1898	530		Silver Lead	2,339,692	206,488
1896	41		Silver Copper Lead	447,323	327 12,247
1895	43		Silver Lead	146,184	21,319

SUMMARY TOTALS: 082KSW018

NAME: **RAMBLER (L.1246)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	189,421 tonnes	208,801 tons
Milled:	8,165 tonnes	9,000 tons
Recovery:		
Silver:	108,959,934 grams	3,503,138 ounces
Gold:	839 grams	27 ounces
Cadmium:	2,950 kilograms	6,504 pounds
Copper:	327 kilograms	721 pounds
Lead:	10,527,871 kilograms	23,209,976 pounds
Zinc:	2,654,696 kilograms	5,852,601 pounds

Comments:

1951: Tailings; zinc concentrate 496 tonnes.
 1950: Includes 641 tonnes tailings.
 1948: No. 3 dump; sent to Whitewater mill.
 1940: 128 tonnes concentrate sent to Trail smelter.
 1935: Tailings to Whitewater mill; 408 T. Zn concentrate shipped to UK.
 1918: Combined with Best (082KSW156) in MM01366.
 1898: Combined with Best (082KSW156) in MM01366.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW019		NAME: SOHO (L.3175)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1930	9		Silver	13,810		
			Lead		1,731	
			Zinc		2,374	
1929	4		Silver	21,181		
			Lead		2,152	
			Zinc		210	
1923	30		Silver	55,052		
			Lead		6,629	
1902	36		Silver	125,967		
			Lead		827	
1901	82		Silver	27,993		
			Lead		29,030	
1900	54		Silver	2,239,424		
			Lead		27,215	

SUMMARY TOTALS: 082KSW019

NAME: **SOHO (L.3175)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	215 tonnes	237 tons
Milled:	tonnes	tons
Recovery:	Silver: 2,483,427 grams	79,844 ounces
	Lead: 67,584 kilograms	148,997 pounds
	Zinc: 2,584 kilograms	5,697 pounds

Comments: 1929: Mary Ryan.

RUN DATE: 25-Jun-2003
RUN TIME: 16:56:50

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER:	082KSW020	NAME:	BON TON (L.636)	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1919	1		Silver Lead	6,998	216
1918	5		Silver Lead	24,572	554
1917	6		Silver Lead	54,430	1,905

SUMMARY TOTALS: 082KSW020

NAME: **BON TON (L.636)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	12 tonnes	13 tons
Milled:		
Recovery:		
Silver:	86,000 grams	2,765 ounces
Lead:	2,675 kilograms	5,897 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW023		NAME: LUCKY JIM		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1959	457		Silver	105,937		
			Gold	31		
			Cadmium			289
			Lead			26,384
			Zinc			49,063
1958	597	597	Silver	88,675		
			Gold	31		
			Cadmium			170
			Lead			19,796
			Zinc			29,054
1953	47,646	47,646	Silver	867,463		
			Cadmium			15,542
			Lead			122,204
			Zinc			3,073,868
1952	92,323	92,323	Silver	1,165,989		
			Gold	218		
			Cadmium			24,870
			Lead			194,969
			Zinc			4,664,487
1951	76,143	76,143	Silver	1,274,881		
			Gold	218		
			Cadmium			19,203
			Lead			275,000
			Zinc			3,342,659
1950	87,670	87,670	Silver	1,756,418		
			Gold	280		
			Cadmium			22,702
			Lead			424,242
			Zinc			3,812,785
1949	89,315	89,315	Silver	1,475,557		
			Gold	186		
			Cadmium			32,963
			Lead			299,397
			Zinc			5,659,779
1948	88,295	88,295	Silver	1,528,184		
			Gold	218		
			Cadmium			31,230
			Lead			281,924
			Zinc			5,530,176
1947	75,398	75,398	Silver	608,997		
			Gold	31		
			Cadmium			22,984
			Lead			58,410
			Zinc			4,144,816
1946	40,881	40,881	Silver	331,745		
			Cadmium			18,454
			Lead			9,689
			Zinc			3,104,904
1945	57,444	57,444	Cadmium			5,677
			Zinc			5,699,272
1944	91,251	91,251	Zinc			8,078,429
1943	76,981	76,981	Zinc			6,683,481
1942	79,463	79,463	Silver	992,403		
			Zinc			7,658,165
1941	34,662	34,662	Zinc			3,215,237
1940	191		Silver	746		
			Lead			19
			Zinc			5,141
1938	2,268	2,268	Zinc			252,372
1937	10,977	10,977	Silver	14,370		
			Cadmium			763
			Lead			435
			Zinc			299,133
1929	3,972	3,972	Silver	241,857		
			Gold	62		
			Lead			57,222
			Zinc			247,840
1928	40,259	40,259	Silver	1,567,591		
			Gold	404		
			Lead			356,566

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW023		NAME: LUCKY JIM		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1928	40,259	40,259	Zinc		2,453,023	
1927	8,824		Silver	1,067,735	228,352	
			Lead		1,085,298	
			Zinc			
1926	18,577		Silver	2,008,507	459,324	
			Lead		2,044,316	
			Zinc			
1925	6,169	6,169	Silver	732,196	129,242	
			Gold	1,120	490,842	
			Lead		19,938	
			Zinc			
1924	45		Zinc		79,419	
1919	177		Silver	7,962	628,208	
			Zinc			
1918	1,520		Silver	144,722	7,428	
			Zinc		1,010,583	
1917	7,404	6,532	Silver	26,500	26,286	
			Lead		1,761,431	
			Zinc		357,501	
1916	10,771	9,915	Silver	89,732	11,064	
			Lead		507,716	
			Zinc		845,284	
1915	2,764		Zinc		16,087	
1913	1,093		Silver	39,998	230,601	
			Lead		2,044,077	
			Zinc		543,310	
1912	1,890		Zinc		100,813	
1910	576		Lead		146,481	
			Zinc		70,794	
1909	4,264		Silver	239,711	361,374	
			Lead		100,289	
1907	1,025		Silver	1,244,276	27,215	
			Lead		32,659	
1905	3,382		Silver	438,863		
			Lead			
1904	283		Silver	104,195		
			Lead			
1898	561		Silver	125,034		
			Lead			
1896	181		Silver			
			Lead			
1895	45		Silver			
			Lead			
1893	54		Silver			
			Lead			

SUMMARY TOTALS: 082KSW023

NAME: **LUCKY JIM**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,065,798 tonnes	1,174,841 tons
Milled:	1,018,161 tonnes	1,122,330 tons
Recovery:		
Silver:	18,634,368 grams	599,108 ounces
Gold:	2,799 grams	90 ounces
Cadmium:	194,847 kilograms	429,564 pounds
Lead:	3,697,184 kilograms	8,150,893 pounds
Zinc:	79,798,689 kilograms	175,925,945 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW025		NAME: MCALLISTER		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1980	523		Silver	145,004	
			Gold	52	
			Lead		2,501
			Zinc		1,788
1958	2		Silver	6,998	
			Lead		26
			Zinc		11
1950	36		Silver	251,530	
			Gold	31	
			Lead		1,100
			Zinc		871
1949	31		Silver	82,392	
			Lead		741
			Zinc		357
1947	439		Silver	338,743	
			Gold	62	
			Lead		2,952
			Zinc		1,167
1944	280		Silver	139,124	
			Gold	31	
			Lead		1,177
1943	61		Silver	27,371	
			Lead		136
1941	96		Silver	203,600	
			Gold	31	
			Lead		670
1940	470		Silver	795,646	
			Gold	156	
			Lead		2,583
1939	134		Silver	803,857	
			Gold	93	
			Lead		2,160
1938	1,392		Silver	1,229,906	
			Gold	404	
1937	1,162		Silver	2,644,284	
			Gold	529	
			Lead		81
			Zinc		59
1936	978		Silver	1,848,762	
			Gold	373	
1929	4,999		Silver	6,760,393	
			Gold	1,306	
1928	4,777		Silver	6,555,735	
1926	5,151		Silver	8,593,417	
1925	906		Silver	890,043	
1922	26		Silver	426,515	
			Gold	31	
			Lead		548
1920	28		Silver	301,948	
			Lead		647
1910	5		Silver	56,079	
			Lead		261
1909	6		Silver	60,153	
			Lead		836
1907	5		Silver	52,688	
1906	27		Silver	309,288	
1904	11		Silver	101,365	
1903	19		Silver	166,121	

SUMMARY TOTALS: 082KSW025

NAME: **MCALLISTER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	21,564 tonnes	23,770 tons
Milled:	21,564 tonnes	23,770 tons
Recovery:		
Silver:	32,790,962 grams	1,054,252 ounces
Gold:	3,099 grams	100 ounces
Lead:	16,419 kilograms	36,198 pounds
Zinc:	4,253 kilograms	9,376 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 16:56:50

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: **082KSW025**

NAME: **MCALLISTER**

STATUS: Past Producer

Comments:

Comments:

1980: Crude ore.
1958: Crude ore from dump.
1903: Rowse (Rouse) Fraction.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW026		NAME: JO-JO (L.1839)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1947	28		Silver	33,498	
			Lead		341
			Zinc		285
1940	8		Silver	54,244	
			Lead		324
			Zinc		243
1924	15		Silver	145,718	
			Gold	31	
			Lead		584
1919	9		Silver	78,286	
			Lead		322
1918	9		Silver	31,103	
			Lead		2,722
1916	9		Silver	31,103	
			Lead		2,722
1912	7		Silver	19,906	
			Lead		2,177
1907	7		Silver	44,695	
			Lead		65
1906	3		Silver	22,207	
			Lead		198
1905	15		Silver	34,244	
1904	21		Silver	108,083	
			Gold	31	
			Lead		200

SUMMARY TOTALS: 082KSW026

NAME: **JO-JO (L.1839)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	131 tonnes	144 tons
Milled:		
Recovery:		
Silver:	603,087 grams	19,390 ounces
Gold:	62 grams	2 ounces
Lead:	9,655 kilograms	21,286 pounds
Zinc:	528 kilograms	1,164 pounds

Comments: 1947: Sorted ore from the No. 3 portal (Annual Report 1947, page 169).

RUN DATE: 25-Jun-2003
RUN TIME: 16:56:50

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KSW027	NAME: MINER BOY (L.4915)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1893	3		Silver	36,857	

SUMMARY TOTALS: 082KSW027

	NAME: MINER BOY (L.4915)	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 3 tonnes	3 tons
	Milled: tonnes	tons
Recovery:	Silver: 36,857 grams	1,185 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW028		NAME: SILVER GLANCE (L.3829)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1920	5		Silver	6,096	
1908	23		Silver	44,415	
1906	31		Silver	52,968	
1905	25		Silver	185,001	
			Gold	62	
1903	50		Silver	342,133	
			Gold	187	
1902	136		Silver	868,271	
			Gold	124	
1901	5		Silver	70,853	
			Gold	31	
			Lead		26
1892	1		Silver	5,599	

SUMMARY TOTALS: 082KSW028

NAME: **SILVER GLANCE (L.3829)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	276 tonnes	304 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,575,336 grams	50,648 ounces
Gold:	404 grams	13 ounces
Lead:	26 kilograms	57 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082KSW029</u>	NAME: <u>HILLSIDE</u>	STATUS: Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>
1900	2	
		<u>Commodity</u>
		Silver
		Copper
		<u>Grams Recovered</u>
		13,654
		<u>Kilograms Recovered</u>
		424

SUMMARY TOTALS: 082KSW029

		NAME: <u>HILLSIDE</u>	
		<u>Metric</u>	<u>Imperial</u>
	Mined:	2 tonnes	2 tons
	Milled:	tonnes	tons
Recovery:	Silver:	13,654 grams	439 ounces
	Copper:	424 kilograms	935 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW030		NAME: WELLINGTON (L.553)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1934	1,064	1,061	Silver	180,024		
			Gold	124		
			Lead		15,740	
			Zinc		41,745	
1915	8		Silver	39,625		
			Lead		1,779	
1910	28		Silver	129,575		
			Lead		8,268	
1909	25		Silver	22,792		
			Lead		7,557	
1908	22		Silver	93,869		
			Lead		6,671	
1905	92		Silver	129,140		
			Lead		3,658	
			Zinc		45,541	
1902	15		Silver	115,765		
			Lead		6,368	
1899	18		Silver	43,544		
			Lead		9,072	
1896	362		Silver	2,152,328		
			Lead		108,862	
1894	45		Silver	233,272		
			Lead		13,608	
1893	91		Silver	466,545		
			Lead		45,359	
1892	9		Silver	46,655		
			Lead		4,536	

SUMMARY TOTALS: 082KSW030

NAME: **WELLINGTON (L.553)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,779 tonnes	1,961 tons
Milled:	1,061 tonnes	1,170 tons
Recovery:		
Silver:	3,653,134 grams	117,451 ounces
Gold:	124 grams	4 ounces
Lead:	231,478 kilograms	510,321 pounds
Zinc:	87,286 kilograms	192,433 pounds

Comments: 1934: See comments in MM01457.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082KSW031</u>	NAME:	<u>CHARLESTON (L.2091)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1966	712	712	Silver	49,796	
			Cadmium		135
			Lead		9,863
			Zinc		17,266
1965	299	299	Silver	19,191	
			Cadmium		54
			Lead		3,623
			Zinc		5,737
1955	546		Silver	66,747	
			Gold	31	
			Cadmium		201
			Lead		13,585
			Zinc		25,418
1951	582		Silver	47,525	
			Lead		9,684
			Zinc		17,685
1950	22		Silver	2,333	
			Lead		640
			Zinc		992
1939	1		Silver	1,151	
			Lead		209
			Zinc		43
1938			Silver	20,248	
			Lead		1,968
			Zinc		703
1926	28		Silver	32,254	
			Zinc		12,768
1924	24		Silver	136,604	
			Gold	31	
			Lead		7,820
1915	12		Silver	116,574	
			Gold	31	
			Lead		3,693
1914	17		Silver	154,395	
			Gold	31	
			Lead		4,900
1908	2		Silver	15,178	
			Gold	31	
			Lead		671
1906	14		Silver	10,699	
			Zinc		6,832
1905	18		Silver	73,745	
			Lead		3,831
1904	8		Silver	56,639	
			Lead		2,634
1902	10		Silver	65,970	
			Lead		5,003
1898	29		Silver	169,574	
			Lead		12,747

SUMMARY TOTALS: 082KSW031

NAME: **CHARLESTON (L.2091)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,324 tonnes	2,562 tons
Milled:	1,011 tonnes	1,114 tons
Recovery:		
Silver:	1,038,623 grams	33,392 ounces
Gold:	155 grams	5 ounces
Cadmium:	390 kilograms	860 pounds
Lead:	80,871 kilograms	178,290 pounds
Zinc:	87,444 kilograms	192,781 pounds

Comments:

1938: Unknown production tonnage.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW033		NAME: WHITEWATER (L.1170)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1980	18		Silver	373	
			Gold	218	
			Lead		18
			Zinc		35
1977	11		Silver	15,552	
			Copper		45
			Lead		1,831
			Zinc		3,069
1976	43		Silver	54,535	
			Gold	62	
			Lead		4,846
			Zinc		11,190
1975	75		Silver	96,233	
			Gold	109	
			Lead		8,755
			Zinc		19,214
1956	4		Silver	6,034	
			Lead		1,402
			Zinc		388
1953	712	712	Silver	81,085	
			Gold	124	
			Cadmium		370
			Lead		17,552
			Zinc		60,979
1952	50,802	50,802	Silver	2,928,907	
			Gold	4,728	
			Cadmium		22,176
			Lead		396,600
			Zinc		3,581,983
1951	27,353	27,353	Silver	1,041,173	
			Lead		127,037
			Zinc		539,971
1950	54,531		Silver	731,169	
			Gold	871	
			Cadmium		5,674
			Lead		122,455
			Zinc		958,744
1949	45,080	45,079	Silver	2,378,291	
			Gold	3,763	
			Cadmium		5,866
			Lead		212,596
			Zinc		735,812
1948	27,118	27,118	Silver	1,534,249	
			Gold	2,799	
			Cadmium		4,670
			Lead		106,601
			Zinc		549,234
1947	8,810	8,810	Silver	714,156	
			Gold	778	
			Cadmium		1,082
			Lead		52,964
			Zinc		125,260
1945	26,817	26,817	Silver	370,561	
			Gold	311	
			Lead		100,260
			Zinc		1,426,994
1944	35,847	35,847	Silver	480,946	
			Gold	311	
			Lead		171,552
			Zinc		2,155,764
1941	82		Silver	94,242	
			Gold	155	
			Lead		9,350
			Zinc		24,880
1940	907	907	Silver	69,795	
			Gold	404	
			Lead		10,409
			Zinc		79,002
1939	378	363	Silver	153,151	
			Gold	342	
			Lead		31,411
			Zinc		11,951

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW033		NAME: WHITEWATER (L.1170)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1937	1,668	19,791	Silver	1,386,945		
			Gold	1,959		
			Lead			317,619
			Zinc			1,167,068
1936	29		Silver	85,284		
			Lead			18,640
1935	11,892	11,875	Silver	2,972,825		
			Gold	342		
			Lead			947,317
			Zinc			1,018,508
1934	1,931	1,878	Silver	666,537		
			Gold	467		
			Lead			121,381
			Zinc			42,626
1930	43	43	Silver	65,099		
			Gold	62		
			Lead			4,538
			Zinc			8,463
1929	22,997	20,746	Silver	1,787,552		
			Gold	2,613		
			Lead			277,153
			Zinc			1,831,711
1928	26,402	22,200	Silver	2,810,561		
			Gold	4,354		
			Lead			472,250
			Zinc			1,892,938
1927	18,324	5,516	Silver	2,464,291		
			Gold	3,795		
			Lead			255,627
			Zinc			1,085,900
1926	24,094	8,926	Silver	2,592,995		
			Gold	778		
			Lead			268,971
			Zinc			1,547,018
1925	811		Silver	683,831		
			Gold	498		
			Lead			63,741
			Zinc			72,031
1924	317		Silver	933,774		
			Gold	591		
			Lead			51,271
			Zinc			54,400
1923	310		Silver	620,225		
			Gold	467		
			Lead			53,912
			Zinc			55,354
1922	372		Silver	534,661		
			Gold	653		
			Lead			45,860
			Zinc			124,261
1921	217		Silver	707,313		
			Gold	311		
			Lead			53,701
			Zinc			10,264
1920	693		Silver	1,559,442		
			Gold	995		
			Lead			146,092
			Zinc			71,755
1919	800		Silver	1,494,033		
			Gold	809		
			Lead			236,458
1918	511		Silver	1,256,903		
			Gold	560		
			Lead			117,201
			Zinc			65,277
1917	800		Silver	1,346,791		
			Lead			119,536
			Zinc			170,024
1916	78		Silver	95,517		
			Gold	62		
			Lead			12,705

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082KSW033** NAME: **WHITEWATER (L.1170)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1916	78		Zinc		18,105
1915	698		Silver Gold Lead Zinc	425,862 311	54,820 261,268
1914	323		Silver Gold Lead Zinc	705,976 466	49,493 72,574
1913	463		Silver Gold Lead	1,141,604 746	107,319
1912	918		Silver Gold Lead	2,764,777 2,488	340,938
1911	56		Silver Gold Lead	330,407 156	18,870
1910	7,461	7,310	Silver Gold Lead Zinc	5,121,233 2,208	373,659 945,234
1909	24,744	24,744	Silver Gold Lead Zinc	9,397,087 5,039	1,165,391 1,698,994
1908	16,737	16,603	Silver Gold Lead	8,272,558 5,008	970,551
1907	15,093	14,492	Silver Gold Lead Zinc	6,815,476 3,608	1,061,654 470,870
1906	824		Silver Gold Lead Zinc	3,019,977 560	350,970 14,387
1905	646	182	Silver Lead Zinc	1,126,893	141,106 135,058
1904	91		Silver Lead Zinc	310,004	41,223 13,662
1903	54		Silver Lead	171,067	24,530
1902	2,871		Silver Lead	7,380,680	1,028,742
1901	2,194		Silver Lead	4,537,586	716,282
1900	4,402		Silver Lead	10,047,233	1,279,027
1899	1,653		Silver Lead	5,716,887	778,497
1898	771		Silver Lead	5,287,510	385,551
1896	181		Silver Lead	1,244,120	90,718
1892	6		Silver Lead	43,544	3,175

SUMMARY TOTALS: 082KSW033

NAME: **WHITEWATER (L.1170)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	471,063 tonnes	519,258 tons
Milled:	378,114 tonnes	416,799 tons
Recovery:		
Silver:	108,675,512 grams	3,493,994 ounces
Gold:	54,881 grams	1,764 ounces
Cadmium:	39,838 kilograms	87,828 pounds
Copper:	45 kilograms	99 pounds
Lead:	13,942,128 kilograms	30,737,122 pounds

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MINFILE NUMBER: **082KSW033**

NAME: **WHITEWATER (L.1170)**

STATUS: Past Producer

Zinc: 23,132,220 kilograms 50,997,801 pounds

Comments:

1980: 1975-1980 production is crude ore.
1929: Figures include 2116 tonnes of tailings; see MM01304.
1928: Figures include 4128 tonnes of tailings; see MM01304.
1927: Figures include 12,764 tonnes of tailings; see MM01304.
1926: Figures include 14,849 tonnes of tailings; see MM01304.
1925: Figures include 435 tonnes of tailings; see MM01304.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KSW035		NAME: DOHERTY (L.12402)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1949	1,366	2,212	Silver	43,793		
			Gold	156		
			Cadmium			364
			Lead			9,291
			Zinc			114,802
1948	4,111	3,265	Silver	77,540		
			Gold	62		
			Cadmium			903
			Lead			13,936
			Zinc			240,398

SUMMARY TOTALS: 082KSW035

NAME: **DOHERTY (L.12402)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5,477 tonnes	6,037 tons
Milled:	5,477 tonnes	6,037 tons
Recovery:		
Silver:	121,333 grams	3,901 ounces
Gold:	218 grams	7 ounces
Cadmium:	1,267 kilograms	2,793 pounds
Lead:	23,227 kilograms	51,207 pounds
Zinc:	355,200 kilograms	783,082 pounds

Comments: 1949: Includes 932 tonnes stockpiled in 1948.

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MINFILE NUMBER:	082KSW036	NAME:	OHIO	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1909	9		Silver Copper	52,108	190

SUMMARY TOTALS: 082KSW036

		NAME:	OHIO		
		<u>Metric</u>		<u>Imperial</u>	
	Mined:	9 tonnes		10 tons	
	Milled:			tons	
Recovery:	Silver:	52,108 grams		1,675 ounces	
	Copper:	190 kilograms		419 pounds	
Comments:	1909:	Geological Survey of Canada Memoir 184, page 239.			

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 082KSW037		NAME: HIGHLAND SURPRISE		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1942	27		Silver	653	
			Gold	373	
1941	1,072		Silver	12,006	
			Gold	23,732	
1940	356		Silver	6,127	
			Gold	12,037	
			Lead		145
			Zinc		145
1939	179		Silver	4,914	
			Gold	6,158	
1938	268		Silver	6,065	
			Gold	8,647	

SUMMARY TOTALS: 082KSW037

NAME: **HIGHLAND SURPRISE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,902 tonnes	2,097 tons
Milled:	tonnes	tons
Recovery:		
Silver:	29,765 grams	957 ounces
Gold:	50,947 grams	1,638 ounces
Lead:	145 kilograms	320 pounds
Zinc:	145 kilograms	320 pounds
Comments:		
1942:	Directly to Trail smelter. Unknown amount of lead also produced.	
1941:	Whitewater mill.	
1940:	Whitewater mill.	

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MINFILE NUMBER: 082KSW038		NAME: EUREKA (L.5552)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1938	14		Silver	124	
			Gold	311	
1937	8		Silver	19,066	
			Lead		4,932
1898	251		Silver	677,890	
			Lead		161,118

SUMMARY TOTALS: 082KSW038

NAME: **EUREKA (L.5552)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	273 tonnes	301 tons
Milled:	tonnes	tons
Recovery:		
Silver:	697,080 grams	22,412 ounces
Gold:	311 grams	10 ounces
Lead:	166,050 kilograms	366,077 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082KSW040** NAME: **LINCOLN (L.1413)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1922	21		Silver Lead	32,627	11,099
1918	29		Silver Lead	49,516	15,149

SUMMARY TOTALS: 082KSW040

NAME: **LINCOLN (L.1413)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	50 tonnes	55 tons
Milled:	50 tonnes	55 tons
Recovery: Silver:	82,143 grams	2,641 ounces
Lead:	26,248 kilograms	57,867 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: <u>082KSW041</u>		NAME: <u>CALEDONIA</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1967	3,447	3,447	Silver	466,918		
			Gold	342		
			Cadmium			442
			Lead			117,401
1966	4,082	4,082	Zinc			118,129
			Silver	355,694		
			Gold	373		
			Cadmium			556
1962	127	127	Lead			89,993
			Zinc			143,325
			Silver	26,966		
			Cadmium			27
1961	979	978	Lead			4,475
			Zinc			7,412
			Silver	350,189		
			Gold	467		
1959	272		Cadmium			352
			Lead			69,753
			Zinc			94,975
			Silver	71,195		
1958	142	142	Gold	156		
			Cadmium			100
			Lead			10,223
			Zinc			27,668
1956	315		Silver	62,517		
			Gold	31		
			Cadmium			18
			Lead			11,326
1955	102		Zinc			5,659
			Silver	146,651		
			Gold	124		
			Cadmium			59
1954	93		Lead			25,342
			Zinc			18,218
			Silver	35,146		
			Gold	62		
1953	289		Cadmium			39
			Lead			8,429
			Zinc			11,413
			Silver	58,287		
1952	54		Gold	156		
			Cadmium			94
			Lead			15,062
			Zinc			34,191
1943	2		Silver	44,353		
			Gold	124		
			Cadmium			15
			Lead			11,757
1942	3		Zinc			7,989
			Silver	6,594		
			Lead			581
			Zinc			80
1941	10		Silver	14,525		
			Lead			1,055
			Zinc			59
			Silver	37,106		
1940	5		Gold	31		
			Lead			5,090
			Zinc			627
			Silver	10,513		
1939	16		Lead			3,597
			Zinc			251
			Silver	32,378		
			Gold	31		
1938	27		Lead			11,234
			Zinc			977
			Silver	65,130		
			Gold	62		
			Lead			14,060

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW041		NAME: CALEDONIA		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1938	27		Zinc		1,651	
1937	7		Silver	38,630		
			Gold	31		
			Lead		4,320	
1927	30		Silver	8,367		
			Lead		1,344	
			Zinc		1,344	
1924	2		Silver	3,857		
			Lead		620	
1923	1		Silver	2,488		
			Lead		562	
1922	2		Silver	3,732		
			Lead		626	
1920	3		Silver	4,976		
			Lead		955	
1914	3		Silver	8,615		
			Lead		1,892	

SUMMARY TOTALS: 082KSW041

NAME: **CALEDONIA**

	<u>Metric</u>	<u>Imperial</u>
Mined:	10,013 tonnes	11,037 tons
Milled:	8,776 tonnes	9,674 tons
Recovery:		
Silver:	1,854,827 grams	59,634 ounces
Gold:	1,990 grams	64 ounces
Cadmium:	1,702 kilograms	3,752 pounds
Lead:	409,697 kilograms	903,227 pounds
Zinc:	473,968 kilograms	1,044,920 pounds

Comments: 1952: No recovery records (Annual Report 1952, page 172).
 1927: Production figures split with Monte Christo (082KSW147).

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MINFILE NUMBER: 082KSW042		NAME: LUCKY BOY		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1948	148		Silver	7,029	
			Cadmium		43
			Lead		1,390
			Zinc		14,055
1938	2		Silver	2,426	
			Lead		1,050
			Zinc		4

SUMMARY TOTALS: 082KSW042

NAME: **LUCKY BOY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	150 tonnes	165 tons
Milled:	tonnes	tons
Recovery:		
Silver:	9,455 grams	304 ounces
Cadmium:	43 kilograms	95 pounds
Lead:	2,440 kilograms	5,379 pounds
Zinc:	14,059 kilograms	30,995 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW045		NAME: EMERALD HILL (L.1426)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1979	2		Silver Lead Zinc	11,757	463 44
1953	3		Silver Lead Zinc	20,061	739 155
1907	4		Silver Lead	39,139	1,160

SUMMARY TOTALS: 082KSW045

NAME: **EMERALD HILL (L.1426)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	9 tonnes	10 tons
Milled:	tonnes	tons
Recovery:	Silver: 70,957 grams	2,281 ounces
	Lead: 2,362 kilograms	5,207 pounds
	Zinc: 199 kilograms	439 pounds
Comments:	1979: Crude ore.	

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MINFILE NUMBER: 082KSW048	NAME: VOYAGEURE (L.3585)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1949	54		Silver	15,552	
			Gold	342	
			Lead		8,060
			Zinc		6,445

SUMMARY TOTALS: 082KSW048

NAME: **VOYAGEURE (L.3585)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	54 tonnes	60 tons
Milled:	tonnes	tons
Recovery:		
Silver:	15,552 grams	500 ounces
Gold:	342 grams	11 ounces
Lead:	8,060 kilograms	17,769 pounds
Zinc:	6,445 kilograms	14,209 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW049		NAME: ALPS-ALTURAS		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1928	71		Antimony		40,000
1916	24		Antimony		14,259

SUMMARY TOTALS: 082KSW049

NAME: **ALPS-ALTURAS**

<u>Metric</u>	<u>Imperial</u>
Mined: 95 tonnes	105 tons
Milled: tonnes	tons
Antimony: 54,259 kilograms	119,621 pounds

Recovery:

Comments:

1928: A total of 95.2 tonnes grading 57.2 per cent antimony shipped.
 1916: Minister of Mines Annual Reports 1916 and 1928.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082KSW051</u>		NAME: <u>MILLIE MACK (L.1831)</u>		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1979	73		Silver	21,088	
			Gold	529	
			Copper		32
			Lead		905
			Zinc		626
1969	22		Silver	6,905	
			Gold	156	
			Lead		452
			Zinc		295
1960	13		Silver	4,261	
			Gold	187	
			Lead		303
1924	22		Silver	105,750	
			Gold	435	
1922	13		Lead		2,184
			Silver	23,452	
1921	11		Gold	435	
			Lead		806
			Silver	25,318	
1919	21		Gold	249	
			Lead		590
			Silver	71,350	
1918	28		Gold	746	
			Lead		1,559
			Silver	77,353	
1917	17		Gold	1,369	
			Lead		2,585
			Silver	64,228	
1916	7		Gold	902	
			Lead		1,806
			Silver	23,047	
1908	103		Gold	311	
			Lead		798
			Silver	184,472	
1906	5		Gold	2,768	
			Lead		6,840
			Silver	18,071	
1902	3		Gold	249	
			Lead		562
			Silver	2,799	
1899	44		Gold	187	
			Lead		248
			Silver	43,700	
			Gold	1,306	
			Lead		973

SUMMARY TOTALS: 082KSW051

NAME: **MILLIE MACK (L.1831)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	382 tonnes	421 tons
Milled:	tonnes	tons
Recovery:		
Silver:	671,794 grams	21,599 ounces
Gold:	9,829 grams	316 ounces
Copper:	32 kilograms	71 pounds
Lead:	20,611 kilograms	45,439 pounds
Zinc:	1,085 kilograms	2,392 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082KSW052		NAME: PROMESTORA (L.3788)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1956	8		Silver	840	
			Gold	715	
			Lead		84
			Zinc		116
1896	8		Gold	762	

SUMMARY TOTALS: 082KSW052

NAME: **PROMESTORA (L.3788)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	16 tonnes	18 tons
Milled:	tonnes	tons
Recovery:		
Silver:	840 grams	27 ounces
Gold:	1,477 grams	47 ounces
Lead:	84 kilograms	185 pounds
Zinc:	116 kilograms	256 pounds

Comments: 1896: Shipped to Trail smelter (Minister of Mines Annual Report 1896).

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: <u>082KSW054</u>		NAME: <u>CHIEFTAIN (L.5845)</u>		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1955	3		Silver	2,239	
			Gold	31	
			Lead		28
			Zinc		15
1934	4		Silver	12,068	
			Gold	124	
			Lead		83
			Zinc		75

SUMMARY TOTALS: 082KSW054

NAME: CHIEFTAIN (L.5845)

	<u>Metric</u>	<u>Imperial</u>
Mined:	7 tonnes	8 tons
Milled:	tonnes	tons
Recovery:		
Silver:	14,307 grams	460 ounces
Gold:	155 grams	5 ounces
Lead:	111 kilograms	245 pounds
Zinc:	90 kilograms	198 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER:	<u>082KSW055</u>	NAME:	<u>PANAMA (L.3152)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1980	826		Silver	904,800	
			Gold	409	
			Copper		809
			Lead		2,889
			Zinc		621
1979	850		Silver	757,121	
			Gold	342	
			Lead		4,196
1976	184		Silver	162,451	
			Gold	63	
			Lead		919
			Zinc		736
1975	379		Silver	360,546	
			Lead		1,438
			Zinc		1,187
1974	73		Silver	143,509	
			Gold	31	
			Copper		110
			Lead		440
			Zinc		367
1970	9		Silver	17,760	
1916	23		Silver	80,401	
1915	32		Silver	137,693	
1914	57		Silver	230,535	
1913	63		Silver	208,390	
1912	56		Silver	193,616	
			Lead		1,431
1911	54		Silver	266,677	
			Lead		446
1910	54		Silver	345,585	
1909	6		Silver	29,455	

SUMMARY TOTALS: 082KSW055

NAME: **PANAMA (L.3152)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,666 tonnes	2,939 tons
Milled:	tonnes	tons
Recovery:		
Silver:	3,838,539 grams	123,412 ounces
Gold:	845 grams	27 ounces
Copper:	919 kilograms	2,026 pounds
Lead:	11,759 kilograms	25,924 pounds
Zinc:	2,911 kilograms	6,418 pounds

Comments:

1980: Crude ore.
 1979: Crude ore.
 1976: Mining in B.C. 1975-1980, Volume 1, page 60.
 1975: Crude ore.
 1974: Bulk sample.
 1970: Crude ore.

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MINFILE NUMBER: 082KSW059	NAME: ISLE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1970	2		Silver Lead Zinc	31	12 8

SUMMARY TOTALS: 082KSW059

	NAME: ISLE	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 2 tonnes	2 tons
	Milled: tonnes	tons
Recovery:	Silver: 31 grams	1 ounces
	Lead: 12 kilograms	26 pounds
	Zinc: 8 kilograms	18 pounds

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MINFILE NUMBER: 082KSW060		NAME: SHANNON		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1975	20		Silver	11,228		
			Gold	629		
			Lead			2,332
			Zinc			2,685
1935	5		Silver	6,594		
			Lead			164
			Zinc			532

SUMMARY TOTALS: 082KSW060

NAME: **SHANNON**

	<u>Metric</u>	<u>Imperial</u>
Mined:	25 tonnes	28 tons
Milled:	tonnes	tons
Recovery:		
Silver:	17,822 grams	573 ounces
Gold:	629 grams	20 ounces
Lead:	2,496 kilograms	5,503 pounds
Zinc:	3,217 kilograms	7,092 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSW065		NAME: RED FOX (L.2413)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1927	1		Silver	9,300	
			Lead		558
			Zinc		153
1906	34		Silver	122,079	
			Lead		7,643
1905	13		Silver	72,626	
			Lead		6,113
1904	32		Silver	196,975	
			Lead		13,377
1903	151		Silver	1,031,096	
			Lead		82,632
1902	130		Silver	1,173,641	
			Lead		60,668
1901	146		Silver	853,031	
			Lead		60,191
1899	10		Silver	48,272	
			Lead		3,555

SUMMARY TOTALS: 082KSW065

NAME: **RED FOX (L.2413)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	517 tonnes	570 tons
Milled:	tonnes	tons
Recovery:	Silver: 3,507,020 grams	112,753 ounces
	Lead: 234,737 kilograms	517,506 pounds
	Zinc: 153 kilograms	337 pounds

Comments: 1927: 1899-1927 production listed with Antoine (082KSW011) in MM01368.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: **082KSW071** NAME: **JESSE** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1976	24		Silver	6,127	
			Lead		188
			Zinc		70
1975	2		Silver	4,323	
			Copper		11

SUMMARY TOTALS: 082KSW071

NAME: **JESSE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	26 tonnes	29 tons
Milled:	tonnes	tons
Recovery:		
Silver:	10,450 grams	336 ounces
Copper:	11 kilograms	24 pounds
Lead:	188 kilograms	414 pounds
Zinc:	70 kilograms	154 pounds

Comments: 1976: Operated by R. Leighton.
 1975: Operated by W. Mengler.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSW082		NAME: BLACK GROUSE		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1935	10		Silver	27,496	
			Lead		241
			Zinc		442
1917	9		Silver	26,033	
1916	2		Silver	4,665	
1915	10		Silver	50,542	
			Gold	31	

SUMMARY TOTALS: 082KSW082

NAME: **BLACK GROUSE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	31 tonnes	34 tons
Milled:	tonnes	tons
Recovery:		
Silver:	108,736 grams	3,496 ounces
Gold:	31 grams	1 ounces
Lead:	241 kilograms	531 pounds
Zinc:	442 kilograms	974 pounds

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MINFILE NUMBER: 082KSW083		NAME: SLOCAN BOY (L.626)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1905	28		Silver	169,014	
			Lead		18,165
1902	136		Silver	366,829	
			Lead		79,378
1896	182		Silver	838,537	
			Lead		125,281

SUMMARY TOTALS: 082KSW083

NAME: **SLOCAN BOY (L.626)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	346 tonnes	381 tons
Milled:	tonnes	tons
Recovery: Silver:	1,374,380 grams	44,187 ounces
Lead:	222,824 kilograms	491,243 pounds

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MINFILE NUMBER: 082KSW088	NAME: SWEDE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1904	8		Gold	778	

SUMMARY TOTALS: 082KSW088

NAME: **SWEDE**

Metric

Imperial

Mined:
Milled:

8 tonnes
tonnes

9 tons
tons

Recovery:

Gold:

778 grams

25 ounces

Comments:

1904: Great Northern Mines.

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MINFILE NUMBER: 082KSW089	NAME: MOTHER LODE (L.1497)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1924	1		Silver Lead	1,648	396

SUMMARY TOTALS: 082KSW089

NAME: **MOTHER LODE (L.1497)**

	Mined:	1 tonnes	1 tons
	Milled:	tonnes	tons
Recovery:	Silver:	1,648 grams	53 ounces
	Lead:	396 kilograms	873 pounds

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MINFILE NUMBER: 082KSW095	NAME: LARDEAU RIVER	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940			Gold	62	
1930			Gold	342	
1900			Gold	933	
1895			Gold	7,216	

SUMMARY TOTALS: 082KSW095

NAME: **LARDEAU RIVER**

<u>Metric</u>	<u>Imperial</u>
Mined: tonnes	tons
Milled: tonnes	tons
Gold: 8,553 grams	275 ounces

Recovery:

Comments:

1940: Production between 1936 and 1940; tonnage unknown (Bulletin 28).
1930: Production between 1926 and 1930; tonnage unknown (Bulletin 28).
1900: Production between 1896 and 1900; tonnage unknown (Bulletin 28).
1895: Production between 1891 and 1895; tonnage unknown (Bulletin 28).

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MINFILE NUMBER: 082KSW096		NAME: MOBBS		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1939	2		Silver	62		
			Gold	62		
1916	12		Silver	40,434		
			Lead			1,769

SUMMARY TOTALS: 082KSW096

		NAME: MOBBS	
		<u>Metric</u>	<u>Imperial</u>
	Mined:	14 tonnes	15 tons
	Milled:		
Recovery:	Silver:	40,496 grams	1,302 ounces
	Gold:	62 grams	2 ounces
	Lead:	1,769 kilograms	3,900 pounds

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MINFILE NUMBER: 082KSW105	NAME: MORNING	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1909	3		Silver Lead	3,732	1,220

SUMMARY TOTALS: 082KSW105

	NAME: MORNING	
	<u>Metric</u>	<u>Imperial</u>
	3 tonnes	3 tons
Mined:		
Milled:		
Recovery:	3,732 grams	120 ounces
	1,220 kilograms	2,690 pounds

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MINFILE NUMBER: **082KSW115** NAME: **LONDON HILL** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1912	4		Silver	18,009	
1902	11		Silver	16,485	
1896	36		Silver	248,824	
1893	3		Silver	18,195	

SUMMARY TOTALS: 082KSW115

NAME: **LONDON HILL**

	<u>Metric</u>	<u>Imperial</u>
Mined:	54 tonnes	60 tons
Milled:		tons
Recovery:	Silver:	301,513 grams
		9,694 ounces

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MINFILE NUMBER: **082KSW116** NAME: **EMPRESS** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1909	14		Silver	132,219	
1908	5		Silver	45,628	
			Lead		2,868
1907	3		Silver	24,447	
1906	8		Silver	16,142	
1905	23		Silver	231,873	
			Gold	31	
1904	39		Silver	230,660	
			Gold	62	
1903	12		Silver	103,666	
			Gold	31	

SUMMARY TOTALS: 082KSW116

NAME: **EMPRESS**

	<u>Metric</u>	<u>Imperial</u>
Mined:	104 tonnes	115 tons
Milled:	tonnes	tons
Recovery:		
Silver:	784,635 grams	25,227 ounces
Gold:	124 grams	4 ounces
Lead:	2,868 kilograms	6,323 pounds

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MINFILE NUMBER: 082KSW121	NAME: TOPSY	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1907	1		Silver Lead	156	50

SUMMARY TOTALS: 082KSW121

	NAME: TOPSY	
	<u>Metric</u>	<u>Imperial</u>
	1 tonnes	1 tons
	Milled: tonnes	tons
Recovery:	Silver: 156 grams	5 ounces
	Lead: 50 kilograms	110 pounds

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MINFILE NUMBER: **082KSW122** NAME: **MARQUIS & GILBERT** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1928	10		Silver	156	
			Gold	467	
1903	5		Silver	1,244	
			Gold	187	
			Lead		95

SUMMARY TOTALS: 082KSW122

NAME: **MARQUIS & GILBERT**

	<u>Metric</u>	<u>Imperial</u>
Mined:	15 tonnes	17 tons
Milled:	tonnes	tons
Recovery: Silver:	1,400 grams	45 ounces
Gold:	654 grams	21 ounces
Lead:	95 kilograms	209 pounds

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MINFILE NUMBER: 082KSW126	NAME: WHITE EAGLE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1928	8		Silver	6,158	
			Gold	93	
			Lead		2,667
			Zinc		1,809

SUMMARY TOTALS: 082KSW126

NAME: **WHITE EAGLE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	8 tonnes	9 tons
Milled:	tonnes	tons
Recovery:		
Silver:	6,158 grams	198 ounces
Gold:	93 grams	3 ounces
Lead:	2,667 kilograms	5,880 pounds
Zinc:	1,809 kilograms	3,988 pounds

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MINFILE NUMBER: 082KSW137	NAME: HORSESHOE (L.3634)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1936	2		Silver Lead	3,110	755

SUMMARY TOTALS: 082KSW137

NAME: **HORSESHOE (L.3634)**

	Mined:	2 tonnes	2 tons
	Milled:		tons
Recovery:	Silver:	3,110 grams	100 ounces
	Lead:	755 kilograms	1,664 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: **082KSW138** NAME: **RUBY SILVER (L.515)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1908	3		Silver Lead	8,895	1,423
1906	10		Silver Lead	75,767	4,287
1896	23		Silver Lead	178,314	12,882

SUMMARY TOTALS: 082KSW138

NAME: **RUBY SILVER (L.515)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	36 tonnes	40 tons
Milled:	tonnes	tons
Silver:	262,976 grams	8,455 ounces
Lead:	18,592 kilograms	40,988 pounds

Recovery:

Comments:

1908: 1896-1908 production listed with Antoine (082KSW011) in MM01368.

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MINFILE NUMBER:	082KSW140	NAME:	SUNSET (L.970)	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1901	47		Silver Lead	258,718	12,522

SUMMARY TOTALS: 082KSW140

NAME: **SUNSET (L.970)**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	47 tonnes		52 tons	
	Milled:				
Recovery:	Silver:	258,718 grams		8,318 ounces	
	Lead:	12,522 kilograms		27,606 pounds	
Comments:	1901:	Minister of Mines Annual Report Index 3, page 215.			

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MINFILE NUMBER: 082KSW145	NAME: MOTHER LODE (L.15421)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1951	3		Silver Lead Zinc	15,303	1,740 86

SUMMARY TOTALS: 082KSW145

	NAME: MOTHER LODE (L.15421)
	<u>Metric</u> <u>Imperial</u>
Mined:	3 tonnes 3 tons
Milled:	tonnes tons
Recovery:	
Silver:	15,303 grams 492 ounces
Lead:	1,740 kilograms 3,836 pounds
Zinc:	86 kilograms 190 pounds

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MINFILE NUMBER: 082KSW146	NAME: IBEX (L.1428)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1906	9		Silver Lead	28,024	7,242

SUMMARY TOTALS: 082KSW146

	NAME: IBEX (L.1428)	
	<u>Metric</u>	<u>Imperial</u>
	9 tonnes	10 tons
Mined:		
Milled:		
Recovery:	28,024 grams	901 ounces
	7,242 kilograms	15,966 pounds

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 082KSW147		NAME: MONTE CHRISTO (L.4468)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1927	19		Silver	14,370	
			Lead		5,059
			Zinc		1,232
1918	17		Silver	29,548	
			Lead		6,895
1917	5		Silver	12,441	
			Lead		1,814
1907	6		Silver	11,321	
			Lead		3,454

SUMMARY TOTALS: 082KSW147

NAME: **MONTE CHRISTO (L.4468)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	47 tonnes	52 tons
Milled:	tonnes	tons
Recovery:		
Silver:	67,680 grams	2,176 ounces
Lead:	17,222 kilograms	37,968 pounds
Zinc:	1,232 kilograms	2,716 pounds

Comments:

1927: 1907-1927: Production listed with Caledonia, 082KSW041 in MM00688.

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MINFILE NUMBER: **082KSW151** NAME: **BOB FR.** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1905	8		Silver	30,854	
1904	16		Silver	82,174	

SUMMARY TOTALS: 082KSW151

NAME: **BOB FR.**

	<u>Metric</u>	<u>Imperial</u>
Mined:	24 tonnes	26 tons
Milled:	tonnes	tons
Recovery: Silver:	113,028 grams	3,634 ounces

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MINFILE NUMBER: 082KSW152	NAME: SWEET GRASS (L.8329)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1901	2		Silver	6,127	
1900	5		Silver	10,606	

SUMMARY TOTALS: 082KSW152

NAME: **SWEET GRASS (L.8329)**

	Mined:	7 tonnes	8 tons
Recovery:	Milled:	tonnes	tons
	Silver:	16,733 grams	538 ounces

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MINFILE NUMBER: 082KSW153	NAME: LOST ATLANTIS	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1957	3		Silver Lead Zinc	5,163	537 232

SUMMARY TOTALS: 082KSW153

NAME: **LOST ATLANTIS**

	<u>Metric</u>	<u>Imperial</u>
Mined:	3 tonnes	3 tons
Milled:	tonnes	tons
Recovery:		
Silver:	5,163 grams	166 ounces
Lead:	537 kilograms	1,184 pounds
Zinc:	232 kilograms	511 pounds

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MINFILE NUMBER: 082KSW154	NAME: NEWPORT (L.4521)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	2		Silver Lead Zinc	14,774	87 47

SUMMARY TOTALS: 082KSW154

NAME: **NEWPORT (L.4521)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2 tonnes	2 tons
Milled:	tonnes	tons
Recovery:		
Silver:	14,774 grams	475 ounces
Lead:	87 kilograms	192 pounds
Zinc:	47 kilograms	104 pounds

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MINFILE NUMBER: 082KSW155	NAME: EAGLE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1928	4		Silver	11,073	

SUMMARY TOTALS: 082KSW155

	NAME: EAGLE	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 4 tonnes	4 tons
	Milled: tonnes	tons
Recovery:	Silver: 11,073 grams	356 ounces

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MINFILE NUMBER: **082KSW156** NAME: **BEST (L.451)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1973	9		Silver	4,541	
			Lead		189
			Zinc		114
1971	8		Silver	6,345	
			Lead		331
			Zinc		163
1934	4		Silver	9,144	
			Lead		434
			Zinc		146
1918	61		Silver	146,495	
			Lead		9,068
1898	61		Silver	205,031	
			Lead		9,068

SUMMARY TOTALS: 082KSW156

NAME: **BEST (L.451)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	143 tonnes	158 tons
Milled:	tonnes	tons
Recovery:	Silver: 371,556 grams	11,946 ounces
	Lead: 19,090 kilograms	42,086 pounds
	Zinc: 423 kilograms	933 pounds

Comments: 1971: 1898-1973 production listed with Rambler-Cariboo in MM01366.

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MINFILE NUMBER: 082KSW166	NAME: TOWSER FRACTION	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1948	11		Silver Lead Zinc	8,927	2,222 2,339

SUMMARY TOTALS: 082KSW166

NAME: **TOWSER FRACTION**

	<u>Metric</u>	<u>Imperial</u>
Mined:	11 tonnes	12 tons
Milled:	tonnes	tons
Recovery:		
Silver:	8,927 grams	287 ounces
Lead:	2,222 kilograms	4,899 pounds
Zinc:	2,339 kilograms	5,157 pounds

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MINFILE NUMBER: 082KSW169		NAME: EMPIRE (L.1477)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1960	32		Silver	9,331	
			Gold	31	
			Lead		4,411
			Zinc		4,379

SUMMARY TOTALS: 082KSW169

		NAME: EMPIRE (L.1477)	
		<u>Metric</u>	<u>Imperial</u>
Recovery:	Mined:	32 tonnes	35 tons
	Milled:	tonnes	tons
	Silver:	9,331 grams	300 ounces
	Gold:	31 grams	1 ounces
	Lead:	4,411 kilograms	9,725 pounds
	Zinc:	4,379 kilograms	9,654 pounds

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MINFILE NUMBER: 082KSW199		NAME: KANE 4		STATUS: Showing	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1935	10		Silver	27,496	
			Lead		241
			Zinc		442
1917	9		Silver	26,033	
1916	2		Silver	4,665	
1915	10		Silver	50,542	
			Gold	31	

SUMMARY TOTALS: 082KSW199

NAME: **KANE 4**

	<u>Metric</u>	<u>Imperial</u>
Mined:	31 tonnes	34 tons
Milled:	tonnes	tons
Recovery: Silver:	108,736 grams	3,496 ounces
Gold:	31 grams	1 ounces
Lead:	241 kilograms	531 pounds
Zinc:	442 kilograms	974 pounds