

Total Number of Mineral Occurrences: 257

Status	092P	082M	082N
Produced	092I	082L	082K
Developed Prospect	092H	082E	082F
Proposed			
Showing			

**GEOLOGICAL LEGEND
 PENTICTON - 082ESW**

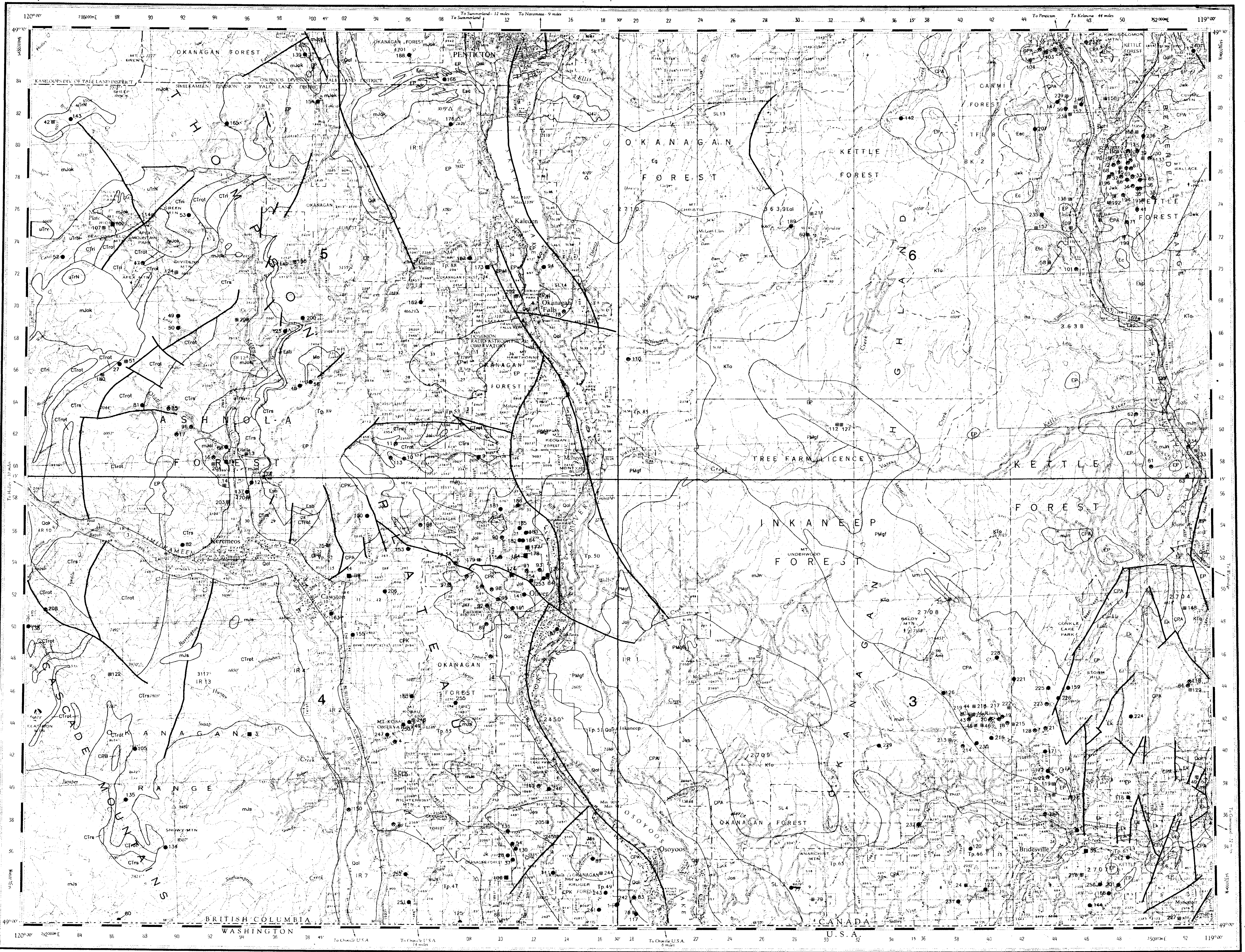
- LAYERED ROCKS**
- QUATERNARY**
- Qal Unconsolidated glacial, fluvial and alluvial deposits
- TERTIARY**
- MIOCENE TO PLEISTOCENE**
- Mo Ollaite Rhyolite: rhyolite breccia, obsidian and related dikes
- EOCENE**
- EP **PENTICTON GROUP:** Undivided mixed alkali and calcalkaline trans-tensional volcanics and associated fluvial and lacustrine sediments
- Included in legend but NOT shown on map (except (Eab) Springbrook and (Epm) White Lake formations):
- EPs White Formation: mostly chert and greenstone slate breccia, some tephrite level, overlain by polygenic tephromerale
 - EPw White Lake Formation: interdigitated volcanic sandstone and conglomerate with felsic porphyry lavas, lahars, pyroclastic rocks and volcanic breccias
 - EPms Marana Formation: flow banded dacite, breccia, mainly lava domes
 - EPmr Maron Formation: undivided Park Hill, Nimp Lake, Kooma Creek, Kiley Lake and Yellow Lake members; microcrystalline andesitic lava, tan trachyte and trachyandesite lava with up to 10 per cent plagioclase glomerophenocrysts in a finely crystalline matrix, pyroxene-rich rhyolite porphyry and mafic phonolite lava and minor breccia, Kiley Lake Member is 51.5 +/- 1.8 Ma, K-Ar (biotite)
 - Eab Springbrook Formation: discontinuous, basal, polygenic conglomerate and breccia, derived from underlying upper Palaeozoic and older basement rocks
 - Egn Okanagan Gneiss: massive, medium grey weathering, resistant hornblende biotite granodiorite orthogneiss; strongly foliated, grades to mylonitic gneiss, mylonite and blastomylonite, minor amphibolite, paragneiss, schist, pegmatite and apatite; strongly chloritized along the Okanagan Valley fault; includes (Eg) hornblende granodiorite; massive, resistant, grey weathering, coarse grained, equigranular, mesocratic with equidimensional black hornblende crystals; includes granite and granodiorite gneiss with pegmatite veins and sills; 52.3 +/- 1.4 Ma, K-Ar (hornblende)
- UPPER TRASSIC**
- UTv Islandarc derived mafic lavas, volcanoclastics, comagmatic intrusions; includes undifferentiated greenstone lenses, includes Rossland Group
 - UTn **NICOLA GROUP:** Islandarc derived mafic lavas, volcanoclastics, comagmatic intrusions; rusty weathering black pyritic slate, phyllite and argillite; locally silicified or cherty; minor quartzite, minor interbedded argillaceous siltstone
- CARBONIFEROUS TO TRASSIC**
- CTot Old Tom Formation: massive andesitic greenstone and greenstone breccia; locally includes large, extensive, strongly silicified equivalents in irregular bodies and lenses with gradational boundaries, undifferentiated limestone, minor dolomite
 - CTrs Shoemaker Formation: massive, greyish green silicified volcanic rocks; includes cherty tuff and breccia, undifferentiated
 - CTI Independence Formation: massive greenstone - volcanic breccia with greenstone fragments; includes large undifferentiated silicified lenses and limestone
- CARBONIFEROUS TO PERMIAN**
- CPA **ANARCHIST GROUP:** Dark grey weathering, recessive amphibolite, greenstone, quartz chlorite schist, quartz biotite schist, (am) minor serpenitized peridotite or diatrite
 - Pw Wallace Formation: metamorphosed andesitic tuffs and lavas, intrusions, hornfels and minor limestone, correlated with the upper (Permian) part of the Anarchist Group
 - CPK **KOBAU GROUP:** Undivided amphibolite, green schist, quartzite, mica schist, greenstone and minor marble; strongly foliated and penetrative faser fabrics
 - CPB **BARLOW ASSEMBLAGE:** Undivided thin bedded, brown, silty slate and argillaceous siltstone, lacks penetrative fabric, lower greenschist facies metamorphism
- PROTEROZOIC TO (?) LOWER PALAEZOIC**
- PMgf Grand Forks and Monashee Gneiss: undifferentiated includes grey, massive, biotite granite gneiss, layered paragneiss, schist, quartzite, calcalkalic gneiss, amphibolite, carbonatite, marble, pegmatite and amphibolite

INTRUSIVE ROCKS

- TERTIARY**
- EOCENE**
- Ec Undifferentiated Coyell-related intrusions: alkalic to calcalkalic, high level, syenite, monzonite and shonkinite; includes (Ea) Alendale Lava stock, porphyritic biotite pyroxene monzonite, syenite, shonkinite, 51.7 +/- 1.8 Ma, K-Ar (biotite)
 - Esc **SHINGLE CREEK PORPHYRY:** quartz felsic porphyry stock; includes (Ete) Toro Creek porphyry stock, quartz albite-sandstone porphyry, 49.5 +/- 2 Ma, K-Ar (biotite), (Eeb) Beaverdam porphyry, massive, lightly jointed, porphyritic granite, distinctive pink orthoclase phenocrysts up to 6 centimetres long, 49.4 +/- 0.7 Ma, K-Ar (biotite), and (Eec) Eugene Creek stock, 54.5 +/- 1.8 Ma, K-Ar (biotite), plutonic equivalent of the Maron Formation, especially (Ea) the Kettle River Formation
- CRETACEOUS AND/OR TERTIARY**
- Kto **OKANAGAN BATHOLITH** and satellite stocks: massive, light grey weathering, medium to coarse grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite
- JURASSIC AND/OR CRETACEOUS**
- Jki **Fairview Granodiorite:** massive, pink to light brown weathering, medium to coarse grained, unfoliated to weakly foliated, fresh granodiorite, 111 +/- 5 Ma minimum, K-Ar (biotite)
- JURASSIC**
- Jos **OSOYOOS PLUTON:** syntematically quartz monzonite intrusion at Anarchist Mountain and west of Osoyoos; medium grained, hypsidiomorphic granular, biotite hornblende quartz monzonite, 170 Ma, Rb-Sr; pink weathering, isoclastic, foliated quartz monzonite with a medium grained, hypsidiomorphic granular texture characterized by small pink garnets and plagioclase muscovite flakes, 140 Ma, Rb-Sr; medium to coarse grained, hypsidiomorphic granular or occasionally porphyritic biotite quartz monzonite with a weakly developed foliation, 125 Ma, Rb-Sr
 - Jol **OLIVER PLUTONIC COMPLEX:** massive, unfoliated, medium grained, porphyritic biotite granite with weakly foliated hornblende granodiorite along the southern border; also includes biotite hornblende diorite, agmatite, massive garnet muscovite granite, porphyritic quartz monzonite and syenite phases; 152 +/- 3 Ma, U-Pb (zircon)
 - Jk **KRUGER ALKALIC COMPLEX:** interpreted as a younger border phase of the Similkameen batholith, potassium feldspar porphyritic diorite, syenite and nepheline syenite, 139, 152 +/- 8 Ma (pyroxene-hornblende mix) and 171 +/- 6.4 Ma, K-Ar (hornblende)
 - Jwk **WESTKETTLE BATHOLITH:** equigranular biotite hornblende granodiorite to quartz diorite; intensely chloritized mafics, age based on correlation with the Nelson batholith
- MIDDLE JURASSIC**
- mIn Undifferentiated intrusions correlated with the Nelson batholith; porphyritic granite, granodiorite
 - mJa **SIMILKAMEEN BATHOLITHIC COMPLEX:** massive, medium grained biotite hornblende granodiorite, 171 +/- 8 Ma, K-Ar (hornblende), includes several satellite stocks referred to as Osoyoos and Fairview granodiorite
 - mJol **OLALLA ALKALIC COMPLEX:** magnetite-bearing pyroxene border phase with a diorite and fine grained syenite core, 178 Ma, K-Ar
 - mJok **OKANAGAN BATHOLITHIC COMPLEX (BROMLEY BATHOLITH):** occupying between Princeton and Okanagan Lake in the northwest corner of the Pentiction map area, marginal diorite intruded by quartz diorite, 185 +/- 5.7 Ma to 185 +/- 6.6 Ma, K-Ar and 165 +/- 53.3 Ma, Rb-Sr isochron, younger porphyritic granodiorite, 194.8 +/- 2.4 Ma, U-Pb (zircon); quartz monzonite and granite, 160.4 +/- 4.8 Ma to 133 +/- 4.1 Ma, K-Ar and 154 +/- 6 Ma, Rb-Sr isochron

NOTE: The above units (CTot, CTrs, CTI) have been informally referred to regionally as the Apex Mountain Group containing five major lithofacies: massive and bedded chert, greenstone, chert breccia, argillite and limestone.

Geological map and legend compiled from:
 Cairnes, C.E. (1940) Kettle River (West Half), British Columbia, Geological Survey of Canada, Map 538A.
 Hoy, T., Churn, N., Legon, A., Glover, K., Gibson, G., Grant, B., Wheeler, J.D. and Dunn, K.P.E. (1993) Geology of the Kootenay River Map Area (NTS 82 and parts of 83, D), B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 194.8.
 Loh, H.W. (1961) Kettle River (West Half), British Columbia, Geological Survey of Canada, Map 15-1961.
 Tompkinson-Rid, D.J. (1989) Geologic Map with Mineral Occurrences, Forest Locations, Radiometric Ages and Gravity Field for Pentiction Map Area (NTS 82), Southern British Columbia, Geological Survey of Canada, Open File 1969.
 Tompkinson-Rid, D.J. (1989) Geology, Pentiction, British Columbia, Geological Survey of Canada, Map 179A, Scale 1:200,000.
 See Pentiction (082ESW) Summary Sheet for an overview of the map area and additional regional references.
 Positions of all geological contacts are approximate. In the case of an apparent disagreement between an occurrence's geological location on the map and its stratigraphic setting given in the MINFILE documentation, the latter should be given priority.



MAP LEGEND - 082ESW

MINFILE NUMBER	NAME	COMMODITIES
001	DIVINGDAKE VEIN	AU AG CU PB ZN BI CO
002	HORN SILVER	AU AG CU PB ZN BI CO
003	ANG EDWARDS	AU AG CU PB ZN BI CO
004	TINHOPE	AU AG CU PB ZN BI CO
005	MORNING STAR	AU AG CU PB ZN BI CO
006	STEWART	AU AG CU PB ZN BI CO
007	FARVIEW	AU AG CU PB ZN BI CO
008	GRANDVIEW	AU AG CU PB ZN BI CO
009	WINDY CREEK	AU AG CU PB ZN BI CO
010	GRANDVIEW	AU AG CU PB ZN BI CO
011	WINDY CREEK	AU AG CU PB ZN BI CO
012	DOLPHIN	AU AG CU PB ZN BI CO
013	BOLTON	AU AG CU PB ZN BI CO
014	SOMERS	AU AG CU PB ZN BI CO
015	LANGRISH	AU AG CU PB ZN BI CO
016	WINDY CREEK	AU AG CU PB ZN BI CO
017	DEP	AU AG CU PB ZN BI CO
018	KONTNOV	AU AG CU PB ZN BI CO
019	WATERLOO	AU AG CU PB ZN BI CO
020	CARIBOONIA	AU AG CU PB ZN BI CO
021	WINDY CREEK	AU AG CU PB ZN BI CO
022	WINDY CREEK	AU AG CU PB ZN BI CO
023	WINDY CREEK	AU AG CU PB ZN BI CO
024	ANARCHIST CHROME	CR
025	ANARCHIST CHROME	CR
026	WINDY CREEK	AU AG CU PB ZN BI CO
027	ALLEGOR	AU AG CU PB ZN BI CO
028	ALLEGOR	AU AG CU PB ZN BI CO
029	CARME	AU AG CU PB ZN BI CO
030	BEAVERDALE	AU AG CU PB ZN BI CO
031	SUNGAIN	AU AG CU PB ZN BI CO
032	SUNGAIN	AU AG CU PB ZN BI CO
033	SUNGAIN	AU AG CU PB ZN BI CO
034	HAMMER	AU AG CU PB ZN BI CO
035	STANBARD	AU AG CU PB ZN BI CO
036	WINDY CREEK	AU AG CU PB ZN BI CO
037	WINDY CREEK	AU AG CU PB ZN BI CO
038	WASHINGTON	AU AG CU PB ZN BI CO
039	BEAVER	AU AG CU PB ZN BI CO
040	GOLD DOP	AU AG CU PB ZN BI CO
041	GOLD DOP	AU AG CU PB ZN BI CO
042	GOLD DOP	AU AG CU PB ZN BI CO
043	GOLD DOP	AU AG CU PB ZN BI CO
044	LURKA	AU AG CU PB ZN BI CO
045	MINNE HA HA	AU AG CU PB ZN BI CO
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048	PAPER	AU AG CU PB ZN BI CO
049	KOPPE	AU AG CU PB ZN BI CO
050	STAR OF HOPE	AU AG CU PB ZN BI CO
051	STAR OF HOPE	AU AG CU PB ZN BI CO
052	GREENWATER	AU AG CU PB ZN BI CO
053	WINDY CREEK	AU AG CU PB ZN BI CO
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MAP LEGEND - 082ESW

MINFILE NUMBER	NAME	COMMODITIES
151	GOLDEN GATE	ZN PB CU AU
152	LUCKY BOY	AU AG CU PB ZN
153	FAIRVIEW	AU AG CU PB ZN
154	FALLEN TALE	TC MG
155	CRAMBERT	AU AG CU PB ZN
156	CRAMBERT	AU AG CU PB ZN
157	CRAMBERT	AU AG CU PB ZN
158	CRAMBERT	AU AG CU PB ZN
159	JOLLY CREEK CHROME	CR
160	MAHONNY HILL	AU AG CU PB ZN
161	MAHONNY HILL	AU AG CU PB ZN
162	MAHONNY HILL	AU AG CU PB ZN
163	MAHONNY HILL	AU AG CU PB ZN
164	COVERT BASIN	UR
165	COVERT BASIN	UR
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167	COVERT BASIN	UR
168	COVERT BASIN	UR
169	BEAVERDALE GRANITE	GR
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171	BEAVERDALE GRANITE	GR
172	BEAVERDALE GRANITE	GR
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