Coding Manual

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Information Circular 2004- 3

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Welcome to the MINFILE Coding Manual. This manual is guide to the collection and entry of data into the MINFILE database. It compliments the MINFILE/pc User's Manual, which provides instructions on installing, operating, and using the MINFILE/pc program. Copies of both manuals are available for download. For comprehensive information concerning the MINFILE/pc program refer to the MINFILE/pc User's Manual.

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1. INTRODUCTION

MINFILE is a relational database containing information on metallic, industrial mineral and coal occurrences within the Province of British Columbia.

> ***An occurrence is defined as in-situ bedrock or placer mineralization, on surface, in drill holes, or in underground workings; generally, it does not include float, geochemical or geophysical anomalies.***

The MINFILE/pc software is used to enter data, search, sort and manipulate the MINFILE database. Such data manipulation allows efficient access to information on over 12,200 occurrence descriptions.

The purpose of this manual is to instruct users in the collection and entry of data into the database. This manual is an update of Version 4.5, July 2000 which replaced the previous MINFILE Coding Manual, Version 4.0, (Information Circular 1996-5). For comprehensive information concerning the MINFILE/pc program refer to the MINFILE/pc User's Manual.

Comments and requests for MINFILE information, this Manual, MINFILE/pc system diskettes and the MINFILE/pc User's Manual should be directed to:

MINFILE
Ministry of Energy and Mines
Energy and Minerals Division, Geological Survey Branch
PO Box 9333 Stn Prov Govt
Victoria BC, Canada V8V 1X4
Location: 5th Floor - 1810 Blanshard Street

MINFILE Team Contacts:

Ian Webster (250) 952-0433
Laura de Groot (250) 952-0387
Larry Jones (250) 952-0386

FAX: (250) 952-0381
Email: Ian.Webster@gov.bc.ca
WWW: http://www.em.gov.bc.ca/mining/GeolSurv/minfile/

The CD-ROM, mineral occurrence maps and data diskettes are available from:

Crown Publications Inc.
521 Fort Street
VICTORIA BC CANADA V8W 1E7;
Phone: (250) 386-4636; Fax: (250) 386-0221
E-Mail: crown@pinc.com
WWW: http://www.crownpub.bc.ca/

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2. GENERAL INFORMATION

The MINFILE CODING MANUAL is a guide for completing the MINFILE coding form (***Appendix XII***) and for entering information into the MINFILE database. This manual, which follows the general format and sequence of the MINFILE/pc input screens, explains the type, limitation, and format of data required for input into the MINFILE database.

There are 3 ways to collect and input data into the MINFILE database. One is to fill in a MINFILE coding form with the appropriate information and then enter this information on the computer. The second way is to skip the coding form and enter the data directly on the computer. Finally, you can generate a MINFILE Master Report and indicate the appropriate changes on the hard copy print out (this obviously won't work for new occurrences).

Data fields can be mandatory or optional, depending on how critical the field is to maintaining relationships within the database. In this manual and on the coding form, mandatory fields are denoted by an asterisk(*****) and must be completed. The field headings in this manual also list the corresponding relational file name (e.g. R02 for Status description) and code table name (e.g. E02 for Status code). Data is indicated on the coding form by checking an appropriate box or filling in the blank. ***Appendix XI*** is a summary of data field characteristics.

Most of the data fields are stored as codes. For example, BIOTITE is stored as BOIT. These are efficient for storage in a relational database and for searches. These codes and their translations are controlled by the Code Tables. Most of the Tables in the MINFILE system are "closed". This means that to enter the mineral BIOTITE it must already exist in the Code Tables. The description must be entered in the exact format it is entered in the Code Table, otherwise the computer will reject the input.

In MINFILE/pc, Proximity Scan and "pick lists" help you to select the correct description from valid entries; the data is automatically stored as the appropriate code. The MINFILE/pc program has built-in error checking and prevents misspelled technical words from being entered. New items can be added to the Code Tables, if required. The tables are updated by the Database Administrator on a regular basis.

Once information is entered into the MINFILE database, the coding forms for all new occurrences will be retained. For new occurrences entered on the computer a Master Report must be generated when the information is complete, and submitted to the MINFILE Team. Before deleting an occurrence, a Master Report must be generated and on it must be written DELETED, the reason for the deletion, the date of deletion and the name of the person requesting the deletion. The Master Report should then be submitted to the MINFILE Team. **All** new and deleted occurrences must have a hard copy record for archival purposes. See ***Appendix X*** for the recommended coding and editing guidelines.

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3. OCCURRENCE IDENTIFICATION

3.1 CODING ACTIVITY

This field is only used when filling in a MINFILE coding form. It is not stored or used when entering data directly into the computer.

The top right hand corner of the MINFILE coding form contains the terms NEW, REVISE and DELETE. These are not part of the database information but are included for administration only. The appropriate term should be checked by the coding geologist to indicate how the data on the coding form should be treated during data entry. The terms have the following meanings:

NEW - This indicates that a new occurrence is being created and all the data will be entered under a newly assigned MINFILE number. Official MINFILE occurrence numbers are issued by the MINFILE Team. Once information is entered into the MINFILE database, the coding forms for all new occurrences will be retained by the MINFILE Team.

The MINFILE Quick Coding Card is useful for coding New occurrences (see Appendix XII).

REVISE - This indicates that the data filled in on the coding form replaces or should be added to the existing data for the stated MINFILE number. Any change to the data, from a minor change to a major rewrite, is considered to be a revision.

When doing a Revise the geologist can indicate on the coding form or

Master Report the specific fields which are to replace existing data or data which is to be added. It is not necessary to complete the entire form when doing a Revise, but inclusion of the MINFILE number is mandatory.

DELETE - This indicates that an existing MINFILE number and all the attached data are to be deleted from the database. A deletion indicates that the researching geologist has confirmed that the occurrence does not exist or the occurrence has been combined with another MINFILE number. An appropriate reason must be given for a deletion. Before deleting an occurrence, a Master Report must be generated. Written on the Master Report must be the word DELETED, the reason for the deletion, the date of deletion and the name of the person requesting the deletion. The Master Report must then be forwarded to a member of the MINFILE Team.

3.2 MINFILE NUMBER(*) (all relational files)

Each mineral occurrence has a unique 9-character MINFILE number used to identify it within the computer database, in hard-copy printouts and on location maps. The MINFILE number number begins with a three-digit NTS (National Topographic System) location number used to identify the appropriate 1:1 000 000 map sheet (from 082 to 114), followed by a single alphabetic character (A to P) used to identify the appropriate 1:250 000 map sheet.

Due to a high density of occurrences, NTS map sheets 082E, F, K, L, 92H and I are plotted at a 1:100 000 scale. In these cases, a two-character (NE, NW, SE, SW) designation identifies the appropriate quadrant on the map sheet. The other map areas are plotted at a 1:250 000 scale and two blank spaces must be input in place of the two-character quadrant designation. An exception is 092IW.

The final three-character segment of the MINFILE number is a sequential three-digit number from 001 to 999, identifying the unique number on the map sheet. For example, 082FSW100 is the 100th occurrence documented in the 082FSW 1:100 000 scale NTS area. If a new occurrence is documented, an occurrence number will be assigned by the MINFILE Team.

Examples: ***082FSW100 at 1:100 000 scale***
093M 014 at 1:250 000 scale
092JW 002 is an exception

3.3 NAME(*) (R08)

This is the **most common or historically relevant** name for an occurrence. Names in current use may or may not be the most appropriate for an occurrence in a historical context. List the most important name first followed by all aliases, in order of importance. Duplication of a first ranked name for different occurrences on the same map sheet is discouraged. Each occurrence can have up to *sixteen* names of 30 characters each. **All** appropriate names should be included.

3.4 STATUS(*) (R02) (E02)

The STATUS describes the state of development of the occurrence as of the date of coding. Status is assigned by checking the appropriate box listed on the coding form or selecting the appropriate status from the list brought up when anything is entered in this field on the computer. Each occurrence has only *one* status. Producers and Past Producers must be defined as either underground or open pit operations (select at least one using an X). Underground should be used to indicate existence of an adit on a site.

STATUS TYPES	DESCRIPTION	CODE	SYMBOL	LINE	FILL
Anomaly	This status type is a holding place for temporary occurrences or occurrences of interest that do not have documented in-situ mineralization. It may also be a site of interest which is recognized from any one or more of: geophysics, geochemistry, surface sampling, prospective geology, or surficial feature such as float, till, drift, or frost-heave (felsnmeer).	ANOM	Cross (+)	04	0
Showing	Occurrences hosting minor in-situ mineralization.	SHOW	Solid circle	01	1
Prospect	Occurrences documented as containing mineralization which warrants further exploration.	PROS	Cross & square	60	0
Developed Prospect	occurrences on which exploration and development have progressed to a stage that allows a reasonable estimate of the amount(s) of one or more of the potentially mineable commodities.	DEPR	Solid square	02	1

Producer	Currently producing mine. Occurrences from which ore containing one or more commodities is being mined for commercial gain or benefit. This does NOT include large bulk samples for testing purposes. Coding must specify whether it is an open pit or underground operation.	PROD	Pick & shovel	57	0
Past Producer	Past producing mine. Occurrences that are not currently being mined and have recorded production in the past. This does not include bulk samples for testing purposes. Coding must specify whether it was an open pit or underground operation.	PAPR	Circl,Pick&Shvl	58	0
Unknown	Data entry is incomplete, or occurrence reported but nothing else known.	****	Open circle	01	0

3.5 NTS MAP(*) (R10) (E10)

This is the National Topographic System map sheet designation for the 1:50 000 map sheet on which the mineral occurrence is located. The NTS map sheet number consists of a three-digit number identifying the 1:1 000 000 map area (082, 083, 092, 093, 094, 102, 103, 104 and 114), followed by one alphabetic character from A to P used to designate the appropriate 1:250 000 map sheet. A two-digit number from 01 to 16 designates the appropriate 1:50 000 map sheet and an alphabetic character (E or W) is used to designate the east or west half of the 1:50 000 map in which the specific occurrence is located. The database will accept up to *four* 1:50 000 scale map sheet designations for each occurrence in the event an occurrence straddles one or more map sheet boundaries. The geographic location must be in the first ranked NTS map sheet.

Example: 082F03E

3.6 BC MAP (R11) (E11)

NOTE: This field is not currently used.

The database will accept up to *four*, 1:20 000 scale map sheet designations for the BC MAP sheet system. The map sheet designation consists of a three-digit number identifying the 1:1 000 000 scale NTS map area (082, 083, 092, 093, 094, 102, 103, 104, and 114), followed by an alphabetic character (A to P) used to designate the appropriate 1:250 000 NTS map sheet. Then, a three-digit number (001 to 100) is used to designate the appropriate 1:20 000 map within the B.C. map sheet system.

Example: 082M053

3.7 MINING DIVISION(*) (R09) (E09)

The database will accept up to *two* Mining Divisions if an occurrence straddles a mining division boundary.

Historically, MINFILE has documented a limited number of occurrences outside the Provincial boundaries, such as in the Alaskan Panhandle, and these have been important in evaluating the metallogeny and economic potential of adjacent areas in British Columbia. The database, therefore, includes pseudo mining divisions for adjacent political jurisdictions and codes for them may be used to identify a selected number of important occurrences.

Refer to ***Figure 1*** for Mining Division boundaries and ***Figure 2*** for general information on Mining Camps in British Columbia.

MINING DIVISIONS	CODE
Alaska, USA	ALSK
Alberni	ALBI
Alberta	ALBT
Atlin	ATLN
Cariboo	CBOO
Clinton	CLIN
Fort Steele	FORT
Golden	GOLD
Greenwood	GRWD

MINING DIVISIONS	CODE
New Westminster	NWES
Nicola	NICO
N.W.T.	NWTR
Omineca	OMIN
Osoyoos	OSOY
Revelstoke	REVL
Similkameen	SIMK
Skeena	SKEE
Slocan	SLOC

Idaho, USA	IDHO	Trail Creek	TRAL
Kamloops	KAML	Yukon	YKON
Liard	LIAR	Vancouver	VANC
Lillooet	LILL	Vernon	VERN
Montana, USA	MNTN	Victoria	VICT
Nanaimo	NIMO	Washington, USA	WASH
Nelson	NELS	Unknown	****

3.8 LOCATION(*) (E01)

Coordinates for an occurrence may be input in either a latitude-longitude or a Universal Transverse Mercator grid (UTM) format (North American Datum NAD 27). The MINFILE/pc program will automatically convert whichever coordinates you enter to the alternate system. Geodetic (latitude-longitude) designations have an east to west convention while the UTM system has a west to east convention.

> ***It is much simpler to locate by UTM grid than by geodetic coordinates because the spacing is the same everywhere and is metric. There is some overlap of the coordinate system from zone to zone but for normal use the overlap is ignored.***

The location of an occurrence should be the most significant physical reference point. In some cases this will be an adit, portal or similar mine working. In other cases, the location may be defined as the centre of a mineral claim or group of claims, a point on the best exposure of a formation, etc. Commonly, the location is a trench, sample site, outcrop or drillhole site. This MUST be clearly stated in the Identification Comment Field, along with the reference from which the location was derived. For example: The Discovery trench at the southeast corner of the Sam claim (Assessment Report 99999). Locational data derived from engineering surveys should be used if available, but the data is usually from 1:50 000 scale or more detailed maps.

3.8.1 LATITUDE/LONGITUDE: The latitude/longitude of a mineral occurrence is expressed in a degrees-minutes-seconds format. For example: Latitude 50 degrees 14 minutes 12 seconds, Longitude 117 degrees 05 minutes 13 seconds. The range of possible values in British Columbia are: Latitude 48 degrees to 60 degrees, Longitude 114 degrees to 140 degrees. Coordinates outside this range will be rejected by the system.

3.8.2 UTM (UNIVERSAL TRANSVERSE MERCATOR) ZONE: The UTM system divides the world into 60 meridianal zones numbered 1 through 60, beginning at 180 degrees west. Each zone covers a strip 6 degrees wide in longitude. Zone numbers for the Northern and Southern Hemispheres are indicated by positive or negative values respectively. Zone numbering starts at zone 1 from 180 degrees west to 174 degrees west and increases eastward to zone 60 between 174 degrees east to 180 degrees east.

ZONE	LOCATION
07	144 to 138 degrees west Longitude
08	138 to 132 degrees west Longitude
09	132 to 126 degrees west Longitude
10	126 to 120 degrees west Longitude
11	120 to 114 degrees west Longitude

3.8.3 UTM NORTHING: These are quoted as a seven-digit number in metres north of the equator that has a false northing of 0 metres for the northern hemisphere (10000000 metres for the southern hemisphere). Within British Columbia the northing may range from 5300000 to 6653000 metres. The UTM grid is limited to 80 degrees north latitude.

3.8.4 UTM EASTING: These are quoted as a six-digit number in metres. The central meridian of each zone is assigned a false easting of 500000 metres. For example, the central meridian of zone 11 (at 117 degrees west longitude) is assigned the UTM easting of 500000. From west to east, zone 11 contains a range of eastings from about 290000 metres at 120 degrees west longitude to about 725000 metres east at 114 degrees west longitude.

3.9 ELEVATION(*) (E01)

Elevations are to be quoted in metres above mean sea level. The maximum acceptable value is 6000 metres. Values acquired from accurate location plots on 1:50 000 map sheets are acceptable, but actual survey information is preferred. Negative elevations are not accepted in the database. Right justify entries with no zeros to the left.

3.10 LOCATION CERTAINTY(*) (E01)

The location certainty is either 500 metres, 1 kilometre or 5 kilometres and is used to indicate the relative precision of the location of an occurrence (adit, trench, outcrop, etc.). A well documented, easily located occurrence should have a location certainty of 500 metres, meaning that the occurrence is within 500 metres of the given coordinates. A poorly documented occurrence may be identified by a location accuracy of 1 or 5 kilometres.

3.11 CANMINDEX # (E01)

NOTE: This field is not currently used.

This is a cross-reference to the Canadian Mineral Index file maintained by the GSC in Ottawa. It consists of a six-digit number from 000001 to 999999.

3.12 NATIONAL MINERAL INVENTORY (NMI) NUMBER (E01)

This is a cross-reference to the National Mineral Inventory file located at the Mining Sector of Natural Resources Canada in Ottawa. This file is no longer being updated and maintained. Each documented mineral deposit in Canada is assigned a unique National Mineral Inventory Number. The number follows NTS conventions and consists of a 1:1 000 000 scale map designation (e.g., 082, 104, 093), followed by a 1:250 000 scale map designation consisting of an alphabetical character (A to P). This is followed by a 1:50 000-scale map designation consisting of a one or two-digit number (1 to 16), then by a commodity code (e.g., Au, Ag, Zn, etc.) and an occurrence number (e.g., 1, 2, 3, etc.). This field is *free form* with 18 characters.

Example: 103F9 Au1

3.13 DATE CODED/CODED BY(*) (E01)

Enter the date on which the occurrence is described for the database and the initials (up to 4 characters) of the person compiling the information. The date is entered in a DD/MM/YY format. If nothing is entered in the Date field when the occurrence is created on the computer, it will automatically be set to the current date. See ***Appendix XIII*** for initials/names used to date.

3.14 DATE REVISED/REVISED BY(*) (E01)

Enter the date on which the occurrence was revised and the initials of the person who compiled the data for the revision. The date is entered in a DD/MM/YY format. If the Date field is left blank on the computer, it will automatically be set to the current date. See ***Appendix XIII*** for initials/names used to date.

3.15 FIELD CHECK(*) (E01)

A "Yes" or "No" designation is selected to indicate if this occurrence has been checked in the field, relatively close in time to the research date, by Ministry personnel. A field examination will be more valuable in determining the characteristics of an occurrence rather than a description based only on published data.

3.16 COMMENTS - IDENTIFICATION (C01)

Space is provided to enter pertinent information which may be relevant in clarifying material entered in the preceding Identification data fields. Comments should be brief, informative and not merely a duplication of specific data entered in the data fields. An explanation of what exactly is at the location, (e.g., centre of outcrop, location of sample) and the reference must be entered here. Entry allows for *unlimited* 70-character lines.

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4. MINERAL OCCURRENCE

4.1 COMMODITIES(*) (R19) (E19)

The commodity fields are used to identify the presence of an element or substance of economic potential or interest. The commodities present in the mineral occurrence are to be listed, **in decreasing order of importance**, based on economic significance. The commodity may be present in any amount and it is not the prerogative of the individual coder to identify commodities based on economic or quantitative criteria. Commodities produced as an economic product from mining activities are identified in the Production and Inventory portion of the database. The commodities identified in the Inventory/ Production portions **MUST** be included in the commodities list for the occurrence. The database will accept up to *15* different commodities per occurrence. Listed commodities should normally have a corresponding mineral in the significant mineral category.

The search codes for commodities consist of two-character standard elemental chemical symbols or two-character codes made up for industrial minerals and other commodities. ***Appendix II*** contains a complete listing of the current commodity search codes. New codes may be added to the master table if required.

Examples: AU=gold, PT=platinum, LS=limestone, JD=jade

Appendix VIII is a glossary of historic and equivalent mineral names and should be used to identify equivalent names or synonyms for the commodities.

4.2 MINERALOGY(*) (R20) (E20a,b)

The mineralogy is described by SIGNIFICANT, ASSOCIATED and ALTERATION minerals. Minerals for

each category are **entered in decreasing order of significance**.

Minerals included in the SIGNIFICANT (economic) category need not be present in economic concentrations but should contain some element of economic interest. ASSOCIATED (gangue) minerals are those present which either form a host matrix to rocks of economic interest or are those related to the occurrence of SIGNIFICANT minerals. ALTERATION minerals are those associated with the alteration process.

The database will accept up to *sixteen* minerals in the SIGNIFICANT category, and *eight* minerals each in the ASSOCIATED and ALTERATION categories. All minerals and their context should be identified in the Capsule Geology. Care should be taken not to duplicate minerals by using synonyms (e.g., FLUORSPAR and FLUORITE). See ***Appendix VIII*** for a short list of historic and equivalent mineral names and their current aliases; this will be of assistance where older references are consulted. Minerals may occur in more than one category (e.g., pyrite may be included as a Significant and an Alteration mineral if appropriate).

Appendix III is the complete list of mineral search codes which may be used in any of the three categories, SIGNIFICANT (economic), ASSOCIATED (gangue) or ALTERATION minerals. ***Appendix I*** contains the recommended derivation technique used to define codes for minerals not already included in the master table. The resulting code must be unique for each mineral. Recommended new codes for minerals are approved and added to the code tables by the database administrator.

> **4.2.1 COMMENTS - MINERALOGY (C02,C03,C04)**: Each of the SIGNIFICANT, ASSOCIATED and ALTERATION mineral categories has an area available for text comments pertinent to understanding the mineralogy. Maximum allowable 70-character lines are *four* for Significant, *three* for Associated, and *four* for Alteration comments.

4.3 ALTERATION TYPE (R21) (E21)

This field indicates the presence of various alteration types based on the alteration and gangue mineralogy identified. A maximum of *six* alteration types may be input per occurrence from the following table:

> ***The indicated mineralogy is intended as a general guide, not as a geologically comprehensive definition. Alteration types may be gradational from one to another.***

ALTERATION TYPE	CODE	ALTERATION MINERALOGY
ALBITIC (SODIUM SILICATE)	ALBI	Introduction of, or replacement by, ALBITE, usually replacing a more calcic plagioclase. It may result from strong sodium metasomatism and addition of sodium to the original rock or it may result by leaching of other cations in the rock and apparent enrichment of sodium. Typical mineral assemblages are ALBITE, PARAGONITE (sodium-rich sericite), CHLORITE, and QUARTZ; generally accompanied by ORTHOCLASE, ANKERITE, or other carbonate minerals.
ALUNITIC	ALUN	Introduction of, or replacement by, ALUNITE. This alteration is caused by extreme hydrolytic leaching of wallrocks in the presence of sulphate. The conditions are oxidizing with an abundance of sulphate ions. The most common mineral assemblage is ALUNITE with some form of silica: QUARTZ, CHALCEDONY, CRISTOBALITE, TRIDYMITE, or OPAL. Other minerals present commonly include KAOLINITE, SERICITE, DIASPORE, BARITE, JAROSITE, RUTILE, ZUNYITE, PYRITE, and HEMATITE.
ARGILLIC	ARGI	Intermediate argillic alteration is the replacement or alteration of feldspars to form predominantly clay minerals. These include the KAOLINITE group: DICKITE, KAOLINITE, HALLOYSITE, and METAHALLOYSITE; the SMECTITE (MONTMORILLONITE) group; the ILLITE group; and the amorphous clays (ALLOPHANE). Mineral assemblages characteristic of advanced argillic alteration caused by hydrothermal solutions at low and moderate temperatures are dominated by KAOLINITE group clay minerals. DICKITE, KAOLINITE, DIASPORE, and PYROPHYLLITE may occur with SERICITE, QUARTZ, ALUNITE, PYRITE, TOURMALINE, TOPAZ, ZUNYITE, and AMORPHOUS CLAYS (ALLOPHANE).
BIOTITE	BIOT	Introduction of, or replacement by, BIOTITE.
CARBONATE	CARB	Introduction of, or replacement by, CARBONATES. Magnesium, iron, calcium, and manganese carbonates are common. These are CALCITE, DOLOMITE, ANKERITE, and SIDERITE.
CHLORITIC	CLOR	The replacement by, conversion into, or introduction of CHLORITE. This alteration may result from a number of disparate metasomatic processes. Mineral assemblages comprise CHLORITE, with subordinate SERICITE, QUARTZ, and PYRITE.

DEUTERIC (AUTOMETASOMATISM)	DEUT	A process involving reactions between primary magmatic minerals and the water-rich solutions that separate from the same body of magma at a late stage in its cooling history. These processes may result in SILICIFICATION, SODIUM SILICATE (ALBITIZATION), POTASSIUM SILICATE, TOURMALINIZATION and GREISENIZATION as pervasive, selectively pervasive, cavity filling and/or vein-controlled modes of alteration.
EPIDOTE	EPID	The hydrothermal introduction of EPIDOTE into rocks or the alteration of rocks in which plagioclase feldspar is albitized, freeing the anorthite molecule for the formation of EPIDOTE and ZOISITE, often accompanied by chloritization. These processes are characteristically associated with metamorphism.
FENITIC	FENT	Widespread alkali metasomatism of quartzofeldspathic country rocks in the environs of carbonatite complexes and/or alkalic igneous rocks. FENITES are characterized by FELDSPATHOIDS, and ALKALI FELDSPARS (POTASH FELDSPAR, ALBITE), PYROXENES (AEGERINE, AEGERINE-AUGITE), and AMPHIBOLES (RIEBECKITE-ARFVEDSONITE series).
GREISEN	GRSN	A type of alteration whose minerals are enriched in fluorine, boron, and the alkali metals (Na, K, and Li). The characteristic minerals include TOURMALINE, TOPAZ, MUSCOVITE, ZINNWALDITE, FLUORITE, ALKALI FELDSPARS, and/or KAOLINITE.
HEMATITE	HEMT	HEMATITE is the principal mineral product and varieties may be granular, specular, or more rarely, earthy. The latter is generally of supergene origin and is associated with clay minerals. The style of hematite alteration is pervasive, selectively pervasive, and vein-controlled.
LEACHING	LECH	The separation, selective removal, or dissolving-out of soluble constituents from a rock, soil, or orebody by the natural action of percolating water.
OXIDATION	OXID	A process whereby an area is modified by surface waters, and/or reaction with oxygen (e.g., sulphides altered to oxides and carbonates). A GOSSAN represents an oxidized zone formed by the oxidation of sulphides and the leaching-out of the sulphur and most metals, leaving hydrated iron oxides and rarely sulphates. Minerals include LIMONITE, HEMATITE, and others.
POTASSIUM SILICATE (POTASSIC)	KSPA	Hydrothermal alteration resulting from potassium metasomatism, commonly accompanied in calcalkaline rocks by removal of calcium and sodium. Characteristic major minerals are POTASSIUM FELDSPARS (ADULARIA, ORTHOCLASE, MICROCLINE), BIOTITE or CHLORITE, SERICITE, and QUARTZ, with common ALBITE, ANHYDRITE, FE-MG CARBONATE, and APATITE.
PROPYLITIC	PROP	The result of low pressure-temperature alteration. The propylitic assemblage consists of EPIDOTE, CHLORITE, ZOISITE, CLINOZOISITE, SERICITE, MG-FE-CA CARBONATES, PYRITE, and sometimes ALBITE-ORTHOCLASE, all involved in partial replacement of wallrock minerals. HEMATITE, JAROSITE, and GOETHITE are also common.
PYRITE	PYRT	Introduction of, or replacement by, PYRITE. A common process of hydrothermal alteration.
QUARTZ CARBONATE	QZCA	LISTWANITE. A mineralogic assemblage that results from the carbonatization of serpentinized ultramafic rocks. A distinctive alteration suite consisting of green chromium-bearing mica (MARIPOSITE, FUCHSITE) with QUARTZ, CARBONATE, LIMONITE and MAGNESITE.
RODINGITIZATION	RDGZ	A metasomatic alteration of a protolith during serpentinization. RODINGITE is a product of this process and is a massive dense calcsilicate rock typically rich in GROSSULAR GARNET and DIOPSIDE. Accessory minerals include combinations of IDOCRASE, CLINOZOISITE, ZOISITE, VESUVIANITE, CHLORITE, PREHNITE, and SERPENTINE.
SERICITIC (PHYLLIC)	SERI	A very abundant and widespread alteration with a characteristic mineral assemblage of SERICITE, QUARTZ, and PYRITE. Sericitization is often the alteration type most closely associated, spatially, with sulphide ore and is a hydrothermal, deuteric, or metamorphic process involving the introduction of, alteration to, or replacement by SERICITIC MUSCOVITE.
SERPENTINIZATION	SERP	The process of hydrothermal alteration by which magnesium-rich silicate minerals (e.g., olivine, pyroxenes, and/or amphiboles in dunites, peridotites, and/or other ultramafic rocks) are converted into or replaced by serpentine minerals. Minerals include SERPENTINE, CHRYSOTILE, BRUCITE, TALC, MAGNETITE, and MAGNESITE (CARBONATES).
SILICIFICATION	SILI	The introduction of, or replacement by, SILICA, generally resulting in the formation of fine-grained QUARTZ, CHALCEDONY, or OPALINE SILICA (OPAL), which may fill pores and replace existing minerals.
SKARN (SILICATION)	SKRN	Silication (silicate alteration) is also known as pyrometasomatic, contact metasomatic, and igneous metamorphic mineralization. The process is one of hydrothermal alteration of carbonate rocks. The altered rocks resulting from the process are called SKARNS or TACTITES. Not all skarn protoliths are carbonate rocks; volcanic and plutonic igneous rocks and aluminosilicate sedimentary rocks may be silicated if their Ca, Mg, and/or CO2 contents are sufficiently high. A wide variety of silicate minerals occur with iron oxides and/or sulphides and with a variety of other minerals of economic interest. Common minerals in the silicated rocks include: GARNETS: ANDRADITE and GROSSULARITE (ALMANDINE is more rare); EPIDOTE and CLINOZOISITE; DIOPSIDE-HEDENBERGITES; IDOCRASE (VESUVIANITE); WOLLASTONITE; TREMOLITE-ACTINOLITE; BIOTITE-PHLOGOPITE; CHLORITES; POTASSIUM and PLAGIOCLASE FELDSPARS.
TALC	TALC	TALC forms as an alteration product of magnesium silicates such as olivine, pyroxenes and amphiboles, or by the reaction between magnesium and silica. Minerals commonly associated with TALC are CHLORITE, DOLOMITE (CARBONATE), TREMOLITE, ANTHOPHYLLITE, ANTIGORITE, SERPENTINE, MAGNESITE, MAGNETITE, and CHROMITE. Common geologic settings for TALC formation are 1) within regionally metamorphosed and/or hydrothermally altered ultramafic rocks, 2) in association with schists, generally chloritic, 3) with dolomite and magnesite, or 4) with mafic volcanics.
TOURMALINIZATION	TURM	Introduction of, or replacement by, TOURMALINE as pervasive, selectively pervasive, and vein-controlled alteration.

ZEOLITIC	ZEOL	Introduction of, alteration to, or replacement by, a mineral or minerals which have ZEOLITES as distinctive, though not necessarily abundant, gangue minerals. Zeolitization results from the passage of relatively low-temperature, near-neutral, hydrothermal solutions that cause recombination of sodium, calcium, and/or potassium in the wallrocks. ZEOLITES most commonly occur as alteration products of volcanic glass and calcium-rich plagioclase feldspar and are associated with alteration minerals which include ADULARIA, PREHNITE, PUMPELLYITE, and minerals of the propylitic facies, particularly EPIDOTE, ALBITE, and CARBONATES. The most common ZEOLITES include CLINOPTILOLITE, MORDENITE, ANALCIME, HEULANDITE, LAUMONTITE, and WAIRAKITE.
UNKNOWN	****	Insufficient information to allow alteration type.

4.4 DEPOSIT CHARACTER(*) (R05) (E05)

The deposit character describes the style of the mineralization or the significant geological feature(s) associated with the mineralized hostrocks. The database will accept up to *four* Deposit Characters for each occurrence and these are ranked in order of importance. This field is mandatory and at least one characteristic must be identified.

A complete description of the characteristics of an occurrence should be incorporated in the Capsule Geology.

DEPOSIT CHARACTER	CODE	MINFILE DEFINITION
Vein	01	Occurrences in which mineralization occurs within one or more simple or complex veins, or vein sets which may be associated with fault or shear zones.
Stockwork	02	Occurrences in which mineralization occurs within a network of veinlets in the country rock.
Breccia	03	Mineral occurrences hosted and/or controlled by the angular, broken rock fragments held together by a mineral cement or in a fine-grained matrix. The breccia may be sedimentary, igneous or tectonic in origin.
Pipe	04	Mineralization in pipes which are generally funnel shaped or cylindrical,, particularly mineralized breccia pipes, diatremes, etc.
Unconsolidated	05	Occurrences within material whose particles are not cemented together. May occur at surface or at depth but is usually assumed to be surficial material.
Podiform	06	Mineralization in a lenticular or rodlike shape with either diffuse or sharp boundaries. May vary from a few centimetres to tens of metres in size.
Layered	07	Mineralization within a tabular succession with different components of igneous, sedimentary or metamorphic rocks which can be identified by mineralogical, textural or structural criteria.
Stratabound	08	General term for mineralization confined by physical or chemical controls to specific stratigraphic units. Such deposits can include veins, lenses, layers, etc. which may or may not be transgressive relative to the enclosing stratigraphy.
Stratiform	09	Specific term used for mineralization which is generally sheet-like in form and concordant to layering in enclosing rocks. Generally applied to deposits such as sedimentary exhalative (SEDEX) and volcanogenic massive sulphide (VMS) deposits.
Concordant	10	Mineralization which is structurally conformable with the major mineralogical textural or structural fabric of the hostrock.
Discordant	11	Mineral occurrences which are not parallel to the major mineralogical, textural or structural fabric of the hostrock.
Massive	12	Mineralization which constitutes a larger percentage of the rock volume than the matrix or gangue minerals.
Disseminated	13	Mineralization which occurs as scattered grains in the hostrock. There is no genetic connotation.
Shear	14	A tabular zone of rock that has been crushed and brecciated by many parallel fractures due to shear strain. Such an area is often mineralized by ore-forming solutions.
Unknown	**	Insufficient information to allow classification.

4.5 DEPOSIT CLASSIFICATION(*) (R07) (E07)

Deposit classification is a general interpretation of the origin of an occurrence based on the best available geological data. The database will accept up to *four* classifications for any given occurrence.

This field is mandatory and at least one classification must be assigned. The coding of deposit classification should be ranked, that is, provide the order in which the classifications are to be entered. The ranked order will be reflected in the printout.

A genetic description should be incorporated in the Capsule Geology and should indicate the geological evidence for the interpretations.

DEPOSIT CLASSIFICATION	CODE	MINFILE DEFINITION
Replacement	01	Deposits form by a solution and deposition mechanism by which new (ore) minerals grow and replace existing minerals. Usually used in the context of ore minerals replacing carbonate minerals or other soluble rock.
Magmatic	02	Mineralization is directly related to a crystallization process in magma, exclusive of pegmatites. The deposits may constitute the entire rock mass, form a compositional layer, or occur as disseminated minerals in an igneous rock.
Volcanogenic	03	Deposits form by processes directly related with volcanism. They are considered to have been produced through volcanic agencies and are demonstrably associated with volcanic phenomena.
Sedimentary	04	Stratiform and/or stratabound deposits form in clastic and carbonate sequences with no strong volcanic association.
Syngenetic	05	Deposits form contemporaneously with, and by essentially the same processes as, the enclosing rock.
Epigenetic	06	Deposits form later than the enclosing rock.
Hydrothermal	07	Deposits form by precipitation of ore and gangue minerals from heated metalliferous, hydrous fluids in fractures, faults, breccia openings or other spaces, by replacement or open-space filling. Fluid temperatures may range from 50 to 700 degrees Celsius, but are generally below 400 degrees Celsius.
Residual	08	Deposits form by mechanical concentration or chemical alteration in a zone of weathering (e.g., laterite, limonite, clay, etc.)
Porphyry	09	Mineralization is spatially and genetically related to igneous intrusions which are generally felsic but range widely in composition. The intrusions are epizonal and invariably porphyritic. Multiple intrusive events, dike swarms, and intrusive breccias are characteristic. Hosts for the intrusions can be any rock type, and range from unrelated country rocks to comagmatic extrusive equivalents. Mineralization and alteration form large zones that exhibit lateral and vertical zoning. Economic minerals occur throughout a large volume of rock as disseminated grains, in stockworks, and veins.
Igneous-contact	10	Mineralization is directly related to contact metamorphic or metasomatic alteration caused by the intrusion of igneous rock. Skarn may be considered a more specific division of this category.
Skarn	11	Deposits are related to pyrometasomatic, contact metasomatic, and igneous metamorphic processes. Skarn protoliths are generally carbonate rocks but volcanic, igneous and aluminosilicate sedimentary rocks can also be hosts. A wide variety of silicate minerals occur with iron oxides and/or sulphides and with a variety of other minerals of economic interest.
Pegmatite	12	Mineralization is directly associated with the formation of pegmatites. Pegmatites represent the last and most hydrous portion of a magma to crystallize and are found as irregular dikes, lenses, or veins, especially at the margins of batholiths. Their composition may be simple or complex and may include rare minerals rich in such elements as lithium, boron, fluorine, niobium, tantalum, uranium, and rare earths.
Placer	13	Deposits form in unconsolidated surficial material as a result of mechanical, chemical, or residual weathering processes.
Evaporite	14	Deposits form by the deposition of soluble components caused generally by evaporation in salinas (salt lakes) and sabkhas (low-lying salt flats) and by precipitation from subsurface brines in both marginal marine and inland desert basins. Principal ore minerals include anhydrite, halite, gypsum, sodium sulphate, potash, and others.
Exhalative	15	Deposits form from the issuance of volcanic, sedimentary or igneous derived fluids onto or very close to the sea floor.
Diatreme	16	Mineralization occurs within, or controlled by, a breccia-filled volcanic pipe formed by gaseous explosion (e.g., kimberlite).
Epithermal	17	Deposits form at high structural levels, at some distance from intrusions commonly in volcanic terranes. Mineralization occurs at surface to a maximum depth of approximately 1000 metres at temperatures generally less than 285 degrees Celsius. Veins are the most common ore host but breccia zones, stockworks, and fine grained bedding replacement zones also occur. Ore and associated minerals are deposited dominantly as open-space filling with banded, crustiform, vuggy, drusy, colloform, and cockscomb textures. Repeated cycles of mineral deposition are evident.
Mesothermal	18	Deposits form at considerable depth (1 to 5 kilometres) from tectonically driven, large scale, deeply circulating fluid systems in the temperature range of 200 to 300 degrees Celsius. They are structurally controlled, multiple, massive to ribboned vein systems with considerable lateral and vertical extent, predominantly in island arc and sedimentary rocks, and remnant slices of oceanic material.
Fossil Fuel	19	This term identifies any hydrocarbon that may be used for fuel. Includes, but is not limited to, petroleum, natural gas, coal, peat, and oil shale.
Metamorphic	20	Minerals develop by an isochemical process when no introduction of material from an external source takes place (e. g., kyanite, garnet, etc.).

Industrial Mineral	21	Industrial minerals, including stone and rocks, may be defined as those naturally occurring materials used to build structures or supply products that are useful to an industrialized society. Since industrial minerals exclude the ores of metals, they have been called the "nonmetallics". Gems and art objects are valuable for their intrinsic properties, but because they are not used in the sense of structures or products, they are not included. Industrial-grade diamonds and semiprecious minerals, however, are useful to industry because of their hardness and are included under abrasives. Listed below are commodities which are considered by MINFILE to be Industrial Minerals. Agate Aggregate Alunite Amber Amethyst Andalusite Anhydrite Apatite Argillite Arsenic Asbestos Barite Bentonite Beryl Beryllium Bitumen Building Stone Celestite Ceramic Clay Chromium Chrysotile Clay Corundum Diamond Diatomite Dimension Stone Dolomite Evaporites Expanding Shale Feldspar Fireclay Flagstone Fluorite Fullers Earth Garnet Gemstones Granite Graphite Gravel Gypsum Hotspring Hydromagnesite Iron Jade/Nephrite Kaolinite Kyanite Limestone Magnesite Magnesium Magnesium Sulphate Magnetite Manganese Marble Marl Mica Nepheline Syenite Ochre Olivine Opal Peat Perlite Phosphate Phosphorus Potash Potassium Potassium Nitrate Pozzolan Pumice Pyrophyllite Railroad Ballast Rhodonite Ruby Sand Sandstone Sericite Shale Silica Sillimanite Slate Soapstone Sodalite Sodium Sodium Carbonate Sodium Chloride Sodium Sulphate Sulphur Talc Titanium Travertine Tremolite Vermiculite Volcanic Ash Volcanic Glass Wollastonite Zeolite Zirconium
Unknown	**	There is insufficient information to define a deposit classification.

4.6 DEPOSIT TYPE (R30) (E30)

Deposit types are based on the *British Columbia Mineral Deposit Profiles* of the Geological Survey Branch. The Deposit type is an attempt to define a deposit based on its characteristics and includes/ implies an explanation of these characteristics in terms of geological processes. The database will accept up to *four* Deposit types for any given occurrence. See ***Appendix XIV*** for a list of all valid Deposit types.

This field is optional since there is often not enough information to define many occurrences as a specific deposit type. The coding of deposit type is ranked, using the most important type as the first ranked. The ranked order will be reflected in the printout.

A thorough deposit description should be incorporated in the Capsule Geology and should indicate the geological evidence for any and all interpretations.

4.7 AGE OF MINERALIZATION (R24) (E24)

The geologic age of the mineralization is indicated with an appropriate era, period or epoch. A complete listing of acceptable codes is provided in ***Appendix V***, Stratigraphic Age Codes. This is an optional field and should be used only if substantial evidence supports the data. This evidence must be stated and referenced in the Structural and Age Comment field and in the Capsule Geology. If the age of mineralization is known then the Isotopic age and Material Dated fields should also be filled in.

4.8 ISOTOPIC AGE (of mineralization) (R22)

This is a twenty-character, free-format field for the age of mineralization in millions (Ma) or billions (Ga) of years. Associated age dating errors should be included (e.g., 48.7 +/- 1.2 Ma). The Structural and Age Comment field must identify the reference used.

PDF version or *JPG*

References:
Okulitch, A.V. (1999): Geological Time Chart 1999, Geological Survey of Canada, Open File 3040
Grant, Brian (2003): Geoscience Reporting Guidelines

4.9 MATERIAL DATED (R22)

This is a thirty-character, free-format field to identify the actual material(s) used in the dating procedure (e.g., biotite, hornblende, fossil, etc.). The information is used to support the Isotopic Age field.

4.10 DATING METHOD (R22) (E22)

The dating method used must be identified for information entered in the Isotopic Age field.

Valid dating methods are listed in the adjacent table:

CODE	DATING METHOD
01	Lead/Lead
02	Rubidium/ Strontium
03	Fossil
04	Carbon 14
05	Uranium/ Thorium
06	Potassium/ Argon
07	Zircon
08	Fission Track
09	Whole Rock
10	Uranium/Lead
11	Argon/Argon
**	Unknown

4.11 DEPOSIT CONFIGURATION (E01)

Three optional fields are available to identify the shape, structural character and size of a mineral occurrence. These fields are usually reserved for those occurrences which have received sufficient exploration and development to have outlined a deposit.

4.11.1 SHAPE OF DEPOSIT (R06) (E06): An appropriate description of the shape of the deposit is selected from the list below. The field is used only if sufficient information is available to identify the shape. The shape should reflect gross dimensions and discount minor irregularities. The coding geologist should identify the shape of the mass of the ore minerals present and not just the host setting. For example, mineralization within a vein or fault may be cylindrical or bladed and not necessarily tabular.

Descriptions of the shape of a deposit are defined as follows:

Regular - The deposit is regular in shape and is approximately the same dimension in all directions. Shapes range from spheroidal to tetrahedral;

Tabular - The deposit has two long dimensions and one short dimension. This would include veins, sills and dikes, etc.;

Cylindrical - The deposit has one long and two short dimensions which are approximately equal. This would include pipes, ore shoots, etc.;

Bladed - The deposit has one long, one medium and one short dimension. Many deposits hosted by shear/fault zones or dikes will belong to this category;

Irregular - The deposit has no discernible regularity of form.

4.11.2 SHAPE MODIFIER (R04) (E04): A structural modifier is used to support the data in the deposit shape field. This field cannot be used unless deposit shape is identified. The database will accept up to *two* modifiers.

SHAPE MODIFIER	CODE
Folded	1
Faulted	2
Fractured	3
Sheared	4
Other (*specify in comment field*)	5
Unknown	*

4.11.3 DEPOSIT DIMENSION (E01): The deposit dimensions are defined in metres, in a sequence of maximum to minimum dimensions (Example: 376 x 230 x 4). Each of the three dimension fields will accept up to four digits.

4.12 ATTITUDE (E01)

Specific directional measurements may be entered which are pertinent to understanding the orientation and/or setting of a mineral occurrence. One measurement for each of strike/dip and trend/plunge may be entered per occurrence.

Strike - The strike direction, as measured in the field, may be entered as a three-digit number from 001 to 360 degrees. Magnetic bearings should be converted to azimuth. Leading zeros should be included in the coding.

Dip - The dip, from horizontal to vertical, may be entered as two digits from 01 to 90 degrees. Dip should be further defined using a directional indicator of N, S, E or W for the four major compass directions. (Dip is perpendicular to strike.)

Trend - The azimuth of the trend, as measured in the field, may be entered as a three-digit number from 001 to 360 degrees. Leading zeros should be included.

Plunge - Plunge, from horizontal to vertical, may be entered as two digits from 01 to 90 degrees. (Plunge is in the direction of structural trend.)

4.13 COMMENTS - STRUCTURAL AND AGE (C05)

Three 70-character lines of text may be added in the comment field to clarify structural or age dating information. If age dating information is included then the reference should be stated here. Also, when dimensions and attitude are given, the specific ore body that these refer to should be identified.

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5. HOSTROCK

5.1 DOMINANT HOSTROCK(*) (R03) (E03)

This is a mandatory field identifying the most significant hostrock type. The hostrock is normally defined as the type of rock in which the mineralization occurs. Only *one* dominant hostrock is accepted by the system.

CODE	HOSTROCK TYPE
1	Sedimentary
2	Plutonic
3	Volcanic
4	Metasedimentary
5	Metaplutonic
6	Metavolcanic
7	Metamorphic
*	Unknown

5.2 FORMAL/INFORMAL HOST(*) (R23) (E23)

Each MINFILE occurrence requires at least one FORMAL or INFORMAL HOSTROCK. Both categories may be entered for any given occurrence; the system will accept a maximum of *two* FORMAL (groups and formations) and *two* INFORMAL (plutonic, metamorphic, etc.) hostrocks. The HOST units are entered into the database using the Group, Formation, Igneous-Metamorphic and Informal host names in ***Appendix IV***. New names and their corresponding codes will be added to the master table periodically as required. The hostrock name(s) must be written out in full on the coding card.

FORMAL hostrocks are those with an officially established Group, Formation, or other stratigraphic name. INFORMAL hostrocks include formal names for igneous and metamorphic units as well as informal names or general terms which are not part of the stratigraphic nomenclature (e.g., plateau basalt).

Group and Formation names are entered in the FORMAL HOST category. Informal, igneous, or metamorphic units must be entered in the INFORMAL HOST category.

It is imperative that both the Group and corresponding Formation are identified. If an occurrence is hosted by the Telkwa Formation, the coding must identify it as part of the Hazelton Group. UNNAMED/ UNKNOWN may be used in either category. If a Group or Formation is known but the corresponding Formation or Group is not identified then UNDEFINED GROUP or UNDEFINED FORMATION should be used to maintain data relations in the hostrock field.

In the MINFILE system, a stratigraphic unit identified as a member is assigned a code in the Formation category. Rock units identified as a Series or Supergroup are assigned codes in the Group category. The formal/informal host(s) along with its stratigraphic age(s) must be included in the Capsule Geology description.

5.3 STRATIGRAPHIC AGE(*) (R23)(E24)

The stratigraphic age is a mandatory field identifying the geological age of the hostrock in terms of era, period or epoch. Appropriate ages are the same as for "Age of Mineralization" listed in ***Appendix V***. Both FORMAL and INFORMAL HOST categories must have relevant ages.

Where only a stratigraphic age is identified it is not necessary to complete the MATERIAL DATED and the DATING METHOD fields. The most specific age information available should be used e.g., Hazelton Group, Mount Dilworth Formation date should be Lower Jurassic even though the Hazelton Group is Upper Triassic to Middle Jurassic in age.

5.4 ISOTOPIC AGE (of Hostrocks) (R23)

Isotopic Age is a 20-character, free-format field for a specific hostrock age, quoted in millions (Ma) or billions (Ga) of years. Associated age dating errors should be included (e.g., 48.7 Ma +/- 1.2 Ma). A Reference should be included in the Hostrock Comment field. The stratigraphic age and the isotopic age must correspond.

PDF version or *JPG*

References:
Okulitch, A.V. (1999): Geological Time Chart 1999, Geological Survey of Canada, Open File 3040
Grant, Brian (2003): Geoscience Reporting Guidelines

5.5 MATERIAL DATED (R23)

When an ISOTOPIC age is given, the material used in the dating procedure must be identified. This is a 30-character, free-format field, listing material(s) used in the age determination (e.g., biotite, zircon, fossil, etc.).

5.6 DATING METHOD (R23) (E22)

The dating method used to determine the ISOTOPIC age must be identified. Refer to the Dating Method table located within the Mineral Occurrence section for appropriate dating methods (*page 18*).

5.7 ROCK TYPE/LITHOLOGY(*) (R25) (E25) (E26)

At least one Rock Type/Lithology must be entered for each occurrence. A total of ten different rock types and up to three modifiers for each rock type may be identified for each occurrence. ***Appendix III*** is a listing of current rock names and modifiers. This table will be updated periodically as required. **The rock types that host the significant mineralization should be listed in their order of importance** and should correspond with the Dominant Hostrock category. Other lithologies identified should correspond with the FORMAL and INFORMAL hostrocks.

All rock types plus modifiers identified should be written out in full in the lithology field on the coding card. Care should be taken not to duplicate rock types by using synonyms (e.g., diabase dike and diorite dike). The Rock Type(s)/Lithologies must be included in the Capsule Geology description.

Example:

MODIFIER SEARCH CODE(S)	*ROCK TYPE SEARCH CODE*	*ROCK TYPE/LITHOLOGY*
	BSLT	*Basalt*
ALKL	*BSLT*	*Alkali Basalt*
QRTZ FLDP	*PRPR*	*Quartz Feldspar Porphyry*

5.8 COMMENTS - HOST ROCK (C06)

Two lines of text may be added to the comment field to clarify hostrock or age dating information.

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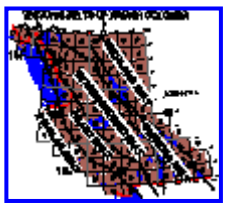
6. GEOLOGICAL SETTING

6.1 TECTONIC BELTS(*) (R12) (E12)

Tectonic belt is a mandatory field and only *one* may be input for any given occurrence. The Province of British Columbia contains five distinct tectonic belts listed in the adjacent table and the figure below (*click to enlarge*):



Descriptions of Tectonic Belts can be found at: Cordilleran Geoscience

TECTONIC BELT	CODE
Insular	IN
Coast	CC
Intermontane	IM
Omineca	OM
Foreland	EA
Unknown	**

6.2 TERRANE(*) (R13) (E13)

A number of lithotectonic terranes have been identified in the Cordillera. Each terrane preserves a geological record different from those of its neighbours or from rocks deposited on or adjacent to cratonic North America. Terrane boundaries are discontinuities, generally major faults, across which the geological record changes abruptly. Many terranes are displaced in the sense that their original paleogeographic positions relative to the North American Craton are uncertain.

Thirty-nine terranes or equivalents have been identified within British Columbia for the requirements of the MINFILE database and these are listed in ***Appendix VI***. The database will accept up to *two* terranes for any given occurrence.

For terranes use the recent compilation from J.O Wheeler et. al. (Wheeler, J.O., Brookfield, A.J., Gabrielse, H., Monger, J.W.H., Tipper, H.W. and Woodsworth, G.J. (comp.), 1991: Terrane Map of the Canadian Cordillera; *Geological Survey of Canada*, Map 1713A, scale 1:2 000 000). A comprehensive description of each terrane from the previous compilation by J.O Wheeler et. al. is also included in ***Appendix VI***. For a more detailed description refer to Monger, J.W.H. & Berg, H.C. Part B of U.S.G.S. Open File Report 84-523 and G.S.C. Preliminary Manuscript Map "Cordilleran Orogen of Canada" prepared for DNAG Volume G6.

For information on tectonic assemblages refer to Wheeler, J.O. and McFeely, P. (comp.), 1991: Tectonic Assemblage Map of the Canadian Cordillera and adjacent parts of the United States of America; *Geological Survey of Canada*, Map 1712A, scale 1:2 000 000.

NOTE: See Figure 3.

6.3 PHYSIOGRAPHIC AREA (R14) (E14)

The Province of British Columbia has been divided into physiographic areas according to distinctive physical characteristics, reflecting in part the gross underlying geological character (e.g., plateaus, trenches, mountain ranges, etc.) The boundaries of each physiographic area are derived from GSC Map 1701A "Physiographic Map of the Canadian Cordillera", by Mathews, W.H. (1986).

Only *one* physiographic area can be input for each occurrence. The physiographic areas are listed in the following table:

PHYSIOGRAPHIC AREA	CODE
Adams Plateau	ADPT
Alberta Plateau	ALPT
Alsek Ranges	ASRG
Boundary Ranges	BNRG
Bowron Trench	BRTR
Cariboo Mountains	CBMT
Cariboo Plateau	CBPT
Cascade Mountains	CCMT
Cassiar Mountains	CSMT
Chilcotin Plateau	CHPT
Continental Ranges	CNRG
Dease Plateau	DSPT
Estevan Strandflat	ESSF
Fairweather Ranges	FWRG
Fiord Ranges (Northern)	NFRG
Fiord Ranges (Southern)	SFRG
Fraser Lowland	FRLL
Georgia Depression	GEDP
Glenorm Trench	GOTR
Hart Ranges	HRRG
Hazelton Ranges	HZRG
Hecate Depression	HCDP
Hyland Highland	HYHL
Icefield Ranges	IFRG
Iskut Trench	IKTR
Kitimat Ranges	KTRG
Kitimat Trench	KTTR
Liard Lowland	LILL
Liard Ranges	LIRG
Manson Upland	MSUP
McGregor Plateau	MGPT
Milbanke Strandflat	MLSF
Monashee Mountains	MOMT
Muskwa Ranges	MKRG

PHYSIOGRAPHIC AREA	CODE
Nass Depression	NSDP
Nawhitti Lowland	NWLL
Nechako Lowland	NCLL
Nechako Plateau	NCPT
Nisutlin Plateau	NSPT
Northern Rocky Mountain Trench	NRMT
Okanagan Highland	OKHL
Omineca Mountains	OMMT
Pacific Ranges	PCRG
Pavillion Ranges	PVRG
Purcell Mountains	PUMT
Purcell Trench	PUTR
Queen Charlotte Lowland	QCLL
Queen Charlotte Ranges	QCRG
Quesnel Highland	QUHL
Rabbit Plateau	RBPT
Rocky Mountain Foothills (N)	RMFN
Rocky Mountain Foothills (S)	RMFS
Selkirk Mountain	SKMT
Shuswap Highland	SSHL
Skeena Ranges	SKRG
Southern Rocky Mountain Trench	SRMT
Spatsizi Plateau	SPPT
Tahtsa Range	THRG
Takla Trench	TKTR
Taku Plateau	TKPT
Tanzilla Plateau	TZPT
Teslin Plateau	TSPT
Teslin Trench	TSTR
Thompson Plateau	THPT
Vancouver Island Ranges	VIRG
Whitefish Range	WHRG
Unknown	****

NOTE: See Figure 4.

6.4 METAMORPHISM

6.4.1 TYPE (R15) (E15) - The type of metamorphism associated with the occurrence is identified. This is a mandatory field if the Relationship and/or Grade fields are used. *One* or *two* types may be entered if appropriate.

TYPE	CODE
Contact	1
Regional	2
Unknown	*

6.4.2 RELATIONSHIP (R17) (E17) - The age-relationship of metamorphism to hostrock mineralization is indicated here. Up to *three* categories may be selected if appropriate.

RELATIONSHIP	CODE
Pre-mineralization	1
Syn-mineralization	2
Post-mineralization	3
Unknown	*

6.4.3 METAMORPHIC GRADE (R16) (E16) - The database will accept a maximum of *two* metamorphic grades and/or coal ranks from the following list:

GRADE/RANK	CODE
Zeolite	ZL
Greenschist	GS
Amphibolite	AM
Hornfels	HF
Granulite	GL
Blueschist	BS
Eclogite	EC

GRADE/RANK	CODE
Anthracite	AN
Semi-Anthracite	SA
Low-Volatile Bituminous	LV
High-Volatile Bituminous	HV
Medium-Volatile Bituminous	MV
Sub- Bituminous	SB
Lignite	LI
Unknown	**

6.5 COMMENT - GEOLOGICAL SETTING (C07)

One 70-character line of text is available to give a brief but pertinent comment on the overall geological setting of a given occurrence.

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7. CAPSULE GEOLOGY(*) (C08)

This is a mandatory, free-form (70-character lines), detailed deposit description incorporating all the data in the coded fields and including more specific information on the geological setting and the controls of economic mineralization. Essentially there is *no limit* to the length of the description but one should consider that MINFILE is intended as a summary of geological characteristics, not a definitive thesis on any given occurrence. A five-space indent begins every paragraph. Tables should have lines before and after to signal a change to fixed font when data is exported to the CD-ROM or Web.

As a general rule the following types of information should be included in every capsule geology:

- Brief pertinent comments on location
- Brief comments on work history (*see Section 11, Work History*).
- Hostrock Group(s), Formation(s), age, lithology and structure (regional and local geology for important occurrences and only local geology for minor showings).
- All ore, gangue and alteration mineralogy.
- Comments on the genetic type and significant characteristics of the deposit.
- General ore controls.
- Wherever available, include average assay values, gross production figures, and/or inventory figures.
- Descriptions are to be in proper sentences, not in point form and no abbreviations please!

Refer to ***Appendix X*** for further information.

The coder must insure that all significant data included in the data fields (particularly for Formal/Informal Host, Rock Types, Minerals, Commodities and the Deposit Character and Classification) are included and discussed within the text of the Capsule Geology. Likewise, all geological data appearing in the text must be included in the appropriate data fields.

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8. BIBLIOGRAPHY(*) (C09)

The MINFILE bibliography is intended to identify all significant references for a deposit. In general, references are to be quoted in summary format, identifying publication, year and page. References of particular value in identifying or describing a deposit should be marked with an asterisk (*).

Standard referencing techniques should be used for publications or references which are not included in the list of abbreviations below or which do not fit in a summary format. When listing the appropriate references, the coding geologist should attempt to list them in the same order as outlined in the listing of abbreviated codes. Use *unlimited*, 70-character lines to list references. If more than one line is required for a reference or list of similar references, then indent the second line and subsequent lines by 3 characters.

Example of a standard reference:

Price, R.A. (1962): Fernie Map-area, East Half, Alberta and British Columbia, Geological Survey of Canada, Paper 61-24.

The corresponding MINFILE abbreviated reference is:

"GSC P 61-24"

"Property File" alone is not identified as a reference. The specific document used should be identified as the reference source and should be listed under the heading of "EMPR PF" which indicates that this item is found within the Ministry's Property File. Each item in the list is separated by a semicolon.

For example:

EMPR PF (Total Energold Ltd., Annual Report, 1989; Cassiar Mining Corp., maps and notes, 1987).

The following formats should be followed in coding references:

- List references in the same order as the listing of abbreviated codes.
- All reference abbreviations must be in upper case letters.
- All older versions of Ministry names should appear as "EMPR".

- Two or more similar references should be joined, e.g., GSC MEM 217, p. 118 and GSC MEM 110 should be: GSC MEM 110; 217, p. 118.
- Order of references should be lowest number to highest or earliest date to present.
- Lists of references are separated by a semicolon (;) except for EMPR Assessment Reports which are separated by commas.
- An asterisk (*) should identify important references and should be placed before the number, year or name not at the beginning, e.g., EMPR ASS RPT 10172, *12470, 13131 and, EMPR AR *1901-13; 1914-98; *1936-45 GSC P 31; *45, p. 10.
- Property File references contain information in brackets. e.g., EMPR PF (Smith, B.J. (1939).....).
- Page numbers should follow the main reference separated by a comma e.g., EMPR OF 1987, p. 35 and GSC BULL, pp. 35-107.
- The following exceptions use hyphens rather than page designations due to the volume of references, e.g., EMPR EXPL 1977-33, EMPR GEM 1981-252, and EMPR AR 1900-122; 1901-383.

A listing of abbreviated codes for selected publications commonly referred to in MINFILE is as follows:

EMPR (Ministry of Energy, Mines and Petroleum Resources) (1*)
EI (Ministry of Employment and Investment) used between April 1996 and February 1998
EM (Ministry of Energy and Mines) used for publications after February 1998

AEROMAG MAP	Aeromagnetic Map
AR	Minister of Mines Annual Report (1874-1968) (1969-1979 includes metal production tables)
ASS RPT	Assessment Report (fiche and hard copy reports in regional offices and Victoria Library)
BC METAL	File containing production data from Land Management and Policy Branch *(now Minerals, Oil and Gas Branch, Resource Development Division)*
BULL	Bulletin
COMM FILE	Commodity File
ENG INSP	Engineering and Inspection Branch (Abandoned Mines Plans Fiche and MDRP Reports) - *see LMP*
EXPL	Exploration in British Columbia (1975-1997); Exploration and Mining in British Columbia (1998-current)
EXPLORE BC	EXPLORE BC Program (1994-1996) (files: GMIP - Grassroots Mineral Incentive Program; MEIP - Mineral Exploration Incentive Program; AMEP - Accelerated Mine Exploration Program)
FIELDWORK	Fieldwork, year, page
GEM	Geology, Exploration and Mining in British Columbia (1969-74)
GEOLOGY	Geology in British Columbia
GEOS MAP	Geoscience Map
IND MIN FILE	Industrial Minerals File (*currently with Dan Hora*)
INDEX	Index to Minister of Mines Annual Reports *(e.g. INDEX 3 (to 1953); INDEX 4 (1954 to 1964)*)
INF CIRC	Information Circular
IR	Information Report (Summary of Operations) (1980-1984)
LMP	Land Management and Policy Branch (Abandoned Mines Plans Fiche) - *formerly ENG INSP; now Mines Branch*
MAP	Map (see also AEROMAG MAP, GEOS MAP, MIN POT MAP, PRELIM MAP)
MDAP	Mine Development Assessment Process (available in Ministry library)
MEIP	Mineral Exploration Incentive Program (1978-1979)
MER	Mineral Exploration Review (see also Information Circulars circa 1983-1 to present)
MINING	Mining in British Columbia (1975-1980; 1981-1985; 1986-1987; 1988)
MIN POT MAP	Mineral Potential Map
MIN STATS	B.C. Mineral Statistics Annual Summary Tables (1985-1990); B.C. Mineral Output (Statistical Output) (1990 to present)
MR MAP	Mineral Reference Map (showing surveyed claims)
NGR	National Geochemical Reconnaisance (1978 and before)
OF	Open File
P	Paper
PAP	Prospectors Assistance Program (*EXPLORE BC Program (1994-1996*))
PERS COMM	Personal Communication or Office Memos
PF	Property File (located in Victoria Library)
PRELIM MAP	Preliminary Map
RGS	Regional Geochemical Survey (1978-current)

EMR (Energy, Mines and Resources Canada, *now Natural Resources Canada* **NRCan**) (2*)

AEROMAG MAP	Aeromagnetic Map
MIN BULL MR #	Mineral Bulletin MR # (*e.g. 166; 181 (1976, 1977, 1978); 198 (1983); 223 (1989)*)
MP COMM FILE	Commodity File
MP CORPFILE	Corporation File (*similar to our Property Files, but located in Ottawa*)
MP RESFILE	Reserves File (*located in Ottawa*)
MRI	Mineral Policy Sector Internal Report *(e.g. MRI 80/7 (1980)*)

GSC (Geological Survey of Canada) (3*)

ANN RPT	Annual Report
BULL	Bulletin
CAT	Catalogues
EC GEOL	Economic Geology Report
GB	Guidebooks
MAP	Map (examples of types: 12-1975, 1978-1, 1203A, 4596G)
MB	Museum Bulletins
MEM	Memoir
MISC RPT	Miscellaneous Reports
OF	Open File
P	Paper
PROG RPT	Progress Report
SUM RPT	Summary Report

CANMET (*formerly Mines Branch*) (4*)

IR	Investigation Report
RPT	Publications
TB	Technical Bulletin

OTHERS

AAPG	American Association of Petroleum Geologists Bulletin
AEG	The Association of Exploration Geochemists
Air Photo	Air Photograph
ARMS	Aggregate Resource Management System (Ministry of Transportation and Highways)
CAN ROCKHOUND	The Canadian Rockhound; includes Internet Magazine (http://www.canadianrockhound.com/)
CIM	Canadian Institute of Mining
CJES	Canadian Journal of Earth Sciences
CMH	Canadian Mines Handbook
CMJ	Canadian Mining Journal
CSPG	Canadian Society of Petroleum Geologist Bulletin
DIAND	Department of Indian and Northern Affairs (5*)
ECON GEOL	Economic Geology and Bulletin of the Society of Economic Geologists
EMG	Exploration and Mining Geology (Journal of the Geological Society of CIM)
EMJ	Engineering and Mining Journal
FIN POST	Financial Post
GAC	Geological Association of Canada
GCNL	George Cross News Letter
Geotech File	Geotechnical File for gravel pits (Ministry of Transportation and Highways)
GSA	Geological Society of America
IAEA	International Atomic Energy Agency
IPDM	International Prospector and Developer Magazine
JGE	Journal of Geochemical Exploration
MAC	Mining Association of Canada
MEG	Mineral Exploration Group (Vancouver)
MIN REV	Mining Review Magazine
MTH	Ministry of Transportation and Highways: District Pit or Provincial Pit (gravel pit numbers)
NAGMIN	North American Gold Mining Industry News
N MINER	Northern Miner (http://www.northernminer.com/)
N MINER MAG	Northern Miner Magazine
NW PROSP	Northwest Prospector Miners & Developers Bulletin
PERS COMM	Personal Communication
PR REL	Press Release
SMF	Statement of Material Facts
USGS	United States Geological Survey
VSE	Vancouver Stock Exchange
V STOCKWATCH	Vancouver Stockwatch
WIN	Western Investment News
W MINER	Western Miner and Oil Review Magazine
WWW	World Wide Web (Internet) (see Industry Web Links in MINFILE)

References are available from the following sources:

1*	**Ministry of Energy and Mines, Library Services**, PO Box 9321 Stn Prov Govt, Victoria BC V8W 9N3; Location 1st Flr. - 1810 Blanshard Street, Phone: (250) 952-0583; Fax: (250) 952-0581; Email: Jennifer.Lu@gov.bc.ca; WWW: http://www.em.gov.bc.ca/handpubs/library/. ***or*** **Crown Publications Inc**., 521 Fort Street, Victoria, B.C. V8W 1E7, Phone: (250) 386-4636; Fax: (604) 386-0221; WWW: **E-Mail: crown@pinc.com; WWW: http://www.em.gov.bc.ca/Mining/Geolsurv/Publications/Crown.htm.**
2*	**National Mineral Inventory (NMI)/CORPFILE, Natural Resources Canada**, Minerals and Metals Sector, Economic, Financial and Social Analysis Branch, 580 Booth Street, 9th Floor, Room C3-1, Ottawa, Ontario, K1A 0E4, Contacts: Louis Arseneau, Phone: (613) 995-0959, e-mail: larsenea@NRCan.gc.ca *or* Andre Lemieux, Phone: (613) 992 2709, e-mail: alemieux@NRCan.gc.ca; WWW: http://www.nrcan.gc.ca/mms/ms-e.htm. (***Note: MINSYS - computer database is no longer active; status of NMI and CORPFILE is unknown.***)
3*	**Earth Sciences Information Centre (ESIC), Geological Survey of Canada** (GSC), 601 Booth Street, Ottawa, Ontario, K1A 0E8; **Bookstore**: Phone (613) 995-4342, Fax (613) 943-0646, Email: gsc_bookstore@gsc.NRCan.gc.ca; Library: Phone: (613) 996-3919, Fax: (613) 943-8742, Email: library@gsc.NRCan.gc.ca; **Interlibrary Loan Service**: Phone: (613) 996-1604, Fax: (613) 943-8742, Email: ill@gsc.NRCan.gc.ca; GSC WWW: http://www.NRCan.gc.ca/gsc/gschp.html; ESIC WWW: http://www.NRCan.gc.ca/ess/esic/esic_e.html. ***or*** **Geoscience Research Library, Geological Survey of Canada**, 1500-605 Robson St., Vancouver, BC, V6B 5J3, Phone: (604) 666-3812, Fax: (604) 666-7186, Email: libvan@gsc.NRCan.gc.ca; **Maps and Publication Sales**: 101-605 Robson St., Phone: (604) 666-0271, Fax: 666-1337; **Reception**: 101-605 Robson St., Phone: (604) 666-0529, Fax: 666-1124; WWW: http://www.NRCan.gc.ca/gsc/.
4*	**Minerals and Metals Sector, CANMET** - Mineral Technology Branch, 555 Booth St., Ottawa, Ontario, K1A 0G1, Phone: (613) 995-4029; WWW: http://www.nrcan.gc.ca/mms (***Note: this contact is unconfirmed***.)
5*	**Exploration and Geological Services Division, Indian and Northern Affairs**, 345-300 Main Street, Whitehorse, YT, Y1A 2B5; Contacts: Grant Abbott, Chief Geologist, Phone: (403) 667-8510, Fax: (403) 393-6262, Email: abbottg@inac.gc.ca; Robert Deklerk, Minfile Geologist, Phone: (403) 667-3205, Fax: (403) 667-3198, Email: deklerkr@inac.gc.ca; WWW: http://www.geology.gov.yk.ca/

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9. INVENTORY

9.1 INVENTORY DATA

The MINFILE coding form includes space for information on deposit economics or mineral inventory.

Several parameters affect the qualitative and quantitative reporting of the economic potential of a mineral occurrence. Some of these are the variable reliability of reporting, differences in interpretation of terms, and changing economic conditions.

The **Reserve** category is used only for an inventory in an operating mine or a mine near production. Ore reserves are reported as *Proven*, *Probable* and *Possible*. The **Resource** category is used for all other inventories. Resources are reported as *Measured*, *Indicated* and *Inferred*. A combination of categories is reported as *Combined*. If the category is not known then *Unclassified* is used. Sample data can be entered using the *Assay/Analysis* category. The reserves/resources are reported in tonnes with the grade of commodities.

Reserves and resources are not calculated by *Ministry of Energy, Mines and Petroleum Resources* personnel but are quoted from referenced industry sources and/or publications. Due to differences in identifying categories in the data sources, Ministry personnel may occasionally have to interpret which category the figures are placed into. The reader should refer to the original data for detailed information.

In general, the inventory is identified by occurrence, zone name and year. There may be an *unlimited* number of ore zones per occurrence. In addition, each zone name may have inventory for each category. Each ore zone can have a maximum of *two* inventory calculations per year, per category (e.g., Calculation *A* & *B*). This allows for changes in calculations due to grade-tonnage relationships; calculation *A* may be high-grade low tonnage while calculation *B* may reflect a low-grade tonnage. Generally, only data for the most recent year is maintained in the database. Older data is erased when data for a new year is input. Only one calculation may be used per ore zone in the ASSAY/ANALYSIS category. The ASSAY/ANALYSIS data cannot coexist with reserves information for any given ore zone name.

NOTE: Conversion factors are included in Appendix VII.

9.2 ZONE NAME(*) (R26-28) (E27)

This is the name of the distinct unit or ore zone of a deposit for which a calculation is made. Several zones may be associated with each deposit and may include categories in both the *Reserve* and *Resource* fields. If a deposit has only one ore zone or does not distinguish between ore zones, then the name of the deposit is used for the zone name.

When using the ASSAY/ANALYSIS category, the ZONE NAME should be chosen from the generic name list in ***Appendix XV***.

9.3 INVENTORY CATEGORY(*) (R26,R28) (E29)

9.3.1 RESERVE: The *Reserve* category is used only for a mineral and/or substance inventory in an operating mine or mine near production. Sufficient information is available to form the basis of a preliminary mine production plan. Factors that affect ore reserve estimates are geological, economic, mining, metallurgical, marketing, environmental, social and governmental conditions. Ore reserves are reported as ***Proven, Probable*** and ***Possible***.

Proven (PV): Ore reserves are stated in terms of mineable tonnes and grades in which the identified substance has been defined using sufficient metallurgical, mine method, geoscientific, infrastructure, operating and capital cost data. Other applicable reserve adjectives may include measured recoverable, diluted, mineable, ore, or in situ.

Probable (PB): Ore reserves are stated in terms of mineable tonnes and grades where sufficient information is available about the thickness, grade, grade distribution, mineable shape and extent of the deposit. Continuity of mineralization should be clearly established. Other applicable reserve adjectives may include measured geological, drill indicated, or indicated.

Possible (PS): Ore reserves are stated in terms of mineable tonnes and grades computed on the basis of limited geoscientific data, but with a reasonable understanding of the distribution and correlation of the substance in relation to this data. Other applicable reserve adjectives may include inferred, geological, mineral inventory, or potential.

9.3.2 RESOURCE: The *Resource* category is used for a mineral and/or substance inventory other than an operating mine. Valuable or useful material is quantified on the basis of geoscientific data and expected economic merit. Mine, metallurgical, price and cost data are not necessarily available. In reporting a resource, there is an implication that there are reasonable prospects for eventual economic exploitation. Resources are reported as ***Measured***, ***Indicated*** and ***Inferred***.

Measured (MG): Sufficient information is available about the thickness, grade, distribution, mineable shape and extent of the deposit to give defined grade and tonnage figures. Continuity of mineralization should be clearly established. Other applicable resource adjectives may include proven, measured recoverable, diluted, mineable, or in situ.

Indicated (IN): Tonnage and grade are computed partly from detailed sampling procedures and partly from projection for a measurable distance, based on geoscientific data. Sampling procedures are too widely spaced to ensure continuity but close enough to give a reasonable indication of continuity. Other applicable resource adjectives may include probable, measured geological, or drill indicated.

Inferred (IF): An estimate of tonnage and grade computed from geoscientific data or other sampling procedures, but before testing and sampling information is sufficient to allow a more reliable and systematic estimation. Other applicable resource adjectives may include possible, geological, mineral inventory, or potential.

9.3.3 OTHER: These are to be used only if the data cannot be categorized as Reserves or

Resources.

Combined (CB): This designation is used when an inventory figure is reported to be a combination of categories (e.g.) PV + PB (Proven and Probable) reserves **or** MG + IF (Measured and Inferred) resources. It can be applied to both the **Reserve** and **Resource** categories.

Unclassified (UN): This designation indicates that the criteria for qualifying the inventory figures are not available. The Unclassified category can be applied to both the **Reserve** and **Resource** categories. For example, a tonnage figure is given with grades of commodities, but the category is not stated.

Assay/Analysis (BA): Samples of one or more of the various sample types listed below have been collected and analyzed. This category is reserved for deposits which have no reported inventory figures. The value quoted should normally be representative of a group of samples and is not necessarily the assay containing the highest values. If available the sample size should be identified in the comment field. The 'SAMPLE TYPE' must be identified when using this category.

Unknown (**): This designation indicates that not enough information is available to determine the category.

9.4 YEAR(*) (R26,R27)

This is the year the inventory figures were published and is mandatory information for any inventory data. If the inventory figures were calculated in any year prior to the official publication date, the source and year of the calculations should be identified in the comment field.

9.5 SAMPLE TYPE (R27) (E28)

When the Assay category is chosen, the sample type must be identified using one of the following:

CODE	SAMPLE TYPE AND DEFINITION
AUGR	Auger - a sample taken using and auger.
BULK	Bulk - a large volume sample collected from one or more sites for assay or metallurgical testing. It includes limited sampling or mining in initial production stages for plant site and operations testing.
CHIP	Chip - a large number of small chips or specimens collected over a specific area.
CHNL	Channel - a sample of all material collected from a channel of specific dimensions across a sample site.
DIAD	Drill Core - a split or other type of drill core sample.
GRAB	Grab - a single sample normally selected to represent either high or low grade material.
ROCK	Rock - this may be a chip, channel or grab sample which has been analyzed by standard geochemical techniques rather than assay techniques.
TRNC	Trench - a sample taken from a trench.
****	Unknown - This may only be used when the data is important and needs to be included but the sample type is not known.

9.6 QUANTITY(*) (R26)

Reserves or resources must be quoted in metric tonnes. General or approximate figures are only acceptable where no other information is available; this should be clearly explained in the comment field. This is not filled in for Assays.

9.7 COMMODITY/GRADE(*) (R28)

The inventory information can have data on up to *six* commodities. These should reflect only those commodities which can be recovered from a deposit. Minor or accessory commodities of economic interest can be identified in the commodities field of the Mineral Occurrence section.

Commodities are entered by selecting from the Commodities table (***see Appendix II***) followed by the grade (precious metals in grams per metric tonne, other commodities as per cent). Some industrial minerals may be quoted in kilograms. Commodities entered in the inventory data field, must first exist as commodities in the Mineral Occurrence section of the database. In many of the reports, the commodities are indicated by the standard two-letter, elemental chemical symbol or two-letter codes (***see Appendix II***); these are also used when searching for commodities.

9.8 COMMENTS - INVENTORY (C11)

This is a 70-character, free-format field to identify information on cutoff grades or other data pertinent to the final figures. *Unlimited* lines are allowed.

9.9 REFERENCE(*) (C12)

The source of the inventory figures is mandatory. Avoid using abbreviations to minimize confusion on the source of the reference. When necessary, an abbreviated format for the reference, similar to the bibliography, is acceptable. *One*, 70-character line is allowed.

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10. PRODUCTION

10.1 PRODUCTION DATA (R18a,b)

Historic production records are provided by the Land Management and Policy Branch of the Ministry of Energy, Mines and Petroleum Resources (now called Ministry of Energy & Mines). Reference should be made in the bibliography to the BC METAL number.

New production is entered using the MINFILE Number, followed by the production year. Information on either ore mined (in tonnes) or ore milled (in tonnes) must be entered. Commodity production should be entered with precious metals quoted in grams and base metals or other commodities quoted in kilograms. If there are no figures for tonnes milled the field may be left blank.

10.2 COMMENTS - PRODUCTION (C10)

This is a *single*, 66-character line of text available to clarify information reported in the production field for any given year. It should be used to indicate the reference source for new production figures not obtained from the Land Management and Policy Branch, or corrections to the reported figures. If there is no comment for a production year or years, it has originated from the Land Management and Policy Branch.

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11. WORK HISTORY

Note: This data is currently being collected as comments in Capsule Geology.

The work history is a compilation of all significant mining/exploration activity carried out on an occurrence. It requires a year, or range of years with associated work types and pertinent information on the owner/ operator or the results of the work. It is not necessary to include all work done, only those activities which have added significantly to the database for a given occurrence.

11.1 YEAR

This is the year or range of years of the work described.

11.2 WORK TYPE

This identifies the type of work carried out. There are plans to establish links between the MINFILE and ARIS (Assessment Report Information System) systems. Work type database codes used in the ARIS system are summarized in ***Appendix IX***. Listing all the work done is not required but all significant work, such as results and development of the occurrence, should be documented.

11.3 AMOUNT

This is a description to quantify the amount of work carried out. Examples of units of measure for each work type are identified in ***Appendix IX***. Drilling should include both the total number of holes and metres drilled.

11.4 OTHER COMMENTS

The operator/owner should be identified and other significant information concerning the work activity. If available, one should identify the person or persons supervising the surveys and the claims the work was carried out on within a large group, etc. It is important to keep material in the comment field as concise as possible. Do not write lengthy descriptions!

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12. EXPLORATION DATABASE

The Exploration section of the MINFILE/pc program was built for the use of the Regional Geology offices. It can also be used by anyone who has a copy of the MINFILE/pc V. 4.0 or higher program. However, the data is not maintained or distributed by the Geological Survey Branch. If interested in this section, refer to the Exploration Coding Manual and/or the MINFILE/pc User's Manual. A coding form for the Exploration Database is included in ***Appendix XII***.

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13. APPENDICES

Some of these Appendices are PDF (Portable Document Format) files, which can be viewed in either Netscape or Internet Explorer. Download the free Acrobat Reader software and install it before viewing PDF files. Use the print button on the Acrobat Reader toolbar to print from, NOT the Netscape or Internet Explorer toolbar.

Appendix	*Title*
I	Procedure for Deriving Mnemonic Mineral Codes
II	MINFILE Commodity Codes
III	MINFILE Mineral, Rock and Modifier Codes
IV	MINFILE Stratigraphic Host Codes
V	Stratigraphic Age Codes
VI	Terrane Codes, Descriptions and Legend Terranes and Codes Terrane Map Description Legend
VII	Conversion Factors
VIII	Glossary of Historic & Equivalent Mineral Names
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XI	Summary of Data Field Characteristics
XII	MINFILE Coding Forms MINFILE Coding Card ***PDF file*** (74K, 4 pages) MINFILE Quick Coding Card ***PDF file*** (17K, 2 pages) MINFILE Inventory Sheet ***PDF file*** (46K, 1 page) MINFILE Production Sheet ***PDF file*** (40K, 1 page) MINFILE Exploration Database ***PDF file*** (18K, 1 page)
XIII	Coder Names, Initials and NTS Areas
XIV	Deposit Types (Mineral Deposit Profiles)
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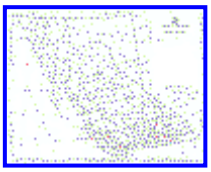
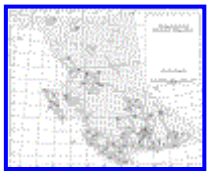
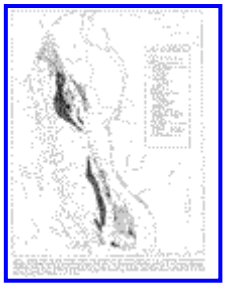


1. British Columbia Mining Divisions



2. British Columbia Mining Camps



3. Generalized Terrane Map of the Canadian Cordillera

4. Physiographic Map of the Canadian Cordillera

5. Geologic Time Scale, B.C. Geological Survey Branch (May 2003)

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Appendix XVI - Regions

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Appendix I - Procedure For Deriving Mnemonic Mineral Codes
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The following system, which has been implemented by various data systems and organizations, is used for deriving mnemonic mineral codes. The mnemonic code is derived by eliminating letters of the original term until only 4 remain. The ranking of letters in order of elimination is as follows:

1. A	15. D
2. E	16. C
3. I	17. M
4. O	18. F
5. U	19. G
6. W	20. P
7. H	21. K
8. Y	22. B
9. Double letters (delete one)	23. V
10. T	24. X
11. N	25. J
12. S	26. Q
13. R	27. Z
14. L	

1. The first letter of each word is retained.
2. Remove insignificant words, such as "the", "on", "a", "an", etc.
3. Only one letter of a double letter occurrence is deleted.
4. Deletion continues until the code word is reduced to 4 letters.
5. Words already smaller than the predetermined size carry blank notations to complete the code.
6. The word is entered on the left in the field and any blanks will be on the right side.
7. Some duplicates may appear; they must be arbitrarily changed by some central authority if system-wide uniqueness is to be maintained.

If a code does not exist in the system use the above rules to derive the mnemonic code and then enter the code in the appropriate section in both mnemonic code and full name. These will be approved and entered into the system by the MINFILE team.

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***Appendix II**: MINFILE Commodity Codes*.

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MINFILE Commodity Codes
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MINFILE Commodity Codes: *e19.dbf*

Commodity (sort)	Code
Agate	AE
Aggregate	AT
Aluminum	AL
Alunite	AI
Amber	AM
Amethyst	AY
Andalusite	AD
Andesite	AA
Anhydrite	AN
Antimony	SB
Apatite	AP
Argillite	AR
Arsenic	AS
Asbestos	AB
Barite	BA
Barium	BR
Bentonite	BN
Beryl	BY
Beryllium	BE
Bismuth	BI
Bitumen	BM
Building Stone	BS
Cadmium	CD
Celestite	CI
Ceramic Clay	CC
Cerium	CE
Cesium	CS
Chromium	CR
Chrysotile	CH
Clay	CY
Coal	CL
Cobalt	CO
Copper	CU
Corundum	CM
Diamond	DI
Diatomite	DE
Dimension Stone	DS
Dolomite	DO
Dysprosium	DY
Erbium	ER
Europium	EU
Evaporites	EV
Expanding Shale	ES
Feldspar	FD

Code (sort)	Commodity
AA	Andesite
AB	Asbestos
AD	Andalusite
AE	Agate
AG	Silver
AI	Alunite
AL	Aluminum
AM	Amber
AN	Anhydrite
AP	Apatite
AR	Argillite
AS	Arsenic
AT	Aggregate
AU	Gold
AY	Amethyst
BA	Barite
BE	Beryllium
BI	Bismuth
BM	Bitumen
BN	Bentonite
BR	Barium
BS	Building Stone
BY	Beryl
CC	Ceramic Clay
CD	Cadmium
CE	Cerium
CH	Chrysotile
CI	Celestite
CL	Coal
CM	Corundum
CO	Cobalt
CR	Chromium
CS	Cesium
CU	Copper
CY	Clay
DE	Diatomite
DI	Diamond
DO	Dolomite
DS	Dimension Stone
DY	Dysprosium
ER	Erbium
ES	Expanding Shale
EU	Europium
EV	Evaporites

Fireclay	FC
Flagstone	FS
Fluorite	FL
Fullers Earth	FR
Gadolinium	GD
Gallium	GA
Garnet	GN
Gemstones	GS
Germanium	GE
Gold	AU
Granite	GR
Graphite	GT
Gravel	GV
Gypsum	GY
Hafnium	HF
Hotspring	HS
Hydromagnesite	HM
Indium	IN
Iridium	IR
Iron	FE
Jade/Nephrite	JD
Kaolinite	KA
Kyanite	KY
Lanthanum	LA
Lead	PB
Limestone	LS
Lithium	LI
Lutetium	LU
Magnesite	MT
Magnesium	MG
Magnesium Sulphate	MS
Magnetite	MA
Manganese	MN
Marble	MB
Marl	MR
Mercury	HG
Mica	MI
Mineral/Rock Wool	MW
Molybdenum	MO
Neodymium	ND
Nepheline Syenite	NS
Nickel	NI
Niobium	NB
Ochre	OC
Olivine	OL
Opal	OP
Osmium	OS
Palladium	PD
Peat	PA
Perlite	PE
Phosphate	PP
Phosphorus	PH
Platinum	PT
Potash	PO
Potassium	KK
Potassium Nitrate	KN
Pozzolan	PZ
Praseodymium	PR
Pumice	PU
Pyrochlore	PY
Pyrophyllite	PL
Quartzite	QZ
Radioactive Material	RD
Radium	RA
Radon	RN
Railroad Ballast	RB
Rare Earths	RS
Rhenium	RE
Rhodium	RH

FC	Fireclay
FD	Feldspar
FE	Iron
FL	Fluorite
FR	Fullers Earth
FS	Flagstone
GA	Gallium
GD	Gadolinium
GE	Germanium
GN	Garnet
GR	Granite
GS	Gemstones
GT	Graphite
GV	Gravel
GY	Gypsum
HF	Hafnium
HG	Mercury
HM	Hydromagnesite
HS	Hotspring
IN	Indium
IR	Iridium
JD	Jade/Nephrite
KA	Kaolinite
KK	Potassium
KN	Potassium Nitrate
KY	Kyanite
LA	Lanthanum
LI	Lithium
LS	Limestone
LU	Lutetium
MA	Magnetite
MB	Marble
MG	Magnesium
MI	Mica
MN	Manganese
MO	Molybdenum
MR	Marl
MS	Magnesium Sulphate
MT	Magnesite
MW	Mineral/Rock Wool
NA	Sodium
NB	Niobium
NC	Sodium Chloride
ND	Neodymium
NI	Nickel
NS	Nepheline Syenite
OC	Ochre
OL	Olivine
OP	Opal
OS	Osmium
PA	Peat
PB	Lead
PD	Palladium
PE	Perlite
PH	Phosphorus
PL	Pyrophyllite
PO	Potash
PP	Phosphate
PR	Praseodymium
PT	Platinum
PU	Pumice
PY	Pyrochlore
PZ	Pozzolan
QZ	Quartzite
RA	Radium
RB	Railroad Ballast
RD	Radioactive Material
RE	Rhenium
RH	Rhodium

Rhodonite	RO	RM	Rubidium
Rubidium	RM	RN	Radon
Ruby	RY	RO	Rhodonite
Ruthenium	RU	RS	Rare Earths
Samarium	SM	RU	Ruthenium
Sand	SD	RY	Ruby
Sandstone	SV	SB	Antimony
Sapphire	SP	SC	Scandium
Scandium	SC	SD	Sand
Selenium	SE	SE	Selenium
Sericite	SK	SH	Shale
Shale	SH	SI	Silica
Silica	SI	SK	Sericite
Sillimanite	SL	SL	Sillimanite
Silver	AG	SM	Samarium
Slate	ST	SN	Tin
Soapstone	SZ	SO	Sodium Carbonate
Sodalite	SX	SP	Sapphire
Sodium	NA	SR	Strontium
Sodium Carbonate	SO	SS	Sodium Sulphate
Sodium Chloride	NC	ST	Slate
Sodium Sulphate	SS	SU	Sulphur
Strontium	SR	SV	Sandstone
Sulphur	SU	SX	Sodalite
Talc	TC	SZ	Soapstone
Tantalum	TA	TA	Tantalum
Tellurium	TE	TB	Terbium
Terbium	TB	TC	Talc
Thallium	TL	TE	Tellurium
Thorium	TH	TH	Thorium
Thulium	TM	TI	Titanium
Tin	SN	TL	Thallium
Titanium	TI	TM	Thulium
Travertine	TR	TR	Travertine
Tremolite	TT	TT	Tremolite
Tungsten	WO	UR	Uranium
Unknown	**	VA	Vanadium
Uranium	UR	VG	Volcanic Glass
Vanadium	VA	VL	Volcanic Ash
Vermiculite	VM	VM	Vermiculite
Volcanic Ash	VL	WL	Wollastonite
Volcanic Glass	VG	WO	Tungsten
Wollastonite	WL	YB	Ytterbium
Ytterbium	YB	YR	Yttrium
Yttrium	YR	ZE	Zeolite
Zeolite	ZE	ZN	Zinc
Zinc	ZN	ZR	Zirconium
Zirconium	ZR	**	Unknown
Total	161	161	Total

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***Appendix I**: Procedure for Deriving Mnemonic Mineral Codes*

***Appendix III**: MINFILE Mineral, Rock and Modifier Codes*

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Mineral, Rock and Modifier Codes
(Minfile Coding Manual)

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The codes are arranged in alphabetical order. Use these letters to quickly locate yourself in the list.

A B C D E F G H I J K L M N O P Q R S T U V W XYZ

MINFILE Mineral, Rock and Modifier Codes: *e20b, e25, e26.dbf*

Description	Code	Mineral	Rock	Modifier
Acanthite	ACNT	X		X
Accretionary	ACRN			X
Acid	ACID			X
Acmite	ACMT	X		X
Actinolite	ACNL	X		X
Adularia	ADLR	X		X
Aegirine	AGRN	X		X
Agate	AGTE	X	X	X
Agglomerate	AGLM		X	
Agglomeratic	AGMC			X
Aguilarite	AGLR	X		
Akerite	AKRT	X		X
Akermanite	AKRM	X		X
Aktashite	AKTS	X		
Alaskite	ALSK		X	X
Albandite	ALBD	X		X
Albertite	ALBR	X	X	X
Albite	ALBT	X		X
Albitite	ALBE		X	X
Algal	ALGL			X
Algodonite	ALGD	X		X
Alkali	ALKL			X
Alkalic	AKLC		X	X
Allanite	ALNO	X		X
Allemontite	ALMT	X		
Alluvium	AVUM		X	
Almandine	AMDN	X		
Alnoite	ALNT		X	
Altaite	ALTT	X		X
Altered	ALRD			X
Aluminous	ALMS			X
Alunite	ALUN	X		X
Amblygonite	AMBG	X		X
Amethyst	AMTS	X		X
Amphibole	AMPB	X		X
Amphibolite	AMPH		X	X
Amphibolitic	APBC			X
Amygdaloidal	AMGD			X
Analcime	ALCM	X		
Analcite	ANLC	X		X

Anatase	ANTS	X		X
Andalusite	ADLS	X		X
Andesine	ANDS	X		X
Andesite	ANDT		X	X
Andesitic	ANDC			X
Andorite	ANDR	X		X
Andradite	ADRD	X		X
Anglesite	AGLS	X		X
Anhydrite	ANHY	X	X	X
Ankaramite	ANKM		X	
Ankerite	ANKR	X		X
Ankeritic	ANKT			X
Annabergite	ABRG	X		X
Anorthite	ANRT	X		X
Anorthosite	ANRS		X	
Anthophyllite	ANPL	X		X
Anthracite	ANRC		X	
Antigorite	ANGR	X		X
Antimony	ANMN	X		X
Apatite	APTT	X		X
Aphanitic	ANPC			X
Aphyric	APRC			X
Aplite	APLT		X	X
Aplitic	APLC			X
Apophyllite	APPL	X	X	X
Aragonite	ARGN	X		X
Arenaceous	ARCS			X
Arenite	ARNT		X	
Arfvedsonite	AFVU	X		X
Argentite	ARGT	X		X
Argentopyrite	AGPR	X		
Argillaceous	AGLC			X
Argillite	ARGL		X	
Arkose	ARKS		X	
Arkosic	ARKC			X
Armenite	ARMT	X		
Arsenic	ARSC	X		X
Arsenopyrite	ARPR	X		X
Asbestos	ASBS	X		X
Ash	ASHH		X	X
Augelite	AUGL	X		
Augen	AUGN			X
Augite	AUGT	X		X
Aurichalcite	ACLC	X		X
Aurostibite	ARSB	X		X
Autunite	ATNT	X		X
Awaruite	AWRT	X		X
Axinite	AXNT	X		X
Azurite	AZRT	X		X
Baddeleyite	BDLT	X		X
Banded	BNDD			X
Barite	BRIT	X	X	X
Baritic	BRTC			X
Barytocalcite	BCLC	X		
Basalt	BSLT		X	X
Basaltic	BSLC			X
Basanite	BSNT		X	
Basic	BSIC			X
Bastite	BSTT	X		
Bastnaesite	BSNS	X		X
Bauxite	BUXT	X		X
Bedded	BDED			X
Beforsite	BFRS		X	
Bentonite	BENT	X	X	X
Berthierite	BRTR	X		X
Beryl	BRYL	X		X
Betafite	BTFT	X		X
Beudantite	BDNT	X		
Bindheimite	BNDM	X		X
Biotite	BOIT	X		X
Bismuth	BSMT	X		X
Bismuthinite	BSMN	X		X
Bismutite	BMTT	X		X
Bitumen	BTMN	X	X	X
Bituminous	BMNS			X

Bixbyite	BXBT	X			X
Black	BLCK				X
Block	BOCK				X
Bloedite	BLDT	X			
Boothite	BTHT	X			X
Boracite	BRCT	X			X
Borax	BORX	X		X	X
Bornite	BRNT	X			X
Boulangerite	BLGR	X			X
Boulder	BLDR				X
Bournonite	BRNN	X			X
Brannerite	BRNR	X			X
Braunite	BRUN	X			X
Bravoite	BRVT	X			X
Breccia	BRCC			X	X
Brecciated	BRCD				X
Breithauptite	BRTP	X			X
Breunnerite	BRRT	X			X
Brines	BRMS	X			X
Britholite	BRTL	X			X
Brochantite	BRCN	X			
Bronzite	BRNZ	X			X
Brucite	BRUC	X		X	X
Calaverite	CLVR	X			X
Calc	CALC				X
Calc-silicate	CLSC	X		X	X
Calcarenite	CLCR			X	
Calcareous	CLCS				X
Calciosamarskite	CCMK	X			X
Calcirudite	CALR			X	
Calcite	CLCT	X			X
Camptonite	CMPN			X	
Cancrinite	CNCR	X			X
Carbon	CRBO	X			
Carbonaceous	CRBC				X
Carbonate	CARB	X		X	X
Carbonatite	CRBM			X	
Carbonatized	CARZ				X
Carbonite	CRBN	X			X
Carnallite	CRNL	X			X
Carnotite	CRNT	X			X
Carrollite	CRLT	X			X
Cassiterite	CSTR	X			X
Cataclasite	CCLS			X	
Cataclastic	CCTC				X
Celadonite	CLDN	X			X
Celestite	CLST	X			X
Celsian	CELS	X			
Cerargyrite	CRRG	X			X
Cerussite	CRST	X			X
Cervantite	CRVN	X			X
Chalcanthite	CHLT	X			
Chalcedony	CLCD	X		X	X
Chalcocite	CLCC	X			X
Chalcomenite	CLCM	X			X
Chalcopyrite	CLCP	X			X
Chalcostibite	CLCB	X			X
Chamosite	CMST	X			X
Charnockite	CRCK			X	X
Chert	CHRT			X	X
Cherty	CHTY				X
Chevkinite	CVKN	X			X
China Stone	CNSN			X	
Chloanthite	CLNT	X			X
Chloride	CLRD	X			X
Chlorite	CLRT	X			X
Chloritic	CLRC				X
Chloritoid	CLTD	X			X
Chondrodite	CDRD	X			X
Chromite	CRMT	X			X
Chromitite	CRTT			X	
Chrysocolla	CRCL	X			X
Chrysolite	CRLI	X			X
Chrysoprase	CPRS	X			
Chrysotile	CRSL	X			X

Cinnabar	CNBR	X		X
Clastic	CSTC		X	X
Clausthalite	CLSL	X		X
Clay	CLAY	X	X	X
Claystone	CLSN		X	
Cleavelandite	CLVD	X		X
Clinochlore	CLCL	X		X
Clinoptilolite	CLTL	X		X
Clinopyroxene	CLPX	X		X
Clinopyroxenite	CLPT		X	
Clinozoisite	CLZS	X		X
Coal	COAL	X	X	X
Coarse Grained	CGRD			X
Cobaltite	CBLT	X		X
Coffinite	CFNT	X		X
Collinsite	CLLT	X		
Collophane	CLPN	X		X
Coloradoite	CLDT	X		X
Columbite	CLMB	X		X
Conglomerate	CGLM		X	X
Conichalcite	CCLC	X		
Copper	CPPR	X		X
Cordierite	CRDR	X		X
Corkite	CRKT	X		
Coronadite	CRND	X		X
Corundum	CRDM	X		X
Corynite	CRYN	X		
Cosalite	CSLT	X		X
Covellite	CVLT	X		X
Crackle	CCKL			X
Crinanite	CRNN		X	
Cristobalite	CTBL	X		X
Crocidolite	CCDL	X		X
Crossite	CRSS	X		
Crushed	CHRD			X
Cryolite	CRYL	X		X
Cryptomelane	CPML	X		X
Crystal	XTAL			X
Cubanite	CBNT	X		X
Cummingtonite	CMNG	X		X
Cuprite	CPRT	X		X
Cyrtolite	CRTL	X		X
Dacite	DCIT		X	X
Dacitic	DCTC			X
Danaite	DNIT	X		X
Danalite	DNLT	X		X
Datolite	DTLT	X		X
Deudantite	DDNT	X		X
Diabase	DIBS		X	X
Diamictite	DMCT		X	
Diamond	DMND	X		X
Diaspore	DSPR	X		X
Diatomaceous	DTMS			X
Diatomite	DITM	X	X	X
Diatreme	DTRM			X
Dickite	DCKT	X		X
Digenite	DGNT	X		X
Dike	DYKE		X	
Diopside	DPSD	X		X
Diorite	DORT		X	X
Dioritic	DORC			X
Djurleite	DJRL	X		X
Dolerite	DLRT		X	
Dolomite	DOLM	X	X	X
Dolomitic	DLMC			X
Domeykite	DMKT	X		X
Dumortierite	DMRR	X		X
Dunite	DUNT		X	
Dunitic	DNTC			X
Dyscrasite	DSCR	X		X
Eclogite	ECLG		X	
Electrum	ELCM	X		X
Ellsworthite	ELSR	X		X
Emery	EMRY	X		X
Empressite	EMPR	X		X

Enargite	ENRG	X			X
Enstatite	ENST	X			X
Epiclastic	EPCL			X	X
Epidote	EPDT	X			X
Epsomite	EPSM	X			X
Equigranular	EQGL				X
Erythrite	ERTR	X			X
Eschynite	ESCN	X			X
Esker Sediment	EKSM			X	
Essexite	ESXT			X	
Euxenite	EXNT	X			X
Evaporite	EVPR	X		X	X
Extrusive	EXTV			X	
Famatinite	FMTN	X			X
Fayalite	FYLT	X			X
Feldspar	FLDP	X			X
Feldspathic	FDPC				X
Feldspathoid	FDPD	X			
Felsic	FLSC				X
Felsite	FLST			X	X
Fenite	FNIT			X	
Ferberite	FRBR	X			X
Fergusonite	FRGS	X			X
Ferricrete	FRCR			X	
Ferrierite	FRRT	X			
Ferrimolybdite	FMBD	X			X
Ferro	FRRO				X
Ferrodolomite	FDLM	X			
Ferruginous	FRUG				X
Fersmite	FRSM	X			X
Fine Grained	FGRD				X
Fireclay	FRCL	X		X	X
Flow	FLOW			X	X
Fluorapatite	FLAP	X			
Fluorite	FLRT	X			X
Fluorphlogopite	FPGP	X			X
Fluorspar	FLRP	X			X
Fluvial	FLVL				X
Foliated	FLTD				X
Formanite	FRMN	X			X
Forsterite	FRSR	X			X
Fossiliferous	FLFR				X
Fractured	FRCD				X
Fragmental	FRAG				X
Franckeite	FRCK	X			X
Freibergite	FRBG	X			X
Freieslebenite	FRLB	X			X
Friedelite	FRLT	X			X
Freilergite	FRLG				X
Frohbergite	FRBT	X			
Froodite	FRDT	X			X
Fuchsite	FCST	X			X
Gabbro	GBBR			X	X
Gabbroic	GBRC				X
Gadolinite	GDLN	X			X
Gahnite	GHNT	X			
Galena	GLEN	X			X
Gallium	GLLM	X			X
Garnet	GARN	X			X
Garnetiferous	GRFR				X
Garnetite	GART			X	X
Garnierite	GRNR	X			X
Gaspeite	GSPT	X			X
Geikielite	GKLT	X			X
Geocronite	GCRN	X			X
Germanite	GRMN	X			
Gersdorffite	GRDF	X			X
Geyserite	GSRT	X			
Gibbsite	GBST	X			X
Glacial	GLCL				X
Glaciolacustrine	GLLC				X
Glass	GLSS	X		X	X
Glaucodot	GLCD	X			X
Glauconite	GLCN	X			X
Glaucophane	GLCP	X			X

Gmelinite	GMLN	X			
Gneiss	GNSS		X		
Gneissic	GNSC				X
Goethite	GTHT	X			X
Gold	GOLD	X			X
Gorceixite	GRCX	X			
Gossan	GSSN		X		X
Gouge	GOUG		X		
Granite	GRNT		X		X
Granitic	GRNC				X
Granitoid	GRND		X		X
Granodiorite	GRDR		X		X
Granophyre	GRPR		X		
Granulite	GRNU		X		X
Graphite	GRPT	X		X	
Graphitic	GRPC				X
Gravel	GRVL		X		
Greenalite	GRNL	X			X
Greenockite	GRCK	X			X
Greensand	GRSD		X		
Greenschist	GRCS		X		
Greenstone	GRNS		X		X
Greisen	GRSN		X		X
Greywacke	GRWK		X		
Grit	GRIT		X		
Grossularite	GRLR	X			X
Grunerite	GRRT	X			X
Guano	GUNO	X		X	
Gudmundite	GDMD	X			X
Gummite	GMMT	X			X
Gypsite	GPST		X		
Gypsum	GPSM	X		X	X
Halite	HLIT	X		X	X
Harzburgite	HZBG		X		
Hatchettolite	HTCL	X			X
Hausmannite	HSMN	X			X
Heazlewoodite	HZLD	X			X
Hedenbergite	HDBG	X			X
Hedleyite	HDLT	X			
Hematite	HMTT	X			X
Hematitic	HMTC				X
Hemimorphite	HMRP	X			
Hercynite	HRCN	X			X
Hessite	HSST	X			X
Heterolithic	HRLC				X
Heulandite	HLND	X			X
Hollandite	HLDT	X			X
Hornblende	HBLD	X			X
Hornblendite	HRBD			X	X
Hornfels	HRFL			X	X
Hornfelsed	HOFD				X
Howlite	HWLT	X			X
Hubnerite	HBNR	X			X
Humite	HUMT	X			
Hybrid	HBRD				X
Hydrocarbon	HDCB	X			X
Hydromagnesite	HDMG	X		X	X
Hydrozincite	HDZC	X			X
Hypersthene	HPRS	X			X
Idaite	IDIT	X			
Idocrase	IDCR	X			X
Ignimbrite	IGMB			X	X
Ijolite	IJLT			X	
Illite	ILLT	X		X	X
Ilmenite	ILMN	X			X
Ilmenorutile	ILMR	X			
Ilvaite	ILVT	X			
Intermediate	INTR				X
Intraformational	IFML				X
Intrusive	INTV			X	X
Inyoite	INYT	X			X
Iridium	IRDM	X			X
Iridosmine	IDSM	X			X
Iron	IRON				X
Iron Formation	IRFM			X	

Ironstone	IRSN		X		
Isokite	ISKT	X			X
Jacobsite	JCBS	X			X
Jacupirangite	JCPG		X		
Jade	JADE	X		X	X
Jadeite	JDIT	X		X	
Jalpaite	JLPT	X			X
Jamesonite	JMSN	X			X
Jarosite	JRST	X			X
Jasper	JSPR	X		X	X
Jasperoid	JPRD			X	
Jaspilite	JSPL			X	
Jordanite	JRDN	X			X
K-Feldspar	KSPA	X			X
Kainite	KINT	X			X
Kaolin	KOLN	X		X	X
Kaolinite	KLNT	X		X	X
Kasolite	KSLT	X			
Kentallenite	KNLN			X	
Keratophyre	KRPR			X	X
Kermesite	KRMS	X			X
Kersantite	KRSN			X	
Kimberlite	KMBL			X	X
Knebelite	KNBL	X			
Knopite	KNPT	X			
Kobellite	KBLT	X			
Kotelskite	KLSK		X		
Krennerite	KRNR	X			X
Kyanite	KYNT	X			X
Laboradorite	LBRD	X			X
Lahar	LAHR			X	X
Lamproite	LMPT			X	X
Lamprophyre	LMPP			X	X
Lapilli	LPLL				X
Lapillistone	LPLS			X	
Larnite	LRNT	X			X
Latite	LTIT			X	X
Laumontite	LMNT	X			X
Lava	LAVA			X	X
Layered	LYRD				X
Lazulite	LZLT	X			X
Lepidocrocite	LPCC	X			X
Lepidolite	LPDL	X			X
Lepidomelane	LPDM	X			
Leuchtenbergite	LCBG	X			
Leucite	LUCT	X			X
Leucocratic	LCCC				X
Leucopyrite	LCPR	X			X
Leucoxene	LCXN	X			X
Lignite	LGNT			X	
Limestone	LMSN			X	X
Limonite	LMON	X			X
Limy	LIMY				X
Linarite	LNRT	X			X
Linnaeite	LNNT	X			X
Listwanite	LSWN			X	X
Lit-par-lit	LPRL				X
Lithic	LTHC				X
Lithiophilite	LTPL	X			X
Lizardite	LZDT	X			
Lollingite	LLGT	X			X
Lugarite	LGRT			X	
Luxullianite	LXLN	X			X
Lyndochite	LNDC	X			X
Mackinawite	MCKN	X			X
Mafic	MAFC				X
Maghemite	MGHM	X			X
Magnesian	MGSN				X
Magnesite	MGNS	X		X	X
Magnesitic	MGSC				X
Magnetite	MGNT	X		X	X
Malachite	MLCT	X			X
Maldonite	MLDN	X			
Malignite	MLGN			X	
Manganiferous	MGFR				X

Manganite	MNGN	X			X
Marble	MRBL	X		X	X
Marcasite	MRCS	X			X
Mariposite	MRPS	X			X
Marl	MARL			X	
Marmatite	MRMT	X			
Martite	MRTT	X			X
Massive	MSSV				X
Matildite	MTLD	X			X
Maucherite	MCRT	X			X
Mcgillite	MCGL	X			
Medium Grained	MGRD				X
Megacrystic	MGCR				X
Melanocratic	MLCR				X
Melanterite	MLNR	X			X
Melilite	MLLT	X			X
Meneghinite	MNGT	X			X
Mercury	MRCR	X			X
Merenskyite	MRSK	X			
Merrschaum	MRCM	X			X
Mertietite	MERI		X		
Merwinite	MRNT	X			X
Mesocratic	MSCR				X
Meta	META				X
Metabasite	MBST			X	
Metacinnabar	MCBR	X			X
Metamorphic	MMPC				X
Metasedimentary	MSDM			X	
Metastibnite	MSBN	X			X
Metatorbernite	MTRB	X			X
Metazeunerite	MZNR	X			
Miargyrite	MRGR	X			X
Mica	MICA	X			X
Micaceous	MCCS				X
Michenerite	MCNR	X			X
Microcline	MCCL	X			X
Microdiorite	MDRT			X	X
Migmatite	MGMT			X	
Migmatitic	MGMC				X
Millerite	MLRT	X			X
Mimetite	MMIT	X			
Minette	MNTT			X	X
Minnesotaite	MNST	X			X
Mirabilite	MRBT		X		
Molybdenite	MLBD	X			X
Molybdite	MBDT	X			X
Monazite	MNZT	X			X
Monchiquite	MNCQ			X	
Monticellite	MNCL	X			X
Montmorillonite	MMRL	X			X
Monzodiorite	MZDR			X	X
Monzonite	MNZN			X	X
Monzonitic	MNZC				X
Morenosite	MRNS	X			X
Mudstone	MDSN			X	X
Mugearite	MGRT			X	
Muscovite	MSCV	X			X
Mylonite	MLNT			X	
Mylonitic	MLNC				X
Nacrite	NCRT	X			
Nagyagite	NGGT	X			X
Natroalunite	NTRL	X			
Natrolite	NTLT	X			
Natron	NTRN	X			
Naumannite	NMNT	X			X
Neodigenite	NDGN	X			X
Neotocite	NTCT	X			
Nepheline	NPLN	X			X
Nephelinite	NPLT			X	
Nephrite	NPRT	X			X
Neyite	NYTE	X			
Niccolite	NCLT	X			X
Ningyoite	NGYT	X			X
Niocalite	NOCL	X			X
Nitre	NITR	X			

Nodular	NDLR				X
Nontronite	NNRN	X			
Nordmarkite	NDMK			X	
Norite	NORT			X	X
Novaculite	NVCL			X	
Obsidian	OBSD	X		X	
Ochre	OCHR	X			X
Odinite	ODNT			X	
Oligoclase	OLGC	X			X
Oligomictic	OGMC				X
Olivine	OLVN	X			X
Oolitic	OLTC				X
Opal	OPAL	X			X
Orbicular	OBCL				X
Orpiment	ORPM	X			X
Ortho	ORTH				X
Orthoclase	ORCL	X			X
Orthopyroxene	ORPX	X			X
Orthopyroxenite	OTPR			X	
Osmiridium	OMDM	X			
Ouachitite	OCTT			X	
Owyheeite	OYHT	X			
Palladium	PLLM	X			
Palygorskite	PLGK	X			
Para	PARA				X
Paragonite	PRGN	X			X
Parahopeite	PRPT	X			X
Pararammelsbergite	PMBG	X			X
Parisite	PRIS	X			
Parkerite	PRKR	X			X
Pearceite	PRCT	X			X
Peat	PEAT			X	
Pebble	PBBL				X
Pegmatite	PGMT			X	X
Pegmatitic	PGMC				X
Pelite	PLIT			X	
Pelitic	PLTC				X
Pelletal	PLTL				X
Penninite	PNNT	X			X
Pentlandite	PNLD	X			X
Periclase	PRCL	X			X
Peridotite	PRDT			X	X
Perknite	PRKN			X	
Perlite	PERL	X		X	X
Perovskite	PRVK	X			X
Perthite	PRTT	X			X
Petzite	PTZT	X			X
Phenacite	PNCT			X	
Phengite	PNGT			X	
Phlogopite	PLGP	X			X
Phonolite	PNLT			X	X
Phosphate	PSPT	X		X	X
Phosphatic	PSPC				X
Phosphorite	PSRT	X		X	X
Phosphuranylite	PHUR	X			
Phyllite	PLLT			X	
Phyllitic	PLLC				X
Phyllonite	PLNT			X	
Phyric	PHRC			X	X
Picrite	PCRT			X	
Picritic	PCRC				X
Picrolite	PCRL	X			X
Pillow	PLLW				X
Pinite	PINT	X			X
Pipe	PIPE			X	
Pitchblende	PCBD	X		X	X
Pitchstone	PCSN			X	
Plagioclase	PLGC	X			X
Platinum	PLNM	X			X
Pollucite	PLCT	X			X
Polybasite	PLBS	X			X
Polycrase	PLCR	X			X
Polydymite	PLDM	X			X
Polymictic	PMCC				X
Porcellanite	PORC			X	X

Porphyritic	PPRC			X
Porphyroblastic	PPBL			X
Porphyry	PRPR		X	X
Powellite	PWLT	X		X
Prehnite	PRNT	X		X
Priorite	PRRT	X		X
Prosopite	PRSP	X		
Proustite	PRST	X		X
Psammite	PSMT		X	
Psammitic	PSMC			X
Psilomelane	PLML	X		X
Pulaskite	PLSK		X	X
Pumice	PUMC		X	X
Pumpellyite	PMPL	X		X
Pyrargyrite	PRRG	X		X
Pyrite	PYRT	X		X
Pyritic	PYRC			X
Pyrobitumen	PYBM	X		
Pyrochlore	PCLR	X		X
Pyroclastic	PCLC		X	X
Pyrolusite	PRLS	X		X
Pyromorphite	PRMP	X		X
Pyrope	PYRP	X		X
Pyrophanite	PRPN	X		X
Pyrophyllite	PRPL	X	X	X
Pyroxene	PRXE	X		X
Pyroxenite	PRXN		X	X
Pyroxenitic	PRXC			X
Pyrrhotite	PYTT	X		X
Quartz	QRTZ	X	X	X
Quartzite	QRZT		X	
Quartzitic/Quartzose	QRZS			X
Quartzofeldspathic	QZFP			X
Rammelsbergite	RMBG	X		X
Rankinite	RNKN	X		X
Rapakivi	RPKV			X
Rauhaugite	RHGT		X	
Realgar	RLGR	X		X
Reworked	RWRK			X
Rhodochrosite	RDCR	X		X
Rhodonite	RODN	X		X
Rhyodacite	RDCT		X	X
Rhyodacitic	RDCC			X
Rhyolite	RYLT		X	X
Rhyolitic	RYLC			X
Rickardite	RCKD	X		X
Riebeckite	RBCK	X		X
Rock	ROCK		X	
Rodingite	RDNG		X	X
Rozenite	RZNT	X		X
Ruby Silver	RSVR	X		X
Rudite	RUDT		X	
Rutile	RUTL	X		X
Sabugalite	SBGL	X		X
Safflorite	SFLR	X		X
Sahlite	SHLT	X		X
Saleeite	SLET	X		X
Salite	SLIT	X		
Salts	SLTS	X	X	X
Samarskite	SMRK	X		X
Sand	SAND		X	
Sandstone	SNDS		X	
Sandy	SNDY			X
Sanidine	SNDN	X		X
Sapphirine	SPRN	X		X
Sapropel	SPPL		X	
Saussurite	SSRT	X		X
Scapolite	SCPL	X		X
Scawtite	SCTT	X		X
Schapbachite	SCBC	X		X
Scheelite	SCLT	X		X
Schist	SCST		X	
Schistose	SCTS			X
Schorlomite	SCLM	X		
Schultenite	SCLN	X		

Scoria	SCOR			X	X
Scorodite	SCRD	X			X
Scorzalite	SCRZ	X			
Sediment/Sedimentary	SDMN			X	X
Selenide	SLND	X			X
Selenite	SLNT	X			X
Selenitic	SLNC				X
Semi	SEMI				X
Semseyite	SMST	X			X
Senarmontite	SNRM	X			X
Sepiolite	SPOL	X			
Sericite	SRCT	X			X
Sericitic	SRCC				X
Serpentine	SRPN	X			X
Serpentinite	SERP	X		X	
Serpentinized	SERZ				X
Seybertite	SBRT	X			X
Shale	SHLE	X		X	X
Shaly	SHLY				X
Sharpstone	SHRP			X	X
Shonkinite	SNKN			X	
Siderite	SDRT	X		X	X
Siegenite	SGNT	X			X
Silica	SILC	X		X	X
Silicate	SLCT	X			X
Siliceous	SLCS				X
Sill	SILL			X	
Sillimanite	SLMN	X			X
Silt	SILT			X	
Siltstone	SLSN			X	
Silty	SLTY				X
Silver	SLVR	X			X
Sinter	SNTR			X	
Skarn	SKRN			X	X
Skutterudite	SKRD	X			X
Slate	SLTE			X	
Slaty	SLAT				X
Smaltite	SMLT	X			X
Smectite	SMCT	X			
Smithsonite	SMSN	X			X
Soapstone	SPSN			X	
Sodalite	SDLT	X			X
Sodic	SODC				X
Soil	SOIL			X	
Sovite	SOVI			X	
Specularite	SPCL	X			X
Spencerite	SPCR	X			
Sperrylite	SPRL	X			X
Spessartine	SPSR	X			X
Spessartite	SPST			X	
Sphalerite	SPLR	X			X
Sphene	SPHN	X			X
Spilite	SPLT			X	
Spinel	SPNL	X			X
Spodumene	SPDM	X			X
Spotted	SPTD				X
Spurrite	SPRT	X			X
Stalactite	STLC			X	X
Stalagmite	SLGM			X	X
Stannite	STNT	X			X
Staurolite	STRL	X			X
Steatite	STTT			X	
Stephanite	STPN	X			X
Sternbergite	SRBG	X			X
Stibiconite	SBCN	X			X
Stibnite	STBN	X			X
Stilbite	STLB	X			
Stilpnomelane	SLPM	X			X
Stolzite	STLZ		X		
Stromatolitic	SMLC				X
Stromeyerite	SRMR	X			X
Strontianite	SRNN	X			X
Sub	SUBB				X
Subfeldspathic	SBFP			X	
Sulphantimonide	SPMD	X			X

Sulphate	SLPT	X			X
Sulphide	SLPD	X			
Sulphidic	SPDC				X
Sulphite	SLPH	X			X
Sulphur	SLPR	X		X	X
Sulvanite	SULV	X			
Svanbergite	SVAN	X			
Syenite	SYNT			X	X
Syenitic	SYEN				X
Syeno	SYNO				X
Sylvanite	SLVN	X			X
Sylvite	SLVT	X			X
Synchysite	SNCS	X			X
Syngenite	SNGT	X			
Tachylyte	TCYL	X		X	
Tailings	TLGS			X	
Talc	TALC	X		X	X
Talcose	TLCS				X
Talus	TLUS			X	
Tantalite	TNTL	X			X
Tapiolite	TPLT	X			X
Tectonic	TCNC				X
Telluride	TLRD	X			X
Tellurobismuthite	TLBM	X			X
Telluropalladinite	TLPD	X			
Temagamite	TMGM		X		
Temiskamite	TMKM	X			X
Tennantite	TNNT	X			X
Tenorite	TNRT	X			X
Tephra	TPHR			X	
Tephrite	TPRT	X		X	X
Tertiary	TRTR				X
Teschenite	TSCN			X	
Tetradymite	TRDM	X			X
Tetrahedrite	TRDR	X			X
Theralite	TERL			X	
Tholeiite	THLT			X	
Tholeiitic	TLTC				X
Thomsonite	TMSN	X			X
Thorianite	TRNT	X			X
Thorite	THRT	X			X
Thorogummite	TRGM	X			X
Thucholite	TCLT	X			X
Thuringite	TRNG	X			
Tiemannite	TMNT	X			X
Till	TILL			X	
Tilleyite	TLYT	X			X
Tillite	TLLT			X	
Titanite	TTNT	X			X
Tonalite	TNLT	X		X	X
Topaz	TOPZ	X			X
Torbernite	TRBN	X			X
Tourmaline	TRML	X			X
Tourmalinite	TMLN			X	
Tourmalite	TRMT			X	X
Trachyandesite	TCAN			X	X
Trachybasalt	TCBL			X	
Trachydacite	TRCC			X	X
Trachyte	TRCT			X	X
Trachytic	TRTC				X
Transported	TRPR				X
Travertine	TRVR			X	
Tremolite	TMLT	X			X
Tridymite	TDYM	X			
Troctolite	TRCL			X	
Troilite	TRLT	X			X
Trondhjemite	TDJM			X	
Tufa	TUFA			X	
Tuff	TUFF			X	X
Tuffaceous	TUFC				X
Tuffite	TUFT			X	
Turbidite	TRBD			X	X
Turgite	TRGT	X		X	
Twinnite	TWNT	X			
Ulexite	ULXT	X			X

Ullmannite	ULMN	X		X
Ultramafic	UMFC		X	X
Ulvospinel	ULVP	X		X
Unconsolidated	UCDD			X
Undifferentiated	UNDF			X
Unknown	****	X	X	X
Uralite	URLT	X		
Uraninite	URNN	X		X
Uranophane	URNP	X		X
Uranothorite	URNR	X		X
Uranotile	URNL	X		X
Urtite	URTT		X	
Valentinite	VLNN	X		X
Valleriite	VLRT	X		X
Vanadinite	VNDN	X		X
Vandendriesscheite	VDRS	X		
Vein	VEIN		X	
Vermiculite	VMCL	X		X
Vesicular	VSCL			X
Vesuvianite	VSVN	X		X
Violarite	VOLR	X		X
Vitric	VTRC			X
Vitrinite	VTRN		X	
Vogesite	VGST		X	
Volborthite	VLBR	X		
Volcanic	VOLC		X	X
Volcanic Glass	VLGL	X	X	
Volcaniclastic	VLCC		X	X
Vuggy	VUGG			X
Wacke	WCKE		X	
Wad	WADD	X		X
Wairauite	WRUT	X		X
Wehrlite	WRLT	X	X	
Welded	WLDD			X
Wehrlite	WRLT	X		
Willyamite	WLMT	X		X
Wilsonite	WLSN	X		X
Witherite	WTRT	X		X
Wittichenite	WTCN	X		X
Wolframite	WLFM	X		X
Wollastonite	WLST	X		X
Woodhouseite	WDST	X		X
Wulfenite	WLFN	X		
Wurtzite	WRTZ	X		X
Xenotime	XNTM	X		
Yukonite	YKNT	X		X
Zaratite	ZRTT	X		
Zeolite	ZOLT	X	X	X
Zeunerite	ZNRT	X		
Zincite	ZNCT	X		X
Zinkenite	ZNKN	X		X
Zircon	ZRCN	X		X
Zoisite	ZOST	X		X
Zunyite	ZNYT	X		
Totals	*918*	*576*	*248*	*694*

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◄ *Appendix II: Commodity Codes*

Appendix IV: Stratigraphic Host Codes ►

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Stratigraphic Host Codes
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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

(Index) DESCRIPTION	CODE	IG/META	GROUP	FORM	(Index) CODE	DESCRIPTION
Active	142			X	**	Undefined Formation
Agassiz Prairie	341			X	***	Undefined Group
Aida	731			X	100	Nilkitkwa
Aishihik Plutonic Suite	860	X			101	Fort Steele
Ajax	205			X	102	Roosville
Akie	732			X	103	Appekunny
Alberta	553		X		104	Kent
Aldridge	116			X	105	Obsolete
Aley Carbonatite Complex	518	X			106	Uslinka
Alice Arm Intrusion	543	X			107	Bridge River
Allenby	544			X	108	Eagle Bay
Allison Lake Pluton	835	X			109	Chitistone
Alsek Ranges	447			X	110	Masset
Altyn	139			X	111	Early Bird
Amphitheatre	171			X	112	Harrison Lake
Anarchist	365		X		113	Kulthieth
Anarchist/Kobau	324		X		114	Miles Canyon
Antler	473			X	115	Nakina
Apex Mountain	622		X		116	Aldridge
Appekunny	103			X	117	Sutton
Archibald	151			X	118	Blumberg
Ashcroft	288			X	119	Longarm
Ashman	177			X	120	Waterton
Asitka	616		X		121	Monk
Asitka Peak Stock	839	X			122	Decourcy
Atan	426		X		123	Spray River
Atlin Ultramafic Allochthon	488	X			124	Cultus
Attwood	629		X		125	Marsh Adams
August Mountain Siltstone	519	X			126	Vashon
Australian Creek	881			X	127	Comox
Axelgold Intrusion	786	X			128	Cape Ball
Azure Lake	709			X	129	Poplar Butte
Babine Intrusions	563	X			130	Brian Boru
Badshot	169			X	131	Boya
Badshot-Mohican	643		X		132	Gateway
Baldonnel	825			X	133	Tango Creek
Baldy Batholith	250	X			134	Tsaydiz
Banff	399			X	135	Quadra
Basal Devonian Unit	672	X			136	Quartzite Range
Battle Range Batholith	273	X			137	Grinnell
Battlement Ridge	645		X		138	Grand Forks Gneiss
Bayonne Batholith	804	X			139	Altyn

Beady Range Pluton	912	X			140	Dunira
Beattie Peaks	541			X	141	Stelkuz
Beaver Mountain	526			X	142	Active
Beaverdell Porphyry	925	X			143	Haida
Beaverfoot	464			X	144	Mount Nelson
Beaverfoot-Brisco	466			X	145	Garibaldi
Beggerlay Creek Pluton	897	X			146	Kapoose
Bendor Pluton	389	X			147	Salish
Bennett Pluton	861	X			148	Northumberland
Besa River	718			X	149	Peninsula
Betty Creek	640			X	150	Hesquiat
Bickford	539			X	151	Archibald
Big Creek	809		X		152	Geoffrey
Big Salmon Complex	416	X			153	Nikolai
Billhook	161			X	154	Skonun
Black Lake Stock	810	X			155	Pasayten
Black Lake Suite	858	X			156	Telkwa
Black Stuart	474			X	157	Bonanza
Blairmore	555		X		158	Skidegate
Blind Creek	758			X	159	Nahlin
Blue River Ultramafite	418	X			160	Karmutsen
Blumberg	118			X	161	Billhook
Bocock	807			X	162	Gabriola
Bonanza	157		X		163	Brokenback Hill
Bootjack Stock	657	X			164	Mount Nansen
Boss Mountain Stock	655	X			165	Yakoun
Boulder Creek	534		X		166	Van Creek
Boulder Crk	846			X	167	Ymir
Bouleau Lake	921			X	168	Swannell
Boundary Ranges Metamor. Suite	650	X			169	Badshot
Bowen Island	195		X		170	Yakataga
Bower Island	174			X	171	Amphitheatre
Bowron River	471			X	172	Nichol Creek
Bowser Lake	364		X		173	Gloucester
Boya	131			X	174	Bower Island
Bralorne Igneous Complex	388	X			175	Nelway
Breakenridge	713			X	176	Broadview
Brenot	771			X	177	Ashman
Brew	922		X		178	Nooksack
Brian Boru	130			X	179	Siyeh
Bridge River	107		X		180	Ootsa Lake
Brisco	465			X	181	French Range
Broadview	176			X	182	Entiako
Brock Volcanics	767	X			183	Mount Gainer
Brokenback Hill	163			X	184	Capilano
Bromley Batholith	674	X			185	Whitesail
Brooklyn	200		X		186	McCarthy
Brothers Peak	236			X	187	Sinwa
Buck Creek	564			X	188	Elise
Buckinghorse	832			X	189	Kasalka
Bugaboo Batholith	572	X			190	Escalante
Bulkley Intrusions	247	X			191	Smithers
Bulldog Creek Pluton	715	X			192	Harbledown
Bullhead	556		X		193	Espee
Burnaby Island Plutonic Suite	666	X			194	Hedley
Burnais	458			X	195	Bowen Island
Burrard	725			X	196	Sandilands
Butedale Pluton	381	X			197	Ghost Creek
Buttle Lake	241		X		198	Sheppard
Cache Creek	349		X		199	Haslam
Cache Creek Complex	869	X			200	Brooklyn
Cadomin	538			X	201	Sooke
Cadwallader	300		X		202	Jowett

Cahill Creek Pluton	676	X			203	Haydon Peak
Cairn Needle	712			X	204	Level Mountain
Cake Hill	363			X	205	Ajax
Cake Hill Pluton	898	X			206	Kedahda
Cameron River	581			X	207	Chilcotin
Canyon Creek	870			X	208	Kettle River
Cape Ball	128			X	209	Teslin
Capilano	184			X	210	Index
Capoose Batholith	491	X			211	One Tree
Cariboo	395		X		212	Nicol Creek
Cariboo Meadows Pluton	900	X			213	Lardeau
Carmacks	648		X		214	Reno
Carmanah	301		X		215	Triune
Carpenter Bay Plutonic Suite	494	X			216	Horsethief Creek
Cassiar Batholith	408	X			217	Dutch Creek
Castlegar Gneiss	374	X			218	Tseapseahoolz Creek Pluton
Catface Intrusions	606	X			219	Mysterious Creek
Cathedral	467			X	220	Dashwood
Cedar District	370			X	221	Three Sisters
Cedared	671			X	222	Quatsino
Central Gneiss Complex	266	X			223	Irene Volcanic
Chancellor	789		X		224	Kutcho
Chapperon	704		X		225	Twin Island
Chasm	695			X	226	Randall
Cheakamus	515			X	227	Marble Canyon
Cherry Creek Pluton	740	X			228	Creston
Chilcotin	207		X		229	Knob Hill
Chilliwack	291		X		230	Metchosin Volcanics
Chilliwack Batholith	599	X			231	Horsefeed
Chischa	513			X	232	Lafrance
Chitistone	109			X	233	Moresby
Christmas Creek Batholith	414	X			234	Myra
Chu Chua	546			X	235	Mount Martley
Chuchi Lake	851			X	236	Brothers Peak
Chuckanut	360			X	237	Nitinat
Coal Harbour	340		X		238	Toby
Coast Plutonic Complex	252	X			239	Phillips
Cogburn Schist	826	X			240	Kitchener
Cold Fish Volcanics	768	X			241	Buttle Lake
Coldwater	304			X	242	Plateau Basalt
Colquitz Gneiss	691	X			243	Whistle Creek
Comox	127			X	244	Plateau Lava
Contact Stock	429	X			245	Peril
Cooper Ridge	845		X		246	Purcell Lava
Copper Mountain Intrusions	628	X			247	Bulkley Intrusions
Copper Mountain Stock	800	X			248	Mesalinka Pluton
Coquihalla	834			X	249	Lower Caribou Creek Stock
Coquihalla Serpentine Belt	593	X			250	Baldy Batholith
Cornell Stock	710	X			251	Topley Intrusions
Coryell Intrusions	282	X			252	Coast Plutonic Complex
Coyle Stock	623	X			253	Whatshan Intrusion
Cranbrook	459			X	254	Iron Mask Batholith
Creston	228			X	255	Mount Lytton Complex
Crooked Amphibolite	290			X	256	Ruby Range Stock
Crownite	880			X	257	Nanika Intrusions
Cultus	124			X	258	Guichon Creek Batholith
Cunningham	392			X	259	Three Sisters Pluton
Currier	787			X	260	Duckling Creek Syenite Complex
Custer-Skagit Gneiss	600	X			261	Similkameen Intrusions
Custer Gneiss	830	X			262	Pacific Rim Complex
Dash	793			X	263	Monashee Complex
Dashwood	220			X	264	Edziza Spectrum Volcanic Comp.
Deadman River	287			X	265	Naver Intrusion

Decourcy	122			X	266	Central Gneiss Complex
Dewar	765			X	267	Shuswap Metamorphic Complex
Dewdney Creek	302			X	268	Mount Carlyle Stock
Dezadeash	317		X		269	Fry Creek Intrusion
Doctors Point Pluton	736	X			270	Takomkane Batholith
Dodger Granite Stock	524	X			271	Valhalla Formation
Dome Creek	472			X	272	Wild Horse Intrusion
Dorsey Assemblage	306	X		X	273	Battle Range Batholith
Downey Succession	659			X	274	Nemo Lakes Intrusion
Duck Lake	685			X	275	Saltspring Intrusive Suite
Duckling Creek Syenite Complex	260	X			276	Raft Batholith
Dum Lake Intrusive Complex	930	X			277	Hogem Intrusive Complex
Dunedin	702			X	278	Goat Canyon Stock
Dunira	140			X	279	Tachilta Intrusion
Dunvegan	890			X	280	Valhalla Complex
Dutch Creek	217			X	281	Galena Bay Stock
Eager	468			X	282	Coryell Intrusions
Eagle Bay	108			X	283	Nelson Intrusions
Eagle Plutonic Complex	755	X			284	Kuskanax Batholith
Early Bird	111			X	285	Ladner
Earn	421		X		286	Jackass Mountain
Echo Island	328			X	287	Deadman River
Echo Lake	812		X		288	Ashcroft
Ecstall Pluton	496	X			289	Hazelton
Edziza Spectrum Volcanic Comp.	264	X			290	Crooked Amphibolite
Eldon	743			X	291	Chilliwack
Eldorado Pluton	693	X			292	Uslika
Elise	188			X	293	Valdez
Elk	551			X	294	Vedder
Elk Point	747		X		295	Tyaughton
Elko	456			X	296	Rosella
Emerald Stock	522	X			297	Parson Bay
Empetrum	719			X	298	Relay Mountain
Endako	323		X		299	Sicker
Entiako	182			X	300	Cadwallader
Escalante	190			X	301	Carmanah
Espee	193			X	302	Dewdney Creek
Etherington	754			X	303	Gaveway
Eugene Creek Stock	923	X			304	Coldwater
Extension	357			X	305	Franklin
Fairholme	397		X		306	Dorsey Assemblage
Fairview Intrusion	694	X			307	Nizi Pluton
Fantasque	819			X	308	Hall
Fennell	489			X	309	Kyuquot
Fergusson	614		X		310	Penticton
Fernie	451		X		311	Nicola
Fire Lake	630		X		312	Glove Stock
Flathead	455			X	313	Kluane
Fleet Peak Pluton	838	X			314	South Fosthall
Flower Ridge	698			X	315	Skolai
Fort St. John	481		X		316	Wallace
Fort Steele	101			X	317	Dezadeash
Fourth Lake	706			X	318	Nasina
Fourth of July	377		X		319	Nazcha
Fourth of July Creek Batholith	575	X			320	Harper Ranch
Francois Lake	684		X		321	Poul Creek
Francois Lake Batholith	683	X			322	Helm
Francois Lake Intrusive Suite	485	X			323	Endako
Franklin	305		X		324	Anarchist/Kobau
Fraser Bend	679			X	325	Spider Creek
Fredrikson Peak	842	X			326	Slocan
French Mine	677			X	327	Takla

French Range	181			X	328	Echo Island
Friendly Lake Intrusive Complex	931	X			329	Hedley Intrusions
Fry Creek Intrusion	269	X			330	Shonektaw
Frying Pan Creek Stock	904	X			331	Gravina Nutzotin
Gabriola	162			X	332	Queen Charlotte
Galena Bay Stock	281	X			333	Phoenix
Galore Creek Intrusions	798	X			334	Vancouver
Gambier	336		X		335	Nina Creek
Gamsby	407		X		336	Gambier
Garibaldi	145		X		337	Sloko
Gataga	887			X	338	Monashee
Gates	480			X	339	Sustut
Gateway	132			X	340	Coal Harbour
Gaveway	303			X	341	Agassiz Prairie
Geoffrey	152			X	342	Long Ridge Pluton
George	885			X	343	Rossland
Germansen Batholith	634	X			344	Maude
Gething	537			X	345	Kamloops
Ghost Creek	197			X	346	Windermere
Gillies Stock	720	X			347	Taylor Creek
Glacial/Fluvial Gravels	412	X			348	Milford
Glenogle	589			X	349	Cache Creek
Gloucester	173			X	350	Skeena
Glove Stock	312	X			351	Takwahoni
Glundebery Batholith	415	X			352	Kunga
Gnat Lakes Ultramafite	901	X			353	Inklin
Goat Canyon-Halifax Ck. Stock	895	X			354	Sharon Creek
Goat Canyon Stock	278	X			355	Wrangell
Gog	476		X		356	Spences Bridge
Goldway Stock	841	X			357	Extension
Goodrich	532			X	358	Tunya
Goodsir	859		X		359	Ingenika Atan
Goosly Intrusions	565	X			360	Chuckanut
Goosly Lake	566			X	361	Quartzite
Grand Forks Gneiss	138	X			362	Yakutat
Granite Lake Pluton	914	X			363	Cake Hill
Granite Mountain Pluton	396	X			364	Bowser Lake
Gravina Nutzotin	331			X	365	Anarchist
Grayling	701			X	366	Sophie Mountain
Greenwood Pluton	516	X			367	Kaslo
Grinnell	137			X	368	Honna
Guichon Creek Batholith	258	X			369	Trail
Gunsteel	717			X	370	Cedar District
Haida	143			X	371	Nanaimo
Hale Mountain Granodiorite	862	X			372	Stuhini
Hall	308			X	373	Mount Roberts
Hamill	376		X		374	Castlegar Gneiss
Hanawald Conglomerate	778	X			375	Mohican
Hanging Glacier Stock	905	X			376	Hamill
Harbledown	192			X	377	Fourth of July
Hardscrabble Mtn Succession	668			X	378	Upper Aldridge
Harper Ranch	320		X		379	Middle Aldridge
Harrison Lake	112			X	380	Lower Aldridge
Harrogate	670			X	381	Butedale Pluton
Harveys Ridge Succession	662			X	382	Hurley
Haslam	199			X	383	Pioneer
Hasler	533			X	384	Noel
Hat Creek	545			X	385	Silver Creek
Haydon Peak	203			X	386	Icefield & Alsek Ranges
Hazelton	289		X		387	President Ultramafics
Heart Peaks	641			X	388	Bralorne Igneous Complex
Hedley	194			X	389	Bendor Pluton

Hedley Intrusions	329	X			390	Unnamed/Unknown Informal
Heffley Creek Pluton	483			X	391	Snowshoe
Helm	322			X	392	Cunningham
Henry Creek	886			X	393	Yankee Belle
Hesquiat	150			X	394	Mural
Hickman Batholith	588	X			395	Cariboo
Hidden Creek Stock	525	X			396	Granite Mountain Pluton
Hogem Intrusive Complex	277	X			397	Fairholme
Honna	368			X	398	Palliser
Horsefeed	231			X	399	Banff
Horseranch	430		X		400	Millford
Horsethief Batholith	571	X			401	Laidman Lake Batholith
Horsethief Creek	216		X		402	Moyie Intrusions
Hotailuh Batholith	730	X			403	Troitsa Stock
Hozameen	560		X		404	Tahtsa Complex
Hulcross	535			X	405	Whiting Stock
Huntingdon	729			X	406	Sibola Stock
Hurley	382			X	407	Gamsby
Hutshi	440		X		408	Cassiar Batholith
Hyder Pluton	644	X			409	McDame
Ice River Complex	570	X			410	Kechika
Icefield & Alsek Ranges	386			X	411	Oblique Creek
Icefield Ranges	449			X	412	Glacial/Fluvial Gravels
Independence	585			X	413	Nome Lake Batholith
Index	210			X	414	Christmas Creek Batholith
Ingenika	428		X		415	Glundebery Batholith
Ingenika Atan	359		X		416	Big Salmon Complex
Inklin	353			X	417	Logtung Stock
Invermay Stock	584	X			418	Blue River Ultramafite
Inzana Lake	852			X	419	Parallel Creek Batholith
Irene Volcanic	223			X	420	Sandpile
Iron Mask Batholith	254	X			421	Earn
Iron Mask Pluton	739	X			422	Maple Leaf Pluton
Isaac	613			X	423	Keehika
Ishbel	503		X		424	Simpson Peak Batholith
Island Plutonic Suite	742	X			425	Sylvester Allochthon
Jackass Mountain	286		X		426	Atan
Jenner Stock	601	X			427	Lamb Mountain Stock
Jensen Peak Batholith	837	X			428	Ingenika
Jervis	615		X		429	Contact Stock
Johnson Canyon	504			X	430	Horseranch
Jowett	202			X	431	Troutline Creek Stock
Jubilee	460			X	432	Mount Haskin Stock
Kaketsa Pluton	878	X			433	Mount Reed Stock
Kamloops	345		X		434	Kuhn Stock
Kananaskis	597			X	435	Stewart Complex
Kano Plutonic Suite	495	X			436	Slako
Kapoose	146			X	437	Laberge
Karmutsen	160			X	438	Mount Stevens
Kasalka	189		X		439	Lewes River
Kasalka Intrusions	891	X			440	Hutshi
Kaslo	367		X		441	Tats
Kastberg Intrusions	775	X			442	Middle Tats
Kaza	509		X		443	Lower Tats
Kechika	410		X		444	Upper Tats
Kedahda	206			X	445	Slide Mountain
Keehika	423		X		446	Tkope River Intrusions
Keg River	748			X	447	Alsek Ranges
Keithley Succession	667			X	448	St. Elias Intrusions
Kemess Pluton	811	X			449	Icefield Ranges
Kent	104			X	450	Kuskawulsh
Kettle River	208			X	451	Fernie
Kinbasket	790			X	452	Kintla

Kindle	638			X	453	Kootenay
King Salmon	591			X	454	Mist Mountain
Kingsvale	631		X		455	Flathead
Kinnaird Orthogneiss	689	X			456	Elko
Kintla	452			X	457	Wonah
Kitchener	240			X	458	Burnais
Kitchener-Siyeh	469			X	459	Cranbrook
Kitley Lake	745			X	460	Jubilee
Kitsumkalum Shale	779	X			461	Upper Jubilee
Kitsuns Creek	567			X	462	Lower Jubilee
Klappan Coal Measures	549			X	463	Ottertail
Klinaklini Pluton	805	X			464	Beaverfoot
Kliyul Creek Body	840	X			465	Brisco
Klotassin Intrusions	871	X			466	Beaverfoot-Brisco
Kluane	313		X		467	Cathedral
Klusha Intrusions	608	X			468	Eager
Knob Hill	229		X		469	Kitchener-Siyeh
Kobau	583		X		470	McKay
Kootenay	453		X		471	Bowron River
Kootenay Assemblage	889	X			472	Dome Creek
Kruger Syenite	678	X			473	Antler
Kuhn Stock	434	X			474	Black Stuart
Kulthieth	113			X	475	Miette
Kunga	352		X		476	Gog
Kuskanax Batholith	284	X			477	Rundle
Kuskawulsh	450		X		478	Sulphur Mountain
Kutcho	224			X	479	Lynx
Kwun Stock	660	X			480	Gates
Kyuquot	309		X		481	Fort St. John
Laberge	437		X		482	Minnes
Ladner	285		X		483	Wolverine Complex
Ladyberg Intrusions	916	X			484	Unnamed/Unknown Formation
Lafrance	232			X	485	Francois Lake Intrusive Suite
Laib	632			X	486	Trembleur Intrusions
Laidman Lake Batholith	401		X		487	Omineca Intrusions
Lamb Mountain Stock	427	X			488	Atlin Ultramafic Allochthon
Lardeau	213		X		489	Fennell
Latham Creek Pluton	899	X			490	Spapilem-Deadfall Creeks
Lay Range Assemblage	821	X			491	Capoose Batholith
Lee Brant Stock	653	X			492	Mahto
Leech River	733			X	493	San Christoval Plutonic Suite
Leech River Complex	617	X			494	Carpenter Bay Plutonic Suite
Legate Creek Apophysis	531	X			495	Kano Plutonic Suite
Level Mountain	204		X		496	Ecstall Pluton
Lewes River	439		X		497	Smith Island Pluton
Lexington Intrusion	929	X			498	Salmon Arm Pluton
Lillooet	501		X		499	Rexmount Porphyry
Little Billy Stock	711	X			500	Shulaps Ultramafic Complex
Little Eagle Pluton	908	X			501	Lillooet
Livingstone	753			X	502	Stone
Lizard	646			X	503	Ishbel
Llangorse Batholith	635	X			504	Johnson Canyon
Logtung Stock	417	X			505	Ranger Canyon
Long Ridge Pluton	342	X			506	Ross Creek
Longarm	119			X	507	Mount Wilson
Lorna Lake Stock	621	X			508	Oliver Plutonic Complex
Lost Horse Intrusions	803	X			509	Kaza
Lower Aldridge	380			X	510	Nonda
Lower Caribou Creek Stock	249	X			511	Mount Ida
Lower Jubilee	462			X	512	Misinchinka
Lower Tats	443			X	513	Chischa
Lynx	479			X	514	Unuk River
Mahto	492			X	515	Cheakamus

Major Hart Pluton	911	X			516	Greenwood Pluton
Malton Gneiss Complex	856	X			517	Ultramafic Intrusions
Mansfield Creek Pluton	915	X			518	Aley Carbonatite Complex
Manson Lakes Ultramafites	766	X			519	August Mountain Siltstone
Maple Leaf Pluton	422	X			520	Summit Lake Stock
Marama	627			X	521	Mika Ultramafic Intrusion
Marble Canyon	227			X	522	Emerald Stock
Marron	917			X	523	Truman - Member
Marsh Adams	125			X	524	Dodger Granite Stock
Masset	110			X	525	Hidden Creek Stock
Maude	344		X		526	Beaver Mountain
McBride River Pluton	896	X			527	Trail Intrusion
McCarthy	186			X	528	Silver King Porphyry
McDame	409		X		529	Sinemurian
McEwan Creek Pluton	785	X			530	Ponder Pluton
McKay	470		X		531	Legate Creek Apophysis
McLaughlin Ridge	604			X	532	Goodrich
McMaster Stock	642	X			533	Hasler
McNaughton	590			X	534	Boulder Creek
Meehaus Pluton	910	X			535	Hulcross
Mesalinka Pluton	248	X			536	Moosebar
Metchosin Volcanics	230	X			537	Gething
Midas	576			X	538	Cadomin
Middle Aldridge	379			X	539	Bickford
Middle Tats	442			X	540	Monach
Miette	475		X		541	Beattie Peaks
Mika Ultramafic Intrusion	521	X			542	Monteith
Miles Canyon	114			X	543	Alice Arm Intrusion
Milford	348		X		544	Allenby
Millford	400			X	545	Hat Creek
Minnes	482		X		546	Chu Chua
Misinchinka	512		X		547	Red Rose
Mission Ridge Pluton	770	X			548	Telkwa Coal Measures
Mist Mountain	454			X	549	Klappan Coal Measures
Mohican	375			X	550	Tranquille
Monach	540			X	551	Elk
Monashee	338		X		552	Morrissey
Monashee Complex	263	X			553	Alberta
Monk	121			X	554	Smoky
Montana Mountain Suite	863	X			555	Blairmore
Monteith	542			X	556	Bullhead
Moosebar	536			X	557	Wapiti
Moosevale	763			X	558	Princeton
Moresby	233		X		559	Newby
Moricetown Sediments	777	X			560	Hozameen
Moricetown Volcanics	776	X			561	Pavilion
Morrissey	552			X	562	Skukum
Mount Alex Plutonic Complex	794	X			563	Babine Intrusions
Mount April	848			X	564	Buck Creek
Mount Barr Batholith	882	X			565	Goosly Intrusions
Mount Brown	817			X	566	Goosly Lake
Mount Carlyle Stock	268	X			567	Kitsuns Creek
Mount Carpenter Stock	652	X			568	Obsolete
Mount Dilworth	639			X	569	Surprise Lake Batholith
Mount Forster	894			X	570	Ice River Complex
Mount Gainer	183			X	571	Horsethief Batholith
Mount Haskin Stock	432	X			572	Bugaboo Batholith
Mount Head	752			X	573	Okanagan Batholith
Mount Hickman Ultramafics	688	X			574	Tip Top Hill
Mount Howell	815			X	575	Fourth of July Creek Batholith
Mount Ida	511		X		576	Midas
Mount Kison	818			X	577	Trail Pluton
Mount Lytton Complex	255	X			578	Skagit

Mount Mark	603			X	579	Rossland Monzonite
Mount Martley	235			X	580	Rainy Day Pluton
Mount Martley Stock	714	X			581	Cameron River
Mount Milligan Intrus. Complex	853	X			582	Shepphard Intrusion
Mount Nansen	164			X	583	Kobau
Mount Nelson	144			X	584	Invermay Stock
Mount Reed Stock	433	X			585	Independence
Mount Riordan Stock	675	X			586	Shoemaker
Mount Roberts	373			X	587	Pend D'Oreille
Mount Stevens	438			X	588	Hickman Batholith
Mount Washington Intrus. Suite	721	X			589	Glenogle
Mount Wilson	507			X	590	McNaughton
Mouse Mountain Stock	673	X			591	King Salmon
Mowitch	636			X	592	Skoki
Moyie Intrusions	402	X			593	Coquihalla Serpentine Belt
Muncho-McConnell	703			X	594	Petch Creek Serpentine Belt
Mural	394			X	595	Salmon River
Myra	234			X	596	Texas Creek Plutonic Suite
Mysterious Creek	219			X	597	Kananaskis
Nahlin	159			X	598	Pimainus
Naiset	874			X	599	Chilliwack Batholith
Nakina	115			X	600	Custer-Skagit Gneiss
Nanaimo	371		X		601	Jenner Stock
Nanika Intrusions	257	X			602	St. Mary's Lake
Nanoose	726			X	603	Mount Mark
Nasina	318		X		604	McLaughlin Ridge
Naver Intrusion	265	X			605	Westcoast Complex
Nazcha	319			X	606	Catface Intrusions
Needle Peak Pluton	827	X			607	Postglacial Sediments
Nelson Intrusions	283	X			608	Klusha Intrusions
Nelway	175			X	609	Quanchus Intrusives
Nemo Lakes Intrusion	274	X			610	Tulameen Ultramafic Complex
Netalzul	780			X	611	Obsolete
Newby	559		X		612	Obsolete
Nichol Creek	172			X	613	Isaac
Nicol Creek	212			X	614	Fergusson
Nicola	311		X		615	Jervis
Nicola Batholith	625	X			616	Asitka
Nightout Pluton	799	X			617	Leech River Complex
Nikolai	153			X	618	Old Tom
Nilkitkwa	100			X	619	Skull Hill
Nina Creek	335		X		620	Thuya Batholith
Nisling Assemblage	707	X			621	Lorna Lake Stock
Nitinat	237			X	622	Apex Mountain
Nizi Pluton	307	X			623	Coyle Stock
Noel	384			X	624	Pennask Batholith
Nome Lake Batholith	413	X			625	Nicola Batholith
Nonda	510			X	626	Unnamed/Unknown Group
Nooksack	178			X	627	Marama
Northumberland	148			X	628	Copper Mountain Intrusions
Oblique Creek	411			X	629	Attwood
Obsolete	105			X	630	Fire Lake
Obsolete	568			X	631	Kingsvale
Obsolete	611			X	632	Laib
Obsolete	612			X	633	Wolf Ridge Gabbro
Obsolete	665			X	634	Germansen Batholith
Obsolete	692			X	635	Llangorse Batholith
Obsolete	687	X			636	Mowitch
Oceanic Ultramafites	854	X			637	Toad
Okanagan Batholith	573	X			638	Kindle
Okanagan Gneiss	705	X			639	Mount Dilworth
Okanagan Intrusions	918	X			640	Betty Creek
Old Diorite	741	X			641	Heart Peaks

Old Tom	618			X	642	McMaster Stock
Oliver Plutonic Complex	508	X			643	Badshot-Mohican
Omineca Intrusions	487	X			644	Hyder Pluton
One Tree	211			X	645	Battlement Ridge
Ootsa Lake	180		X		646	Lizard
Osprey Lake Batholith	796	X			647	Portland Canal Dykes
Osprey Lake Intrusions	919	X			648	Carmacks
Otter Intrusions	847	X			649	Tapioca Sandstone
Otter Lakes	761		X		650	Boundary Ranges Metamor. Suite
Ottertail	463			X	651	Sifton
Outram	873			X	652	Mount Carpenter Stock
Pacific Nickel Complex	723	X			653	Lee Brant Stock
Pacific Rim Complex	262	X			654	Westkettle Batholith
Pallen Creek Pluton	875	X			655	Boss Mountain Stock
Palliser	398			X	656	Polley Stock
Parallel Creek Batholith	419	X			657	Bootjack Stock
Parson Bay	297			X	658	Shiko Stock
Pasayten	155		X		659	Downey Succession
Pavilion	561		X		660	Kwun Stock
Peachland Creek	738			X	661	Sheridan Creek Pluton
Pend D'Oreille	587		X		662	Harveys Ridge Succession
Pender	727			X	663	Seven Sisters Stock
Peninsula	149			X	664	Spatsizi
Peninsula Mtn. Volcanic Suite	864	X			665	Obsolete
Pennask Batholith	624	X			666	Burnaby Island Plutonic Suite
Penticton	310		X		667	Keithley Succession
Peril	245			X	668	Hardscrabble Mtn Succession
Petch Creek Serpentine Belt	594	X			669	Whitehorse
Phillips	239			X	670	Harrogate
Phoenix	333		X		671	Cedared
Pillow Ridge	814			X	672	Basal Devonian Unit
Pimainus	814			X	673	Mouse Mountain Stock
Pioneer	383			X	674	Bromley Batholith
Pitman Batholith	892	X			675	Mount Riordan Stock
Plateau Basalt	242	X			676	Cahill Creek Pluton
Plateau Lava	244	X			677	French Mine
Plughat Mountain	816			X	678	Kruger Syenite
Polaris Intrusive Complex	823	X			679	Fraser Bend
Polley Stock	656	X			680	Quesnel River
Ponder Pluton	530	X			681	Quesnel Lake Gneiss
Poplar Butte	129			X	682	QR Stock
Poplar Creek Stock	906	X			683	Francois Lake Batholith
Portland Canal Dykes	647	X			684	Francois Lake
Postglacial Sediments	607	X			685	Duck Lake
Poul Creek	321			X	686	Yehiniho Pluton
Powell Creek	788			X	687	Obsolete
President Ultramafics	387	X			688	Mount Hickman Ultramafics
Presqu'ile	749			X	689	Kinnaird Orthogneiss
Price	696			X	690	Wark Gneiss
Princeton	558		X		691	Colquitz Gneiss
Prophet	700			X	692	Obsolete
Protection	728			X	693	Eldorado Pluton
Purcell	750		X		694	Fairview Intrusion
Purcell Lava	246	X			695	Chasm
QR Stock	682	X			696	Price
Quadra	135			X	697	Thelwood
Quanchus Intrusives	609	X			698	Flower Ridge
Quartzite	361			X	699	Sicamous
Quartzite Range	136			X	700	Prophet
Quatsino	222			X	701	Grayling
Queen Charlotte	332		X		702	Dunedin
Quesnel Lake Gneiss	681	X			703	Muncho-McConnell
Quesnel River	680		X		704	Chapperon

Raft Batholith	276	X			705	Okanagan Gneiss
Rainbow Creek	850			X	706	Fourth Lake
Rainy Day Pluton	580	X			707	Nisling Assemblage
Randall	226			X	708	Starbird
Ranger Canyon	505			X	709	Azure Lake
Razorback	813		X		710	Cornell Stock
Red Rose	547			X	711	Little Billy Stock
Relay Mountain	298		X		712	Cairn Needle
Reno	214			X	713	Breakenridge
Rexmount Porphyry	499	X			714	Mount Martley Stock
Road River	824		X		715	Bulldog Creek Pluton
Rocky Mountain	888		X		716	Silverquick
Rocky Ridge	773			X	717	Gunsteel
Roosville	102			X	718	Besa River
Rose and Edon Plutons	784	X			719	Empetrum
Rosebery Stock	903	X			720	Gillies Stock
Rosella	296			X	721	Mount Washington Intrus. Suite
Ross Creek	506			X	722	Tofino Intrusive Suite
Rossland	343		X		723	Pacific Nickel Complex
Rossland Monzonite	579	X			724	Spuzzum Intrusions
Ruby Range Stock	256	X			725	Burrard
Rundle	477		X		726	Nanoose
Saddle Hill Volcanics	781	X			727	Pender
Sadler	760			X	728	Protection
Saint Elias Plutonic Suite	857	X			729	Huntingdon
Salish	147			X	730	Hotailuh Batholith
Salmon Arm Pluton	498	X			731	Aida
Salmon River	595			X	732	Akie
Saltspring Intrusive Suite	275	X			733	Leech River
San Christoval Plutonic Suite	493	X			734	Sooke Gabbro
Sandilands	196			X	735	Spider Peak
Sandpile	420		X		736	Doctors Point Pluton
Savage Mountain	764			X	737	Stemwinder Mountain
Scuzzy Pluton	757	X			738	Peachland Creek
Settler Schist	831	X			739	Iron Mask Pluton
Seven Sisters Stock	663	X			740	Cherry Creek Pluton
Sharon Creek	354			X	741	Old Diorite
Sheppard	198			X	742	Island Plutonic Suite
Shepphard Intrusion	582	X			743	Eldon
Sheridan Creek Pluton	661	X			744	White Lake
Shiko Stock	658	X			745	Kitley Lake
Shingle Creek Porphyry	920	X			746	Wallace Creek Batholith
Shoemaker	586			X	747	Elk Point
Shonektaw	330			X	748	Keg River
Shulaps Ultramafic Complex	500	X			749	Presqu'ile
Shuswap Metamorphic Complex	267	X			750	Purcell
Sibola Stock	406	X			751	Spray Lakes
Sicamous	699			X	752	Mount Head
Sicker	299		X		753	Livingstone
Sifton	651		X		754	Etherington
Silver Creek	385			X	755	Eagle Plutonic Complex
Silver King Porphyry	528	X			756	Spius Creek
Silverquick	716			X	757	Scuzzy Pluton
Silverthrone	926			X	758	Blind Creek
Similkameen Intrusions	261	X			759	Tsalkom
Simpson Peak Batholith	424	X			760	Sadler
Sinemurian	529			X	761	Otter Lakes
Sinwa	187			X	762	Slate Creek
Sitlika Assemblage	782	X			763	Moosevale
Siyeh	179			X	764	Savage Mountain
Skagit	578			X	765	Dewar
Skaha	928			X	766	Manson Lakes Ultramafites
Skeena	350		X		767	Brock Volcanics

Skidegate	158			X	768	Cold Fish Volcanics
Skoki	592			X	769	Tsaybahe
Skolai	315		X		770	Mission Ridge Pluton
Skonun	154			X	771	Brenot
Skukum	562		X		772	Trout Creek
Skull Hill	619			X	773	Rocky Ridge
Slako	436		X		774	Tzezakwa Creek Sediments
Slate Creek	762			X	775	Kastberg Intrusions
Slide Mountain	445		X		776	Moricetown Volcanics
Slocan	326		X		777	Moricetown Sediments
Sloko	337		X		778	Hanawald Conglomerate
Slollicum Schist	829	X			779	Kitsumkalum Shale
Smelter Lake Stock	802	X			780	Netalzul
Smith Island Pluton	497	X			781	Saddle Hill Volcanics
Smithers	191			X	782	Sitlika Assemblage
Smoky	554		X		783	Toodoggone
Snake Indian	792			X	784	Rose and Edon Plutons
Snow Peak Pluton	876	X			785	McEwan Creek Pluton
Snowdrift Creek Pluton	907	X			786	Axelgold Intrusion
Snowshoe	391		X		787	Currier
Sooke	201			X	788	Powell Creek
Sooke Gabbro	734	X			789	Chancellor
Sophie Mountain	366			X	790	Kinbasket
South Fosthall	314		X		791	Tsar Creek
Spapilem-Deadfall Creeks	490			X	792	Snake Indian
Spatsizi	664		X		793	Dash
Spences Bridge	356		X		794	Mount Alex Plutonic Complex
Spider Creek	325		X		795	Wolfe Creek
Spider Peak	735			X	796	Osprey Lake Batholith
Spius Creek	756			X	797	Verde Creek Pluton
Spray Lakes	751		X		798	Galore Creek Intrusions
Spray River	123		X		799	Nightout Pluton
Springbrook	927			X	800	Copper Mountain Stock
Spuzzum Intrusions	724	X			801	Voigt Stock
St. Elias Intrusions	448	X			802	Smelter Lake Stock
St. Mary's Lake	602			X	803	Lost Horse Intrusions
Starbird	708			X	804	Bayonne Batholith
Stelkuz	141			X	805	Klinaklini Pluton
Stemwinder Mountain	737			X	806	Tiedemann Pluton
Stewart Complex	435		X		807	Bocock
Stikine Assemblage	808	X			808	Stikine Assemblage
Stikine Plutonic Suite	865	X			809	Big Creek
Stone	502			X	810	Black Lake Stock
Stuhini	372		X		811	Kemess Pluton
Sully	833			X	812	Echo Lake
Sulphur Mountain	478			X	813	Razorback
Summers Creek Pluton	836	X			814	Pillow Ridge
Summit Lake Stock	520	X			815	Mount Howell
Surprise Lake Batholith	569	X			816	Plughat Mountain
Survey Peak	872			X	817	Mount Brown
Sustut	339		X		818	Mount Kison
Sutton	117			X	819	Fantasque
Swannell	168			X	820	Wasi Ultramafic Complex
Sylvester Allochthon	425	X			821	Lay Range Assemblage
Tachilta Intrusion	279	X			822	Tenakihi Intrusive Complex
Tachilta Lakes Pluton	913	X			823	Polaris Intrusive Complex
Tagish Volcanic Suite	866	X			824	Road River
Tahltan Pluton	877	X			825	Baldonnel
Tahtsa Complex	404	X			826	Cogburn Schist
Takla	327		X		827	Needle Peak Pluton
Takomkane Batholith	270	X			828	Yellow Aster Complex
Takwahoni	351			X	829	Slollicum Schist
Tango Creek	133			X	830	Custer Gneiss

Tanzilla Canyon	879			X	831	Settler Schist
Tanzilla Pluton	909	X			832	Buckinghorse
Tapioca Sandstone	649	X			833	Sully
Tats	441		X		834	Coquihalla
Taylor Creek	347		X		835	Allison Lake Pluton
Telkwa	156			X	836	Summers Creek Pluton
Telkwa Coal Measures	548			X	837	Jensen Peak Batholith
Tenakihi Intrusive Complex	822	X			838	Fleet Peak Pluton
Teslin	209			X	839	Asitka Peak Stock
Tetsa	884			X	840	Kliyul Creek Body
Texas Creek Plutonic Suite	596	X			841	Goldway Stock
Thelwood	697			X	842	Fredrikson Peak
Three Sisters	221			X	843	Heffley Creek Pluton
Three Sisters Pluton	259	X			844	Wolverine Complex Intrusions
Thuya Batholith	620	X			845	Cooper Ridge
Tiedemann Pluton	806	X			846	Boulder Crk
Tintlhohtan Lake Stock	932	X			847	Otter Intrusions
Tip Top Hill	574			X	848	Mount April
Tkope River Intrusions	446	X			849	Witch Lake
Toad	637			X	850	Rainbow Creek
Toby	238			X	851	Chuchi Lake
Tofino Intrusive Suite	722	X			852	Inzana Lake
Toodoggone	783			X	853	Mount Milligan Intrus. Complex
Topley Intrusions	251	X			854	Oceanic Ultramafites
Trail	369		X		855	Twin Creek
Trail Intrusion	527	X			856	Malton Gneiss Complex
Trail Pluton	577	X			857	Saint Elias Plutonic Suite
Tranquille	550			X	858	Black Lake Suite
Trembleur Intrusions	486	X			859	Goodsir
Triune	215			X	860	Aishihik Plutonic Suite
Troitsa Stock	403	X			861	Bennett Pluton
Trout Creek	772			X	862	Hale Mountain Granodiorite
Troutline Creek Stock	431	X			863	Montana Mountain Suite
Truman - Member	523			X	864	Peninsula Mtn. Volcanic Suite
Tsalkom	759			X	865	Stikine Plutonic Suite
Tsar Creek	791			X	866	Tagish Volcanic Suite
Tsaybahe	769		X		867	Tutshi Volcanic Suite
Tsaydiz	134			X	868	Windy-Table Volcanic Suite
Tseapseahoolz Creek Pluton	218	X			869	Cache Creek Complex
Tuchodi	883			X	870	Canyon Creek
Tulameen Ultramafic Complex	610	X			871	Klotassin Intrusions
Tunya	358		X		872	Survey Peak
Turnagain Pluton	893	X			873	Outram
Tutshi Volcanic Suite	867	X			874	Naiset
Tuzo Creek Stock	924	X			875	Pallen Creek Pluton
Twin Creek	855			X	876	Snow Peak Pluton
Twin Island	225		X		877	Tahltan Pluton
Tyaughton	295		X		878	Kaketsa Pluton
Tzezakwa Creek Sediments	774	X			879	Tanzilla Canyon
Ultramafic Intrusions	517	X			880	Crownite
Undefined Formation	**			X	881	Australian Creek
Undefined Group	***		X		882	Mount Barr Batholith
Unnamed/Unknown Formation	484			X	883	Tuchodi
Unnamed/Unknown Group	626		X		884	Tetsa
Unnamed/Unknown Informal	390	X			885	George
Unuk River	514			X	886	Henry Creek
Upper Aldridge	378			X	887	Gataga
Upper Jubilee	461			X	888	Rocky Mountain
Upper Tats	444			X	889	Kootenay Assemblage
Uslika	292			X	890	Dunvegan
Uslinka	106			X	891	Kasalka Intrusions
Valdez	293		X		892	Pitman Batholith
Valhalla Complex	280	X			893	Turnagain Pluton

Valhalla Formation	271	X			894	Mount Forster
Van Creek	166			X	895	Goat Canyon-Halifax Ck. Stock
Vancouver	334		X		896	McBride River Pluton
Vashon	126			X	897	Beggerlay Creek Pluton
Vedder	294		X		898	Cake Hill Pluton
Verde Creek Pluton	797	X			899	Latham Creek Pluton
Voigt Stock	801	X			900	Cariboo Meadows Pluton
Wallace	316			X	901	Gnat Lakes Ultramafite
Wallace Creek Batholith	746	X			902	Wragge Creek Stock
Wapiti	557		X		903	Rosebery Stock
Wark Gneiss	690	X			904	Frying Pan Creek Stock
Wasi Ultramafic Complex	820	X			905	Hanging Glacier Stock
Waterton	120			X	906	Poplar Creek Stock
Westcoast Complex	605	X			907	Snowdrift Creek Pluton
Westkettle Batholith	654	X			908	Little Eagle Pluton
Whatshan Intrusion	253	X			909	Tanzilla Pluton
Whistle Creek	243			X	910	Meehaus Pluton
White Lake	744			X	911	Major Hart Pluton
Whitehorse	669			X	912	Beady Range Pluton
Whitesail	185			X	913	Tachilta Lakes Pluton
Whiting Stock	405	X			914	Granite Lake Pluton
Wild Horse Intrusion	272	X			915	Mansfield Creek Pluton
Windermere	346		X		916	Ladyberg Intrusions
Windy-Table Volcanic Suite	868	X			917	Marron
Witch Lake	849			X	918	Okanagan Intrusions
Wolf Ridge Gabbro	633	X			919	Osprey Lake Intrusions
Wolfe Creek	795			X	920	Shingle Creek Porphyry
Wolverine Complex	483	X			921	Bouleau Lake
Wolverine Complex Intrusions	844	X			922	Brew
Wonah	457			X	923	Eugene Creek Stock
Wragge Creek Stock	902	X			924	Tuzo Creek Stock
Wrangell	355			X	925	Beaverdell Porphyry
Yakataga	170			X	926	Silverthrone
Yakoun	165		X		927	Springbrook
Yakutat	362		X		928	Skaha
Yankee Belle	393			X	929	Lexington Intrusion
Yanks Peak	933			X	930	Dum Lake Intrusive Complex
Yehiniho Pluton	686	X			931	Friendly Lake Intrusive Complex
Yellow Aster Complex	828	X			932	Tintlhohtan Lake Stock
Ymir	167		X		933	Yanks Peak

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***Appendix III**: MINFILE Mineral, Rock & Modifier Codes*

Appendix V - MINFILE Stratigraphic Age Codes.

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Stratigraphic Age Codes: *(e24.dbf)*

ERA	PERIOD	EPOCH	CODE
1 **Cenozoic**	0	0	100
	1 Quaternary	0	110
		1 Recent	111
		2 Pleistocene	112
		9 Pliocene-Pleistocene	119
	2 Tertiary	0	120
		1 Pliocene	121
		2 Miocene	122
		3 Oligocene	123
		4 Eocene	124
		5 Paleocene	125
		9 Cretaceous-Tertiary	129
	3 Mesozoic-Cenozoic		199
2 **Mesozoic**	0		200
	1 Cretaceous	0	210
		1 Upper	211
		4 Middle	214
		7 Lower	217
		9 Jurassic-Cretaceous	219
	2 Jurassic	0	220
		1 Upper	221
		4 Middle	224
		7 Lower	227
		9 Triassic-Jurassic	229
	3 Triassic	0	230
		1 Upper	231
		4 Middle	234
		7 Lower	237
		9 Permian-Triassic	239
	Paleozoic-Mesozoic		299
3 **Paleozoic**	0	0	300
	Upper Paleozoic		301
	1 Permian	0	310
		1 Upper	311
		4 Middle	314
		7 Lower	317
		9 Pennsylvan.-Permian	319
	2 Pennsylvanian	0	320
		1 Upper	321
		4 Middle	324
		7 Lower	327
		9 Carboniferous	329
	3 Mississippian	0	330
		1 Upper	331
		4 Middle	334
		7 Lower	337
		9 Devonian-Mississipp.	339
	4 Devonian	0	340

			1 Upper	341
			4 Middle	344
			7 Lower	347
			9 Silurian-Devonian	349
		5 Silurian	0	350
			1 Upper	351
			4 Middle	354
			7 Lower	357
			9 Ordovician-Silurian	359
		6 Ordovician	0	360
			1 Upper	361
			4 Middle	364
			7 Lower	367
			9 Cambrian-Ordovician	369
		7 Cambrian	0	370
			1 Upper	371
			4 Middle	374
			7 Lower	377
			9 Proterozoic-Cambrian	379
	Proterozoic-Paleoz.			399
4 Proterozoic		0	0	400
		1 Upper	0	410
		2 Hadrynian	0	420
		4 Middle	0	440
		5 Helikian	0	450
		7 Lower	0	470
		8 Aphebian	0	480
5 Archean		0	0	500
		1 Upper	0	510
		4 Middle	0	540
		7 Lower	0	570
Unknown				***
Total				*80*

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***Appendix IV**: MINFILE Stratigraphic Host Codes*

***Appendix VI**: Terrane Codes, Descriptions and Legend*

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Terrane *(e13.dbf)*	Code
Alexander	AX
Ancestral North America	NA
Barkerville	KOB
Bridge River	BR
Cache Creek	CC
Cadwallader	CD
Cariboo	CAC
Cassiar	CA
Chilliwack	CK
Chugach	CG
Crescent	CR
Dorsey	DY
Harper Ranch	QNH
Harrison	HA
Kootenay	KO
Methow	MT
Monashee	MO
Nisling	NS
Nisultin	KON
Okanagan	QNO
Pacific Rim	PR

Pelly Gneiss	PG
Plutonic Rocks (includes Coast Plutonic Complex)	CPC
Porcupine	PC
Quesnel	QN
Shuksan	SH
Slide Mountain	SM
Stikine	ST
Taku	TU
Undivided Metamorphic Assemblages	M
Windy McKinley	WM
Wrangell	WR
Yakutat	YA

Post Terrane Accretion Overlap Assemblages

Bowser Lake	JBL
Overlap Assemblage	JKT
Gambier	JKG
Inklin	JI
Lewes River	TRL
Takwahoni	JT
Unknown	***

Terrane Map Description *(see Figure 3)*

The data has been compiled by J.O. Wheeler, A.J. Brookfield, H. Gabrielse, J.W. H. Monger, H.W. Tipper, and G.J. Woodsworth from Terrane Map of the Canadian Cordillera, Geological Survey of Canada, Open File 1894, 1988.

"Terranes are bodies of rock, each preserving a geological record different from those of neighboring terranes (Monger and Berg, 1984). Plutonic and metamorphic rocks and mineral deposits may be integral parts of terranes. Terrane boundaries are important faults, although in places these may be concealed by younger cover rocks or intrusions. Paleontological and paleomagnetic data suggest that some currently juxtaposed terranes were originally separated by distances of up to thousands of kilometres." (DNAG, Chapter 2)

Terranes are categorized according to their relationship to ancestral North America. Tectonic assemblages and plutonic suites which make up each terrane are listed using symbols and names from Tectonic Assemblage Map of the Canadian Cordillera and adjacent parts of the United States of America, compiled by J.O. Wheeler and P. McFeely, Geological Survey of Canada, Open File 1565, 1987.

Legend

MIOGEOCLINE

CRATON

NA Ancestral North America

Middle Proterozoic to Carboniferous passive and offshelf continental margin sediments, Devonian to Carboniferous clastic wedges, Pennsylvanian to Jurassic passive continental margin prism, and Permian clastics.

mPCM Cap Mountain, mPM Mackenzie, mPMu Muskwa, mPPW Purcell-Wernecke, uPW Windermere, uPWR Rapitan, uPPI Pinguicula, PCG Gog, PCH Hyland, mCr rift assemblage, CDR Rocky Mountains, DMB Besa River, DME Earn, DMI Imperial, DCR Rundle, CM Mattson, CL Lisburne, CPO Outer, PPI Ishbel, PJ Jungle Creek, TRJS Spray River, JKp Parsons
plutonic rocks: MPgH Hellroaring Creek, MPdM Moyie, LPqD Deserters, LPdM Macdonald, LPdR Rackla, LPdT Thundercloud, Sy Bearpaw Ridge.

TERRANES: geological record, except for displaced continental margin, differs from that of Ancestral North America.

NORTH AMERICAN BASEMENT?

MO Monashee

Craton-related metasedimentary rocks overlying basement paragneiss and orthogneiss of Early Proterozoic age.

lPM Monashee Complex
plutonic rocks: EPnMo Monashee, LPYC Mt. Copeland

MO? Monashee - inferred
IPnV Vaseaux Gneiss

DISPLACED CONTINENTAL MARGIN: stratigraphic record similar to that of adjacent Ancestral North America.

AA Arctic Alaska

Upper Proterozoic and lower Paleozoic miogeoclinal sedimentary, volcanic and granitic rocks unconformably overlain by Lower Carboniferous to Triassic continental margin deposits and displaced along the Kaltag Fault.

uPN Neruokpuk, PCHA Hyland, CDRA Rocky Mountains, DMIA Imperial, CMA Mattson, CLA Lisburne, PTRS Sadlerochit, JKPA Parsons
plutonic rocks: DMqA Ammerman, DMqF Fitton, DMqOC Old Crow, DMqSH Schaeffer, DMqSe Sedgwick.

CA Cassiar

Upper Proterozoic to Upper Triassic passive continental margin sediments displaced along the Tintina and Northern Rocky Mountain Trench transcurrent faults.

uPWC Windermere, PCGC Gog, CDRC Rocky Mountains, DMRC Rundle, DMEC Earn, TRJSC Spray River plutonic rocks: EPnT Tochieka

SUBTERRANE

CAC Cariboo

Upper Proterozoic to Upper Triassic displaced offshelf passive continental margin sediments without characteristic platformal Upper Silurian (?) to Upper Devonian carbonate and sandstone

uPWCA Windermere, PCGCA Gog, CDRCA Rocky Mountains, DMECA Earn, PPICA Ishbel, TRSCA Spray River

NS Nisling

Metamorphosed Proterozoic to lower Paleozoic (?) passive continental margin assemblage and partly metamorphosed carbonaceous and siliceous offshelf sediments.

PCN Nisling, CDN Nasina

PC Porcupine

Continental margin sediments comprising upper Proterozoic clastics overlain by Paleozoic carbonates and clastics intruded by Devonian syenodiorite, and bounded by the Yukon and Kaltag faults.

PCHP Hyland, CDRP Rocky Mountains, CLP Lisburne, CPOP Outer, PJP Jungle Creek, TRJSP Spray River, JKpp Parsons
plutonic rocks: DMYDL Dave Lord

PERICRATONIC: no record of significant displacement but rocks differ in stratigraphic or structural characteristics from the ancient continental margin.

KO Kootenay

Intensely deformed, variably metamorphosed and poorly dated Proterozoic to Triassic, siliceous clastic sediments, subordinate volcanics, and limestone, locally intruded by Ordovician, Devonian, and Mississippian granitoid plutons. Some of the deformed lowest Paleozoic rocks appear to be stratigraphically related to ancestral North American whereas the younger, less deformed rocks do not.

PPzEK Eagle Bay, CMK Milford
plutonic rocks: OSnL Little Shuswap Lake, DMqF Mt. Fowler, DMqC Clachnacuddain.

SUBTERRANES

KO? Kootenay - inferred

Proterozoic continental margin sediments and basement gneiss separated from North American strata by the Purcell and Esplanade thrust faults

lPM Malton, uPW Windermere
plutonic rocks: EPnM Malton, LPgH Hugh Allan, DyI Ice River

KOB Barkerville

Proterozoic and Paleozoic strata which are thrust bounded with and may be a facies equivalent of the Cariboo Subterrane

PPzEK Eagle Bay
plutonic rocks: DMqQ Quesnel Lake

KON Nisutlin

Metamorphosed and intensely cataclastized sedimentary, volcanic and intrusive rocks of Late Proterozoic, Paleozoic and possibly early Mesozoic ages

PTRNK Nisutlin
plutonic rocks: DMgS Simpson Range Suite, EpqSC Sulphur Creek

PG Pelly Gneiss

Muscovite-biotite granite and leucogranite augen gneiss and biotite quartz monzonite orthogneiss of S-type affinity; in part fault bounded. Pelly Gneiss is in fault contact with Nisutlin Subterrane and in an unknown relationship with the Nisling Terrance. It may be included with the Nisutlin Subterrane if correlated by age with the Simpson Range Suite although Pelly Gneiss is compositionally different.

DMgM Mink Creek Suite

ACCRETED TERRANES: represent oceanic or island arc lithologies, generally of unknown Paleogeographic origin, which are clearly allochthons with respect to miogeoclinal strata. These are grouped into the Intermontane and Insular superterranes.

INTERMONTANE SUPERTERRANE: terranes amalgamated by latest Triassic time and accreted to Ancestral North America in the Jurassic.

SM Slide Mountain

Oceanic marginal basin volcanics and sediments of Devonian to Late Triassic age which are basement to Quesnellia in southern B.C.. Included are chert, argillite, sandstone, conglomerate, mafic intrusions, basalt, alpine-type ultramafic rocks, carbonate rocks and local occurrences of blueschist and eclogite. In northern B.C. Permian fusulinids are not found in coeval, co-latitudinal cratonal rocks suggesting terrane movement from the south.

DTRS Slide Mountain
plutonic rocks: DTRuo oceanic ultramafics, DTRd, EPtF and EMtF Four Mile.

DY Dorsey

Carboniferous marginal basin chert and clastics with similar lithology to Slide Mountain Terrane but lacking ultramafics, containing less volcanics and including important conglomeratic units. The terrane may represent a facies of either Quesnel or Slide Mountain terrane.

CD Dorsey

QN Quesnel

Upper Triassic and Lower Jurassic arc volcanics, volcaniclastics and comagmatic intrusive rocks overlain by Jurassic arc-derived clastics. Triassic and Jurassic faunas differ from those in coeval, co-latitudinal cratonal rocks.

TRJN Nicola, JHA Hall
plutonic rocks: LTRup Polaris Suite, EJgG Guichon Suite, EJYCM Copper Mountain Suite

SUBTERRANES: basement to Quesnellia

Harper Ranch

QNH

Upper Devonian to Triassic arc clastics, volcanics and carbonate.

DTRH Harper Ranch

QNO Okanagan

Carboniferous to Permian oceanic volcanics and sediments.

OTRS Shoemaker, CPA Anarchist

CC Cache Creek

Mississippian to Upper Triassic oceanic volcanics and sediments, Upper Triassic island arc volcanics and local accretionary prism melange. Included are radiolarian chert, argillite and basalt, shallow water carbonate and alpine-type ultramafics. The terrane is bounded on the east by the Teslin and Pinchi faults. Permian fusulinid and coral faunas of Tethyan affinity are not found in coeval, co-latitudinal cratonal rocks suggesting an exotic origin.

MTRC Cache Creek, TRKU Kutcho
plutonic rocks: DTRuo oceanic ultramafics

ST Stikine

-

Devonian to Permian arc volcanics and platform carbonates form the basement to Stikinia. They are overlain by Triassic and Lower Jurassic arc volcanics, volcaniclastics, and arc-derived clastics, which are intruded by comagmatic plutonic rocks. Permian, Triassic and Jurassic faunas differ from co-latitudinal cratonal rocks indicating northward terrane displacement.

DPA Asitka, TRS Stuhini, TRL Lewes River, JH Hazelton, JT Takwahoni
plutonic rocks: LTRup Polaris Suite, LTRdS Stikine Suite, TRJgK Klotassin Suite, EJqB Black Lake, EJqCM Copper Mountain Suite, EJq unnamed plutons in Coast Mountains, EJqL Long Lake Suite, EJqT Topley Suite, MJdgT Three Sisters Suite.

WM Windy McKinley

Devonian oceanic sediments and volcanics; Cretaceous blocks

DKWR White River

TERRANES OF THE COAST BELT

TU Taku

Variably metamorphosed upper Paleozoic and Triassic basalt, local acid volcanics, carbonate, pelite and Permian crinoidal limestone. Jurassic to Cretaceous metamorphosed sediments and volcanics are similar to the Gambier (Gravina-Nutzotin) Assemblage. The stratigraphic base of the terrane is unknown and relationships with other terranes are obscured by intrusions and metamorphism.

PKT Taku

CD Cadwallader

Upper Triassic island arc clastics and volcanics (regarded in part by some workers as Stikinia) overlain by Jurassic arc clastics and volcanics, and Jura-Cretaceous easterly derived continental margin clastic wedge of shale and siltstone in Tyaughton Trough.

TRC Cadwallader, JL Ladner, JKR Relay Mountain

MT Methow

Upper Triassic basalt overlain by Lower Jurassic arc clastics and volcanics, and Jurassic and Cretaceous easterly derived clastic wedges shed from Quesnellia

JL Ladner, JKR Relay Mountain, KS Skeena

BR Bridge River

Accretionary prism and oceanic crust of Permian to Middle Jurassic age disrupted and variably metamorphosed radiolarian chert, argillite, basalt, alpine-type ultramafics and minor carbonate and diorite.

PJB Bridge River

HA Harrison

Jurassic island arc volcanics and clastics. Carbonate clasts in Toarcian conglomerate contain Permian fossils similar to those in the Chilliwack Terrane

JHL Harrison Lake

CK Chilliwack

Devonian to Permian arc volcanics and clastics overlain by Upper Triassic to Lower Jurassic arc clastics. Permian fusilinid faunas resemble those in Quesnellia and Stikinia. The Yellow Aster may in part by basement to the Chilliwack Terrane.

DPCH Chilliwack, TRJC Cultus
plutonic rocks: PPnV Vedder, COnY Yellow Aster.

SH Shuksan

Upper Triassic and Lower Jurassic oceanic crust and sediments metamorphosed to greenschist and blueschist and Jurassic near arc oceanic marginal basin crust and sediments

TRJSE Settler, JS Shuksan

INSULAR SUPERTERRANE: terranes amalgamated by Late Jurassic to earliest Cretaceous time and accreted to continental margin in the Cretaceous.

AX Alexander

Upper Proterozoic to Triassic volcanic and sedimentary rocks in a variety of depositional settings (ocean arc, back arc, platform, rift, trough, offshelf) and comagmatic intrusions.

PCW Wales, OSD Descon, ODD Donjek, ODK Kaskawulsh, OTRA Alexander, DC Cedar Cove, DK Karheen, DPC Cannery, CI Iyoukeen, PH Halleck, PP Pybus, PTRA Alexander, TRH Hyd
plutonic rocks: COd in St. Elias, OSg, OSd, Sy and Sum in S.E. Alaska, PPgI Icefield Ranges Suite.

WR Wrangell

Silurian to Permian arc volcanics, clastics and platform carbonates form the basement to Wrangellia; they are overlain by Triassic oceanic rift tholeiitic basalt, carbonate and Jurassic arc volcanics, and intruded by comagmatic plutons. Paleomagnetic data suggest displacement from low latitudes.

DPS Sicker, PPS Skolai, TRK Karmutsen, JB Bonanza
plutonic rocks: DgS Saltspring, EJdW, EJnW Westcoast Complex, MJgV Vancouver Island Suite, MJg Chichagof Island

OUTER TERRANES: Mesozoic and Tertiary accretionary prisms

CG Chugach

Cretaceous accretionary prism of greywacke, argillite, and melange of Triassic to Lower Cretaceous blocks in a Lower Cretaceous matrix.

KV Valdez

YA Yakutat

Upper Cretaceous turbidite and melange of Upper Triassic to Lower Cretaceous blocks in a Cretaceous matrix.

uKY Yakutat, pTM Metchosin, pTC Carmanah, nTY Yakataga

PR Pacific Rim

Melange and chert-volcanics assemblage on Upper Triassic calc-alkaline arc volcanics

JKPR Pacific Rim

CR Crescent

Pull-apart basin ridge-island Eocene volcanics cut by gabbro and diabase intrusions

pTM Metchosin
plutonic rocks: ETgC Catface Suite

ROCKS EXCLUDED FROM TERRANE CLASSIFICATION:

METAMORPHIC ASSEMBLAGES

m undivided metamorphic assemblages

PLUTONIC ROCKS

CPC All post-terrane accretion intrusives

POST-TERRANE ACCRETION OVERLAP ASSEMBLAGES HIGHLIGHTED ON MAP:

TRL Lewes River (on Cache Creek Terrane)
JBL Bowser Lake (on Stikine Terrane)
JI Inklin (on Cache Creek Terrane)
JT Takwahoni (on Cache Creek Terrane)
JKG Gambier (in Coast Belt)

POST TERRANE ACCRETION OVERLAP ASSEMBLAGES UNDIFFERENTIATED ON MAP

JKT **Cratonal overlap:**
Related to the collision of the Intermontane Superterrane with Ancestral North America, and with subsequent intraplate deformation.

JKK Kootenay, mKB Blairmore, mKS South Fork, uKS Smoky, uKT Trevor, KTB Brazeau, pTMC Moose Channel, pTR Reindeer, nTB Beaufort, nTF Fraser, Q Quaternary

Terrane overlap:
Indicate latest times of assembly of various components of the superterranes and the time of collision between the Insular and Intermontane superterranes.

JKR Relay Mountain, lKL Longarm, KS Skeena, mKS South Fork, uKH Honna, uKM Midnight Peak, uKV Virginian Ridge, uKC Carmacks, KTN Nanaimo, pTA Amphitheatre, pTC Carmanah, pTK Kamloops, pTS Sifton, nTA Alert Bay, nTC Chilcontin, nTF Fraser, nTp Pemberton, nTS Skonun, TQA Anahim, TQE Edziza, TQG Garibaldi, TQW Wrangell, QC Clearwater, Q Quaternary.

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1 ounce (troy)	= 31.1034768 grams.		
1 troy ounce per short ton	= 34.2857 grams per metric tonne	= 34.2857 ppm	
1 gram per metric tonne	= 0.0292 troy ounce per short ton		
1 kilogram (kg)	= 32.151 ounces (troy)	35.274 ounces (avdp)	2.205 pounds (avdp)
1 ounce (avdp)	= 28.3495 grams		

i.e. 1 troy ounce = 31.103481 grams but a troy ounce/ton using a conversion of 31.103481 gives you only GRAMS PER SHORT TON. To complete the metric conversion you must also convert short tons to tonnes using the conversion factor 0.9071. So: 31.103481 grams per ton 0.9071 = 34.2857 grams per tonne.

1 inch (in)	= 2.54 centimetres		
1 foot (ft)	= 0.3048 metres		
1 cubic foot (cu ft)	= 0.028 cubic metres		
1 yard (yd)	= 91.44 centimetres	0,9144 metres	
1 metre (m)	= 39.370 inches	3.28083 feet	1.094 yards
1 mile (mi)	= 1.6093 kilometres	1609.3 metres	
1 kilometre (km)	= 0.621371 miles	3280 feet	1000 metres
1 acre (ac)	= 0.4047 hectares		
1 hectare (ha)	= 2.471 acres	10,000 square metres	0.00386 square miles
1 square kilometre (sq km)	= 247.1 acres	100 hectares	0.3861 square miles
1 square mile (sq mi)	= 640 acres	258.99 hectares	2.59 square kilometres
1 litre (l)	= 0.220 gallons (imperial)	0.880 quarts (imperial)	
1 litre (l)	= 100 cubic centimetres	61.025 cubic inches	
1 kilogram (kg)	= 2.2045855 pounds		
1 metric ton (1000 kg)	= 0.9842 tons (long)	1.102311 tons (short)	2204.622 pounds
1 long ton (l t)	= 1.01605 tonne	2240 pounds (lb)	
1 short ton (s t)	= 0.90718474 tonne	2000 pounds (lb)	
1 pound (lb)	= 0.45359237 kilograms		

Degrees Fahrenheit (oF) - 32x5/9 = Degrees Celsius (oC)

To Convert		To Obtain	Multiply By
Aluminium	Al	Al_2O_3	1.8895
Antimony	Sb	Sb_2O_3	1.1971
Arsenic	As	As_2O_3	1.3203
	As	As_2O_5	1.534
Barium	Ba	$BaSO_4$	1.6994
	Ba	BaO	1.117

Beryllium	Be	BeO	2.775
Bismuth	Bi	Bi_2O_3	1.1148
Boron	B	B_2O_3	3.2199
Cadmium	Cd	CdO	1.1424
Calcium	Ca	$CaCO_3$	2.4973
	Ca	CaO	1.399
	Ca	CaF_2	1.9481
Cerium	Ce	CeO_2	1.2284
	Ce	Ce_2O_3	1.171
Cesium	Cs	Cs_2O	1.060
Chromium	Cr	Cr_2O_3	1.4616
Cobalt	Co	Co_3O_4	1.3620
	Co	CoO	1.271
Copper	Cu	CuO	1.2518
Fluorine	F	CaF_2	2.0549
Hafnumu	Hf	HfO_2	1.1793
Iron	Fe	Fe_2O_3	1.4297
	Fe	Fe_3O_4	1.382
	Fe	FeO	1.2865
	Fe	FeS	1.5741
Lanthanum	La	La_2O_3	1.1728
Lead	Pb	PbO	1.0772
	Pb	PbS	1.1547
Lithium	Li	Li_2CO_3	5.3240
	Li	Li_2O	2.153
Magnesium	Mg	$MgCO_3$	3.4683
	Mg	MgO	1.6581
Manganese	Mn	MnO	1.2912
	Mn	MnO_2	1.582
Mercury	Hg	HgO	1.0798
	Hg	HgS	1.1598
Molybdenum	Mo	MoS_2	1.6681
	Mo	MoO_3	1.500
Nickel	Ni	NiO	1.2725
Niobium	Nb	Nb_2O_5	1.4305
Phosphorus	P	P_2O_5	2.2914
	$P_2O_5Ca_3$	$(PO_4)_2$	2.1852
Potassium	K	K_2O	1.2046
Rubidum	Rb	Rb_2O	1.094
Silicon	Si	SiO_2	2.1393
Sodium	Na	NaCl	2.5421
	Na	Na_2O	1.348
Strontium	Sr	SrO	1.185
	Sr	$SrSO_4$	2.0963
Tantalum	Ta	Ta_2O_5	1.2211
Thorium	Th	ThO_2	1.1379
Tin	Sn	SnO_2	1.2696
Titanium	Ti	TiO_2	1.6681
Tungsten	W	WO_3	1.2611
Uranium	U	U_3O_8	1.1792
	U	UO_3	1.202

	U	UO_2	1.134
Vanadium	V	V_2O_5	1.7852
Yittrium	Y	Y_2O_3	1.270
Zinc	Zn	ZnO	1.2448
	Zn	ZnS	1.490
Zirconium	Zr	ZrO_2	1.3508

---

1 ounce (troy)	= 31.1034768 grams.		
1 troy ounce per short ton	= 34.2857 grams per tonne	34.2857 ppm	
1 gram per tonne	= 0.0292 troy ounce per short ton		
1 kilogram (kg)	= 32.151 ounces (troy)	35.274 ounces (avdp)	2.205 pounds (avdp)
1 ounce (avdp)	= 28.3495 grams		

i.e. 1 troy ounce = 31.103481 grams but a troy ounce/ton using a conversion of 31.103481 gives you only GRAMS PER SHORT TON. To complete the metric conversion you must also convert short tons to tonnes using the conversion factor 0.9071. So: 31.103481 grams per ton 0.9071 = 34.2857 grams per tonne.

---

1 inch (in)	= 2.54 centimetres		
1 foot (ft)	= 0.3048 metres		
1 cubic foot (cu ft)	= 0.028 cubic metres		
1 yard (yd)	= 91.44 centimetres	0,9144 metres	
1 metre (m)	= 39.370 inches	3.28083 feet	1.094 yards
1 mile (mi)	= 1.6093 kilometres	1609.3 metres	
1 kilometre (km)	= 0.621371 miles	3280 feet	1000 metres
1 acre (ac)	= 0.4047 hectares		
1 hectare (ha)	= 2.471 acres	10,000 square metres	0.00386 square miles
1 square kilometre (sq km)	= 247.1 acres	100 hectares	0.3861 square miles
1 square mile (sq mi)	= 640 acres	258.99 hectares	2.59 square kilometres
1 litre (l)	= 0.220 gallons (imperial)	0.880 quarts (imperial)	
1 litre (l)	= 100 cubic centimetres	61.025 cubic inches	
1 kilogram (kg)	= 2.205 pounds		
1 metric ton (tonne)	= 0.9842 tons (long)	1.102311 tons (short)	2204.622 pounds
1 long ton (l t)	= 1.01605 tonne	2240 pounds (lb)	
1 short ton (s t)	= 0.90718474 tonne	2000 pounds (lb)	
1 pound (lb)	= 0.45359237 kilograms		

Degrees Fahrenheit (oF) - 32x5/9 = Degrees Celsius (oC)

1 ppm	= 1000 ppb	
1%	= 10,000 ppm	
1 nano gram/g	= 1 ppb	solids
1 micro gram/gl	= 1 ppm	solids
1 mg/l	= 1 ppm	liquids
1 micro g/l	= 1 ppb	liquids
1 micro g/ml	= 1 ppm	liquids

To Convert		**To Obtain**	**Multiply By**
Aluminium	Al	Al_2O_3	1.8895
Antimony	Sb	Sb_2O_3	1.1971
Arsenic	As	As_2O_3	1.3203

	As	As_2O_5	1.534
Barium	Ba	$BaSO_4$	1.6994
	Ba	BaO	1.117
Beryllium	Be	BeO	2.775
Bismuth	Bi	Bi_2O_3	1.1148
Boron	B	B_2O_3	3.2199
Cadmium	Cd	CdO	1.1424
Calcium	Ca	$CaCO_3$	2.4973
	Ca	CaO	1.399
	Ca	CaF_2	1.9481
Cerium	Ce	CeO_2	1.2284
	Ce	Ce_2O_3	1.171
Cesium	Cs	Cs_2O	1.060
Chromium	Cr	Cr_2O_3	1.4616
Cobalt	Co	Co_3O_4	1.3620
	Co	CoO	1.271
Copper	Cu	CuO	1.2518
Fluorine	F	CaF_2	2.0549
Hafnumu	Hf	HfO_2	1.1793
Iron	Fe	Fe_2O_3	1.4297
	Fe	Fe_3O_4	1.382
	Fe	FeO	1.2865
	Fe	FeS	1.5741
Lanthanum	La	La_2O_3	1.1728
Lead	Pb	PbO	1.0772
	Pb	PbS	1.1547
Lithium	Li	Li_2CO_3	5.3240
	Li	Li_2O	2.153
Magnesium	Mg	$MgCO_3$	3.4683
	Mg	MgO	1.6581
Manganese	Mn	MnO	1.2912
	Mn	MnO_2	1.582
Mercury	Hg	HgO	1.0798
	Hg	HgS	1.1598
Molybdenum	Mo	MoS_2	1.6681
	Mo	MoO_3	1.500
Nickel	Ni	NiO	1.2725
Niobium	Nb	Nb_2O_5	1.4305
Phosphorus	P	P_2O_5	2.2914
	$P_2O_5Ca_3$	$(PO_4)_2$	2.1852
Potassium	K	K_2O	1.2046
Rubidum	Rb	Rb_2O	1.094
Silicon	Si	SiO_2	2.1393
Sodium	Na	NaCl	2.5421
	Na	Na_2O	1.348
Strontium	Sr	SrO	1.185
	Sr	$SrSO_4$	2.0963
Tantalum	Ta	Ta_2O_5	1.2211
Thorium	Th	ThO_2	1.1379
Tin	Sn	SnO_2	1.2696
Titanium	Ti	TiO_2	1.6681

Tungsten	W	WO_3	1.2611
Uranium	U	U_3O_8	1.1792
	U	UO_3	1.202
	U	UO_2	1.134
Vanadium	V	V_2O_5	1.7852
Yittrium	Y	Y_2O_3	1.270
Zinc	Zn	ZnO	1.2448
	Zn	ZnS	1.490
Zirconium	Zr	ZrO_2	1.3508

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***Appendix VI**: Terrane Codes, Descriptions and Legend*

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Historic Mineral Name	Current Alias
Alumina	= Aluminum oxide
Antimonite	= Stibnite
Antimony glance	= Stibnite
Barytes	= Barite
Blue John	= Fluorite (purple/blue)
Blackjack	= Sphalerite
Brimstone	= Sulphur
Calamine	= Hemimorphite (+ Smithsonite, Hydrozincite oxide zinc ores)
Calcium Tungstate	= Scheelite
Calcspar	= Calcite
Cave Cotton	= Gypsum
Chrome Mica	= Fuchsite and/or Mariposite
Copper Carbonate-blue (or Blue Copper Ore)	= Azurite
Copper Carbonate-green	= Malachite
Copper Glance	= Chalcocite
Cobalt Bloom	= Erythrite
Electrum	= Amalgum of native gold & silver
Emery	= Spinel
Epsom Salt	= Magnesium Sulphate
Fool's Gold	= Usually chalcopyrite but may be pyrite or sometimes sericite
Flint	= Silica
Fluorspar	= Fluorite
Glauber's Salt	= Magnesium Sulphate
Green Lead Ore	= Pyromorphite (Apatite (Pb5(PO4)5Cl))
Gray Antimony	= Stibnite
Gray Copper	= Tetrahedrite
Horseflesh Ore	= Bornite
Herkimer Diamond	= Quartz crystal
Heavy Spar	= Barite (or Feldspar)
Iron Glance	= Hematite (specularite)
Iron Spar	= Siderite
Iceland Spar	= Calcite
Kupfernickel	= Niccolite
Lodestone	= Magnetite
Mispickel	= Arsenopyrite
Mountain Leather or Mountain Cork	= Weathered Asbestos

Molybdenum Bloom	= Powellite
Nickel Bloom	= Annabergite
Nickel Glance	= Gersdorffite
Peacock Copper	= Bornite
Ruby Silver	= Pyrargyrite
Salt Cake	= Sodium sulphate
Silver Glance	= Tetrahedrite
Silicate of Copper	= Chrysocolla
Spathic Iron	= Siderite
Sulphide of Copper & Silver	= Stromeyerite (50% Cu & 32% Ag)
Tiff	= Calcite or Barite
Tinstone	= Cassiterite
Titanic Iron Ore	= Ilmenite
Tripoli	= Diatomite
Wad	= Manganese Oxide
White Lead Ore	= Cerussite
White Pyrite	= Marcasite
Wood Tin	= Botryoidal Cassiterite
Yellow Copper	= Chalcopyrite
Yellow Lead Ore	= Wulfenite
Yellow Arsenic	= Orpiment
Zinc Blende	= Sphalerite
Zinc Spar	= Smithsonite

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General Type	Specific Type	Work Type	Work Type Unit of Measurement
Geological	General or unknown	GEOL	Hectares
	Photo	FOTO	Hectares
	Petrographic	PETR	Number of sample(s)
	Mineralographic	MNGR	Number of sample(s)
Geophysical	General or Unknown	GEOP	Kilometres
	Magnetic, ground	MAGG	Kilometres
	Magnetic, airborne	MAGA	Kilometres
	Electromagnetic, ground	EMGR	Kilometres
	Electromagnetic, airborne	EMAB	Kilometres
	Induced Polarization	IPOL	Kilometres
	Radiometric, ground	RADG	Kilometres
	Radiometric, airborne	RADA	Kilometres
	Seismic	SEIS	Kilometres
	Dip needle	DIPN	Kilometres
	Self potential	SPOT	Kilometres
	Gravity	GRAV	Kilometres
	Resistivity (alone)	REST	Kilometres
	Mise-a-la-masse	MALM	Metres
	Scintillometer, ground	SCGR	Kilometres
	Scintillometer, airborne	SCAB	Kilometres
	Gamma ray spectrometer, ground	GRSG	Kilometres
	Gamma ray spectrometer, airborne	GRSA	Kilometres
	Radiometric drill hole probing	RADP	Metres
	Radon gas scintillometry	RGAS	Kilometres
	Radar	RADR	Kilometres
	Infra-red	INFR	Kilometres
Geochemical	General or unknown	GEOC	
	Fission track etch	ETCH	Number of sample(s)
	Soil	SOIL	Number of sample(s)
	Silt	SILT	Number of sample(s)
	Rock	ROCK	Number of sample(s)
	Heavy minerals	HMIN	Number of sample(s)
	Sampling/assaying	SAMP	Number of sample(s)
	Metallurgic	META	Number of sample(s)
	Water	HYDG	Number of sample(s)
	Biogeochemistry	BIOG	Number of sample(s)
Drilling	General or unknown	DRIL	Metres/number of holes
	Diamond (surface)	DIAD	Metres/number of holes
	Diamond (underground)	UNDD	Metres/number of holes
	Percussion	PERD	Metres/number of holes
	Rotary	ROTD	Metres/number of holes
	Becker Hammer	BHDR	Metres/number of holes
	Churn	CHUD	Metres/number of holes
	Overburden	OBDR	Metres/number of holes
Prospecting	Prospecting	PROS	Hectares
Physical	General or unknown	PHYS	
	Legal surveys	LSUR	Kilometres
	Topographic/photogrammetric	TOPO	Hectares
	Line/grid	LINE	Kilometres
	Road, local access	ROAD	Kilometres
	Trench	TREN	Metres/number of trenches

Underground development	UNDV	Metres
Reclamation	RECL	Hectares
Trail	TRAL	Kilometres
Underground surveys	USUR	Metres
Stripping	STRI	Hectares
Pits	PITS	Number of pits(s)
Sluicing/Panning	SLUC	Amount
Staking	STAK	Number of claims
Crown Granted	CGRT	Number of crown grants
Rail	RAIL	Kilometres
Tram Lines	TRAM	Kilometres
Mill Construction	MILL	-----
Rehabilitation	RHAB	-----
Mining/Milling Production	MINE	-----
Feasibility Study	FEAS	-----

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INTRODUCTION

The following are guidelines for the methodology, writing and editing procedures, and materials used by the MINFILE team. All data must be entered using MINFILE/pc. A hard copy (i.e. completed coding card or printout of digital version) must accompany the digital version and this must contain a Work History section (use the Capsule Geology field). Before coding begins, please ensure that the following documentation has been read and any questions have been addressed. The objective of the MINFILE project is to maintain a data set that is as accurate and complete as possible.

Document Subject

MINFILE Coding Manual, Information Circular 2004-3 Coding rules
MINFILE/pc V.4.5 User's Manual, Information Circular 2004-4 Search/Report/Data Entry
GSB Style Guide, Information Circular 1992-7 Writing/Editing

MINFILE office: 5th Floor, 1810 Blanshard Street, Victoria, B.C. V8V 1X4
Contacts: Ian Webster; Phone (250) 952-0433; Fax (250) 952-0381; e-mail: Ian.Webster@gov.bc.ca
Laura deGroot (250) 952-0387; Laura.DeGroot@gov.bc.ca
Larry Jones (250) 952-0386; Larry.Jones@gov.bc.ca

CODING AND EDITING PROCEDURE

The following is the suggested procedure to assist in the gathering and coding of information for a 1:250 000 scale or 1:100 000 scale National Topographic System (NTS) map sheets for the MINFILE database. This procedure should be used as a guide; detailed information is available in the appropriate sections of the Coding Manual.

1) Assemble general NTS map sheet information.

- All 1:50 000 scale topographic maps (located in Property File or obtained from Maps B.C.).
- Various scale geology maps (located in Property File or Publications).
- Current geological compilation map and legend (obtained from GSB or GSC).
- 1:50 000 claim maps of active areas (obtained from Mineral Titles).
- Assessment Report map, index and fiche.
- Regional publications such as Papers, Bulletins, Memoirs, Fieldwork - see GSC, EMPR, and GEOSCAN indexes.

- General Property File on the NTS area, including NMI Cards.
- Current MINFILE or Mineral Inventory Map (MI) - On this map, plot, if practical, terranes, physiographic areas, mining divisions, and tectonic belts. Enlarging the existing small-scale map will help. The following are the small-scale maps currently being used in MINFILE:

Physiographic Map of the Canadian Cordillera, W.H. Mathews, 1986, Geological Survey of Canada Map 1701A, Scale 1:5 000 000.

Tectonic Assemblage Map of the Canadian Cordillera and adjacent parts of the United States of America, J.O. Wheeler and P. McFeely (comp.), 1991, Geological Survey of Canada Map 1712A, Scale 1:2 000 000.

Terrane Map of the Canadian Cordillera, J.O. Wheeler, et. al. (comp.), 1991, Geological Survey of Canada Map 1713A, Scale 1:2 000 000.

Metamorphic Map of the Canadian Cordillera, P.B. Read, 1991, Geological Survey of Canada, Map 1714, Scale 1:2 000 000.

2) Obtain existing mineral occurrence information within the NTS map sheet.

- Master Report of old MINFILE data (from Database Manager).
- National Mineral Inventory (NMI) Cards (located in the Property File).
- Other mineral indexes and compilations.

3) Communicate with field and expert geologists.

- Inform them you are working on the area.
- Obtain access to their mineral files, compilations, papers.
- Obtain current geological nomenclature of the area.
- Request a list of occurrences visited and which ones will be written up by Geological Survey Branch staff.

4) Begin coding by 'Mining or Exploration' Camps or by areas of similar geology.

- Compile a brief, general geological picture of the area, i.e. terranes, rock groups and formations, lithologies, structure, etc.

5) Build references on individual occurrences.

- Use existing references from MINFILE, NMI, and other sources, as a guideline and verify that these refer to the occurrence.
- Check expert geologist's files, assessment reports, annual reports, government publications, university theses, Property File (clippings, press releases, prospectuses, articles, etc.).
- Star (*) the important references and set these aside for use in the Capsule Geology description.
- With less important references, document the information and fill the various data fields.
- Scan assessment reports occurring in the area of interest and make a quick note on pertinent information, such as, claims covered, area worked, work done, company name, year of work. This may save time when compiling work history.
- All assessment reports on the map sheet should be reviewed.
- Try to group references to make bibliographies consistent. The general format is as follows:

EMPR AR; GEM; EXPL; ASS RPT; Articles; etc.
EMPR PF (Standard reference format: Name (year): Title, Source)
GSC BULL; MEM; OF; MAP; etc.

Periodicals, N. Miner, Theses, etc.

6) Locate occurrence accurately.

- Choose the occurrence location from the most accurate reference and plot it on a 1:50 000 scale topographic map.
- Give a brief physiographic comment on the location and identify the source for your location. (e.g. Adit portal, east side of Yellow Creek, Assessment Report 1654, Figure 2).
- Proper identification and location of the occurrence is important as it is easy to confuse occurrences (e.g. same occurrence but different names or different occurrence but same characteristics).
- For new occurrences or corrected locations, insert an accurate plot on a page-size copy of the map area.
- Please check the Coding Manual for the definitions of the Status designations.

7) Complete Data fields.

- Separate and rank the data (mineralogy, deposit character and classification, lithology) into the various fields. Provide lithological synonyms if required.

8) Occurrence Name(s).

- The first name should be the most significant or currently used one. All names related to the occurrence should follow, including group names, claim names, place names, etc.

9) Assigning the Host Rock.

- Include up to two Formal and two Informal hosts that contain mineralization or are related to mineralization.
- The lithology field must be ranked in order of importance with respect to the mineralization.
- If the Isotopic age field is filled in, a source for that information must be included in the comment field.
- The most specific stratigraphic age is coded, but others are commented on (e.g. Cache Creek Group, Horsefeed Formation would be coded as upper Mississippian to Permian even though the Cache Creek Group ranges from Carboniferous to Jurassic; this would be mentioned in the Capsule Geology or Comment field.

10) Inventory.

- The inventory figures or assay results from a representative sample must be included, if available.
- Cutoff grades, sample intervals, drillhole intersections etc. must be included in the comment field.
- The source for the figures must be included in the reference field.

11) Production.

- Production field information is provided by the Land Management and Policy Branch (BC METAL). However, other data obtained during research may be included as long as the source is identified in the Comment/Reference field.
- Try to separate, if possible, production originating from other occurrences.

12) Work History.

- This data is temporarily collected in the Confidential field. The data structure will be established.

- This section must be completed in an organized fashion.
- The assessment report number should be listed in the comment field for work done.

13) MINFILE Maps.

- Plot the occurrence on the old MINFILE map and add or change the legend.
- Run a SDF file using MINFILE/pc and check it (using DBASE or FOXPLUS) for errors (i.e. check that the latitude/longitude correspond with the NTS map coded, ensure that commodities and status fields are completed).
- Compile and draft the geology layer (the geology legend should be input in MS Word). The geology layer should be digitized using GSB standards in AutoCad
- Update Assessment Report Index map, if required.

14) Confidential Information.

- Indicate on the card or printout the confidential information and the date it comes off confidential. It stays in a holding file until this date, then it will be entered into the computer.

15) New/Revision/Modified - Coded by/Coding date.

- These are coding activities:

  New - add a new occurrence.
  Revise - change existing occurrence.
  Add - append to existing data.
  Delete - delete occurrence due to duplication or lack of verification.

- Initial and date occurrence.

16) Capsule Geology.

- A file is automatically created when a Capsule Geology is created. The file can be retrieved at any time from the MINFILE/TEMP directory. The files are named as follows: the first character off the front of the MINFILE Number is dropped; if quadrants are not used for a particular map sheet substitute "XX" for quadrants, and use file extension .CAP for Capsule Geology files and .BIB for Bibliography files. Examples of file names are: 82ENE023.CAP, 92JWX001.BIB, 04PXX123.CAP. When entering the Capsule Geology through the MINFILE/pc V.4.0 Data Entry System, the files will automatically be named properly.
- Editors used inside the MINFILE/pc Data Entry System in the Capsule Geology field (also the Identification comment and Bibliography fields) are set up when the software is installed.
- Begin the Capsule Geology by naming the occurrence and briefly describing its geographic location.
- A synopsis of the exploration history should be included, particularly for major occurrences but generally not for minor occurrences.
- Provide a brief regional geology followed by a detailed geology and mineralization description.
- Also include representative assays or reserves/resources, with references, and/or past production figures.
- Use standard ASCII characters.
- Field length is 70 characters.
- Use both upper and lower case characters for text.
- Always type the word MINFILE in capitals.
- Ensure that you distinguish between the letter "O" and the number "0".
- Always convert any figures to metric units.

- Use the Geological Survey Branch Style Guide (Information Circular 1992-7), for details on Sentence Structure, Spelling, Capitalization, Punctuation, and Hyphenation. Some common errors are:

  Spelling: metres (not meters)
  per cent (not percent)
  axis (not axes)
  dikes (not dykes)

- Capitalization: Upper Devonian (not upper Devonian)
- Hyphenation: fine-grained granite (should have a hyphen)
  metavolcanics (should not have a hyphen)
- Hangingwall and footwall are single words.
- If there are three directions as in NNW, type it out the long way and place the hyphen between the first and second direction, e.g. north-northwest.
- Leave two spaces after a period at the end of a sentence.
- Indent five spaces at the beginning of a paragraph, but do not use the tab key to do this.
- Do not leave blank lines between paragraphs.
- When specifying a measurement that is less than one metre, include a zero before the decimal point; the unit is singular, e.g. 0.5 metre.
- When a measurement is written as 23 X 25 km. type it as 23 by 25 kilometres.
- If you have a range of per cent, e.g. 20 to 25, when you type it you only need to include the words per cent once, e.g. 20 to 25 per cent. This also applies to degrees and minutes.
- If you have extracted information from a confidential Assessment Report, please clearly mark the information, including the date in which the information is off-confidential (usually one year after the Affidavit Date).
- When referring to a reference at the end of a paragraph, the short form that is used in the bibliography section should not be used; the rule is to drop any of the Ministry's headings, e.g. EMPR, and use the full form of whatever followed the EMPR, e.g. EMPR ASS RPT 1180, would become Assessment Report 1180. This rule also applies to the Identity Screen comment area and the Reserves/resources Reference area. Also please note that these references need not be as complete as in the bibliography section, their aim is only to lead you to the bibliography where you can check for necessary page numbers, dates or map numbers.

17) Bibliography.

- Use upper case characters for abbreviations to publications as listed in the Coding Manual to MINFILE.
- To continue a line of bibliography leave 3 leading spaces at the beginning of the next line.
- When typing in EMPR BULL and it has a year in brackets with it, only include the year if it is 1940 or earlier, e.g. (1936).
- Always use hyphens with the following: EMPR EXPL 1977-33; EMPR GEM 1981-252; EMPR AR 1900-122; 1901-383 etc.
- Use page numbers with the following: EMPR FIELDWORK 1977, p. 9; GSC MEM 223, p. 117; GSC BULL 10, pp. 203-204; EMPR BULL 27, p. 389; GSC SUM RPT 1938, pp. 412, 835, 901; GSC P 36 -17, p. 10.
- If there are two of the same headings, e.g. GSC MEM 217, p. 118; and GSC MEM 110; join them together as GSC MEM 110; 217, p. 118.
- If referring to more than one page number use "pp." not "p."
- All lists of references are divided by a semicolon (;) not a comma with the exception of the EMPR Assessment Reports which are separated by commas.
- Order the items numerically from the lowest to highest, e.g. EMPR ASS RPT 1011, 3889, 14000, 14009.
- When including information from the Property File, place all of the reference material in round brackets, e.g. EMPR PF (Smith, B.J. (1939): Report on the Mining at Coal Creek; *Baits, U.K. (1945): Report on the Diamond Drill Hole at Smithers).
- For important references, the asterisk should be placed before the year or the name, not at the front of the line e.g. EMPR PF (*Smith, B.J. (1939)...)

18) NTS Map Sheet Summaries.

- A 1 to 2 page summary of the NTS map sheet must be written. The summaries should state how many occurrences are documented in the area, the geology of the area and the important deposits and/or mines (including production or development phase). Contact the MINFILE office for examples and/or further information.
- General references should be included with the summaries.
- These should be done separately from the occurrence (i.e. NOT entered using MINFILE/pc V. 4.0) using MS Word.

19) Editing.

MINFILE is a large and complex relational database. In the process of making the MINFILE product as accurate and consistent as possible, all coded material is edited before and after input to the database. However, due to the large volume of data, it is necessary for each coder to ensure their work is as complete and error free as possible. The following are some general guidelines to assist in the editing process and they should be applied to all occurrence descriptions before submission to the MINFILE database.

i) Style:

The Mineral Resources Division, Geological Survey Branch Style Guide should be referred to for details on sentence structure, spelling, punctuation, word usage, etc.

- Abbreviations are NOT to be used in any text fields unless absolutely necessary.
- Measurements of fractional values must be presented in decimal format with a zero placed before the decimal.
- Information extracted from confidential sources must be clearly marked and the reference and confidentiality period must be identified.
- Some common usage to be checked:

North Trending	not	North-South Trending
Southeast	not	Southeasterly
Sulphide	not	Sulfide
Striking 065 degrees	not	Striking north 65 degrees east
Jurassic Hazelton Group	not	Hazelton Group of Jurassic age
23 by 300 metres	not	23 X 300 m.
20 to 25 per cent	not	20% to 25%
"close to" or "near"	not	"in close proximity to"
gossanous	preferred to	rusty

ii) Deletions:

If you delete a MINFILE occurrence from the database, a coding form should be submitted identifying the MINFILE Number and the occurrence name. Clearly identify the reason for deleting the occurrence on the front of the form (e.g. Combined with another occurrence (identify); not sufficient documentation to warrant an occurrence; located on a different map sheet, etc.). Under no circumstances are veins or old workings to be coded as MINFILE occurrences unless mineralization of economic interest is documented.

iii) Occurrence Names:

- Is the primary name consistent with the common usage for that occurrence?
- Are the names in order of significance?

- Primary occurrence names within a map sheet must not be duplicated. If unavoidable, identify them by the correct name plus a number (e.g. Debbie 1, Debbie 2, Debbie 3, etc.).
- If MINFILE numbers are used as references in text fields, comments etc. the MINFILE name must be included.

iv) Status:

- Does Status conform to Production and Reserve/resource data? If production or reserve/resource data is present the status should indicate a "developed prospect", "producer" or "past producer" etc., not a "showing". Bulk samples for testing or very small scale single event mining activity does not warrant classification of an occurrence as a past producer.

v) Location:

- Is the NTS Map Sheet consistent with the Latitude/Longitude information?
- Have you double checked the location data? Coordinates must be derived from 1:50 000 scale government topographic maps or larger scale sources.
- Identity comment should indicate if you are identifying the location of a claim group, actual outcropping mineralization, mine portal, etc.

vi) Commodities:

- Are commodities consistent with Significant Minerals field?
- Are commodities coded in order of abundance/importance?
- Are commodities consistent with Production/Reserve/Resource data?

vii) Mineralogy:

- Are all minerals considered important coded in the Significant Minerals field? Minerals identified as such DO NOT have to be present in economically recoverable amounts.
- Are minerals in order of importance?
- Do the Alteration Types reflect the Alteration Minerals.
- Have all Alteration Minerals (particularly oxides) also been identified in the Significant or Associated fields if appropriate.
- Synonyms for minerals (and rocks) should be avoided (e.g. Fluorite and Fluorspar).

viii) Deposit Descriptions:

- All characteristics of MINFILE occurrences described in the Capsule Geology should be identified in the Deposit Character, Classification and Type fields. These should be ranked in order of importance.

ix) Host Rock:

- Have you identified the one "Dominant Host Rock" type for the economic mineralization and is it consistent with the Rock Type/Lithology data?
- Are Formal/Informal Host Rocks consistent with "Terrane" and "Tectonic Belt" information from occurrence to occurrence within a map area?
- Is the hostrock age consistent with the age described in the Capsule Geology?
- Is the stratigraphic data used consistent with the most current stratigraphic nomenclature for the map area?
- Are all significant rock types identified by correct codes and are all appropriate Modifier Codes identified? Remember: a database search can be done for either rock types or modifiers or any combination of the two, so it is important to include as much detail as is appropriate for these fields. Rocks hosting mineralization should be coded first.

x) Metamorphism:

- Is the "Type" and "Grade" of metamorphism consistent with the alteration mineralogy and setting described elsewhere in the database?

xi) Capsule Geology:

The Capsule Geology is a compilation and interpretation of all data coded to the various data fields. It is particularly important to check the following:

- All rock types, minerals, commodities, alteration types, Formal and Informal Hosts, deposit classification and characteristics, etc. identified in the geology text must also be coded in the appropriate data fields and vice versa.
- All measurements are to be in METRIC units.
- Are reserves/resources and assays quoted consistent with data in Production and Reserves/resources sections?
- Generalizations should be avoided: e.g. Sulphides, mineralization, alteration, etc. should be defined in terms of specific rocks and minerals, etc.

xii) Bibliography:

- Is the bibliography complete? Does it include all recent publications, particularly Open Files and Assessment Reports?
- Are more regional references included which may clarify the geological setting of the deposit?
- Are abbreviations consistent with the Coding Manual listings?
- Are the most significant references marked (*)?

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***Appendix IX**: Work Type Codes and Measurements*

***Appendix XI**: Summary of Data Field Characteristics*

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Data Field Summary

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Appendix XI - Summary of Data Field Characteristics
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File	Field	Length	Alias	Mandatory	Max. Entries	Example	Checks & Range
E01	MINFILNO	9	MINFILE_NUMBER	Y	1	104B 021	082-114/A-P/ NESW/001-999
E01	LAT_DEG	2	LATITUDE_DEGREES	note 2	1	56	48 - 60
E01	LAT_MIN	2	LATITUDE_MINUTES	N	1	12	0 - 60
E01	LAT_SEC	2	LATITUDE_SECONDS	N	1	41	0 - 60
E01	LAT_HEMI	1	LATITUDE_HEMISPHERE	Y	1	N	N or S
E01	LONG_DEG	3	LONGITUDE_DEGREES	note 2	1	130	114 - 140
E01	LONG_MIN	2	LONGITUDE_MINUTES	N	1	20	0 - 60
E01	LONG_SEC	2	LONGITUDE_SECONDS	N	1	35	0 - 60
E01	LONG_HEMI	1	LONGITUDE_HEMISPHERE	Y	1	W	W or E
E01	N83_LATDEG	2	NAD83_LATITUDE_DEGREES	note 2	1	56	48 - 60
E01	N83_LATMIN	2	NAD83_LATITUDE_MINUTES	N	1	12	0 - 60
E01	N83_LATSEC	2	NAD83_LATITUDE_SECONDS	N	1	40	0 - 60
E01	N83_LATHEMI	1	LATITUDE_HEMISPHERE	Y	1	N	N or S
E01	N83_LONDEG	3	NAD83_LONGITUDE_DEGREES	note 2	1	130	48 - 60
E01	N83_LONMIN	2	NAD83_LONGITUDE_MINUTES	N	1	20	0 - 60
E01	N83_LONSEC	2	NAD83_LONGITUDE_SECONDS	N	1	42	0 - 60
E01	N83_LONHEMI	1	LONGITUDE_HEMISPHERE	Y	1	W	W or E
E01	UTM_ZONE	2	UTM_ZONE	note 2	1	09	07 - 11
E01	UTM_EAST	6	UTM_EASTING	note 2	1	416700	290000 - 725000
E01	UTM_NORT	8	UTM_NORTHING	note 2	1	6230200	5300000 - 6653000
E01	N83_ZONE	2	NAD83_ZONE	note 2	1	09	07 - 11
E01	N83_EAST	6	NAD83_EASTING	note 2	1	416694	290000 - 725000
E01	N83_NORT	8	NAD83_NORTHING	note 2	1	6230205	5300000 - 6653000
E01	ELEV	4	ELEVATION	Y	1	0975	0 - 6000
E01	LOC_ACC	1	DEPOSIT_LOCATION_ACCURACY	Y	1	1	1,2,3

E01	DEPSIZEL	4	DEP_SIZE_L	N	1	1200	nnnn
E01	DEPSIZEB	4	DEP_SIZE_B	N	1	0760	nnnn
E01	DEPSIZEW	4	DEP_SIZE_W	N	1	0240	nnnn
E01	DIP	3	DEPOSIT_DIP	N	1	40W	nnN,E,S,W
E01	STRIKE	3	DEPOSIT_STRIKE	N	1	020	001 - 360
E01	PLUNGE	6	DEPOSIT_TREND_PLUNGE	N	1	02040	001 - 360/01 - 90
E01	NATMINNO	18	NAT_MIN_INV_NO	N	1	104B1 Cu1	082-114/A-P/1-16/ aaa/nnn
E01	CANMINNO	6	CANMINDEX_NUMBER	N	1		000001 - 999999
E01	CODED	8	DATE_CODED	Y	1	240785	D/M/Y
E01	REVISED	8	DATE_REVISED	Y	1	250788	D/M/Y
E01	GREVISED	4	GEOLOGIST_REVISE	Y	1	LDJ	aaaa
E01	FREVISED	1	FIELD_REVISED	Y	1	N	Y or N
E01	FCHECKED	1	FIELD_CHECKED	Y	1	N	Y or N
E01	GNAME	4	GEOLOGIST_NAME	Y	1	GSB	aaaa
E01	OPENPIT	1	OPEN_PIT	note 3	1	X	X
E01	UGROUND	1	UNDER_GROUND	note 3	1	X	Y
E31	PROJ_NO	7	PROJECT_NUMBER	if exists	1		nnnnnnn
E31	PROPERTY	30	PROPERTY_NAME	Y	1		open
E31	PROPERTY_2	30	PROPERTY_NAME2	N	1		
E31	OWNER	30	OWNER_NAME	Y	1		Company name
E31	OWNER_2	30	OWNER_NAME2	N	1		or First name,
E31	OPERATOR	30	OPERATOR	Y	1		Last name
E31	DIST_SEQNO	3	DISTRICT_SEQUENCE_NUMBER	N	1		
E31	DIST_MAPNO	3	DISTRICT_MAP_NUMBER	N	1		
E31	LAT_DEG	2	LATITUDE_DEGREE	Y	1		48 - 60
E31	LAT_MIN	2	LATITUDE_MINUTE	Y	1		0 - 60
E31	LAT_SEC	2	LATITUDE_SECOND	Y	1		0 - 60
E01	LAT_HEMI	1	LATITUDE_HEMISPHERE	Y	1		N or S
E31	LON_DEG	3	LONGITUDE_DEGREE	Y	1		114 - 140
E31	LON_MIN	2	LONGITUDE_MINUTE	Y	1		0 - 60
E31	LON_SEC	2	LONGITUDE_SECOND	Y	1		0 - 60
E31	LON_HEMI	1	LONGITUDE_HEMISPHERE	Y	1		W or E
E31	N83_LATDEG	2	NAD83_LATITUDE_DEGREES	note 2	1		48 - 60
E31	N83_LATMIN	2	NAD83_LATITUDE_MINUTES	N	1		0 - 60
E31	N83_LATSEC	2	NAD83_LATITUDE_SECONDS	N	1		0 - 60
E31	N83_LATHEMI	1	LATITUDE_HEMISPHERE	Y	1		N or S
E31	N83_LONDEG	3	NAD83_LONGITUDE_DEGREES	note 2	1		48 - 60
E31	N83_LONMIN	2	NAD83_LONGITUDE_MINUTES	N	1		0 - 60
E31	N83_LONSEC	2	NAD83_LONGITUDE_SECONDS	N	1		0 - 60
E31	N83_LONHEMI	1	LONGITUDE_HEMISPHERE	Y	1		W or E
E31	LOC_ACC	1	LOCATION_ACCURACY_CODE	Y	1		1,2,3
E31	CR_DATE	8	CREATED_DATE	Y	1		D/M/Y
E31	RV_DATE	8	REVISED_DATE	Y	1		D/M/Y
E31	CHECKED_BY	5	CHECKED_BY	Y	1		aaaa
R02	STATUS_C	4	STATUS_TYPE_CODE	Y	1	PAPR	SHOW/PROS/ DEPR/PROD/PAPR
R03	DOMHRK_C	1	DOMINANT_HOST_ROCK_CODE	Y	1	1	table E03
R04	DEPMOD_C	1	DEPOSIT_MODIFIER_CODE	N	2	1,4	table E04
R05	DEPCHR_C	2	DEPOSIT_CHARACTER_CODE	Y	4	12,09,01	table E05; ranked
R06	DEPSHA_C	2	DEPOSIT_SHAPE_TYPE_CODE	N	1	1	table E06
R07	DEPCLA_C	2	DEPOSIT_CLASSIFICATION_CODE	Y	4	03,05	table E07, ranked
R08	NAME	30	NAME	Y	16	GRANDUC	ranked
R09	MINDIV_C	4	MINING_DIVISION_CODE	Y	2	SKEE	table E09

R10	NTSMAP_C	7	NTS_MAPSHEET (1:50000)	Y	4	104B01W	082-114/A-P/01-16/ E,W; table E10
R11	BCMAP_C	7	BC_MAPSHEET (1:20000)	N	4	104B029	082-114/A-P/001-100: table E11
R12	TECBLT_C	2	TECTONIC_BELT_CODE	Y	1	IN	table E12
R13	TERRAN_C	3	TERRANE_CODE	Y	2	ST	table E13
R14	PHYSIO_C	4	PHYSIOGRAPHIC_AREA_CODE	N	1	BNRG	table E14
R15	META_T_C	1	METAMORPHIC_TYPE_CODE	note 4	2	2	table E15
R16	META_G_C	2	METAMORPHIC_GRADE_CODE	N	2	AM	table E16
R17	META_R_C	1	METAMORPHIC_RELATIONSHIP_CODE	N	3	3	table E17
R18a	YEAR	4	YEAR	if exists	1	1984	table E18
R18a	MINED	12	ORE_MINED	Y	1	352630	tonnes
R18a	MILLED	12	ORE_MILLED	Y	1	352630	tonnes
R18b	COMMOD_C	2	COMMODITY_CODE	Y	6	AG	table E19
R18b	QUANTITY	12	QUANTITY	Y	6	3944057	grams or kilograms
R19	COMMOD_C	2	COMMODITY_CODE	Y	15	CU,AG...	table E19; ranked
R20	MINCLA_C	1	MINERALOGY_CLASS_CODE	Y	1		1,2,3; table E20a
R20	MINERL_C	4	MINERAL_CODE	note 5	16/8/8	PYRT etc	table E20b; ranked
R21	ALTER_C	4	ALTERATION_CODE	N	6	EPID etc	table E21; ranked
R22	DATMET_C	2	DATING_METHOD_CODE	N	1	01	table E22
R22	ISOAGE	20	ISOTOPIC_AGE_MINERALIZATION	N	1	220 +/- 2 Ma	text
R22	MATERIAL	30	MATERIAL_DATED_MINERALIZATION	N	1	Galena	text
R23	ST_AGE_C	3	STRATIGRAPHIC_AGE_CODE	Y	1	227	table E24
R23	STNAME_C	6	STRATIGRAPHIC_NAME_CODE	note 6	2/2	289,514	table E23
R23	DATMET_C	2	DATING_METHOD_CODE	N	1	11	table E22
R23	ISOAGE	20	ISOTOPIC_AGE_HOST	N	1	210+/-10Ma	text
R23	MATERIAL	30	MATERIAL_DATED_HOST	N	1	Zircon	text
R24	ST_AGE_C	3	MINERALIZATION_AGE_CODE	N	1	***	table E24
R25	ROCK_T_C	4	ROCK_TYPE_CODE	Y	10	SCST etc	table E25; ranked
R25	ROCK_M_C	4	ROCK_MODIFIER_CODE	N	3x10	QRTZ etc	table E26
R26-R28	OREZON_C	5	ORE_ZONE_CODE	if exists	unlimited	99814	table E27
R26, R28	RESCAT_C	2	RESERVE_CATEGORY_CODE	Y	1	IN	table E29
R26-R28	A_OR_B	1	A_OR_B	Y	1	A	use A first
R26, R27	YEAR	4	YEAR	Y	1	1969	table E18
R26	QUANTITY	12	QUANTITY	Y	1	39316435	tonnes
R26	REPORT_ON	1	REPORT_ON	N	1	Y	Y or N
R27	SAMPLE_C	4	SAMPLE_TYPE_CODE	N	1		table E28
R28	COMMOD_C	2	COMMODITY_CODE	Y	6	CU	table E19
R28	GRADE	9	GRADE	Y	6	1.73	grams per tonne or per cent
R30	DEPTYP_C	5	DEPOSIT_TYPE_CODE	N	4	GO4	table E30
R31	PROJ_NO	7	PROJECT_NUMBER	if exists	1		nnnnnnn
R31	MINFILNO	9	MINFILE_NUMBER	if exists	16		if associated with Project
R32a	NOW_NO	9	NOTICE_NUMBER	if exists	unlimited		YYYY-nnnn
R32a	NOTIC_TYP	1	NOTICE_TYPE_CODE	Y	1		table E32
R32a	RECVD_DATE	8	RECEIVED_DATE	N	1		D/M/Y
R32a	APRV_DATE	8	APPROVED_DATE	N	1		D/M/Y
R32a	OPERATOR	30	OPERATOR	N	1		
R32a	MANAGER	30	MANAGER	N	1		

R32a	MGR_TEL	14	MANAGER_TELEPHONE	N	1		
R32a	WK_START	8	WORK_STARTED	N	1		D/M/Y
R32a	WK_END	8	WORK_ENDED	N	1		D/M/Y
R32a	EXP_BUD	13	EXPLORATION_BUDGET	N	1		$
R32a	PROD_BUD	13	PRODUCTION_BUDGET	N	1		$
R32a	COMPLETED	1	COMPLETED	N	1		Y or N
R32a	DISCUSSED	1	DISCUSSED	N	1		T or F
R32a	MDSCREV	1	MDSC_REVIEW	N	1		T or F
R32a	DEP_TARGET	60	DEPOSIT_TARGET	N	1		
R32b	WK_TODO	70	WORK_TO_DO	N	1		
R32b	WK_DONE	70	WORK_DONE	N	1		
R33	PRJTYP_C	1	PROJECT_TYPE_CODE	Y	1		table E33
R34	STAGE_C	1	MDAP_STAGE_CODE	N	1		table E34
R35	MINDIV_C	4	MINING_DIVISION	Y	2		table E09, for Project
R36	NTSMAP_C	7	NTS_MAP	Y	4		table E10, for Project
R39	REGION_C	4	REGION_CODE_PROJECT	Y	10		table E40, for Project
R40	REGION_C	4	REGION_CODE_MINFILE	Y	10		table E40, for MINFILE
C01	IDENT_T	70	IDENTIFICATION_COMMENTS	N	unlimited	The mine is ...	upper & lower case text
C02	SIGMIN_T	70	SIGNIFICANT_MINERALS_COMMENTS	N	4		upper & lower case text
C03	ASSMIN_T	70	ASSOCIATED_MINERALS_COMMENTS	N	3		upper & lower case text
C04	ALTMIN_T	70	ALTERATION_MINERALS_COMMENTS	N	4		upper & lower case text
C05	STRUCT_T	70	STRUCTURAL_COMMENTS	N	3	Granduc dep...	upper & lower case text
C06	HSTRCK_T	70	HOST_ROCK_COMMENTS	N	2	Age date ...	upper & lower case text
C07	META_T	70	METAMORPHISM_COMMENT	N	1		upper & lower case text
C08	CAPSUL_T	70	CAPSULE_GEOLOGY_COMMENTS	Y	unlimited	The Granduc ...	upper & lower case text
C09	BIBLIO_T	70	BIBLIOGRAPHY_COMMENTS	Y	unlimited	EMPR BULL ...	upper & lower case text
C10	PROD_T	66	PRODUCTION_COMMENTS	N	1		upper & lower case text
C11	RESERV_T	70	RESERVES_COMMENTS	N	unlimited		for each A or B calculation
C12	RESREF_T	70	RESERVES_REFERENCE	Y	1	Open File ...	for each A or B calculation
C13	CONF_NOTE	70	CONFIDENTIAL_NOTES	N	unlimited		upper & lower case text
C14	EXPL_T	70	EXPLORATION_COMMENTS	N	unlimited		upper & lower case text

NOTES: 1. All fields are character.
2. Either Longitude/Latitude or UTM coordinates must be entered in NAD 27 or NAD 83.
3. Either underground or open pit if Producer or Past Producer.
4. Mandatory if relationship and/or grade fields are used.
5. One significant (16 max) mineral is mandatory; up to 8 associated and alteration allowed.
6. At least one FORMAL or INFORMAL host required; maximum of 2 each.

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***Appendix X**: Coding and Editing Guidelines*

***Appendix XII**: MINFILE Coding Forms*

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Coding Forms

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These Coding Forms are PDF (Portable Document Format) files, which can be viewed in either Netscape or Internet Explorer. Download the free Acrobat Reader software and install it before viewing PDF files. Use the print button on the Acrobat Reader toolbar to print from, NOT the Netscape or Internet Explorer toolbar.

MINFILE Coding Card ***PDF file*** (74K, 4 pages)
MINFILE Quick Coding Card ***PDF file*** (17K, 2 pages)
MINFILE Inventory Sheet ***PDF file*** (46K, 1 page)
MINFILE Production Sheet ***PDF file*** (40K, 1 page)
MINFILE Exploration Database ***PDF file*** (18K, 1 page)

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***Appendix XI**: Summary of Data Field Characteristics*

***Appendix XIII**: Coder Names, Initials and NTS Areas*

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MINFILE CODING CARD

☐ NEW ☐ REVISE ☐ DELETE

IDENTIFICATION

MINFILE NO.*: _____ **NAME*:** _____

(Up to 16) _____

NMI: _____ _____

STATUS* *(Choose One)*: _____

☐ Anomaly *(Use as a temporary occurrence)* _____

☐ Showing _____

☐ Prospect _____

☐ Developed Prospect MINING METHOD *(Choose One)*: _____

☐ Producer ☐ Open Pit _____

☐ Past Producer ☐ Underground _____

LOCATION*

NTS MAP* *(Up to 4)*: _____ _____ _____ _____

BC MAP* *(Up to 4; not used)*: _____ _____ _____ _____

MINING DIVISION* *(Up to 2)*: _____ _____

REGION* *(Up to 10)*: _____

UTM ZONE*: _____ NAD

LATITUDE*: _____° _____' _____" N ***or*** NORTHING*: _____ ☐ 27

LONGITUDE*: _____° _____' _____" W EASTING*: _____ ☐ 83

ELEVATION*: _____*(metres)* LOCATION CERTAINTY*: ☐ Within 500 m ☐ Within 1 km ☐ Within 5 km

IDENTIFICATION COMMENTS *(Unlimited space[1])*: _____

_____

_____

DATE CODED*: ____DD____MM_____YY CODED BY*: _____ FIELD CHECKED*: ☐ Yes ☐ No

DATE REVISED*: ____DD____MM_____YY REVISED BY*: _____ FIELD CHECKED*: ☐ Yes ☐ No

MINERAL OCCURRENCE

COMMODITIES* *(Up to 15)*: _____

_____

_____

MINERALS

SIGNIFICANT* *(Up to 16)*: _____

_____

COMMENTS *(4 lines)*: _____

_____

ASSOCIATED *(Up to 8)*: _____

_____

COMMENTS *(3 lines)*: _____

_____

ALTERATION *(Up to 8)*: _____

_____

COMMENTS *(4 lines)*: _____

_____

ALTERATION TYPE *(Up to 6)*: _____

_____

mandatory field; all multiple fields are ranked; [1]all comment lines are 70 characters each. ***Rev. 30/09/98***

AGE OF MINERALIZATION

MINERALIZATION AGE: _____ ISOTOPIC AGE: _____

MATERIAL DATED: _____ DATING METHOD: _____

DEPOSIT

CHARACTER* *(Up to 4; rank with numbers)*:

☐ Vein ☐ Stockwork ☐ Breccia ☐ Pipe ☐ Unconsolidated

☐ Podiform ☐ Layered ☐ Stratabound ☐ Stratiform ☐ Concordant

☐ Discordant ☐ Massive ☐ Disseminated ☐ Shear ☐ Unknown

CLASSIFICATION* *(Up to 4 rank with numbers)*:

☐ Replacement ☐ Magmatic ☐ Volcanogenic ☐ Sedimentary ☐ Syngenetic

☐ Epigenetic ☐ Residual ☐ Porphyry ☐ Igneous-contact ☐ Skarn

☐ Pegmatite ☐ Placer ☐ Evaporite ☐ Exhalative ☐ Diatreme

☐ Hydrothermal ☐ Epithermal ☐ Mesothermal ☐ Fossil fuel ☐ Metamorphic

☐ Industrial Mineral ☐ Unknown

TYPE *(Up to 4)*: _____ _____

SHAPE *(Choose 1, if known)*:

☐ Regular ☐ Tabular ☐ Cylindrical ☐ Bladed ☐ Irregular

MODIFIER *(Must have shape; choose up to 2)*:

☐ Folded ☐ Faulted ☐ Fractured ☐ Sheared ☐ Other _____

DIMENSION: _____X_____X_____ *(metres)*

STRIKE/DIP: _____/_____ TREND/PLUNGE: _____/_____

STRUCTURAL COMMENTS *(3 lines)*: _____

_____

_____

HOST ROCK

DOMINANT HOST* *(Choose 1)*:

☐ Sedimentary ☐ Volcanic ☐ Metaplutonic ☐ Metamorphic ☐ Plutonic

☐ Metasedimentary ☐ Metavolcanic

LITHOLOGIES* *(Up to 10)*:

MODIFIER 1	MODIFIER 2	MODIFIER 3	ROCK TYPE*

FORMAL HOST

*(*List at least 1 Formal or Informal host; up to 2)*

1. GROUP: _____ FORMATION: _____

STRATIGRAPHIC AGE*: _____ ISOTOPIC AGE: _____

DATING METHOD: _____ MATERIAL DATED: _____

2. GROUP: _____ FORMATION: _____

STRATIGRAPHIC AGE*: _____ ISOTOPIC AGE: _____

DATING METHOD: _____ MATERIAL DATED: _____

INFORMAL HOST

1. IGNEOUS/METAMORPHIC/OTHER: _____

STRATIGRAPHIC AGE*: _____ ISOTOPIC AGE: _____

DATING METHOD: _____ MATERIAL DATED: _____

2. IGNEOUS/METAMORPHIC/OTHER: _____

STRATIGRAPHIC AGE*: _____ ISOTOPIC AGE: _____

DATING METHOD: _____ MATERIAL DATED: _____

HOST ROCK COMMENTS *(2 lines)*: _____

_____

_____

GEOLOGICAL SETTING

TECTONIC BELT* *(Choose 1)*:

☐ Insular ☐ Coast ☐ Intermontane ☐ Omineca ☐ Foreland

TERRANE* *(Up to 2)*: _____ _____

PHYSIOGRAPHIC REGION *(List 1)*: _____

METAMORPHISM

TYPE *(Up to 2)*:

☐ Contact ☐ Regional

GRADE *(Up to 2)*:

☐ Zeolite ☐ Greenschist ☐ Amphibolite ☐ Hornfels

☐ Granulite ☐ Blueschist ☐ Eclogite

(For coal occurrences only):

☐ Anthracite ☐ Semi-Anthracite ☐ Low-Vol. Bituminous ☐ Med.-Vol. Bituminous

☐ Hi-Vol. Bituminous ☐ Sub-Bituminous ☐ Lignite

RELATIONSHIP *(Up to 3):*

☐ Pre-mineralization ☐ Syn-mineralization ☐ Post-mineralization

GEOLOGICAL SETTING COMMENTS *(1 line)*: _____

_____

INVENTORY

ZONE *(Only use name if not an assay; if an assay use generic name)*: _____

YEAR: _____ REPORT ON: ☐ Yes ☐ No

CATEGORY *(Choose 1)*

RESERVE: RESOURCE:

☐ Proven ☐ Probable ☐ Possible ☐ Measured ☐ Indicated ☐ Inferred

OTHER:

☐ Combined ☐ Unclassified ☐ Assay/Analysis

SAMPLE TYPE *(Assay only)*:

☐ Chip ☐ Grab ☐ Channel ☐ Bulk ☐ Drill Core ☐ Rock

QUANTITY *(Reserves or Resources only)*: _____(*tonnes*)

COMMODITIES/GRADES *(Precious metals in grams, others in per cent)*:

_____/_____ _____/_____ _____/_____

_____/_____ _____/_____ _____/_____

REFERENCE* *(1 line)*: _____

INVENTORY/ASSAY COMMENTS *(Unlimited space)*: _____

_____

_____

PRODUCTION

YEAR: _____

ORE MINED: _____ (*tonnes*) ORE MILLED: _____(*tonnes*)

COMMODITIES/QUANTITIES *(Precious metals in grams, others in kilograms)*:

_____/_____ _____/_____ _____/_____

_____/_____ _____/_____ _____/_____

PRODUCTION COMMENT *(1 line)*: _____

CAPSULE GEOLOGY*

(Include comments on location and history; regional and local geology; deposit description and mineralogy; inventory and production)

BIBLIOGRAPHY*

*(Quote all references for the occurrence in summary format; *asterisk important references)*

WORK HISTORY

(Include: Year - from/to; Work Type; Amount; Comments - operator/owner/results/reference)

Currently not used; include Work History comments in Capsule Geology.

MINFILE QUICK CODING CARD

☐ NEW ☐ REVISE ☐ DELETE

IDENTIFICATION

MINFILE NO.*: _____ **NAME*:** _____

STATUS* *(Choose One)*: *(Up to 16)* _____

☐ Anomaly *(Use as a temporary occurrence)* _____

☐ Showing _____

☐ Prospect ☐ Producer _____

☐ Developed Prospect ☐ Past Producer _____

MINING METHOD *(Choose One)*: ☐ Open Pit ☐ Underground _____

LOCATION*

NTS MAP* *(Up to 4)*: _____ _____ _____ _____

MINING DIVISION* *(Up to 2)*: _____ _____

REGION* *(Up to 10)*: _____

UTM ZONE*: _____ NAD

LATITUDE*: _____° _____' _____" N ***or*** NORTHING*: _____ ☐ 27

LONGITUDE*: _____° _____' _____" W EASTING*: _____ ☐ 83

ELEVATION*: _____*(metres)* LOCATION CERTAINTY*: ☐ Within 500 m ☐ Within 1 km ☐ Within 5 km

IDENTIFICATION COMMENTS *(Unlimited space[1])*: _____

DATE CODED*: ____DD____MM_____YY CODED BY*: _____ FIELD CHECKED*: ☐ Yes ☐ No

DATE REVISED*: ____DD____MM_____YY REVISED BY*: _____ FIELD CHECKED*: ☐ Yes ☐ No

MINERAL OCCURRENCE

COMMODITIES* *(Up to 15)*: _____

MINERALS

SIGNIFICANT* *(Up to 16)*: _____

ASSOCIATED *(Up to 8)*: _____

ALTERATION *(Up to 8)*: _____

DEPOSIT

CHARACTER* *(Up to 4, rank with numbers)*:

☐ Vein ☐ Stockwork ☐ Breccia ☐ Pipe ☐ Unconsolidated

☐ Podiform ☐ Layered ☐ Stratabound ☐ Stratiform ☐ Concordant

☐ Discordant ☐ Massive ☐ Disseminated ☐ Shear ☐ Unknown

CLASSIFICATION* *(Up to 4, rank with numbers)*:

☐ Replacement ☐ Magmatic ☐ Volcanogenic ☐ Sedimentary ☐ Syngenetic

☐ Epigenetic ☐ Residual ☐ Porphyry ☐ Igneous-contact ☐ Skarn

☐ Pegmatite ☐ Placer ☐ Evaporite ☐ Exhalative ☐ Diatreme

☐ Hydrothermal ☐ Epithermal ☐ Mesothermal ☐ Fossil fuel ☐ Metamorphic

☐ Industrial Mineral ☐ Unknown TYPE *(Up to 4)*: _____

HOST ROCK

DOMINANT HOST* *(Choose 1)*:

☐ Sedimentary ☐ Volcanic ☐ Metaplutonic ☐ Metamorphic ☐ Plutonic

☐ Metasedimentary ☐ Metavolcanic

LITHOLOGIES* *(Up to 10; up to 3 **modifiers** for each **rock type**)*:

_____ _____

_____ _____

_____ _____

mandatory field; all multiple fields are ranked; [1]all comment lines are 70 characters each. ***Rev. 14/09/98***

FORMAL HOST

*(*List at least 1 Formal or Informal host)*

1. GROUP: _____ FORMATION: _____

STRATIGRAPHIC AGE*: _____ ISOTOPIC AGE: _____

DATING METHOD: _____ MATERIAL DATED: _____

INFORMAL HOST

1. IGNEOUS/METAMORPHIC/OTHER: _____

STRATIGRAPHIC AGE*: _____ ISOTOPIC AGE: _____

DATING METHOD: _____ MATERIAL DATED: _____

GEOLOGICAL SETTING

TECTONIC BELT* *(Choose 1)*:

☐ Insular ☐ Coast ☐ Intermontane ☐ Omineca ☐ Foreland

TERRANE* *(Up to 2)*: _____ _____

PHYSIOGRAPHIC AREA: _____

INVENTORY

ZONE *(Use generic name for an assay)*: _____

YEAR: _____ REPORT ON: ☐ Yes ☐ No

CATEGORY ☐ Assay/Analysis ☐ Reserve/Resource *(Use main **Coding Card** or **Inventory Sheet**)*

SAMPLE TYPE *(Assay only)*:

☐ Chip ☐ Grab ☐ Channel ☐ Bulk ☐ Drill Core ☐ Rock

COMMODITIES/GRADES *(Precious metals in grams, others in per cent)*:

_____/_____ _____/_____ _____/_____

_____/_____ _____/_____ _____/_____

REFERENCE* *(1 line)*: _____

CAPSULE GEOLOGY*

(Include comments on location and history; regional and local geology; deposit description and mineralogy; inventory and production)

BIBLIOGRAPHY*

*(Quote all references for the occurrence in summary format; *asterisk important references)*

MINFILE INVENTORY SHEET

MINFILE NO.:_____ **NAME:** _____

INVENTORY

ZONE *(Only use name if not an assay; if an assay use generic name)*: _____

YEAR: _____ REPORT ON: ☐ Yes ☐ No

CATEGORY *(Choose 1)*

RESERVE: RESOURCE:

☐ Proven ☐ Probable ☐ Possible ☐ Measured ☐ Indicated ☐ Inferred

OTHER:

☐ Combined ☐ Unclassified ☐ Assay/Analysis

SAMPLE TYPE *(Assay only)*:

☐ Chip ☐ Grab ☐ Channel ☐ Bulk ☐ Drill Core ☐ Rock

QUANTITY *(Reserves or Resources only)*: _____(*tonnes*)

COMMODITIES/GRADES *(Precious metals in grams, others in per cent)*:

_____/_____ _____/_____ _____/_____

_____/_____ _____/_____ _____/_____

REFERENCE* *(1 line)*: _____

INVENTORY/ASSAY COMMENTS *(Unlimited[1])*: _____

_____

_____

_____

_____

INVENTORY

ZONE *(Only use name if not an assay; if an assay use generic name)*: _____

YEAR: _____ REPORT ON: ☐ Yes ☐ No

CATEGORY *(Choose 1)*

RESERVE: RESOURCE:

☐ Proven ☐ Probable ☐ Possible ☐ Measured ☐ Indicated ☐ Inferred

OTHER:

☐ Combined ☐ Unclassified ☐ Assay/Analysis

SAMPLE TYPE *(Assay only)*:

☐ Chip ☐ Grab ☐ Channel ☐ Bulk ☐ Drill Core ☐ Rock

QUANTITY *(Reserves or Resources only)*: _____(*tonnes*)

COMMODITIES/GRADES *(Precious metals in grams, others in per cent)*:

_____/_____ _____/_____ _____/_____

_____/_____ _____/_____ _____/_____

REFERENCE* *(1 line)*: _____

INVENTORY/ASSAY COMMENTS *(Unlimited)*: _____

_____

_____

_____

_____

DATE REVISED: _____DD_____MM_____YY REVISED BY: _____

mandatory field; [1]all comment lines are 70 characters each. ***Rev. 30/09/98***

MINFILE PRODUCTION SHEET

MINFILE NO.:_______________ **NAME:** ________________________

PRODUCTION

YEAR: ____________

ORE MINED: ________________________ (*tonnes*) ORE MILLED: ________________________(*tonnes*)

COMMODITIES/QUANTITIES *(Precious metals in grams, others in kilograms)*:

_____________/__________ _____________/__________ _____________/__________

_____________/__________ _____________/__________ _____________/__________

PRODUCTION COMMENT *(1 line[1])*: ____

PRODUCTION

YEAR: ____________

ORE MINED: ________________________ (*tonnes*) ORE MILLED: ________________________(*tonnes*)

COMMODITIES/QUANTITIES *(Precious metals in grams, others in kilograms)*:

_____________/__________ _____________/__________ _____________/__________

_____________/__________ _____________/__________ _____________/__________

PRODUCTION COMMENT *(1 line)*: ____

PRODUCTION

YEAR: ____________

ORE MINED: ________________________ (*tonnes*) ORE MILLED: ________________________(*tonnes*)

COMMODITIES/QUANTITIES *(Precious metals in grams, others in kilograms)*:

_____________/__________ _____________/__________ _____________/__________

_____________/__________ _____________/__________ _____________/__________

PRODUCTION COMMENT *(1 line)*: ____

PRODUCTION

YEAR: ____________

ORE MINED: ________________________ (*tonnes*) ORE MILLED: ________________________(*tonnes*)

COMMODITIES/QUANTITIES *(Precious metals in grams, others in kilograms)*:

_____________/__________ _____________/__________ _____________/__________

_____________/__________ _____________/__________ _____________/__________

PRODUCTION COMMENT *(1 line)*: ____

PRODUCTION

YEAR: ____________

ORE MINED: ________________________ (*tonnes*) ORE MILLED: ________________________(*tonnes*)

COMMODITIES/QUANTITIES *(Precious metals in grams, others in kilograms)*:

_____________/__________ _____________/__________ _____________/__________

_____________/__________ _____________/__________ _____________/__________

PRODUCTION COMMENT *(1 line)*: ____

DATE REVISED: _____DD_____MM_____YY REVISED BY: _______________

[1]*production comment line is 66 characters.*

Rev. 30/09/98

BRITISH COLUMBIA *Ministry of Energy and Mines*

MINFILE EXPLORATION DATABASE

PROJECT

PROJECT NUMBER*:_____ **NAME*:** _____

(Up to 2) _____

PROJECT TYPE*: _____ MINING DIVISION*: _____

(Up to 2) _____

OWNER(S)*: _____ NTS MAP NO*: _____ _____

(Up to 2) _____ *(Ranked, up to 4)*: _____ _____

OPERATOR*: _____ LATITUDE*: _____ ° _____ ' _____ "

LONGITUDE*: _____ ° _____ ' _____ "

LOCATION ACCURACY*: _____ _____ _____

MINFILE NO(S)*(Ranked, up to 16)*:: _____

_____ _____ _____ DISTRICT SEQ. NO: _____

_____ _____ _____ DISTRICT MAP NO: _____

_____ _____ _____ CREATE DATE*: _____

_____ _____ _____ REVISION DATE*: _____

_____ _____ _____ CHECKED BY*: _____

EXPLORATION NOTES[1]:

NOTICE OF WORK

NOTICE NUMBER*: _____ **NOTICE TYPE*:** _____

RECEIVED DATE:_____ APPROVED DATE: _____

OPERATOR: _____

MANAGER: _____ TELEPHONE: _____

TARGET: _____

WORK TO DO[1]:_____

WORK DONE[1]: _____

WORK STARTED: _____ _____WORK FINISHED: _____ COMPLETED:

EXPL. BUDGET: _____ DISCUSSED: _____

PROD. BUDGET: _____ MDAP REVIEW: _____

MDAP STAGE: _____

mandatory field; [1]all comment lines are 70 characters each. ***Rev. 30/09/98***

Coder Names/Initials

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Coder Names, Initials and NTS Areas
(MINFILE Coding Manual)

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The following table is a list of coders, sorted by initials, that have worked on the MINFILE database.

Initials	Coder's Name	NTS Areas and Commodity
ADE or AE	Art D. Ettlinger	083GSW043, 092GNW055
AFW or AW	Allan F. Wilcox	082ESE, SW, FNE, KNE, NW, INE, JNE, 093E
ASL	Andrew S. Legun	
AP	Andre Panteleyev	093A
BF	?	104B 362-363
BG	Brian Grant	082FSW, G, J, 092P, Magnesite, Brucite, Hydromagnesite
BL see RAL	Bob Lane ?	093E 109, 082FSE102
BNC or NC	B. Neil Church	082ESE, 082FNW, 082KNW, 092JNE
CB	Cindy B. Borsholm	103I 002, 092I 014
CCD	Charles C. Downie	
CEK	Caline E. Kilby	092GNW, GSE, GSW, Sand and Gravel
CG	?	104G 128-131
CHBL	Craig H.B. Leitch	082FSE
CID	Carol I. Didson	092JNE, W
CJR	Chris J. Rees	092HNE, 092M, N, 094K, L, M, N, 102P
CR	Chris Rees ? (doubtful)	104B 352
CRE	Chris Rees ? (maybe)	104N 126-127
DAB or DB	Derek A. Brown	082FNW, 104G
DBJ	?	092P 034
DE	?	104G 049, 070
DEG	?	104B 367
DEJ or DJ	Dorthe E. Jakobsen	082FSW, LSE, LSW, 092C, F, GSW, INE, 093F, K, 103O, P, 104A, B, I, M, N, O, P, Industrial Minerals
DGB	David G. Bailey	092JNE, JSE, JW, O, 093A, B, C, D, F, G, H, I, J, K, 103H
DH see ZDH	Z. Dan Hora	
DISC	Discovery Consultants	082LSW
DJA	Dani J. Alldrick	103O, P, 104B
DM or DMM	Dave M. Melville	093N, 094C, D
DMN	Dave Nelles	092HNW, 093N
DR	Dave Rhyes	104G 123
ELF	E.L. (Ted) Faulkner	
EVFK or EVK	Eileen Van der Flier Keller	082GNE, GSE, JSE, 092F, 093I, O, P, 094B, D, 103F, 103K, 104A, Coal
FF	Fil Ferri	093N
FHK	Fleur Harvey-Kelly	Asbestos

GA	George Addie	
GB	Georges Beaudoin ?	082FNE, FNW, 092P 148
GJA	Gilles J. Arseneau	082FNW, KSE
GJP or GP	Garry J. Payie	082FSW, GNW, 092B, C, F, GNW, GSW, HSW, INE, JNE, JSE, JW, K, O, P, 093K, N, O, 094A, B, 103F, 103J, K, 104B, F, G, I, N, P
GKK	Greg K. Kulla (Fox Consultants)	093O, 094A, B, C
GLB	?	092O 048, 050
GNG	Geoff N. Goodall (Fox Consultants)	094C
GO	George Owsiacki	082ESE, ESW, FNE, G, J, LNE, LNW, N, O, 092F, GNE, GNW, HNE, HNW, HSE, INW, 094B, E, F, H, I, J, O, P, 104I, J, Majors
GR	Gerry Ray?	082ESE060,169, 082FSW010....+ others, Skarns
GRF	Gary R. Foye	093A, B, C, D, E, F, G, H, I, J, K, Silica
GS	Greg Stewart	082FNE, 092O, P
GSA	Gordon S. Archer	104B
GSB	Geological Survey Branch	prior to 1985
GTN	Graham T. Nixon	Ultramafic associated
GVW or GW	Gary V. White	082FNW249, 082ESW169, 092K 140
HM or HWM	Henry W. Marsden	104O 018, 104P 049, 054, 060, 085
ICLW or IW	Ian C.L. Webster	082M 118, 092L 189-190, 104B 367-368, 103G 137, Skarns
JB	John Bradford	104K, M, N, O, P, 114P
JD	John Drobe	093E, 104B, G
JF	Janet Fontaine	092HNE034, 092B 102
JL or JML	Jim Logan	082FNW, 104G
JLG	John L. Gravel	104A, H
JMB	Jim M. Britton	104B
JMR	Janet M. Riddell	092O 002
JN	Joanne L. Nelson	104O 005, 104P 115
JNR	Jonathan N. Rouse	103A, B, C, F, G, H, J, K
JP	Jennifer W. Pell	082FNW, FSE, LNE, LSE, M, 083D, 092HNW, 093I, Industrial Minerals, Carbonatites, Nepheline Syenites, Kimberlites, Kyanite, Garnet
JWP	Jay W. Page	082ENE, NW
KBE	Kim A. Bellefontaine	093N, 093K
KC	?	104P 024
KDH	Kirk D. Hancock	Industrial Minerals, Magnetite, Chromite, Nickel
KG	Kim C. Green	092O 111-120
KJM	Keith J. Mountjoy	082ESW, FNW, KSW, 083C, D, 092GNE, GNW, GSE, HNW, HSE, HSW, ISW, J, K, 094E
KKD	?	092GSE026
KPA or KPEA	Kathryn P.E. Andrews	082FSW
LC	Laura L. Coughlan ?	093E 035, 041, 099
LD	Laura L. Duffett	
LDJ or LJ	Larry D. Jones	082ESE, ESW, FNW, KNW, M, 092F, 103B, C, F, G, H, I, J, K, 104B, K, N, Uranium/Thorium, Majors
LJD	Larry J. Diakow	104B 029
LKW or LW	Lori K. Walters	092ISE, ISW
LLC see LLD	Laura L. Coughlan	082FSW, 092HSE, HSW, ISW, 093L, 104G, K
LLD	Laura L. Duffett	092E, GNW, GSE, GSW, K, L, 093L, 102I, 103A, B, C, G, H, I, 104B, K
MAB	Mary A. Bloodgood	093A
MC	Maurice Colpron	082M
MDE or MD	Marc Deschenes	114O, P
MGM	Mitch G. Mihalynuk	104M, N
MHG	Mike H. Gunning	104N
MM	Mary McLean	082ESE, 092JNE, 093A, K, L, N, 104I, P 114P, Talc,Pyophyllite
MPS	Mikkel P. Schau	
MS or MSM	Moira Smith	114O, P
MSC	Michael S. Cathro	082M
MTS	?	104K 117,118

NC see BNC	B. Neil Church	082ESE
NJH	Nigel J. Hulme	092L
PBR	Peter B. Reid	092HSE, INE, INW, 092O, P,
PD	Pat J. Desjardins	
PF	Peter Fischl ?	082FSW296
PMB	Pat M. Bartier ?	082M 254
PSC	Paul Schiarizza	
PSF	Peter S. Fischl	092C, F, GNE, GNW, GSE, HNE, HNW, HSE, M, 093O, 094A, C, F, I, K, 103P, Industrial Minerals, Limestone, Wollastonite, Tremolite
PW	Paul Wilton	
RAL	Robert (Bob) A. Lane	093F
RGG	Robert G. Gaba	092JNE, O
RHM	Ron McMillan	082KSW, 093M, 094C
RLA	Ron L. Arksey	093L
RMC	Ron McMillan	082KSW
RP	Robert H. Pinsent	
SBB	Steve B. Butrenchuk	082GNE, GNW, GSE, JSE, JSW, 083E, Phosphate, Gypsum
SD or SFD	Steve F. Dudka	094C, 104K 127,128, 114P
SED	Sandra E. Dumais	092K, 104M
SH	S. Hiebert	104B 361
SNB	Shielagh N. Banfield	092E, ISW
SNP or SP	Shielagh N. Pfuetzenreuter	092B 129, 103F 052
SS	Steve Sibbick	092N 063
SS	? (not Steve Sibbick)	104K 009
SSB	?	082GSE057, 093I 021-022, 093O 038, 093P 022
TBH	Todd B. Hubner	082ENW, ESW, LSW
TGS	Tom G. Schroeter	082ENE, 104K, Majors, Gold
TH	Trygve Hoy	082M 240-242, 244, 082FNE 057-059, KSW
TSH	Tark S. Hamilton	092M
VAP	Victor A. Preto	103H 014
VK or VMK	Victor M. Koyanagi	104B, G
WC	William (Bill) Coombe	104A
WHH	William H. Halleran	094E, F, G
WJM	William (Bill) J. McMillan	104H 005, 104I 060
WV or WSV	Wim S. Vanderpoll	092E, F, L, 102I
ZDH	Z. Dan Hora	093H 028, Industrial Minerals

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◄ ***Appendix XII**: MINFILE Coding Forms*

***Appendix XIV**: Deposit Types (Mineral Deposit Profiles)* ►

Last Updated September 27, 2001

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Deposit Types

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Deposit Types (Mineral Deposit Profiles)
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Code	Description	Synonym	USGS	BC Example
A	**ORGANIC**		- -	
A01	Peat		- -	Fraser Delta, North Coast
A02	Lignite	"Brown coal"	- -	Skonun Point (Graham Island)
A03	Sub-bituminous coal	Thermal coal, Black lignite	- -	Hat Creek, Princeton
A04	Bituminous coal	Coking coal, Thermal coal	- -	Quintette, Bullmoose, Greenhills, Fording
A05	Anthracite	Stone coal	- -	Mt Klappan
B	**RESIDUAL/SURFICIAL**		**- -**	
B01	Laterite Fe	Gossan Fe	- -	
B02	Laterite Ni		38a	
B03	Laterite-Saprolite Au	Eluvial placers	38g	
B04	Bauxite Al	Lateritic bauxite	38b	Florence (Sooke)
B05	Residual kaolin	Primary kaolin	38h*	Lang Bay, Sumas Mountain
B06	Fireclay	Refractory shale, Claystone, Clay	38i*	Sumas Mountain Quinsam
B07	Bog Fe, Mn, U, Cu, Au		- -	Whipsaw Creek, Limonite Creek Iron King
B08	Surficial U	"Calcrete U"	- -	Prairie Flats
B09	Karst-hosted Fe, Al, Pb-Zn		- -	Villalta (Fe)
B10	Gossan Au-Ag	Residual Au; Precious metal gossans	- -	Villalta
B11	Marl		- -	Cheam Lake (Chiliwack)
B12	Sand and Gravel		- -	
C	**PLACER**		- -	
C01	Surficial placers	Placer Au-PGE-Sn- diamond-mag-gar-gems	39a to e	Fraser River, Quesnel River, Graham Island
C02	Buried-channel placers	Paleochannel placers	39a to e	Williams Creek Otter Creek, Bullion mine
C03	Marine placers	Off-shore heavy mineral sediments	39f*?	Middlebank (off north end of Vancouver Island)
C04	Paleoplacer U-Au-PGE-Sn- Ti-diam-mag-gar-zir	Quartz pebble conglomerate Au-U	29a	Mulvehill
D	**CONTINENTAL SEDIMENTS AND VOLCANICS**		**- -**	
D01	Open-system zeolites		25oa	Princeton Basin, Cache Creek area
D02	Closed-basin zeolites		25ob	
D03	Volcanic redbed Cu	Basaltic Cu	23	Sustut Copper, Shamrock, NH
D04	Basal U		- -	Blizzard, Tyee

D05	Sandstone U	Roll front U, Tabular U	30c	
D06	Volcanic-hosted U	"Epithermal" U, Volcanogenic U	25f	Rexspar, Bullion (Birch Island)
D07	Iron oxide breccias & veins ±P±Cu±Au ±Ag±U	Olympic Dam type, Kiruna type	29b,25i	Iron Range
E	**SEDIMENT-HOSTED**		**- -**	
E01	Almaden Hg	Carbonate-hosted Au-Ag	27b	
E02	Carbonate-hosted disseminated Au-Ag	Kipushi Cu-Pb-Zn	32c	
E03	Carbonate-hosted disseminated Au-Ag	Carlin-type Au, Sediment-hosted micron Au	26a,19c	Golden Bear ?
E04	Sediment-hosted Cu	Sediment-hosted stratiform Cu	30b	Roo, Commerce, Chal 4
E05	Sandstone Pb		30a	
E06	Bentonite	Volcanic clay/ Soap clay	28e?*	Parton River, Princeton, Quilchena
E07	Sedimentary kaolin	"Secondary" kaolin	31k*	Sumas Mountain Quinsam
E08	Carbonate-hosted talc	Dolomite-hosted talc	18?i*	Red Mountain, Silver Dollar
E09	Sparry magnesite	Veitsch-type, Carbonate-hosted magnesite	18i*	Mt. Brussilof, Driftwood Creek
E10	Carbonate-hosted barite	Mississippi Valley type-barite	- -	Muncho Lake
E11	Carbonate-hosted fluorspar	Mississippi Valley type-fluorite	32d*	Liard Fluorite
E12	Mississippi Valley type Pb-Zn	Carbonate-hosted Pb-Zn, Appalachian Zn	32a/32b	Robb Lake, Monarch
E13	Irish-type carbonate-hosted Zn-Pb	Kootenay Arc-type Zn-Pb, Remac-type	- -	Reeves MacDonald, HB, Jersey, Duncan
E14	Sedimentary exhalative Zn-Pb-Ag	Sedex, Sediment-hosted massive sulphide	31a	Sullivan, Cirque, Driftpile
E15	Blackbird sediment hosted Cu-Co	Sediment-hosted Cu-Co massive sulphide	24d	
E16	Shale-hosted Ni-Zn-Mo-PGE	Sediment-hosted Ni	- -	
E17	Sediment-hosted barite	Bedded barite	31b	Kwadacha
F	**CHEMICAL SEDIMENT**		**- -**	
F01	Sedimentary Mn		34b	
F02	Bedded gypsum	Marine evaporite gypsum	35ae	Lussier River, Windermere
F03	Gypsum-hosted sulphur	Frasch sulphur	- -	Trutch area
F04	Bedded celestite		35aa*	Kitsault Lake
F05	Palygorskite	Attapulgite	34e*	
F06	Lacustrine diatomite	Diatomaceous earth, Kieselguhr	31s	Crownite Formation (Quesnel)
F07	Upwelling-type phosphate		34c	Fernie synclinorium
F08	Warm current-type phosphate		34d	
F09	Playa and Alkaline Lake Evaporites	Hydromagnesite, Na carbonate lake brines	35ba, bm(T)	Milk River
F10	Lake Superior & Rapitan types iron-formation		34a	
F11	Ironstone	Minette ores	34f	Peace River region
G	**MARINE VOLCANIC ASSOCIATION**		**- -**	
G01	Algoma-type iron-formation	Taconite, Banded iron-formation	28b	Falcon, Lady A
G02	Volcanogenic Mn		24c	
G03	Volcanogenic anhydrite/gypsum		- -	Britannia, Falkland
G04	Besshi massive sulphide Cu-Zn	Kieslager	24b	Goldstream, Windy Craggy, Standard, True Blue
G05	Cyprus massive sulphide Cu (Zn)		24a	Anyox camp, Chu Chua, Lang Creek?
G06	Noranda/Kuroko massive sulphide Cu-Pb-Zn		28a	Britannia, Kutcho Creek, Myra Falls
G07	Subaqueous hot spring Ag-Au		- -	Eskay Creek
H	**EPITHERMAL**		**- -**	

H01	Travertine	Tufa	35d*	Clinton, Slocan, Deep River
H02	Hot spring Hg		27a	Ucluelet
H03	Hot spring Au-Ag		25a	Cinola, Clisbako, Wolf?, Trout?
H04	Epithermal Au,Ag, Cu: high sulphidation	Acid-sulphate, qtz-alunite Au, Nansatsu-type	25d	Westpine, Taylor-Windfall, Mt. McIntosh
H05	Epithermal Au-Ag: low sulphidation	Adularia-sericite epithermal	25c	Lawyers, Blackdome, Silbak Premier
H06	Epithermal Mn		25g	
H07	Sn-Ag veins	Polymetallic Sn veins	25h,20b	D Zone and Lang Creek (Cassiar)
H08	Alkalic intrusion-associated Au	Alkalic intrusion-related Au, Au-Ag-Te veins	22b	Flathead, Howell, Howe
H09	Hydrothermal alteration clays-Al-Si	Kaolin, Alunite, Siliceous cap, Pyrophyllite	25lb*	Monteith Bay, Pemberton Hills
I	**VEIN, BRECCIA AND STOCKWORK**		**- -**	
I01	Au-quartz veins	Mesothermal, Motherlode, saddle reefs	36a	Bralorne, Erickson, Polaris-Taku
I02	Intrusion-related Au pyrrhotite veins	Subvolcanic shear-hosted gold	- -	Scottie, Snip, Johnny Mountain, Iron Colt
I03	Turbidite-hosted Au veins	Meguma-type	36a	Frasergold, Reno, Queen, Island Mountain
I04	Iron formation-hosted Au	Iron formation-hosted gold	36b	
I05	Polymetallic veins Ag-Pb-Zn±Au	Felsic intrusion-associated Ag-Pb-Zn veins	22c,25b	Silver Queen, Beaverdell, Silvana, Lucky Jim
I06	Cu±Ag quartz veins	Churchill-type vein Cu	?	Davis-Keays, Churchill Copper, Bull River
I07	Silica veins		- -	Granby Point
I08	Silica-Hg carbonate		27c	Pinchi, Bralorne Takla, Silverquick
I09	Stibnite veins and disseminations	Simple and disseminated Sb deposits	27d,27e	Minto, Congress, Snowbird
I10	Vein barite		IM27e	Parson, Brisco, Fireside
I11	Barite-fluorite veins		26c*	Rock Candy, Eaglet
I12	W veins	Quartz-wolframite veins	15a	
I13	Sn veins and greisens		15b,15c	Duncan Lake
I14	Five-element veins Ni-Co-As-Ag±(Bi, U)	Ni-Co-native Ag veins, Cobalt-type veins	- -	
I15	"Classical" U veins	Pitchblende veins, Vein uranium	- -	Purple Rose, Fisher, Dixie
I16	Unconformity-associated U	Unconformity-veins, Unconformity U	37a	
I17	Cryptocrystalline magnesite veins	Bone magnesite, Kraubath-type magnesite	- -	Sunny, Pinchi Lake
J	**MANTO**		**- -**	
J01	Polymetallic manto Ag-Pb-Zn	Polymetallic replacement deposits	19a	Bluebell, Midway
J02	Manto and stockwork Sn	"Replacement" Sn, Renison-type	14c	
J03	Mn veins and replacements	covered by I05 and J01	19b	
J04	Sulphide manto Au	Au-Ag sulphide mantos	- -	Mosquito Creek , Island Mountain
K	**SKARN**		**- -**	
K01	Cu skarn		18a,b	Craigmont, Phoenix
K02	Pb-Zn skarn		18c	Piedmont, Contact
K03	Fe skarn		18d	Tasu, Jessie, Merry Widow, HPH
K04	Au skarn		18f*	Nickel Plate
K05	W skarn		14a	Emerald Tungsten, Dimac
K06	Sn skarn		14b	Daybreak

K07	Mo skarn		- -	Coxey, Novelty
K08	Garnet skarn		- -	Crystal Peak
K09	Wollastonite skarn		18g	Mineral Hill, Rossland
L	**PORPHYRY**		**- -**	
L01	Subvolcanic Cu-Ag-Au (As-Sb)	Enargite Au, Transitional Au-Ag	22a/25e	Equity Silver, Thorn
L02	Porphyry-related Au	Granitoid Au, Porphyry Au	20d	Snowfields
L03	Alkalic porphyry Cu-Au	Diorite porphyry copper	- -	Afton, Copper Mountain, Galore Creek
L04	Porphyry Cu ± Mo ± Au	Calcalkaline porphyry	17,20, 21a1	Highland Valley, Gibraltar
L05	Porphyry Mo (Low F- type)	Calcalkaline Mo stockwork	21b	Endako, Kitsault, Glacier Gulch
L06	Porphyry Sn	"Subvolcanic tin"	20a	
L07	Porphyry W	Stockwork W-Mo	21c*	Boya
L08	Porphyry Mo (Climax-type)	Granite molybdenite	16	
M	**ULTRAMAFIC/MAFIC ASSOCIATION**		**- -**	
M01	Flood Basalt-Associated Ni-Cu	Basaltic subvolcanic Cu-Ni-PGE	5a/5b	
M02	Tholeiitic intrusion-hosted Ni-Cu	Gabbroid-associated Ni-Cu	7a	Giant Mascot, Nickel Mountain
M03	Podiform chromite		8a/8b	Castle Mountain, Scottie Creek
M04	Magmatic Fe-Ti±V oxide deposits	Mafic intrusion-hosted Ti-Fe deposits	7b	Lodestone Mountain?, Tanglewood Hill?
M05	Alaskan-type Pt±Os±Rh±Ir	Zoned ultramafic, Uralian-type	9	Tulameen Complex
M06	Ultramafic-hosted asbestos	Serpentinite-hosted asbestos	8d	Cassiar, Kutcho
M07	Ultramafic-hosted talc-magnesite		8f*	
M08	Vermiculite deposits		- -	Fort Fraser area
N	**CARBONATITES, KIMBERLITES & LAMPROITES**		**- -**	
N01	Carbonatite-hosted deposits		10	Aley, Mount Grace tuff
N02	Kimberlite-hosted diamonds	Diamond pipes	12	Cross
N03	Lamproite-hosted diamonds		12	
O	**PEGMATITE**		**- -**	
O01	Rare element pegmatite - LCT family	Zoned pegmatite (Lithium-Cesium-Tantalum)	13a*,b*	
O02	Rare element pegmatite - NYF family	Niobium-Yttrium-Fluorine pegmatite	- -	
O03	Muscovite pegmatite	Mica-bearing pegmatite	13f*	
O04	Feldspar-quartz pegmatite	Barren pegmatite	IM13g*, e*	
P	**METAMORPHIC-HOSTED**		**- -**	
P01	Andalusite hornfels		- -	Leech River
P02	Kyanite-sillimanite schists		- -	
P03	Microcrystalline graphite	"Amorphous" graphite	18k	
P04	Crystalline flake graphite		37f	AA
P05	Vein graphite	"Lump and chip" graphite	37g	
P06	Corundum in aluminous metasediments		- -	
Q	**GEMS AND SEMI-PRECIOUS STONES (diamonds under N)**		**- -**	
Q01	Jade		- -	Cry Lake, Ogden Mountain
Q02	Rhodonite		- -	Hill 60, Arthur Point, Cassiar
Q03	Agate		- -	
Q04	Amethyst		- -	
Q05	Jasper		- -	
Q06	Columbia-type emerald		31c	
Q07	Schist-hosted emerald	Exometamorphic emerald deposit	- -	
Q08	Sediment-hosted opal	Australian-type opal	- -	
Q09	Gem corundum in contact zones		- -	

Q10	Gem corundum hosted by alkalic rocks		- -	
Q11	Volcanic-hosted opal		- -	
R	**INDUSTRIAL ROCKS**		**- -**	
R01	Cement shale		- -	Dunsmuir shale, Sumas Mountain
R02	Expanding shale		- -	Nanaimo shale, Saturna Island
R03	Dimension stone - granite		- -	Nelson Island
R04	Dimension stone - marble		- -	Marblehead, Anderson Bay (Texada Island)
R05	Dimension stone - andesite		- -	Haddington Island
R06	Dimension stone - sandstone		30d*	Saturna Island, Newcastle Island
R07	Silica sandstone	High-silica quartzite	30e*	Moberley, Nicholson
R08	Flagstone		- -	Salmo, Revelstoke
R09	Limestone		- -	Texada Island, Quatsino Belt
R10	Dolomite		- -	Crawford Bay, Rock Creek
R11	Volcanic ash - pumice		- -	Meagher Mountain, Buse Lake
R12	Volcanic glass - perlite		IM25ka*	Frenier, Francois Lake
R13	Nepheline syenite		- -	Trident Mountain
R14	Alaskite		- -	
R15	Crushed rock	Road metal, Riprap, Railroad ballast	- -	McAbbee, Gissome
S	**OTHER**		**- -**	
S01	Broken Hill-type Pb-Zn-Ag±Cu	Shuswap-type, Ammeburg-type Pb-Zn	- -	Cottonbelt, River Jordan, Ruddock Creek
T	**MISCELLANEOUS**		**- -**	
T01	Tailings		- -	
T02	Geothermal spring	Spring water, Hot spring	- -	Liard Hot Springs
*	Unknown		- -	

Total Entries: 181

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◄ ***Appendix XIII**: Coder Names, Initials and NTS Areas*

***Appendix XV**: Generic Zone Names for Assay/Analysis Category* ►

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Appendix XV - Generic Zone Names for Assay/Analysis Category
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Choose from this generic name list when using the Assay/Analysis Category for Zone Name:

ADIT
AREA
BRECCIA
DRIFT
DRILLHOLE
DUMP
FAULT
FLOAT
FOOTWALL
GLORY HOLE
GOSSAN
HANGINGWALL
HIGH-GRADE
LENS
MAIN SHOWING
MAIN VEIN
OPENCUT
ORE SHOOT
OUTCROP
PIT
PITS
QUARRY
ROADCUT
ROCK
SAMPLE
SHAFT
SHEAR
SHOWING
SKARN
STOCKPILE
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WORKINGS

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***Appendix XIV**: Deposit Types (Mineral Deposit Profiles)*

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Appendix XVI - Regions
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CODE	DESCRIPTION (sort)	COMMENTS
APCC	Adams Plateau - Clearwater Area	Mining Camp, Area or Belt
AFG	Afghanistan	Country
AKAC	Ainsworth - Kaslo Area	Mining Camp, Area or Belt
AL	Alabama	USA State
AK	Alaska	USA State
AB	Alberta	Province in Canada
ALG	Algeria	Country
AARM	Alice Arm	Mining Camp, Area or Belt
ALKC	Alta Lake Camp	Mining Camp, Area or Belt
AND	Andorra	Country
ANG	Angola	Country
ANYX	Anyox Camp	Mining Camp, Area or Belt
ARG	Argentina	Country
AZ	Arizona	USA State
AR	Arkansas	USA State
ATLC	Atlin Camp	Mining Camp, Area or Belt
AUL	Australia	Country
AUS	Austria	Country
BPHC	Babine Porphyry	Mining Camp, Area or Belt
BRGC	Babine Range	Mining Camp, Area or Belt
BAN	Bangladesh	Country
BIAC	Banks Island Area	Mining Camp, Area or Belt
BEVC	Beaverdell Area	Mining Camp, Area or Belt
BEL	Belgium	Country
BEN	Benin	Country
BOL	Bolivia	Country
BOS	Bosnia-Hercegovina	Country
BOT	Botswana	Country
BRA	Brazil	Country
BRVC	Bridge River Camp	Mining Camp, Area or Belt
BRAC	Britannia Area	Mining Camp, Area or Belt
BC	British Columbia	Province in Canada
BUL	Bulgaria	Country
BUR	Burma	Country
BDI	Burundi	Country
BLKC	Buttle Lake Camp	Mining Camp, Area or Belt
CA	California	USA State
CAM	Cameroon	Country
CAN	Canada	Country
CBKC	Cariboo - Barkerville Camp	Mining Camp, Area or Belt
CQBC	Cariboo - Quesnel Belt	Mining Camp, Area or Belt
CASC	Cassiar Camp	Mining Camp, Area or Belt
CAR	Central African Republic	Country
CHA	Chad	Country
CHI	Chile	Country
CPR	China, People's Republic of	Country
CO	Colorado	USA State
COL	Columbia	Country
PRC	Congo, People's Republic of	Country
CT	Connecticut	USA State
CCAC	Copper Creek Area	Mining Camp, Area or Belt
CGBC	Coquihalla Gold Belt	Mining Camp, Area or Belt
COS	Costa Rica	Country
CRO	Croatia	Country

CODE (sort)	DESCRIPTION
***	Unknown
AARM	Alice Arm
AB	Alberta
AFG	Afghanistan
AK	Alaska
AKAC	Ainsworth - Kaslo Area
AL	Alabama
ALG	Algeria
ALKC	Alta Lake Camp
AND	Andorra
ANG	Angola
ANYX	Anyox Camp
APCC	Adams Plateau - Clearwater Area
AR	Arkansas
ARG	Argentina
ATLC	Atlin Camp
AUL	Australia
AUS	Austria
AZ	Arizona
BAN	Bangladesh
BC	British Columbia
BDI	Burundi
BEL	Belgium
BEN	Benin
BEVC	Beaverdell Area
BIAC	Banks Island Area
BLKC	Buttle Lake Camp
BOL	Bolivia
BOS	Bosnia-Hercegovina
BOT	Botswana
BPHC	Babine Porphyry
BRA	Brazil
BRAC	Britannia Area
BRGC	Babine Range
BRVC	Bridge River Camp
BUL	Bulgaria
BUR	Burma
CA	California
CAM	Cameroon
CAN	Canada
CAR	Central African Republic
CASC	Cassiar Camp
CBKC	Cariboo - Barkerville Camp
CCAC	Copper Creek Area
CGBC	Coquihalla Gold Belt
CHA	Chad
CHI	Chile
CO	Colorado
COL	Columbia
COS	Costa Rica
CPR	China, People's Republic of
CQBC	Cariboo - Quesnel Belt
CRO	Croatia
CT	Connecticut

CUB	Cuba	Country	CUB	Cuba
CYP	Cyprus	Country	CYP	Cyprus
CZE	Czechoslovakia	Country	CZE	Czechoslovakia
DE	Delaware	USA State	DE	Delaware
DEN	Denmark	Country	DEN	Denmark
ECU	Ecuador	Country	ECU	Ecuador
EGY	Egypt	Country	EGY	Egypt
ETH	Ethiopia	Country	ETH	Ethiopia
FIJ	Fiji	Country	FIJ	Fiji
FIN	Finland	Country	FIN	Finland
FL	Florida	USA State	FL	Florida
FRA	France	Country	FRA	France
GAB	Gabon	Country	GA	Georgia
GA	Georgia	USA State	GAB	Gabon
GER	Germany	Country	GBAC	Gibraltar Area
GHA	Ghana	Country	GER	Germany
GBAC	Gibraltar Area	Mining Camp, Area or Belt	GGBC	Graham Island Gold Belt
GSAC	Goldstream Area	Mining Camp, Area or Belt	GHA	Ghana
GGBC	Graham Island Gold Belt	Mining Camp, Area or Belt	GMAC	Greenstone Mountain - Meadow Creek Area
GRE	Greece	Country	GRE	Greece
GRN	Greenland	Country	GRN	Greenland
GMAC	Greenstone Mountain - Meadow Creek Area	Mining Camp, Area or Belt	GRNC	Greenwood Camp
GRNC	Greenwood Camp	Mining Camp, Area or Belt	GSAC	Goldstream Area
GUA	Guatemala	Country	GUA	Guatemala
GUI	Guinea	Country	GUI	Guinea
GUY	Guyana	Country	GUY	Guyana
HI	Hawaii	USA State	HEDC	Hedley Camp
HEDC	Hedley Camp	Mining Camp, Area or Belt	HI	Hawaii
HVMC	Highland Valley Camp	Mining Camp, Area or Belt	HON	Honduras
HON	Honduras	Country	HUN	Hungary
HUN	Hungary	Country	HVMC	Highland Valley Camp
ID	Idaho	USA State	IA	Iowa
IL	Illinois	USA State	ICAC	Island Copper Area
IND	India	Country	ID	Idaho
IN	Indiana	USA State	IL	Illinois
INS	Indonesia	Country	IMAC	Iron Mask Area
IA	Iowa	USA State	IN	Indiana
IRA	Iran, Islamic Republic of	Country	IND	India
IRQ	Iraq	Country	INS	Indonesia
IRE	Ireland	Country	IRA	Iran, Islamic Republic of
IMAC	Iron Mask Area	Mining Camp, Area or Belt	IRE	Ireland
ICAC	Island Copper Area	Mining Camp, Area or Belt	IRQ	Iraq
ISR	Israel	Country	ISR	Israel
ITA	Italy	Country	ITA	Italy
JPN	Japan	Country	JOR	Jordan
JOR	Jordan	Country	JPN	Japan
KS	Kansas	USA State	KEN	Kenya
KY	Kentucky	USA State	KORG	Kootenay Region
KEN	Kenya	Country	KS	Kansas
KORG	Kootenay Region	Regional Geologist Region	KUW	Kuwait
ROK	Korea, Republic of	Country	KY	Kentucky
KUW	Kuwait	Country	LA	Louisiana
LRGC	Leech River Gold Belt	Mining Camp, Area or Belt	LES	Lesotho
LES	Lesotho	Country	LHBC	Lillooet River - Harrison Lake Belt
LHBC	Lillooet River - Harrison Lake Belt	Mining Camp, Area or Belt	LRGC	Leech River Gold Belt
LA	Louisiana	USA State	MA	Massachusetts
MAG	Madagascar	Country	MAG	Madagascar
ME	Maine	USA State	MAL	Malaysia
MLW	Malawi	Country	MAU	Mauritania
MAL	Malaysia	Country	MB	Manitoba
MLI	Mali	Country	MD	Maryland
MB	Manitoba	Province in Canada	ME	Maine
MD	Maryland	USA State	MEX	Mexico
MA	Massachusetts	USA State	MI	Michigan
MAU	Mauritania	Country	MLI	Mali
MEX	Mexico	Country	MLW	Malawi
MI	Michigan	USA State	MN	Minnesota
MN	Minnesota	USA State	MO	Missouri
MS	Mississippi	USA State	MOR	Morocco
MO	Missouri	USA State	MOZ	Mozambique
MT	Montana	USA State	MS	Mississippi
MSBC	Moresby Island Skarn Belt	Mining Camp, Area or Belt	MSBC	Moresby Island Skarn Belt
MOR	Morocco	Country	MT	Montana
MOZ	Mozambique	Country	MWAC	Mt. Washington Area
MWAC	Mt. Washington Area	Mining Camp, Area or Belt	NAM	Nambia
NAM	Nambia	Country	NB	New Brunswick
NE	Nebraska	USA State	NC	North Carolina
NTH	Netherlands	Country	NCBC	Nicola Belt
NV	Nevada	USA State	NCRG	Northeast-Central Region
NB	New Brunswick	Province in Canada	ND	North Dakota
NH	New Hampshire	USA State	NDEC	New Nadina - Equity Area

NJ	New Jersey	USA State	NE	Nebraska
NM	New Mexico	USA State	NER	Niger
NDEC	New Nadina - Equity Area	Mining Camp, Area or Belt	NF	Newfoundland
NY	New York	USA State	NH	New Hampshire
NZL	New Zealand	Country	NIC	Nicaragua
NF	Newfoundland	Province in Canada	NIR	Nigeria
NIC	Nicaragua	Country	NJ	New Jersey
NCBC	Nicola Belt	Mining Camp, Area or Belt	NKAC	Nimpkish Area
NER	Niger	Country	NM	New Mexico
NIR	Nigeria	Country	NOR	Norway
NKAC	Nimpkish Area	Mining Camp, Area or Belt	NS	Nova Scotia
NC	North Carolina	USA State	NT	Northwest Territories
ND	North Dakota	USA State	NTH	Netherlands
NCRG	Northeast-Central Region	Regional Geologist Region	NV	Nevada
NWRG	Northwest Region	Regional Geologist Region	NWRG	Northwest Region
NT	Northwest Territories	Territory in Canada	NY	New York
NOR	Norway	Country	NZL	New Zealand
NS	Nova Scotia	Province in Canada	OH	Ohio
OH	Ohio	USA State	OK	Oklahoma
OK	Oklahoma	USA State	OMA	Oman, Sultanate of
OMA	Oman, Sultanate of	Country	ON	Ontario
ON	Ontario	Province in Canada	OR	Oregon
OR	Oregon	USA State	PA	Pennsylvania
PAK	Pakistan	Country	PAK	Pakistan
PAR	Paraguay	Country	PAR	Paraguay
PMDC	Pemberton District	Mining Camp, Area or Belt	PBSC	Purcell Belt (Sullivan)
PA	Pennsylvania	USA State	PE	Prince Edward Island
PER	Peru	Country	PER	Peru
PHI	Philippines	Country	PHI	Philippines
POL	Poland	Country	PMDC	Pemberton District
POR	Portugal	Country	POL	Poland
PE	Prince Edward Island	Province in Canada	POR	Portugal
PBSC	Purcell Belt (Sullivan)	Mining Camp, Area or Belt	PQ	Quebec
PQ	Quebec	Province in Canada	PRC	Congo, People's Republic of
QCIS	Queen Charlotte Islands	Area in British Columbia	QCIS	Queen Charlotte Islands
RI	Rhode Island	USA State	RI	Rhode Island
ROM	Romania	Country	ROK	Korea, Republic of
ROSC	Rossland Camp	Mining Camp, Area or Belt	ROM	Romania
RUS	Russia	Country	ROSC	Rossland Camp
RWA	Rwanda	Country	RUS	Russia
SSAC	Salmo - Sheep Creek Area	Mining Camp, Area or Belt	RWA	Rwanda
SGAC	Sarita - Gordon River Area	Mining Camp, Area or Belt	SAF	South Africa
SK	Saskatchewan	Province in Canada	SAU	Saudi Arabia
SAU	Saudi Arabia	Country	SBAC	Similkameen - Boundary Area
SEN	Senegal	Country	SC	South Carolina
SKBC	Sicker Belt	Mining Camp, Area or Belt	SCRG	South-Central Region
SLN	Sierra Leone	Country	SD	South Dakota
SRAC	Silver Standard - Rocher Deboule Area	Mining Camp, Area or Belt	SEN	Senegal
SBAC	Similkameen - Boundary Area	Mining Camp, Area or Belt	SGAC	Sarita - Gordon River Area
SLOC	Slocan Camp	Mining Camp, Area or Belt	SK	Saskatchewan
SLO	Slovenia	Country	SKBC	Sicker Belt
SOM	Somalia	Country	SLAC	Stump Lake Area
SCRG	South-Central Region	Regional Geologist Region	SLN	Sierra Leone
SAF	South Africa	Country	SLO	Slovenia
SC	South Carolina	USA State	SLOC	Slocan Camp
SD	South Dakota	USA State	SMAC	Swakum Mountain Area
SWRG	Southwest Region	Regional Geologist Region	SOM	Somalia
SPA	Spain	Country	SPA	Spain
STWC	Stewart Camp	Mining Camp, Area or Belt	SRAC	Silver Standard - Rocher Deboule Area
SLAC	Stump Lake Area	Mining Camp, Area or Belt	SSAC	Salmo - Sheep Creek Area
SUD	Sudan	Country	STWC	Stewart Camp
SMAC	Swakum Mountain Area	Mining Camp, Area or Belt	SUD	Sudan
SWA	Swaziland	Country	SWA	Swaziland
SWE	Sweden	Country	SWE	Sweden
SWZ	Switzerland	Country	SWRG	Southwest Region
TNZ	Tanzania, United Republic of	Country	SWZ	Switzerland
TBAC	Taseko - Blackdome Area	Mining Camp, Area or Belt	TBAC	Taseko - Blackdome Area
TRGC	Telkwa Range	Mining Camp, Area or Belt	THA	Thailand
TN	Tennessee	USA State	TKAC	Tofino - Kennedy River Area
TXIS	Texada Island	Mining Camp, Area or Belt	TMAC	Tillicum Mountain Area
TX	Texas	USA State	TN	Tennessee
THA	Thailand	Country	TNZ	Tanzania, United Republic of
TMAC	Tillicum Mountain Area	Mining Camp, Area or Belt	TODC	Toodoggone Camp
TKAC	Tofino - Kennedy River Area	Mining Camp, Area or Belt	TOG	Togo
TOG	Togo	Country	TRGC	Telkwa Range
TODC	Toodoggone Camp	Mining Camp, Area or Belt	TUN	Tunisia
TUN	Tunisia	Country	TUR	Turkey
TUR	Turkey	Country	TX	Texas
UGA	Uganda	Country	TXIS	Texada Island
UAE	United Arab Emirates	Country	UAE	United Arab Emirates
UK	United Kingdom	Country	UGA	Uganda

USA	United States of America	Country	UK	United Kingdom
***	Unknown	Unknown Region	URU	Uruguay
URU	Uruguay	Country	USA	United States of America
UT	Utah	USA State	UT	Utah
VANI	Vancouver Island	Area in British Columbia	VA	Virginia
VEN	Venezuela	Country	VANI	Vancouver Island
VT	Vermont	USA State	VEN	Venezuela
VTN	Vietnam	Country	VT	Vermont
VA	Virginia	USA State	VTN	Vietnam
WA	Washington State	USA State	WA	Washington State
WV	West Virginia	USA State	WI	Wisconsin
WI	Wisconsin	USA State	WV	West Virginia
WY	Wyoming	USA State	WY	Wyoming
YNAC	Ymir - Nelson Area	Mining Camp, Area or Belt	YNAC	Ymir - Nelson Area
YUG	Yugoslavia	Country	YT	Yukon
YT	Yukon	Territory in Canada	YUG	Yugoslavia
ZAI	Zaire	Country	ZAI	Zaire
ZAM	Zambia	Country	ZAM	Zambia
ZKAC	Zeballos - Kyuquot Area	Mining Camp, Area or Belt	ZIM	Zimbabwe
ZIM	Zimbabwe	Country	ZKAC	Zeballos - Kyuquot Area

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◄ ***Appendix XV**: Assay Categories*

Figures ►

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British Columbia Mining Divisions (MINFILE Coding Manual)

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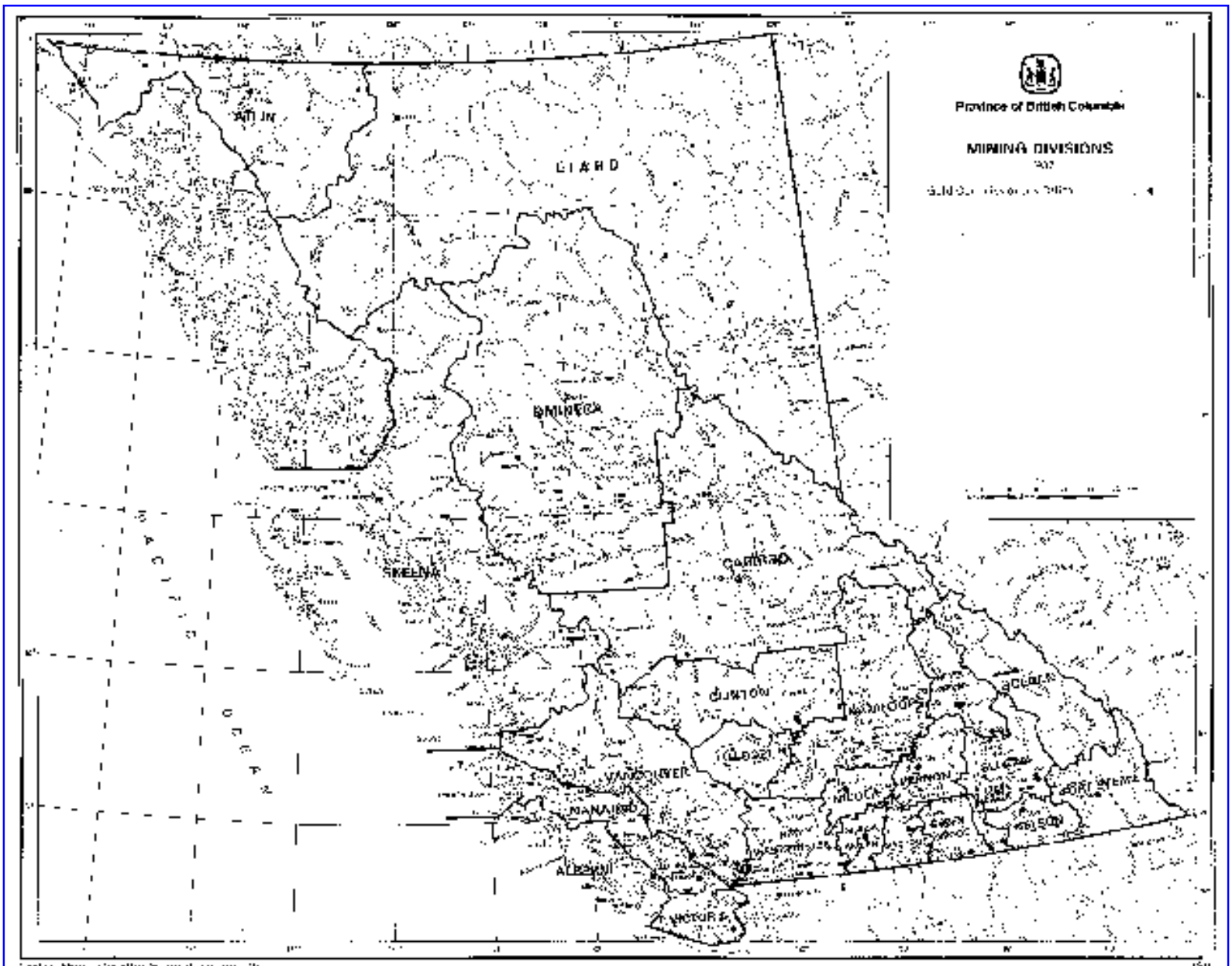

Fig. 1 - Mining Divisions

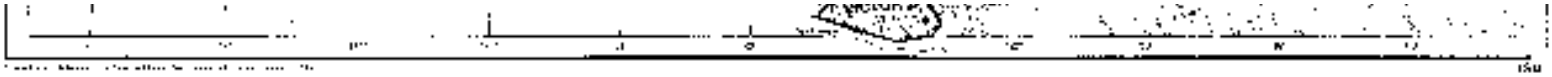

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***Figure 2**: Mining Camps and Exploration Areas of BC*

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British Columbia Mining Camps (MINFILE Coding Manual)

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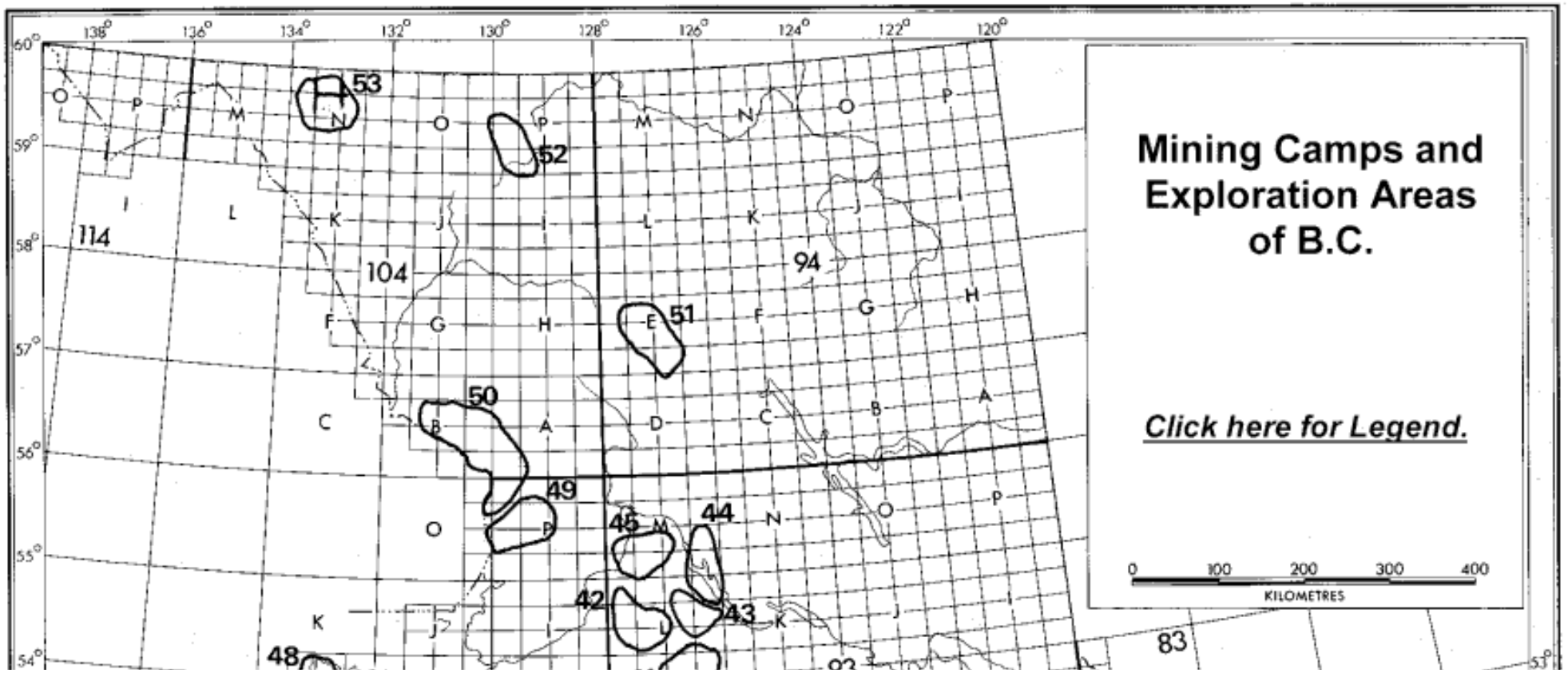

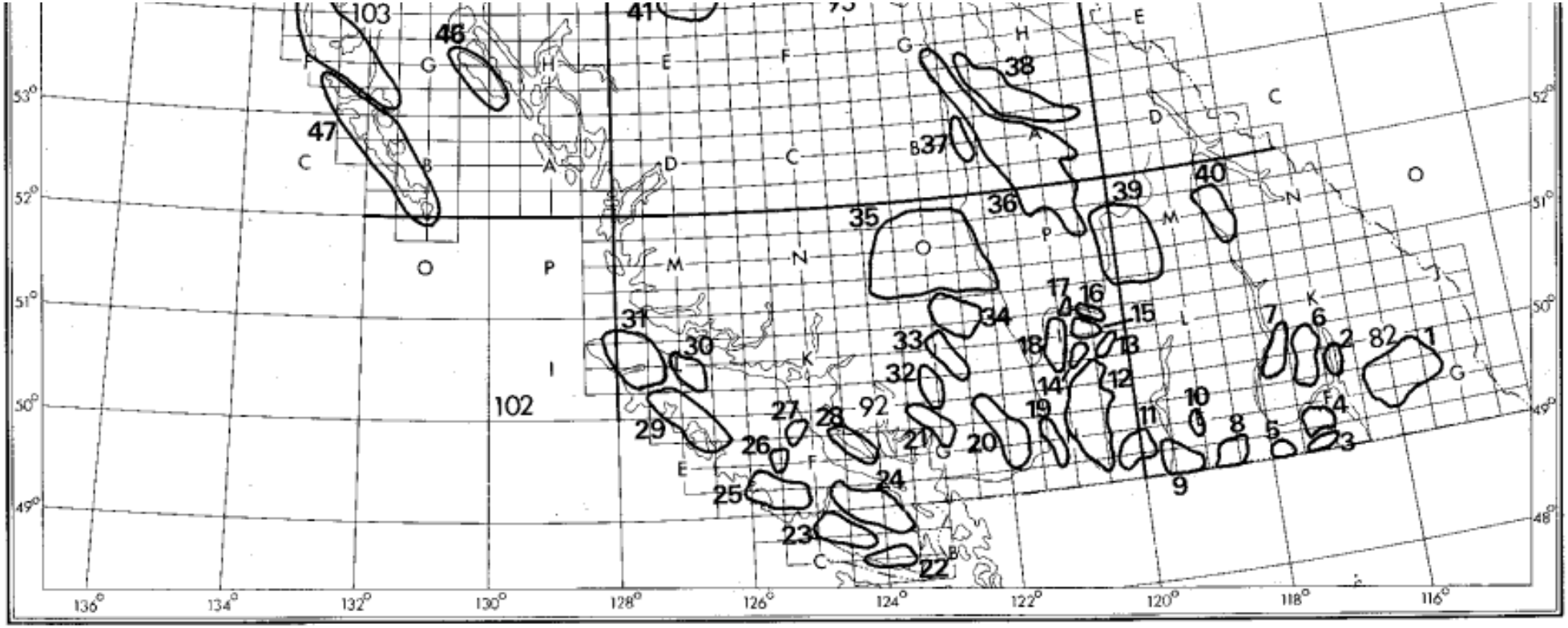

This map is for information only; it is not used by MINFILE.

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***Figure 1**: British Columbia Mining Divisions*

***Figure 3**: Generalized Terrane Map of the Canadian Cordillera*

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Simplified Terrane Map of the Canadian Cordillera
(MINFILE Coding Manual)

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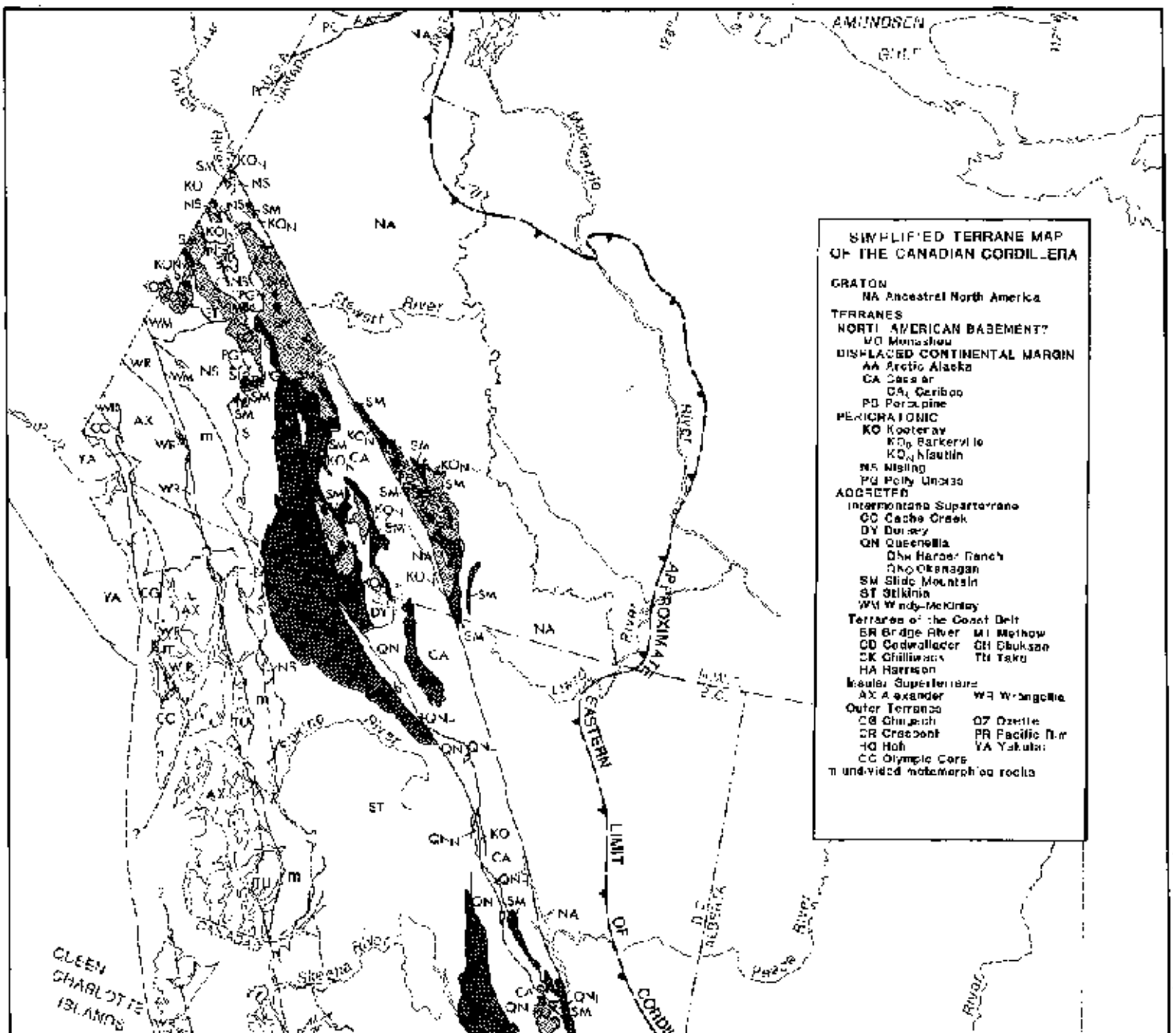

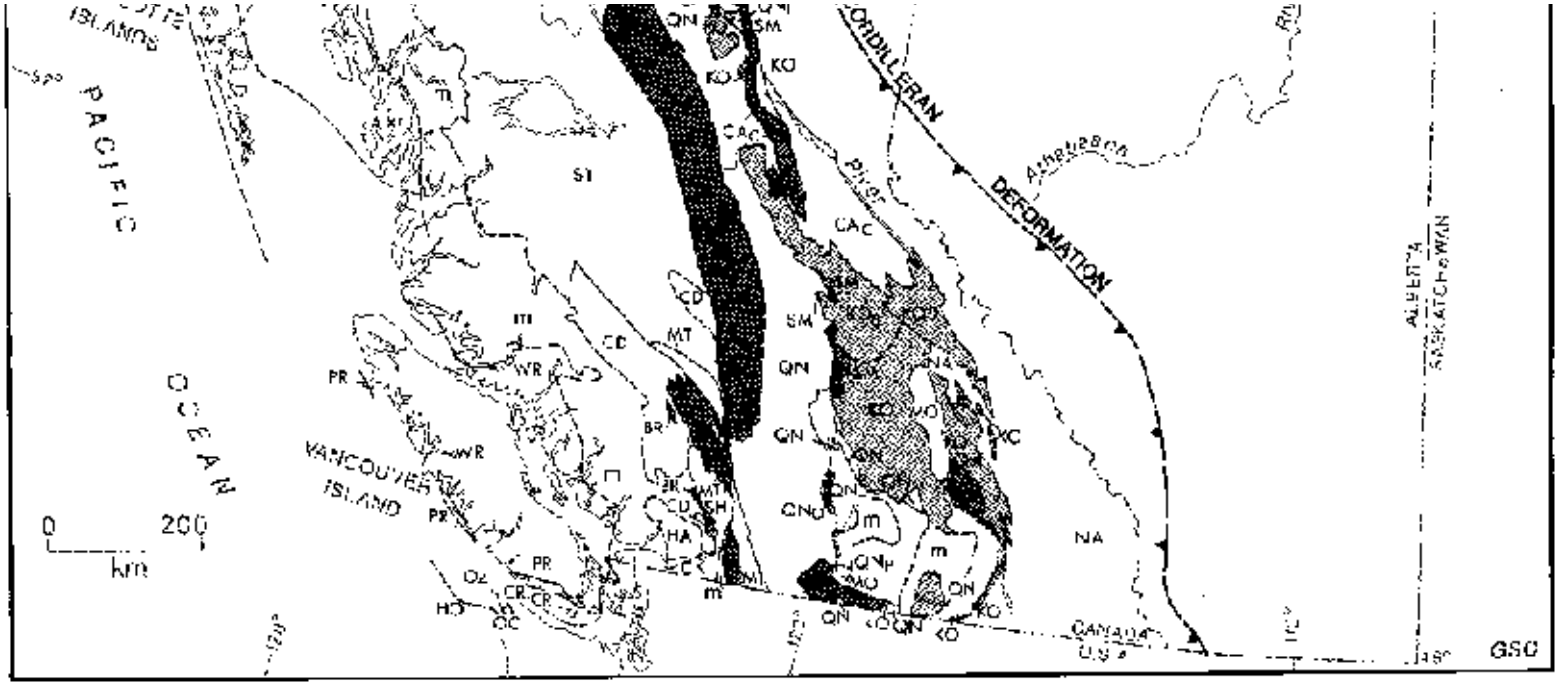

Figure 2. *Simplified terrane map of the Canadian Cordillera. PR & CR, Pacific Rim and Crescent terranes; CC & YA, Chugach and Yakutat terranes; WH, Wrangellia; AX, Alexander Terrane; GN, Gravina-Nutzotin Terrane; CP & MRX, Coast Plutonic and Metamorphic Rocks; BH-CD-SI-HA-CK-MT, Bridge River, Cadwallader, Shuksan, Harrison, Cultus/wack and Methow terranes; ST, Stikinia; CC, Cache Creek Terrane; QN, Quesnellia; SM & OY, Slide Mountain and Dorsey terranes; KO, Kootenay Terrane; NA, North American Terrane (ancestral North America); MO, Monashee Terrane (North American Basement); PG & NS, Polly Gneiss and Nisling Terrane. (Gabrielse, H. et al., in press).*

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◄ ***Figure 2**: British Columbia Mining Divisions*

***Figure 4**: Physiographic Map of the Canadian Cordillera* ►

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British Columbia Physiographic Map of the Canadian Cordillera
(MINFILE Coding Manual)

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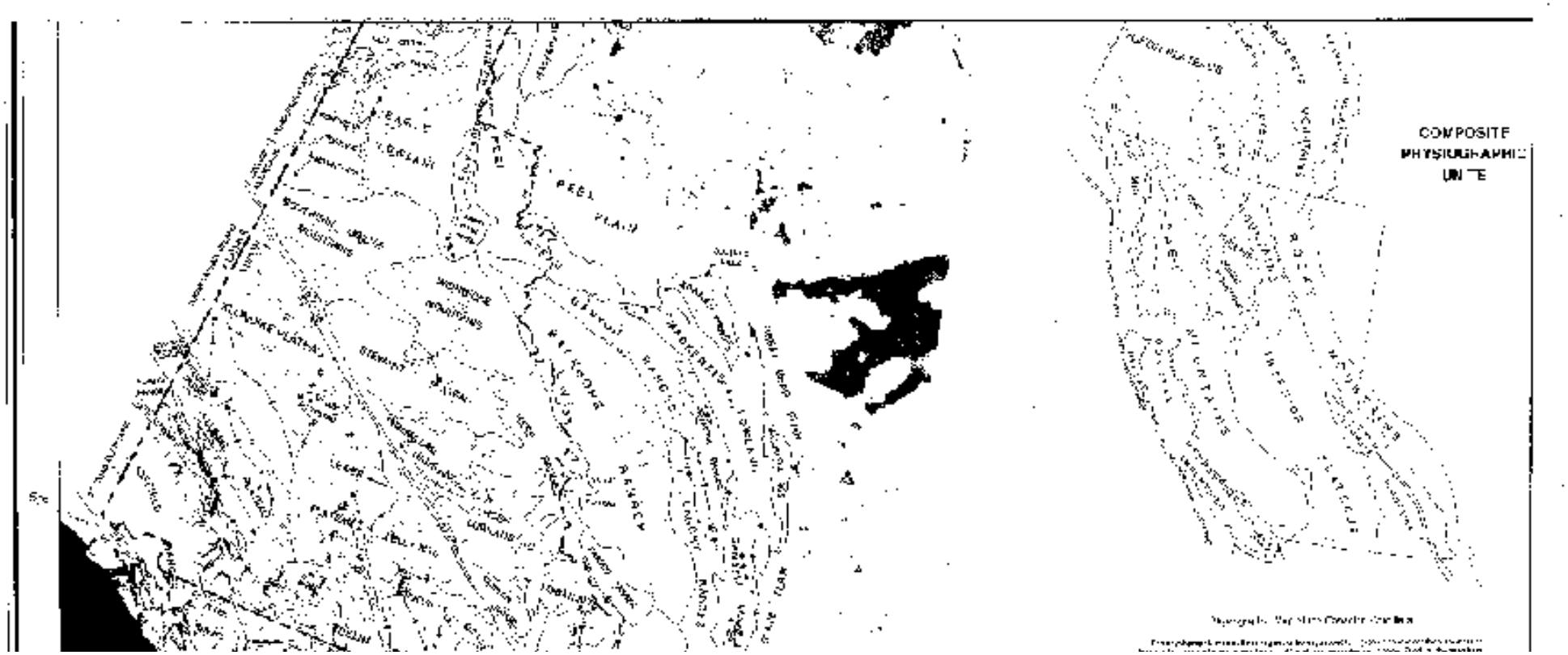
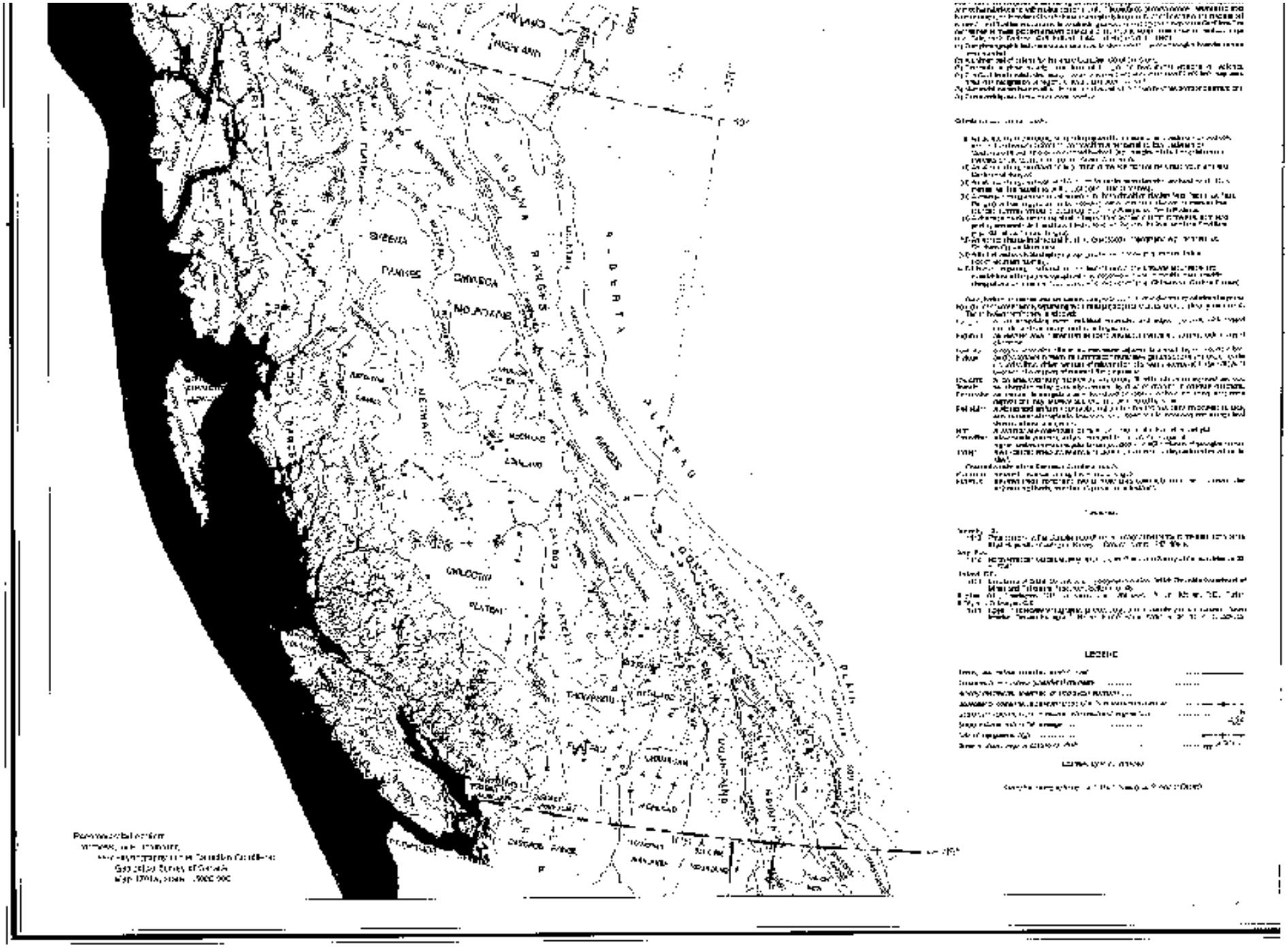
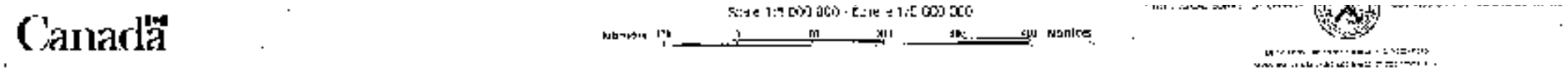


Fig. 4 - Physiographic Map





Click on the map for a larger image; click on the text for enlarged legend.

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***Figure 3**: Simplified Terrane map of the Canadian Cordillera*

***Figure 5**: Geologic Time Scale- British Columbia Survey Branch*

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British Columbia Geologic Time Scale (MINFILE Coding Manual)

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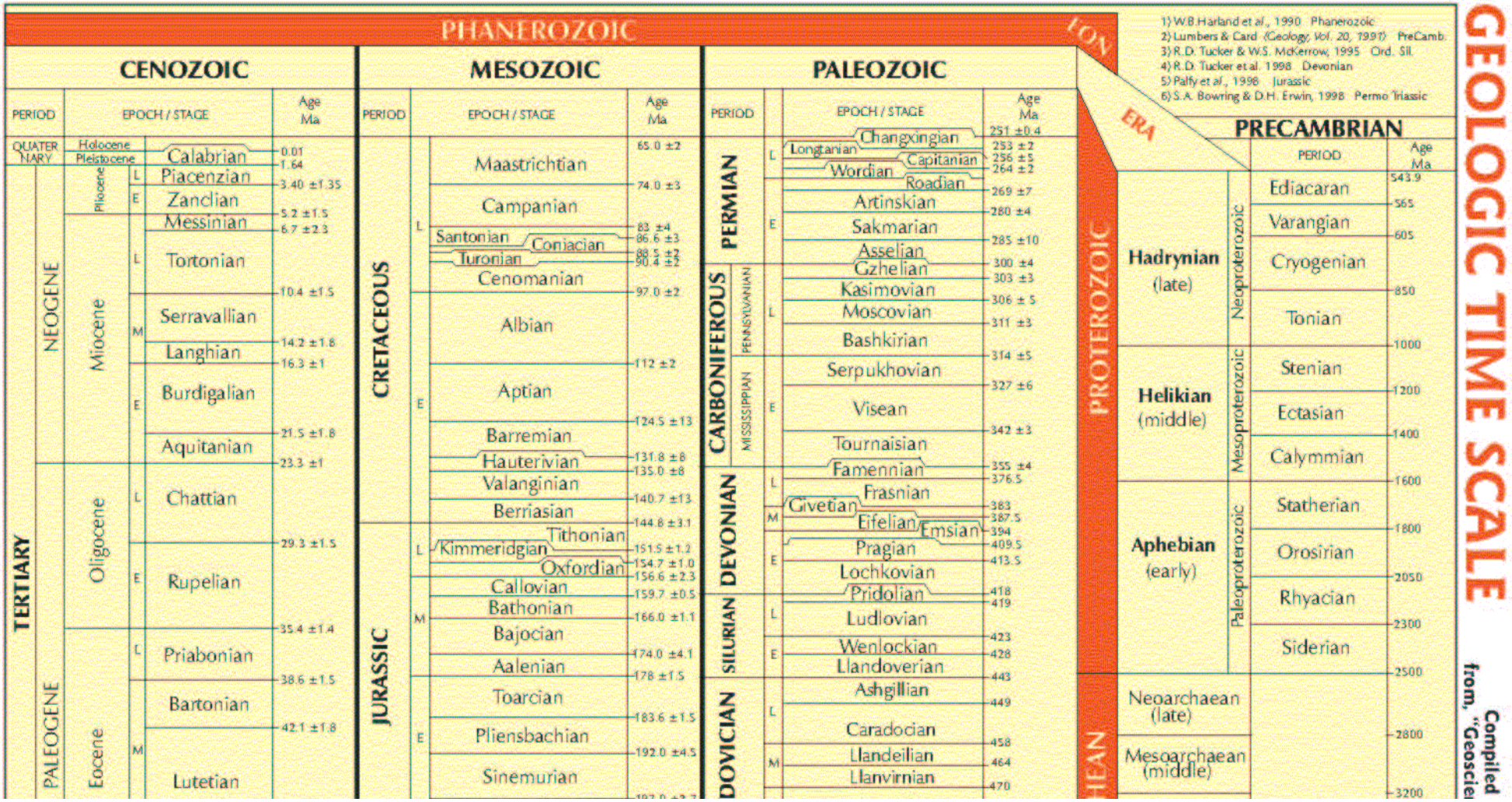

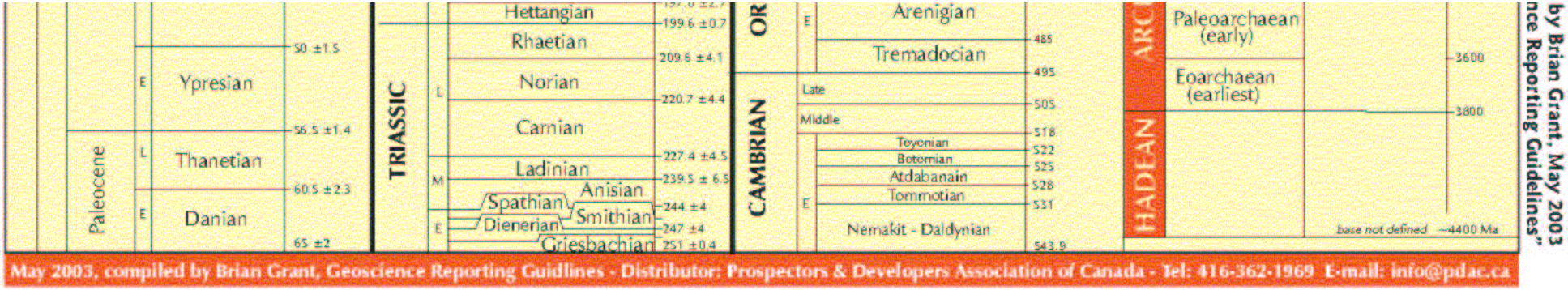

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***Figure 4**: Physiographic Map of the Canadian Cordillera*

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Appendix II - MINFILE Commodity Codes
(MINFILE Coding Manual)

MINFILE Commodity Codes: *e19.dbf*

Commodity (sort)	Code	Code (sort)	Commodity
Agate	AE	AA	Andesite
Aggregate	AT	AB	Asbestos
Aluminum	AL	AD	Andalusite
Alunite	AI	AE	Agate
Amber	AM	AG	Silver
Amethyst	AY	AI	Alunite
Andalusite	AD	AL	Aluminum
Andesite	AA	AM	Amber
Anhydrite	AN	AN	Anhydrite
Antimony	SB	AP	Apatite
Apatite	AP	AR	Argillite
Argillite	AR	AS	Arsenic
Arsenic	AS	AT	Aggregate
Asbestos	AB	AU	Gold
Barite	BA	AY	Amethyst
Barium	BR	BA	Barite
Bentonite	BN	BE	Beryllium
Beryl	BY	BI	Bismuth
Beryllium	BE	BM	Bitumen
Bismuth	BI	BN	Bentonite
Bitumen	BM	BR	Barium
Building Stone	BS	BS	Building Stone
Cadmium	CD	BY	Beryl
Celestite	CI	CC	Ceramic Clay
Ceramic Clay	CC	CD	Cadmium
Cerium	CE	CE	Cerium
Cesium	CS	CH	Chrysotile
Chromium	CR	CI	Celestite
Chrysotile	CH	CL	Coal
Clay	CY	CM	Corundum
Coal	CL	CO	Cobalt
Cobalt	CO	CR	Chromium
Copper	CU	CS	Cesium
Corundum	CM	CU	Copper
Diamond	DI	CY	Clay
Diatomite	DE	DE	Diatomite
Dimension Stone	DS	DI	Diamond
Dolomite	DO	DO	Dolomite
Dysprosium	DY	DS	Dimension Stone
Erbium	ER	DY	Dysprosium
Europium	EU	ER	Erbium
Evaporites	EV	ES	Expanding Shale

Expanding Shale	ES	EU	Europium
Feldspar	FD	EV	Evaporites
Fireclay	FC	FC	Fireclay
Flagstone	FS	FD	Feldspar
Fluorite	FL	FE	Iron
Fullers Earth	FR	FL	Fluorite
Gadolinium	GD	FR	Fullers Earth
Gallium	GA	FS	Flagstone
Garnet	GN	GA	Gallium
Gemstones	GS	GD	Gadolinium
Germanium	GE	GE	Germanium
Gold	AU	GN	Garnet
Granite	GR	GR	Granite
Graphite	GT	GS	Gemstones
Gravel	GV	GT	Graphite
Gypsum	GY	GV	Gravel
Hafnium	HF	GY	Gypsum
Hotspring	HS	HF	Hafnium
Hydromagnesite	HM	HG	Mercury
Indium	IN	HM	Hydromagnesite
Iridium	IR	HS	Hotspring
Iron	FE	IN	Indium
Jade/Nephrite	JD	IR	Iridium
Kaolinite	KA	JD	Jade/Nephrite
Kyanite	KY	KA	Kaolinite
Lanthanum	LA	KK	Potassium
Lead	PB	KN	Potassium Nitrate
Limestone	LS	KY	Kyanite
Lithium	LI	LA	Lanthanum
Lutetium	LU	LI	Lithium
Magnesite	MT	LS	Limestone
Magnesium	MG	LU	Lutetium
Magnesium Sulphate	MS	MA	Magnetite
Magnetite	MA	MB	Marble
Manganese	MN	MG	Magnesium
Marble	MB	MI	Mica
Marl	MR	MN	Manganese
Mercury	HG	MO	Molybdenum
Mica	MI	MR	Marl
Mineral/Rock Wool	MW	MS	Magnesium Sulphate
Molybdenum	MO	MT	Magnesite
Neodymium	ND	MW	Mineral/Rock Wool
Nepheline Syenite	NS	NA	Sodium
Nickel	NI	NB	Niobium
Niobium	NB	NC	Sodium Chloride
Ochre	OC	ND	Neodymium
Olivine	OL	NI	Nickel
Opal	OP	NS	Nepheline Syenite
Osmium	OS	OC	Ochre
Palladium	PD	OL	Olivine
Peat	PA	OP	Opal
Perlite	PE	OS	Osmium
Phosphate	PP	PA	Peat
Phosphorus	PH	PB	Lead

Platinum	PT	PD	Palladium
Potash	PO	PE	Perlite
Potassium	KK	PH	Phosphorus
Potassium Nitrate	KN	PL	Pyrophyllite
Pozzolan	PZ	PO	Potash
Praseodymium	PR	PP	Phosphate
Pumice	PU	PR	Praseodymium
Pyrochlore	PY	PT	Platinum
Pyrophyllite	PL	PU	Pumice
Quartzite	QZ	PY	Pyrochlore
Radioactive Material	RD	PZ	Pozzolan
Radium	RA	QZ	Quartzite
Radon	RN	RA	Radium
Railroad Ballast	RB	RB	Railroad Ballast
Rare Earths	RS	RD	Radioactive Material
Rhenium	RE	RE	Rhenium
Rhodium	RH	RH	Rhodium
Rhodonite	RO	RM	Rubidium
Rubidium	RM	RN	Radon
Ruby	RY	RO	Rhodonite
Ruthenium	RU	RS	Rare Earths
Samarium	SM	RU	Ruthenium
Sand	SD	RY	Ruby
Sandstone	SV	SB	Antimony
Sapphire	SP	SC	Scandium
Scandium	SC	SD	Sand
Selenium	SE	SE	Selenium
Sericite	SK	SH	Shale
Shale	SH	SI	Silica
Silica	SI	SK	Sericite
Sillimanite	SL	SL	Sillimanite
Silver	AG	SM	Samarium
Slate	ST	SN	Tin
Soapstone	SZ	SO	Sodium Carbonate
Sodalite	SX	SP	Sapphire
Sodium	NA	SR	Strontium
Sodium Carbonate	SO	SS	Sodium Sulphate
Sodium Chloride	NC	ST	Slate
Sodium Sulphate	SS	SU	Sulphur
Strontium	SR	SV	Sandstone
Sulphur	SU	SX	Sodalite
Talc	TC	SZ	Soapstone
Tantalum	TA	TA	Tantalum
Tellurium	TE	TB	Terbium
Terbium	TB	TC	Talc
Thallium	TL	TE	Tellurium
Thorium	TH	TH	Thorium
Thulium	TM	TI	Titanium
Tin	SN	TL	Thallium
Titanium	TI	TM	Thulium
Travertine	TR	TR	Travertine
Tremolite	TT	TT	Tremolite
Tungsten	WO	UR	Uranium
Unknown	**	VA	Vanadium

Uranium	UR	VG	Volcanic Glass
Vanadium	VA	VL	Volcanic Ash
Vermiculite	VM	VM	Vermiculite
Volcanic Ash	VL	WL	Wollastonite
Volcanic Glass	VG	WO	Tungsten
Wollastonite	WL	YB	Ytterbium
Ytterbium	YB	YR	Yttrium
Yttrium	YR	ZE	Zeolite
Zeolite	ZE	ZN	Zinc
Zinc	ZN	ZR	Zirconium
Zirconium	ZR	**	Unknown
Total	161	161	Total

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***Appendix I**: MINFILE Mnemonic Codes*

***Appendix III**: MINFILE Mineral, Rock & Modifier Codes*.