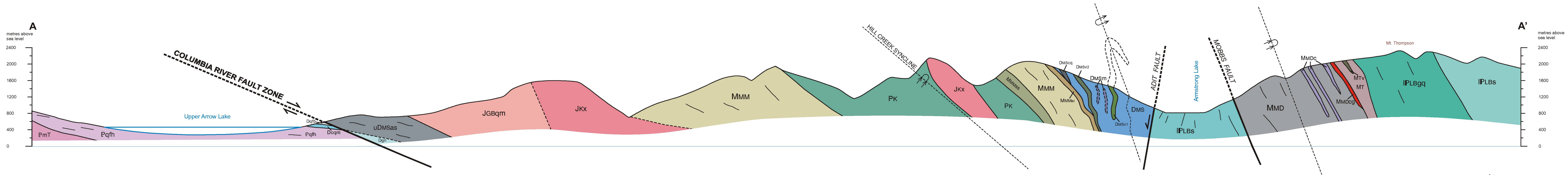

GEOLOGICAL SURVEY OF CANADA
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Natural Resources Canada / Ressources naturelles Canada

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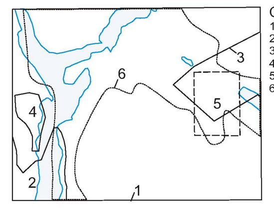
MINERAL OCCURRENCE INDEX

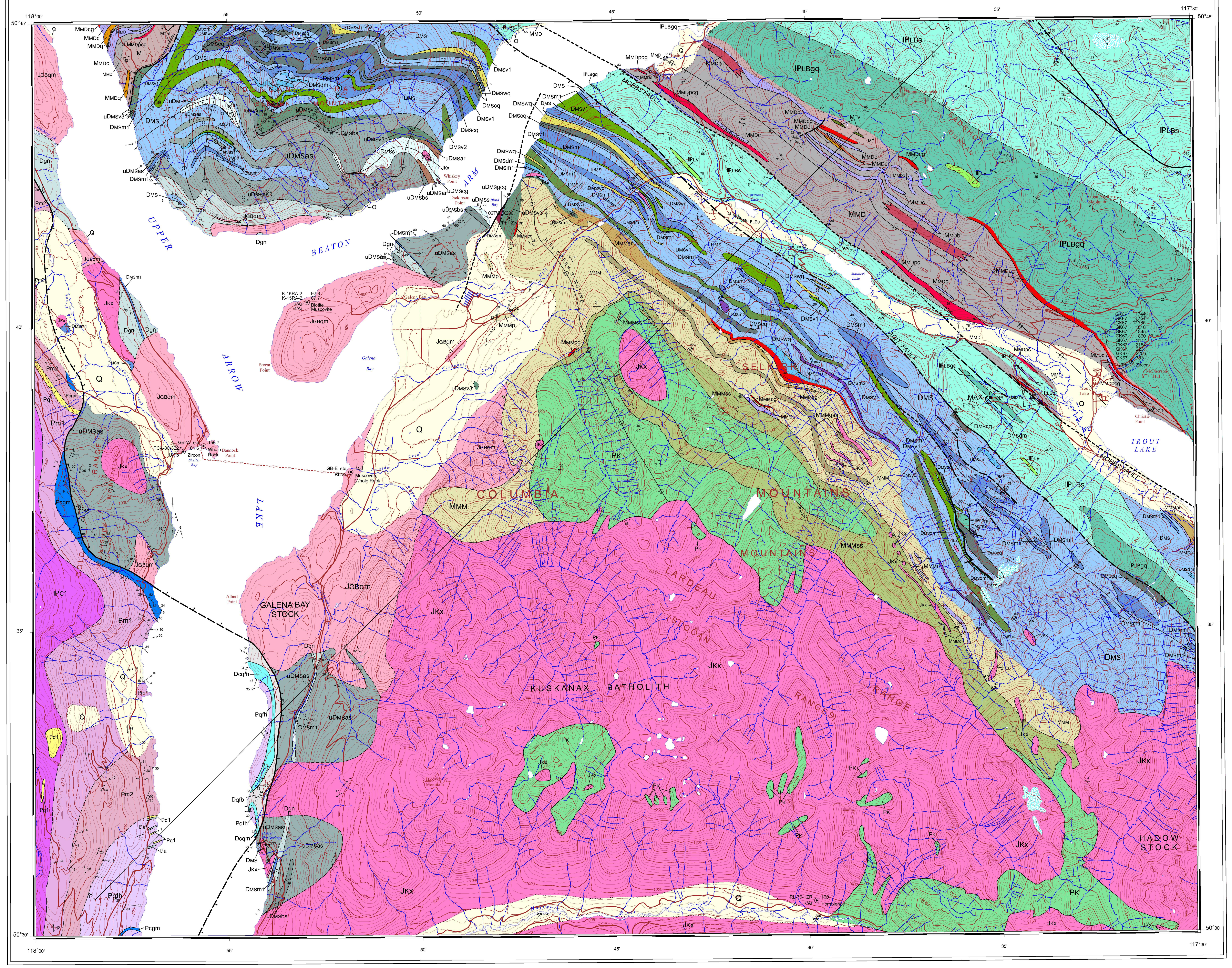
MINFILE #	NAME	COMMODITY
082KNW002	STAUBERT LAKE	PB,ZN
082KNW003	LUCKY BOY (L.5423)	AG,PB,CU,ZN,WO,AU,MO
082KNW004	COPPER CHIEF (L.4584)	AG,PB,CU,WO,ZN,MO,AU
082KNW005	FISSURE	AG,CU,ZN,FE
082KNW030	TRUE FISSURE (L.1097)	AG,PB,ZN,AU,CU
082KNW040	BEATRICE (L.4586)	AG,PB,ZN,AU
082KNW059	ETHEL	AG,PB,ZN
082KNW061	GREAT NORTHERN (L.1099)	AG,AU,PB,ZN,CU
082KNW062	ST. ELMO, (L.4581)	AG,AU,PB,ZN,CU
082KNW087	MAX	MO,WO,PB,ZN,CU
082KNW088	VMS 9	CU
082KNW089	VMS 19, 20	CU
082KNW090	VMS 21	PB,ZN,CU
082KNW091	VMS 23	PB,ZN,MO
082KNW092	VMS 1	PB,ZN,AG
082KNW093	VMS 2	PB,ZN,MO,AG
082KNW096	MURRAY	CU,AU,PB,ZN
082KNW097	MIKE	PB,ZN,AG,AU
082KNW101	SILVER DOLLAR	AG,PB,ZN,AU,CU
082KNW105	MAR	MO,PB
082KNW123	HOMESTAKE	PB
082KNW127	GILLMAN	AU,AG,PB,ZN
082KNW131	MO,UNTAIN BOY (L. 2495)	AG,PB
082KNW136	IRON DOLLAR (L.7059)	PB,AU,AG,CU
082KNW147	CRAIG	AG,PB,AU
082KNW149	RAINY DAY	CU
082KNW189	ROYAL CANADIAN	AU
082KNW213	GREAT WESTERN (L.4503)	PB,AG
082KNW224	UPPER ARROW TALC	TC
082KNW226	SIDMO,UTH	LS,MB,BS
082KNW228	RATH	PB,ZN,AG
082KNW229	LEMAR	MO
082KNW230	POLLMAN CREEK	PB
082KNW231	STAU,BERT TRENCH	PB,ZN
082KNW233	HALCYON HOT SPRINGS	HS
082KNW234	HALFWAY RIVER HOTSPRINGS	HS
082KNW235	UPPER HALFWAY RIVER HOTSPRINGS	HS
082KSW099	PINGSTON	ZN,AG,PB,CU

* Abbreviations for commodities: AG – silver; AU - gold; BS - building stone; CU - copper; FE - iron; HS - hotspring; LS - limestone; MB - marble; MO - molybdenum; PB - lead; SB - antimony; TC - talc SN - tin; TC - talc; TE - tellurium; WO - tungsten; ZN - zinc

Source: British Columbia Ministry of Energy and Mines, MINFILE database available at: http://www.em.gov.bc.ca/Mining/Geolsurv/Minfile/



COMPILATION SOURCES:
1. Read and Wheeler (1976)
2. Reesor and Moore (1971)
3. Fyles and Eastwood (1962)
4. Kraft (2005)
5. Read et al. (2009)
6. Kraft (2011)



SYMBOLS

- Foliation (unclassified): inclined, horizontal, vertical
- Foliation (1st generation): inclined, horizontal, vertical
- Bedding: inclined, horizontal, vertical, overturned
- Fold: axis plane (unknown generation) s-verging, z-verging
- Cleavage
- Mineral lineation
- Fold hinge: crenulation lineation
- Geochronology sample (http://gdr.nrcan.gc.ca/geochron/index_e.php) — database no., age, isotopic sys., mineral
- Mineral Occurrence — database no.
- Geological boundary defined, approximate, assumed
- Geological boundary: arbitrary
- Quaternary limit
- Fault, reverse (teeth indicate upthrust side): defined, approximate, assumed
- Fault, normal (balls indicate downthrown side): defined, approximate
- Fault, normal (balls indicate downthrown side): assumed
- Fault, unclassified: defined, approximate, assumed
- Anticline (2nd generation) upright, overturned, plunging
- Syncline (2nd generation) upright, overturned, plunging
- Anticline (2nd generation) (approximate): upright, overturned, plunging
- Syncline (2nd generation) (approximate): upright, overturned, plunging
- Anticline (3rd generation): upright
- Syncline (3rd generation): upright
- Cross-section line

ROCKS WEST OF COLUMBIA RIVER FAULT ZONE

DEVONIAN

- **Dqfb** Silver Creek Schist?: purplish biotite-feldspar-quartz schist with or without muscovite, garnet and sillimanite; minor white to grey marble and amphibolitic schist
- **Dcqm** Calcareous Quartzite Marker (Chase Quartzite?): pitted, calcareous quartzite; diopside-bearing calcareous quartzite; quartzite; marble

PROTEROZOIC (TO PALEOZOIC?)

- **Pqfh** Biotite-quartz-feldspar schist (with or without sillimanite, garnet); feldspar-quartz-hornblende schist (with or without biotite); amphibolite; calc-silicate gneiss; micaceous quartzite (map units M and F of Reesor and Moore, 1971)
- **Pa** Amphibolite; maybe interlayered with biotite schist and biotite-quartz-feldspar paragneiss (unit M8 of Reesor and Moore, 1971)
- **Pcgm** Marble (unit M7 of Reesor)
- **Pm2** Biotite-quartz-feldspar paragneiss characterized by lenses and boudins of garnetiferous amphibolite; extensive lenticular masses of pegmatite
- **Pm1** Biotite-quartz-feldspar paragneiss; sillimanite-biotite-garnet schist; garnet-quartz-feldspar gneiss
- **Pq1** Quartzite (unit M3a of Reesor and Moore, 1971)

PROTEROZOIC
PALEOPROTEROZOIC
MONASHEE COMPLEX

- **PPc1** Layered gneisses; biotite-quartz-feldspar gneiss (unit C1 of Reesor and Moore, 1971)

LEGEND

COLUMBIA RIVER FAULT ZONE

CENOZOIC

- **Q** Unconsolidated sediments; glacial deposits, colluvium and alluvium; few if any outcrops

MESOZOIC
JURASSIC
MIDDLE JURASSIC

- **JGBm** Galena Bay Stock: muscovite-biotite quartz monzonite, granodiorite and monzogranite

EARLY AND MIDDLE JURASSIC

- **JKx** Kuskanax batholith: biotite or augite granodiorite; leuco-quartz monzonite; minor leucosyenite and leucogranite

PALEOZOIC
PERMIAN
KASLO GROUP

- **PK** Meta-basalt flows; minor volcanic breccia and tuff; local gabbro

CARBONIFEROUS
UPPER MISSISSIPPIAN AND PENNSYLVANIAN
MILFORD GROUP (MCHARDY ASSEMBLAGE)

- **MMMss** Banded tan, purple and white metasandstone, commonly rhythmically interbedded with thinner layers of black metasiltstone at centimetres- to decimetres-scale.
- **MMM** Medium grey to black phyllite and bedded or massive metasiltstone; argillaceous phyllite
- **MMMgss** Poorly sorted lithic metasandstone and grit; local conglomerate lenses
- **MMMar** Carbonaceous and siliceous argillite and metasiltstone weathering rusty brown and orange; pyritiferous
- **MMMc** Medium grey to black crystalline limestone or argillaceous limestone
- **MMMcg** Oligomict pebble orthoconglomerate with argillaceous clasts; grey quartzite

DEVONIAN
UPPER DEVONIAN
MOUNT SPROAT ASSEMBLAGE

- **uDMSs** Pelitic schist and phyllite: fine grained quartzose muscovite schist; black laminated metasiltstone and phyllite; garnet-hornblende-muscovite schist; biotite ± staurolite schist
- **uDMSar** Rusty weathering black siliceous argillite and argillaceous phyllite
- **uDMScg** Quartz pebble conglomerate
- **uDMSas** Amphibolitic schist: biotite-hornblende±muscovite schist; chorite-sericite schist; locally calcareous
- **uDMSv3** Calc-alkaline metabasaltic rocks. Massive, fragmental or plagioclase porphyritic textures; commonly with buff carbonate pods
- **uDMSbs** Medium-grained grey biotite-quartz-plagioclase±hornblende schist
- **uDMSgcg** Pebble to cobble paraconglomerate with matrix of biotite-muscovite-chlorite-quartz schist; angular to rounded clasts of crystalline quartz and gritty quartzite

MIDDLE AND (OR) UPPER DEVONIAN
MOUNT SPROAT ASSEMBLAGE

- **DMS** Dark grey, carbonaceous quartz-mica schist to quartzite; grey and brown weathering, fine- to- medium-grained biotite-quartz-feldspar schist and micaceous (muscovite-biotite) quartzite; micaceous grey phyllite; phyllitic greenstone; marble
- **Dgn** Quartzofeldspathic and pelitic paragneiss with or without muscovite, garnet and sillimanite; minor white to grey marble and amphibolitic schist; metamorphosed equivalent of IPMSu?
- **DMSm2** Differentially weathering light grey to white calc-silicate and marble with abundant cm-scale phyllitic laminations; local tremolite ± grossular ± diopside
- **DMSv2** Metabasaltic rocks of island arc tholeiite affinity.
- **DMSdm** Buff weathering, fine-grained white or light grey dolomitic marble and (or) calcitic marble; massive and pervasively fractured
- **DMSv1** Metabasaltic rocks of enriched mid-ocean ridge basalt, or rarely ocean island basalt, affinity
- **DMSwq** Fine-grained white quartzite to light grey phyllitic quartzite with light rusty orange weathering
- **DMSm1** Medium to dark grey platy marble and argillaceous marble; limy carbonaceous phyllite
- **DMScq** Rusty-weathering, fine-grained carbonaceous quartzite to sooty quartz-mica schist; contorted quartz veinlets (sweats) define transposition foliation, S1

CAMBRIAN TO DEVONIAN
LARDEAU GROUP
BROADVIEW FORMATION

- **IPLBgq** Light green or grey phyllitic quartzite to subarkosic wacke with blue-quartz granules; millimetre-scale phyllitic partings define transposition foliation
- **IPLBs** Graphitic grey quartzose phyllite or schist with common blue-quartz granules; quartz veinlets along undulatory foliation

FORMATION NOT ASSIGNED

- **IPLv** Green phyllite and phyllitic greenstone

ROCKS NORTHEAST OF MOBBS FAULT

CARBONIFEROUS
UPPER MISSISSIPPIAN AND PENNSYLVANIAN
MILFORD GROUP (DAVIS ASSEMBLAGE)

- **MMD** Medium and dark grey silty phyllite with minor metasiltstone and metasandstone; locally pyritiferous
- **MMDb** Thinly bedded (<5 m) assemblage of limy phyllite, metasiltstone, metasandstone and limestone
- **MMDch** Grey to black bedded chert and cherty quartzite
- **MMDq** Massive grey quartzite, minor limy quartzite to limestone
- **MMDc** Medium grey to black crystalline limestone; locally fossiliferous
- **MMDpcg** Oligomict, locally polymict, pebble conglomerate with grey or green phyllite matrix
- **MMDcg** Oligomict pebble to cobble orthoconglomerate with quartzitic matrix

LOWER OR MIDDLE MISSISSIPPIAN
THOMPSON ASSEMBLAGE

- **MT** Greenish phyllitic grit with graded bedding; greenish grey phyllite; green and maroon banded phyllite and phyllitic argillite; grey crystalline limestone and limestone-dolostone breccia; sandy marble; rare, thin beds of whitish chert
- **MTv** Purple and dark green amygdaloidal metabasalt of enriched mid-ocean ridge basalt geochemical affinity
- **MTm** Medium to dark grey platy marble and argillaceous marble; limy carbonaceous phyllite; crinoid ossicles on ridge west-southwest of McCrae Peak

CAMBRIAN TO DEVONIAN
LARDEAU GROUP
BROADVIEW FORMATION

- **IPLBgq** Light green or grey phyllitic quartzite to subarkosic wacke with blue-quartz granules; millimetre-scale phyllitic partings define transposition foliation
- **IPLBs** Graphitic grey quartzose phyllite or schist with common blue-quartz granules; quartz veinlets along undulatory foliation
- **IPLBc** Medium or dark grey marble and argillaceous marble

FORMATION NOT ASSIGNED

- **IPLv** Green phyllite and phyllitic greenstone

DESCRIPTIVE NOTES

PHYSIOGRAPHY

TECTONOSTRATIGRAPHIC FRAMEWORK

INTRUSIVE ROCKS

STRUCTURAL GEOLOGY

FAULTING

ECONOMIC GEOLOGY

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Compilers: J.L. Kraft, R.I. Thompson and P. Dhesi

Geology by: J.E. Reesor and J.M. Moore, 1963-65; J.O. Wheeler, 1965,67; P.B Read 1971-76; R.I. Thompson, 2002-04, Y. Lemieux, 2003-06; J.L. Kraft, 2004, 2006-08

Geological compilation by R.I. Thompson, 2002 and J. Kraft, 2010

Digital cartography by P. Dhesi, Geological Survey of Canada, Pacific Division

Any revisions or additional information known to the user would be welcomed by the Geological Survey of Canada

OPEN FILE 6574

GEOLOGY

BEATON

BRITISH COLUMBIA

Scale 1:50 000/Echelle 1/50 000

kilometres 1 0 1 2 3 4 kilomètres

Universal Transverse Mercator Projection
North American Datum 1983

Projection transverse universelle de Mercator
Système de référence géodésique nord-américain 1983

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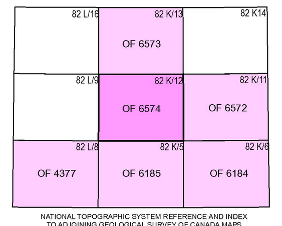
Digital base map from data compiled by Geomatics Canada, modified by the Geological Survey of Canada - Pacific Division

Magnetic declination 2011, 16°43' E, decreasing 13.3' annually

Elevations in metres above mean sea level
Contour interval 40 metres

Universal Transverse Mercator Grid
North American Datum 1983
Zone 11



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

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