Natural Resources Canada / Ressources naturelles Canada

GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA

TGI3 GC3 Cordillera Cordillière

REFERENCES

Read, P.B., and Wheeler, J.O.
1976: Geology, Lardeau west half, British Columbia (82K W/2); Geological Survey of Canada, Open File Map 432, 1:250,000.

Sears, J.W.
1979: Tectonic contrasts between the Columbian orogen, Albert Peak area, western Selkirk Mountains, British Columbia; PhD thesis, Queens University, Ontario, Canada, 154 p. (geological maps and cross-sections in pocket).

Thompson, R.I.
1978: Geology of the Akolkolex River area; B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 60, 77 p.

Canadian Geochronology Knowledgebase: http://gdr.nrcan.gc.ca/geochron/index_e.php

MINERAL OCCURRENCE INDEX

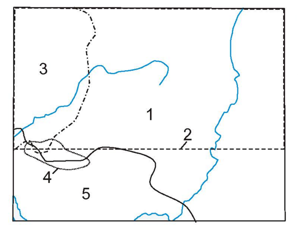
MINFILE #	NAME	COMMODITY
082KNW001	HOMESTEAD	AG,PB,AU
082KNW041	MOHAWK (L.4571)	AG,ZN,PB
082KNW042	MOSCOW (L.4500)	AG,PB,ZN
082KNW043	EXCISE	AG,PB,ZN
082KNW044	ECLIPSE (L.5170)	AG,PB,ZN
082KNW045	SPIDER (L.15752)	AG,PB,ZN
082KNW046	ST. JOE (L.5675)	PB
082KNW047	CONMORE (L.5677)	PB,ZN,AG
082KNW048	SANDY (L.8719)	AG,PB,ZN
082KNW049	BARCLAY	PB
082KNW063	RED HORSE (L.8718)	AG,AU,PB
082KNW064	MERIDIAN	AU,AG
082KNW065	CRITERION-OYSTER	AU,AG
082KNW066	EVA (L.5172)	AU,AG,PB
082KNW068	WIGWAM	ZN,PB,AG
082KNW069	TEDDY GLACIER	AG,PB,ZN
082KNW070	VIMY RIDGE	AG,PB,ZN
082KNW071	LEAD STAR	AG,PB,ZN
082KNW072	BURNIERE (L.4198)	AU,AG,PB
082KNW074	MORNING STAR	AG,PB,ZN
082KNW075	ASBESTOS	AB,TC,MT
082KNW076	GOLDFINCH (L.5654)	AU,AG,PB
082KNW077	MAMMOTH (L.6473)	AG,PB,AU
082KNW078	BIG SHOWING	AG,PB,ZN
082KNW101	SILVER DOLLAR	AG,PB,ZN
082KNW124	ALMA	AG,PB,ZN
082KNW126	DEL REY (L.10373)	AG,PB,AU
082KNW127	GILLMAN	AU,AG,PB
082KNW129	WIDE WEST (L.6453)	PB,CU,AU
082KNW130	BLACK BEAR (L.5086)	PB,ZN
082KNW131	MOUNTAIN BOY (L. 2495)	AG,PB
082KNW132	AGNES	AU,AG,CU
082KNW133	SUNSET (L.1970)	AG,PB,ZN
082KNW137	HUNTER (L.4495)	AG,PB,ZN
082KNW138	NELSON	AU,AG
082KNW139	SCOUT	AG,PB,ZN
082KNW143	CHOLLA (L.5399)	AU,AG
082KNW146	PIPESTEM (L.15779)	AG,PB,ZN
082KNW148	KITSAP (L.3500)	AG,PB,ZN
082KNW161	LEXINGTON (L.3088)	AG,PB
082KNW162	NELLIE (L.5670)	PB,AG,ZN
082KNW163	BANNER (L.3085)	AG,PB,ZN
082KNW168	KINGSTON (L.6558)	AU
082KNW174	BRUNSWICK (L.4354)	AU
082KNW180	HARVEY (L.5169)	AG,AU,PB
082KNW185	TRILBY	PB,AG
082KNW186	IMPERIAL (L.4778)	AU,AG,PB
082KNW187	LUCKY JACK (L.8715)	AU,AG
082KNW190	LARDEAU-GOLDSMITH	AG,PB
082KNW195	LOST CUP (L.1870)	AG,PB
082KNW196	PAYMASTER	AG,PB,ZN
082KNW197	DAFFODIL	PB,AG
082KNW198	UNITED VICTORY	WO,MO
082KNW199	YELLOWJACKET	PB,CU
082KNW202	ROYAL	AG,PB
082KNW216	ADVENTURE	AU
082KNW232	KELLIE CREEK	WO,MO
082LNE046	GHOST PEAK	ZN,PB

*Abbreviations for commodities: AG – silver; AU - gold; CU - copper; MO - molybdenum; PB - lead; TC - talc
WO - tungsten; ZN - zinc

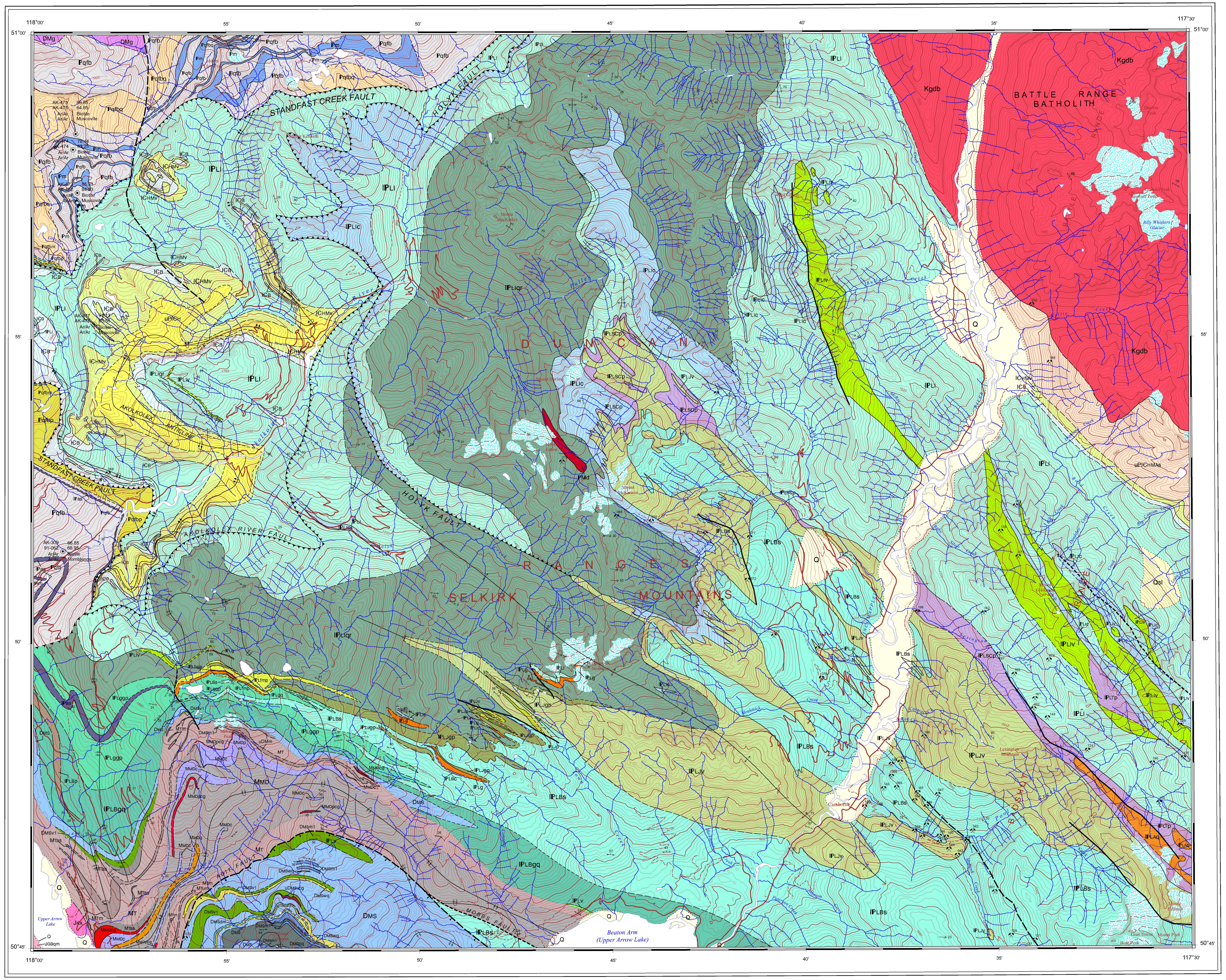
Source: British Columbia Ministry of Energy and Mines, MINFILE database available at: http://www.em.gov.bc.ca/Mining/Geolsurv/Minfile/

ACKNOWLEDGMENTS

This map is largely a compilation of geological mapping by P.B. Read, J.O. Wheeler, and R.I. Thompson. Recent mapping by Kraft in the southwest portion of Camborne map area served to bring out local detail and subtleties of the framework that had been established prior. Contacts on the north flank of McCrae Peak are primarily those of Thompson. Support from a variety of sources at the Geological Survey of Canada through the Targeted Geoscience Initiative 3 - Cordillera program enabled this mapping and compilation. R.G. Anderson especially is thanked for his unfailing support in production of these maps. Kraft is grateful for supervisory support from P. Erdmer at University of Alberta during the course of this project. Excellent field assistance to Kraft was provided by B. Jablonski, R. Tapping, and K. Laird. This map benefited from careful review by A. Okulitch.



COMPILATION SOURCES:
1. Read and Wheeler (1976)
2. Sears (1979)
3. Thompson (1978)
4. Thompson (2007)
5. Kraft (2011)



This publication is available from the Geological Survey of Canada Bookstore (http://gsc.nrcan.gc.ca/bookstore_e.php).
It can also be downloaded free of charge from GeoPub (http://geopub.nrcan.gc.ca).

LOCATION MAP

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

Geology by: J.O. Wheeler, 1965, 67; R.I. Thompson, 1969-70, 2006-07; P.B. Read 1971-76; J.L. Kraft, 2006-08

Geological compilation by R.I. Thompson, 2002 and J.L. 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 6573

GEOLOGY

CAMBORNE

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°46'E, decreasing 13.5' annually

Elevations in feet above mean sea level
Contour interval 20 metres

Universal Transverse Mercator Grid
North American Datum 1983
Zone 11

82 M/1	82 N/4	82 N/3
82 L/16	82 K/13 OF 6573	82 K14
82 L/9	82 K/12 OF 6574	82 K/11 OF 6572

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

LEGEND

CENOZOIC

Unit	Description
Q	*Unconsolidated sediments; glacial deposits, colluvium and alluvium; few if any outcrops*
Qsl	*Slide*

MESOZOIC
CRETACEOUS

Unit	Description
Kgdb	*Pyritiferous alaskite*

JURASSIC
MIDDLE JURASSIC

Unit	Description
JGBqm	*Galena Bay Stock: muscovite-biotite quartz monzonite, granodiorite and monzogranite*

EARLY AND MIDDLE JURASSIC

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

PALEOZOIC OR MESOZOIC

Unit	Description
PMd	*Hornblende and pyroxene meta-gabbro or meta-diorite; amphibolite*

UPPER MISSISSIPPIAN AND PENNSYLVANIAN
MILFORD GROUP (DAVIS ASSEMBLAGE)

Unit	Description
MMD	*Medium and dark grey silty phyllite with minor metasiltstone and metasandstone; locally pyritiferous*
MMDc	*Medium grey to black crystalline limestone; locally fossiliferous*
MMDq	*Massive grey quartzite, minor limy quartzite to limestone*
MMDpcg	*Oligomict, locally polymict, pebble conglomerate with grey or green phyllitic matrix*
MMDcg	*Oligomict pebble to cobble orthoconglomerate with quartzitic matrix*

LOWER OR MIDDLE MISSISSIPPIAN
THOMPSON ASSEMBLAGE

Unit	Description
MT	*Calcareous green to grey phyllite, limy grey quartzite and conglomeratic phyllite (at Northeast Arm of Upper Arrow Lake); grey phyllite, conglomeratic quartzite, sandy limestone, crinoidal limestone, talc schist (near Mt. McCrae); rusty-weathering, argillaceous biotite schist, amphibole-biotite schist, metaconglomerate and tremolite-bearing light grey marble (near mouth of Crawford Creek)*
MTum	*Talc-serpentine schist; waxy green talc-bearing phyllite*
MTm	*Medium to dark grey platy marble and argillaceous marble; limy carbonaceous phyllite; crinoid ossicles on ridge west-southwest of McCrae Peak*
MTas	*Amphibolitic schist: biotite-hornblende±muscovite schist; muscovite schist with coarse sprays of black amphibole; locally calcareous*
MTcg	*Oligomict and polymict pebble paraconglomerate with quartzose matrix*

ROCKS IN FOOTWALL OF STANDFAST CREEK FAULT

PALEOZOIC
DEVONIAN OR CARBONIFEROUS
LATE DEVONIAN OR EARLY MISSISSIPPIAN

Unit	Description
DMg	*foliated granitoid rocks*

PALEOZOIC

Unit	Description
Pqfb	*Grey and brown garnet-biotite schist; micaceous quartzite; minor amphibolite (Thompson, 1978)*
Pm	*Grey marble*
Pqfbp	*Grey and brown schist; black phyllite; minor limestone (Thompson, 1978)*
Pqfbm	*marble*
Pas	*Medium to coarse grained amphibolite and calcareous amphibolite; amphibolitic schist with or without biotite; minor marble*
Pqfbq	*Grey, white, and brown quartzite and micaceous quartzite; minor schist and amphibolite (Thompson, 1978)*

STANDFAST CREEK FAULT

MIDDLE AND (OR) UPPER DEVONIAN
MOUNT SPROAT ASSEMBLAGE

Unit	Description
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*
DMSv1	*Metabasaltic rocks of enriched mid-ocean ridge basalt, or rarely ocean island basalt, affinity*
uDMSgcg	*Pebble to cobble paraconglomerate with matrix of biotite-muscovite-chlorite-quartz schist; angular to rounded clasts of crystalline quartz and gritty quartzite*
DMSdm	*Buff weathering, fine-grained white or light grey dolomitic marble and (or) calcitic marble; massive and pervasively fractured*
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; banded grey to white coarse crystalline marble to calc-silicate gneiss near Upper Arrow Lake*
DMScq	*Rusty-weathering, fine-grained carbonaceous quartzite to sooty quartz-mica schist; contorted quartz veinlets (sweats) define transposition foliation, S1*

ROCKS IN THE McCRAE PEAK AREA

CAMBRIAN TO DEVONIAN
LARDEAU GROUP
BROADVIEW FORMATION

Unit	Description
lPLBgq	*Tan to light grey weathering micaceous quartzite and gritty quartzite with characterisitic phyllitic or micaceous partings; minor grey and green phyllite and gritty phyllite*
lPLBp	*Coarse grained, rusty weathering garnet-biotite-muscovite schist with or without staurolite; minor quartzite and garnetiferous quartzite*

FORMATION NOT ASSIGNED

Unit	Description
lPLggp	*Interlayered green and grey phyllite; occasional layers of micaceous and (or) gritty quartzite, rusty weathering ferroan marble and beige to tan weathering phyllite*
lPLas	*Medium to coarse grained amphibolite and calcareous amphibolite; amphibolitic schist with or without biotite; minor marble*
lPLgq	*Grey to dark grey weathering, gritty quartzite marker approximately 20 m thick and forming the structurally upper boundary to the barite-chert-phyllite succession at McCrae Peak*
lPLbcp	*Barite-chert (exhalite?)-phyllite succession (<30 m thick): beige to light rusty brown weathering light grey stratiform barite and chert; gradationally underlain by black siliceous phyllite*
lPLfmp	*Rusty-brown weathering ferroan marble interlayered with tan, grey and green sericitic phyllite and quartzose phyllite*

ROCKS NORTH AND EAST OF McCRAE PEAK AREA

CAMBRIAN TO DEVONIAN
LARDEAU GROUP
BROADVIEW FORMATION

Unit	Description
lPLBgq	*Light green or grey phyllitic quartzite to subarkosic wacke with blue-quartz granules*
lPLBs	*Graphitic grey quartzose phyllite or schist with common blue-quartz granules; quartz veinlets along undulatory foliation*
lPLBc	*Medium or dark grey marble and argillaceous marble*
lPLv	*Green phyllite and phyllitic greenstone*

JOWETT FORMATION

Unit	Description
lPLJv	*Metamorphosed basaltic tuff and flows, mafic volcanic breccia and pillow basalt; green phyllite and limy green phyllite; phyllitic greenstone*
lPLJgp	*Green phyllite*
lPLJp	*Pale greenish grey phyllite with rusty brown weathered surfaces*

TRIUNE, AJAX AND SHARON CREEK FORMATIONS

Unit	Description
lPLSCp	*SHARON CREEK FORMATION: dark grey to black siliceous phyllite and argillite*
lPLAq	*AJAX FORMATION: massive grey quartzite commonly with extensive quartz veining*
lPLTp	*TRIUNE FORMATION: grey to black siliceous phyllite and argillite*

INDEX FORMATION

Unit	Description
lPLI	*Grey and light green phyllite; Dark grey slaty phyllite; minor phyllitic limestone and quartz grit*
lPLIqr	*Intercalated quartzofeldspathic grit and grey and green phyllite with or without quartz granules; quartz mica schist; micaceous quartzite*
lPLg	*Light grey to white gritty quartzite; micaceous quartz grit*
lPLIc	*Medium to dark grey crystalline limestone and marble; phyllitic limestone and minor limy grey phyllite*
lPLIv	*Green phyllite, limy green phyllite, greenstone*

LOWER CAMBRIAN

Unit	Description
lЄB	*BADSHOT FORMATION: grey and white crystalline limestone and marble*

HAMILL GROUP

Unit	Description
lЄHMv	*MOHICAN FORMATION: green phyllite, minor grey phyllite and limestone*

EDIACARAN AND/OR LOWER CAMBRIAN

Unit	Description
uPlЄH	*White, pure green, and grey quartzite and micaceous quartzite; dark slate, phyllite, and mica schist; some pebbly and feldspathic quartzite*
uPlЄHMAs	*MARSH ADAMS FORMATION: white, grey and brown quartzite, phyllitic quartzite; minor grey and black phyllite*

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
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, sinistral: approximate
Fault, unclassified: defined, approximate, assumed
Anticline (unknown generation): recumbent
Syncline (unknown generation): recumbent
Anticline (2nd generation) upright, overturned, plunging
Syncline (2nd generation) upright, overturned, plunging
Anticline (3rd generation): recumbent
Syncline (3rd generation): recumbent

OPEN FILE
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6573
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2011

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