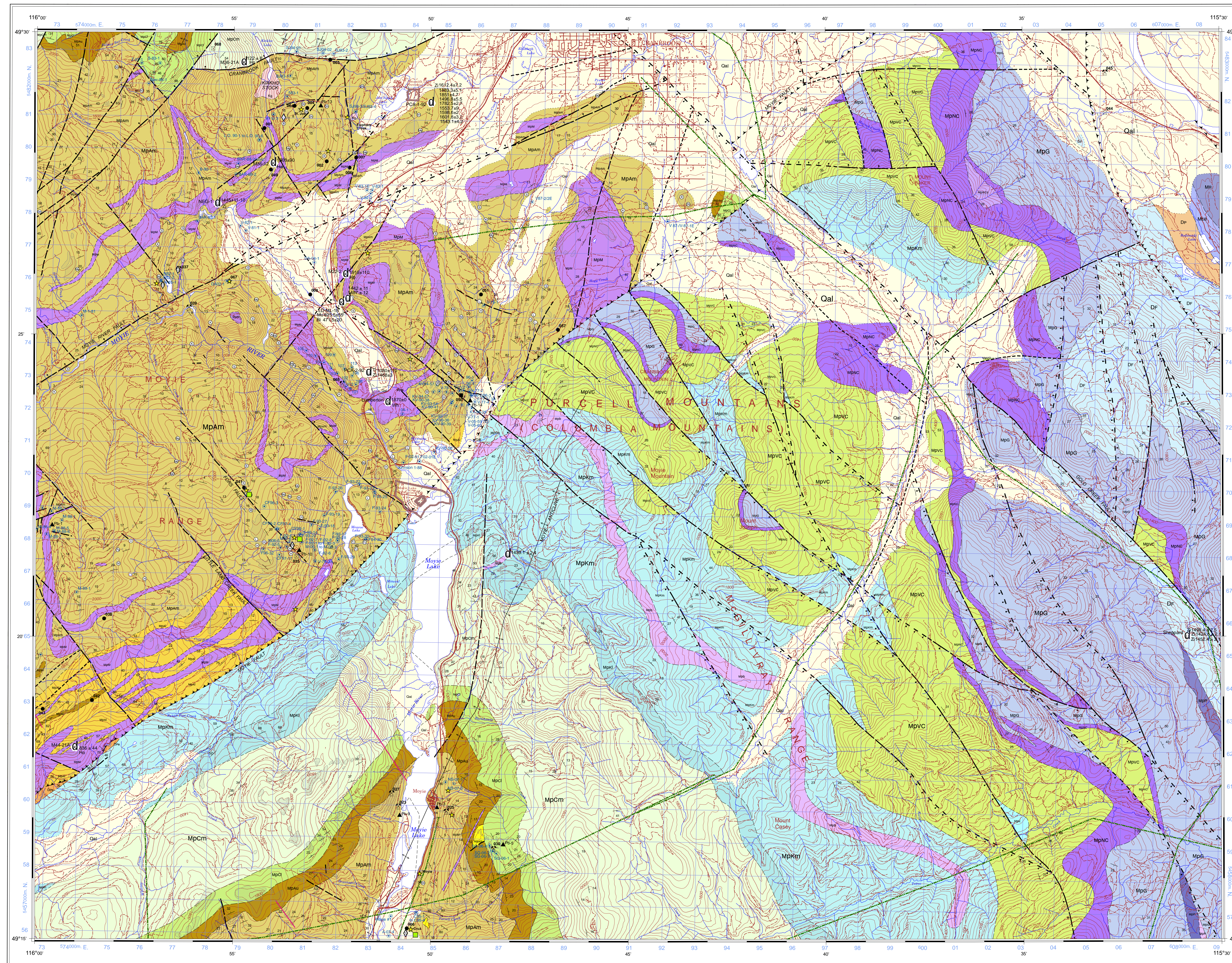
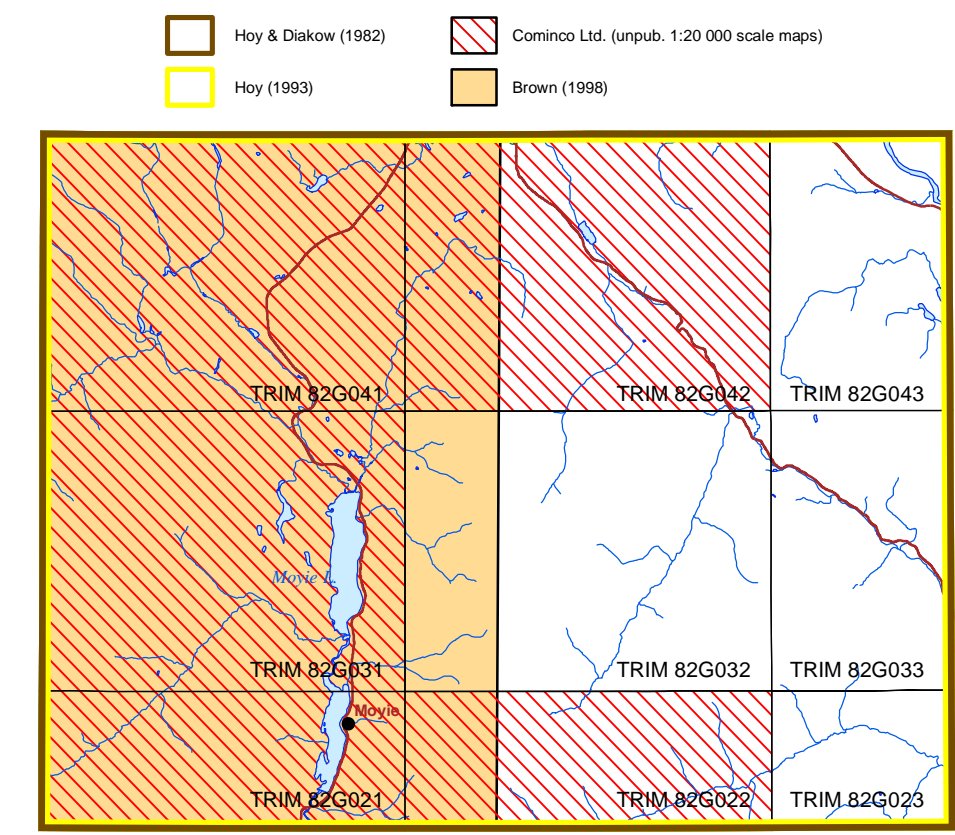
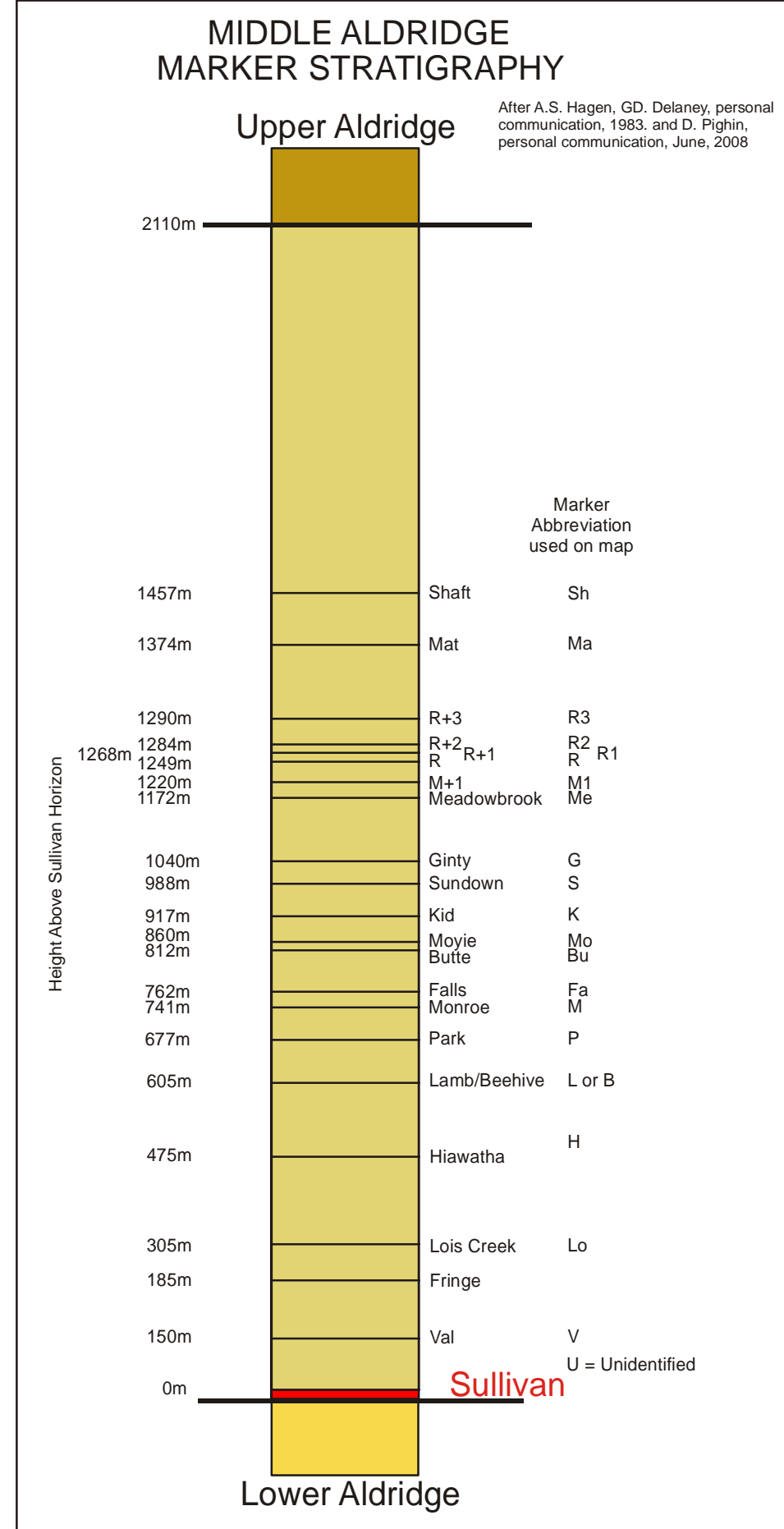


- REFERENCES**
- Anderson, H.E. and Davis, D.W., 1996. U-Pb geochronology of the Moyie sills, Purcell Supergroup, southeastern British Columbia: implications for the Middle Proterozoic geologic history of the Purcell (Basin). *Canadian Journal of Earth Sciences*, v. 33, p. 1169-1183.
 - Brown, D.A., 1998. The Moyie Industrial Partnership Project: Geology and Mineralization of the Moyie Lake Area, Southeastern British Columbia (S2501E, S2501W, S2502E). Geological Paper 6303, Geological Survey of Canada, Ottawa, 1998, 1:50,000 scale map.
 - Brown, D.A. and Wood, R.D., 1996. Geological Comparison of Grey Mountain (East Half) and Moyie Lake (West Half) Map Areas, Southeastern British Columbia (S2501E, S2501W). Geological Paper 6291, Geological Survey of Canada, Ottawa, 1996, 1:50,000 scale map.
 - Canadian Geoscience Knowledgebase, 2010. Geoscience Data Repository. Geological Survey of Canada, Earth Sciences Sector. Natural Resources Canada, Government of Canada. http://www.cgs.nrc.ca/geoscience/index_e.html [accessed March 1, 2010].
 - Comsol Ltd., Unpublished, 1:200,000 scale geology maps.
 - Hoy, T., 1983. Geology of the Purcell Supergroup in the Fernie West Half Map Area, Southeastern British Columbia. B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 64.
 - Hoy, T. and Dobson, L., 1982. Geology of the Moyie Lake Area, B.C. Ministry of Energy, Mines and Petroleum Resources, Planning Map 28.
 - Joseph, J.M.R., Brown, D., and Walker, R., 2010. Diamond drill hole database for the Purcell Basin. Geological Survey of Canada, Open File 6546, 1 CD-ROM.



LAYERED ROCKS

CEANOZOIC QUATERNARY

- Qal: Unconsolidated outwash, alluvium, colluvium and fill.

PALEOZOIC CARBONIFEROUS MESSIPIAN RUNDLE GROUP

- MR: Mostly dolomite and limestone, cherty toward the top.
- MEB: MB - Barff Formation: Thin bedded, platy, laminated dolomite and limestone; cherty layers ME - Estevan Formation: Carbonaceous platy shale, pyritic.

DEVONIAN

UPPER DEVONIAN PALLISER FORMATION

- Dp: Buff, yellow and grey, banded and nodular argillaceous limestone with siltstone interbeds.

FAIRHOLME GROUP

- Df: Limestone, dolomite, platy and argillaceous; siltstone, orthoquartzite and laminated limestone; buff, grey limestone and minor siltstone with possible argillaceous.

DEVONIAN (?)

- Dre: Peavine Conglomerate: Polymictic conglomerates.

PROTEROZOIC MESOPROTEROZOIC (HELIKIAN) PURCELL SUPERGROUP ROOSEVILLE FORMATION

- Mpr: Green siltstone and argillite, black laminated argillite, stromatolitic dolomite and dark brown oolitic dolomite, quartz arenite toward the top.
- Mpp: Maroon micaceous siltstone, quartz wacke and argillite.
- Mpg: Unidentified.
- Mpc: Unidentified.
- Mpn: Unidentified volcanic rocks. Massive to amygdaloidal basalt to andesite lava flows, volcanic sandstone, siltstone.
- Mpncs: Volcaniclastic siltstone, fine quartz wacke.
- Mpvc: Van Creek Formation: Fine green, laminated, siltite and argillaceous siltite and quartz wacke. Minor ripple marks, bedformular structures, rare tabular mudcracks.
- Mpk: Unidentified.
- Mpkm: Middle: Dolomitic siltstone, dolomitic argillite, dolomite, commonly buff-weathering; argillite, siltstone, quartzite, molar tooth texture; green argillite dolomite siltstone near base.
- Mpkl: Lower: Green, beige siltstone, dark grey argillite; dolomitic siltstone.
- Mpc: Unidentified.
- Mpcm: Middle: light grey, massive, purple, thin-to medium-bedded quartz arenite, quartz wacke, lesser grey siltite and argillite. White quartzite interbeds. Lenticular bedding, oolites, cross-bedding and mudcracks.
- Mpci: Lower: wavy green to olive with tan weathering surfaces, thin-to thick-bedded to laminated argillite and siltite. Lesser fine grained quartz wacke. Wavy bedding and abundant mudcracks.

ALDRIDGE FORMATION

- Mpa: Unidentified.
- Mpai: Sedimentary fragmental: stratiform to discordant matrix to framework supported; angular to rounded clasts, fine-grained quartz wacke fragments; fragment sizes vary from <2mm to >2m; interpreted to be syn-sedimentary; siltstone flows, dewatering structures, mud volcanoes, and hydrothermal breccia.
- MpaU: Upper: rusty brown weathering, grey to dark grey, fissile to platy, laminated siltite, siltite.
- MpAm: Middle: grey to rusty weathering, thick to thin-bedded, quartzite/argillaceous wacke, intercalated argillite and siltite.
- MpaL: Lower: rusty brown weathering, thin-to medium-bedded, quartz wacke, quartz siltite.

INTRUSIVE ROCKS

MESOZOIC CRETACEOUS

- Kg: Massive, fine to medium-grained biotite monzonite.

PROTEROZOIC MESOPROTEROZOIC (HELIKIAN) MESOHELKIAN

POST MOYIE INTRUSIONS

- Mpd: Mafic sills and rare dikes hosted in Kitchener Formation. Olive green, massive to plagioclase porphyritic.

MOYIE INTRUSIONS

- Mpm: "Moyie Sills" Dark green to black, medium- to fine-grained gabbro and hornblende quartz diorite sills and minor dikes. >200m L-PB dikes circa 1407 Ma (Anderson and Davis, 1995).

SYMBOLS

Geological contact defined, approximate, assumed

Outcrop

Quaternary limit of cover

Fault defined, approximate, assumed

Fault thrust (both on upthrust side): defined, approximate, assumed

Fault normal (solid circle indicates downthrust side): defined, approximate, assumed

Bedding: horizontal, inclined, vertical

Bedding: facing direction known

Foliation, anastomosing, fracture cleavage: inclined, vertical

Lineation: undefined, mineral, intersection (S,S₂)

Sedimentary fragments (rocked exposures)

Tourmaline: outcrop, assemblage, discordant, floor

Albite alteration

Marker locality (see index for abbreviations)

Geochronology sample: Age Method: Analytical Method: Mineral (marked as shown)

Sample Number

Mineral

Lead isotope

MINFILE mineral occurrence (see table)

producer, past producer, developed prospect, prospect, showing, anomaly

Act. drill hole with reference number (see Joseph et al., 2010)

Stromatolites

Fossil locality

Anticline, syncline (trace of axial surface)

Overturbed anticline, syncline (trace of axial surface)

Marker horizon projection: defined, approximate, assumed

Approximate location of seismic line

Location of measured stratigraphic column with name

point of section, section line

Provincial Park Boundary

TABLE OF MINFILE OCCURRENCES

MINFILE NO.	NAME	STATUS	COWORDS
00000001	MOYIE	Showing	FB
00000002	JM 16	Showing	FB
00000003	BERT	Showing	STAU
00000004	B 5.1	Showing	FB 2N AG
00000005	JM 4	Showing	FB
00000006	JM 6	Showing	FB
00000007	JM 8	Showing	FB
00000008	LAMBTON	Showing	FB 2N AG
00000009	ALDRIDGE 1971	Post Producer	FB 2N AG
00000010	ST. EUGENE (A) 88	Post Producer	AG FB 2N AG
00000011	QUANQUAN L. 1373	Post Producer	FB 2N AG
00000012	SOCIETY ISLAND 4455	Post Producer	FB 2N AG
00000013	FMS	Prospect	FB 2N AG FB WG
00000014	FAV 104 (S. 200)	Post Producer	AG AG CU FB
00000015	FB 202	Showing	FB
00000016	MOHLEE	Post Producer	AU
00000017	SMOKER	Showing	FB 2N AG
00000018	FB 205	Showing	FB
00000019	FB 206	Showing	FB 2N AG
00000020	MARPOCK QUARRY 84	Prospect	DT
00000021	SHANDE	Post Producer	DT
00000022	VINE 10	Showing	FB 2N AG
00000023	VINE 11	Developed Prospect	FB 2N AG CU AU
00000024	VINE 12	Showing	FB 2N
00000025	WACH	Showing	FB 2N
00000026	ST. JOE	Showing	FB 2N AG
00000027	SHANDE BRIDGE	Prospect	FB
00000028	COLE	Showing	FB 2N AG
00000029	DAVET	Showing	FB 2N AG
00000030	SM	Prospect	AU CU FB

OPEN FILE 6303
GEOLOGY
MOYIE LAKE
BRITISH COLUMBIA

Scale 1:50 000/Echelle 1/50 000

Compilers: D.A. Brown, R.F. MacLeod, C.L. Wagner, and W. Chow

Geological compilation by D.A. Brown, R.F. MacLeod, C.L. Wagner, and W. Chow; 2008-2010

Co-ordinated through the auspices of the Targeted Geoscience Initiative (TGI)

Digital cartography by R.F. MacLeod and W. Chow, Geological Survey of Canada (Pacific Division)

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

Digital base map from data compiled by Geomatics Canada, modified by Geological Survey of Canada

Magnetic declination 2011, 19°28'E, decreasing 11' annually

Elevations in meters above mean sea level

Contour interval at 40 meters

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada 2011

Projection Transverse universelle de Mercator
Système de référence géodésique nord-américain 1983
© Sa Majesté la Reine du chef du Canada 2011

Geological Survey of Canada
Commission géologique du Canada

2011