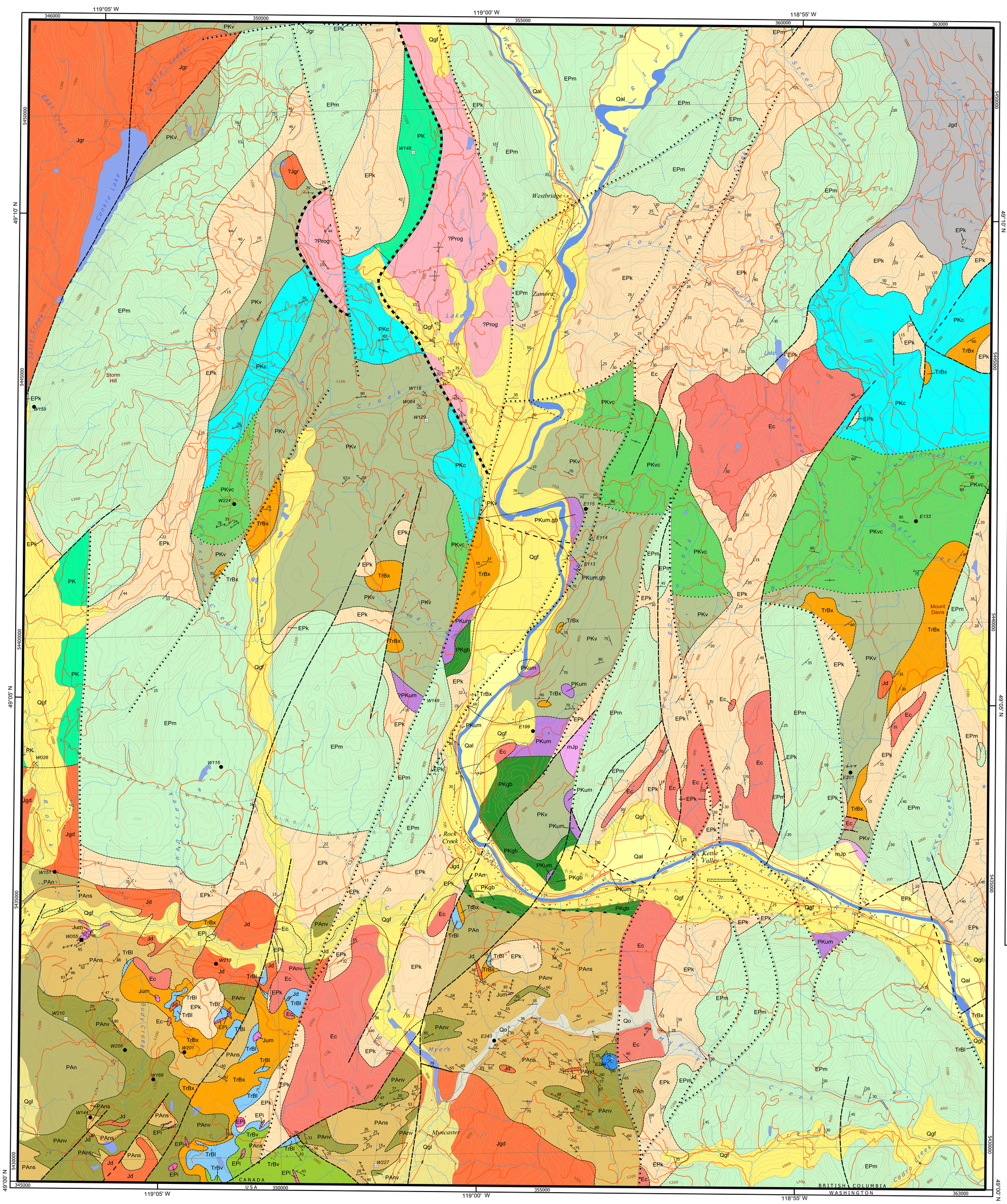

BRITISH COLUMBIA
Ministry of Energy and Mines
Mining and Minerals Division
Geological Survey

OPEN FILE 2007-7

GEOLOGY AND MINERAL DEPOSITS OF THE ROCK CREEK AREA, BRITISH COLUMBIA

NTS 82E/2W; 82E3/E

Mapping and compilation by N.W.D. Massey

Field assistance provided by Ashley Dittmer (2005) and Erig Westberg (2006)

Scale 1:25 000

0 1 2 3 4
Kilometres

LEGEND

INTRUSIVE ROCKS

EOCENE

- **EPi** — Minor intrusions, equivalent to Marron Fm volcanics: diorite, syenite, pyroxene-feldspar porphyry, hornblende-feldspar porphyry
- **Ec** — Coryell Intrusions: syenite, quartz monzonite; minor pulaskite, granite, diorite

JURASSIC

- **mJp** — Quartz-feldspar porphyry, quartz porphyry
- **J** — Nelson Intrusions: d diorite, gabbro, quartz diorite; gd granodiorite, quartz diorite; gr granite, granodiorite
- **Jum** — Pyroxenite, hornblende-pyroxenite, peridotite, serpentinite

AGE UNKNOWN

- **?Prog** — Orthogneiss: grey biotite-feldspar-quartz diorite to granodiorite gneiss, pink to grey, coarse-grained K-spar augen gneiss; unfoliated leucogranite [may be correlative with the Grand Forks Gneiss Complex or the Vaseaux Gneiss]

VOLCANIC AND SEDIMENTARY ROCKS

QUATERNARY

- **Qal** — Fluvial and alluvial deposits
- **Qgf** — Glacio-fluvial deposits
- **Qgl** — Glacio-lacustrine deposits
- **Qo** — Organic deposits

EOCENE

PENTICTON GROUP

- **EPm** — Marron Formation: andesite, trachyandesite, pyroxene-feldspar porphyry, sodic trachyte, minor phonolite and rhomb porphyry; lavas, minor intrusions, tuffs and volcanic sandstone
- **EPk** — Kettle River Formation: white feldspathic and lithic sandstone and siltstone, arkose and arkosic conglomerate; polymictic boulder to pebble conglomerate including granitoid, chert, greenstone, schist and limestone clasts

TRIASSIC

BROOKLYN FORMATION

- **TrBv** — Massive to fragmental greenstone; pyroxene-phyric to aphanitic
- **TrBl** — Massive to poorly bedded, white to grey sparry limestone, limestone breccia; marble, calc-silicate skarn
- **TrBx** — Polymictic pebble to cobble conglomerate, gritstone and siltstone; clasts of angular to subrounded chert, limestone, greenstone ("Sharpstone Conglomerate")

LATE DEVONIAN TO EARLY PERMIAN

KNOB HILL COMPLEX

- **PK** — Undivided
- **PKc** — Chert, metachert, monolithic chert breccia, grey argillite; minor greenstone and limestone
- **PKvc** — Interbedded chert, metachert and massive greenstone in equal proportions
- **PKv** — Greenstone, aphanitic, minor feldspar and pyroxene phenocrysts; massive, pillow lava, breccia; minor limestone, metachert and argillite
- **PKgb** — Greenwood Gabbro (formerly known as the "Old Diorite"): varitextured gabbro, coarse to fine-grained, laced with feldspathic veinlets; gabbroic pegmatite, plagiogranite, diabase dykes and xenoliths
- **PKum** — Serpentinite, listwanite, minor pyroxenite; may include some gabbro (um,gb)

PALEOZOIC (EXACT AGE UNDETERMINED)

ANARCHIST SCHIST

- **PAn** — Undivided
- **PAns** — Predominantly metasediments: quartzite (metachert), argillaceous quartzite, quartz-chlorite schist, chlorite-sericite schist, quartz-biotite schist,siliceous meta-argillite; minor greenstone, barite
- **PAnv** — Predominantly metavolcanics: aphanitic, massive to schistose greenstone, breccia, green chlorite schist; minor quartzite and schistose metasediments
- **PAnd** — "Mighty White dolomite": fine to medium, equigranular white dolomite; minor dark grey-green chloritic dykes and chlorite-epidote skarn. Relationship to rest of Anarchist Schist is enigmatic.

SYMBOLS

- Geological contact (approximate, assumed, transitional)
- Fault (defined, approximate, assumed)
- Normal fault (defined, approximate, assumed)
- Thrust fault (assumed)
- Extension fault (approximate)
- Bedding (inclined, vertical)
- Schistosity (horizontal, inclined, vertical)
- Secondary schistosity and cleavage (inclined, vertical)
- Lineation (plunge indicated)
- Axis of minor folds (plunge indicated)
- Brittle shear zone
- MINFILE locations (Producer, past producer, developed prospect, prospect, showing) - see Table 1
- Contour (100m interval, 20m interval)
- Roads
- Rivers
- Lakes
- Bridge, Tunnel
- Airfield
- Building
- Powerline

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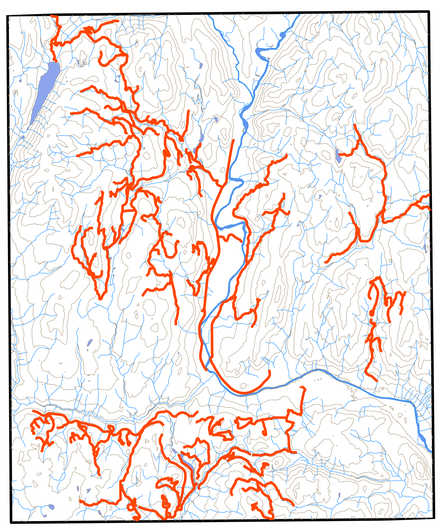
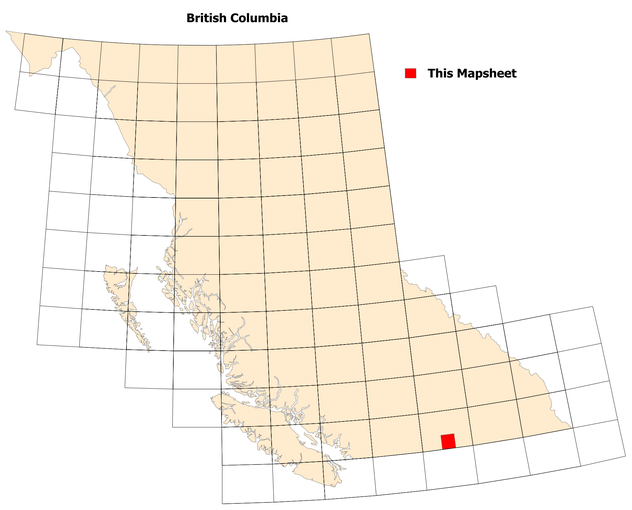
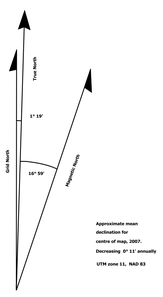
Table 1: Mineral Occurrences

Map ID	MINFILE number	Property Name	Status	Commodities	Deposit type	Latitude °N	Longitude °W	UTM zone	Easting	Northing
W026	082ESW026	ROCK CREEK PLACER, JOLLY CREEK PLACER	Past Producer	Au, Pt	C01	49.071945	119.116390	11	345430	5437611
W055	082ESW055	OLD NICK, OLD NICK GROUP, OLD NICK 1-4, NICKEL, UR CLAIM GROUP, MISSION 1, NICKEL RIDGE	Developed Prospect	Ni, Co, Cu, Au, Mo, Cr	M02, M03	49.041668	119.103890	11	348249	5434220
W064	082ESW084	CROWN POINT (L.2449), CROWN POINT GROUP, CROWN POINT FR. (L.2449), TRIANGLE FR., ORO FINO (L.1448), SUNNYSIDE (L.1440), NO. 2 (L.2445), NO. 3 (L.2447), ALDER GROVE (L.1534), SOPHIE SHERRON, ZAMORA, MAYBE, LEONA GROUP, ENIO (L.2852), DONKEY	Past Producer	Ag, Pb, Zn, Au	I05, J01	49.134167	119.016670	11	352897	5444329
W116	082ESW116	ROCK CREEK ASBESTOS	Showing	asbestos	M06	49.071667	119.067780	11	348979	5437482
W118	082ESW118	MAYBE, CROWN POINT GROUP, CROWN POINT FRACTION (L.2449), ZAMORA, LEONA GROUP	Past Producer	Au, Ag, Pb, Zn, Cu	I01, I05	49.136391	119.015270	11	353005	5444573
W129	082ESW129	LEONA, LEONA GROUP, DAVID 1-3, BEV 1-4, NORM 1-8, CROWN POINT GROUP, CROWN POINT FRACTION (L.2449), ZAMORA, ENIO (L.2852)	Prospect	Au, Ag, Pb, Zn, Cu	I01, I05	49.131664	119.014720	11	353031	5444047
W144	082ESW144	EK, BRIDESVILLE, KUHN, AU 4, FLINT, LIS 1	Showing	silica	R07	49.011112	119.101110	11	346358	5430818
W148	082ESW148	JO DANDY (L.2120), OLD KENTUCKY (L.2121), EMMA FR. (L.2122), RILEY (L.2123), TEXAS FR. (L.2124), (L.2125), DUFF (L.2452), LONG SHOT (L.2451), ROCK 2-3, ANITA	Prospect	Au, Ag, Pb, Zn, Cu	I05	49.177780	119.018890	11	352864	5449181
W149	082ESW149	ROCK CREEK, D.W.S., D.W.S. GROUP, HULME CREEK GROUP, SAMMY GROUP, TOBRUCH, CR 1-8, BELCHROME 1-8, YELLOW OCHER, RED OCHER, GREEN OCHER, HUL	Prospect	Cr, Ni	M03	49.082775	119.010000	11	353232	5438604
W151	082ESW151	GOLDEN GATE, KET 8, KET 10 GROUP, KET 8-10, ROCK CREEK (L.2527), WREN (L.2528)	Showing	Zn, Pb, Cu, Ag, Au	I01, I05	49.053333	119.111110	11	345758	5435531
W159	082ESW159	JOLLY CREEK CHROME	Showing	Cr	M03	49.133335	119.117780	11	345519	5444437
W168	082ESW168	DAN, DANA GROUP, DAN 1-8, ROCK GROUP, ROCK 1-11, ROCK 13-13	Showing	Ni, Cr	M02, M03	49.017776	119.084720	11	347577	5431526
W201	082ESW201	KET 27, ANNA 2, KET 5 GROUP, KET 4-5, KET 25-27, CJ 1-11	Showing	Au, Cu, Pb	I01	49.022499	119.078670	11	348180	5432035
W210	082ESW210	KET 28, RM GROUP, RM 1-13, RM 18, MIDWAY, ROCK CREEK	Prospect	Au	I01	49.028057	119.107770	11	345923	5432715
W212	082ESW212	SYACKAN, KET 5 GROUP, KET 4-5, KET 25-27, CJ 1-11, ROCK CREEK	Showing	Cu, Pb	K01, K02	49.037777	119.068610	11	348816	5433717
W224	082ESW224	JOLLY, JOLLY 2-4	Showing	Au, Ag, Cu, Pb, Zn	I05, I01	49.116943	119.065000	11	349319	5442509
W227	082ESW227	INTERNATIONAL (L.1877S), Z CAR (L.1876S), CASSEL GROUP, CASSEL	Prospect	Ag, Au, Pb	I05	49.003334	119.026120	11	351819	5429804
W256	082ESW256	ROCK	Showing	barite	E17	49.022778	119.092220	11	347044	5432097
W064	082ESW084	CROWN POINT (L.2449) CROWN POINT GROUP CROWN POINT FR. (L.2449) TRIANGLE FR. ORO FINO (L.1448) SUNNYSIDE (L.1440) NO. 2 (L.2445) NO. 3 (L.2447) ALDER GROVE (L.1534) SOPHIE SHERRON ZAMORA MAYBE LEONA GROUP ENIO (L.2852) DONKEY	Past Producer	Ag, Pb, Zn, Au	I05, J01	49.134167	119.016667	11	352897	5444329
E113	082ESE113	IMPERIAL EMLINE (L.1081S) BADGER STEEVES GROUP EMMALINE	Past Producer	Ag, Pb, Zn, Au, Cu	I05	49.106667	118.974444	11	355897	5441191
E114	082ESE114	RIVERSIDE (L.1031) (M-415) H.R. (L.1033) RIVERSIDE NO.2 FR. (L.2805 S)	Past Producer	Ag, Au, Pb, Zn, Cu	I05	49.111667	118.971111	11	356155	5441740
E115	082ESE115	COMMONWEALTH (L.1029) BIG EDDY (L.1030)	Showing	Ag, Pb, Zn	I05	49.116667	118.972778	11	356047	5442299
E133	082ESE133	HOP LEE BAR	Showing	Cu, Mo	L03	49.115000	118.888111	11	362366	5441953
E199	082ESE199	RIFF FIR	Showing	Cu, Ni		49.078333	118.986111	11	354963	5438064
E200	082ESE200	ROCK CREEK ROCK CREEK DOLOMITE DOLO MIGHTY WHITE DOLOMITE DOLOWHITE	Producer	dolomite	R10	49.020278	118.966944	11	356195	5431574
E201	082ESE201	BUBAR RUBARB	Showing	Cu, Ni		49.071667	118.902778	11	361029	5437166
E243	082ESE243	MYERS CREEK KPJ ROCK CREEK	Showing	Au, Cu	L03	49.025000	118.995556	11	354117	5432153

Key to deposit type code:

C01:	*Surficial placers*	*IC01:*	*Cu skarns*	*M03:*	*Podiform chromite*
B17:	*Sediment-hosted barite*	*IC02:*	*Pb-Zn skarns*	*M06:*	*Ultramafic-hosted asbestos*
I01:	*Au-quartz veins*	*L03:*	*Alkalic porphyry Cu-Au*	*R07:*	*Silica sandstone*
I05:	*Polymetallic veins Ag-Pb-Zn±Au*	*M02:*	*Tholeiitic intrusion-hosted Ni-Cu*	*R10:*	*Dolomite*
J01:	*Polymetallic manto Ag-Pb-Zn*				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