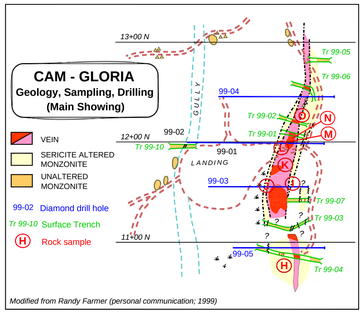
SELECTED REGIONAL GEOCHEMICAL ANALYSES

Sample	UTM N	UTM E	Au	Ag	As	Bi	Cu	Mo	Pb	Sb	W	Zn	Sample Description
99JLO-2-14	5699890	321763	-2	0.25	0.8	0.27	4	3.2	22.5	0.1	1.1	42	bio-musc granite
99JLO-2-18-2	5698509	322634	6430	0.6	1.5	562	900	<1.0	4	-0.1	<10.0	6	mus-bio-kspar-qtz pegmatite
99JLO-5-48-2	5688982	324316	-2	0.65	1.4	1.55	1300	4200	23.5	-0.1	1	26	grab sample of Mo-bearing pegmatite
99JLO-5-57	5688759	323768	-2	<0.05	1	0.21	7	4.4	6	-0.1	0.8	8	grab, 5 cm quartz vein
99JLO-5-66	5686501	324092	-2	0.05	1.3	0.3	4	1	22	-0.1	1.1	12	0.5 m chip across vein + ankerite alteration
99JLO-5-66-2	5686501	324092	-2	0.05	1.7	0.15	4	1	24.5	-0.1	0.5	14	grab of quartz vein material
99JLO-5-66-3	5686501	324092	-2	<0.05	1.6	0.08	1	0.2	30	-0.1	0.5	8	grab of quartz vein material
99JLO-6-71-2	5682201	321349	-2	0.1	0.8	0.31	14	4.2	12.5	-0.1	0.3	10	grab of foliation-parallel quartz veins
99JLO-6-82	5685246	321458	-2	0.1	1.6	0.08	2	0.8	18	-0.1	2.6	26	grab, altered bio quartz monzonite
99JLO-7-89-2	5682746	322483	-2	<0.05	0.6	0.03	3	<0.2	1	-0.1	0.1	<2	grab of cross-cutting quartz veins
99JLO-7-95	5682891	323515	-2	0.1	2	0.14	10	0.6	11.5	-0.1	2	14	grab, altered orthogneiss
99JLO-7-95-2	5682891	323515	-2	<0.05	1.4	0.08	4	<0.2	4.5	-0.1	0.2	8	grab of quartz vein material
99JLO-7-96	5682862	323659	10	0.05	3.8	0.38	5	0.4	5	0.3	0.8	22	grab, ankerite altered orthogneiss
99JLO-7-100-3	5682899	324727	-2	<0.05	0.5	0.03	7	<0.2	14	-0.1	0.3	6	grab, pegmatite
99JLO-8-107	5679569	322113	-2	0.1	3.8	0.04	6	<0.2	10.5	0.2	18.7	26	grab, silicified-sericite altered monzonite
99JLO-8-112	5680778	321661	17	0.05	2.3	0.13	14	<0.2	9	-0.1	1.7	28	25 cm qtz vein, sericite altered HW-FW
99JLO-8-114	5680661	321703	-2	0.15	4	0.34	9	<0.2	18	1	3.7	44	1 m chip sample across spaced fractures
99JLO-8-115	5680582	321742	20	0.25	10.3	398	229	0.2	9	1.1	4.6	18	5 cm qtz vein, chlorite + trace po, cpy
99JLO-8-116	5680518	321752	6	0.2	6	1.35	31	<0.2	3.5	0.4	0.7	4	grab, 3 sheeted cm-wide quartz veins
99JLO-8-118	5680398	321729	13	0.6	108	5.45	676	4.6	25.5	6.7	0.3	6	25 cm qtz vein, massive po, trace pyrite
99JLO-9-132	5680232	322548	3	<0.05	1.4	0.2	17	<0.2	2	-0.1	0.3	2	25 cm wide rusty qtz vein
San Vein													
99JLO-4-46	5693064	309296	4	0.15	10.9	0.21	5	1	20	0.2	0.1	8	1.2 m chip sample, vein + sericite alteration
99JLO-4-47	5693044	309342	80	7.8	259	7.36	6	6.6	428	3.7	0.5	526	35 c m chip across vein, mainly pyrite
99JLO-4-47-2	5693044	309342	128	86.4	536	142	24	51	5590	10.6	<10.0	>10000	grab of mineralization
Main Vein, Cam-Gloria													
99JLO-10-147	5680446	321516	20	1.9	5.9	7.7	27	0.2	52.5	0.2	1	4	(H) grab, silicified-sericite altered monzonite
99JLO-10-148	5680503	321541	1570	6.6	11.6	17.75	32	1	26.5	0.4	0.4	2	(I) 3.3 m chip sample starting from the FW
99JLO-10-150	5680506	321535	902	9.6	31.4	9.45	49	0.8	168.5	0.4	1.6	2	(I) 3.3 m chip from HW side of vein
99JLO-10-151	5680505	321538	67	13.2	23.5	31.2	116	0.6	271	0.6	0.3	6	(H) grab, dissem of po, py, trace cpy, gn
99JLO-10-152	5680528	321563	1540	3.15	51.3	30.6	163	1.8	42.5	1.5	0.6	30	(I) 1.5 m chip sample, SW end of the main vein
99JLO-10-153	5680532	321571	18300	15.5	22.5	196	381	3.2	354	2.5	7.8	378	(G) chip, altered FW-monzonite, brecciated vein
99JLO-10-154	5680532	321571	73	11.4	20.8	71.8	251	4	277	2.3	2	526	(I) 1.5 m chip, coarse and fine grained pyrite
99JLO-10-155	5680537	321573	892	60.6	193	240	203	11	1165	1.7	<0.1	576	(A) grab, fracture filling blebs of po, py, gn

Au, As and Sb by INA; other elements by total digestion-ICP
Au in ppb, rest in ppm



Modified from Randy Farmer (personal communication; 1999)

Camille Berube in trench on footwall side of the northeast-striking, steeply-dipping Main vein at the discovery site of the Cam-Gloria prospect. The quartz vein is enveloped by a wide zone of sericite alteration within quartz monzodiorite of the middle Jurassic Honeymoon stock. ((H) (G)).

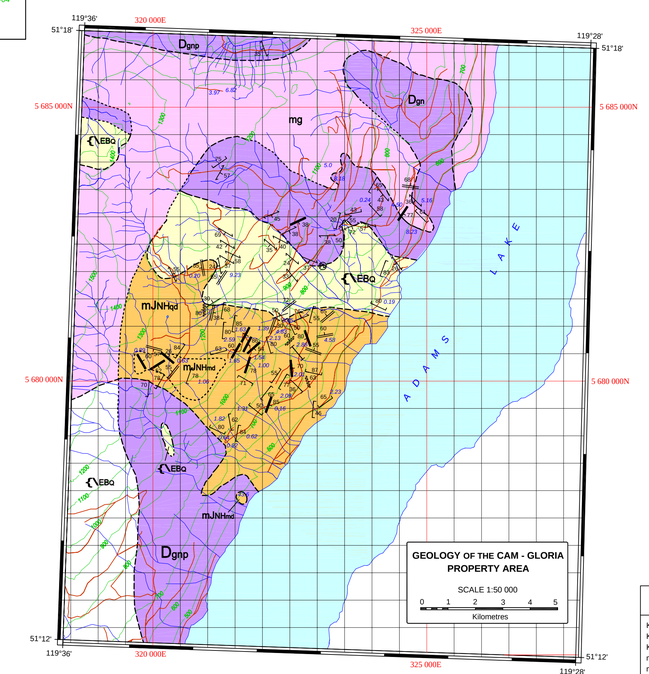
MINFILE OCCURRENCES

MINFILE 082M -	NAME	UTM (Zone 11) NORTH	EAST	COMMODITY
Intrusion-Hosted, Polymetallic Quartz Veins Au-Ag-Pb				
70	FORTUNA 2	5693840	293767	Pb Zn Cu Ag Au
71	KUNO	5695028	294977	Pb Ag Au
73	KUNIGUNDE	5695553	297321	Pb Ag Au
74	MAFALDA	5696171	297346	Pb Ag Au
135	SAN	5693245	309043	Ag Pb Au Zn Cu
266	CAM-GLORIA	5680716	322043	Au Ag Pb Cu
Schist-Hosted, Polymetallic Quartz Veins Ag-Pb-Zn+/-Au				
49	GRIZZLY	5686160	308293	Cu Ag Zn Mo Au
50	RENNING	5685568	307592	Ag Zn Cu Pb
61	RUTH	5685957	305473	Ag Pb Zn Cu Au
65	ENERGITE	5693000	291603	Pb Ag Zn Cu Au
64	NORTH STAR	5693471	291428	Pb Zn Ag Cu
72	FORTUNA 1	5692233	295252	Pb Ag Zn Cu Au
222	CAD	5687549	300299	Zn Pb Ag
223	ADON V	5687156	306488	Pb Zn Ag Cu Au
Massive Sulphide Cu-Pb-Zn+/-Ag				
10	BEX ZONE	5686106	309745	Cu
51	EBL	5690237	306799	Cu Pb Zn Ag Au Mo
59	CC	5689971	297681	Cu Pb Zn Ag
60	HARPER	5691703	300849	Cu Zn Pb Ag Au
63	SITTING BULL	5692080	299121	Cu Ag Au
67	ANACONDA	5690473	296732	Cu Pb Zn Ag Au
110	B & B	5690377	303123	Cu
114	HILLTOP	5706884	316602	Cu
115	HILLTOP 9	5707042	318248	Cu
117	FENNELL ZONE	5685205	309033	Cu Au Mo Ni
127	NSP	5685213	317275	Cu
130	BROKEN RIDGE	5691771	299108	Cu Pb Zn Ag
131	MAY	5691323	298703	Cu Pb Zn Ag
219	PERCY	5692141	297573	Cu Ag Au Pb Zn
220	COPPER CLIFF	5690017	296520	Cu Pb Zn Ag
221	RAINBOW	5689697	296798	Cu Pb Zn Ag
Porphyry Molybdenum Mo+/-W				
26	BIRMOLY	5696279	294640	Mo
52	H	5695401	301187	Mo
62	BAR-BARRIERE	5697894	300704	Mo
112	VAL	5695138	300015	Mo
238	KITTY	5700425	295388	Ag Mo Pb W

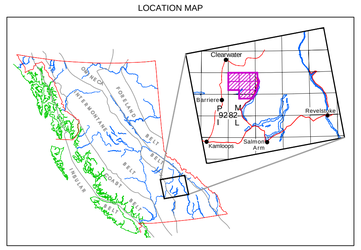
BASE MAP INFORMATION

Base map has been reproduced from digital TRIM I (Terrain Resource Inventory Management) 1:20 000 topographic database produced by the British Columbia Ministry of Environment, Lands and Parks.
North American Datum 1983 Zone 11.
Universal Transverse Mercator Projection.
Elevation in metres above sea level.
Approximate Mean Declination 1989 23°31'. Decreasing 9.1' annually.

COMMENTS OR CORRECTIONS:
Any improvements or comments concerning this map would be appreciated. Please contact Jim Logan at (250) 952-0436, FAX (250) 952-0381, Email Jim.Logan@gems6.gov.bc.ca



LOCATION MAP



MAGNETIC SUSCEPTIBILITY VALUES

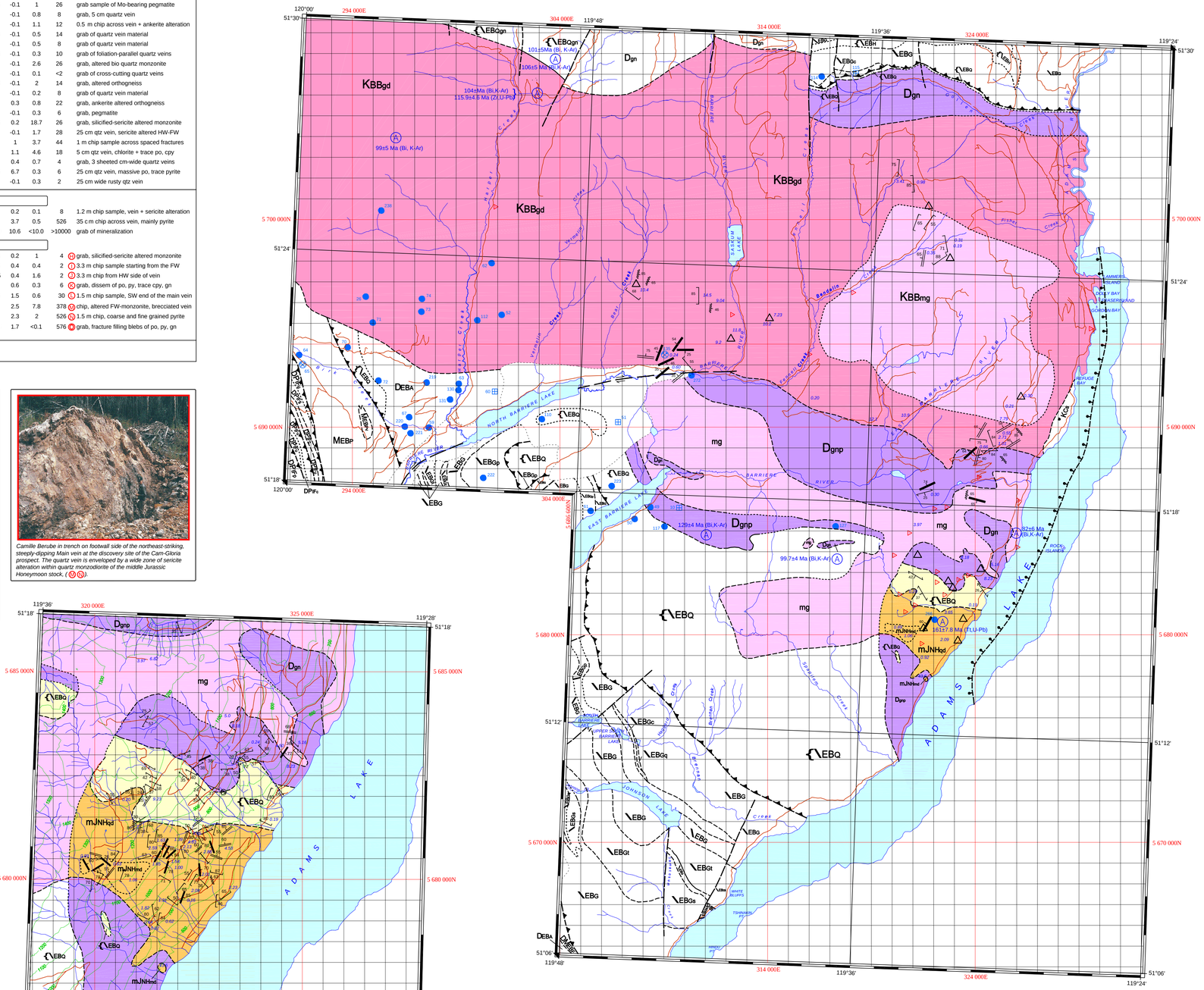
Unit	Number *	MS ** Range	Mean	
KBBgd	n = 7	3.97 - 12.1	9.08	megacrystic
KBBg	n = 10	0.42 - 14.5	7.04	bi granite
KBBmg	n = 12	0.10 - 3.41	0.57	bi-mu granite
mJNHqd	n = 33	0.16 - 9.23	2.07	qtz monzodiorite
mJNHmd	n = 1	43.6	43.6	monzodiorite

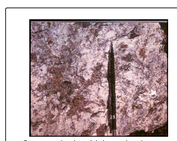
* number of field measurements
** MS = magnetic susceptibility, values are x 0.001 S.I. Units

AGE DATES

NTS MAP	UTM (Zone 11) NORTH	EAST	MAP CODE	PLUTON ROCK	DATING METHOD	MINERAL DATED	AGE (Ma)	SOURCE
82M/6	5684895	325978	KBBgd	Baldy Batholith	K-Ar	biotite	82 +/- 6 Ma	Wanless et al., 1966
82M/5	5703946	296101	KBBgd	Baldy Batholith	K-Ar	biotite	99 +/- 5 Ma	Wanless et al., 1966
82M/5	5707727	303784	KBBgd	Baldy Batholith	K-Ar	biotite	101 +/- 5 Ma	Kirkland, 1971
82M/5	5707727	303784	KBBgd	Baldy Batholith	K-Ar	biotite	106 +/- 5 Ma	Kirkland, 1971
82M/5	5706090	302909	KBBgd	Baldy Batholith	Rb-Sr	whole rock	98.5 +/- 2 Ma	Jung, 1986
82M/5	5706090	302909	KBBgd	Baldy Batholith	K-Ar	biotite	104 +/- 3 Ma	Jung, 1986
82M/5	5684812	311047	Dgnp	Orthogneiss	K-Ar	biotite	129 +/- 4 Ma	Belik, 1973
82M/5	5684580	317439	Dgnp	Orthogneiss	K-Ar	biotite	99.7 +/- 4 Ma	Belik, 1973
★ 82M/12	5711358	296398	Dgnp	Orthogneiss	K-Ar	whole rock	102+/-3 Ma	Belik, 1973
★ 82M/12	5710113	304455	vein	Vein	K-Ar	muscovite	114+/-5.5 Ma	Kirkland, 1971
82M/5	5706090	302909	KBBgd	Baldy Batholith	U-Pb	zircon	115.9 +/-4.6 Ma	Calderwood et al., 1990
82M/4	5680495	322115	mJNHqd	Honeymoon stock	U-Pb	titanite	161 +/-7.8 Ma	Mortensen pers comm, 2000

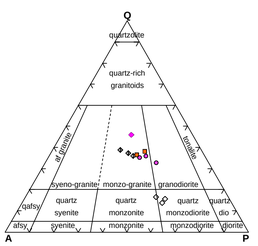
★ Sample location north of map area

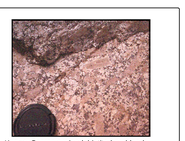




Coarse-grained, molybdenum-bearing pegmatite dike (2.5 m thick), from upper reaches of Bendelin Creek. Pegmatite consists of graphic intergrowths of smoky quartz and potassium feldspar, plagioclase and coarse books of biotite and muscovite with interstitial spessartine garnet and clots of molybdenum

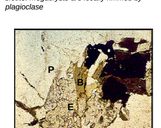
Modal quartz-alkali feldspar-plagioclase feldspar plot for Baldy Batholith and Honeymoon stock
(fields from LeMaitre, 1989)





KBBgd: *Coarse-grained, biotite-hornblende granite from the vicinity of Bear Creek, shows characteristic euhedral potassium feldspar megacrysts. Matrix is comprised of subhedral grains of quartz, white plagioclase and pink potassium feldspar with interstitial crystals of biotite. Megacrysts are locally rimmed by plagioclase*

KBBmg: *Medium to coarse-grained, leucocratic biotite-muscovite monzogranite from the upper reaches of Barriere River. Sample contains rare white potassium feldspar megacrysts in an equigranular matrix of potassium feldspar, plagioclase and quartz with interstitial biotite and muscovite*



Photomicrograph of Honeymoon Bay quartz monzodiorite (Unit mJNHqd*). Igneous textures of primary epidote (**E**) include its euhedral contact with biotite (**B**), and wormy intergrowth with plagioclase (**P**) and hornblende (**H**)*

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

Geological Survey Branch
Open File 2000-7

GEOLOGY AND MINERALIZATION AROUND BALDY BATHOLITH, SOUTHCENTRAL BRITISH COLUMBIA

parts of NTS 82M/3, 4, 5 and 6

by Jim Logan and Richard Mann

SCALE 1:100 000
0 2 4 6 8 10
Kilometres

Previous mapping of the area by Schiarizza and Preto (1987) forms the geological and lithological context for the current study. Recognition of mapable intrusive phases in the Baldy Batholith and the presence of a Middle Jurassic intrusion (Honeymoon stock) are some of the new geological contributions to the area.

LAYERED / IGNEOUS ROCKS

CENOZOIC
EOCENE
Kcs — *Sandstone, shale, conglomerate, and coal.*

MESOZOIC
CRETACEOUS
BAYONNE SUITE
BALDY BATHOLITH
KBBgd — *Coarse potassium feldspar megacrystic hornblende-biotite granite to granodiorite, coarse equigranular biotite monzogranite* (KBBg) *and medium-grained aplite dikes.*
KBBmg — *Medium-grained, equigranular, leucocratic biotite-muscovite monzogranite, rare white potassium feldspar megacrysts.*
MIDDLE JURASSIC
NELSON SUITE
HONEYMOON BAY STOCK
mJNHqd — *Coarse equigranular biotite-epidote-hornblende quartz monzodiorite, rare potassium megacrystic phases and monzodiorite phases* (mJNHmd).

PALEOZOIC
DEVONIAN TO PERMIAN
FENNEL FORMATION
DPIFc — *Grey and green bedded chert, cherty argillite, slate and phyllite.*
DPIFg — *Gabbro, diorite, diabase.*
DPIFp — *Light to medium grey quartz-feldspar porphyry rhyolite.*
DPIFu — *Undivided; mainly* IFc *and* IFg *but may include any or all of above rock types.*
LOWER CAMBRIAN (AND OLDER?) TO MISSISSIPPIAN
EAGLE BAY ASSEMBLAGE
MEBP — *Dark grey phyllite and slate with interbedded siltstone, sandstone and grit; lesser amounts of conglomerate, limestone, dolostone, chlorite-sericite-quartz schist, quartzite and metatuff;* MEBPv *- metavolcanic breccia and tuff.*
DMEBF — *Light to medium grey, rusty weathering feldspathic phyllite, schist and fragmental schist derived from intermediate tuff and volcanic breccia; minor amounts of dark grey phyllite and siltstone.*
DEBA — *Light silvery grey to medium greenish grey sericite-quartz phyllite and sericite-chlorite-quartz phyllite derived from felsic to intermediate volcanic and volcaniclastic rocks, including pyritic, feldspathic and coarsely fragmental varieties; lesser amounts of dark grey phyllite and siltstone, green chloritic phyllite, sericitic quartzite and pyritic chert (exhalite?).*
{\ EBQ — *Light to dark grey quartzite, micaceous quartzite, grit, chlorite-muscovite-quartz schist and phyllite; lesser amounts of calcareous phyllite, calcsilicate schist, carbonate and green chlorite schist; eastern exposures include staurolite-garnet-mica schist and amphibolite;* {\ EBQp *- includes orthogneiss of unit* Dgn*, as well as sericite-quartz phyllite derived from quartz porphyry dikes and sills.*
\ EBG — *Medium to dark green calcareous chlorite schist, fragmental schist and greenstone derived largely from mafic to intermediate volcanic and volcaniclastic rocks; lesser amounts of limestone and dolostone; minor amounts of quartzite, grit, and light to dark grey phyllite;* \ EBGc *- limestone, dolostone, marble;* \ EBGt *- Tshinakin limestone member - massive, light grey finely crystalline limestone and dolostone;* \ EBGs *- dark to light grey siliceous and/or graphitic phyllite, calcareous phyllite, limestone, calc-silicate, cherty quartzite; minor amounts of green chloritic phyllite and sericite-quartz phyllite;* \ EBGq *- light to medium grey quartzite;* \ EBGp *- dark grey phyllite, calcareous phyllite and limestone; minor amounts of rusty weathering carbonate-sericite quartz phyllite (metatuff?).*
EBH — *Light to medium grey and greenish grey quartzite, grit and chlorite-sericite-quartz schist; minor amounts of pebble conglomerate, medium to dark grey phyllite and rusty weathering dolomitic sericite-chlorite schist (metatuff?).*
LATE DEVONIAN
Dgn — *Granite and granodiorite orthogneiss;* Dgnp *- includes sillimanite-bearing paragneiss.*

AGE UNKNOWN
mg — *Medium to coarse grained, pink potassium feldspar megacrystic biotite monzogranite, hornblende-biotite monzodiorite and coarse pegmatite segregations.*

SYMBOLS

Geological contacts (defined, approximate, inferred)
Thrust faults (approximate, inferred)
Normal faults (inferred)
Fault strike-slip (approximate)
Fault unknown (approximate, inferred)
Bedding (tops unknown, inclined)
Foliation; dominant schistosity or cleavage
Joint, fracture or altered fracture
Fault plane
Vein
Dike
Lineations; undefined
Mineral occurrence with MINFILE number (82M-) (past producer, prospect, showing) 137
Age date (K-Ar, U-Pb) (A)
Pb-Pb isotope sample (B)
Station
Geochemical/assay rock sample
Magnetic susceptibility (0.001 S.I. Units) 7.75
Roads
Rivers, streams, and creeks
Unmapped

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Recommended citation: Logan, J.M. and Mann, R.K. (2000): Geology and Mineralization around the Baldy Batholith, South-central British Columbia (82M/5, parts of 4 & 6); *B.C. Ministry of Energy and Mines*, Open File 2000-7, 1:100,000 scale map.

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We have benefited from geological discussions with Mike Cathro of the B.C. Mines Branch and Paul Schiarizza of the B.C. Geological Survey Branch.

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