Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

GEOLOGICAL SURVEY BRANCH

OPEN FILE 1990-16

GEOLOGY AND MINERAL DEPOSITS OF THE SNIPPAKER AREA

NTS 104B/6E, 104B/7W, 104B/10W, 104B/11E

GEOLOGY BY
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SCALE 1:50 000

CONTOUR INTERVAL 100 FEET

MAGNETIC DECLINATION (1982) 27° EAST

LEGEND

GOSSANOUS ALTERATION ZONES

Pyrite ± quartz ± sericite ± carbonate ± clay; locally foliated to schistose

INTRUSIVE ROCKS

TERTIARY

10 *POST-TECTONIC DYKES (Narrow, not shown)*

- *10a Lamprophyre, andesite, diabase*
- *10b Leucogranite: holofelsic, quartz-rich, fine to coarse-grained*
- *10c Hoodoo dykes: basaltic dykes related to Quaternary extrusives*

9 *COAST PLUTONIC COMPLEX: Medium to coarse-grained biotite granite; biotite ±hornblende granodiorite; minor quartz diorite; locally foliated along margins*

JURASSIC

8 *TEXAS CREEK PLUTONIC SUITE: Fine to coarse-grained, quartz diorite, monzodiorite, quartz monzonite; syn to post-volcanic intrusions. Porphyritic to phaneritic textured; possibly hypabyssal equivalents of extrusive rocks*

- *8a Lehto Batholith: coarse K-feldspar±hornblende porphyritic monzodiorite; equigranular monzonite and quartz diorite*
- *8b Bronson Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- *8c Red Bluff Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- *8d Iskut Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- *8e Gregor Stock: coarse K-feldspar porphyry hornblende monzodiorite to monzonite*
- *8f Isolated K-feldspar-porphyry dykes and sills (Narrow, not shown)*
- *8g Felsite: (Age unknown) hypabyssal sills, stocks and related dyke swarms; leucocratic to holofelsic; fine-grained feldspar±quartz phenocrysts set in an aphanitic groundmass*

TRIASSIC

7 *STIKINE PLUTONIC SUITE: Foliated to massive, fine to medium-grained hornblende-biotite quartz diorite*

- *7a Mount Verrett Stock: medium to dark grey-green, fine-grained, plagioclase phyric diorite; extensively recrystallized*
- *7b Jekill River Stocks: fine to medium-grained hornblende diorite; variably recrystallized*
- *7c Synvolcanic sills and dykes; melanocratic, fine-grained; recrystallized*

VOLCANIC AND SEDIMENTARY ROCKS

(Note: No stratigraphic order is implied within sequences.)

QUATERNARY

RECENT

6 *UNCONSOLIDATED SEDIMENTS: Alluvium, glaciofluvial deposits, landslide debris, moraine*

PLEISTOCENE TO RECENT

5 *BASALT FLOWS AND TEPHRA: Dark grey to black, olivine and plagioclase phyric basalt flows and tephra*

VOLCANIC AND SEDIMENTARY ROCKS (continued)

JURASSIC

HAZELTON GROUP

MIDDLE JURASSIC

4 *SILTSTONE SEQUENCE (Salmon River Formation): Dark grey, well-bedded siltstone; minor sandstone.*

LOWER JURASSIC

3 *UPPER VOLCANOSEDIMENTARY SEQUENCE: Heterogeneous, grey, green, rarely purple or maroon, massive to bedded pyroclastic and sedimentary rocks. Green and grey, intermediate to mafic volcaniclastics and flows intercalated with fine-grained immature sedimentary rocks. Locally thick conglomerates. Limestone rare or absent.*

Includes equivalents of Unuk River, Betty Creek and Mount Dilworth formations. In the Snippaker-Johnny Mountain area an upper package of felsic volcanics (consisting of units 3d, 3b, 3g and 3jfl) is probably correlative with the combined Betty Creek and Mount Dilworth formations of the Sulphurets map area (see Hancock, 1990, and MacLean, 1990).

- *3v Undifferentiated, mainly volcanic rocks*
- *3a Green and grey, massive to poorly bedded andesite; ash tuff to tuff breccia; feldspar±hornblende phyric*
- *3b Dark green, basaltic-andesite tuffs and flows*
- *3d Grey, green and purple dacitic tuff, lapilli tuff, crystal and lithic tuff; massive to well bedded; feldspar phyric; locally welded*
- *3g Light grey and green dacite crystal and lapilli tuffs with minor hematitic stringers (Snippaker-Inel Ridge)*
- *3k K-feldspar-plagioclase±hornblende porphyritic andesitic to dacitic tuffs and flows ("Premier Porphyry")*
- *3s Undifferentiated, mainly sedimentary rocks*
- *3t Black, thinly bedded siltstone (turbidite), shale ,argillite, mudstone*
- *3h Maroon, hematitic mudstone with calcareous concretions*
- *3w Grey, brown and green tuffaceous wacke; variably bedded*
- *3c Conglomerate and volcanic conglomerate; polymictic, locally orange-weathering*

TRIASSIC

STUHINI GROUP

UPPER TRIASSIC

2 *LOWER VOLCANOSEDIMENTARY SEQUENCE: Medium to dark green, mafic to intermediate volcanic and volcaniclastic rocks and thick sequences of brown, black and grey, immature sedimentary rocks; minor limestone as beds, lenses and clasts*

- *2v Undifferentiated, mainly volcanic rocks*
- *2a Grey and green, plagioclase±hornblende±pyroxene phyric andesite*
- *2p Grey and green, pyroxene±feldspar porphyritic andesite; rare pillow breccia*
- *2m Melanocratic, pyroxene-rich basalt and andesite; tuff, tuff-breccia, debris flows; with intercalated pyroxene-bearing wacke and conglomerate*
- *2y Light grey-green, wavy, dacitic pyroxene-plagioclase crystal and lapilli tuffs (Winslow Ridge)*
- *2i Aphyric andesitic tuffs and lapilli tuffs (Winslow Ridge)*
- *2f Light weathering, felsic tuffs and breccias*
- *2s Undifferentiated, mainly sedimentary rocks*
- *2t Black, thinly bedded siltstone and fine sandstone (turbidite); shale; argillite*
- *2w Grey, brown and green tuffaceous wacke; variably bedded; locally calcareous*
- *2c Conglomerate and volcanic conglomerate; polymictic*
- *2l Grey, variably bedded limestone (mostly recrystallized); locally silty or sandy*

PALEOZOIC

STIKINE ASSEMBLAGE

1 *DEFORMED METAMORPHIC ROCKS (May include some Triassic strata): Phyllite; fine-grained schist and gneiss. Metamorphosed tuffaceous siltstone and sandstone with interbeds of marble and quartzite. Metamorphosed volcanic rocks are distinguished by relict volcaniclastic textures.*

- *1s Mica-rich schist and phyllite; probable sedimentary protolith*
- *1l Marble (recrystallized limestone); massive to thinly layered*
- *1q White, fine-grained quartzite*
- *1g Grey, fine-grained, biotite-rich quartzofeldspathic gneiss*
- *1m Fine-grained, migmatitic amphibolite and quartzofeldspathic gneiss (xenolith in Coast Plutonic Complex)*
- *1v Medium to dark grey and green, fine-grained gneiss with relict volcaniclastic textures*

MINERAL OCCURRENCES

MINFILE NUMBER (104B)	NAME	COMMODITY
004	BONANZA (REG)	Ag, Zn, Pb, Au, Cu
005	CRAIG RIVER	Pb, Cu, Wollastonite
023	SHAN (JOSH)	Zn, Cu, Ag, Pb, Magnetite
028	LAKE ZONE	Cu, Pb, Zn, Au, Ag
032	NEE	Au, Ag, Pb, Zn
076	RAY	Au, Ag, Pb, Zn, Cu, As
077	RED BLUFF (L.2857)	Au, Ag, Cu
088	RAY NO. 2	Zn, Cu, Pb, Ag, Au, Cd
089	ISKUT 1	Au, Ag, Cu, Pb, Zn, Mo
107	STONEHOUSE (REG)	Au, Ag, Cu, Pb, Zn
111	PINS	Zn, Pb, Cu, Ag, Au
113	INEL	Au, Ag, Zn, Cu, Pb
115	PINS EAST	Cu, Pb, Zn
116	TAMI (BLUE RIBBON)	Au, Ag, Cu, Pb, Ba
117	KIM (SNOW)	Ag, Cu, Au, Pb, Zn, Mo
131	BRONSON EAST	Au, Ag, Pb, Zn, Cu
135	LAKE RIDGE WEST	Ag, Pb, Zn, Au, Cu
138	KHYBER PASS	Au, Ag, Cu, Zn, Pb, Mo
204	WARATAH 6	Au, Ag, Cu, Magnetite
205	HANDEL	Ag, Zn, Pb, Au, As, Cu
206	WOLVERINE	Zn, Pb, Ag, Cu, Au
207	PYRAMID HILL	Magnetite, Cu, Zn, Au, Ag, Mo
208	GOLDEN SPRAY	Au, Ag, Pb, Zn, As
210	JOY 2	Au, Ag, Cu
214	PELICAN	Au, Ag, Cu, Zn, Pb
248	HEMLO WEST 15	Cu, Au, Ag
249	AURUM	Au, Cu, Ag
250	SNIP	Au, Ag, Zn, Cu, Pb
255	BIG BOWL (INEL)	Zn, Pb, Au, Ag, Cu
256	WOLVERINE (INEL)	Zn, Ag, Cu, Pb, Au
257	EAST RIDGE (INEL)	Cu, Pb, Zn, Ag, Au
258	INEL RIDGE	Ag, Au, Cu, Zn, Pb
259	SUPERIOR (INEL)	Zn, Ag, Au, Pb, Cu
260	MCFADDEN (REG)	Au
261	TWO BARREL (REG)	Ag, Pb, Zn, Au
262	C1 (REG)	Au, Ag, Pb, Zn, Cu
263	C2 (REG)	Au, Ag, Pb, Zn
264	C3 (REG)	Au, Ag, Cu, Pb, Zn
268	HANGOVER TRENCH	Ag, Cu, Pb, Zn, Au
269	BURNIE 1	Ag, Au
270	GRACE	Au, Ag, Cu
271	BURNIE 2	Pb, Ag, Au, Cu, Zn
272	DAN 2	Pb, Zn, Ag, Au, Cu
290	JOSH	Mo, Cu, Ag, Ba
291	JOSH 3	Au, Ag, Cu, Zn, Pb, Magnetite
292	GIM (ZONE 1)	Cu, Fe, Ag, Pb, Zn, Magnetite
293	GIM (ZONE 2)	Au, Ag, Bi, As
295	GOLD BUG	Au, Ag, Cu, Zn, Pb
296	GOLDEN ARROW	Au, Ag
297	BOOT (WARATAH)	Au
298	CHOPIN	Au, Cu
299	RIDGE (CHOPIN)	Au, Ag
300	BRONSON	Au, Cu, Zn, Ag, Pb
306	NORTH CREEK	Cu, Pb, Zn
307	BURTON	Au, Ag, Cu, Pb, Zn
308	STAR	Pb, Ag, Au, Cu, Zn
310	BILLY GOAT BOWL (STU)	Au, Ag, Zn, Pb, Cu, As
311	CENTRAL STU 2	Au, Cu, Ag, As
312	ISKUT 2	Au, Cu, Ag
313	MAGNETITE (STU)	Cu, Au, Ag, Magnetite, Zn, Pb, As, Bi
314	SECOND BASIN NORTH	Au, Ag, Pb, Zn
315	SECOND BASIN GOSSAN	Ag, Au, Cu, Pb, Zn
316	EXPOSURE SHOWING	Ag, Au, Cu, Pb, Zn
317	VER 1	Au
318	SERICITE EAST	Cu, Au, Ag
319	HAG	Au, Cu, Pb
320	NUNATAK (INEL)	Au, Ag, Zn, Pb, Cu
321	BIG ROCK (INEL)	Ag, Pb, Zn, Cu, Au
322	MOONLIGHT (INEL)	Au, Ag, Zn, Cu, Pb
323	PYRAMID SADDLE	Cu, Au, Ag, Zn
324	IAN 4	Zn, Cu
325	IAN NORTH	Zn, Cu
326	CAM 9	Cu, Ag, Zn, Au, Magnetite
328	GIGI (CAM 6)	Cu, Ag
329	JOY 1	Au
330	IAN 6	Au, Ag, Cu
331	IAN 8	Ag, Cu, Zn, Mo
346	CANNONBALL	Au
347	EGG	Au
348	ARGENT	Ag, Au
349	STILL	Au, Ag, Pb, Zn
350	ADRIAN	Au
356	GORGE	Au
357	GREGOR	Au, Ag
361	TWIN CREEKS	Au, Ag, Pb, Zn
362	KIRK	Magnetite, Cu
363	SKARN CREEK	Cu
364	ENTERPRISE	Au, Ag, Cu

SYMBOLS

- Geological boundary (defined, approximate, assumed)
- Bedding, tops known (horizontal, inclined, vertical, overturned)
- Bedding, tops unknown (horizontal, inclined, vertical)
- Bedding, estimated dip (gentle, moderate, steep)
- Compositional layering in metamorphosed rocks; foliation (inclined, vertical)
- Regional anticline; syncline
- Antiform; synform (normal, overturned)
- Minor fold axis with M, Z or S symmetry; with plunge
- Fault (defined, assumed); = downthrown side
- Air photo lineament
- Fossil locality (F = macrofossil; C = conodont) — F C
- Volcanic vent
- Mineral spring
- Geologic station
- National geochemical reconnaissance sample site
- Mineral occurrence; MINFILE number — ✕364
- Adit
- Airstrip

NOTES AND SELECTED REFERENCES

This map is based on reconnaissance geological mapping conducted from July to September, 1989. It includes information from published geological maps, unpublished assessment reports, and the Ministry's Property Files.

For a description of the geology of the Snippaker map area see:

Britton, J.M., Fletcher, B.A. and Alldrick, D.J. (1990): Snippaker Map Area (104B/6E, 7W, 10W, 11E), *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork, 1989, Paper 1990-1.

Published geological maps of parts of the Snippaker area include:

Fletcher, B.A. and Hiebert, S.N. (1990): Geology of the Johnny Mountain Area (104B/11), *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1990-19.

Kerr, F.A. (1948): Lower Stikine and Western Iskut River Areas, British Columbia, *Geological Survey of Canada*, Memoir 246, 94pp.

Logan, J.M., Koyanagi, V.M. and Drobe, J.R. (1990): Geology, Geochemistry and Mineral Deposits of the Forrest Kerr-Iskut River Area (104B/10, 15), Northwestern British Columbia, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1990-2.

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For information on adjacent areas see:

Alldrick, D.J., and Britton, J.M. (1988): Geology and Mineral Deposits of the Sulphurets Area (104A/5E, 12E, 104B/8W, 9W), *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1988-4.

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Britton, J.M. and Alldrick, D.J. (1988): Sulphurets Map Area (104A/5W, 12W, 104B/8E, 9E), *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork, 1987, Paper 1988-1, p.199-209.

Hancock, K.D. (1990): Geology of the Nickel Mountain and the E & L Nickel-Copper Prospect (NTS 104B/10E), *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1989, Paper 1990-1.

MacLean, M.E. (1990): Geology of the Colagh Prospect, Unuk Map Area (104B/10E), *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1989, Paper 1990-1.

B.C. Ministry of Energy, Mines and Petroleum Resources, MINFILE Map 104B, Iskut River, 1:250 000.

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