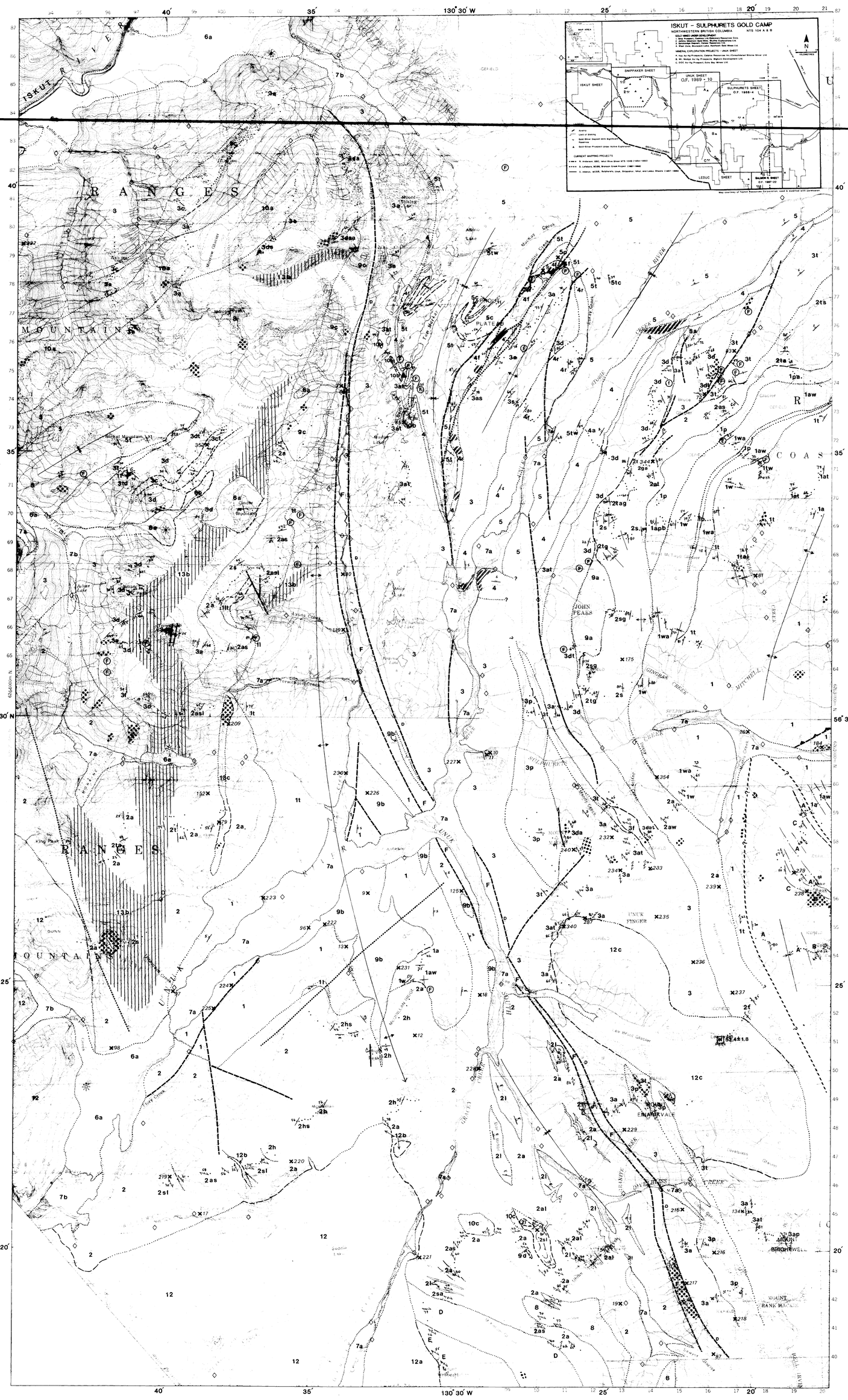

Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

GEOLOGICAL SURVEY BRANCH

OPEN FILE MAP 1989-10

GEOLOGY AND MINERAL DEPOSITS OF THE UNUK AREA

NTS 104B/7E, 104B/8W, 104B/9W, 104B/10E

GEOLOGY BY D.J. ALLDRICK, J.M. BRITTON, I.C.L. WEBSTER AND C.W.P. RUSSELL

COMPILED BY J.M.BRITTON

SCALE 1:50 000

CONTOUR INTERVAL 100 FEET

MAGNETIC DECLINATION (1982) 27° EAST

LEGEND

INTRUSIVE ROCKS

TERTIARY

13 *POST-TECTONIC DYKES*

- *13a Lamprophyre, andesite, diabase (Narrow not shown)*
- *13b King Creek Dyke Swarm: feldspar porphyry dacite, andesite, diabase, quartz diorite*
- *13c Hawilson monzonite: fine-grained leuco-monzonite*

12 *COAST PLUTONIC COMPLEX*

- *12a Biotite granite*
- *12b Hornblende-biotite quartz diorite*
- *12c Lee Brant Stock: K-feldspar porphyry, hornblende-biotite quartz monzonite*

JURASSIC

11 *NICKEL MOUNTAIN GABBRO: melanocratic olivine-pyroxene gabbro*

10 *SYN TO POST-VOLCANIC INTRUSIONS: Porphyritic to phaneritic textured; possibly hypabyssal equivalents of extrusive rocks*

- *10a Lehto Porphyry: K-feldspar-plagioclase-hornblende porphyry granodiorite to syenite*
- *10b Barb Lake Dyke: fine- to medium-grained hornblende diorite*
- *10c Andesite-Diorite Complex: melanocratic, fine- to medium-grained diorite with abundant xenoliths of dark green meta-andesite; (possibly Triassic)*

9 *UNUK RIVER DIORITE SUITE: medium- to coarse-grained, mafic to intermediate stocks*

- *9a John Peaks melanocratic hornblende diorite*
- *9b Max biotite-hornblende diorite; quartz diorite*
- *9c Melville hornblende-biotite diorite to quartz diorite*
- *9d Doc Ridge biotite monzodiorite*

TRIASSIC

8 *BUCKE GLACIER STOCK: light grey, gneissic to foliated, medium-grained hornblende-biotite quartz diorite*

METAMORPHIC ROCKS

A - F *METAMORPHIC EQUIVALENTS OF UNITS 1, 2 OR 3*

- *A Metapelite: dark grey, carbonaceous quartz-feldspar-sericite phyllite*
- *B Felsic metavolcanics: light green,quartz-albite-chlorite-sericite phyllite; locally with deformed lapilli*
- *C Mafic to intermediate metavolcanics: dark green, plagioclase-chlorite phyllite*
- *D Hornblende-plagioclase mylonite; mylonitic meta-tuffs*
- *E Hornblende-plagioclase gneiss; agmatitic migmatite*
- *F Strongly sheared rocks within the Unuk-Harrymel fault zone*

GOSSANOUS ALTERATION ZONES

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

Disseminated pyrite in felsic volcanics

VOLCANIC AND SEDIMENTARY ROCKS

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

QUATERNARY

RECENT

7 *UNCONSOLIDATED SEDIMENTS*

- *7a Alluvium, glaciofluvial deposits, landslide debris, moraine*
- *7b Alluvium underlain by Pleistocene to Recent basalt*

PLEISTOCENE TO RECENT

6 *BASALT FLOWS AND TEPHRA*

- *6a Dark grey to black, basalt flows and tephra; minor pillow lavas*
- *6b Basalt tephra*

TRIASSIC TO JURASSIC

HAZELTON GROUP

MIDDLE JURASSIC (TOARCIAN TO BAJOCIAN)

5 *SILTSTONE SEQUENCE (Salmon River Formation): Dark grey, well-bedded siltstone with minor sandstone and conglomerate.*

- *5c Chert pebble conglomerate and arenite*
- *5t Rhythmically bedded siltstone and shale (turbidite)*
- *5w Thinly bedded wacke*
- *5p Andesitic pillow lavas and pillow breccias with minor siltstone interbeds*

LOWER JURASSIC (TOARCIAN)

4 *FELSIC VOLCANIC SEQUENCE (Mount Dilworth Formation): Light weathering, intermediate to felsic pyroclastic rocks, including dust, ash, crystal and lithic tuffs, lapilli tuff. Locally pyritiferous (5 to 15%) and gossanous. Minor chalcedonic quartz veins locally.*

- *4a Variably bedded airfall tuffs*
- *4f Massive felsic tuff*
- *4r Black and white, carbonaceous felsic volcanics; locally flow banded and autobrecciated*

LOWER JURASSIC (PLIENSBACHIAN TO TOARCIAN)

3 *PYROCLASTIC-EPICLASTIC SEQUENCE (Betty Creek Formation): Heterogeneous, grey, green, locally purple or maroon, massive to bedded pyroclastic and sedimentary rocks; pillow lava*

- *3a Green and grey, massive to poorly bedded andesite*
- *3d Grey, green and purple dacitic tuff, lapilli tuff, crystal and lithic tuff; massive to well bedded; feldspar phyric*
- *3f White weathering, felsic tuffs and breccias with quartz stringers*
- *3c Andesitic lapilli tuff with pink siliceous clasts*
- *3p Andesitic pillow lavas and pillow breccias with minor siltstone interbeds*
- *3t Black, thinly bedded siltstone, shale and argillite (turbidite)*

UPPER TRIASSIC TO LOWER JURASSIC (NORIAN TO SINEMURIAN)

2 *ANDESITE SEQUENCE (Unuk River Formation): Green and grey, intermediate to mafic volcaniclastics and flows with locally thick interbeds of fine-grained immature sediments; minor conglomerate and limestone*

- *2a Grey and green, plagioclase±hornblende porphyritic andesite; massive to poorly bedded*
- *2h Grey and green, hornblende-(± pyroxene)-feldspar porphyritic andesitic lapilli and ash tuff*
- *2s Grey, brown and green, thinly bedded, tuffaceous siltstone and fine grained wacke*
- *2t Black, thinly laminated siltstone (turbidite); shale; argillite*
- *2g Dark grey, matrix-supported conglomerate with granitic cobbles*
- *2l Grey, variably bedded limestone (completely recrystallized along South Unuk valley)*

TRIASSIC

STUHINI GROUP

UPPER TRIASSIC (CARNIAN TO NORIAN)

1 *LOWER VOLCANOSEDIMENTARY SEQUENCE: Brown, black and grey, mixed sedimentary rocks interbedded with medium to dark green, mafic to intermediate volcanic and volcaniclastic rocks*

- *1t Grey to black, thinly bedded siltstone, shale, argillite (turbidite)*
- *1w Brown and grey, fine grained tuffaceous wacke; minor siltstone or conglomerate*
- *1l Grey, impure, silty, sandy limestone*
- *1a Green, fine-grained, andesitic ash tuff; feldspar and hornblende phyric*
- *1b Dark green basalt*
- *1p Grey and green, andesitic breccia with augite-hornblende-plagioclase clasts and augite-rich matrix*

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)
- Stratigraphic tops in pillow volcanics
- Compositional layering in metamorphosed rocks; foliation (inclined, vertical)
- Trend line
- Regional anticline; syncline
- Antiform; synform (normal, overturned)
- Minor fold axis with M, Z or S symmetry; with plunge
- Fault (defined, assumed; D = downthrown side)
- Thrust fault (defined, assumed; teeth on upper plate)
- Air photo lineament
- Fossil locality
- Fiamme
- Area with more than 40% Tertiary dykes
- Limit of major phyllite zone
- Volcanic vent (observed, assumed)
- Geologic station
- National geochemical reconnaissance sample site
- Potassium-argon isotopic age site; H = hornblende; age in millions of years before present
- Mineral occurrence: MINFILE number — ×83
- Adit

MINERAL OCCURRENCES

MINFILE NUMBER (104B)	NAME	COMMODITY	MINFILE NUMBER (104B)	NAME	COMMODITY
6	E & L	Ni Cu Pt Ag Ti Au	216	Bliss 1	Cu
7	Copper King, Lehto	Cu Fe	217	Bliss 4	Cu
8	MacKay	Au Ag Pb Zn Cu	218	Mal	Cu
9	Har, Jim, Max	Cu Fe	219	Jim, Flory	Cu Fe
10	Fox, Ox	Magnetite	220	McQuillan Ridge	Cu
11	Cumberland, Daly	Au Ag Zn Cu Pb Ba	221	Gracey Creek	Cu
12	McQuillan	Cu Fe	222	Gebuck Creek, Max	Au, Ag
13	Max, Granduc	Fe Cu	223	Fewright Creek Placer	Au
14	Doc, Gracey	Au Ag Cu Pb Zn	224	Homer 3	Cu
15	Globe, Doc	Au Ag Pb	225	Six Mile 2	Cu
17	Gold Run	Au Pb Zn	226	North Fork	Cu
18	Unuk Jumbo	Cu	227	Sulphide Creek Placer	Au
19	Florence	Pb Cu Au	228	GC	Cu
20	Sulphurets Creek Placer	Au	229	Granite Creek	Cu
72	Bruce Glacier	Zn	230	Iliad	Zn Fe
79	V V, Mt. Dunn	Cu Au Ag Mo	231	Fred, Dan	Cu
80	Harrymel Creek	Cu	232	Tet	Cu
81	Tag	Cu	233	GFJ, Corey	Au Ag Cu Zn
83	Unuk (Zone 1)	Ag Pb	234	Mandy Glacier	Cu
85	Barb Lake	Au Ag	235	Unuk Finger	Cu
87	Up, Bliss 3	Cu Au Pb	236	Ted Morris Glacier	Cu
96	Unuk River	Cu	237	TMG	Cu
97	Fewright	Cu Ag Au Pb	238	That 5	Cu
98	Canyon Creek	Au Pb Zn	239	Corey 16	Cu
119	Harrymel Creek South	Cu	240	C-10, Mount Madge	Au Ag Cu Zn
125	Chris, Anne	Cu Fe	279	Mike Peak	Asbestos
134	DC	Pb	287	Corey 6	Cu
152	Eric 2, Mount Dunn	Zn	327	Cam South	Cu Pb Zn Mo
175	Gingrass Creek	Asbestos, Cu	340	Corey South	Au Ag
184	Sulphurets Lake	Au Ag Cu	344	Unuk (Zone 2)	Au Cu
209	Cole, Boot	Cu Ag Au	352	Colagh	Cu Pb Zn
215	Divel	Pb Cu	354	Elgar	Au Ag Pb Zn Cu

NOTES

ACKNOWLEDGMENTS

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