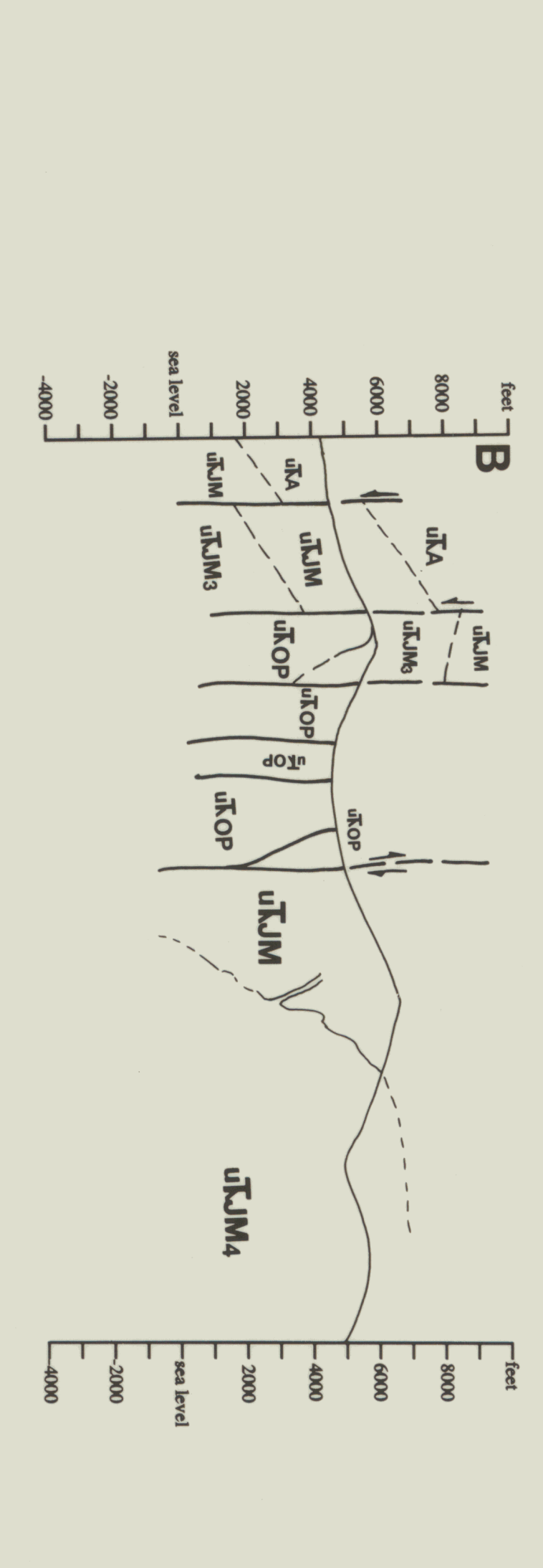


Canada  
Yukon Territory  
Edition 3  
Geological Survey of Canada  
Scale 1:50,000



**LEGEND**  
**SYMBOLS**

Limit of outcrop .....  
Geological boundary (defined approximate, assumed or beneath overburden) .....  
Fault (defined, approximate, assumed or beneath overburden) .....  
Bedding .....  
Flow surface .....  
Schistosity of shear zone .....  
Primary magmatic flow fabric .....  
Cross-section line .....  
Isotopic age determination (Morrison et al., 1979) .....  
Gosauan .....  
Skarn, calc-silicate .....  
Quartz vein, or locally derived quartz vein host .....  
Jasperoidal vein and alteration .....  
Megacryst (microcrystall locally) .....  
Halobal (microfossil locally) .....  
H

**QUATERNARY**  
Q Unconsolidated silt, sand and gravel of glacial, fluvial and lacustrine origins.

**TERTIARY**  
**EARLY EOCENE**  
St/ULM GrouP? with, part or light orange, friable quartz-feldspar porphyry plugs and dikes. E<sub>1</sub> Light weathering, white and light grey, flow banded dykes.  
E<sub>2</sub> Light weathering, light grey, bedded ± hornblende ± quartz pyrox. andesite, felsic, quartz-feldspar porphyry dikes.

**CRETACEOUS**  
**MID-CRETACEOUS**  
MOUNT MOUNTAIN PLUTONIC SUITE (ca. 109 Ma)  
Cap Mountain Pluton  
Light pink to orange weathering, pink, medium to coarse-grained, light pink to orange weathering, pink, medium to coarse-grained, containing numerous small, mafic xenoliths and dikes.  
mKqcm Pink, granodioric, quartz monzonite, is characterized by coarse-grained plagioclase, hornblende and quartz phenocrysts set in a fine-grained, microcrystalline matrix.  
mKqcm<sub>2</sub> Dark grey, weathering, dark pink, hornblende, monzonite and syenite with dark pink groundmass and chlorite hornblende phenocrysts. Epidote and chlorite alteration is common.  
Dikes genetically related to the Cap Mountain Pluton.

**WHITEHORSE PLUTONIC SUITE (ca. 115 Ma)**  
mKdcc<sub>1</sub> Cap Creek Pluton  
Weathering, medium grained, equigranular, biotite-hornblende granodiorite.  
mKdcc<sub>2</sub> Dark weathering, fine-grained, biotite or hornblende-rich quartz diorite and diorite.  
mKdcc<sub>3</sub> Medium-grained, with weathering, typically altered biotite and hornblende, biotitic granodiorite.  
mKdcc<sub>3</sub> Dark, blocky weathering, coarse grained, hornblende diorite.  
mKdcc<sub>3</sub> Andesite and feldspar porphyry dikes assumed to be genetically related to the Cap Creek Pluton.

**TESLIN PLUTONIC SUITE (ca. 120 Ma)**  
Kgm White to dark grey weathering, massive, lacustrine, coarse-grained equigranular biotite-hornblende granodiorite locally with sparse grey and pink potassium feldspar phenocrysts.

**MOUNT NANSÉN GROUP?**  
Kv Light weathering, massive and bedded, light grey andesite with abundant, medium to coarse grained, andesite and dacite.

**JURASSIC**  
**LOWER TO MIDDLE JURASSIC**  
LABERGE GROUP  
JL Weathering, massive, reddish-brown, medium to coarse-grained, biotite, hornblende, quartz, plagioclase, and feldspar. Very difficult to distinguish from, and may include all.  
JL<sub>1</sub> Dark weathering, massive to finely laminated, black mudstone, massive horizon. Dispositionally, on top of sedimentary Lower River Group limestone. Lower part of the unit is flaggy and lumpy.

**TRIASSIC**  
**LATE TRIASSIC (AND OLDER?)**  
LEWIS AND CLERK GROUP  
UL<sub>1</sub> Underlain by sedimentary rocks including in decreasing abundance: fine grained, sandstone, shales, siltstone, sandstone, gneiss, granite, and quartzite. Very difficult to distinguish from, and may include all.  
UL<sub>1</sub> White weathering, resistant, massive to poorly bedded, biotite and mafic minerals, mafic and stannic, and massive, flaggy, dark grey limestone and quartz limestone.  
UL<sub>2</sub> Massive to poorly bedded, imbricate, conglomerate and breccia deposited as debris flows and turbidites. Limestone occurs as angular clasts or as a fine-grained matrix.  
UL<sub>2</sub> Dark grey weathering, generally unaltered, fine-grained and locally medium-grained monomineralic or biotite and pyroxene/epidote, plagioclase, quartz, and calcite. Locally altered to calcite and dolomite.  
UL<sub>2</sub> Dark, resistant, magmatic, basaltic andesite and gabbro dikes.

**UL<sub>3</sub>** Resistant, dark weathering, chaotic and massive to poorly bedded, hornblende, dioritic, conglomerate and fragmental or gneiss composed of volcanic and sedimentary fragments.  
**UL<sub>3</sub>** Resistant, dark brown weathering, brittle massive basalt flows.  
**UL<sub>3</sub>** Chaotic assemblage of massive weathering, volcanogenic with massive or amy beds.  
**UL<sub>3</sub>** Dark weathering, massive, variable toward coarse-grained and locally pegmatitic, hornblende gabbro and diorite.

**UL<sub>4</sub>** Proves formation  
UL<sub>4</sub> gneiss, quartzite, and schistosity, assemblages of quartz, feldspar, and biotite, with weathering, from irregular carbonate, epidote, calcite and chlorite alteration.  
As above, except, mafic, massive, as a result of hematite alteration induced by oxidation.

**UL<sub>5</sub>** Old flows  
UL<sub>5</sub> Dark weathering, fine-grained, aphyric, allowed basal flows with calcite veining and weak but pervasive chlorite alteration. These gabbros are under a package of grey and amy sediments.

**MINERAL OCCURRENCES**

Yukon MINIFILE Number	Name	Deposit Type
49	LABE	* Exploration Target
50	ACE	▲ Au Ag Pb Zn vein
51	WHEELER	* Exploration Target
86	SLEWE	* Exploration Target
148	ERSE	* Exploration Target
149	ERSE	* Exploration Target

**COMPILATION and REFERENCE SOURCES**  
HART, C.J.R., and RADLOFF, J.K., 1990. Geology of the Carcross, Fenwick Creek, Alligator Lake, Whitehorse, and part of Robinson map areas (1050/2, 3, 6, 11 and part of 7), Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Open File 1980-4, 113 p.  
MORRISON, G.W., GODWIN, G.I., and ARMSTRONG, R.L., 1979. Interpretation of isotopic ages and Sr/Sr<sub>0</sub> initial ratios for plutonic rocks in the Whitehorse map area, Yukon. Canadian Journal of Earth Sciences, Vol. 16, p. 1989-1997.  
TEMPELMAN-KLUIT, D.J., 1984. Geology of Laberge (105E) and Carmacks (115I) map areas. Two 1:250 000 maps with legends. Geological Survey of Canada Open File 110.  
WHEELER, I.O., 1981. Whitehorse map area (105D). Yukon Territory. Geological Survey of Canada Memoir 312, 156 p.  
**This map accompanies:**  
HART, C.J.R., and HUNT, J.A., 1984. Geology of the Joe Mountain map area (105D/15), southern Yukon Territory. In: Yukon Division, Yukon, Indian and Northern Affairs Canada.  
HART, C.J.R., and HUNT, J.A., 1984. Preliminary Geological Map (1:50 000) of Joe Mountain map area, southern Yukon Territory. (105D/15). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada. Open File 1984-4 (G).

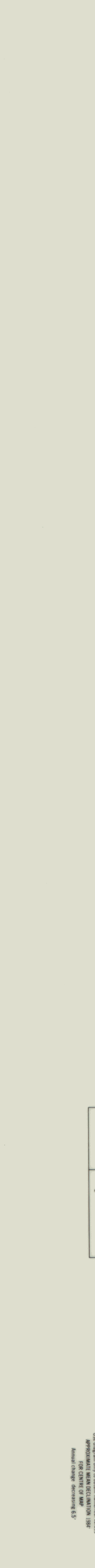
**Acknowledgments:**  
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Indian and Northern Affairs Canada  
Exploration and Geological Services Division  
Yukon Region  
Open File 1994-4 (G)  
**PRELIMINARY GEOLOGICAL MAP OF JOE MOUNTAIN MAP AREA, SOUTHERN YUKON TERRITORY NTS 105D/15**  
Craig J.R. Hart and Julie A. Hunt  
Canada/Yukon Mineral Development Agreement  
Geoscience Office



Canada  
Yukon Territory  
Edition 3  
Geological Survey of Canada  
Scale 1:50,000

**JOE MOUNTAIN**  
YUKON TERRITORY TERRITOIRE DU YUKON  
Scale 1:50 000 Echelle  
ONE INCHES TO ONE KILOMETRE  
UNITE TERRITORIALE DE QUATRE MILES  
UNITE TERRITORIALE DE QUATRE MILES  
Scale 1:50 000 Echelle  
Scale 1:50 000 Echelle  
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