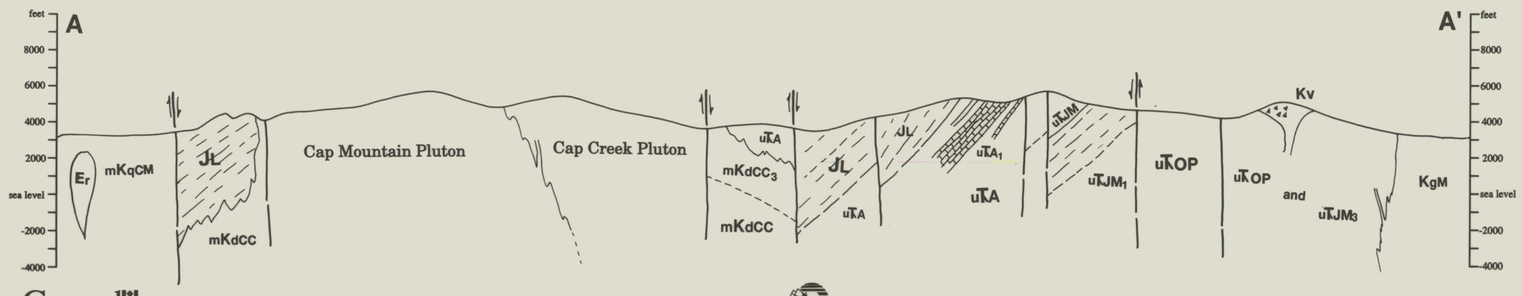
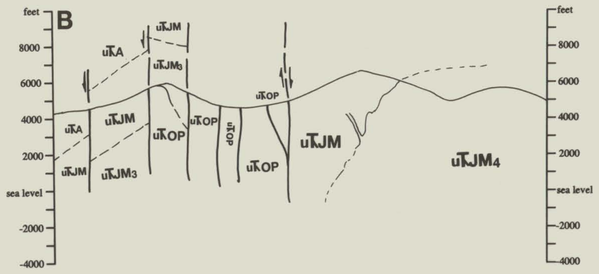




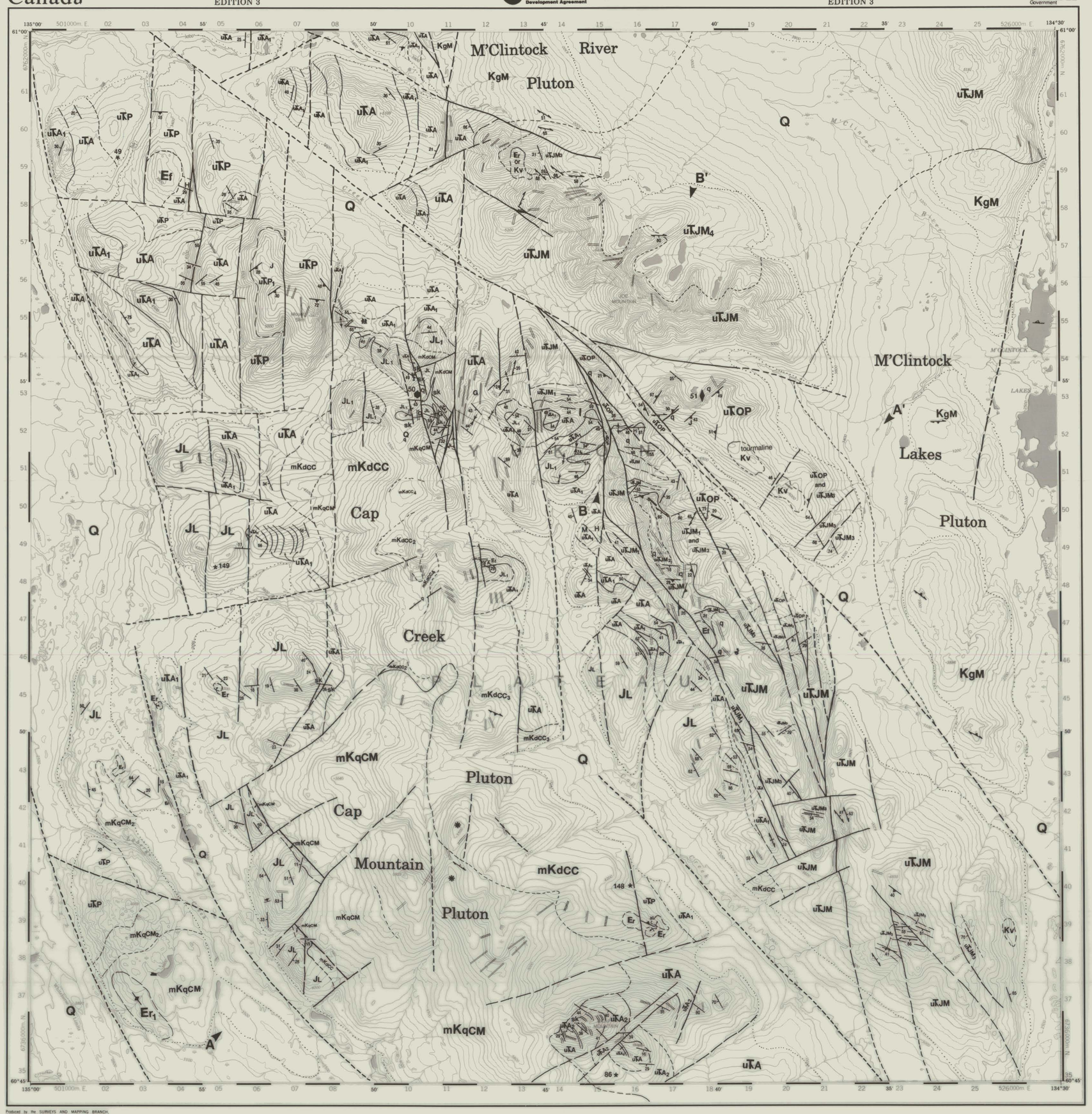
Canada

EDITION 3

Canada/Yukon Economic Development Agreement

ÉDITION 3

Yukon Government



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Department of Energy, Mines and Resources

JOE MOUNTAIN

YUKON TERRITORY TERRITOIRE DU YUKON

Scale 1:50 000 Échelle

Miles 1 0 1 2 3 Miles

Metres 1000 0 1000 2000 3000 4000 Mètres

CONVERSION SCALE FOR ELEVATIONS ÉCHELLE DE CONVERSION DES ALTITUDES

Metres 30 20 10 0 50 100 150 200 250 300 Mètres

Feet 100 50 0 100 200 300 400 500 600 700 800 900 1000 Pieds

ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 8
QUADRILLAGE DE MILLE MÈTRES
TRANSVERSE UNIVERSEL DE MERCATOR

GRID ZONE DESIGNATION DÉSIGNATION DE LA ZONE DU QUADRILLAGE: 8 V

100 000 m SQUARE IDENTIFICATION IDENTIFICATION DU CARRÉ DE 100 000 m: NC

Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1984
FOR CENTRE OF MAP
Annual change: decreasing 6.5'

LEGEND

QUATERNARY

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

TERTIARY

EARLY EOCENE

SKUKUM GROUP?

Er — Light weathering, white, pink or light orange, rhyolite, alaskite quartz-feldspar porphyry plugs and dykes. **Er1** Light weathering, white and light grey, flow banded rhyolite.

Ef — Light weathering, light grey, feldspar ± hornblende ± quartz-phyric, siliceous, felsite dykes and plugs.

Rhyolite, alaskite, felsite, quartz-feldspar porphyry dykes.

CRETACEOUS

MID-CRETACEOUS

MOUNT McINTYRE PLUTONIC SUITE (ca. 109 Ma)

Cap Mountain Pluton

mKqCM — Light pink to orange weathering, pink, medium to coarse-grained, hornblende-biotite quartz-monzonite, granite and quartz syenite containing numerous small. mafic xenoliths and clots.

mKqCM1 — Pink granophyric quartz monzonite is characterized by coarse-grained plagioclase, hornblende and quartz phenocrysts set in a fine-grained, sucrosic, pink potassium feldspar and quartz matrix.

mKqCM2 — Dark grey weathering, dark pink, hornblende monzonite and syenite with dark pink groundmass and chloritic hornblende phenocrysts. Epidote and chlorite alteration is common.

Dykes genetically related to the Cap Mountain Pluton.

WHITEHORSE PLUTONIC SUITE (ca. 115 Ma)

Cap Creek Pluton

mKdCC — Medium grey weathering, medium grained, equigranular, biotite-hornblende granodiorite.

mKdCC1 — Dark weathering, fine-grained, biotite or hornblende-rich quartz diorite and diorite.

mKdCC2 — Medium-grained, white weathering, propylitically altered biotite and hornblende, leucocratic granodiorite.

mKdCC3 — Dark, blocky weathering, coarse grained, hornblende diorite .

Andesite and feldspar porphyry dykes assumed to be genetically related to the Cap Creek Pluton

TESLIN PLUTONIC SUITE (ca. 120 Ma)

M'Clintock Granodiorite

KgM — White to pale grey weathering, recessive, leucocratic, coarse-grained equigranular biotite - hornblende granodiorite locally with sparse grey and pink potassium feldspar phenocrysts.

MOUNT NANSEN GROUP?

Kv — Light weathering, black to light orange, quartz-eye rhyolite and dacite flows, tuffs, breccias and assorted fragmental volcanics with tourmaline breccia.

JURASSIC

LOWER TO MIDDLE JURASSIC

LABERGE GROUP

JL — Brown to tan weathering, recessive, sedimentary rocks including siltstone, sandstone, greywacke, interbedded silt and sandstone couplets, and hornfels; with rare, usually solitary, conglomerate and limestone beds. Similar to and may include **uTA** .

JL1 — Dark weathering, massive to finely laminated, black mudstone, limy mudstone and hornfels, locally with wispy brown laminae or limestone horizons. Depositionally on top of uppermost Lewes River Group limestone. Lower part of this unit is flaggy and limy.

TRIASSIC

LATE TRIASSIC (AND OLDER?)

LEWES RIVER GROUP

Aksala Formation

uTA — Undifferentiated sedimentary rocks including in decreasing abundance; limy siltstone, siltstone, shale, sandstone, conglomerate, hornfels and diamictite; all locally with limestone. Very difficult to distinguish from, and may include **JL**.

uTA1 — White weathering, resistant, massive to poorly bedded, bioclastic and micritic limestone, marble and skarn; and recessive, flaggy, dark grey limestone and sandy limestone.

uTA2 — Massive to poorly bedded, limestone conglomerate and breccia deposited as debris flows and fanglomerate. Limestone occurs as angular clasts or as a fine-grained matrix.

Joe Mountain Volcanic Suite

uTJM — Dark grey weathering, generally unaltered, fine-grained and locally medium-grained monomineralic or feldspar and pyroxene?-phyric, pillowed andesite lava and massive microdiorite. Locally interbedded with **uTJM2** and **uTJM4** .

Dark, resistant, magnetic, basaltic andesite and gabbro dykes.

uTJM1 — Resistant, dark weathering, chaotic and massive to poorly bedded, heterolithic, diamictite, conglomerate and fragmental or gritty sedimentary rocks deposited as debris flows. Clasts are composed of volcanic and sedimentary fragments.

uTJM2 — Recessive, dark brown weathering, brittle massive basalt flows.

uTJM3 — Chaotic assemblage of recessive weathering, volcanogenic sandstone, siltstone, shale, gritty sandstone and conglomerate with limestone or limy beds.

uTJM4 — Dark weathering, massive, variable textured, coarse-grained and locally pegmatitic, hornblende gabbro and diorite.

Povoas Formation

uTP — Dark grey-green weathering, monotonous accumulations of grungy-green pillowed basalt flows with vesiculated rims, interpillow carbonate, epidote, calcite and chlorite alteration.

uTP1 — As above, except maroon weathering as a result of hematitic alteration induced by oxidation.

Old Pillows

uTOP — Black weathering, fine-grained, aphyric, pillowed basalt flows with calcite veining and weak but pervasive chloritic alteration. These pillows are under a package of gritty and limy sediments.

SYMBOLS

- Limit of outcrop
- Geological boundary (defined, approximate, assumed or beneath overburden)
- Fault (defined, approximate, assumed or beneath overburden)
- Bedding
- Flow surface
- Schistocity of shear zone
- Primary magmatic flow fabric
- Cross-section line — A A'
- Isotopic age determination (Morrison et al., 1979) — ✱
- Gossan — G
- Skarn, calc-silicate — sk
- Quartz vein, or locally derived quartz vein float — q
- Jasperoidal vein and alteration — J
- Megaladont (macrofossil locality) — M
- Halobia (macrofossil locality) — H

MINERAL OCCURRENCES

Yukon MINFILE Number	Name	Deposit Type
49	LABE	★ Exploration Target
50	POW	● Cu (W, Mo) skarn
51	ACE	♦ Au, Ag (Pb, Zn) vein
86	WHEELER	★ Exploration Target
148	SLEWE	★ Exploration Target
149	ERGE	★ Exploration Target

COMPILATION and REFERENCE SOURCES

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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

Copies of this map may be purchased from: Exploration and Geological Services Division, Indian and Northern Affairs Canada, 200 Range Road, Whitehorse, Yukon, Y1A 3V1.