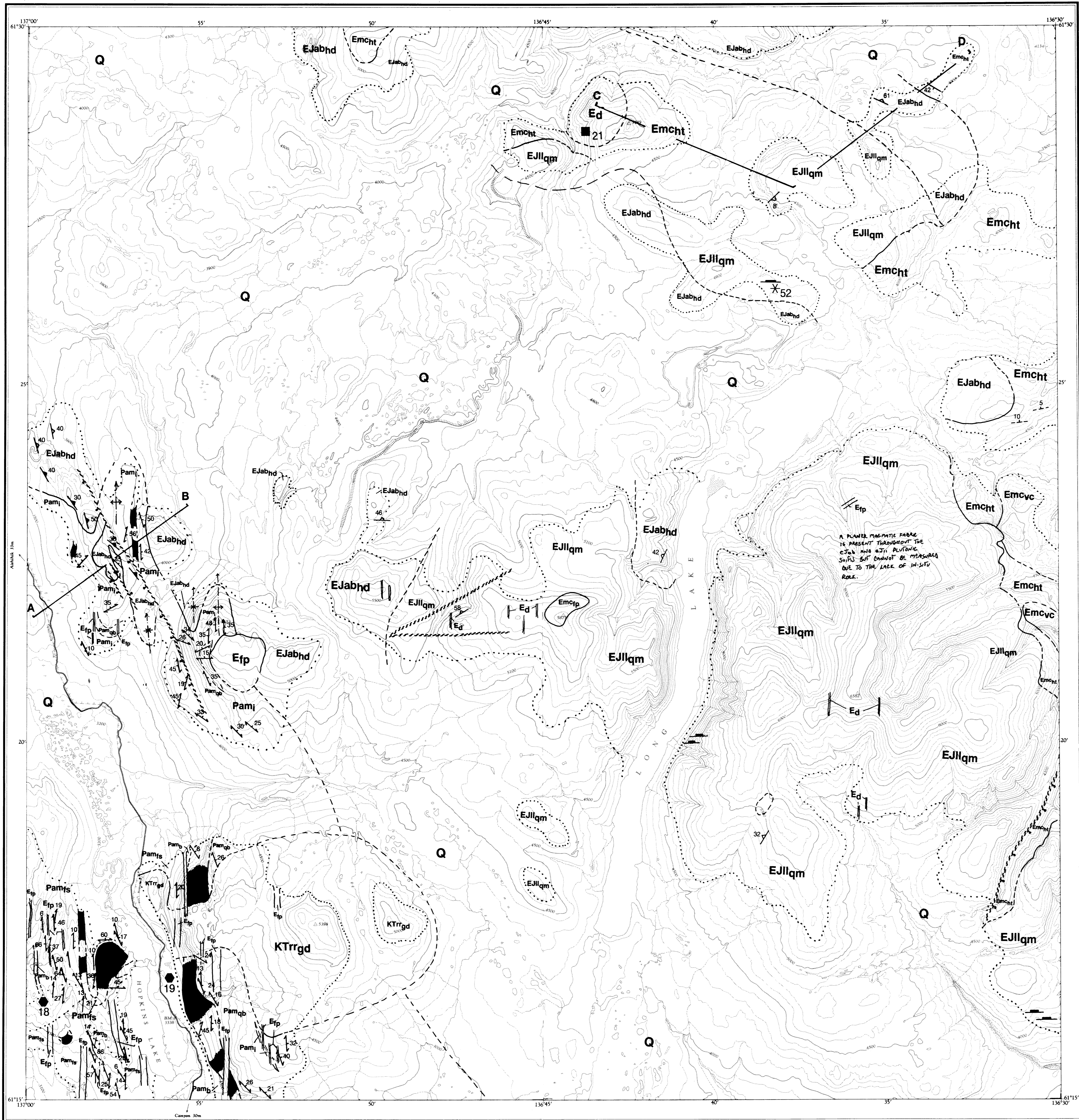


PROVISIONAL MAP
115 H/7 W 1:50,000

Canada



CARTE PROVISOIRE
EDITION 1 115 H/7 E



LAYERED ROCKS

QUATERNARY

Q undifferentiated, unconsolidated gravels, sands and clays of glaciogenic origin (Hughes, 1990).

EOCENE

MOUNT CREEDON VOLCANIC SUITE

Emc undifferentiated volcanic, volcanoclastic, and sub-volcanic dyke rocks.

Emc_{1p} brown, orange and green weathering, intermediate to dark green, intermediate felspar porphyry flows; asicular hornblende phenocrysts are common; pyroxene, biotite, and grey quartz eyes are rare, a flow fabric, defined by the parallel alignment of felspar grains, is common; unit includes some autoclastic flow breccia and minor tuff.

Emc₂ heterogeneous, grey-green, buff and maroon, well bedded to massive, interbedded intermediate felspar porphyritic autoclastic flow breccia and subordinate ash tuff; breccia locally includes xenolithic granitoid and metamorphic clasts; tuff locally exhibits well defined graded bedding; unit includes minor felspar porphyry and dacite flows, and Emeg - flows which erupted at the velocity of light.

Emc₃ olive brown to tan, olivine-pyroxene-hornblende porphyritic mafic flow; includes distinct euhedral to cigar shaped hornblende phenocrysts that commonly exhibit recessive maroon-coloured cores.

Emc₄ buff to brown-orange weathering, green to tan, aphanitic to felspar porphyritic dacite flows; dacite is commonly flow banded; columnar jointing occurs locally; includes minor flow-banded rhyolite and felsic dykes and sills.

Emc₅ heterogeneous, grey, green and maroon, poorly consolidated, intermediate to felsic, felspar and hornblende-felspar porphyritic tuff; flow breccia and volcaniclastic rocks; felspar and hornblende phenocrysts occur as discrete phenocrysts and as glomeroporphyritic clots; the matrix consists of crystal lithic tuffs and sands; pea to boulder size rounded to angular, autoclastic and, less commonly, xenolithic clasts constitute the breccia flows.

Emc₆ green, grey, and maroon, interbedded volcanoclastic, intermediate to felsic, clasts consist of reworked volcanic rocks and fragments of the country rock; sand consists primarily of felspar and quartz grains; mudstones locally preserve plant debris; includes minor tuff, only present on 115H/7.

PALEOZOIC AND LATE PROTEROZOIC AISHIHIK METAMORPHIC SUITE

Pam₁ heterogeneous assemblage of felspathic muscovite schist and gneiss, two-mica granitic gneiss, and hornblende diorite gneiss; all three rock types are intimately interfoliated; granitic gneiss and muscovite gneiss are tan to brown and are locally characterized by augen of potassium felspar and by discontinuous metabasite bands; diorite gneiss is grey, equigranular and medium to coarse grained; includes minor marble and quartzite.

Pam₂ tan to brown to black quartzite; commonly micaceous; includes minor mica-schist, marble, metabasite and felsic meta-igneous rocks.

Pam₃ bleached white-weathering, white to grey, coarsely crystalline, flow banded, field marble; graphite, chert, metabasite and calc-silicate laminae are common.

Pam₄ orange and green weathering, green to black hornblende metabasite; includes hornblende amphibolite to hornblende-plagioclase gneiss and hornblende quartzite; adjacent to marble horizons may include significant amount of epidote-diopside calc-silicate; also includes Pam₁ - a solitary mega-bouldin of orange weathering, dark green, gabbroic felspar augen gneiss.

Pam₅ pink purple, red, and dark grey weathering, dark grey to brown, garniferous, muscovite biotite felspathic mica-schist and quartz mica-schist; foliation quartz and quartz-felspar lenses are common and locally impart a magmatic appearance to the rock; micaceous felspathic grey quartz gneiss is a locally significant subunit; includes minor quartzite, metabasite, marble, and meta-igneous rocks.

INTRUSIVE ROCKS

EOCENE

Ed light grey weathering, dark grey, medium to coarse grained; equigranular, hornblende diorite; planar fabric defined by alignment of euhedral hornblende grains; strongly magnetic; underlies the SATO claims; includes orange weathering, dark green, aphanitic to finely crystalline, dense mafic dyke rocks in 115 H/7.

Efp north-trending, olive to orange weathering, green felspar porphyry dyke rocks; asicular hornblende phenocrysts are common; thought to represent feeder dykes to Emc_{1p} flows; includes buff weathering, tan to orange, leucocratic quartz eye felspar porphyry which forms a plug that intrudes the western margin of the Aishihik Batholith in central-west 115 H/7.

LATE CRETACEOUS - TERTIARY RUBY RANGE PLUTONIC SUITE

KTr_{1g} grey to light brown weathering, light to dark grey, medium to coarse grained, equigranular to potassium felspar megacrystic, biotite hornblende granodiorite; hornblende biotite monzonite and quartz monzonite, in which grey quartz eyes are abundant, is a locally significant phase; titanite is a locally significant accessory; includes minor mafic microdiorite and hornblende diorite.

KTr_{2p} grey weathering, tan to olive brown, biotite quartz felspar porphyry and porphyritic biotite quartz monzonite; quartz defines smoky grey eyes; potassium felspar and plagioclase occur as porphyritic phenocrysts.

KTr_{3d} grey orange weathering, dark grey to greasy grey-green, medium grained, equigranular, hornblende and biotite hornblende diorite; hornblende commonly occurs as asicular grains 1 to 3 cm long.

KTr_{4d} heterogeneous, dark to light weathering, leucocratic to mafic, finely crystalline, microgranitic enclaves; enclaves vary from hornblende to biotite hornblende diorite to biotite granite.

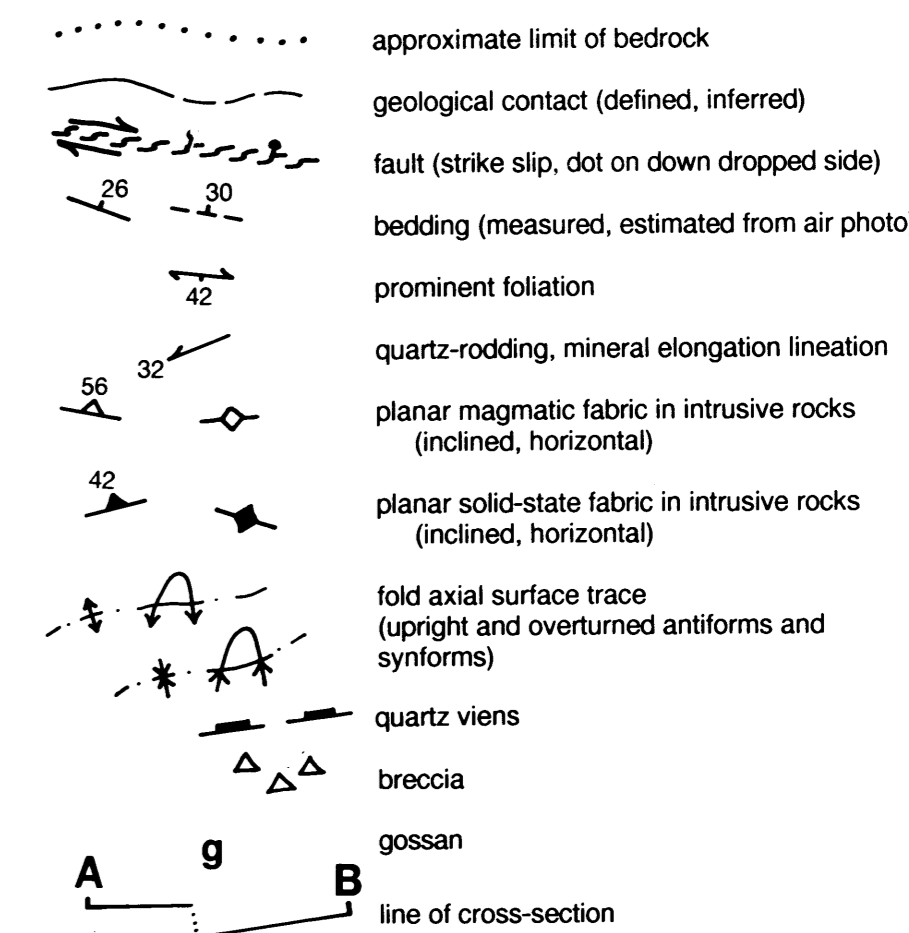
EARLY JURASSIC LONG LAKE PLUTONIC SUITE

eJlqm pink-orange weathering, rose to pink to white, leucocratic, biotite hornblende quartz monzonite to granite; texturally heterogeneous ranging from coarsely crystalline, potassium felspar megacrystic rock, to finely crystalline equigranular rock; also occurs as cross-cutting pegmatitic and aplitic dykes; coarse grained rocks are characterized by a subtle to well developed planar fabric defined by the parallel alignment of felspar megacrysts; microgarnets are common; locally includes significant amounts of elabhd.

AISHIHIK BATHOLITH

Ejabhd white to orange weathering, grey, coarsely crystalline, equigranular, hornblende diorite and monzonite; a porphyritic texture, defined by potassium felspar megacrysts is locally present; minor amounts of biotite are common; epidote and titanite are important accessory phases; planar fabrics include a solid state fabric along the western margin of the batholith, and a magmatic fabric elsewhere; includes minor mafic microdiorite enclaves, migmatite, and ill-pair-ill gneiss in which hornblende diorite is interleaved with eJlqm. This unit is tenacious.

SYMBOLS



MINERAL OCCURRENCES		
YUKON MINIFILE NO. ¹	NAME	DEPOSIT TYPE
115H018	Jarvis	Cu-Mo-W skarn
115H019	Hopkins	Cu skarn
115H021	Sato	Cu-Mo porphyry
115H052	Lascaz	industrial-grade quartz

1 - INAC, 1992

REFERENCES

COCKFIELD, W.E., 1927, *Aishihik Lake District, Yukon. Geological Survey of Canada, Summary Report, 1926*, p. 1-13. *Reprinted in BOSTOCK, H.S., 1957, Selected field reports of the Geological Survey of Canada, 1898-1933. Geological Survey of Canada, Memoir 284*, p. 558-569.

GORDEY, S.L., 1973, *Petrology and structural relations of volcanic and basement rocks on the west side of Aishihik Lake Yukon Territory. Unpublished B.Sc. thesis, University of British Columbia*, 69 p.

HUGHES, O.L., 1990, *Surficial geology and geomorphology, Aishihik Lake, Yukon Territory. Geological Survey of Canada, Paper 87-29*, 23 p.

INAC, 1992, *Yukon Minfile, 1992. Exploration and Geological Services Division, Indian and Northern Affairs Canada*.

JOHNSTON, S.T., 1993, *Geologic evolution of Nisling Assemblage and Siskine Terrane in the Aishihik Lake area, southwest Yukon [Ph.D. thesis], University of Alberta*, 336 p.

JOHNSTON, S.T., and TIMMERMAN, J., 1994, *Geological map of the Aishihik Lake map area, southwest Yukon (115 H/8). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1994-1(g)*.

MORIN, J.A., 1981, *Geology and Mineralization of the Hopkins Lake area, 115 H/2, 3, 6, 7. In: Geology and Exploration, 1979-80, Department of Indian and Northern Affairs Canada, Whitehorse, Yukon*, p. 88-104.

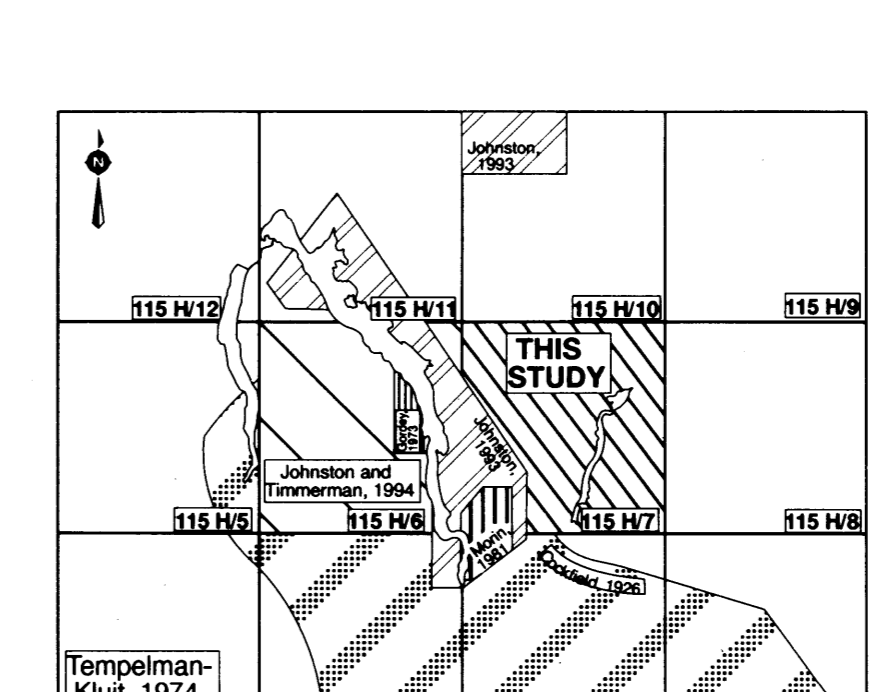
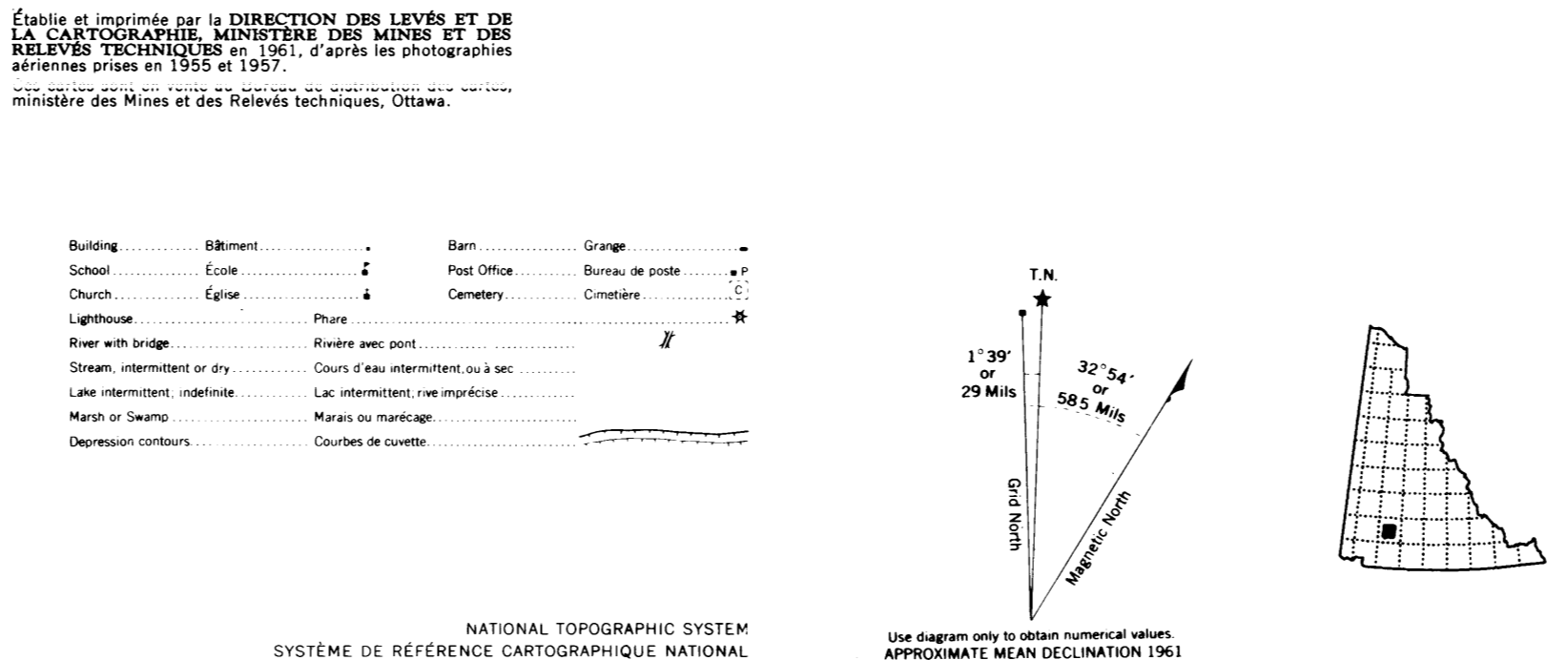
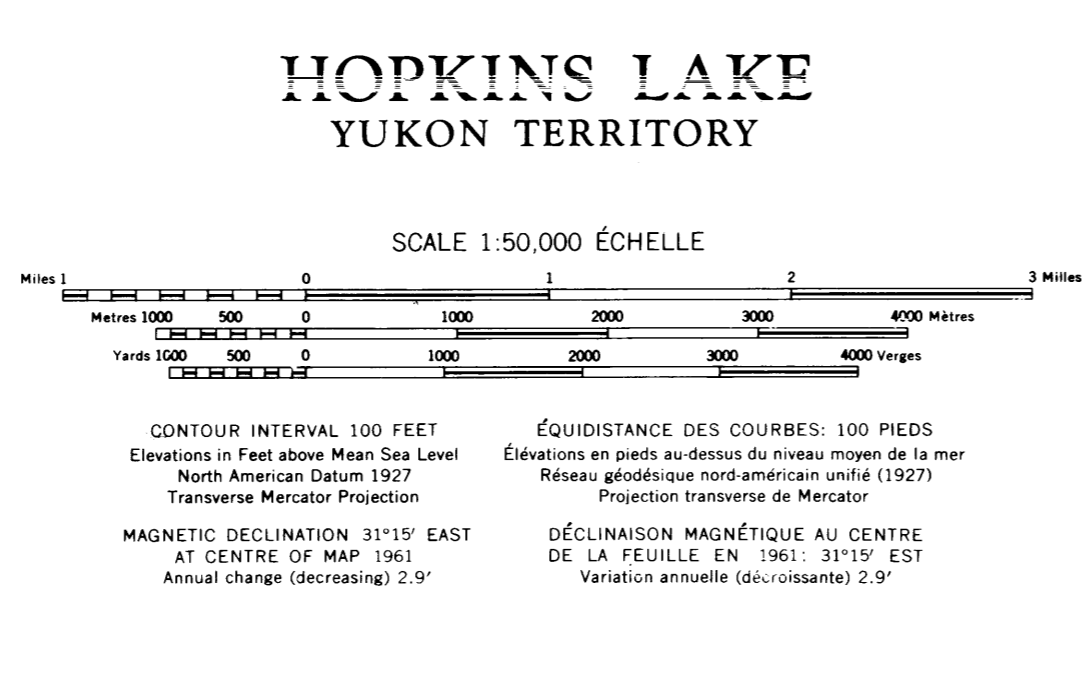
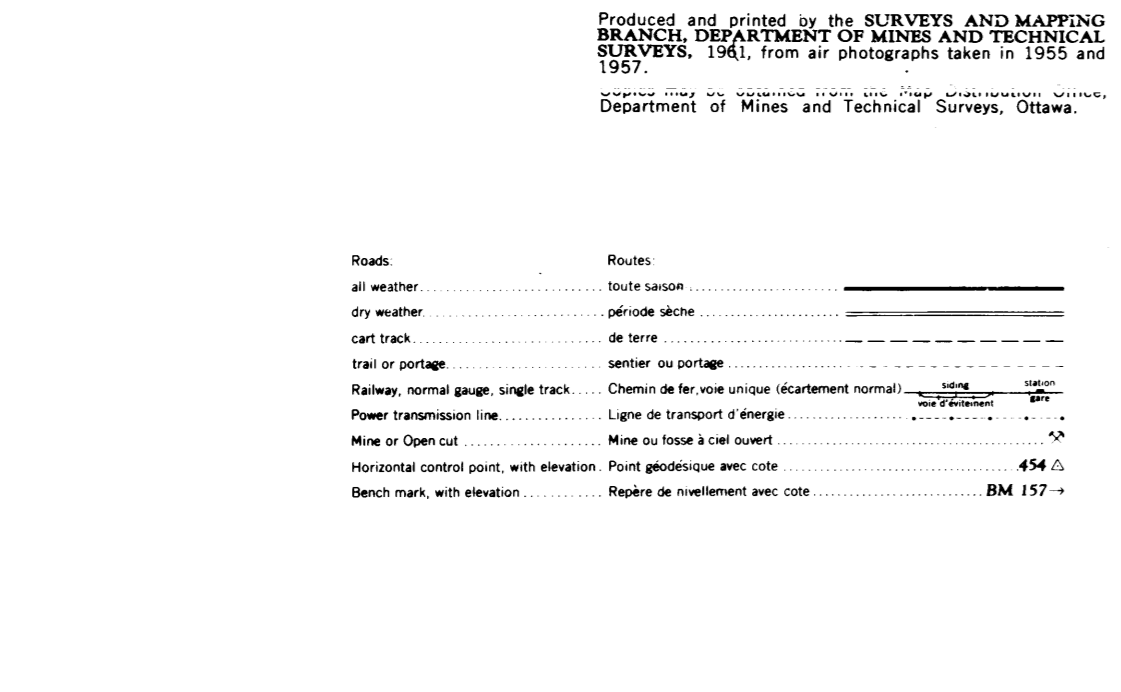
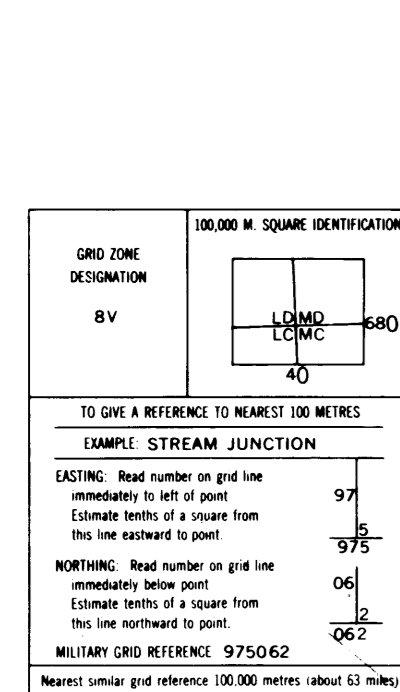
TEMPELMAN-KLUIT, D.J., 1974, *Reconnaissance geology of Aishihik Lake, Snag and part of Stewart River map-areas, west-central Yukon Territory. Geological Survey of Canada, Paper 73-14*, 93 p.

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Copies of this map can be purchased from:
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Indian and Northern Affairs Canada
Exploration and Geological Services Division
Yukon Region

Open File 1994-2 (g)
Geological Map of Hopkins Lake area
115 H/7 E&W

1:50,000-SCALE
by Stephen Johnston and Jay Timmerman
Canada/Yukon Mineral Development Agreement
Geoscience Office