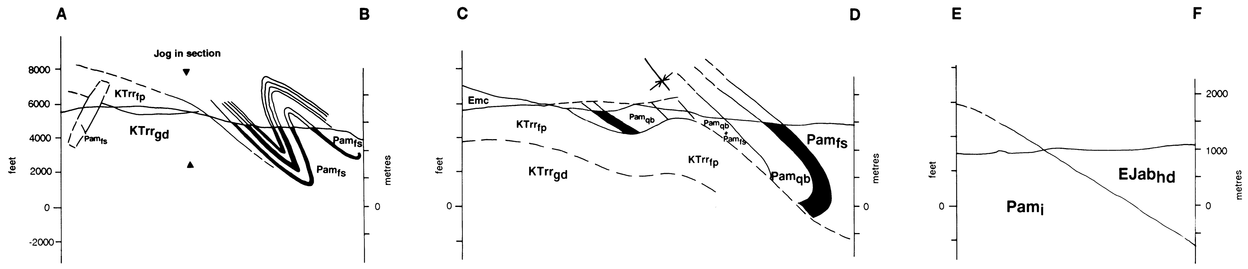


Canada

canada/yukon economic development agreement

Yukon Government

AISHIHIK LAKE

Yukon Territory

Scale 1:50 000 Échelle

Miles 1 0 1 2 3 Miles

Metres 1000 0 1000 2000 3000 4000 Mètres

Information concerning bench marks and horizontal survey monuments can be obtained from Geodetic Survey Surveys and Mapping Branch, Ottawa

Pour tout renseignement concernant les repères et bornes arpentreurs s'adresser aux levés géodésiques, Direction des levés et de la cartographie, Ottawa

CONVERSION SCALE FOR ELEVATIONS

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

Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉCHELLE DE CONVERSION DES ALTITUDES

Altitudes en pieds
Système de référence géodésique nord américain 1927
Projection transverse de Mercator

Roads: Routes
Good all weather / Toute saison
Fair weather / Temps sec
Trail / Sentier
Poor motor road or trail / Route ou sentier médiocre
Cart track / Chemin de terre
Portage / Portage
Intermittent streams / Ruisseaux intermittents

FOR COMPLETE REFERENCE SEE REVERSE SIDE — POUR UNE LISTE COMPLÈTE DES SIGNES, VOIR AU VERSO

T.N. N.G.
1°58' W. 35 Mils
31°51' W. 566 Mils
MAGNETIC NORTH / NORD MAGNÉTIQUE
TRUE NORTH / NORD VRAI

Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1984
FOR CENTRE OF MAP
Annual change decreasing 5.6'

N'utiliser le diagramme que pour obtenir les valeurs numériques
DÉCLINAISON MOYENNE APPROXIMATIVE
AU CENTRE DE LA CARTE EN 1984
Variation annuelle décroissante 5.6'

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

GRID ZONE DESIGNATION / DESIGNATION DE LA ZONE DU QUADRILLAGE	100 000 m SQUARE IDENTIFICATION / IDENTIFICATION DU CARRÉ DE 100 000 m
8 V	LD, LC, 68

LAYERED ROCKS

QUATERNARY

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

EOCENE
MOUNT CREEDON VOLCANIC SUITE

Emc — undifferentiated volcanic, volcaniclastic, and sub-volcanic dyke rocks.

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

Emc_a — heterogeneous, grey-green, buff, and maroon, well bedded to massive, interbedded intermediate feldspar 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 feldspar porphyry and dacite flows, and **Emc_2** - flows which erupted at the velocity of light.

Emc_{mf} — olive brown to tan, olivene-pyroxene-hornblende porphyritic mafic flow; includes distinct euhedral to cigar shaped hornblende phenocrysts that commonly exhibit recessive maroon-coloured cores.

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

Emc_{ht} — heterogeneous grey, green and maroon, poorly consolidated, intermediate to felsic, feldspar and hornblende-feldspar porphyritic tuff, flow breccia and volcaniclastic rocks; feldspar 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.

Emc_{vc} — green, grey, and maroon, interbedded volcanoglomerate, sandstone and mudstone; clasts consist of reworked volcanic rocks and fragments of the country rock; sand consists primarily of feldspar and quartz grains; mudstones locally preserve plant debris; includes minor tuff; only present on 115H/7.

PALEOZOIC AND LATE PROTEROZOIC
AISHIHIK METAMORPHIC SUITE

Pam_j — heterogeneous assemblage of feldspathic 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 feldspar and by discontinuous metabasite boudins; diorite gneiss is grey, equigranular and medium to coarse grained; includes minor marble and quartzite.

Pam_{qb} — tan to brown to black quartzite; commonly micaceous; includes minor micaschist, marble, metabasite and felsic meta-igneous rocks.

Pam_c — bleached white-weathering, white to grey, coarsely crystalline, flow banded, felid marble; graphite, chert, metabasite and calc-silicate lamina are common.

Pam_b — 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 **Pam_{bf}** - a solitary mega-boudin of orange weathering, dark green, gabbroic feldspar augan gneiss.

Pam_{fs} — pink purple, red, and dark grey weathering, dark grey to brown, garnetiferous, muscovite biotite feldspathic micaschist and quartz micaschist; foliaform quartz and quartz-feldspar lenses are common and locally impart a migmatitic appearance to the rock; micaceous feldspathic grey quartz gneiss is a locally significant subunit; includes minor quartzite, metabasite, marble, and meta-igneous rocks.

INTRUSIVE ROCKS

EOCENE

E_d — 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.

E_{fp} — north-trending, olive to orange weathering, green feldspar porphyry dyke rocks; asicular hornblende phenocrysts are common; thought to represent feeder dykes to Emcfp flows; includes buff weathering, tan to orange, leucocratic quartz eye feldspar 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

$KTrr_{gd}$ — grey to light brown weathering, light to dark grey, medium to coarse grained, equigranular to potassium feldspar megacrystic, biotite hornblende granodiorite; hornblende biotite monzodiorite 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.

$KTrr_{fp}$ — grey weathering, tan to olive brown, biotite quartz feldspar porphyry and porphyritic biotite quartz monzonite; quartz defines smoky grey eyes; potassium feldspar and plagioclase occur as porphyritic phenocrysts.

$KTrr_{hd}$ — 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.

$KTrr_{md}$ — heterogeneous, dark to light weathering, leucocratic to mafic, finely crystalline, microgranitic enclaves; enclaves vary from hornblendite to biotite hornblende diorite to biotite granite.

EARLY JURASSIC
LONG LAKE PLUTONIC SUITE

$eJll_{qm}$ — pink-orange weathering, rose to pink to white, leucocratic, biotite hornblende quartz monzonite to granite; texturally heterogeneous ranging from coarsely crystalline, potassium feldspar 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 feldspar megacrysts; microvugs are common; locally includes significant amounts of eJabhd.

AISHIHIK BATHOLITH

$eJab_{hd}$ — white to orange weathering, grey, coarsely crystalline, equigranular, hornblende diorite and monzodiorite; a porphyritic texture, defined by potassium feldspar 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 lit-par-lit gneiss in which hornblende diorite is interleaved with eJll$_{qm}$. This unit is tenacious.

SYMBOLS

- approximate limit of bedrock
- geological contact (defined, inferred)
- fault (strike slip, dot on down dropped side)
- 6 / 15 — bedding (measured, estimated from air photo)
- 46 — prominent foliation
- 19 — quartz-rodding, mineral elongation lineation
- 25 — planar magmatic fabric in intrusive rocks (inclined, horizontal)
- 33 — planar solid-state fabric in intrusive rocks (inclined, horizontal)
- fold axial surface trace (upright and overturned antiforms and synforms)
- quartz viens
- breccia
- g — gossan
- A — B — line of cross-section

MINERAL OCCURRENCES

YUKON MINFILE NO.[1]		NAME	DEPOSIT TYPE
115H018	●	Janisiw	Cu, Mo, W skarn
115h020	✳	Dericon	exploration target

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 Stikine 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 Hopkins Lake map area, southwest Yukon (115 H/7). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1994-2(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. 98-104.*

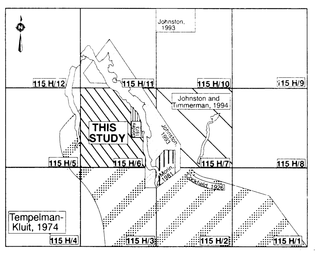
TEMPELMAN-KLUIT, D.J., 1974, *Reconnaissance geology of Aishihik Lake, Snag and part of Stewart River map-areas, west-central Yukon Territory. Geological Survey of Canada, Paper 73-14, 93 p.*

THIS MAP ACCOMPANIES THE FOLLOWING REPORT:
JOHNSTON, S.T., *and* TIMMERMAN, J.R., 1994. *Geology of the Aishihik Lake and Hopkins Lake areas (115 H/6,7), southwest Yukon. In: Yukon Exploration and Geology, 1993. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada.*

RECOMMENDED CITATION:
JOHNSTON, S.T., and TIMMERMAN, J., 1994, *Geological map of the Aishihik Lake map area, southwest Yukon (115 H/6). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1994-1(g).*

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

ACKNOWLEDGMENTS
Able field assistance provided by Paul Baxter and Siegfried Joiner. Field visits by, and discussions with Philippe Erdmer, Grant Abbott, and Craig Hart aided in the interpretation of the geology. Drafting assistance was provided by Doom VanRanden.



Indian and Northern Affairs Canada
Exploration and Geological Services Division
Yukon Region

Open File 1994-1 (G)

Geological Map of Aishihik Lake area 115 H/6

1: 50,000-SCALE

by
Stephen Johnston and Jay Timmerman
Canada/Yukon Mineral Development Agreement
Geoscience Office