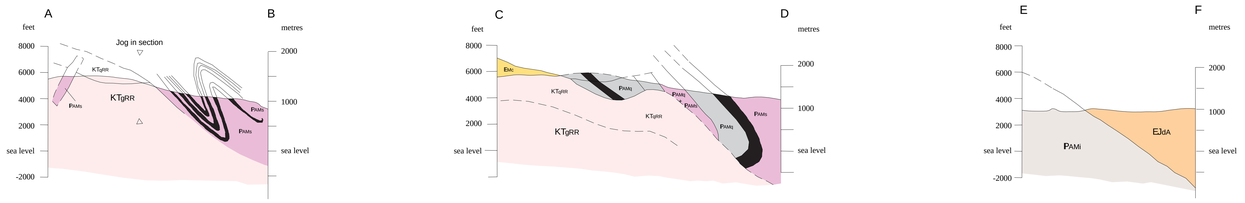
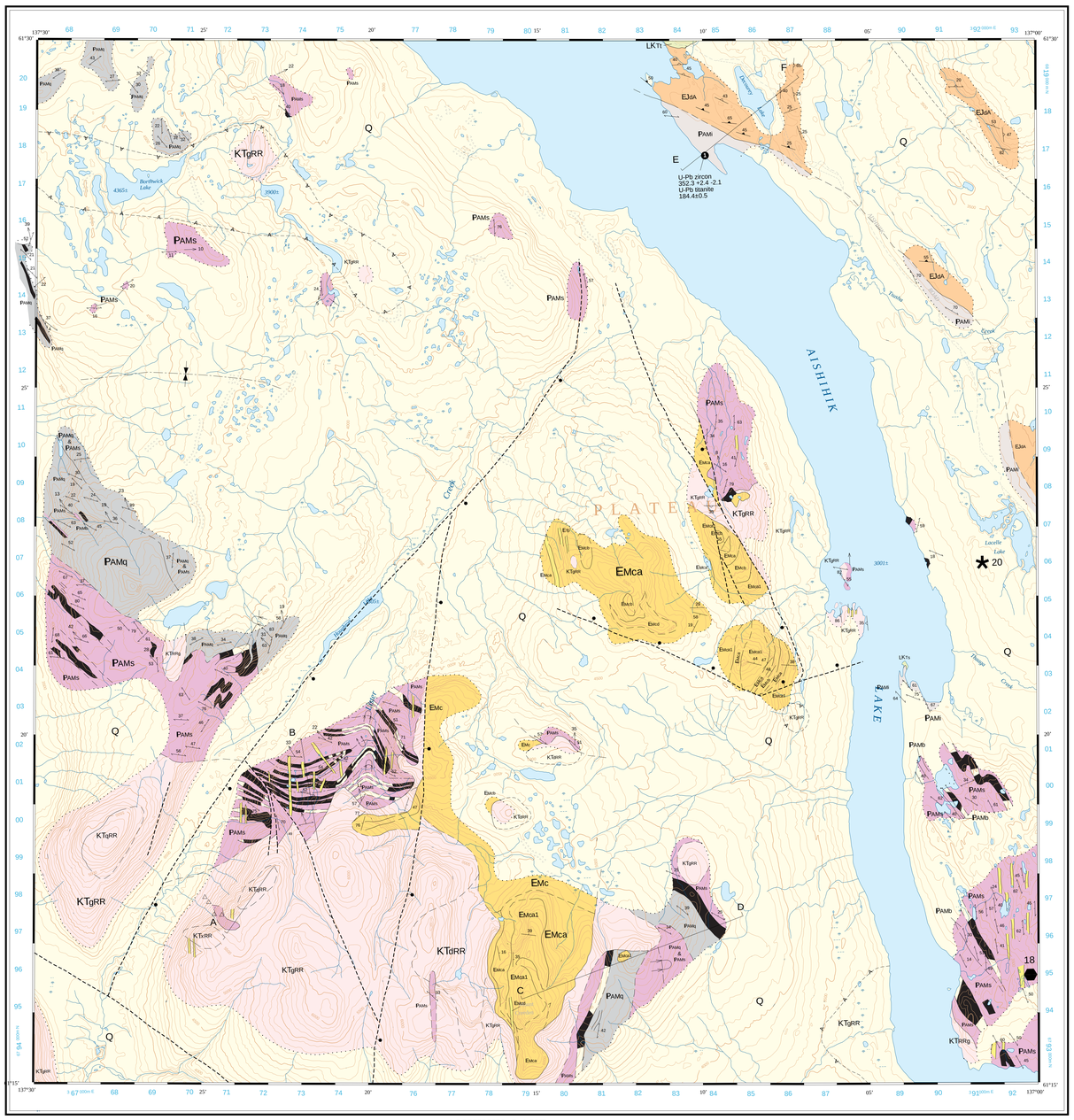


Canada

canada/yukon economic development agreement

Yukon Government



AISHIHIK LAKE
YUKON TERRITORY
SCALE 1:50 000

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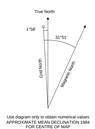
ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

Miles 1 0 1 2 3 Miles

Metres 1000 0 1000 2000 3000 4000 Metres

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1994
FOR CENTRE OF MAP
Annual change decreasing 5.6'

115 H/12	115 H/11	115 H/10
115 H/5	115 H/6 THIS MAP	115 H/7 Johnston & Timmerman Geoscience Map 1997-9
115 H/4	115 H/3	115 H/2

LAYERED ROCKS

QUATERNARY

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

EOCENE

MOUNT CREEDON VOLCANIC SUITE

EMc — undifferentiated volcanic, volcaniclastic, and subvolcanic dyke rocks

EMca — heterogenous, grey-green, buff and maroon, well bedded to massive, interbedded intermediate feldspar porphyritic autoclastic andesite flow breccia and ash tuff; breccia locally includes xenolithic granitoid and metamorphic clasts; tuff locally exhibit well defined graded bedding; unit includes minor feldspar porphyry and dacite flows

EMca1 — brown, orange and green weathering, intermediate to dark green andesite feldspar porphyry flows; vesicular 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

EMcb — olive brown to tan, olivene-pyroxene-hornblende porphyritic basalt flow; includes distinct euhedral to cigar shaped hornblende phenocrysts that commonly exhibit recessive maroon-coloured cores

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

LATE CRETACEOUS

TLANSANLIN FORMATION

LKTt — heterogenous 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 in 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

LKTs — 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 115 H/7

PALEOZIOC AND LATE PROTEROZOIC

AISHIHIK METAMORPHIC SUITE[1]

PAMi — heterogenous assemblages 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 discontinuous metabasite boudins; diorite gneiss is grey, equigranular and medium to coarse grained; includes minor marble and quartzite

PAMq — tan to brown to black quartzite; commonly micaceous includes minor mica-schist, marbles, metabasite and felsic meta-igneous rocks

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

PAMb — 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 calcsilicate; also includes Pambi- a soitary mega-boudin of orange weathering, dark green, gabbroic feldspar augen gneiss

PAMs — pink, purple, red and dark grey weathering, dark grey to brown, garneti-ferous, muscovite biotite feldspathic micaschist and quartz micaschist; foli-form quartz and quartz-feldspar lenses are common and locally impart a migmatic appearance to the rocks; micaceous feldspathic grey quartz gneiss is a locally significant subunit; includes minor quartzite, metabasite marble, and meta-igneous rocks

INTRUSIVE ROCKS

EOCENE

Etp — north-trending, olive to orange weathering, green feldspar porphyry dyke rocks; esicular hornblende phenocrysts are common; thought to represent feeder dykes to EMtp flows; includes buff weathering, tan to orange, leucocratic quartz 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[2]

KTgRR — grey to light brown weathering, light to dark grey medium to coarse grained, equigranular to potassium feldspar megacrystic, biotite-hornblende grano-diorite; 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

KTqRR — 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

KTgrR — grey orange weathering, dark grey to greasy grey green, medium grained, equigranular, hornblende and biotite-hornblende diorite; hornblende commonly occurs as esicular grains 1 to 3 cm long

KTsRR — heterogenous, dark to light weathering, leucocratic to mafic, finely crystalline, microgranitic enclaves; enclaves vary from hornblende to biotite hornblende diorite to biotite monzonite

EARLY JURASSIC

AISHIHIK BATHOLITH[3]

EJdA — 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 accesory 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 EJqLL

SYMBOLS

approximate limit of bedrock
geological contact (defined, inferred)
fault (inferred from aeromag, dot on down dropped side)
contact or fault inferred from aeromag
bedding (defined, inferred)
prominent foliation
quartz-rodding, mineral elongation lineation
planar magmatic fabric in intrusive rocks (inclined, horizontal)
planar solid-state fabric in intrusive rocks (inclined, horizontal)
fold axial surface trace (upright and overturned antiforms and synforms)
quartz veins
breccia
line of cross-section
Isotopic age determinations
line of cross-section
line of cross-section

NOTES

1 age range defined in Johnston et al., 1996.

2 U-Pb zircon + K-Ar age determinations imply that magmatism began at > 70 Ma and peaked by 58 Ma (Johnston, 1993).

3 U-Pb zircon age of 186.0±2.8 Ma reported in Johnston et al., 1996.

MINERAL OCCURRENCES

Minfile Number	Name	Deposit type
115H018	Janisiw	Cu-Mo-W skarn
115H020	Dericon	exploration target

REFERENCES

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RECOMMENDED CITATION

JOHNSTON and TIMMERMAN, J., 1997. Geology of Aishihik Lake map area, Yukon (NTS 115 H/6). Exploration and Geological Services Division, Indian and Northern Affairs, Canada, Geoscience Map 1997-8.

Digital cartography and drafting by Will van Randen, Yukon Geology Program.

Any revisions or additional geological information known to the user would be welcomed by the Yukon Geology Program.

Copies of this map and Yukon Minfile may be purchased from Geoscience Information and Sales, Exploration and Geological Services Division, Indian and Northern Affairs, Canada, Room 102-300 Main St. Whitehorse, Yukon Y1A 2B5, Ph. 867-667-6264 Fax 867-667-3267.

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Map released November, 1997, subsequent revision dates are:

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

Geoscience Map 1997-8

Geology of Aishihik Lake map area, Yukon (NTS 115 H/6)

1:50 000-SCALE

by

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