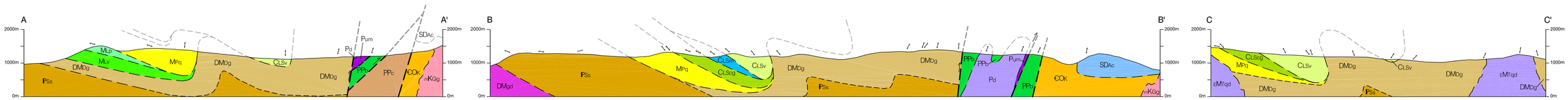
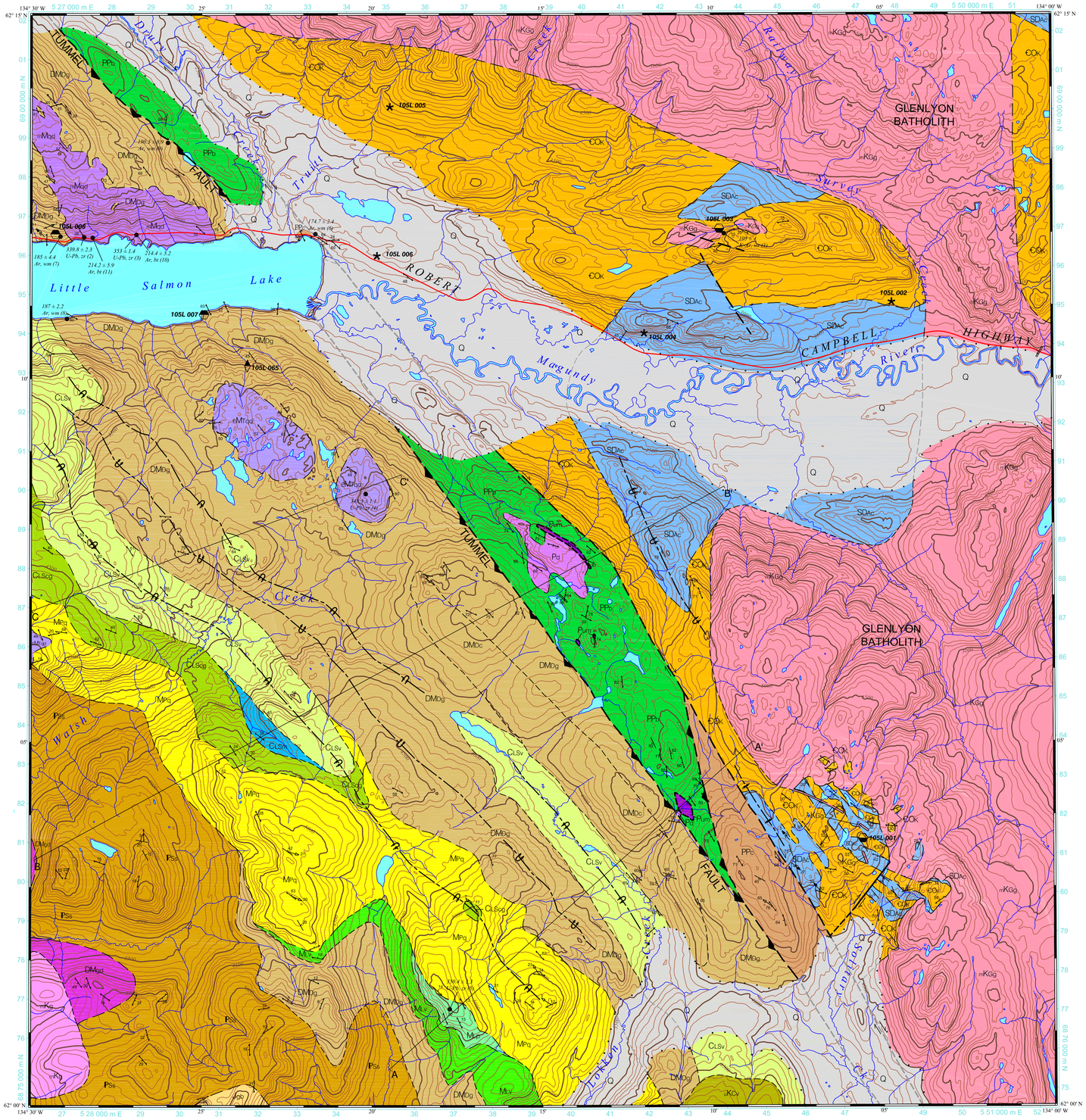
Yukon Government

CELEBRATING 10 YEARS! YUKON GEOLOGY PROGRAM

Canada





LEGEND

QUATERNARY

Q — Unconsolidated alluvium, colluvium and glacial deposits

OVERLAP ASSEMBLAGE

INTRUSIVE ROCKS

EARLY CRETACEOUS

Glenlyon Batholith

mKgg — Medium- to coarse-grained weakly foliated black-and-white or pinkish biotite granite; tan-weathering, biotite-hornblende granodiorite; tan-weathering, white biotite-muscovite granite, locally with plagioclase megacrysts up to 4 cm long; muscovite-quartz-plagioclase pegmatite; rare 0.5 to 3 m andesite dykes

mKg — Medium-grained, equigranular biotite granite; K-feldspar megacrystic granite

EARLY JURASSIC (?)

Jgb — Coarse-grained hornblende-biotite gabbro

LAYERED ROCKS

UPPER CRETACEOUS

Carmacks Group

uKcv — Dark green to black, reddish-brown weathering, aphanitic basalt, commonly amygdaloidal (agate); agglomerate

SLIDE MOUNTAIN TERRANE (?)

INTRUSIVE ROCKS

PERMIAN (?)

Pd — Medium- to coarse-grained, weakly to moderately foliated, hornblende diorite

Pum — Serpentinite; talc-antigorite (± brucite) schist; locally relict cumulate texture

LAYERED ROCKS

PENNSYLVANIAN TO LOWER PERMIAN (?)

PPc — Pale green and grey-green, foliated, thinly bedded to massive chert, locally pyritiferous; fine-grained white and light green quartzite; minor black slate, locally graphitic

PPb — Light to dark greenish-grey, fine- to medium-grained, foliated andesite and basaltic andesite, greenstone

YUKON - TANANA TERRANE

INTRUSIVE ROCKS

MIDDLE MISSISSIPPIAN

Little Salmon Plutonic Suite

mMqd — Fine- to medium-grained, foliated hornblende quartz diorite to granodiorite (338-340 Ma U-Pb zircon dates)

EARLY MISSISSIPPIAN

Telegraph Plutonic Suite

eMTqd — Coarse-grained hornblende-biotite granodiorite; hornblende quartz diorite; moderately to strongly foliated (348-349 Ma U-Pb zircon dates)

DEVONIAN - MISSISSIPPIAN (?)

DMgd — Strongly foliated, dark grey to dark green, fine- to medium-grained, equigranular hornblende ± biotite tonalite; hornblende diorite to granodiorite; locally contains garnet; leuco-tonalite

LAYERED ROCKS

Little Salmon formation

UPPER MISSISSIPPIAN - MIDDLE PENNSYLVANIAN

CLSm — Medium to dark grey biotite marble

MIDDLE MISSISSIPPIAN - PENNSYLVANIAN (?)

CLSv — Medium green and yellow-green, massive chlorite - epidote ± biotite ± magnetite schist; locally intercalated with minor, light green to grey, banded calcareous schist, dark grey carbonaceous schist, and marble

MIDDLE MISSISSIPPIAN

CLScg — Medium- to coarse-grained quartz - chlorite schist; basal pebble to boulder conglomerate.

LOWER MISSISSIPPIAN

Pelmac formation

MPq — White to light grey quartzite, locally gritty; locally intercalated with chlorite-muscovite schist; minor light grey-green and pink quartzite

Lokken member

MLp — Foliated, fine- to medium-grained quartz-feldspar and feldspar porphyry; up to 50% phenocrysts; fine-grained green to maroon tuffaceous volcaniclastic rocks (U-Pb zircon age 350.4 +/- 1.3 Ma)

MLv — Mint-green to yellow-green foliated intermediate volcanic and volcaniclastic rocks; minor intercalated marble and psammitic schist

DEVONO-MISSISSIPPIAN

Drury formation

DMdg — Coarse-grained arkosic grit: light to dark grey quartzite; micaceous quartzite; psammitic schist (detrital zircon U-Pb ages 365 - 370 Ma); **DMdc**: dark grey to black phyllite intercalated with light grey marble

DEVONIAN AND OLDER (?)

Snowcap Assemblage

PSs — **Undivided:** Light to medium grey quartzite and psammitic schist; medium to dark grey carbonaceous muscovite-quartz (± garnet) schist; light green chlorite-actinolite-carbonate schist; light green quartzite; minor marble

CASSIAR TERRANE (ANCESTRAL NORTH AMERICA)

LAYERED ROCKS

SILURIAN-DEVONIAN

Askin Group ?

SDAc — White to grey, tan- to grey-weathering, fine- to coarse-grained, weakly to moderately foliated marble, graphitic along Robert Campbell Highway; diopside marble; quartz-mica schist; green to white, medium- to coarse-grained plagioclase-wollastonite-diopside calc-silicate rock, locally garnetiferous; locally cross-cut by foliated amphibolite dykes

CAMBRIAN - ORDOVICIAN

Kechika Group ?

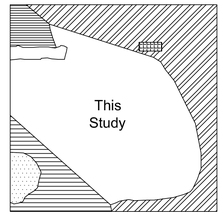
€Ok — Black phyllite, locally calcareous; brown to dark grey siltstone and fine-grained sandstone; adjacent to Glenlyon Batholith, rust-weathering, medium- to coarse-grained quartz-muscovite-biotite ± garnet schist; light green quartzite (± diopside); coarse-grained marble; medium-grained foliated amphibolite; garnetiferous wollastonite-diopside calc-silicate rock

NOTE:
A number of new stratigraphic terms for Yukon-Tanana Terrane are introduced informally on this map. These units will be formally defined in a report in preparation.

SYMBOLS

- Geological contacts (defined, approximate, assumed, covered)
- Thrust fault (assumed, covered)
- Dextral strike-slip fault (assumed, covered)
- Limit of outcrop
- Bedding
- Compositional layering
- Dominant foliation (transposition foliation; commonly parallel to compositional layering) (inclined, vertical)
- Second phase foliation
- Crenulation cleavage
- Mylonitic foliation
- Fault plane
- Dyke, vein (inclined)
- Intersection lineation
- Crenulation lineation
- Dominant fold axis (vergence unknown, Z)
- Fold axial trace (overturned anticline, overturned syncline, upright syncline)
- Line of cross-section
- Apparent dip of bedding in cross-section
- Apparent dip of foliation in cross-section

Data Sources



- Paterson (1982) Assessment Report 091372
- Colpron (1999, 2000, 2001)
- Campbell (1967) & Gordey & Makepeace (1999)
- Colpron, Murphy, Nelson, Roots (2002)

Geochronology sample (number refers to Isotopic Age Dates table) ● *105 ± 4 K-Ar; wr (1)*

Material dated: *bt* = biotite; *wm* = white micas; *wr* = whole rock; *zr* = zircon

ISOTOPIC AGE DATES

	Sample	Age (Ma)	2σ	Method	Mineral	Lithology	Interpretation notes	Reference
					Crystallization Ages			
GLENLYON PLUTONIC SUITE (?) -								
1	SYA86-64A-1	105.0	± 4.0	K/Ar	whole rock	hornfels zone	metamorphic cooling age	Hunt and Roddick (1990)
LITTLE SALMON PLUTONIC SUITE -								
2	99MC034	339.8	± 2.3	U/Pb	zircon	granodiorite	3 point regression, MSWD = 17.6	Colpron and Mortensen (unpub.)
3	T-454	353.0	± 1.3	U/Pb	zircon	granodiorite	3 point regression	Oliver and Mortensen (1998)
TELEGRAPH PLUTONIC SUITE -								
4	KG01-220	348.3	± 1.1	U/Pb	zircon	granodiorite	3 overlapping concordant fractions	Gladwin, Colpron and Mortensen (unpub.)
LOKKEN MEMBER (PELMAC FORMATION) -								
5	01MC288	350.4	± 1.3	U/Pb	zircon	porphyry	4 fractions on or near concordia	Colpron and Mortensen (unpub.)
					Metamorphic Cooling Ages			
6	RO-87	174.7	± 2.4	Ar/Ar	muscovite	unit COK	integrated age - cooling 350°C	Oliver (1996)
7	RO-99	185.0	± 4.4	Ar/Ar	muscovite	unit CLSv	integrated age - cooling 350°C	Oliver (1996)
8	SS-406a	187.0	± 2.2	Ar/Ar	muscovite	unit DMDg	integrated age - cooling 350°C	Oliver (1996)
9	T-226	190.3	± 8.9	Ar/Ar	muscovite	unit DMDg	integrated age - cooling 350°C	Oliver (1996)
10	T-454	214.4	± 5.2	Ar/Ar	biotite	unit mMqd	integrated age - cooling 300°C	Oliver (1996)
11	T-459	214.2	± 5.8	Ar/Ar	biotite	unit mMqd	integrated age - cooling 300°C	Oliver (1996)

MINERAL OCCURRENCE
Yukon MINFILE

MINFILE No.	Name	Status	Type	Commodity
105L 001	LOKKEN	Prospect	Skarn	Zn (Ag, Pb, Cu, Au)
105L 002	COLIN	Unknown	Unknown	
105L 003	LITTLE SALMON	Drilled prospect	Skarn	Zn, Ag, Pb (Au, Sn) ((As))
105L 004	MOULE	Anomaly	Unknown	Cu
105L 005	TRUITT	Drilled Prospect	Unknown	
105L 006	KEENE	Unknown	Unknown	
105L 007	RED KNOLL	Unknown	Unknown	Py
105L 008	ULRIKE	Anomaly	Unknown	Cu (Py)
105L 065	GLAD	Showing	Veln	Cu

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RECOMMENDED CITATION

GLADWIN, K., COLPRON, M., AND BLACK, R., 2002. Geological map of Truitt Creek (NTS 105L/1), central Yukon (1:50 000 scale). Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Open File 2002-5.

Digital cartography and drafting by Kaesy Gladwin, University of Victoria.

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

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A digital PDF (Portable Document Format) file of this map may be downloaded free of charge from the Yukon Geology Program website: www.geology.gov.yk.ca.

Keep this map in a dark area to keep colours from fading.

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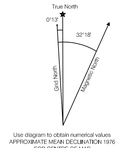
ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

TRUITT CREEK
YUKON TERRITORY
SCALE 1:50 000

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 1983
Transverse Mercator Projection



Use diagram to obtain numerical values
APPROXIMATE MEAN DECLINATION 1976
FOR CENTRE OF MAP
Annual change decreasing 2.7'

105 L/7	105 L/8	105 K/5
105 L/2	THIS MAP	105 K/4
105 E/15	105 E/16	105 F/13

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

Open File 2002-5

GEOLOGICAL MAP OF TRUITT CREEK (NTS 105L/1), CENTRAL YUKON (1:50 000 scale)

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