

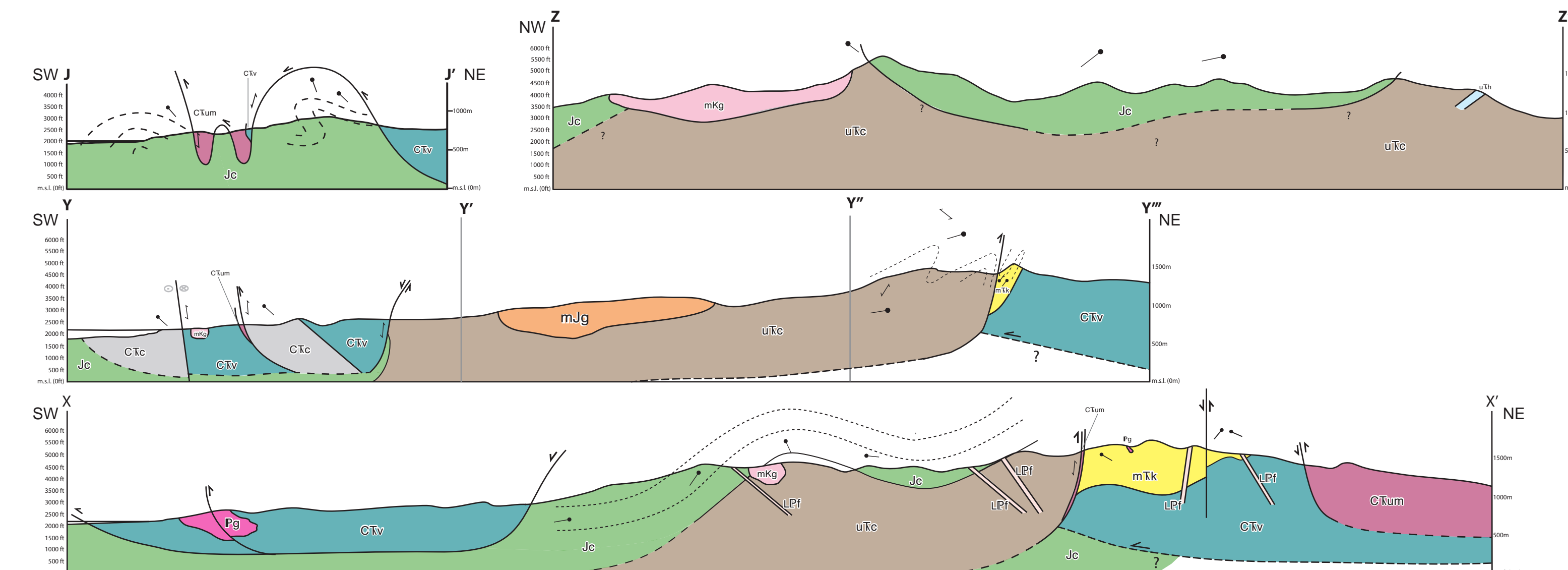
LEGEND

- QUATERNARY**
 Q unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluvial silt, sand, and gravel, in part with cover of soil and organic deposits
- INTRUSIVE ROCKS**
- PALEOGENE**
 LPI light to dark grey, very fine to medium-grained spherulitic dacite, rhyodacite; subvolcanic white-buff rhyolite, rarely with biotite and porphyritic K-feldspar
- EARLY TO LATE CRETACEOUS**
 mKg medium to coarse-grained hornblende diorite; coarse-grained quartz biotite monzonite
- MIDDLE JURASSIC**
 mJg coarse-grained to pegmatitic biotite muscovite syenite
- PENNSYLVANIAN TO TRIASSIC**
 Pg MARSH LAKE INTRUSIVE COMPLEX: light grey to grey-green, medium to coarse-grained to porphyritic gabbro-norite; medium-grained clinopyroxenite; fine to medium-grained diorite; olivine porphyritic diabase
- LAYERED ROCKS**
WHITEHORSE TROUGH
LOWER TO MIDDLE JURASSIC
 Jc RICHTHOFEN FORMATION: green-brown, medium to coarse-grained lithic sandstone, typically coupled with brown to dark grey turbiditic siltstone; polymictic paraconglomerate
- STIKINIA**
UPPER TRIASSIC
 uTc AKSALA FORMATION, CASCA MEMBER: coarse-grained, black-grey arkosic sandstone to fine-grained, thinly laminated, dark grey argillaceous siltstone; siltstone forms thick sections with grey-buff, very fine grained sandstone interlaminae, locally bioturbated; sandstone locally calcareous
 uTh AKSALA FORMATION, HANCOCK MEMBER: coarsely crystalline, light grey limestone to limestone breccia, locally fossiliferous
- CACHE CREEK TERRANE**
PENNSYLVANIAN TO TRIASSIC
 mTk MICHIE FORMATION (new unit): dark grey, fine-grained siltstone; buff, coarse-grained calc-lithic sandstone; green-grey wacke to pebble polymictic orthoconglomerate; fine-grained siltstone locally interbedded with thin, argillaceous limestone beds; carbonate-rich debris flows and rare olistoliths(?)
 Ctm grey, massive, crystalline limestone, locally crinoidal and fusuline; recrystallized white to pale yellow limestone, limestone breccia, dolostone
 Ctc grey-red-brown massive to ribbon banded chert, locally with soft sediment deformation; argillite interbeds
 Ctv dark grey, medium-grained to aphanitic, chloritized basalt, locally amygdaloidal; light grey, fine-grained andesite; lenses of limestone and chert, locally, within the volcanic rocks; andesite to chloritized basalt intercalated with green-grey auto-brecciated volcanoclastic rocks; basalt rarely pillowed and hyaloclastic
 Ctm dark grey-brown, medium to coarse-grained pyroxenite; dun-brown to orange, coarse-grained dunite, harzburgitic dunite, locally brecciated, highly magnetic serpentinite; dun-orange listwaenite

SYMBOLS

- Geologic contacts (defined, approximate, inferred, covered).....
- Fault; movement not known (defined, covered).....
- Thrust fault (defined, approximate, inferred, covered).....
- Sinistral strike-slip fault (approximate).....
- Normal fault (defined, approximate, inferred, covered).....
- Fold axial trace (upright - anticline, syncline; overturned - anticline, syncline).....
- Bedding (inclined, overturned).....
- Dominant foliation (inclined).....
- Intersection lineation (m, s, z).....
- Fold axis (dominant phase).....
- Igneous fabric.....
- Isotopic date (U-Pb detrital zircon; K-Ar; ⁴⁰Ar/³⁹Ar) (youngest detrital age indicated for U-Pb; italic numbers refer to geochronology table).....
- Fossil locality (italic numbers refer to fossil table).....
- Field station.....
- Roadtrail.....
- Apparent dip of bedding, foliation (in cross section).....
- Sense of displacement across strike-slip fault (in cross section; away, toward).....

CROSS SECTIONS



MAP#	CURATION#	AGE	FORMATION	AUTHOR	DATE	STATION	FOSSIL TYPE	FOSSIL CATEGORY
1	C-176034	Late Triassic, Late Norian	Hancock	M.J. ORCHARD	1991	91-GGA-13-5A	conodont; foraminifer; radiolarian; gastropod; echinoderm; cephalopod (ammonoid); bivalve; sponge; fish	microfossil
2	C-176035	Late Triassic, Late Norian	Hancock	M.J. ORCHARD	1994	91-GGA-13-6A	conodont; foraminifer; radiolarian; gastropod; echinoderm; cephalopod (ammonoid); bivalve; sponge; fish	microfossil
3	C-176012	Middle or Late Triassic, Anisian-Carnian	Cache Creek	F. CORDEY	1994	91-GGA-10-01C	conodont; foraminifer; radiolarian; gastropod; echinoderm; cephalopod (ammonoid); bivalve; sponge; fish	microfossil
4	C-176014	Late Triassic, Norian?	Hancock	M.J. ORCHARD	1991	91-GGA-13-3A	conodont; foraminifer; radiolarian; gastropod; echinoderm; cephalopod (ammonoid); bivalve; sponge; fish	microfossil
5	C-300023	Late Triassic-Middle Jurassic	Cache Creek	F. CORDEY	1991	91-GGA-13-03B	conodont; foraminifer; radiolarian; gastropod; echinoderm; cephalopod (ammonoid); bivalve; sponge; fish	microfossil
6	C-176059	Late Triassic, Middle Late Norian	Hancock	M.J. ORCHARD	1991	91-GGA-13-2B	conodont; foraminifer; radiolarian; gastropod; echinoderm; cephalopod (ammonoid); bivalve; sponge; fish	microfossil
7	O-025048	probably late Norian	Hancock	E.T. TOZER			bivalve	macrofossil
8	C-117184	Late Carboniferous (Pennsylvanian)-Early Permian?	Cache Creek	M.J. ORCHARD	1985	85-TD-WH-1	conodont; foraminifer; radiolarian; gastropod; echinoderm; holothuroid; sponge; fish	microfossil

1) Geology of the northeastern and western portion of the Tagish (NTS 105D/8) map area is after Wheeler (1961).

2) Geology of the western portion of the Streak Mountain (NTS 105C/12) and north western portion of the Squaga Lake (NTS 105C/5) is after Gorday and Stevens (1994).

3) Detrital zircon dates from coarse sandstones of 'Michie formation' is from Bickerton (2014).

REFERENCES

- BICKERTON, L., 2014. The northern Cache Creek terrane: a record of Middle Triassic arc activity and Jurassic-Cretaceous terrane imbrication. Unpublished M.Sc. Thesis, Simon Fraser University, Burnaby, British Columbia.
- GORDEY, S.P. and STEVENS, R.A., 1994. Geology, Teslin, Yukon Territory. Geological Survey of Canada, Open File 2886, 1:250 000.
- HART, C.J.R., 1995. Magmatic and tectonic evolution of the Intermontane superterrane and coast plutonic complex in southern Yukon Territory. Unpublished M.Sc. Thesis, University of British Columbia, Vancouver, British Columbia.
- WHEELER, J.O., 1961. Whitehorse map-area, Yukon Territory, 105D. Geological Survey of Canada, Memoir 312, 156 p.

RECOMMENDED CITATION

BICKERTON, L., 2014. Geological map of Michie Creek (NTS 105D/9) and parts of Tagish (NTS 105D/8) areas. Yukon Geological Survey, Open File 2014-11, 1:50 000 scale.

Digital cartography and drafting by Luke Bickerton, Simon Fraser University, and Maurice Colpron, Yukon Geological Survey. Cam Dorsey and Jasp Verbaas provided assistance in the field.

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

Paper copies of this map may be obtained from the Yukon Geological Survey, Energy, Mines and Resources, Yukon Government, P.O. Box 2703 (K-102), Whitehorse, Yukon, Y1A 2C6. Ph. 867-667-3201. Email: geology@gov.yk.ca

A digital PDF (Portable Document File) file of this map may be downloaded free of charge from the Yukon Geological Survey website: <http://www.geology.gov.yk.ca>

Map ID	Type	Station #	Age (Ma)	Material	Method	Interpretation	Reference
1	K-Ar	85C464-1	104 +/- 4	Hornblende	crystalization	Hart (1995) M.Sc. thesis, University of British Columbia	Bickerton (2014)
2	U-Pb	10MCD04	244.54 +/- 0.13	Zircon (detrital)	CA-TIMS	source	Bickerton (2014)
3	U-Pb	12LB181	245.85 +/- 0.07	Zircon (detrital)	CA-TIMS	source	Bickerton (2014)
4	U-Pb	12LB220	ca. 190	Zircon (detrital)	LA-ICPMS	source	Bickerton (2014)
5	Ar-Ar	12LB211	165.9 +/- 0.8	White mica	⁴⁰ Ar/ ³⁹ Ar cooling	Heitler (written comm. 2014); this map	
6	Ar-Ar	12LB211	162.5 +/- 0.6	Biotite	⁴⁰ Ar/ ³⁹ Ar cooling	Heitler (written comm. 2014); this map	

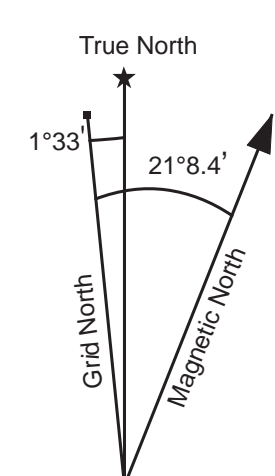
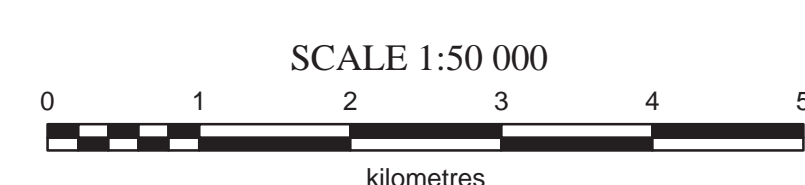
Mineral Occurrences				
Yukon MINIFILE				
105C 049	○	NLF	Anomaly	Unknown
105C 055	◇	Eaglenest	Showing	Au, Ag Au-Quartz Veins
105D 067	◇	McClintock	Drilled Prospect	Cu Cur-/Ag Quartz Veins
105D 068	○	Oak	Anomaly	Unknown
105D 069	△	Marsh	Drilled Prospect	Cu, Au Gabbroid Cu-Ni-PGE
105D 070	◇	Levellee	Showing	Asbestos Ultramafic-hosted asbestos
105D 071	◇	Michie	Showing	Cr Podiform Chromite
105D 115	◇	Worbetts	Prospect	Au, Ag Polymetallic Veins Ag-Pb-Zn+/Au
105D 153	○	Ichie	Anomaly	Unknown
105D 154	◇	Into	Anomaly	Polymetallic Veins Ag-Pb-Zn+/Au
105D 176	○	Mc Michie	Anomaly	Unknown
105D 178	○	Military	Anomaly	Unknown
105D 185	○	Bronco	Anomaly	Unknown
105D 196	◇	Mike	Showing	Cu-/Ag Quartz Veins
105D 198	◇	NLC	Showing	Au-Quartz Veins

1:50 000-scale topographic base data produced by CENTRE FOR TOPOGRAPHIC INFORMATION, NATURAL RESOURCES CANADA

ONE THOUSAND METRE GRID Universal Transverse Mercator Projection North American Datum 1983 Zone 8

CONTOUR INTERVAL 20 METRES Elevations in metres above Mean Sea Level

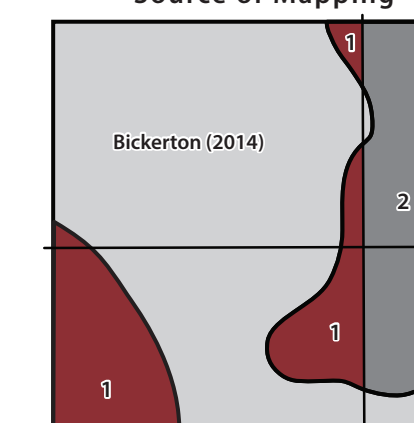
BEDROCK GEOLOGY MICHE CREEK/TAGISH YUKON



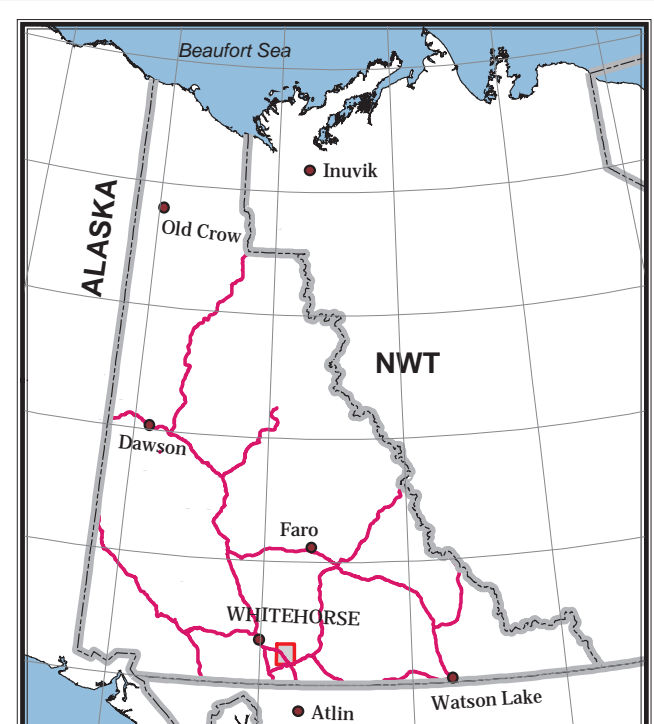
Use diagram only to obtain numerical values APPROXIMATE MEAN DECLINATION 2005 FOR CENTRE OF MAP

105D/15	105D/16	105C/13
Joe Mountain	Mount McClintock	Rosy Lake
105D/10	105D/09	105C/12
Macrae	THIS MAP	Streak Mountain
105D/07		105C/05
Robinson		Squaga Lake

Source of Mapping



- Wheeler (1961)
- Gorday and Stevens (1994)



Yukon Geological Survey Energy, Mines and Resources Government of Yukon

Open File 2014-11
 Geological map of Michie Creek (NTS 105D/9) and parts of Tagish (NTS 105D/8) areas (1:50 000 scale)

by Luke Bickerton Simon Fraser University