

- QUATERNARY**
- Q Unconsolidated alluvium, colluvium and glacial deposits
- INTRUSIVE ROCKS**
- PENNSYLVANIAN AND/OR PERMIAN**
- PPum Yellow-green weathering, pale green to tan, variably serpenitized ultramafic rock. Texture varies from scaly and foliated to massive, with pseudomorph after orthopyroxene. Intrusive contacts locally preserved. Nephrite jade locally developed near basal contact.
 - PPp Medium- to coarse-grained, foliated actinolite-plagioclase-chlorite meta-gabbro
- LAYERED ROCKS**
- mPgl Red-brown to pale green matrix, and framework-supported polymictic conglomerate, pale green sandstone and lesser dark grey shale. Conglomerate clasts include porphyritic basalt, aphyric massive basalt, chloritic phyllite, quartz-mica phyllite, siliceous carbonaceous phyllite, carbonate, white bull quartz and chert. Clasts of serpentine, blueschist and eclogite have been reported from this unit elsewhere (Mortensen, Erdmer and Ghent, 1997). Mid-Permian conodonts have been reported from this unit in Watson Lake map area (J. Mortensen, pers. comm., 2000).
- PENNSYLVANIAN and/or LOWER PERMIAN**
- PPC7c Variably foliated mafic meta-volcanic rock ranging from foliated pale to medium green chloritic phyllite to massive weakly foliated aphyric meta-basalt. Mn- to dm-scale lenses of carbonate (amylolite?) throughout. Age unknown, but resembles foliated meta-basalt of the Campbell Range succession (unit PPC22 of Murphy and Pirozy, 1999).
 - PPC7g Ferruginous tectonite-clast pebble and cobble breccia, conglomerate, gritty sandstone and red phyllite-matrix diamictite overlain by light grey quartz sandstone interbedded with quartz-pebble conglomerate. Chocolate brown dolomitic sandstone and brown-grey siliceous phyllite/chert occur locally. Siliceous tectonite clasts are identical to underlying unit Pch.
 - Fch Foliated and lineated grey, black and white argillite and chert. Uncommon lenses of brown carbonate. In 105H5, this unit also compresses pink, green and tan chert; dark argillite and chert-pebble conglomerate. May be equivalent to unit P'cl.
- Jules Creek Thrust**
- Pcl Dark grey to black carbonaceous argillite, dark grey chert, dark grey matrix-supported diamictite, grey chert-pebble conglomerate, grey-brown, poorly sorted, quartzofeldspathic greywacke, uncommon tan quartz sandstone. Uncommon limestone-pebble conglomerate at base.
 - Pc Massive to thickly bedded, light to medium grey, light grey-weathering marble. Locally crinoidal. Pennsylvanian to Early Permian conodonts have been reported from this unit elsewhere (Orchard, M. in Gordey and Makepeace, 1999).
- MISSISSIPPIAN**
- Mv Light to medium green, locally quartz- and feldspar-phyric, intermediate meta-volcanic rocks. Locally, this unit comprises maroon and green tuff breccia. A Mississippian U-Pb age has been reported for a similar tuff breccia in 105H4, south of the area mapped (Mortensen, 1992).
 - Mch Dark grey argillite and chert
 - Mjz Pale to olive green, locally magnetite-bearing chert and argillite
 - Mc Light grey-weathering, light to medium grey massive marble

LEGEND

SYMBOLS

- Geological contacts (defined, approximate, assumed, covered)
- Fault (defined, approximate, inferred, covered)
- Limit of outcrop
- Limit of mapping
- Bedding
- Dominant foliation (inclined, vertical)
- Fold axial surface trace (anticline: upright, overturned; syncline: upright, overturned)
- Line of cross-section
- U-Pb age date

Mortensen, in Gordey and Makepeace (1999)

MINERAL OCCURRENCES
Yukon Minfile (1997)

105H 015	◆	DOUGEVA	Cu vein
105H 080	◆	KNEIL	Zn, Pb, Cu
105H 085	★	BEANS	work target

REFERENCES

GORDEY, S.P. and MAKEPEACE, A.J., 1999. Yukon digital geology. S.P. Gordey and A.J. Makepeace (comp.), Geological Survey of Canada Open File D3826 and Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1999-1.

MORTENSEN, J.K., 1992. Pre-Mid-Mesozoic tectonic evolution of the Yukon-Fanana terrane, Yukon and Alaska. *Tectonics*, v. 11, p. 836-853.

MORTENSEN, J.K., ERDMER, P. and GHENT, E.D., 1997. Westerly-derived Upper Triassic clastic sedimentary rocks in southeastern Yukon: evidence for Early Mesozoic terrane interaction with the western margin of ancestral North America. In F. Cook and P. Erdmer (compilers), 1997. Slave-Northern Cordillera Lithospheric Evolution (SNORCLE) Transect and Cordilleran Tectonics Workshop Meeting, Abstracts, Lithoprobe Report No. 56, 245 pp.

MURPHY, D.C. and PIERCEY, S.J., 1999. Geological map of Wolverine Lake area, Pelly Mountains (NTS 105G/8), southeastern Yukon (scale 1:50 000). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1999-3.

YUKON MINFILE, 1997. Frances Lake, NTS 105H. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada. Also available from Hyperborean Productions.

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RECOMMENDED CITATION

MURPHY, D. C., 2000. Preliminary geological map of T'uchitua River North area (105H/4), southeastern Yukon (1:50 000 scale), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 2000-16.

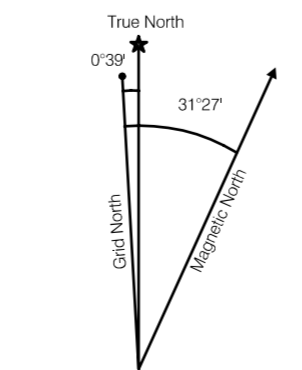
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'TUCHITUA RIVER NORTH'
YUKON TERRITORY
SCALE 1:50 000



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ONE THOUSAND METRE Universal Transverse Mercator Grid ZONE 9

CONTOUR INTERVAL 20 METRES
Elevations in metres above Mean Sea Level
North American Datum 1983
Transverse Mercator Projection

Use diagram to obtain numerical values APPROXIMATE MEAN DECLINATION 1985 FOR CENTRE OF MAP. Annual change decreasing 0.3

105 G/8	105 H/5	105 H/6
105 G/1	105 H/4 THIS MAP	105 H/3
105 B/16	105 A/13	105 A/14

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

Open File 2000-16
Preliminary geological map of part of
'Tuchitua River North' area (105H/4),
southeastern Yukon (1:50 000 scale)

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