

- QUATERNARY**
- Q Unconsolidated alluvium, colluvium, lacustrine and glacial deposits
- INTRUSIVE ROCKS**
- Kq Weakly foliated medium- to coarse-grained biotite-muscovite granite, generally equigranular
  - Mog Equigranular medium- to coarse-grained granitic to monzonitic orthogneiss
  - um Massive, variably serpentinized, ultramafic rocks. Relationship to surrounding rocks unclear.
- LAYERED ROCKS**
- PENNSYLVANIAN TO PERMIAN**
- PFCa Campbell Range basalt: Coarse basaltic breccia, pillowed and massive basaltic lavas, gabbro, diabase, maroon and green chert. Foliated and tightly folded on western edge of Campbell Range Belt.
- CARBONIFEROUS**
- 7 Carbonaceous argillite, sandstone and grey quartz grit; minor diamictite and mafic meta-igneous rock (7m); top is marked by several metres of green, possibly tuffaceous chert and cherty argillite
  - 6 Thinly interbedded (cm-scale) massive to granular siliceous rock and light coloured phyllite. Siliceous rock is pale coloured, locally massive and bedded on metre scale at base where associated with banded iron formation. Darker near top where intercalated phyllite is dark grey.
  - 5b Carbonaceous phyllite and quartz sandstone (5cp) with variable amounts of locally porphyritic felsic phyllite (5f), and quartz-feldspar metaporphyrty (5fp). The lower part contains coarse felsopelagic sandstone and grit (5l).
- UNCONFORMITY**
- Layered rocks above unconformity have one tilation, equivalent to the second phase of deformation in rocks below the unconformity.
- Layered rocks below unconformity are characterized by two phases of deformation with compositional layering transposed into the second phase foliation.
- PRE-MISSISSIPPIAN AND MISSISSIPPIAN**
- 4a Carbonaceous phyllite (4cp), biotite-chlorite-actinolite-plagioclase mafic schist (4m), and quartzite (4q). Locally absent beneath unconformity
  - 4b Undifferentiated muscovite-feldspar-quartz<sup>1</sup> felsic schist<sup>2</sup>, feldspar- and rarely quartz-augen schist (meta-porphyrty), marble and calc-silicate (3c), thin calcite-plagioclase-biotite<sup>3</sup> schist and lesser carbonaceous phyllite and grey quartzite. Magnetite iron formation occurs locally in carbonaceous argillite and thin felsic schist.
  - 2 Massive to stubby layered biotite-plagioclase-actinolite-chlorite<sup>4</sup> schist, and lesser carbonaceous phyllite and quartzite and grey marble
  - 1 Biotite-muscovite-quartz<sup>2</sup> schist, micaceous quartzite, marble
- <sup>1</sup> ca. 110 Ma U/Pb age determinations reported from similar bodies elsewhere in the Pelly Mountains (Mortensen, 1992 and personal communication, 1996)
- <sup>2</sup> Early Mississippian U/Pb age determinations reported from similar bodies elsewhere in Yukon-Tanana Terrane in the Pelly Mountains (Mortensen, 1992 and personal communication, 1996; Grant, Dodson and Erdmer, 1996)
- <sup>3</sup> Mid-Mississippian to Early Permian, based on zircon dates identified by Torka-Harms as reported in Pitt and Gordon, (1997)
- <sup>4</sup> Early Mississippian U/Pb age determinations have been obtained from similar rocks throughout Yukon-Tanana Terrane (Mortensen, 1992)
- <sup>5</sup> Mineral modifiers are listed in order of increasing abundance.

MINERAL OCCURRENCES	
Yukon Millite	
Volcanic-associated massive sulphide occurrences	
105 G/072	Wolverine (Fetish) Zn, Cu, Pb, Ag, Au (deposit)
	Work Targets
105 G/040	Jay (Vol. Foot, F.Y.D. Wolf)
105 G/041	Finlayson
105 G/116	Charlie

**RECOMMENDED CITATION**

MURPHY, D.C. and PIERCEY, S.J. 1998. Preliminary geological map of northern Wolverine Lake area, Pelly Mountains, southeastern Yukon (NTS 105G/8, north half). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1998-4 (1:50 000-scale).

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, the accompanying report and Yukon Millite may be purchased from Geoscience Information and Sales, c/o Whitehorse Mining Recorder, Indian and Northern Affairs Canada, Room 102-300 Main St. Whitehorse, Yukon, Y1A 2B5, Ph. 867-667-3266 or Fax: 867-667-3267.

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

**REFERENCES**

Grant, S., Coaker, R., and Erdmer, P. 1996. Isotopic, geochemical, and kinematic studies of the Yukon-Tanana terrane in the Money Klippe, SE Yukon. In Cook, F. and Erdmer, P. (eds.) Lithoprobe Slave-Northern Cordillera Lithospheric Evolution (SNORCLE) Transect Meeting, Report No. 50, p. 58-60.

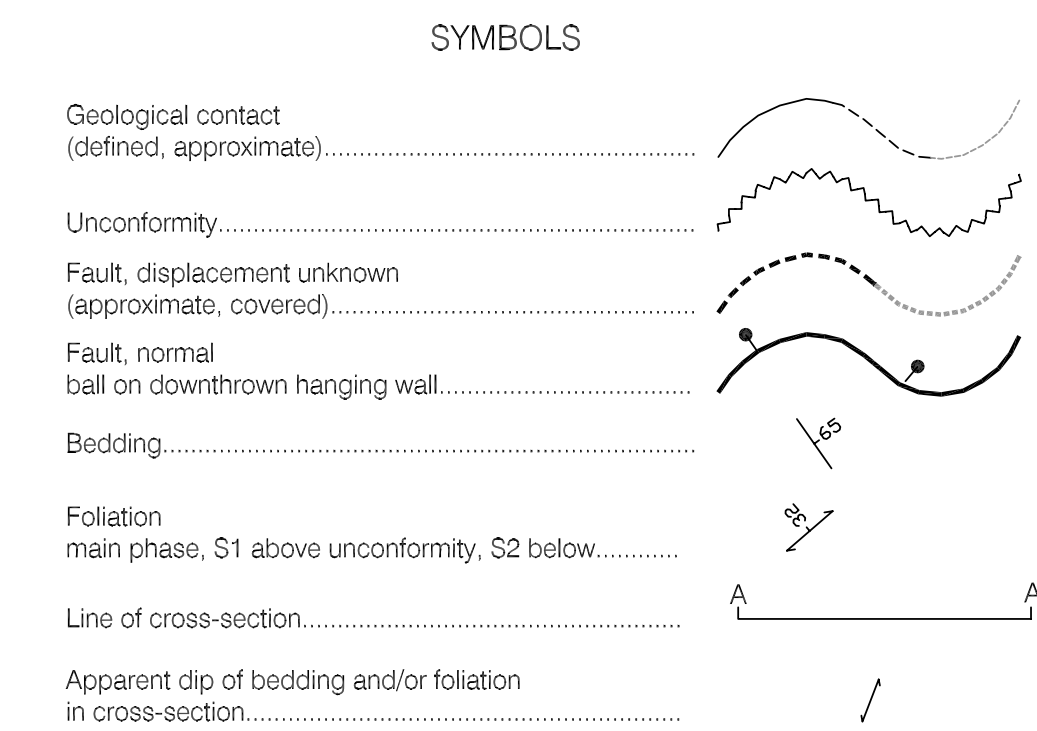
Lithoprobe: Slave-Northern Cordillera Lithospheric Evolution (SNORCLE) Transect Meeting, Report No. 50, p. 58-60.

Mortensen, J.K., 1992. Pre-mid-Mesozoic tectonic evolution of the Yukon-Tanana Terrane, Yukon and Alaska. *Tectonics*, v. 11, p. 836-853.

Pitt, H.E. and Gordon, T.M. 1997. The Slide Mountain Terrane and the structural evolution of the Finlayson Lake Fault Zone, southeastern Yukon. *Canadian Journal of Earth Science*, v. 34, p. 105-120.

**ACKNOWLEDGEMENTS**

The authors would like to thank the following: Paul MacRobbie of Comco for his camp hospitality and other logistical assistance, allowing use of their contract helicopter and for sharing some of his insights into the regional geology and the local geology around Kudz Ze Kiyath; Bill Wronczynski of Expatriate Resources and Les Pigeau, formerly of Expatriate, for camp hospitality, access to core and samples, and sharing their detailed knowledge of Expatriate's target areas; Doug Eaton of Expatriate Resources for giving them permission to share their data; Terry Tucker, formerly of Westmin, for pointing out the traverse where the base of the Campbell Range basalt could be best evaluated; Dave Terry of Bolden Westmin for discussions about the geology around the Wolverine deposit; Jim Mortensen of UBC for ongoing dialog on the geology of Yukon-Tanana Terrane and patience in the face of zircon born under Murphy's Law; and Koon Tongai for assistance with final map production. Safe and reliable helicopter service was provided by Trans North Air, notably by pilots John Wilham, Chris Guchoon and Steve Stanley.



**WOLVERINE LAKE**  
YUKON TERRITORY  
SCALE 1:50 000

Topographic data provided by SURVEY AND MAPPING BRANCH, ADMINISTRATION OF ENERGY SERVICES  
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ONE THOUSAND METRE  
Universal Transverse Mercator Grid  
ZONE 8

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

105 G/10	105 G/9	105 H/12
105 G/7	105 G/8 <b>THIS MAP</b>	105 H/5
105 G/2	105 G/1	105 H/4

Use diagram on 10 to obtain contour value  
North American Datum 1983  
UTM Zone 8  
UTM Easting 490000  
UTM Northing 6100000

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

Open File 1998-4  
Preliminary geological map of Wolverine Lake area,  
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NTS 105G/8, north half

by  
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