

- QUATERNARY**
- Q Unconsolidated alluvium, colluvium and lacustrine and glacial deposits
  - Qls landslide debris
- INTRUSIVE ROCKS**
- Td North-northeast trending undeformed, brown, clay-altered feldspar porphyry dykes and light grey aphyric felsite dykes.
- CRETACEOUS**
- Kg Weakly foliated medium- to coarse-grained biotite-muscovite granite, generally equigranular
- MISSISSIPPIAN**
- Grass Lakes orthogneiss<sup>2</sup>
    - Mgg Equigranular medium- to coarse-grained granitic to monzonitic orthogneiss.
    - Mhag Potassium feldspar megacrystic granitic augen orthogneiss.
    - Mog Undifferentiated granitic orthogneiss
    - Mtqp Quartz-feldspar metaprophy, variably foliated, mineralized and oxidized
  - North Lakes Metadiorite
    - Mnd Foliated coarse-grained hornblende-biotite meta-diorite.
    - 2mum Biotite-actinolite-plagioclase amphibolite (meta-gabbro) and actinolite amphibolite (meta-pyroxenite)
  - Age unknown
    - 2um Massive to layered metamorphosed ultramafic rocks including dunite and pyroxenite, locally serpentinized.
- LAYERED METAMORPHIC ROCKS**
- 1.2 Units 1 and 2 are not differentiated for lack of date.
  - Unit 2
    - 2m Massive calcareous actinolite-plagioclase-chlorite-biotite schist, subtly layered plagioclase-actinolite-chlorite schist, and lesser carbonaceous phyllite and quartzite
  - Unit 1
    - 1qsu Upper quartzose metaclastic unit: biotite-muscovite quartz schist and micaceous quartzite, lesser quartz-pebble conglomerate and chlorite-biotite schist, uncommon grey carbonaceous quartzite. Narrowly transitional upward to Unit 2m
    - 1clp Calcareous quartz psammite, marble, calcareous chlorite-biotite schist and epidote-biotite-calcite-garnet calcislate schist; stratigraphically equivalent to Unit 1cls
    - 1cls Calcareous garnet-biotite-muscovite schist and marble, rare garnet-biotite amphibolite; stratigraphically equivalent to Unit 1clp
    - 1qsl Lower quartzose metaclastic unit: biotite-quartz-muscovite schist and lesser biotite-muscovite quartz schist and plagioclase-quartz-chlorite-biotite schist.
    - 1m Calcareous plagioclase-chlorite-biotite schist
    - 1f Quartz-feldspar-muscovite augen schist
  - Units of uncertain stratigraphic position
    - 3cp Discontinuous (traceable for over a kilometre but not throughout map area) bodies of calcareous muscovite-quartz schist or phyllite, quartzite, uncommon light grey marble.
    - 3f Light grey, tan to white platy quartz-muscovite schist, locally with mm-scale quartz and feldspar augen
    - 3r Creamy tan to white, massive, cherty metahyolite locally with quartz amygdulites, and quartz and feldspar augen
    - 3qp Discontinuous (traceable for over a kilometre but not throughout map area) bodies of calcareous muscovite-quartz psammite and grey quartzite.
    - 2.4\* Undifferentiated mafic (plagioclase-biotite-actinolite-chlorite) schist and carbonaceous phyllite and quartzite; see cross-sections B-B' for two interpretations of the stratigraphic position of this unit.

**LEGEND**

**SYMBOLS**

- Geological contact (defined, approximate, assumed, covered).....
- Fault (displacement unknown) (approximate, assumed, covered).....
- Normal fault (circle on downthrown hanging wall) (approximate, assumed, covered).....
- Thrust fault (teeth on upthrown hanging wall) (approximate, assumed, covered).....
- Recumbent fold axial surface trace (arrow indicates plunge of hinge).....
- Limit of outcrop.....
- Foliation (main phase, generally parallel to compositional layering).....
- Line of cross-section..... A A'
- Apparent dip of foliation in cross-section.....

**MINERAL OCCURRENCES**

Yukon Minfile

1056 028	GYP	Pb, Zn, Cu
1056 029	GEE	Pb
1056 030	PIT	U, Ag, Cu, F
1056 031	ROB	Ag
1056 032	PACK	Pb, Zn, Cu
1056 033	TAK	work target
1056 067	LAWN	work target
1056 071	MYDA	W
1056 088	COOKIE	work target
1056 102	HOWDEE	W, Cu
1056 117	KUOZ ZE KAYAH	Pb, Zn, Ag, Cu, Au

- PRE-MISSISSIPPIAN AND MISSISSIPPIAN**
- Unit 4
    - 4 Undifferentiated mafic (biotite-chlorite-actinolite-plagioclase) schist, carbonaceous phyllite and quartzite, and quartzofeldspathic gneiss and psammite
    - 4m Massive, punky calcareous biotite-plagioclase schist, subtly layered chlorite-actinolite-plagioclase schist
    - 4s Carbonaceous phyllite and quartzite, quartzofeldspathic psammite and grit
  - Unit 3
    - 3 undifferentiated felsic (quartz-muscovite-feldspar) schist, lesser carbonaceous phyllite and quartzite and mafic schist
    - 3f Light grey, tan to white platy quartz-muscovite schist, locally with mm-scale quartz and feldspar augen
    - 3r Creamy tan to white, massive, cherty metahyolite locally with quartz amygdulites, and quartz and feldspar augen
  - Unit 2
    - 2m Massive calcareous actinolite-plagioclase-chlorite-biotite schist, subtly layered plagioclase-actinolite-chlorite schist, and lesser carbonaceous phyllite and quartzite
  - Unit 1
    - 1qsu Upper quartzose metaclastic unit: biotite-muscovite quartz schist and micaceous quartzite, lesser quartz-pebble conglomerate and chlorite-biotite schist, uncommon grey carbonaceous quartzite. Narrowly transitional upward to Unit 2m
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This map supercedes Murphy and Timmerman (1997).

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

Digital cartography and drafting by Will vanRanden, Yukon Geology Program.

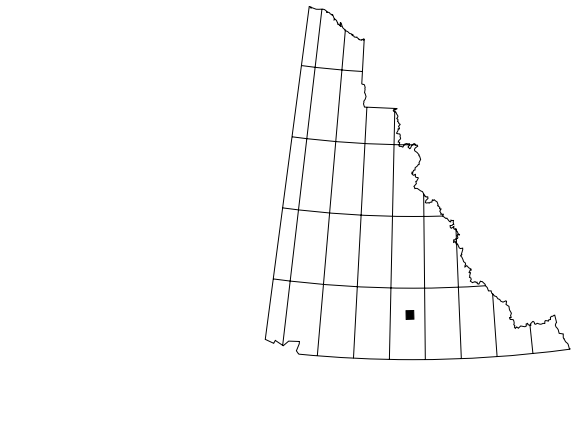
Store the map in a dark area to prevent colours from fading.

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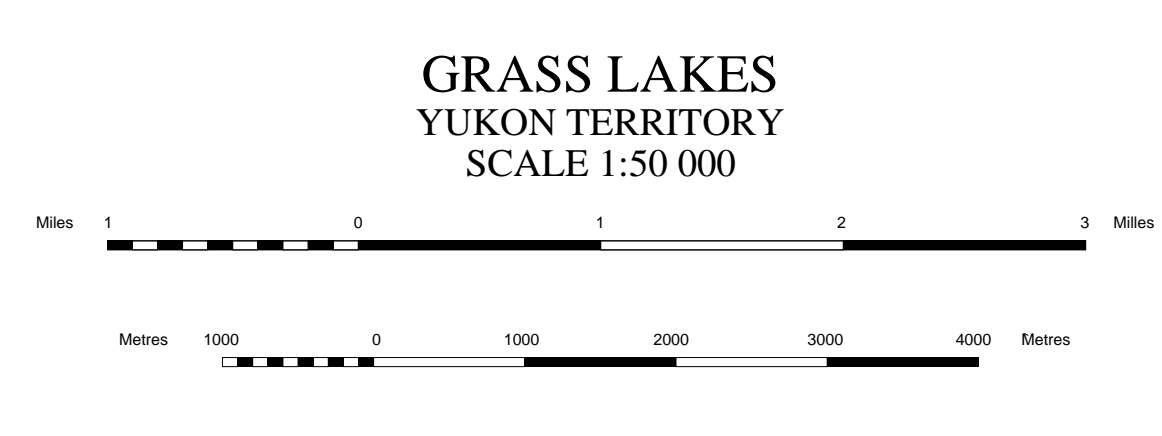
**RECOMMENDED CITATION**

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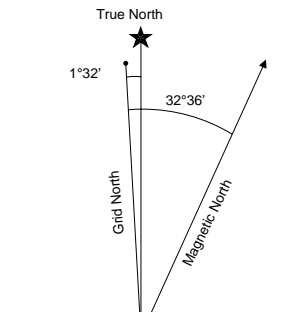
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CONTOUR INTERVAL 20 METRES Elevations in Feet above Mean Sea Level North American Datum 1983 Transverse Mercator Projection



Use diagram only to obtain numerical values APPROXIMATELY ONLY FOR INFORMATION PURPOSES CENTRE OF MASS (AROUND CENTER OF MASS) (AROUND CENTER OF MASS)

105 G/11	105 G/10	105 G/9
105 G/6	105 G/7 <b>THIS MAP</b>	105 G/8
105 G/3	105 G/2	105 G/1

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

**Open File 1997-3**

**Preliminary geological map of  
Grass Lakes area  
Pelly Mountains, southeastern Yukon**

**NTS 105G/7**

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