



Preliminary Map: PMAP2003-4

Geology of the western Sharpe Lake area, Manitoba (NTS 53K5)

Legend

Felsic plutonic rocks

- 12 Graphic granite, pegmatite, aplite
- 11 Hornblende granodiorite: potassium feldspar megacrystic, beige to pale pink weathering, grey buff; weakly foliated; coarse grained
- 10 Biotite tonalite dikes: leucocratic, plagioclase phyrlic; white to light grey weathering, grey; fine grained
- 9 Biotite tonalite: leucocratic, white weathering, white; weakly foliated, medium grained

Cross Lake assemblage

- 8 Meta-arenite and conglomerate:
  - 8a) Meta-arenite
  - 8b) Polymictic conglomerate; polymictic clast support; tonalite clast dominant

Pre-Cross Lake intrusive rocks

- 7 Tonalite: leucocratic; white weathering; fine grained

Oxford Lake assemblage

- 6 Metagreywacke, pebbly metagreywacke:
  - 6a) Feldspathic metagreywacke; biotite garnet bearing; sandstone with minor siltstone interbeds
  - 6b) Polymictic conglomerate; pebble, cobble bearing; matrix and clast support; volcanic derived felsic to intermediate composition, clasts dominant

Stull assemblage

- 5 Gabbro, diorite: includes post-Oxford Lake assemblage

- Basalt: aphyric to sparsely plagioclase phyrlic; mafic tectonite; amphibolite:
  - 4a) Basalt: pillowed and massive flows; pale green to green weathering, green to grey; aphyric to sparsely plagioclase phyrlic
  - 4b) Basalt: pillowed and massive flows; pale green to green weathering, green to grey; aphyric; variolitic, 2 to 5 mm spherical epidolitized domains typically near margins of pillows
  - 4c) Basalt: pillowed and massive flows; dark grey to black weathering, black; aphyric
  - 4d) Mafic tectonite: pale green weathering, green to grey; derived chiefly from basalt and gabbro

Richardson Arm gneiss complex

- Granodiorite gneiss:
  - 3a) Granodiorite gneiss: biotite bearing; beige to pink weathering, grey to pale pink; moderately to strongly foliated, weakly layered; contains variable percentages of units 1 and 2
  - 3b) Augen granodiorite gneiss: tectonized granodiorite gneiss (3a)
- Tonalite gneiss:
  - 2a) Hornblende tonalite: white to light grey weathering, light grey; weakly to moderately foliated; medium to coarse grained; forms the major injection in the tonalite gneisses
  - 2b) Hornblende tonalite gneiss: locally hornblende biotite bearing; white to light grey weathering, grey; moderately to strongly foliated, moderately to strongly layered; contains 5 to 50% xenoliths of unit 1
  - 2c) Schollen to stromatic hornblende tonalite gneiss: strongly foliated and parallel layered gneiss containing oriented, variably assimilated rafts of unit 1
- Mafic to intermediate orthogneiss:
  - 1a) Layered amphibolite: grey to black weathering, dark grey to black; granoblastic to weakly foliated, compositionally layered
  - 1b) Mafic granulite: orthopyroxene and clinopyroxene bearing; granoblastic to weakly foliated, variably retrograded to garnet amphibolite

Symbols

- Geological contact
  - - - Underwater contact
  - - - Fault
  - ... Limit of mapping
- |                            |  |
|----------------------------|--|
| <b>Mineral occurrences</b> | <b>Alteration</b>                              |
| ● pyrrhotite               | ▲ chlorite, calcite                            |
| ● pyrite                   | ▲ sericite                                     |
| ● pyrite, malachite        | ▲ sericite, ankerite                           |
| <b>Veins</b>               | ▲ sericite, ankerite, fuschite                 |
| ⚡ quartz vein              | ▲ sericite, ankerite, fuschite, silicification |
| ⚡ calcite vein             | ▲ silicification                               |
| ⚡ ankerite vein            |  |

Geology by: M.T. Corkery, C.J. Beaumont-Smith, S.D. Anderson and A.H. Bailes (2003)

with additional geology by: Martin, B. 1973. Sharpe Lake (west half); Manitoba Department of Mines, Resources and Environmental Management, Mines Branch, Preliminary Map 1973 H-14, scale 1:50 000.

Cartography by: M.E. McFarlane

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This map is a provisional summary of work carried out during the summer field season and is produced directly from the geologist's manuscript. It is not to be regarded as a final interpretation of the geology of the area.

SUGGESTED REFERENCE

Corkery, M.T., Beaumont-Smith, C.J., Anderson, S.D. and Bailes, A.H. 2003: Geology of the western Sharpe Lake area, Manitoba (NTS 53K5); Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, Preliminary Map PMAP2003-4, scale 1:50 000.

Layering

- ┆ Bedding: top known
- ┆ Pillow: top known
- ┆ Pillow: top unknown

Foliation

- ┆ generation unknown
- ┆ generation 1
- ┆ generation 2
- ┆ generation 3 (retrograde shear fabric)
- ┆ generation 4

Gneissosity

- ┆ generation unknown
- ┆ generation 1
- ┆ generation 2
- ┆ generation 3
- ┆ generation 4 (retrograde shear fabric)
- ┆ generation 5 (fracture cleavage)

Faults and shears

- ┆ Fault: generation unknown
- ┆ Shear: sense unknown
- ┆ Shear: sense dextral

Lineation

- ┆ Stretching: generation unknown
- ┆ Stretching: generation 1
- ┆ Stretching: generation 2
- ┆ Stretching: generation 3
- ┆ Stretching: generation 4
- ┆ Fold axis: generation unknown
- ┆ Fold axis: generation 2
- ┆ Fold axis: generation 3
- ┆ Fold axis: generation 4
- ┆ Intersection: generation 3
- ┆ Intersection: generation 4

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