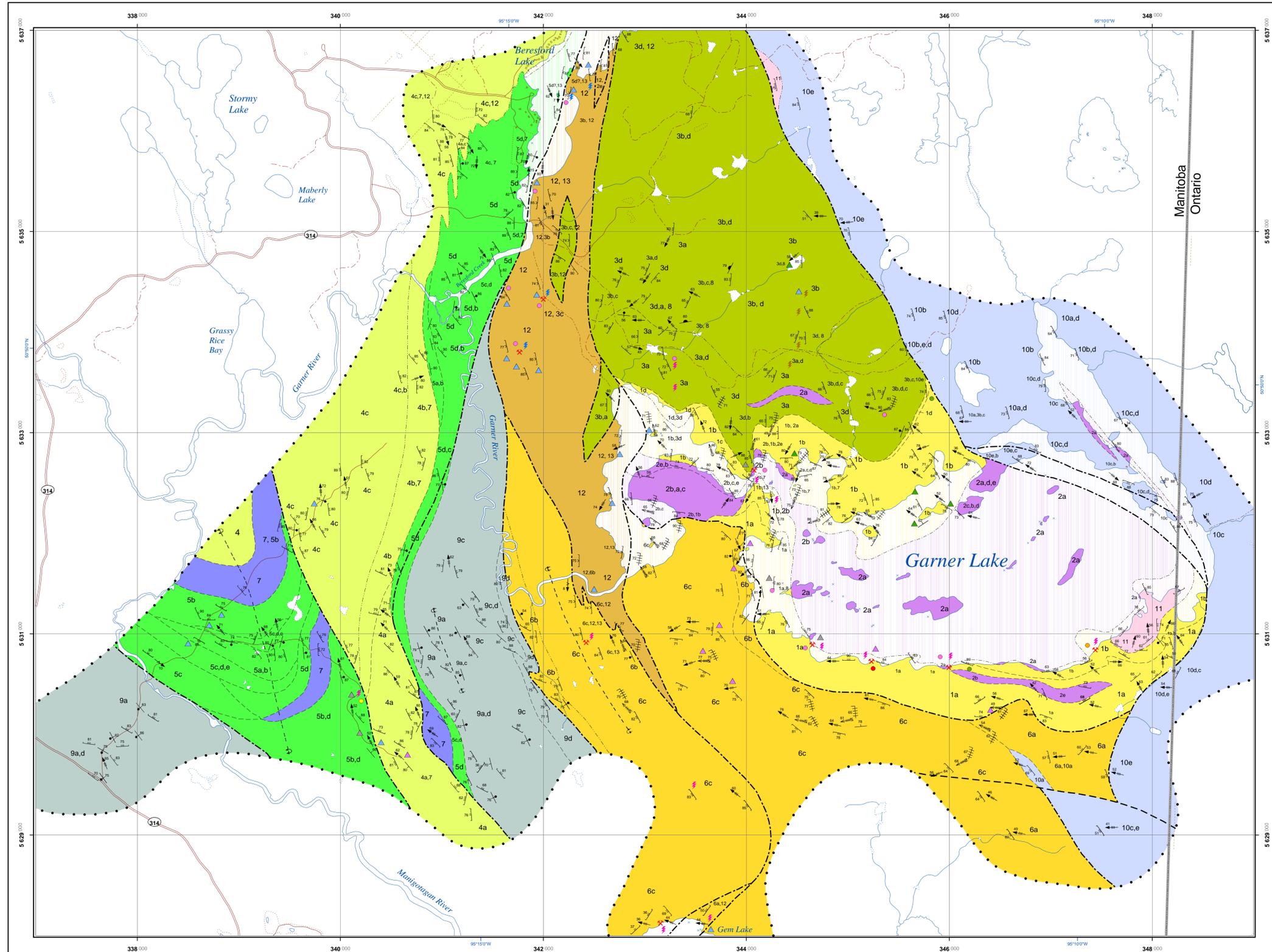




Geology and structure of the Garner Lake area, southeast Rice Lake greenstone belt, Manitoba (part of NTS 52L14)



Legend

- 13** Diorite
post-tectonic dikes cutting 12
- 12** Chlorite-sericite ± ankerite schist
- 11** Biotite leucogranite
- 10** **Northeast arm gneiss belt**
10a) hornblende-biotite granodiorite, quartz diorite or tonalite, locally feldspar porphyritic
10b) biotite ± hornblende leucogranite, locally feldspar porphyritic
10c) gabbroic orthogneiss (mainly derived from 2b,c)
10d) granitoid orthogneiss, with minor amphibolite
10e) amphibolite, amphibolite-facies tectonite
- 9** **Edmunds Lake unit (<2705 Ma)**
9a) thin-bedded siltstone, greywacke, mudstone and chert, with minor iron formation
9b) massive to pillowed volcanic sandstone, with minor siltstone, mudstone and pebble conglomerate
9c) massive to very thick-bedded quartzose arenite, with minor conglomerate and thin-bedded siltstone
9d) polymictic pebble to cobble conglomerate and quartzose arenite, with minor siltstone
- 8** Feldspar ± quartz porphyry
- 7** Gabbro
- 6** **Garner River unit (ca. 2730-2720 Ma?)**
6a) massive intermediate volcanic sandstone, with minor pebbly sandstone beds
6b) thin-bedded feldspathic wacke and siltstone
6c) heterolithic andesite breccia, tuff breccia and conglomerate, minor felsic tuff
- 5** **Manigotagan River unit (<2725 Ma)**
5a) massive to pillowed basalt or andesite flows, typically quartz-amygdaloidal
5b) basalt or andesite volcanic breccia and lapilli tuff, with local agglomerate
5c) polymictic volcanic conglomerate and sandstone
5d) thin-bedded feldspathic greywacke, siltstone, mudstone and chert; minor pebble conglomerate
5e) feeder dikes to 5a (fine-grained, with well-developed chilled margins)
- 4** **The Narrows Formation (ca. 2731 Ma)**
4a) dacite volcanic breccia, tuff breccia, lapilli tuff and thinly-layered crystal tuff (weakly feldspar-phyric, typically light grey to white weathering)
4b) dacite volcanic breccia, tuff breccia, and lapilli tuff (strongly feldspar-phyric, typically dark grey weathering)
4c) heterolithic pebble to boulder volcanic conglomerate and sandstone, minor tuff breccia
- 3** **Garner Lake extrusive complex (ca. 2870 Ma)**
3a) massive komatiite flows (local spinifex texture), minor flow breccia
3b) massive to pillowed Mg-tholeiite flows, minor flow breccia
3c) iron formation, chert
3d) synvolcanic gabbro, commonly glomeroporphyritic
- 2** **Garner Lake intrusive complex (2870 Ma)**
2a) pyroxenite, peridotite, and serpentinized equivalents
2b) melanocratic gabbro
2c) leucocratic gabbro
2d) pegmatitic leucogabbro
2e) hornblende-biotite quartz diorite and tonalite
- 1** **Garner Narrows unit (ca. 2883-2898 Ma)**
1a) pebble and cobble volcanic conglomerate (mainly intermediate volcanic detritus)
1b) dacite to rhyodacite volcanic breccia and tuff breccia, with minor lapilli tuff and tuff
1c) thin-bedded quartzite, iron carbonate, and ferruginous argillite
1d) iron formation

Geology by:
S.D. Anderson (2002-2003)

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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
Anderson, S.D. 2003: Geology and structure of the Garner Lake area, southeast Rice Lake greenstone belt, Manitoba (part of NTS 52L14); Manitoba Industry, Trade and Mines, Manitoba Geological Survey, Preliminary Map PMAP2003-1, scale 1:20 000.

Symbols

- Bedding**
 - upright
 - overturned
 - facing unknown
- Pillows**
 - upright
- Foliation**
 - generation 2
 - generation 3
 - generation 4
 - generation 5
- Minor fold axial plane**
 - generation 4
- L-fabric**
 - generation 3
 - generation 5
- Minor fold axis**
 - S asymmetric, generation 4
 - Z asymmetric, generation 4
 - symmetric, generation 4
- Geological contacts**
 - approximate
 - extrapolated
 - inferred
- Faults and shears**
 - fault (approximate)
 - shear (approximate)
- Fold axial trace**
 - overturned anticline - generation 2
 - overturned syncline - generation 2
- Other**
 - mapping limits
- Mineral occurrences**
 - chalcopyrite, molybdenite
 - pyrrhotite
 - arsenopyrite
 - pyrite
 - pyrite, Au
- Workings**
 - working
- Veins**
 - ankerite vein
 - magnesite vein
 - quartz vein
- Alteration occurrences**
 - ankerite alteration
 - epidote alteration
 - sericite alteration
 - silica alteration
- Other Features**
 - Reefs
 - Cutline
 - Pits, tailings
 - Dock, quay
 - Provincial road
 - Gravel road
 - Track
 - Trail
 - Manitoba-Ontario boundary

