

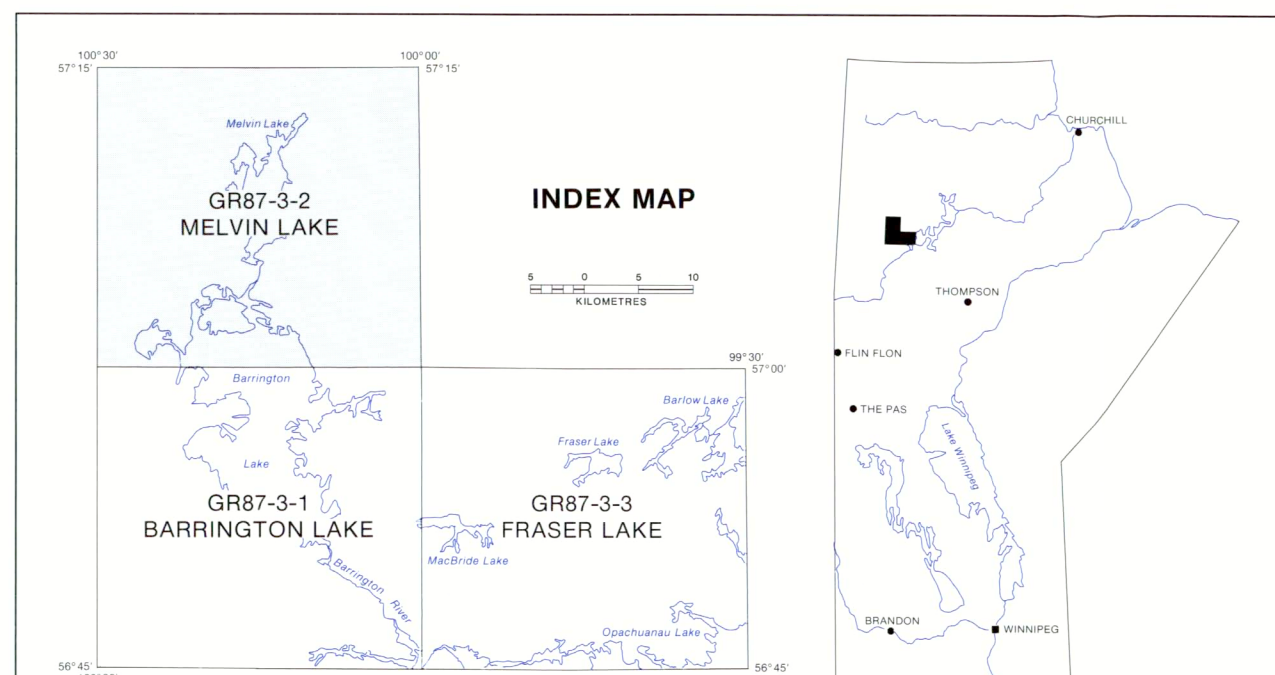


SYMBOLS

- Area of outcrop
- Outcrop
- Probable outcrop
- Frost-heaved blocks
- Geological contact (defined, approximate, assumed, underwater, gradational)
- Limit of geological mapping
- Fault (defined, inferred)
- Axial trace of syncline, approximate
- Axial trace of synform, approximate
- Minor fold axis (inclined, vertical)
- Minor fold axial plane (inclined, vertical)
- Minor fold symmetry (symmetrical, asymmetrical S-shaped, asymmetrical Z-shaped)
- Minor fold, e.g., asymmetrical S-fold with axis plunging 45 degrees and axial plane dipping 60 degrees
- Bedding, tops known (inclined, dip unknown)
- Bedding, tops unknown (inclined)
- Igneous layering, tops known (inclined)
- Igneous layering, tops unknown (inclined, vertical, dip unknown)
- Inclusion layering, inclined
- Foliation (inclined, vertical, dip unknown)
- Cataclastic foliation, inclined
- Foliation and parallel primary layering, inclined
- Rodding, inclined
- Mineralization
- Reef
- Rapids
- Swamp
- Pyrite

The corresponding sheet of the National Topographic Series is 64F-1

The magnetic declination at the centre of the map is approximately 9°48' East (1991) and is decreasing by 11.0' annually



LEGEND

PRECAMBRIAN

PRE- AND POST-SICKLE GROUP INTRUSIVE ROCKS

- 11 Granite and granodiorite, medium grained to pegmatitic; related cataclasis
- 10 Gabbro, norite, amphibolite and related gneiss; hornblende, diabase and minor diorite; 10a norite, gabbro, minor gabbro; hornblende gabbro, biotite-hornblende gabbro, 10b pegmatitic hornblende gabbro; 10c amphibolite, garnet amphibolite and hornblende gneiss; 10d hornblende, biotite hornblende; 10e diabase, related amphibolite and schist; 10f diorite, biotite diorite
- 9 Massive to gneissoid tonalite, quartz diorite, diorite and related gneiss; granodiorite, granite, pegmatite and aplite; 9a tonalite, quartz diorite; 9a1 biotite tonalite and quartz diorite; 9a2 hornblende tonalite and quartz diorite; 9b porphyritic tonalite, quartz diorite; 9c diorite; 9d layered dioritic quartz diorite gneiss; 9e granodiorite; 9f granite; 9g porphyritic granodiorite and granite; 9h granitic pegmatite and aplite; 9i granite and granite gneiss, massive to porphyritic; pegmatite and alkali
- 9-1-5 9i migmatitic tonalite and granodiorite with inclusions of 4 and 5; 9k granitoid rocks with subordinate enclaves of units 1 to 5
- 8 Quartz-plagioclase porphyry, felsite, tonalite; 8a quartz-plagioclase porphyry; 8b felsite; 8c fine grained tonalite and porphyritic tonalite

SICKLE GROUP

- 7 Conglomerate with quartz-feldspar porphyry, sedimentary, volcanic and granitoid clasts; sandstone; 7a conglomerate, arkose matrix; 7b arkose sandstone, pebbly sandstone

SICKLE OR WASEKAN GROUP

- 6 Conglomerate, feldspathic greywacke and siltstone; 6a polymictic conglomerate with minor feldspathic greywacke interlayers; 6b feldspathic greywacke, siltstone, minor amphibolite

ROCKS OF PROBABLE WASEKAN AGE

- 5 Amphibolite, schist, gneiss and related migmatite; 5a amphibolite, hornblende-plagioclase gneiss and migmatite; 5b mafic to intermediate schist and gneiss; 5c intermediate to felsic schist and gneiss
- 4 Paragneiss, schist and related migmatite; 4a psammite gneiss; 4b semipelite gneiss; 4c pelitic gneiss; 4d sillimanite gneiss and schist; 4e hornblende-plagioclase-biotite gneiss

WASEKAN GROUP

- 3 Sedimentary rocks: 3a greywacke, siltstone; 3b conglomerate; 3b1 polymictic volcanic breccia; 3c argillite; 3d hematite-magnetite-bearing iron formation
- 2 Intermediate to felsic volcanic extrusive, intrusive and fragmental rocks: 2a aphyric rhyolite and dacite; 2a1 aphyric rhyolite; 2b porphyritic rhyolite and dacite; 2b1 porphyritic rhyolite; 2b2 porphyritic dacite; 2c intermediate to felsic volcanic breccia and lapilli tuff; 2d intermediate to felsic tuff; 2d1 intermediate tuff, lapilli tuff; 2d2 felsic tuff
- 1 Mafic to intermediate volcanic extrusive and fragmental rocks; minor gabbro and diabase; 1a aphyric and porphyritic basalt, andesite, and related flow gabbro and diabase; 1a1 aphyric basalt; 1a2 porphyritic plagioclase (hornblende) basalt and andesite; 1a3 mafic flow breccia; 1b porphyritic hornblende basalt; 1c pillowed porphyritic and aphyric basalt; 1d massive porphyritic and aphyric andesite; 1e mafic tuff and crystal tuff; 1f1 intermediate tuff; 1f mafic to intermediate lapilli tuff; 1f2 mafic to intermediate pyroclastic breccia; 1f3 gabbro, quartz gabbro, diabase; 1f4 aphyric basalt; 1f5 pillowed aphyric basalt; 1f6 pillow breccia, hyaloclastite; 1f7 mafic tuff
- W Undifferentiated volcanic and sedimentary rocks (Wasekan Group) after Crombie (1948), Stanton (1948) and Milligan (1960)

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NOTES

- 1 The ages of units 9 to 11 relative to the Sickle Group are uncertain. Unit 10 (Melvin Lake north), containing younger granitoid intrusions (11), is interpreted as post-Sickle. Unit 9 is interpreted as older than the Melvin Lake north (10), but some phases may be relatively younger (e.g. pegmatites (9h) that in part may be equivalent to unit 11).
- 2 Conglomerate (6a) is considered to be late Wasekan or Sickle age and to overlie paragneisses (4) on the basis of regional stratigraphic relationships (Gilbert et al., 1980).

REFERENCE

Gilbert, H.P., Syme, E.C., and Zwanzig, H.V.
1980. Geology of the metavolcanic and volcanoclastic metasedimentary rocks in the Lynn Lake area, Manitoba Energy and Mines, Geological Paper GP80-1, 118p.

MAP GR87-3-2

MELVIN LAKE

Scale 1:50 000

