

Legend

Post-Sickle intrusive rocks (<1860 to 1800 Ma)

- 22** Quartz porphyry, quartz-feldspar porphyry, tonalite, and diabase
- a) Quartz porphyry, quartz-feldspar porphyry
 - b) Fine-grained tonalite, porphyritic tonalite
 - c) Diabase
- 21** Aplitic, aplitic granite, pegmatite, and graphic granite
- a) Aplitic, aplitic granite
 - b) Pegmatite, graphic granite
- 20** Granite, granodiorite
- 19** Quartz diorite, tonalite, granodiorite, and dioritic gneiss; migmatite
- a) Hornblende-biotite granodiorite
 - b) Tonalite, quartz diorite
 - c) Layered dioritic and quartz dioritic gneiss
 - d) Migmatite with granitoid rocks and enclaves of units 4 to 9
- 18** Gabbro, minor ultramafic rock, diabase, diorite, and plutonic breccia
- a) Gabbro, minor ultramafic rock
 - b) Diabase
 - c) Diorite
 - d) Plutonic breccia

Sickle group (~1860 to 1830 Ma?)

- 17** Sandstone, greywacke, derived schist and gneiss
- a) Arkosic sandstone, pebbly sandstone
 - b) Muscovite-bearing arkose, pebbly arkose
 - c) Greywacke
 - d) Hornblende-bearing psammitic gneiss, calcareous sandstone
 - e) Biotite-bearing psammitic gneiss
 - f) Quartz-feldspar-muscovite schist, arkosic sandstone
 - g) Sillimanite-bearing arkosic gneiss
- 16** Polymictic conglomerate with quartz-feldspar porphyry, sedimentary, volcanic and granitoid clasts
- a) Conglomerate, arkose matrix
 - b) Conglomerate, greywacke matrix; hornblende

Burntwood group (~1845 to 1835 Ma)

- 15** Greywacke, siltstone, mudstone, and minor volcanic rocks; migmatite
- a) Biotite-garnet-bearing greywacke, migmatite
 - b) Biotite-sillimanite-garnet-bearing greywacke-mudstone, migmatite

Zed Lake greywacke/Ralph Lake conglomerate

- 14** Conglomerate with sedimentary, volcanic and granitoid clasts, greywacke, siltstone, schist, and migmatite
- a) Conglomerate, hornblende greywacke matrix
 - b) Conglomerate, biotite greywacke matrix
 - c) Biotite greywacke, siltstone, minor argillite
 - d) Biotite-garnet-greywacke to mudstone migmatite
 - e) Layered and massive amphibolite, calc-silicate rock

Pre-Sickle intrusive rocks (<1910 to 1870 Ma)

- 13** Granodiorite, granite, minor syenite, aplitic, pegmatite, and granite gneiss
- a) Granite, granodiorite
 - b) Pegmatite, aplitic
 - c) Syenite
 - d) Aplitic granite
 - e) Granite and granite gneiss, massive to porphyritic; pegmatite and alaskite
- 12** Diorite, quartz diorite, tonalite and granodiorite, and migmatite
- a) Diorite, quartz diorite
 - b) Hornblende-biotite tonalite, quartz diorite
 - c) Granodiorite, tonalite
 - d) Migmatite with granitoid rocks and enclaves of units 3 to 9
- 11** Gabbro, norite, diorite, ultramafic rock, diabase and related amphibolite and schist; gneiss
- a) Norite, gabbro, norite, minor gabbro, hornblende gabbro, biotite-hornblende gabbro
 - b) Pegmatitic hornblende gabbro
 - c) Amphibolite, garnet amphibolite, hornblende gneiss
 - d) Hornblende, biotite hornblende
 - e) Diabase, related amphibolite and schist
 - f) Diorite, biotite diorite
- 10** Hornblende diorite and quartz diorite
- 9** Gabbro and diabase

Structure Symbols

- Bedding: tops known, tops unknown, overturned
- Pillows: tops known, tops unknown, overturned
- Foliation: generation 1, generation 2
- Flow contact: tops known, tops unknown
- Igneous layering, tops unknown

Wasekwan tectonic collage (1910 to 1860? Ma)

- 8** Sedimentary rocks and paragneiss
- a) Pebbly greywacke, paraconglomerate
 - b) Hornblende greywacke, siltstone
 - c) Biotite greywacke, siltstone, mudstone
 - d) Quartz-rich greywacke
 - e) Siltstone and mafic mudstone
 - f) Mafic mudstone, tuff, greywacke
 - g) Argillite
 - h) Chert
 - i) Porphyroblastic schist
 - j) Iron formation
 - k) Psammitic gneiss
 - l) Semipellitic gneiss
 - m) Pelitic gneiss
 - n) Sillimanite gneiss and schist
 - o) Hornblende-plagioclase-biotite gneiss
 - p) Migmatite
- 7** Conglomerate, pebbly mudstone, and volcanic breccia
- a) Quartz-pebble conglomerate
 - b) Conglomerate with volcanic and sedimentary clasts
 - c) Pebbly mudstone
 - d) Polymictic volcanic breccia, conglomerate

Rhyolite, hyaloclastite, breccia, tuff, and felsic gneiss

- 6**
- a) Massive aphyritic rhyolite
 - b) Massive porphyritic rhyolite
 - c) Porphyritic breccia
 - d) Hyaloclastite
 - e) Tuff

Dacite, breccia, tuff, and schist

- 5**
- a) Massive aphyritic dacite
 - b) Massive porphyritic dacite
 - c) Breccia
 - d) Tuff
 - e) Altered dacite, schist

Intermediate to felsic volcanic and volcanoclastic rocks

- 4**
- a) Andesite
 - b) Porphyritic dacite
 - c) Intermediate tuff, lapilli tuff
 - d) Pyroclastic breccia

Mafic and intermediate volcanic rocks, amphibolite, schist and gneiss

- 3**
- a) Massive porphyritic and aphyric basalt and andesite
 - b) Pillowed basalt and andesite
 - c) Autoclastic breccia
 - d) Polymictic breccia
 - e) Mafic tuff
 - f) Intermediate tuff
 - g) Garnetiferous amphibolite
 - h) Andesite
 - i) Mafic to intermediate schist and gneiss
 - j) Intermediate to felsic schist and gneiss
 - k) Undivided amphibolite and intermediate rocks

Mafic volcanic rocks, tuff, breccia and amphibolite

- 2**
- a) Massive basalt
 - b) Pillowed basalt
 - c) Autoclastic breccia
 - d) Porphyritic and aphyric basalt
 - e) Tuff
 - f) Banded amphibolite, breccia
 - g) Mafic porphyry

Basalt, breccia, hyaloclastite, tuff and amphibolite

- 1**
- a) Massive basalt
 - b) Pillowed basalt
 - c) Pillow breccia, hyaloclastite
 - d) Tuff
 - e) High-magnesian basalt, tuff, ultramafic rock, amphibolite
 - f) Layered and massive amphibolite, calc-silicate rock

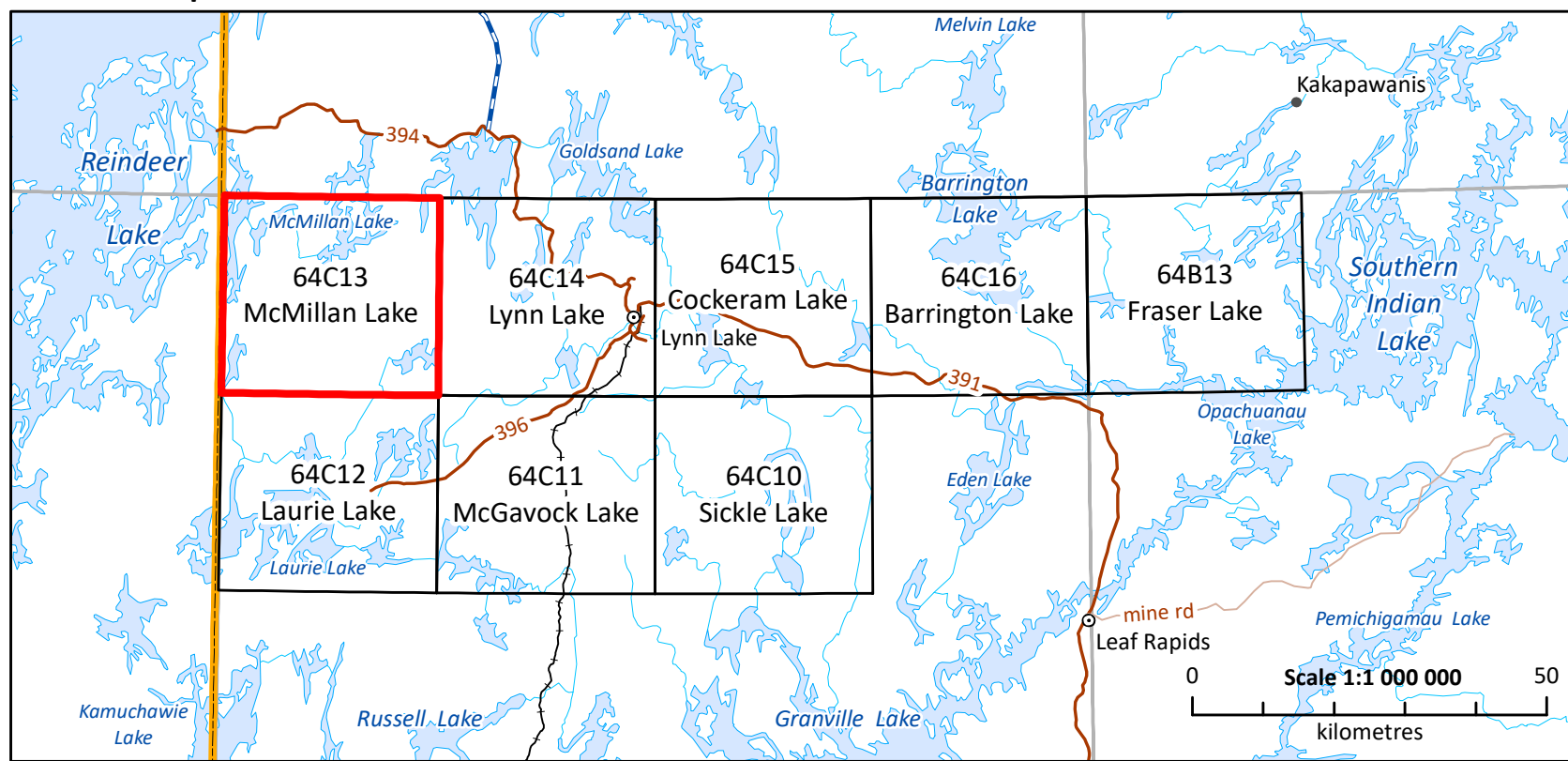
Geological symbols

- Contact: defined, approximate, assumed, assumed gradational, geophysical
- Fault, approximate
- Syncline, approximate: generation 1, overturned
- Anticline, approximate: generation 1, overturned
- Limit of exposure
- Limit of mapping
- Outcrop

Infrastructure symbols

- Road, loose surface: all-weather, winter
- Railway track
- Power line
- Trail

Location Map



References

- Cameron, H.D.M. 1980: McMillan Lake; Manitoba Energy and Mines, Mineral Resources Division, Preliminary Map 1980-1, scale 1:50 000.
- Gilbert, H.P. 1993: Geology of the Barrington Lake-Melvin Lake-Fraser Lake area; Manitoba Energy and Mines, Geological Services, Geological Report GR87-3, 97 p. plus 4 maps at 1:50 000 scale.
- Gilbert, H.P. and Syme, E.C. 1976: Lynn Lake; Manitoba Mines, Resources and Environmental Management, Mineral Resources Division, Preliminary Map 1976-2, scale 1:50 000.
- Gilbert, H.P., Syme, E.C. and Zwanig, H.V. 1980: Geology of the metavolcanic and volcanoclastic metasedimentary rocks in the Lynn Lake area; Manitoba Energy and Mines, Mineral Resources Division, Geological Paper GP80-1, 118 p.
- Gilbert, H.P., Zwanig, H.V. and McGill, B. 1977: Lynn Lake, N.T.S. part of 64C14; Manitoba Mines, Resources and Environmental Management, Mineral Resources Division, Preliminary Map 1977-4, scale 1:50 000.
- Syme, E.C. 1985: Geochemistry of metavolcanic rocks in the Lynn Lake Belt; Manitoba Energy and Mines, Geological Services, Geological Report GR84-1, 84 p. plus 1 map at 1:100 000 scale.
- Zwanig, H.V. 1978: Lynn Lake area; Manitoba Mines, Resources and Environmental Management, Mineral Resources Division, Preliminary Map 1978-1, scale 1:100 000.

Published by:

- Manitoba Agriculture and Resource Development, Manitoba Geological Survey, 2021
- ISBN: 978-0-7711-1616-2
- Copies of this map can be obtained from:
- Manitoba Agriculture and Resource Development
- Manitoba Geological Survey, Publication Sales
- 360-1395 Ellice Avenue
- Winnipeg, MB R3G 3P2 Canada
- Phone: 204-945-6569
- Toll free: 1-800-223-5215
- Email: mineinfo@gov.mb.ca
- Available for free download at www.manitoba.ca/minerals

Lynn Lake Bedrock Compilation Map 64C13

McMillan Lake, Manitoba (NTS 64C13)

