

Legend

Neoproterozoic

- Late intrusive rocks
 - 9 Pegmatite
- Inconnu pluton II
 - 8 Gneissic granodiorite and granite, fine to coarse grained, strongly foliated, with west-east amphibole muscovite pegmatite
- Inconnu pluton I
 - 7 Granodiorite and granite, medium to very coarse grained, locally porphyritic, pinkish granodiorite and granite (amphibole/biotite/muscovite)
- TTG suite (includes Maskwa Lake batholith II)
 - 7 Tonalite, trondhjemite, granodiorite, minor quartz diorite and quartz-feldspar porphyry (TTG): medium to coarse grained, locally porphyritic (amphibole/biotite/orthopyroxene)
- Gabbroic intrusions
 - 6 Gabbro, with locally leucocratic to melanocratic varieties (includes New Manitoba Mine, Cat Lake and other smaller intrusions): medium grained, locally fine to coarse grained
- Euclid Lake intrusion
 - 6 Leucogabbro to gabbroic anorthosite (Euclid Lake intrusion): coarse to very coarse grained, locally megacrystic (274x111 Ma²)
 - 4 Pyroxenite, amphibolite (Euclid Lake intrusion): coarse to very coarse-grained, amphibolite and/or pyroxenite, olivine pyroxenite, and minor chromite
- Euclid Lake formation
 - 3 Lithic gneiss, siltstone, arkose, arenite; minor iron formation: fine- to medium-grained, dark-grey metavolcanic sandstone, and intercalated mafic rocks
- MORB-type formation
 - 2 MORB-type basalt and syenitic gabbro: aphanitic, very fine- to fine-grained, pillow to massive, aphyric basalt; minor plagioclase-phyric basalt; fine- to medium-grained syenitic gabbro and quartzite

Mesoproterozoic

- Maskwa Lake batholith I
 - 1 Older granitoids (Maskwa Lake batholith I): medium- to coarse-grained, locally porphyritic granite, granodiorite, tonalite and quartz diorite (2632-310.9 Ma², 2644-12 Ma², 2652.8-1.1 Ma²), and related gneiss

Structure symbols

- Beeding
- Cleavage
- Mylonitic foliation
- Dike margin
- Fold hinge
- Contact
- Foliation
- Fault plane: dextral, sense unknown
- Crenollosity, schistosity
- Igneous layering
- Joint, fracture
- Mineral lineation
- Shear band: dextral, sinistral, sense unknown
- Vein margin
- Shear zone: dextral, sinistral, sense unknown

Geological boundaries

- Geological contact, defined
- Geological contact, inferred
- Fault, defined or inferred from topographic and/or geophysical data
- Limit of mapping

Mafic-ultramafic intrusions

- ELI Euclid Lake intrusion
- CLI Cat Lake intrusion
- NMMI New Manitoba Mine intrusion

Mineral deposits/occurrences

- 1 Euclid Lake chrome deposit
- 2 New Manitoba mine (Cu-Ni deposit)
- 3 Igou rare-metal pegmatite deposit
- 4 Cat Lake Au-Ag deposit
- 5 Acme Ni-Cu occurrence

Other symbols

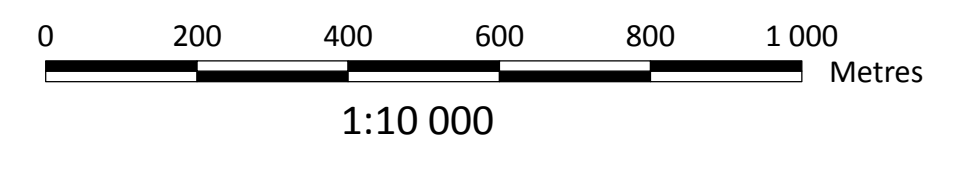
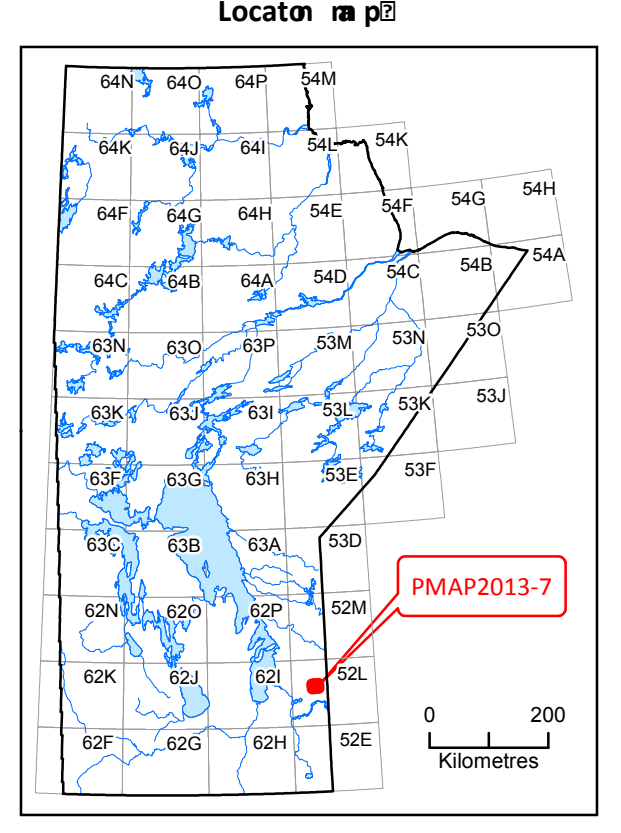
- Major road, loose surface
- Minor road, loose surface
- Trail

Preliminary Map PMAP2013-7

Manitoba

¹Wang, 1993; ²Houli et al., 2013; ³Gilbert et al., 2008

Bedrock geology of the Cat Lake-Euclid Lake area, Bird River greenstone belt, southeastern Manitoba (parts of NTS 52L11, 12)



Geology by: X.M. Yang
 GIS Cartography by L.E. Chackowsky
 Published by:
 Manitoba Mineral Resources
 Manitoba Geological Survey, 2013.

This map is available to download free of charge at www.manitoba.ca/minerals/; to purchase a print copy contact Publications Sales at 1-800-231-5215 or (204) 945-4154 or minresinfo@gov.mb.ca.

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, authoritative map of the area.

SUGGESTED REFERENCE:
 Yang, X.M., 2013: Bedrock geology of the Cat Lake-Euclid Lake area, Bird River greenstone belt, southeastern Manitoba (parts of NTS 52L11, 12); Manitoba Mineral Resources, Manitoba Geological Survey, Preliminary Map PMAP2013-7, scale 1:110 000.

REFERENCES

Bannatyne, B.B. and Trueman, D.L., 1982: Chromite reserves and geology of the Bird River Silt, Manitoba; Manitoba Energy and Mines, Mineral Resources Division, Open File Report OR82-1, 73 p.

Cerny, P., Trueman, D.L., Zehlike, D.V., Goad, B.E. and Paul, B.J., 1981: The Cat Lake-Winnipeg River and the Wekwaka Lake pegmatite fields, Manitoba; Manitoba Energy and Mines, Mineral Resources Division, Economic Geology Report ER80-1, 216 p.

Duguet, M., Liu, S., Davis, D.W., Corkery, M.T. and McDonald, J., 2009: Long-lived transpression in the Archean Bird River greenstone belt, western Superior Province, southeastern Manitoba; Precambrian Research, v. 176, no. 3-4, p. 383-407.

Gilbert, H.P., 2008: Geology of the west part of the Bird River area, southeastern Manitoba (NTS 52L15), Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, Preliminary Map PMAP2008-6, 1 colour map, scale 1:200 000.

Gilbert, H.P., Davis, D.W., Duguet, M., Kremer, P.D., Meslin, C.A. and MacDonald, J., 2008: Geology of the Bird River Belt, southeastern Manitoba (parts of NTS 52L5, 6), Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, Geoscientific Map MGP2008-1, scale 1:50 000 (plus notes and appendix).

Houli, M.C., Mitchell, V.J., Okcu, V., Yang, X.M. and Gilbert, H.P., 2013: New age for the Mayville intrusion: implication for a large mafic-ultramafic event in the Bird River greenstone belt, southeastern Manitoba (abstract); Geological Association of Canada - Mineralogical Association of Canada, Joint Annual Meeting, Winnipeg, Manitoba, May 22-24, 2013, Program with Abstracts, p. 115.

Manitoba Energy and Mines 1987: Pointe du Bois, NTS 52L, Manitoba Energy and Mines, Minerals Division, Bedrock Geology Compilation Map Series, NTS 52L, preliminary edition, scale 1:250 000.

Springer, G.D., 1949: Geology of the Cat Lake - Winnipeg River Area; Manitoba Mines Branch, Preliminary Report and Map 48-7, 15 p.

Theyer, P., 1994: Mineral deposits and occurrences in the Flinstone Lake area, NTS 52L/11, Manitoba Energy and Mines, Geological Services, Mineral Deposit Series Report No. 22, 60 p., + 1 map at 1:50 000.

Trueman, D.L., 1980: Stratigraphy, structure and metamorphic geology of the Archean greenstone belt at Bird River, Manitoba; Ph.D. thesis, University of Manitoba, Winnipeg, Manitoba, 150 p.

Trueman, D.L. and Macke, J.J., 1971: Geology of the Bird River Silt; Manitoba Mines Branch, Preliminary Map 1971-0-1.

Wang, X., 1993: U-Pb zircon geochronology study of the Bird River greenstone belt, southeastern Manitoba; M.Sc. thesis, University of Windsor, Windsor, Ontario, 96 p.

Yang, X.M., 2012: Bedrock geology of the Cat Lake area, Bird River greenstone belt, southeastern Manitoba (part of NTS 52L12); Manitoba Innovation, Energy and Mines, Manitoba Geological Survey, Preliminary Map PMAP2012-3, scale 1:12 500.