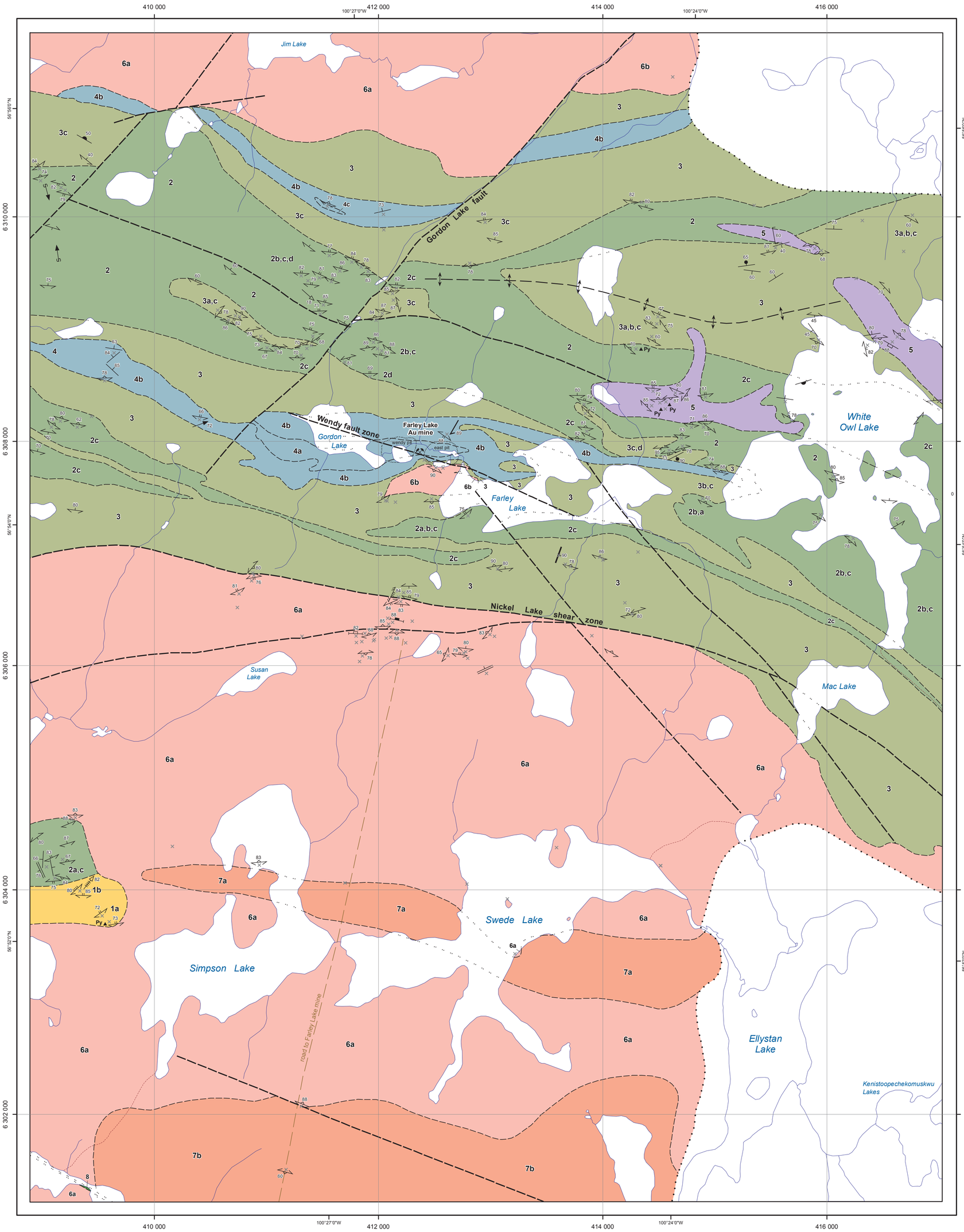
Preliminary Map PMAP2016-5

Bedrock geology of the Farley Lake area, Lynn Lake greenstone belt, northwestern Manitoba (part of NTS 64C16)



The magnetic declination in 2016 at the centre of the map is 5°19.80' East, and annual change 6.8' West.

NAD 1983 UTM Zone 14N

Scale 1:20 000

0 1 2 3 4

kilometres

Legend

Mesoproterozoic

8 Mackenzie dike (1267 Ma[1])

Paleoproterozoic

Post-Sickle intrusive suite

7 Granodiorite, granite and leucogranite
- 7a Granite and leucogranite
- 7b Granodiorite

Pre-Sickle intrusive suite

6 Gabbro, diorite, quartz diorite, tonalite, granodiorite and granite (1876 +8/-6 Ma[2]), and associated pegmatitic and aplitic dikes
- 6a Tonalite, granodiorite, granite and associated pegmatitic and aplitic dikes
- 6b Diorite, quartz diorite and minor gabbro

5 Gabbro (amphibolite)

Wasekwan group

4 Sedimentary rocks intercalated with minor volcaniclastic rocks
- 4a Argillite, metasiltstone and metagreywacke
- 4b Banded iron formation
- 4c Volcanic mudstone and sandstone

3 Mafic to intermediate volcanic rocks and synvolcanic intrusive rocks
- 3a Diabase and leucogabbroic dikes
- 3b Porphyritic basaltic andesite
- 3c Plagioclase-phyric basalt and aphyric basalt
- 3d Mafic autobreccia

2 Volcaniclastic rocks with minor volcanic sedimentary rocks
- 2a Felsic lapilli tuff and tuff
- 2b Intermediate lapillistone, lapilli tuff and tuff
- 2c Mafic lapillistone, mafic lapilli tuff, tuff and minor mafic mudstone
- 2d Mafic tuff breccia and breccia

1 Felsic intermediate volcanic and volcaniclastic rocks
- 1a Rhyolite and dacite (1881-1884 Ma[3,4])
- 1b Felsic to intermediate volcaniclastic rocks

Structural symbols

- Foliation: generation unknown, 1, 2, 3, 4
- Pillow: top known
- Bedding: tops unknown, known
- Crenulation cleavage: generation 4
- Shear zone: generation unknown, sense unknown
- Fault: generation unknown, sense unknown
- Igneous layering: top unknown
- Dike
- Joint
- Slicken striae
- Vein
- Intersection lineation: generation unknown, 4
- Fold axis (symmetrical): generation unknown
- Fold axis (S asymmetry): generation unknown

Symbols

- Geological contact: approximate
- Geological contact: underwater
- Fault (based on geophysical data)
- Anticline
- Limit of mapping
- Py (pyrite)
- Farley Lake mine
- Outcrop

Note: structural symbols without "×" are from Gilbert (1993) and Gilbert et al (1980).

References

(1) Baragar, W.R.A., Ernst, R.E., Hulbert, L. and Peterson, T. 1996: Longitudinal petrochemical variation in the Mackenzie dyke swarm, northwestern Canadian Shield; Journal of Petrology, v. 37, p. 317–359.

(2) Baldwin, D.A., Syme, E.C., Zwanzig, H.V., Gordon, T.M., Hunt, P.A. and Stevens, R.P. 1987: U-Pb zircon ages from the Lynn Lake and Rusty Lake metavolcanic belts, Manitoba: two ages of Proterozoic magmatism; Canadian Journal of Earth Sciences, v. 24, p. 1053–1063.

(3) Beaumont-Smith, unpublished data

(4) Manitoba Geological Survey 2006: Manitoba Geochronology Database; Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, Open File OF2006-34, digital web release, version 1.51, December 2006, URL http://www.gov.mb.ca/iem/info/libmin/OF2006-34.zip [October 2016].

Includes geology compiled from

Beaumont-Smith, C.J., Lentz, D.R. and Tweed, E.A. 2000: Structural analysis and gold metallogeny of the Farley Lake gold deposit, Lynn Lake greenstone belt (NTS 64C/16); *in* Report of Activities 2000, Manitoba Industry, Trade and Mines, Manitoba Geological Survey, p. 73–81.

Beaumont-Smith, C.J. and Böhm, C.O. 2004: Structural analysis of the Lynn Lake greenstone belt, Manitoba (NTS 64C10, 11, 12, 14, 15 and 16); *in* Report of Activities 2004, Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, p. 55–68.

Gilbert, H.P. 1993: Geology of the Barrington Lake-Melvin Lake-Fraser Lake area; Manitoba Energy and Mines, Geological Report GR87-3, 97 p.

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Peck, D.C., Lin, S., Atkin, K. and Eastwood, A.M. 1998: Reconnaissance structural studies of Au metallotects in the Lynn Lake greenstone belt (parts of NTS 64C/10, C/11, C/15); *in* Report of Activities 1998, Manitoba Energy and Mines, Geological Services, p. 69–74.

Geology by X.M. Yang and C.J. Beaumont-Smith (2016)

Cartography by M.E. McFarlane

Recommended reference:
Yang, X.M. and Beaumont-Smith, C.J. 2016: Bedrock geology of the Farley Lake area, Lynn Lake greenstone belt, northwestern Manitoba (part of NTS 64C16); Manitoba Growth, Enterprise and Trade, Manitoba Geological Survey, Preliminary Map PMAP2016-5, scale 1:20 000.

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.

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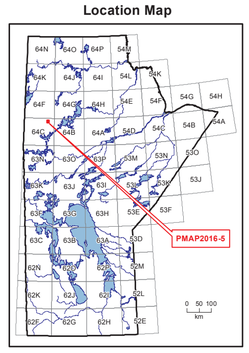
Location Map



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