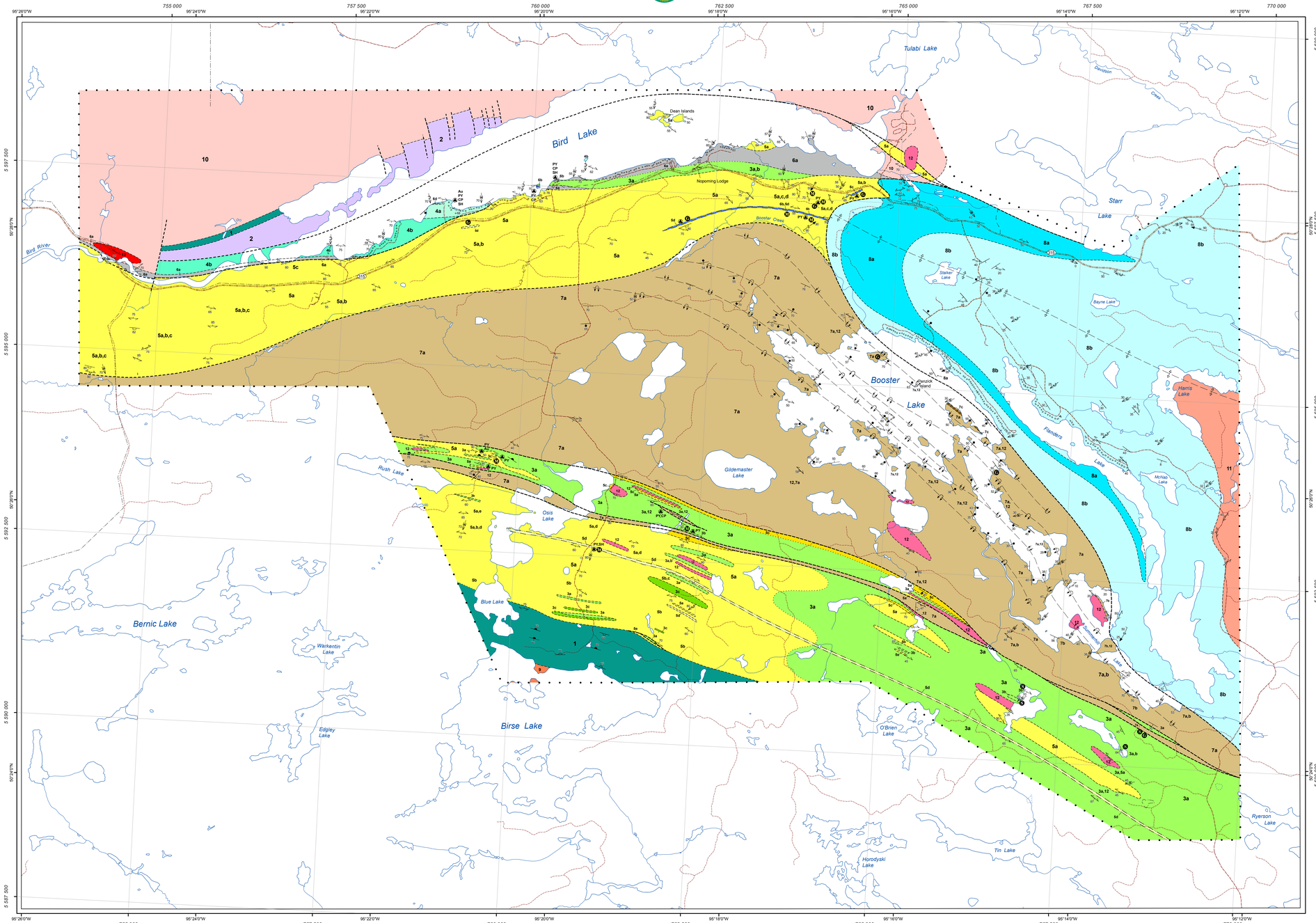
Geology of the east-central part of the Bird River area, Manitoba (NTS 52L6N)



LEGEND

ARCHEAN

Intrusive rocks (<2729 ±9 Ma; includes some older rocks)

- 13 Quartz-feldspar porphyry
- 12 Pegmatite, pegmatitic granite
- 11 Granite, granodiorite (Marijane Lake pluton)
- 10 Tonalite, granodiorite (Maskwa Lake Batholith)
- 9 Tonalite, granodiorite (Birse Lake pluton)

Sedimentary rocks

Flanders Lake Formation (<2697 ±18 Ma)

- 8a Polymictic conglomerate
- 8b Arenite, feldspathic wacke

Booster Lake Formation (<2712 ±17 Ma)

- 7a Greywacke, siltstone, quartz wacke; minor argillitic siltstone and cherty siltstone
- 7b Intermediate to felsic paragneiss
- 7c Volcanic-derived conglomerate

Arc-type volcanic and sedimentary rocks

Sedimentary rocks

- 6a Greywacke, siltstone; minor quartz wacke, argillitic siltstone and chert
- 6b Oxide-facies iron formation
- 6c Sulphide-facies iron formation
- 6d Arkeritic siltstone with chloritic schist laminae

Felsic volcanic rocks (2740 ±4 Ma)

- 5a Rhyolite, dacite, massive to fragmental; related intrusive rocks
- 5b Heterolithic felsic volcanic breccia, lapilli tuff and tuff
- 5c Felsic tuff, locally reworked
- 5d Altered felsic volcanic rocks, silicified and/or hornblende porphyroblastic ± garnet
- 5e Felsic gneiss, volcanic-derived

Intermediate volcanic rocks

- 4a Heterolithic volcanic breccia, locally reworked
- 4b Volcanic breccia, mafic and felsic fragments

Mafic volcanic and related intrusive rocks, metamorphic derivatives

- 3a Basalt, pillowed basalt, aphyric to sparsely plagioclase-phyric, minor gabbro
- 3b Altered basalt, derived gneiss (silicified ± epidote ± hornblende ± garnet)
- 3c Gabbro, diabase

Intrusive rocks

Bird River Sill (2745 ±5 Ma)

- 2 Dunite, peridotite, picrite, anorthosite and gabbro

MORB-type mafic volcanic rocks

Lamprey Falls Formation

- 1 Basalt, pillowed basalt, related gabbro

SYMBOLS

Planar structures

- Bedding: tops unknown, upright, overturned
- Pillow: tops unknown, upright, overturned
- Foliation: generation unknown, 1st, 2nd
- Igneous layering
- Minor fold axial plane: generation unknown, 1st
- Shear zone
- Dike

Linear structures

- Fold axis, symmetrical: generation unknown, 1st
- Fold axis, generation unknown: asymmetrical S-shaped, Z-shaped
- L-fabric: mineral lineation
- L-fabric: clast elongation

- Geological contact: approximate, assumed, inferred from aeromagnetic trends
- Axial trace of first generation anticline, overturned
- Axial trace of first generation syncline, overturned
- Axial trace of second generation anticline, upright
- Fault, inferred
- Mapping limit
- Mineralization: Au Gold; PY Pyrite; CP Chalcopyrite; SH Sphalerite
- Gossan
- Silicic alteration
- Magnetic anomaly

- Provincial road
- Gravel road
- Track or trail
- Powerline

Geology by: H.P. Gilbert (2005-2006)

Cartography by: M.E. McFarlane

Published by:
Manitoba Science, Technology, Energy and Mines
Manitoba Geological Survey, 2006

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
Gilbert, H.P. 2006: Geology of the east-central part of the Bird River area, Manitoba (NTS 52L6N); Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, Preliminary Map PMAP2006-8, scale 1:20000.

NOTES
1. All dates are U/Pb isotope ages from Wang (1993) except those for the Flanders Lake and Booster Lake formations, which are from U-Pb laser-ablation multi-collector inductively coupled plasma mass spectrometry data on zircons (Gilbert, 2006).
2. The Eaglenest Lake Formation does not occur within the mapped area and is not included in the legend.

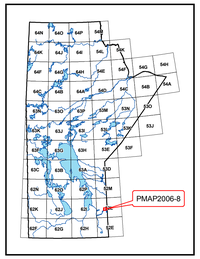
REFERENCES
Gilbert, H.P. 2006: Geological investigations in the Bird River area, southeastern Manitoba (parts of NTS 52L5N and 6); *in* Report of Activities 2006, Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, p. 184-205.

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.

500 0 500 1000 1500 2000 metres

1:20000

INDEX MAP



Manitoba