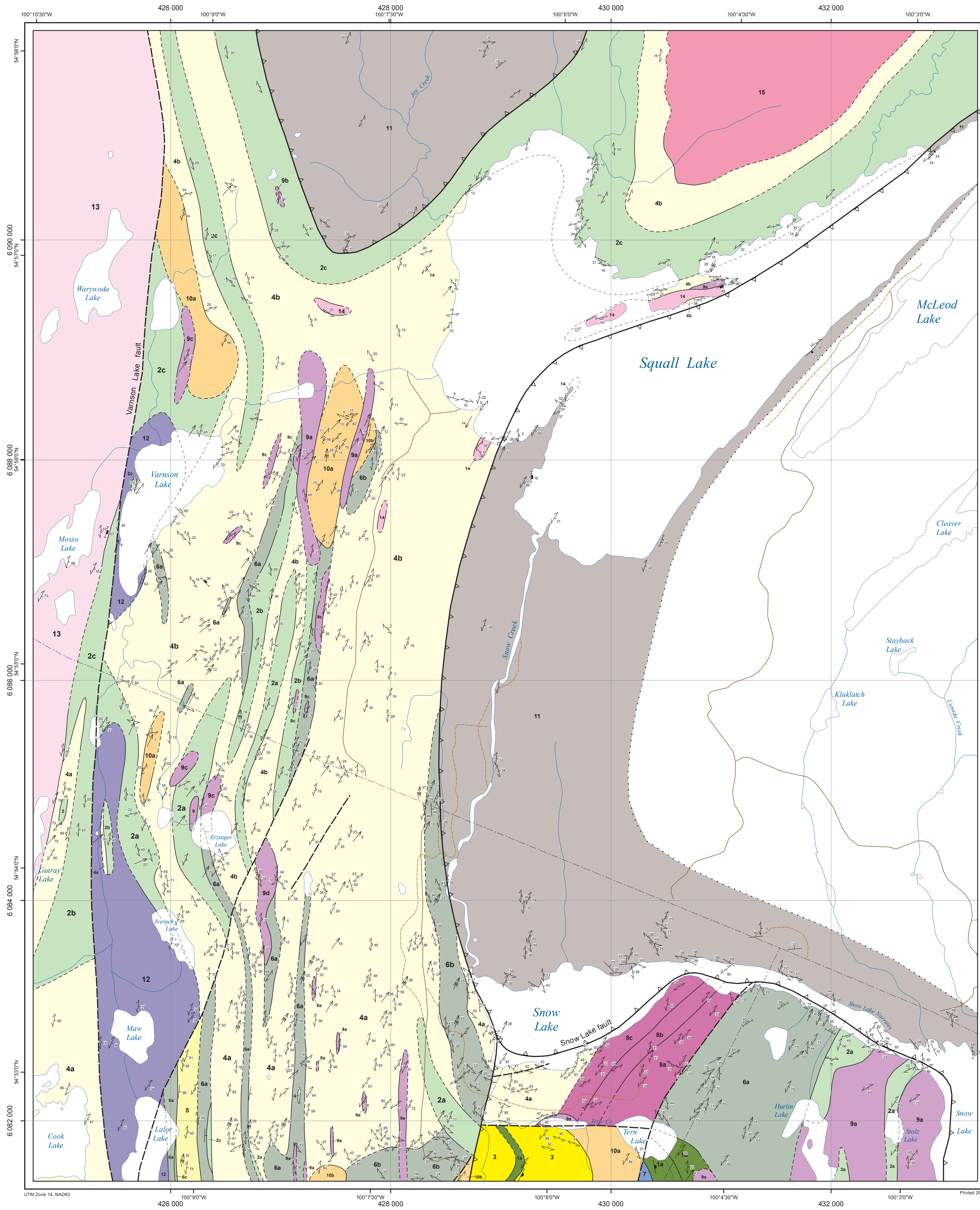




Updated geology of the Squall–Varnson lakes area, west-central Manitoba (part of NTS 63K16)



Legend

- Paleoproterozoic**
- < 1.84 Ga intrusive rocks
 - 15 Squall Lake pluton: homogeneous, foliated medium- to coarse-grained granite
 - 14 Granitic pegmatite: homogeneous, massive, microcline-plagioclase-quartz-biotite-muscovite
 - 13 Ham Lake pluton: foliated medium- to coarse-grained biotite-hornblende granodiorite and tonalite
 - 12 Chisel Lake layered ultramafic intrusion: undivided peridotite, pyroxenite, gabbro
 - Burntwood group (1.85 – 1.84 Ga)**
 - 11 Greywacke: staurolite-garnet-biotite schist; garnet-biotite schist; sillimanite-garnet-biotite schist
 - Snow Lake arc assemblage (>1.88 Ga)**

Synvolcanic intrusive rocks (may include rocks as young as 1.84 Ga)

 - 10 Quartz porphyry, quartz-plagioclase porphyry, derived gneiss
 - a) prominent phenocrysts (>1%)
 - b) aphyric to sparsely quartz-phyric
 - 9 Gabbro, diorite, quartz-diorite, derived amphibolite
 - a) fine to medium grained
 - b) medium to coarse grained
 - c) plagioclase-phyric
 - d) pyroxene-phyric, pyroxene-plagioclase-phyric
 - e) amphibolite
 - 8 Fractionated gabbro sill
 - a) medium-grained, equigranular gabbro
 - b) coarse-grained gabbro with large amphibole crystals
 - c) quartz-diorite with large amphibole crystals
 - 7 Pyroxenite, melagabbro, gabbro
 - Supracrustal rocks**
 - 6 Mafic volcanic breccia, gneiss/recrystallized
 - a) heterolithic mafic breccia
 - b) mixed mafic and felsic breccia
 - c) mafic volcanic wacke
 - 5 Rhyodacite tuff, lapilli tuff: massive, plagioclase-phyric, variably altered to hornblende (10–40%) and garnet (5–30%)
 - 4 Felsic gneiss, local amygdulites
 - a) aphyric to sparsely quartz-phyric
 - b) completely recrystallized, locally granitoid texture
 - 3 Photo Lake rhyolite: massive aphyric to sparsely plagioclase-phyric
 - 2 Aphyric mafic flows (mainly massive), mafic gneiss and amphibolite
 - a) massive flows, locally amygdaloidal, rare pillows
 - b) fine-grained mafic gneiss
 - c) amphibolite
 - 1 Porphyritic basalt flow
 - a) porphyritic
 - b) sparsely porphyritic

Symbols

- Planar structures**
- Bedding: tops unknown, known
 - Foliation: generation unknown, 1, 2, 3
 - Pillow: top known
 - Crenulation cleavage: generation unknown, 2
 - Shear zone: sense unknown, dextral
 - Fault: sense unknown, normal
 - Igneous layering: tops unknown
 - Fold axial plane: generation unknown, 2
- Linear structures**
- Intersection lineation: generation 1
 - L-fabric: generation unknown, 1, 2
 - L-fabric: mineral lineation
- Geological contact: approximate, assumed, underwater**
- Fault
 - Thrust fault
 - Limit of mapping
 - Trail
 - Dirt road
 - Transmission line

Geology by: A.H. Bailes, D.C.P. Schledewitz and S. Gagné

This map was produced using compiled geology from Bailes and Schledewitz (1999) and Schledewitz and Bailes (1998). S. Gagné also contributed new geological data acquired during a two-week field-mapping program in 2011. Geological data from NATMAP Shield Margin Project Working Group (1998) and Bailes et al. (1997) were also used to complete the map.

REFERENCES:

- Bailes, A.H. and Schledewitz, D.C.P. 1999: Geology of the Squall–Varnson lakes area (part of NTS 63K16); Manitoba Industry, Trade and Mines, Manitoba Geological Survey, Preliminary Map 1999F-1, scale 1:20 000.
- Bailes, A.H., Simms, D., Galley, A.G. and Young, J. 1997: Geological setting of the Photo Lake volcanic-hosted massive sulphide deposit, Snow Lake, Manitoba, NTS 63K16SE (part); Manitoba Energy and Mines, Geological Services Open File Report OF97-5, 1 colour map at 1:5 000 scale.
- NATMAP Shield Margin Project Working Group 1998: Geology, NATMAP Shield Margin Project area, Flin Flon Belt, Manitoba/Saskatchewan; Geological Survey of Canada, Map 1968A, 1:100 000 scale.
- Schledewitz, D.C.P. and Bailes, A.H. 1998: Compilation of the Geology of the Squall Lake area (NTS 63K16NE); Manitoba Energy and Mines, Geological Services, Preliminary Map 1998F-1, scale 1:20 000.

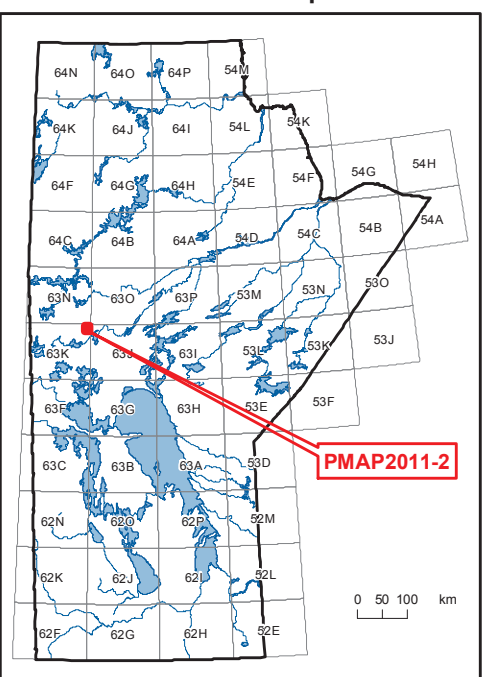
This map is a provisional summary of work carried out during the summer field season and is produced directly from the geologist's manuscript. It is not to be regarded as a final interpretation of the geology of the area.

SUGGESTED REFERENCE:

- Bailes, A.H., Schledewitz, D.C.P. and Gagné, S. 2011: Updated geology of the Squall–Varnson lakes area, west-central Manitoba (part of NTS 63K16); Manitoba Innovation, Energy and Mines, Manitoba Geological Survey, Preliminary Map PMAP2011-2, scale 1:20 000.

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Location map



Cartography by: M.E. McFarlane

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