



**Geology of the Brunne Lake area,  
Flin Flon Belt, west-central Manitoba  
(parts of NTS 63K11, 14)**

#### Legend

<b>Paleoproterozoic</b>
<1.88 Ga Intrusive rocks
9 Big Rat Lake pluton: homogeneous, massive to weakly foliated, medium- to coarse-grained syenogranite, locally pegmatitic, biotite+muscovite-bearing.
8 Gabbro: diorite to medium to coarse grained, equigranular, massive to weakly foliated, with rare angular inclusions of fine-grained mafic rocks.
7 Monzonite: homogeneous, equigranular, medium to coarse grained, biotite-bearing; massive to moderately foliated.
6 Quartz monzonite: moderately to well-foliated, equigranular to locally plagioclase-porphyritic, medium to coarse grained; hornblende-bearing; local aegirite.
5 Granodiorite to quartz diorite: massive to foliated, equigranular, medium to coarse grained; biotite+hornblende+magnetite-bearing.
<b>Supracrustal rocks (age unknown)</b>
4 Quartz porphyry, quartz-plagioclase porphyry: dikes
3 Dacite to rhyolitic crystal and lapilli tuff: massive to thinly bedded, with 5–15% plagioclase phenocrysts (0.5–3 mm), 1–3% quartz phenocrysts (0.5–2 mm).
2a Mafic volcaniclastic and sedimentary rocks: Volcanic conglomerate, heterolithic, crudely stratified, clast-supported and poorly to moderately sorted. The clasts consist of mafic to intermediate flow (mostly plagioclase-phric and aphyric) and intrusive rocks.
2b Mafic lapilli tuff: crudely-bedded, heterolithic, minor mafic ash and crystal tuff, locally contains broken quartz and epidote amygdalites.
2a Mafic ash and crystal tuff: crudely-bedded, crystal content varying from plagioclase-, to pyroxene-, to plagioclase- and pyroxene-phric.
<b>Mafic volcanic rocks and syn-volcanic intrusions</b>
1e Chalcocite basalt: aphyric, massive to pillow flows, weakly foliated, chlorite-bearing (10 – 50%).
1d Mafic tectonite: proto-mylonitic to mylonitic fabric, pervasive carbonate alteration.
1c Gabbro: fine to medium grained, equigranular, with lesser amounts of basalt.
1b Massive basalt flow: aphyric to plagioclase- to pyroxene-plagioclase-phric, locally amygdaloidal, with lesser amounts of pillow basalts and gabbro.
1a Pillowed basalt flow: aphyric to plagioclase-phric, with lesser amounts of massive basalt and gabbro.

#### Symbols

<b>Planar structure</b>
Bedding: top unknown
Foliation: generation unknown, 2
Spaced cleavage: generation unknown
Shear zone: generation unknown, known, dextral, sinistral
Vein
Joint
<b>Linear structure</b>
Mineral lineation
L-fabric: generation unknown
Fold axis: generation unknown
Fold axial plane: generation unknown
<b>Mineral occurrence</b> : reference number can be searched on the Manitoba Geological Survey GIS Map Gallery website at: <a href="http://www.manitoba.ca/en/mrdr/geo/gis/geoscience.html">http://www.manitoba.ca/en/mrdr/geo/gis/geoscience.html</a>
★ Gossan Hill prospect
△ Silicification
▽ Trench: archived, GPS
● Gossanous area
<b>Geological contacts</b>
Defined contact
Approximate contact
Underwater contact
Fault
Shear zone
Limit of mapping
<b>Cultural features</b>
Gravel road
Winter road
Railway
Abandoned railway

Gagné, S. 2012. Geology of the Brunne Lake area, Flin Flon belt, west-central Manitoba (NTS 63K11, 14). Manitoba Innovation, Energy and Mines, Manitoba Geological Survey, Preliminary Map PMAP2012-6, scale 1:10 000.

