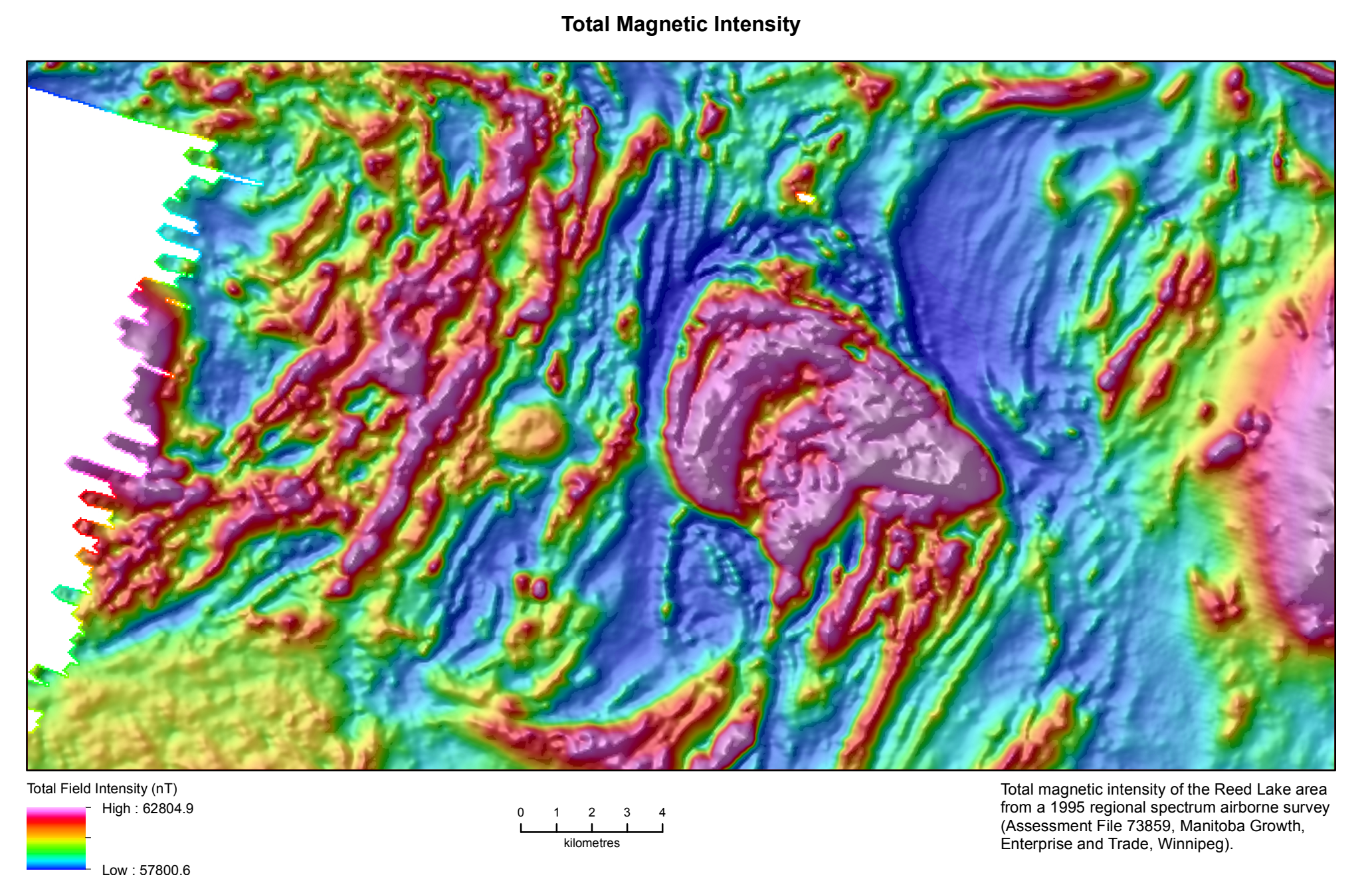


Sub-Phanerozoic geology of the Reed Lake area, Flin Flon belt, west-central Manitoba (parts of NTS 63K7, 8, 9, 10)

Scale 1:30 000



- Legend**
- Sedimentary Rocks**
Burntwood Group
 B1a Greywacke, mudstone and derived gneisses
 B1b Greywacke, siltstone, mudstone
 B1c Graphitic, sulfidic mudstone, sulfide facies iron formation, minor greywacke
- Tectonites**
Berry Creek Shear Zone
 t2 Mafic tectonite: chlorite schist, carbonates, brittle/ductile shears
- Intrusive rocks**
 P6 Granite to granodiorite
 P5 Granodiorite to tonalite
 P5a Granodiorite
 P5b Granodiorite to tonalite

- Volcanic rocks, sub-Phanerozoic**
 sJ6 Undivided bimodal juvenile-arc volcanic rocks
- Volcanic rocks, exposed basement**
 sJ5 Juvenile-arc basalt, andesite, and rhyolite volcanic and volcanoclastic rocks, minor MORB basalt
 sJ5a Juvenile-arc mafic and intermediate volcanoclastic rocks, minor mudstone-sandstone sequences
 sJ5b Juvenile-arc basalt, andesite, andesite, MORB basalt, felsic volcanic rocks
 sJ4 MORB basalt, rhyolite, and andesite with weak arc signature
 sJ3a MORB basalt, andesite with weak arc signature, massive flows and pillows, subordinate autoclastic facies, minor sulphidic mudstone
 sJ3b MORB basalt, weak-arc andesite, rhyolite flow and felsic volcanoclastic rocks
 sJ3c Calc-alkaline mafic flows, minor felsic rocks, minor MORB mafic flows
 sJ2 MORB basalt, andesite, intermediate volcanoclastic rocks, and mudstone-sandstone intervals
 sJ1 Fourmile Island Assemblage, juvenile arc
 sJ1a Basaltic andesite, andesite, minor rhyolite and quartz porphyry
 sJ1b Intermediate to mafic volcanoclastic rock, minor felsic volcanoclastic rocks and sulfidic argillites

- Juvenile-Arc rocks, exposed basement**
West Reed volcanic package
 J15 Felsic crystal tuff, lapilli tuff and tuff breccia; minor quartz-plagioclase-phyric dacitic to rhyolitic flows
 J10 Mafic volcanoclastic rocks (tuff breccia, lapilli tuff and tuff); minor basalt; massive flows and pillows
Fourmile Island assemblage
 J8 Porphyritic and aphyric felsic breccia, tuff, felsic dikes
 J6 Aphyric and porphyritic pillowed and massive basalt, basaltic andesite, andesite, high magnetic signature
Ocean Floor rocks, exposed basement
Reed Lake mafic-ultramafic complex
 F2 Layered mafic-ultramafic complex
 F2a Layered gabbro, leucogabbro, anorthosite
 F2b Layered melagabbro, gabbro, pyroxenite
 F1 N-type basalts
 F1a Northeast Reed pillowed and massive MORB basalt

- Geological Boundaries**
 - - - Contact: approximate
 - - - Fault
 - - - Thrust fault: defined, approximate
 - - - Formline
 - - - Neoline
- Drillholes**
 o Examined
 x Not Examined
- Mineral Deposit**
 ● Base metals
 - Highway 39
 - Road, gravel
 * Campground
- Geological compilation by S. Gagné (2017)**
 Geology of exposed supracrustal rocks by E.C. Syme, A.H. Bales, S.D. Lucas (1995)
 Cartography by S.K.Y. Lee
- Geological interpretation added using total and vertical gradient aeromagnetic maps (Assessment File Report 73859) and observation from examined drillcores by Gagné (2015-2017) and local (1960-1994 by McGregor, 2010). Selected historical and recent exploration drillcore from Assessment files filed with Manitoba Growth, Enterprise and Trade, Winnipeg, have also been reviewed and integrated in this compilation. Lithologies in the Reed Lake mafic-ultramafic complex are after Young (1992), Williamson (1992, 1993) and Williamson and Eckstrand (1995).
- Recommended references:
 Gagné, S. 2017. Sub-Phanerozoic geology of the Reed Lake area, Flin Flon belt, west-central Manitoba (parts of NTS 63K7, 8, 9, 10). Manitoba Growth, Enterprise and Trade, Manitoba Geological Survey, Preliminary Map PMAP2017-2, scale 1:30 000.
 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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 Available for free download at www.manitoba.ca/minerals
- Copies of this map can be obtained from:
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 300-1395 Ellice Avenue
 Winnipeg, Manitoba, R5G 3P2
- Sources of geological information:
 Gagné, S. 2015. Examination of exploration drillcore from the Reed Lake area, Flin Flon belt, west-central Manitoba (parts of NTS 63K9, 10). In Report of Activities 2015, Manitoba Mineral Resources, Manitoba Geological Survey, p. 38-51.
 Gagné, S. 2016. Examination of exploration drillcore from the Reed Lake area, Flin Flon belt, west-central Manitoba (parts of NTS 63K7, 8, 9, 10). In Report of Activities 2016, Manitoba Mineral Resources, Manitoba Geological Survey, p. 63-73.
 Gagné, S. 2017. Examination of exploration drillcore from the Reed Lake area and the sub-Phanerozoic extension of the Paleoproterozoic Flin Flon belt, west-central Manitoba (parts of NTS 63K7, 8, 9, 10). In Report of Activities 2017, Manitoba Growth, Enterprise and Trade, Manitoba Geological Survey, p. 91-103.
 McGregor, C.F. 2010. GIS compilation of relogged sub-Phanerozoic Precambrian drillcore from the Comoran and Shield Margin projects, Manitoba and Saskatchewan (parts of NTS 63J, 63K, 63L). Manitoba Mineral Resources, Energy and Mines, Manitoba Geological Survey, Open File 0P2010-2, digital map on DVD.
 Syme, E.C., Bales, A.H. and Lucas, S.B. 1995. Reed Lake, parts of NTS 63K9, 63K10, Manitoba Energy and Mines, Geological Services, Preliminary Map 1995F-1, scale 1:50 000.
- Source of geochronological data:
 Leclair, A.D., Scott, P.G. and Lucas, S.B. 1993. Sub-Phanerozoic geology of the Flin Flon belt from integrated drillcore and potential field data, Comoran Lake area, Manitoba and Saskatchewan, in Current Research, Part C, Geological Survey of Canada, Paper 93-1C, p. 249-258.

