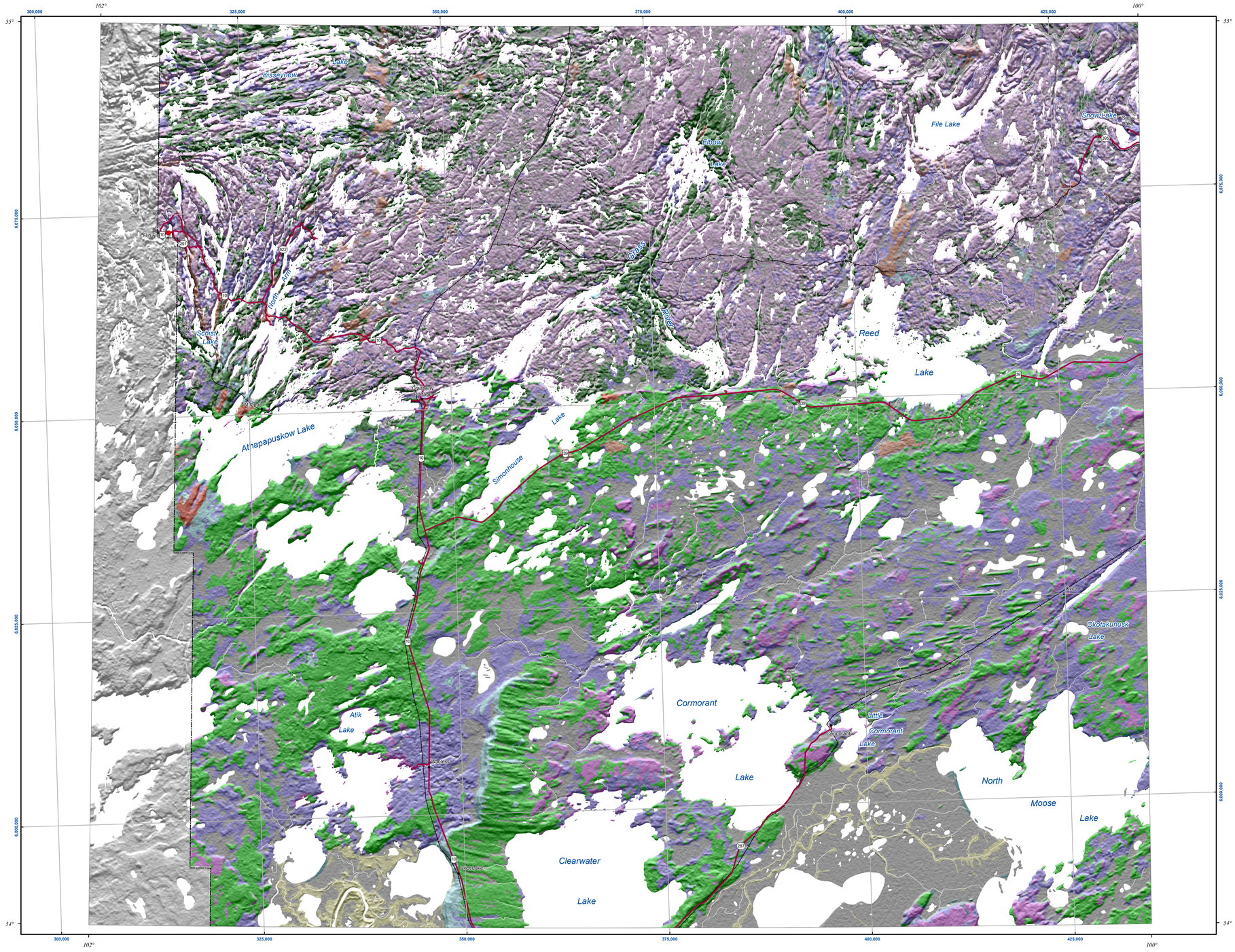

Scale 1:250 000

0 10 20 30
Kilometres

North American Datum 1983
Universal Transverse Mercator Projection, Zone 14
Shuttle Radar Topography Mission elevation data provided by NASA (2003)
100X vertical exaggeration
Approximate mean declination (2017) for centre of map is 5°58.56' E, decreasing 6.7' annually.

The DVD containing the entire Surficial Geology Compilation Map Series (2007) can be obtained from:
Manitoba Growth, Enterprise and Trade
Manitoba Geological Survey, Publication Sales
360-1395 Ellice Ave
Winnipeg, MB, R3G 3P2
Canada

Phone: (204) 945-6569
Toll free: 1-800-223-5215
E-mail: minesinfo@gov.mb.ca
This map is available to download free of charge at
www.gov.mb.ca/minerals

Suggested reference:
Gauthier, M.S., Matile, G.L.D. and Keller, G.R. 2017: Surficial geology of the Cormorant Lake map sheet (NTS 63K), Manitoba; Manitoba Growth, Enterprise and Trade, Manitoba Geological Survey, Surficial Geology Compilation Map Series, SG-63K, scale 1:250 000.

Modified from:
Clarke, M.D. 1989: Surficial geology, Cormorant Lake, Manitoba-Saskatchewan; Geological Survey of Canada, "A" Series Map, Map 1699A, scale 1:250 000.

Dredge, L.A. and McMartin, I. 2014: Surficial geology, Elbow Lake, Manitoba, NTS 63-K/15; Geological Survey of Canada, Canadian Geoscience Map 170, scale 1:50 000.

Henderson, P.J. and McMartin, I. 2008: Surficial geology, Flin Flon, Manitoba-Saskatchewan; Geological Survey of Canada, Open File 5828, scale 1:50 000.

Henderson, P.J. and McMartin, I. 2009: Surficial geology, Naosap Lake, Manitoba; Geological Survey of Canada, Open File 5940, scale 1:50 000.

Henderson, P.J. and McMartin, I. 2010: Surficial geology, File Lake, Manitoba; Geological Survey of Canada, Open File 6556, scale 1:50 000.

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McMartin, I. 1997: Surficial geology, Rocky Lake area, Manitoba-Saskatchewan; Geological Survey of Canada, Open File 3342, scale 1:1 000 000.

McMartin, I. 1997: Surficial geology, Reed Lake area, Manitoba; Geological Survey of Canada, Open File 3406, scale 1:100 000.

McMartin, I. 1997: Surficial geology, Athapapuskow Lake area, Manitoba; Geological Survey of Canada, Open File 3526, scale 1:100 000.

LEGEND

Quaternary

- **O** — ORGANIC DEPOSITS: peat, muck; <1–5 m thick; very low relief wetland deposits; commonly in low-lying areas; accumulated in fen, bog, swamp, and marsh settings; in areas of permafrost, commonly include permafrost features such as patterned ground and peat palsas
- **Lm** — SHORELINE SEDIMENTS: sand and gravel; 1–2 m thick; beaches; formed by waves at the margins of modern lakes
- **C** — COLLUVIUM: landslide debris, eroded slopes, sheet flood deposits associated with steep slopes
- **E** — EOLIAN: sand and minor silt; dunes, blowouts and undulating plains; generally overlies deltaic sediments, coarse lacustrine sediments, or glaciofluvial deposits
- **A** — ALLUVIAL SEDIMENTS: sand and gravel, sand, silt, clay, organic detritus; 1–20 m thick; channel and overbank sediments
- **Ms** — MARGINAL GLACIOMARINE SEDIMENTS: littoral sand and gravel; 1–10 m thick; beach ridges, spits, bars; formed by waves at the margin of the Holocene Tyrell Sea and present-day Hudson Bay
- **M** — OFFSHORE GLACIOMARINE SEDIMENTS: clay, silt, minor sand; 1–20 m thick; very low relief massive and laminated deposits which are commonly overlain by peat; deposited from suspension in the offshore, deep water of the Holocene Tyrell Sea and present-day Hudson Bay
- **Ls** — MARGINAL GLACIOLACUSTRINE SEDIMENTS: sand and gravel; 1–20 m thick; beach ridges, spits, bars, littoral sand and gravel; formed by waves at the margin of glacial Lake Agassiz and other small proglacial lakes
- **Lc** — OFFSHORE GLACIOLACUSTRINE SEDIMENTS: clay, silt, minor sand; 1–20 m thick; low relief massive and laminated deposits; deposited from suspension in offshore deep water of proglacial lakes, primarily glacial Lake Agassiz; commonly scoured and homogenized by icebergs
- **Gs** — DISTAL GLACIOFLUVIAL SEDIMENTS: fine sand, minor gravel, thin silt and clay interbeds; 1–75 m thick; subaqueous or subaerial outwash fans, deltas and blankets; commonly reshaped by wave erosion and/or reworked by wind
- **G** — PROXIMAL GLACIOFLUVIAL SEDIMENTS: sand and gravel; 1–20 m thick; complex deposits, belts with single or multiple esker ridges and kames, as well as thin, low-relief deposits; deposited in contact with glacial ice by meltwater

TILL: diamicton; unsorted glacial debris; 1–75 m thick; generally low-relief, commonly streamlined deposits; in Lake Agassiz basin areas, the till can be wave washed, covered discontinuously by a thin veneer of glaciolacustrine sediments and scoured by icebergs; thicker sequences in the Hudson Bay Lowland, consist of multiple units of varying texture and provenance

- **Tm** — CALCAREOUS SHALE-RICH DIAMICTON: calcareous diamicton; fine-grained matrix; contains a high percentage of Mesozoic shale clasts
- **Tc** — CALCAREOUS DIAMICTON: fine-grained matrix; contains a high percentage of Paleozoic carbonate-bearing clasts
- **Tp** — NON-CALCAREOUS DIAMICTON: fine-grained to sandy matrix; contains a high percentage of Precambrian intrusive, metasedimentary and metavolcanic rocks

Pre-Quaternary

ROCK: > 75% bedrock outcrop; generally subglacially eroded and unweathered; in areas of permafrost includes frost shattered, angular, monolithic boulder fields (Felsenmeer)

- **Rm** — MESOZOIC TERRANE: shale-dominated rocks above the Manitoba Escarpment, exposed in the base of spillways and along the Manitoba Escarpment in association with colluvium
- **Rc** — PALEOZOIC TERRANE: carbonate-dominated rocks; exposed typically as glacially striated, low-relief surfaces in areas west of Lake Winnipeg; along large river valleys in the Hudson Bay lowland
- **Rp** — PRECAMBRIAN TERRANE: intrusive, metasedimentary, and metavolcanic rocks having a glacially scoured irregular surface with high local relief

Uncoloured legend blocks indicate units that do not appear on this map.
Letter symbols on legend blocks (not shown on map face) are used to identify units in the map legend database included online and on the DVD (2007).
To aid the reader, a shadow effect has been added to exaggerate the topographic relief based on data from the Shuttle Radar Topography Mission Digital Elevation Model.[1]

[1] United States Geological Survey 2002: Shuttle radar topography mission, digital elevation model, Manitoba; United States Geological Survey, URL <ftp://edcsgs9.cr.usgs.gov/pub/data/srtm/>, portions of files N49W097.hgt.zip through N60W102.hgt.zip, 1.5 Mb (variable), 90 m cell, zipped hgt format [Mar 2003].

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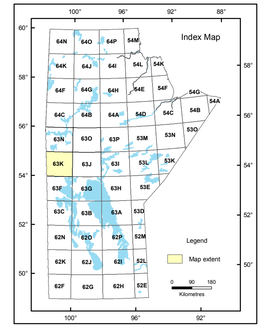
Compiled by: M.S. Gauthier, G.L.D. Matile and G.R. Keller

SURFICIAL GEOLOGY COMPILATION MAP SERIES

SG-63K

Surficial geology of the Cormorant Lake map sheet (NTS 63K), Manitoba



Manitoba