



LEGEND

This legend is common to GSC maps 2049A-2060A, and MGS geoscientific maps MAP2003-1-MAP2003-12. Coloured legend blocks indicate map units that appear on this map. Not all map symbols shown in the legend necessarily appear on this map.

QUATERNARY

NONGLACIAL DEPOSITS

- O** Organic deposits: peat, muck, <1-5 m thick; very low relief wetland deposits; accumulated in fen, bog, swamp, and marsh settings.
- E** Eolian sediments: fine sand; 1-5 m thick; dunes; formed by wind prior to stabilization by vegetation, in most cases on subaqueous outwash sand.
- Lm** Shoreline sediments: sand and gravel; 1-2 m thick; beaches; formed by waves at the margins of modern lakes.
- Ap** Overbank deposits.
- Ac** Channel deposits.

ALLUVIAL SEDIMENTS: sand and gravel, sand, silt, clay, organic detritus; 1-20 m thick; channel and overbank sediments; deposited by postglacial rivers.

GLACIOFLUVIAL DEPOSITS

- Ls** Shoreline deposits.
- Li** Littoral deposits.
- Lz** Clayey to sandy silt.
- Lc** Clay to silty clay.
- Gs** Subaqueous outwash: fine sand, minor gravel, thin silt and clay interbeds; 1-75 m thick; subaqueous outwash fans; deposited near the ice margin in glacial Lake Agassiz by meltwater turbidity currents, commonly reshaped by wave erosion and reworked by wind.
- Gc** Ice-contact 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.
- Gp** Predominantly derived from igneous and metamorphic rocks.

GLACIAL DEPOSITS

- T** Till: calcareous silt diamicton; 1-75 m thick; low-relief, commonly streamlined deposits; subglacial deposits; largely derived from carbonate rocks; thicker sequences consist of multiple units of varying texture; commonly scoured by icebergs; covered discontinuously by thin veneers (<1 m) of glaciofluvial and glaciofluvial sediments.
- Tc** Predominantly derived from carbonate rocks.
- Tp** Predominantly derived from igneous and metamorphic rocks.

DISCONTINUOUS TILL AND ASSOCIATED GLACIOFLUVIAL SEDIMENTS:

gravely silt to sand diamicton; sand and gravel; 1-30 m thick; low-relief deposits between bedrock outcrops making up 25-75% of the area; sandy silt interbedded and interspersed with nearly equal and often greater amounts of sandy glaciofluvial sediments, as well as minor glaciofluvial sediments.

PRE-QUATERNARY

- Rc** Paleozoic sedimentary rocks.
- Rp** Precambrian igneous and metamorphic rocks.

Geological boundary (approximate)
 Built-up area (map GSC 2055A / MGS MAP2003-7 only)
 Mine waste
 Peat-extraction area
 Gravel pit
 Mine or bedrock quarry
 Stabilized dunes
 Abandoned channel
 Minor beach ridge
 Wave-cut scarp
 Groundwater sapping channel
 Piping depression
 Iceberg scour
 Tunnel valley
 Esker (direction of flow indicated)
 Streamlined landform
 Glacial striae
 Crossed striae (numbers indicate relative age, 1 being the oldest)
 Small bedrock outcrop

Copies of this map may be obtained from the Geological Survey of Canada, 613 Booth Street, Ottawa, Ontario K1A 0S8, 3303 5th Street, N.W., Calgary, Alberta T2B 3A7, 111-020 Robert Street, Vancouver, B.C. V6B 2Z1, Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, Publication Sales, 300-1985 Ellice Avenue, Winnipeg, Manitoba R2G 3P2.

Geology by J.D. Mann, University of Manitoba, 1997.
 Co-ordinated by H. Threlkenton and G.L.D. Wallis through the auspices of the Southern Plains NATMAP Project and the Winnipeg Region NATMAP Project.
 Digital cartography by P.A. Melbourne, Earth Sciences Sector Information Division (ESS Info).
 This map was produced from processes that conform to the ESS Info Publishing Services Subdivision Quality Management System, registered to the ISO 9001:2000 standard.

GSC MAP 2054A
 MGS GEOSCIENTIFIC MAP MAP2003-6
SURFICIAL GEOLOGY
BIG WHITESHELL LAKE
MANITOBA-ONTARIO

Scale 1:100 000/Échelle 1/100 000

Universal Transverse Mercator Projection
 North American Datum, 1983
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Projection transversale universelle de Mercator
 Système de référence géodésique nord-américain, 1983
 © Sa Majesté la Reine du chef du Canada 2004

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada and the Manitoba Geological Survey.
 Digital base map from data compiled by Geomatics Canada, modified by ESS Info.
 Mean magnetic declination 2004, 2°57' E, decreasing 5.6" annually. Readings vary from 3°30' E in the SW corner to 2°24' E in the NE corner of the map.
 Elevations in feet above mean sea level.

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|---------------|----------------|----------------|----------------|
| 02 11 01 | 02 11 02 | 02 11 03 | 02 11 04 |
| GSC 2054A | GSC 2054A | GSC 2054A | GSC 2054A |
| MGS MAP2003-1 | MGS MAP2003-2 | MGS MAP2003-3 | MGS MAP2003-4 |
| 02 11 05 | 02 11 06 | 02 11 07 | 02 11 08 |
| GSC 2054A | GSC 2054A | GSC 2054A | GSC 2054A |
| MGS MAP2003-5 | MGS MAP2003-6 | MGS MAP2003-7 | MGS MAP2003-8 |
| 02 11 09 | 02 11 10 | 02 11 11 | 02 11 12 |
| GSC 2054A | GSC 2054A | GSC 2054A | GSC 2054A |
| MGS MAP2003-9 | MGS MAP2003-10 | MGS MAP2003-11 | MGS MAP2003-12 |

