



LEGEND

This legend is common to GSC maps 2048A - 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 fan, 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.

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

- Ap** Overbank deposits.
- Ac** Channel deposits.

GLACIOLACUSTRINE DEPOSITS

GLACIAL LAKE SHORELINE 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.

- Ls** Shoreline deposits.
- LI** Littoral deposits.

OFFSHORE GLACIOLACUSTRINE SEDIMENTS: clay, silt, minor sand; 1-20 m thick; very low relief massive and laminated deposits; deposited from suspension in offshore, deep water of glacial Lake Agassiz, commonly scoured and homogenized by icebergs.

- LZ** Clayey to sandy silt.
- Lc** Clay to silty clay.

GLACIOFLUVIAL DEPOSITS

- 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.

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.

- Gc** Predominantly derived from carbonate rocks.
- Gp** Predominantly derived from igneous and metamorphic rocks.

GLACIAL DEPOSITS

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

DISCONTINUOUS TILL AND ASSOCIATED GLACIOFLUVIAL SEDIMENTS: gravelly silt to sand diamiction, sand and gravel; 1-30 m thick; low-relief deposits between bedrock outcrops making up 25-75% of the area; sandy till interbedded and interspersed with nearly equal and often greater amounts of sandy glaciofluvial sediments, as well as minor glaciolacustrine sediments.

- Tc** Predominantly derived from carbonate rocks.
- Tp** Predominantly derived from igneous and metamorphic rocks.

PRE-QUATERNARY

ROCK: >75% bedrock outcrop; Paleozoic carbonate-dominated rocks in areas west and south of Lake Winnipeg, exposed typically as glacially striated, low-relief surfaces; in Precambrian terranes, generally unweathered intrusive, metasedimentary, and metavolcanic rocks having a glacially scoured (irregular surface with high local relief); includes patches of thin glacial sediments and organic material.

- 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 seeping 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

Co-ordinated by H. Thorlinton and G.L.D. Meille through the auspices of the Southern Prairie NATMAP Project and Winnipeg Region NATMAP Project

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This map was produced from processes that conform to the ESS Info Publishing Services Division Quality Management System, registered to the ISO 9001: 2000 standard



GSC MAP 2055A
MGS GEOSCIENTIFIC MAP MAP2003-7
SURFICIAL GEOLOGY
WINNIPEG
MANITOBA

Scale 1:100 000/Échelle 1/100 000

kilometres 0 2 4 6 8 kilometres

Universal Transverse Mercator Projection
North American Datum 1983
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Projection transversale universelle de Mercator
Système de référence géodésique nord-américain, 1983
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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, 5°00' E, decreasing 6.3" annually. Readings vary from 5°31' E in the SW corner to 4°29' E in the NE corner of the map

Elevations in metres above mean sea level north of 49°45' latitude and in feet above mean sea level south of 49°45' latitude

02 010	02 011	02 012	02 013	02 014
GSC 2048A	GSC 2050A	GSC 2051A	GSC 2051A	GSC 2051A
MGS MAP2003-1	MGS MAP2003-2	MGS MAP2003-3	MGS MAP2003-4	MGS MAP2003-5
02 015	02 016	02 017	02 018	02 019
GSC 2052A	GSC 2053A	GSC 2054A	GSC 2055A	GSC 2056A
MGS MAP2003-6	MGS MAP2003-7	MGS MAP2003-8	MGS MAP2003-9	MGS MAP2003-10
02 020	02 021	02 022	02 023	02 024
GSC 2057A	GSC 2058A	GSC 2059A	GSC 2060A	GSC 2060A
MGS MAP2003-11	MGS MAP2003-12	MGS MAP2003-13	MGS MAP2003-14	MGS MAP2003-15