

**LEGEND**

This legend is common to GSC maps 2057A-2060A, and MGS geoscientific maps MAP2003-1-MAF2003-12. 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, swamps, 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.

**GLACIOFLUVIAL 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.
- U** Littoral deposits.

**OFFSHORE GLACIOFLUVIAL 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 easterly winds.

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

**GLACIAL DEPOSITS**

- T** Till: calcareous silt diamictite; 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 glacioluvial 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 diamictite; sand and gravel; 1-30 m thick; low-relief deposits between bedrock outcrops making up 25-75% of the area; sandy till interbedded and interpenetrated with nearly equal and often greater amounts of sandy glacioluvial sediments, as well as minor glaciolacustrine 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 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 .....

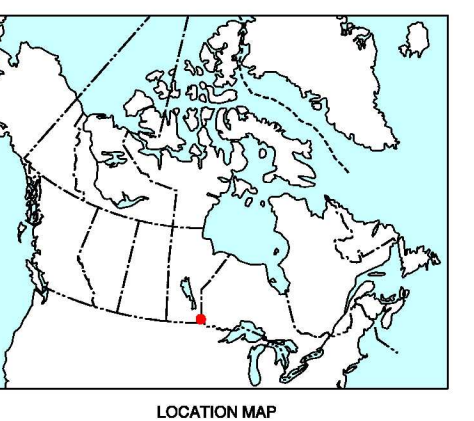
Some of the map data were obtained from the Geological Survey of Canada, 615 Booth Street, Ottawa, Ontario K1A 0S8, 3003-28th Street, N.W., Calgary, Alberta T2B 2A7, 101-400 Robert Street, Vancouver, B.C. V6B 5G3  
 Manitoba Industry, Economic Development and Mines  
 Manitoba Geological Survey, Publication Services  
 200-1065 Ellice Avenue, Winnipeg, Manitoba R3G 3P2

Geology by G.L.D. Matile, Manitoba Geological Survey, 1993-1994

Co-ordinated by H.Thornton and G.L.D. Matile through the auspices of the Southern Prairies 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 2057A  
 MGS GEOSCIENTIFIC MAP MAP2003-9  
 SURFICIAL GEOLOGY  
**WEST HAWK LAKE**  
 MANITOBA-ONTARIO

Scale 1:100 000/Échelle 1/100 000

Universal Transverse Mercator Projection  
 North American Datum 1983  
 © Her Majesty the Queen in Right of Canada 2004

Projection transversale universelle du Méridien  
 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, 3°03' E, decreasing 5.6" annually. Readings vary from 3°35' E in the SW corner to 2°30' E in the NE corner of the map

Elevations in feet above mean sea level

02 013	02 014	02 015	02 016	02 017	02 018
GSC 2057A	GSC 2057B	GSC 2057C	GSC 2057D	GSC 2057E	GSC 2057F
MGS MAP2003-1	MGS MAP2003-2	MGS MAP2003-3	MGS MAP2003-4	MGS MAP2003-5	MGS MAP2003-6
MGS MAP2003-7	MGS MAP2003-8	MGS MAP2003-9	MGS MAP2003-10	MGS MAP2003-11	MGS MAP2003-12