

#### SURFICIAL GEOLOGY COMPILATION MAP SERIES

The Surficial Geology Compilation Map Series (SGCMS) addresses an increasing demand for consistent surficial geology information for applications such as groundwater protection, industrial mineral management, protected lands, basic research, mineral exploration, engineering, and environmental assessment. The SGCMS will provide province-wide coverage at scales of 1:500 000, 1:250 000 and a final compilation at 1:100 000.

The unit polygons were digitized from paper maps originally published by the Geological Survey of Canada and Manitoba Geological Survey (MGS). In several areas, digital polygons derived from soils mapping were used to fill gaps in the geological mapping. The 1:250 000 scale maps provide a bibliography for the original geological mapping.

Edge-matching of adjoining 1:250 000 scale map sheets is based on data from the Shuttle Radar Topography Mission Digital Elevation Model (SRM DEM) as interpreted by the MGS. Other polygon inconsistencies were modified in a similar manner. Geology (colour) is draped over a shaded topographic relief map (grey tones) derived from the SRM DEM.

<sup>1</sup> United States Geological Survey 2002. Shuttle radar topography mission, digital elevation model. Manitoba; United States Geological Survey, URL: <http://edcgs9.cr.usgs.gov/pub/data/srtm>; portions of files N48W88W.hgt.zip through N60W102.hgt.zip, 1.5 Mb (variable), 90 m cell, zipped hgt format (Mar 2003).

#### LEGEND

##### Quaternary

- O** ORGANIC DEPOSITS: peat, muck; <1–5 m thick; very low relief wetland deposits; accumulated in fen, bog, swamp, and marsh settings
- 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 detritic 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; reworked by existing rivers and deposited primarily as bars
- 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
- Lc** 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
- Gs** DISTAL GLACIOFLUVIAL SEDIMENTS: fine sand, minor gravel, thin silt and clay interbeds; 1–75 m thick; subaqueous outwash fans; deposited in glacial Lake Agassiz by meltwater turbidity currents; commonly reshaped by wave erosion and 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:** diamiction; 1–75 m thick; low-relief, commonly streamlined deposits; subglacial deposits; largely derived from shale above the Manitoba Escarpment, carbonate rocks in the central lowlands, and crystalline rocks in areas of Precambrian terrane; thicker sequences consist of multiple units of varying texture; commonly scoured by icebergs; covered discontinuously by thin veneers (<1 m) of glaciolacustrine and glaciofluvial sediments

- Tm** Calcareous clay diamiction, predominantly derived from Mesozoic shale
- Tc** Calcareous silt diamiction, predominantly derived from Paleozoic dolomite and limestone
- Tp** Non-calcareous sand diamiction, predominantly derived from Precambrian crystalline rock

##### Pre-Quaternary

- R** ROCK: > 75% bedrock outcrop; Cretaceous shales above the Manitoba Escarpment, Paleozoic carbonate-dominated rocks in areas west and south of Lake Winnipeg, exposed typically as glacially striated, low-relief surfaces; in Precambrian terrane, generally unweathered 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. To aid the reader a shadow effect has been added to exaggerate the topographic relief.

Published by: Manitoba Industry, Economic Development and Mines  
Manitoba Geological Survey, 2004

Compiled by: G.L.D. Matile and G.R. Keller

Modified from:  
Burt, A.K. 2004. Surficial geology, Belair, Manitoba; Geological Survey of Canada; Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, Geoscientific map 2003-2, 1 colour map. Scale 1:100 000. [joint GSC-MGS map]

Burt, A.K. 2004. Surficial geology, Beausejour, Manitoba; Geological Survey of Canada; Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, Geoscientific map 2003-5, 1 colour map. Scale 1:100 000. [joint GSC-MGS map]

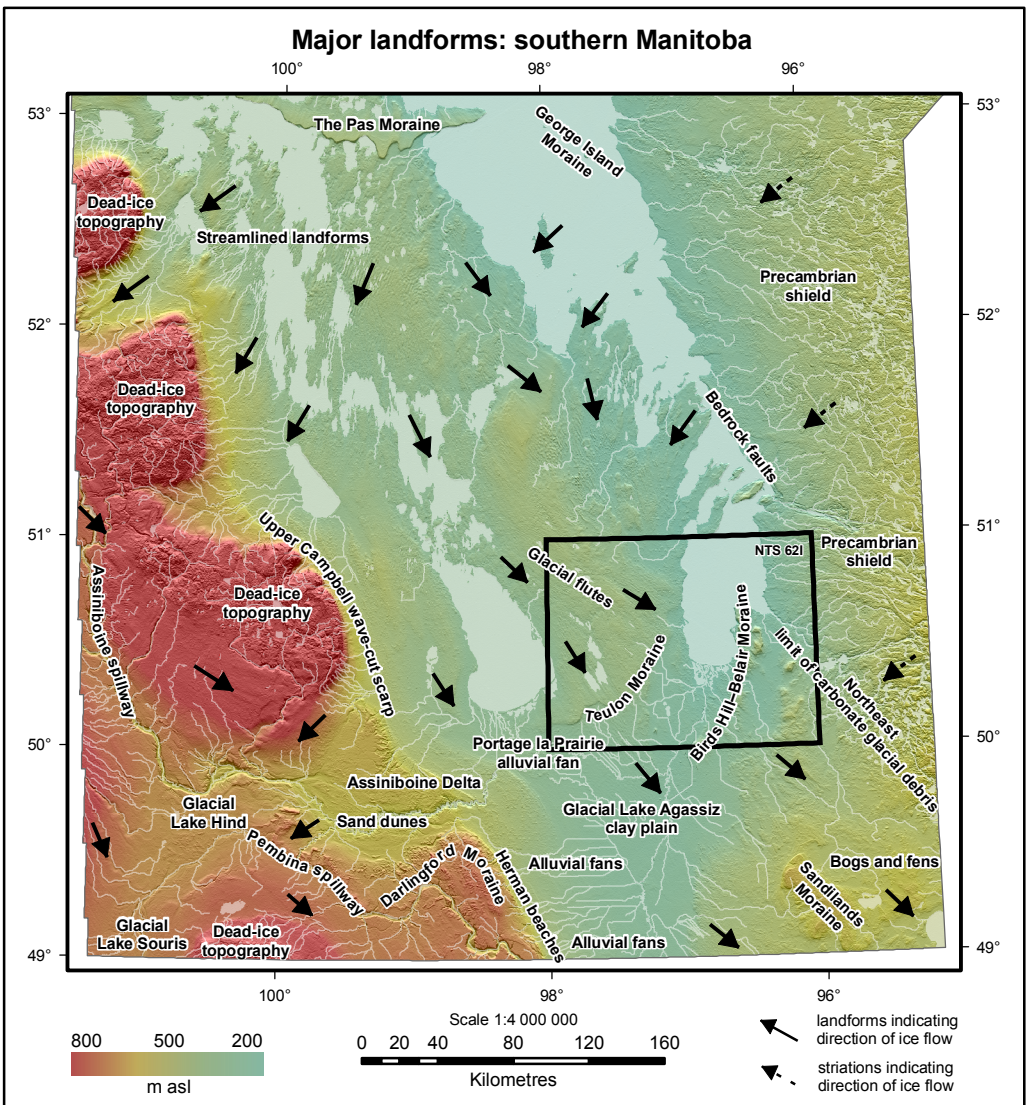
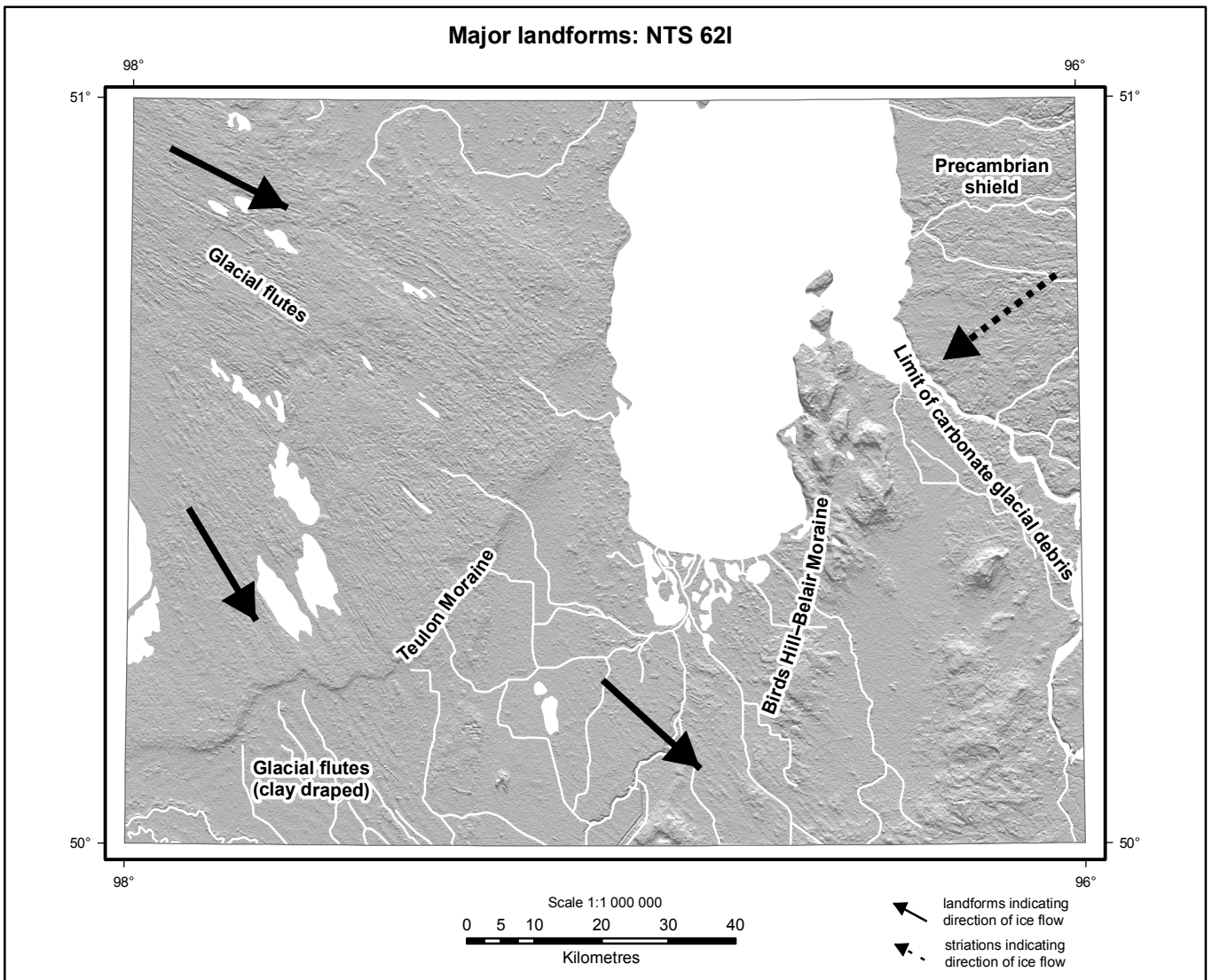
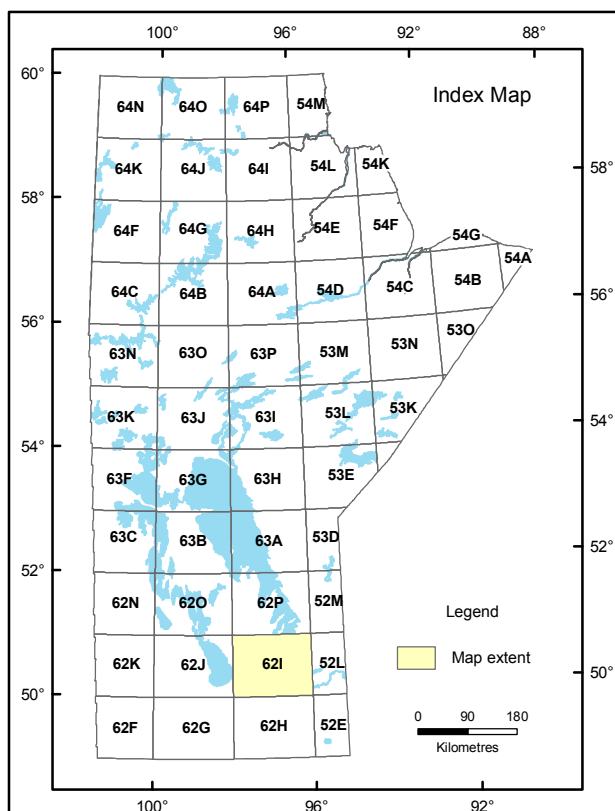
Grant, N.M. 2004. Surficial geology, Inwood, Manitoba; Geological Survey of Canada; Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, Geoscientific map 2003-1, 1 colour map. Scale 1:100 000. [joint GSC-MGS map]

Grant, N.M. 2004. Surficial geology, Woodlands, Manitoba; Geological Survey of Canada; Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, Geoscientific map 2003-4, 1 colour map. Scale 1:100 000. [joint GSC-MGS map]

#### SURFICIAL GEOLOGY COMPILATION MAP SERIES

SG-621

### Surficial geology of the Selkirk map sheet (NTS 621), Manitoba



Suggested reference:  
Matile, G.L.D. and Keller, G.R. 2004. Surficial geology of the Selkirk map sheet (NTS 621), Manitoba; Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, Surficial Geology Compilation Map Series, SG-621, scale 1:250 000.

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 (2004) for centre of map is 4°25' E, decreasing 6.2° annually.

Copies of this map can be obtained from:  
Manitoba Industry, Economic Development and Mines  
Manitoba Geological Survey, Publication Sales  
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Winnipeg, MB, R3G 3P2  
Canada

Phone: (204) 945-4154  
Toll free: 1-800-223-5215  
E-mail: [mineinfo@gov.mb.ca](mailto:mineinfo@gov.mb.ca)  
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[www.gov.mb.ca/lim/mtd](http://www.gov.mb.ca/lim/mtd)