LEGEND

Coloured legend blocks indicate map units that appear on this map

SURFICIAL DEPOSITS QUATERNARY

NONGLACIAL ENVIRONMENT

ORGANIC DEPOSITS: variable proportions of lichen-moss, sedge, and woody peat; thickness variable; includes bog peat and fen peat; irregular thermokarst depressions are common; occupies most topographic lows

ALLUVIAL DEPOSITS: variable proportions of silt, sand, and rounded gravel, commonly terraced; thickness ranges from a thin veneer to several metres

PROGLACIAL ENVIRONMENT

GLACIOLACUSTRINE DEPOSITS: massive to laminated sand, silt, and clay; deposited in glacial Lake Agassiz; thickness ranges from a thin veneer to thick sequences forming planar surfaces; commonly mantled with peat



NEARSHORE AND LITTORAL SEDIMENTS: well sorted sand, gravel, and cobbles occurring as a blanket grading basinward into undifferentiated silt and clay, or as one or a series of ridges, 1 to 4 m in height (includes beaches, bars, and spits) commonly well developed on wave washed glaciofluvial deposits



OFFSHORE SEDIMENTS: laminated silt, clay, and sand; thickness ranges from a veneer to tens of metres; thick accumulations form planar surfaces characterized by extensive

GLACIAL ENVIRONMENT



ICE CONTACT GLACIOFLUVIAL DEPOSITS: interstratified sand, gravel, cobbles, and diamicton; deposited by meltwater flowing in contact with or proximal to glacier ice; thickness ranges from 5 to 50 m: forming eskers, kames, crevasse fillings, ice contact deltas, and recessional, end, and interlobate moraines

GLACIAL DEPOSITS: till and related sediments, comprising unsorted to poorly sorted debris deposited at the front of or beneath glaciers, or under ice shelves. Glacial deposits in the western part of the study area (NTS 63N, 64C, and 64F) are sandy and contain a large proportion of debris derived from crystalline shield lithologies. Matrix carbonate composition of sandy till is generally 0% but may reach 5%. Farther east (NTS 64B and 64G), glacial deposits are silty and contain a large proportion of calcareous debris derived from Paleozoic carbonate lithologies flooring Hudson Bay and adjacent lowlands. Matrix carbonate content ranges from 5 to 35%. Sediment may be leached of carbonate to a depth of 2.5 m, particularly in areas of thin drift where drainage is controlled by bedrock topography and clay cover is minimal



Till blanket: forms a continuous cover, 1 to several metres in thickness, masking underlying bedrock topography; surface commonly fluted and may be covered by a veneer of Lake Agassiz clay; 2a - Sandy till; 2b - Silty till



Till veneer: forms a discontinuous cover, ranging from 0 to 3 m in thickness; thicker deposits may fill isolated bedrock depressions; surface morphology reflects underlying bedrock structure; 1a - Sandy till; 1b - Silty till

BEDROCK PRE-QUATERNARY

RECAMBRIAN ROCK: glacially scoured metasedimentary and metavolcanic rocks and associated felsic to mafic intrusive lithologies

| Geological boundary (defined) | $\overline{}$ |
|---|---------------|
| Small bedrock outcrop | ······. |
| Striae (ice flow direction known, unknown; poorly defined) | 75-1 |
| Crossed striae (1 = oldest) | 1,2 |
| Fluting | / |
| Crag and tail (direction of ice flow known) | |
| Recessional, end or interlobate moraine | |
| Esker (direction of flow known, unknown), crevasse fillings | 747 :::: |
| Meltwater channel (large, small) | X |
| Beach ridge | -57 222 |
| Dunes | |
| Ice contact delta | |
| | |

Geology by C.A. Kaszycki, 1985

Compiled by C.A. Kaszycki and V.J. Way Nee, 1986

Geological cartography by the Geological Survey of Canada

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Base map at 1:250 000 published by the Surveys and Mapping Branch, 1963

Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy Mines and Resources, Ottawa, Ontario K1A 0E9

Mean magnetic declination 1989, 08°43' East, decreasing 12.2' annually. Readings vary from 07°13' E in the NE corner to 10°06' E in the SW corner of the map

Elevations in feet above mean sea level

REFERENCE

1986: Surficial Geology of north-central Manitoba; Geological Survey of Canada, Memoir 419, 57p. Accompanied by Map 1603A, Surficial Geology, north-central Manitoba, scale 1:500 000

Copies of this map may be obtained from the Geological Survey of Canada: 601 Booth Street, Ottawa, Ontario K1A 0E8 3303-33rd Street, N.W., Calgary, Alberta T2L 2A7

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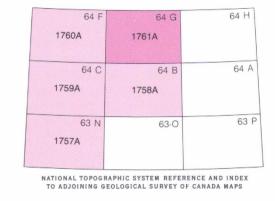


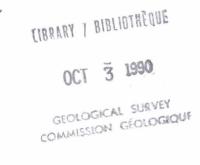
MAP 1761A SURFICIAL GEOLOGY

BIG SAND LAKE MANITOBA

Scale 1:250 000 - Échelle 1/250 000







Recommended citation: Kaszycki, C.A. and Way Nee, V.J. (compilers) 1990: Surficial geology, Big Sand Lake, Manitoba; Geological Survey of Canada, Map 1761A, scale 1:250 000

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