

Geological Survey of Canada
Resource Geophysics and Geochemistry Division
and
Manitoba Department of Energy and Mines
Mineral Resources Division

CONTRACTORS

Sample collection by Marshall Macklin Monaghan Ltd., Toronto
Sample preparation by Golder Associates, Ottawa

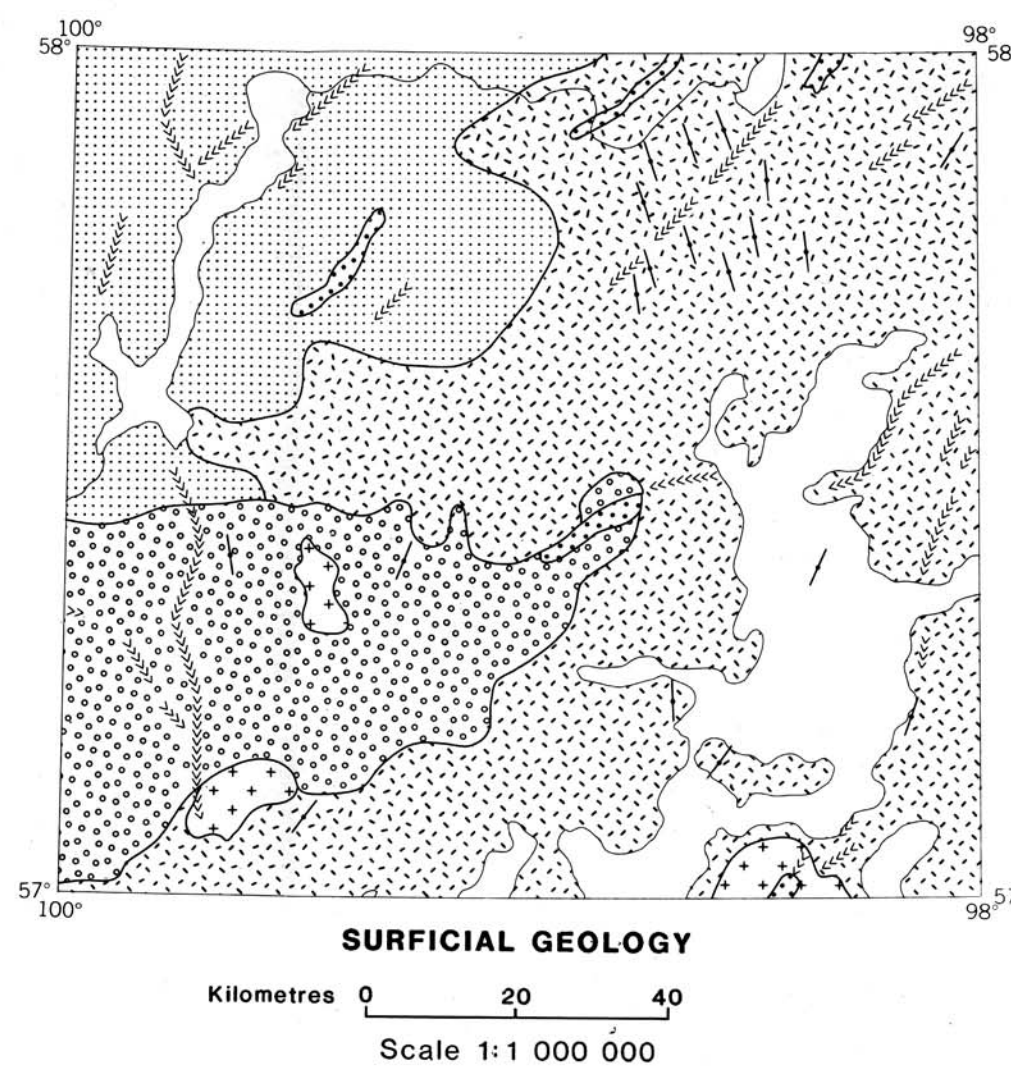
Sediment chemical analysis by Barringer Magenta Ltd., Rexdale, Ontario
Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

Copies of map material and listings of field observations and analytical data, from which the material was prepared, may be available at users expense by application to:

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The data are also available in digital form. For further information please contact:

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PROGLACIAL AND GLACIAL ENVIRONMENT

GLACIOLACUSTRINE DEPOSITS: beach and nearshore deposits: sand and gravel 1-4 m thick, forming distinct ridges

GLACIOLACUSTRINE DEPOSITS: deep basin deposits: silt, clay and sand, 1-30 m thick

GLACIOFLUVIAL DEPOSITS: gravel, sand and silt, 1-100 m thick

GLACIAL ENVIRONMENT

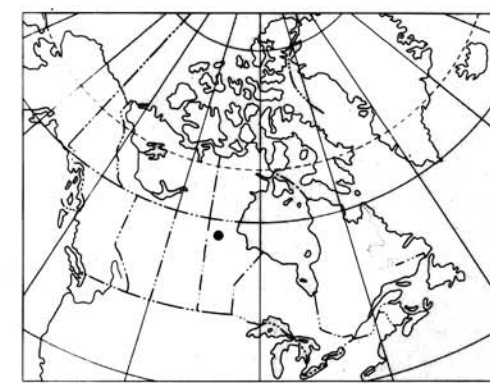
GLACIAL DEPOSITS: till: 1-5 m thick, derived primarily from Precambrian bedrock

NONGLACIAL ENVIRONMENT

BEDROCK

ORGANIC DEPOSITS: marsh, fen, swamp and bog deposits up to 6 m thick, characterized by seasonal flooding

Striations
Flutings, drumlins, and drumlinoid ridges, oriented parallel to ice flow direction
Escher (flow direction known or inferred)



Elevation in feet above mean sea level

Mean magnetic declination 1985, 9°06' East, decreasing 23.1' annually. Readings vary from 7°35' in the NE corner to 10°28' in the SW corner of the map area

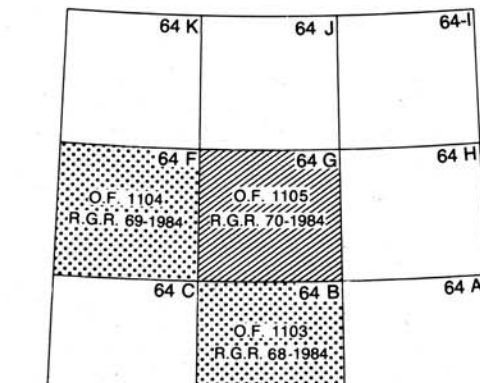
FLUORINE in water (ppb)
GSC OPEN FILE 1105
REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 70-1984
CANADA - MANITOBA
MINERAL DEVELOPMENT AGREEMENT (1984-89)
LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY
NORTH-WEST MANITOBA, 1984

Scale 1:250 000

Kilometres 5 0 5 10 15 20 Kilometres

Universal Transverse Mercator Projection
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Base map at the same scale published by the Surveys and Mapping Branch in 1963



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FLUORINE in water (ppb)
GSC OPEN FILE 1105
NORTH-WEST MANITOBA, 1984

LEGEND

Note: This legend is common for Regional Geochemical Reconnaissance Map 70-1984, Open File 1105

A* Metadiorite, hornblende of possible Archean age

1 Amphibolite, volcanic derived with locally preserved pillows

2a Biotite-feldspar-quartz-paragneiss + garnet + granite ± muscovite

2b Biotite metatextite + garnet + granite (25-75% white granitic lit)

2c Biotite metatextite + garnet + cordierite

3a Light grey biotite (5-10%) quartz-feldspar-gneiss + magnetite + garnet with discontinuous diorite gneiss lenses

3b Light grey to dark grey biotite (5-15%) quartz-feldspar-gneiss interlayered with thin layers of amphibolite and/or hornblende-biotite bearing layers

4 Calc-silicate rock

5 Amphibolite, metagabbro, locally agmatitic

6a Metaconglomerate

6b Thin interlayered amphibolite and hornblende biotite-bearing layers

6c Arkosic gneiss

6d Metavolcanic rocks

6e Metagreywacke

7 Gneissic diorite and leucodiorite

7a Biotite ± hornblende granodiorite gneiss with white granitic lit

7b Gabbro

8 Grey, medium to coarse grained biotite (5%) + magnetite-tonalite to quartz monzonite

8a Hybrid gneiss of grey biotite-quartz monzonite and gneissic diorite

9 Foliated quartz diorite + magnetite

10 Biotite (15-20%) - tonalite ± garnet

11a Megacrystic biotite-granodiorite

11b Megacrystic biotite-hornblende ± pyroxene-granodiorite

11c Coarse grained leucocratic granodiorite

12 White leucocratic medium grained to pegmatitic monzogranite ± garnet

13 Coarse grained to megacrystic-pyroxene-hornblende-monzonite to monzogranite with olive-brown feldspar

13a Anorthositic gabbro

13b Hornblende-biotite-monzonite to quartz monzonite with variegated olive-brown and pink feldspar

14 Megacrystic-biotite-magnetite quartz monzonite

15 Biotite ± hornblende coarse grained to megacrystic pink granite to quartz monzonite

15a Biotite-hornblende granite gneiss

15b Leucocratic megacrystic pink granite

15c Fine grained quartz monzonite

16 Magnetite-biotite-hornblende quartz monzonite

17 Granite pegmatite

18 Diabase

Pyrite, chalcopyrite, galena, sphalerite, Iron Formation ▲Py; ▲Cd; ▲Pd; ▲Sp; ▲I.F.
Geological boundary (approximate, assumed, gradational)
Drift covered

* A four character mnemonic name recorded rock type as part of the 1984 field observations

Provisional Compilation map by H.V. Zwanig,
Manitoba Department of Energy and Mines

This map forms one of a series of maps released by the Geological Survey of Canada, Open File 1103 to 1105. Each Open File consists of maps of various geochemical variables: 16 for lake sediment, 3 for lake water and 1 sample site location

FLUORINE in water (ppb)
GSC OPEN FILE 1105
NORTH-WEST MANITOBA, 1984