

- 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
Esker (flow direction known or inferred)

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

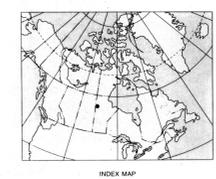
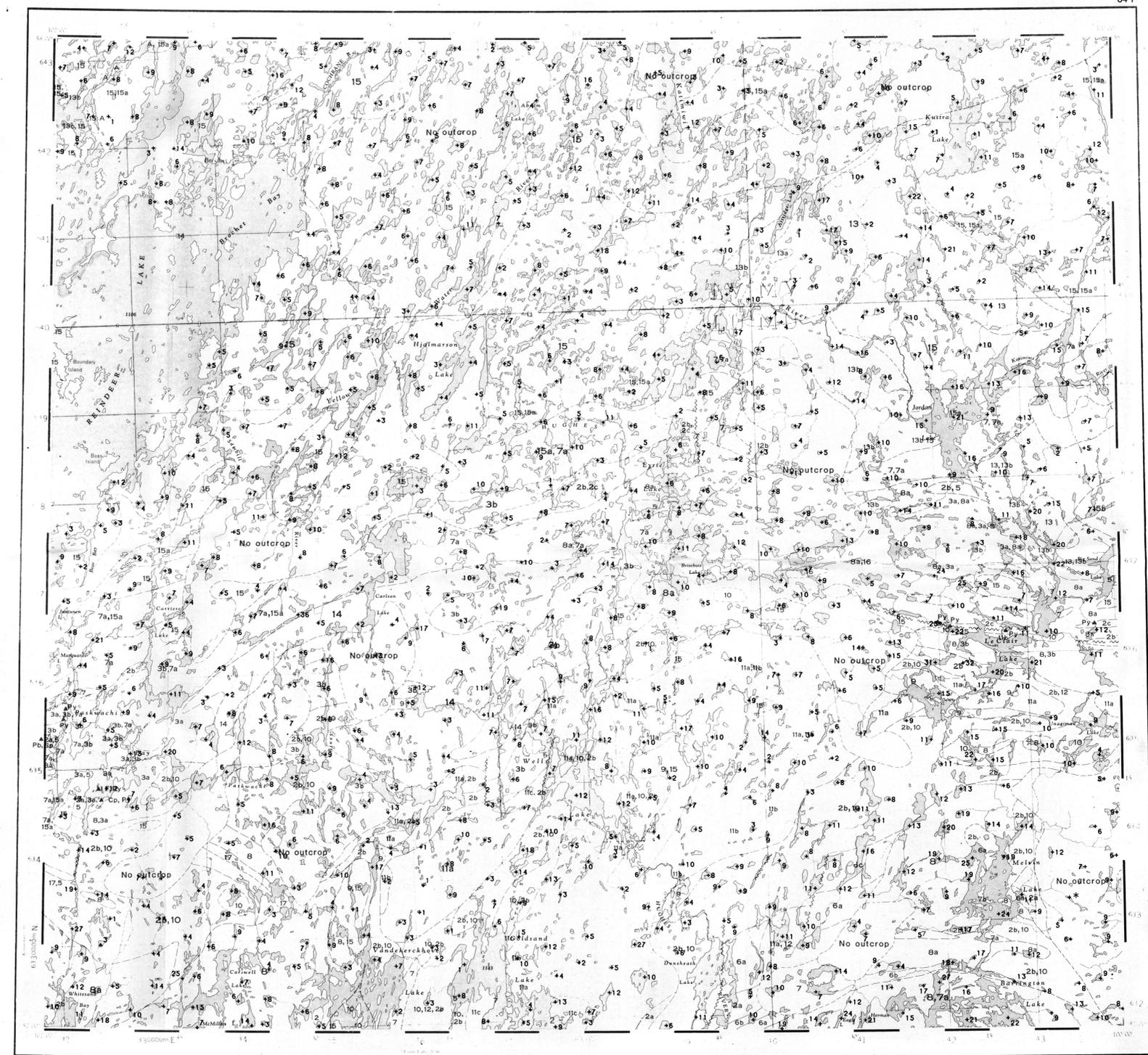
Sediment chemical analysis by Barringer Magenta Ltd., Rexdale, Ontario
Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

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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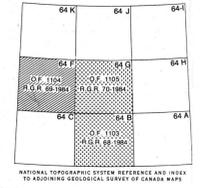


Elevation in feet above mean sea level

Mean magnetic declination 1985, 11°52' East, decreasing 23.2' annually. Readings vary from 10°28' in the SE corner to 13°05' in the NW corner of the map area

COBALT (ppm)
GSC OPEN FILE 1104
REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 69-1984
CANADA - MANITOBA
MINERAL DEVELOPMENT AGREEMENT (1984-89)
LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY
NORTH-WEST MANITOBA, 1984
Scale 1:250 000
Universal Transverse Mercator Projection
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Base map at the same scale published by the Surveys and Mapping Branch in 1963



- LEGEND**
- Note: This legend is common for Regional Geochemical Reconnaissance Map 69-1984, Open File 1104.
- A* Metadiorite, hornblende of possible Archean age
 - 1 Amphibolite, volcanic derived with locally preserved pillows
 - 2a Biotite-feldspar-quartz-paragneiss + garnet + garnet ± muscovite
 - 2b Biotite metatexite + garnet + granite (25-75% white granitic lit)
 - 2c Biotite metatexite + 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 Metacglomerate
 - 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, chalcocopyrite, galena, sphalerite,
Iron Formation
- Geological boundary (approximate, assumed, gradational)
- Drift covered

Provisional Compilation map by H.W. Zwanzig,
Manitoba Department of Energy and Mines

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

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

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