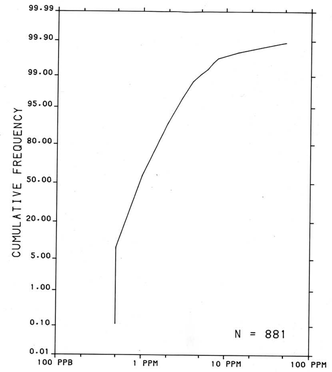
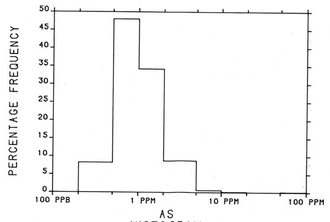
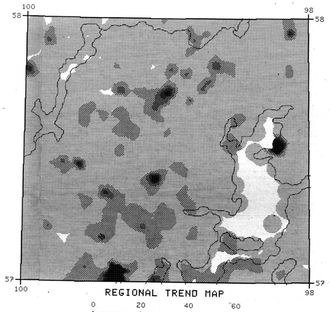




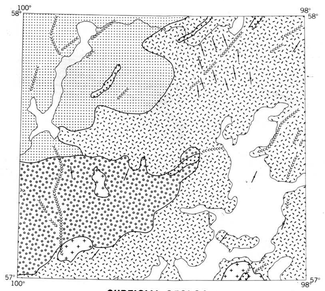
AS
HISTOGRAM



AS

PPM	%TILE
≥1.0	MAX
5.0	99
4.0	98
3.0	95
2.0	90
0.5	MIN

881 SAMPLES



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:

K.G. Campbell Corporation
880 Wellington St.
Bay 238
Ottawa, Ontario
K1R 6K7

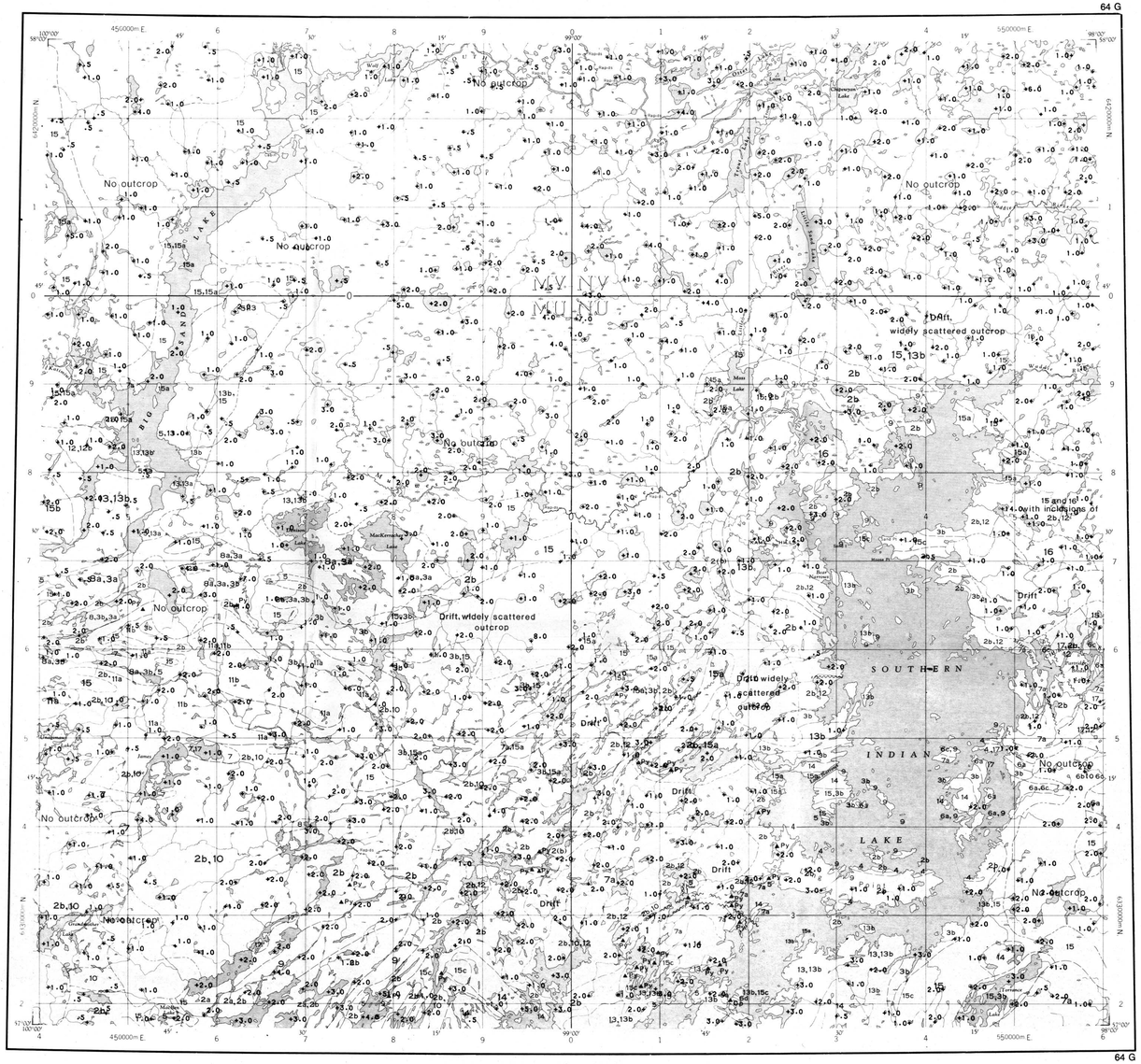
The data are also available in digital form. For further information please contact:

The Director
Computer Science Centre
Department of Energy, Mines and Resources
Ottawa, Ontario
K1A 0E4

Manitoba
Department of Energy and Mines

Canada
Department of Energy, Mines and Resources
Geological Survey of Canada

64 G



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INDEX MAP

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

ARSENIC (ppm)

GSC OPEN FILE 1105

REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 70-1984

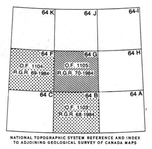
CANADA - MANITOBA
MINERAL DEVELOPMENT AGREEMENT (1984-89)
LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY
NORTH-WEST MANITOBA, 1984

Scale 1:250 000

Kilometres 5 0 5 10 15 20 Kilometres

Universal Transverse Mercator Projection

Base map at the same scale published by the Surveys and Mapping Branch in 1963



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

ARSENIC (ppm)

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, hornblendite of possible Archean age
1	Amphibolite, volcanic derived with locally preserved pillows
2a	Biotite-feldspar-quartz-paragneiss + garnet + granite ± 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	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; ▲Cp; ▲Pb; ▲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. Zwanzig,
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

ARSENIC (ppm)
GSC OPEN FILE 1105
NORTH-WEST MANITOBA, 1984