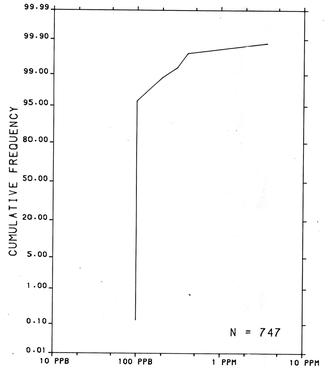
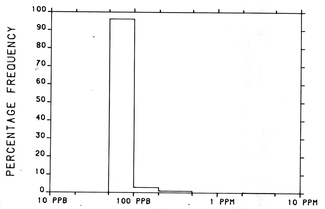
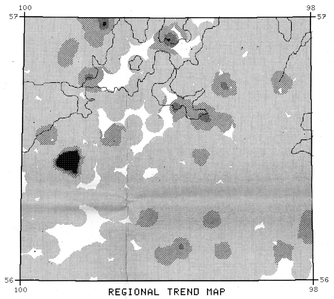
# ANTIMONY (ppm)

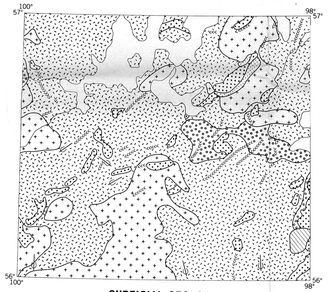
GSC OPEN FILE 1103
NORTH-WEST MANITOBA, 1984




HISTOGRAM



**SURFICIAL GEOLOGY**

Kilometres 0 20 40
Scale 1:1 000 000

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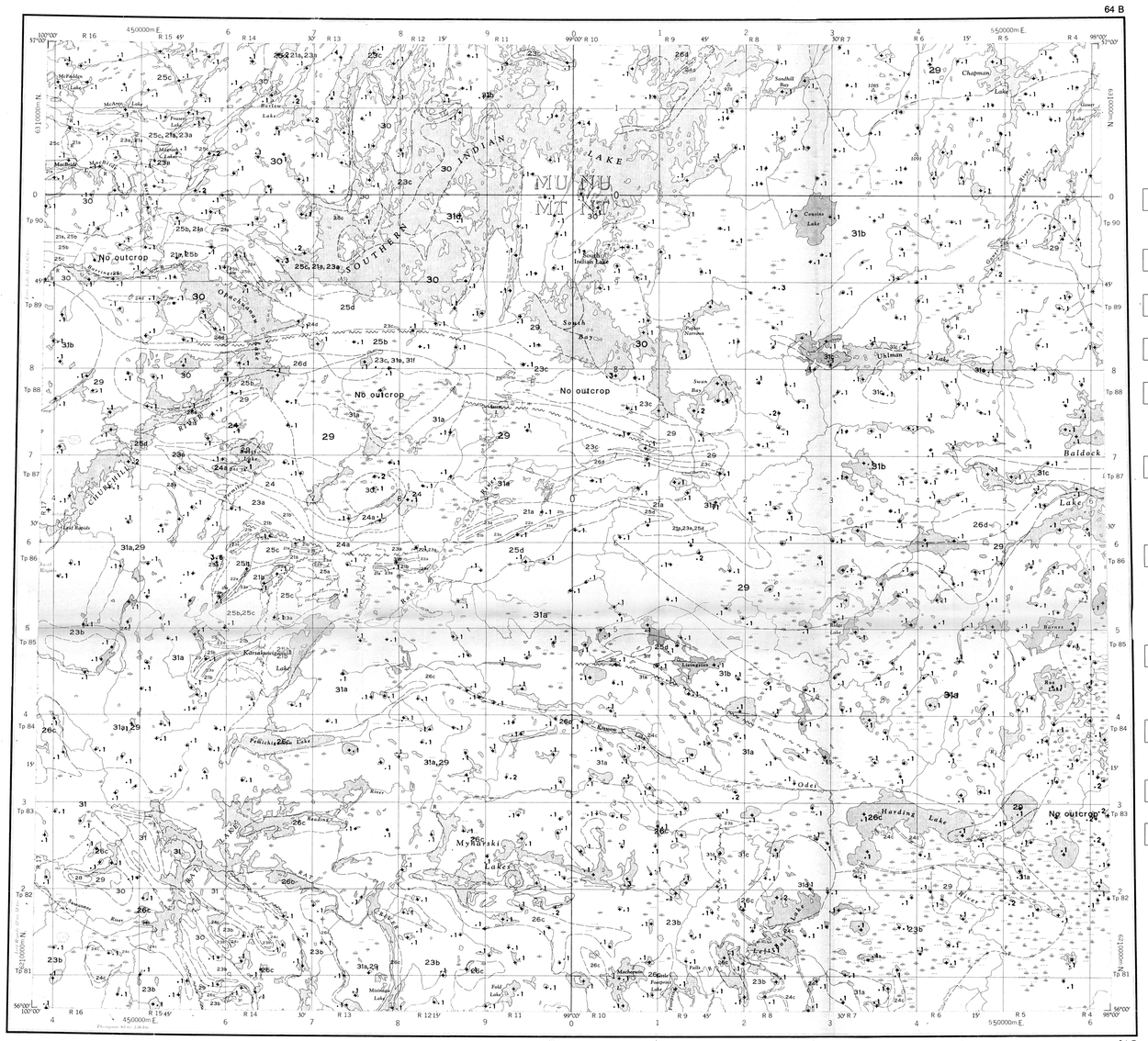
The data are also available in digital form. For further information please contact:

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



INDEX MAP

Elevation in feet above mean sea level

Mean magnetic declination 1985, 9°08' East, decreasing 21.3' annually. Readings vary from 7°44' in the NE corner to 10°25' in the SW corner of the map area

## ANTIMONY (ppm)

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REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 68-1984

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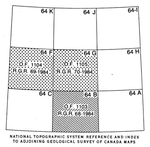
Base map at the same scale published by the Surveys and Mapping Branch in 1963




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

## LEGEND

Note: This legend is common for Regional Geochemical Reconnaissance Map 68-1984, Open File 1103.

### PROTEROZOIC (APHEBIAN)

**31** — GRANITIC INTRUSIVE ROCKS, POST-SICKLE (HUDSONIAN) (AHia to AHif)*
31 granite (AHia) 31a-granodiorite, tonalite 31b-megacrystic granite; 31c - granite, granodiorite ± muscovite ; 31d leucogranite, tonalite ; 31e monzonite, syenite 31f-pegmatite

**30** — GRANITIC INTRUSIVE ROCKS, POST-SICKLE and remobilized PRE-SICKLE
30 - granite, granodiorite (AHig)

**29** — INTERMEDIATE INTRUSIVE ROCKS, POST-SICKLE and remobilized PRE-SICKLE
29-tonalite, granodiorite, quartz diorite (AHit), 29a - pyroxene tonalite (AHip)

**28** — MAFIC INTRUSIVE ROCKS, POST-SICKLE
28 - gabbro, minor ultramafic rock (AHir)

**27** — BLACK TROUT INTRUSIVE SUITE
27 - quartz diorite, diorite (ATiq)

**26** — SICKLE GROUP — ARKOSIC METASEDIMENTARY ROCKS, DERIVED GNEISS
26a - conglomerate (ASac)
26b - arkosic sandstone (ASas)

unconformable

SICKLE METAMORPHIC SUITE
26c - sandstone-derived gneiss, migmatite (ASan)

conformable ? on Burntwood River 77.5

SOUTHERN INDIAN GNEISS
26d - felsic, minor mafic gneiss (age unknown) (AImf)

**25** — PRE-SICKLE INTRUSIVE ROCKS
25a - gabbro, norite, ultramafic rock (APir)
25b - tonalite, granodiorite, diorite (APit)
25c - granite (APig), 25d gabbro-quartz diorite (APig)

**24** — WASEKWAN or SICKLE GROUP — AMPHIBOLITE CALC-SILICATE ROCK, METASEDIMENTARY ROCKS
24 - greywacke (ASmw)
24a - conglomerate, greywacke (AGmc), 24b - felsic gneiss (AGmf)

unconformable?

GNEISSIC ROCKS OF PROBABLE WASEKWAN AGE

**23** — WASEKWAN GROUP — METASEDIMENTARY ROCKS
23a - greywacke, conglomerate, mafic mudstone (AWsw)

BURNTWOOD RIVER METAMORPHIC SUITE
24c mafic gneiss, volcanic rock greywacke, quartzite, marble (ABmn)

conformable

24d-amphibolite, tuff (AImd)

conformable

23c - greywacke-derived gneiss and migmatite (ABsw)

23b-greywacke-derived gneiss, migmatite (ABsw)

**22** — FELSIC, INTERMEDIATE VOLCANICS
22a - dacite, rhyolite (AWvd)

**21** — MAFIC, INTERMEDIATE VOLCANICS
21a - basalt andesite (AWva) tuff, amphibolite
21b - basalt (AWvb)

Geological boundary (approximate, inferred).....
Fault approximate or inferred.....
Area of no outcrop.....
No analytical result.....*

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

Provisional Compilation map by H.W. 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

This map has been reprinted from a scanned version of the original map
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