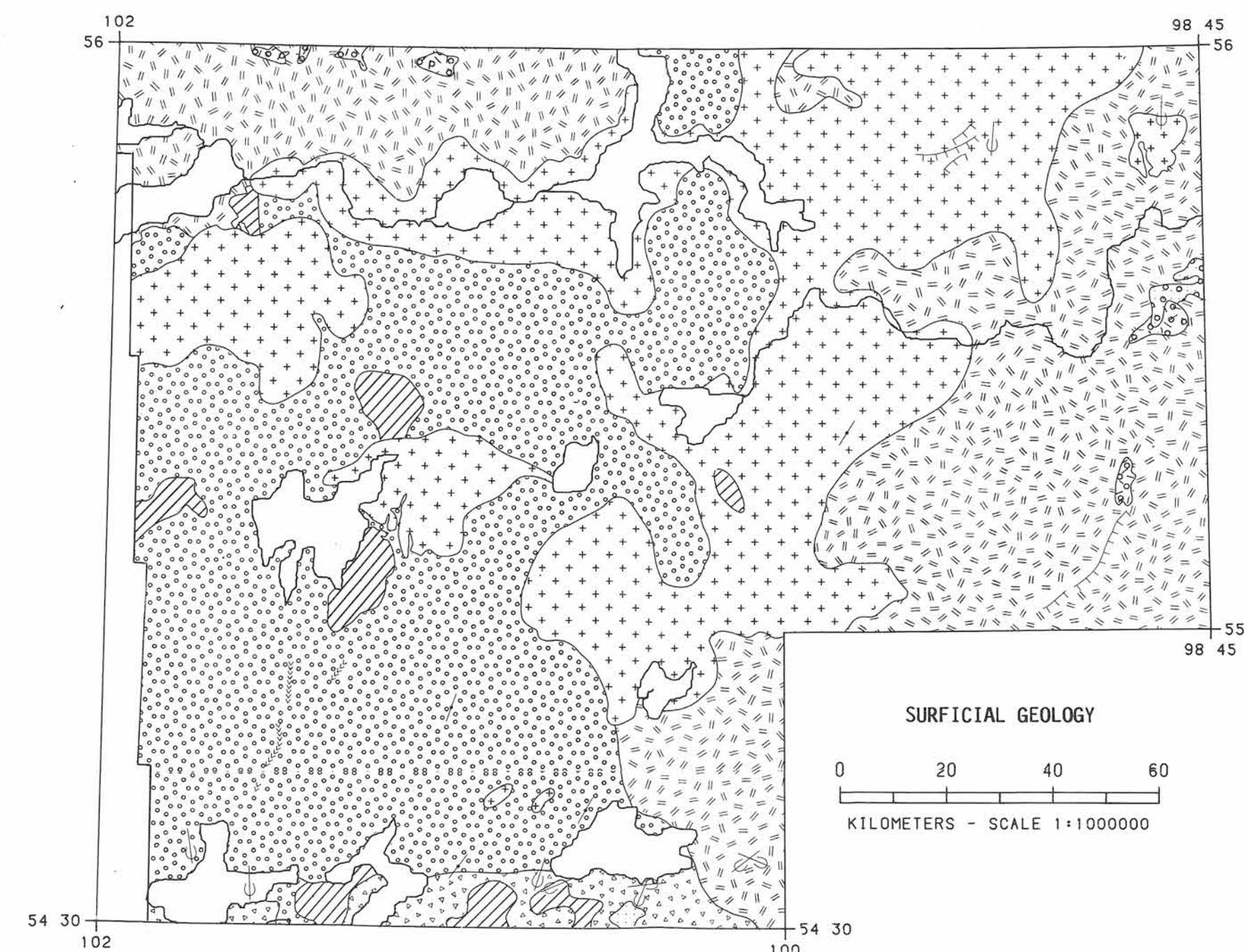


The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function ( $1/d^2$ ) to filter out minor irregularities and emphasize broad-scale regional features. Single point anomalies may be suppressed or eliminated, however, geological units which are chemically enriched, or larger metallic deposits undergoing weathering would be expected to produce identifiable anomalies.



#### NONGLACIAL ENVIRONMENT

**ORGANIC DEPOSITS:** marsh, fen, bog and swamp deposits up to 6 m thick, seasonally flooded; commonly overlying fine textured proglacial lake and glacial till deposits

#### PROGLACIAL AND GLACIAL ENVIRONMENT

**GLACIOLAUSTRINE DEPOSITS:** clay silt; sand and minor gravel, 1 - 30 m thick, deposited in proglacial lakes

**Beach and nearshore deposits:** sand and gravel 1 - 4 m; sand blanket 0 - 1 m thick; includes areas of wave washed till and exposed bedrock

**Deep basin deposits:** silt, clay and sand, 1 - 30 m thick, forming extensive lake plains and discontinuous veneer reflecting underlying topography; may include areas of iceberg scouring, thin alluvium, wave washed till and exposed bedrock

**GLACIOFLUVIAL DEPOSITS:** gravel, sand and silt 1 - 100 m thick, deposited in an ice-marginal environment; includes subaqueous outwash deposited in glacial lakes, and some late glacial valley fill

#### GLACIAL ENVIRONMENT

**GLACIAL DEPOSITS:** unsorted glacial debris, 1 - 10 m thick, reflecting composition of underlying bedrock; predominantly lodgment till; also includes extensive areas of hummocky stagnation moraine, ribbed moraine and water deposited till

**Till:** 1 - 10 m thick, highly calcareous, derived primarily from Paleozoic carbonate rock; typical composition: silt - 4%, sand - 21%, clay - 19%, gravel - 16%; includes bedrock exposures, evidence of wave-washing

**Till:** 1 - 5 m thick, derived primarily from Precambrian bedrock; typical composition: sand - 46%, gravel - 28%, silt - 22%, clay - 4%; includes extensive areas of bedrock outcrop, surface reflects form of underlying bedrock surface

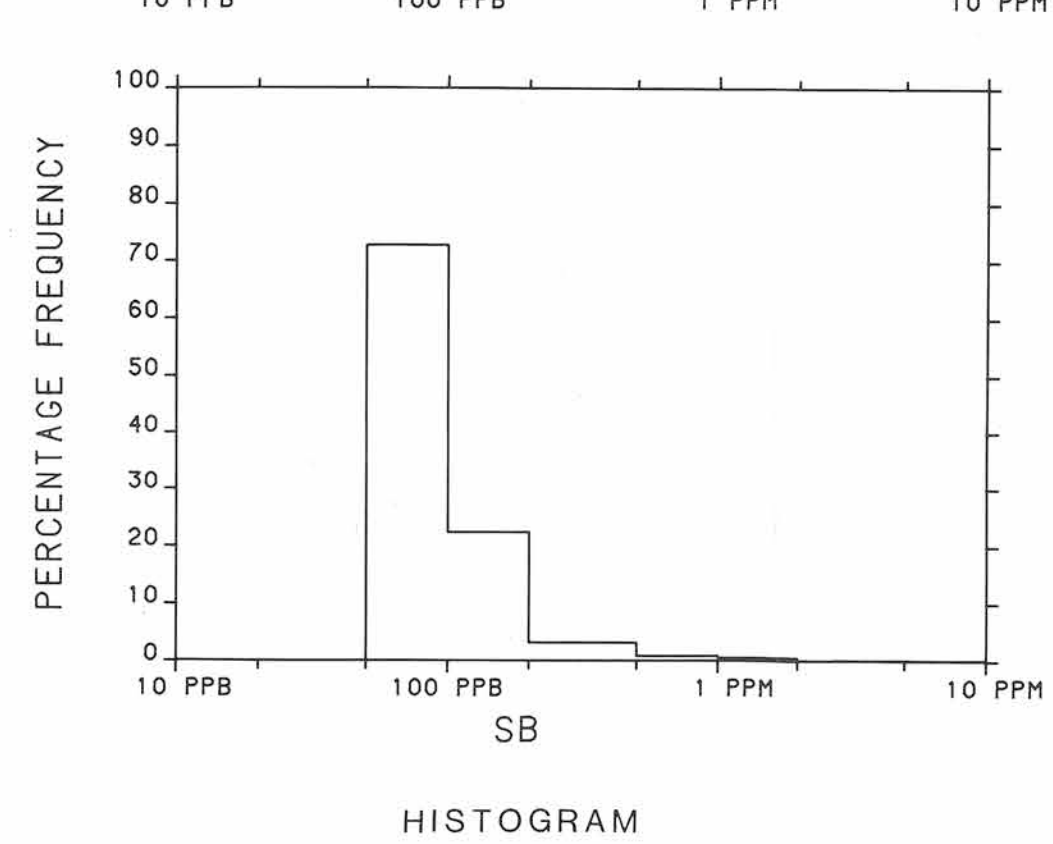
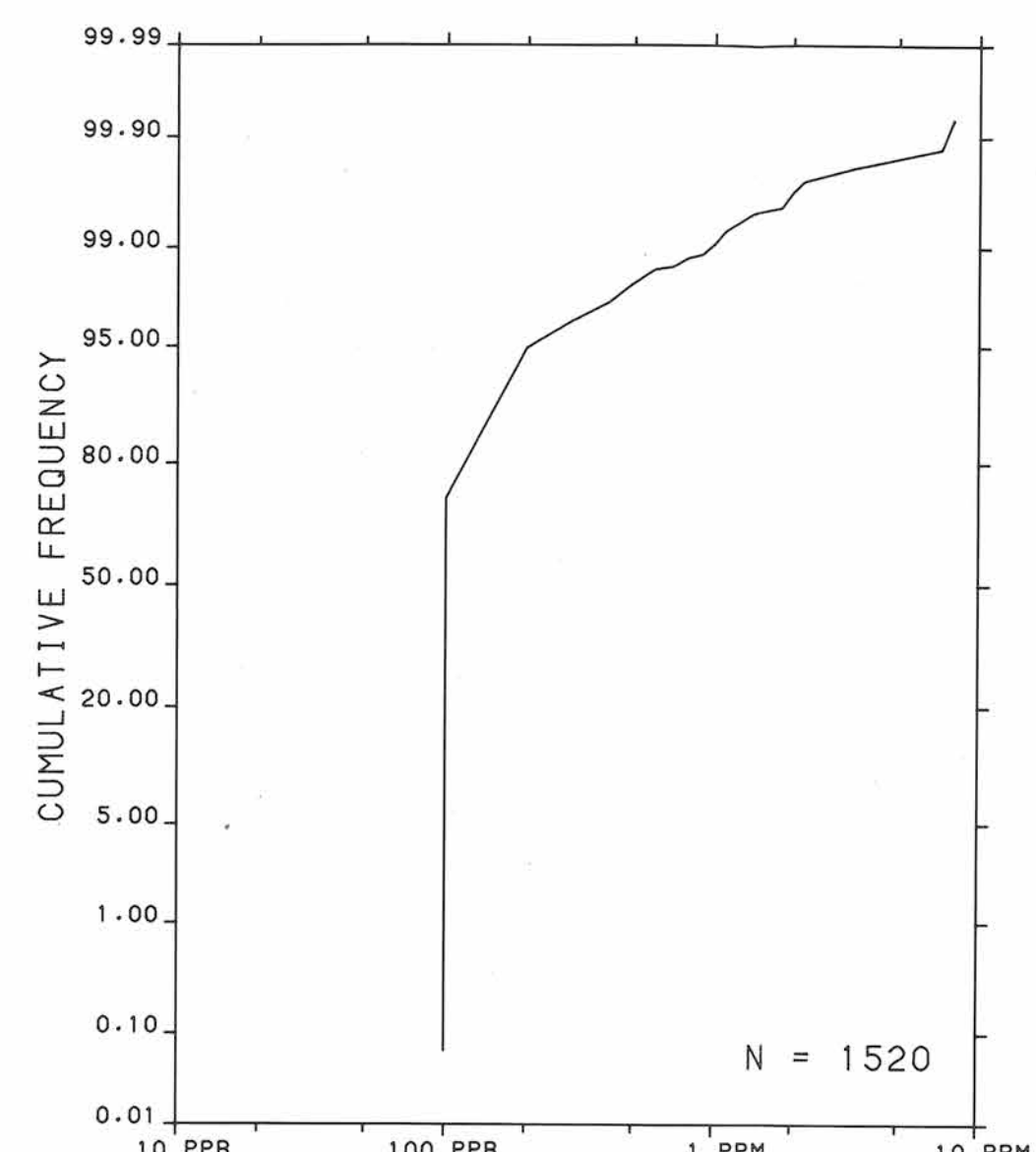
#### NONGLACIAL ENVIRONMENT

**BEDROCK:** Precambrian, Paleozoic and Mesozoic bedrock of various lithologies. Detailed geological legend at right

#### SYMBOLS

Surficial geological boundary . . . . .  
Striae . . . . .  
Flutings, drumlins and drumlinoid ridges . . . . .  
Moraines (including end, interlobate and recessional) . . . . .  
Beach ridges, bars and strandlines . . . . .  
Esker . . . . .

Surficial geology derived from:  
Nelson, E. et al. (1981) Surficial Geological Map of Manitoba, Aggregate Resources Section, Manitoba Mineral Resources Division, Map 81-1 (1:1,000,000 scale)



#### LEGEND

##### CENOZOIC

**10 QVSD 44\*** Overburden; mainly glacial till and glaciolacustrine deposits

##### PALEOZOIC

###### ORDOVICIAN

**9 ORLM 14** RED RIVER FORMATION: Mottled dolomitic limestone to dolomite, in part cherty and calcareous

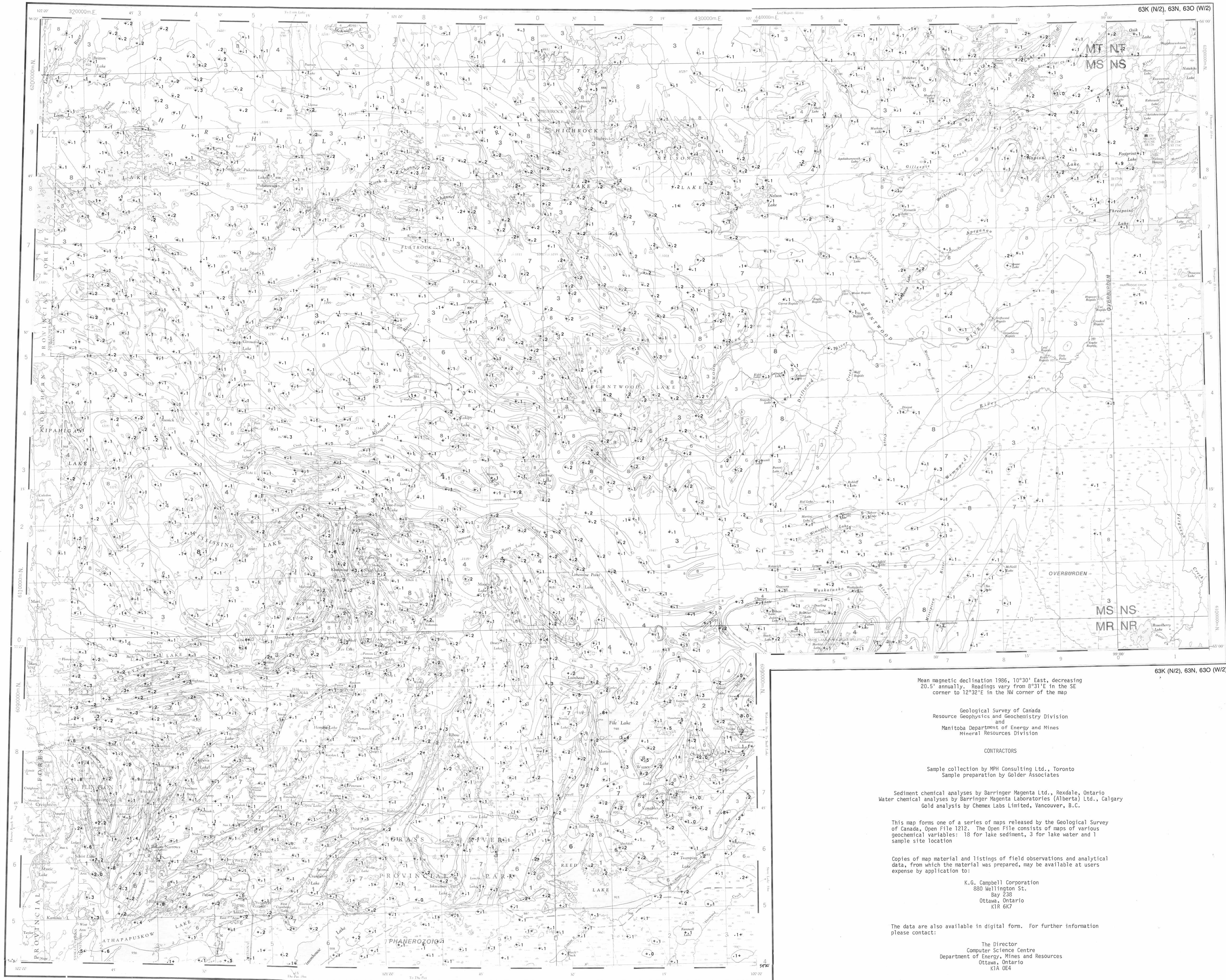
##### PROTEROZOIC

**8 ACIV 04** Felsic to intermediate plutonic rocks  
**7 IMIV 04** Intermediate plutonic rocks  
**6 BCIV 04** Mafic to intermediate plutonic rocks. Includes ultramafic rocks  
**5 AMPB 04** Amphibolite. Includes chert, marble  
**4 MARK 04** Meta-arkose and quartz-feldspathic gneiss  
**3 MDGK 04** Meta-greywacke and quartz-biotite gneiss  
**2 IEVY 04** Intermediate to felsic volcanic rocks  
**1 BEVY 04** Mafic to intermediate volcanic rocks

\*A mnemonic code assigned to rock types and recorded as part of field observations

Geological boundary . . . . .  
Surficial deposit boundary . . . . .  
No analytical results . . . . .

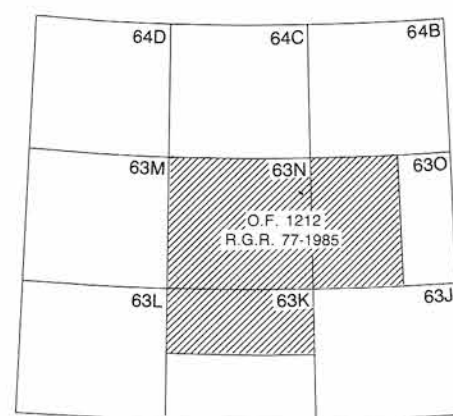
Provisional Synoptic Geological Compilation at 1:250,000 scale, by S. Parker, Geological Services, Manitoba Energy and Mines, 1985



#### ANTIMONY (ppm)

GSC OPEN FILE 1212  
REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 77-1985  
CANADA-MANITOBA  
MINERAL DEVELOPMENT AGREEMENT (1984-89)  
LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY  
WEST-CENTRAL MANITOBA, 1985  
Scale 1:250 000

Universal Transverse Mercator Projection  
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Mean magnetic declination 1986, 10°30' East, decreasing 20.3" annually. Readings vary from 8°31'E in the SE corner to 12°32'E in the NW corner of the map

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

#### CONTRACTORS

Sample collection by MPH Consulting Ltd., Toronto  
Sample preparation by Golder Associates

Sediment chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary  
Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary  
Gold analysis by Chemex Labs Limited, Vancouver, B.C.

This map forms one of a series of maps released by the Geological Survey of Canada, Open File 1212. The Open File consists of maps of various geochemical variables: 18 for lake sediment, 3 for lake water and 1 sample site location

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.  
Box 238  
Ottawa, Ontario  
K1R 6K7

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

The Director  
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Manitoba Energy and Mines

Energy, Mines and Resources Canada

Energie, Mines et Ressources Canada

Canada

ANTIMONY (ppm)

GSC OPEN FILE 1212

WEST-CENTRAL MANITOBA, 1985