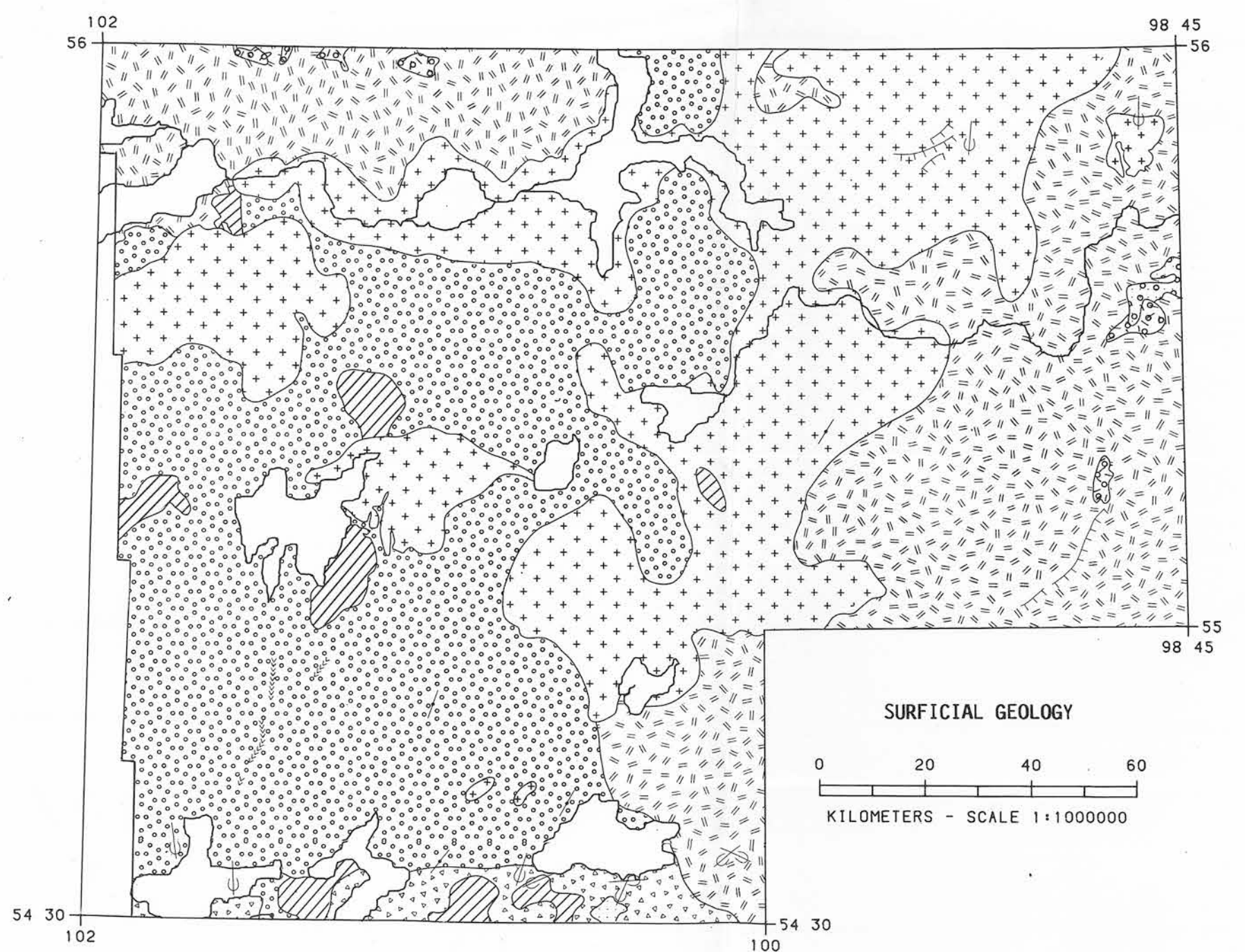


The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function ( $1/d^2$ ) to filter out minor irregularities and emphasize broad-scale regional features. Single point anomalies may be suppressed or eliminated, however, geological units which are chemically enriched, or large 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 rocks; typical composition: silt - 44%, 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 - 48%, gravel - 28%, silt - 22%, clay - 2%; includes extensive areas of bedrock outcrop, surface reflects form of underlying bedrock surface.

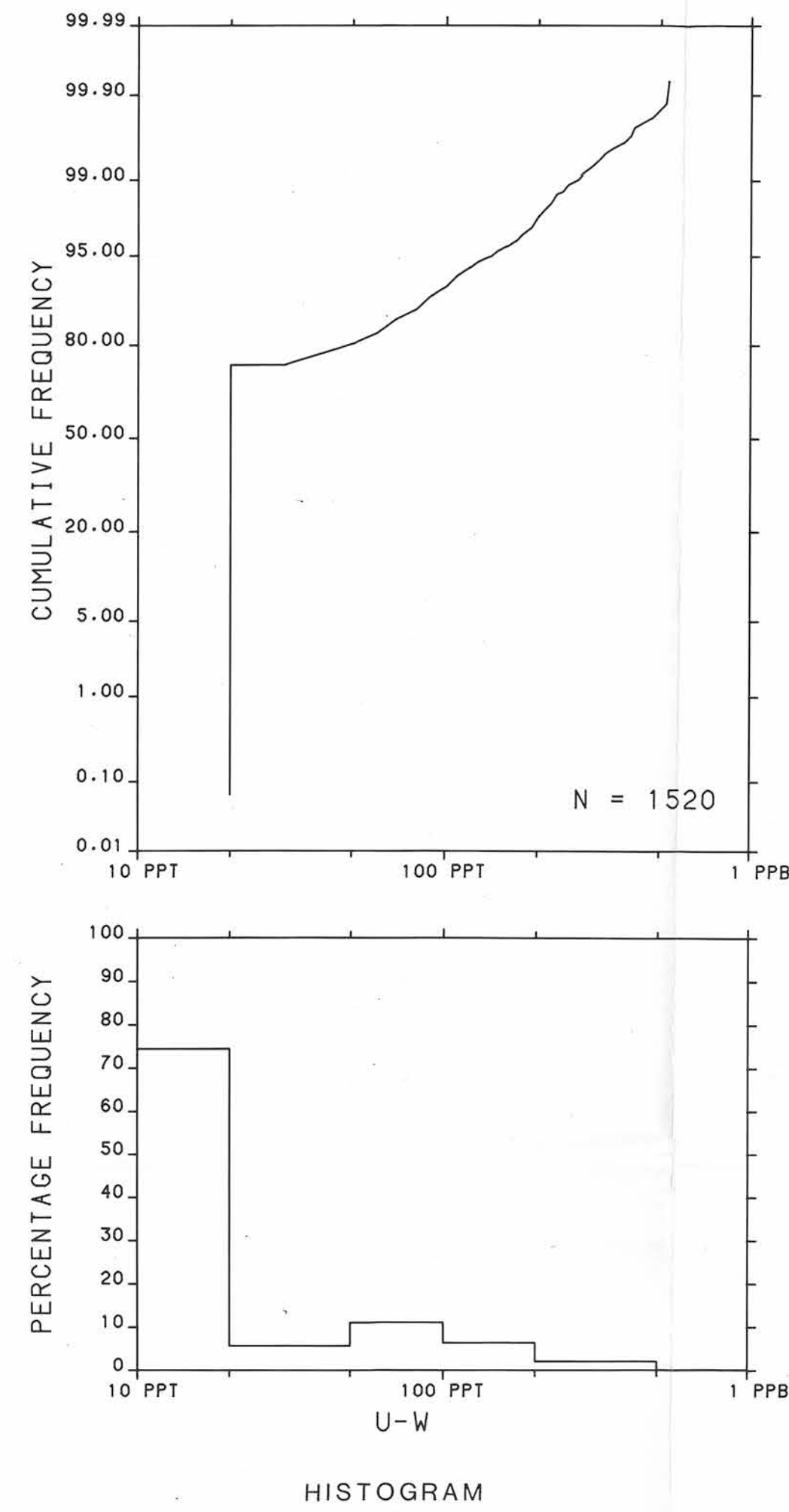
#### NONGLACIAL ENVIRONMENT

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:  
Nielson, L. et al. (1981) Surficial Geological Map of Manitoba, Aggregate Resources Section, Manitoba Mineral Resources Division, Map 61-1 (1:1,000,000 scale).



#### LEGEND

#### CENOZOIC

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

#### PALEOZOIC

##### ORDOVICIAN

9 DMN 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 MGCK 04 Meta-gneiss and quartz-biotite gneiss.

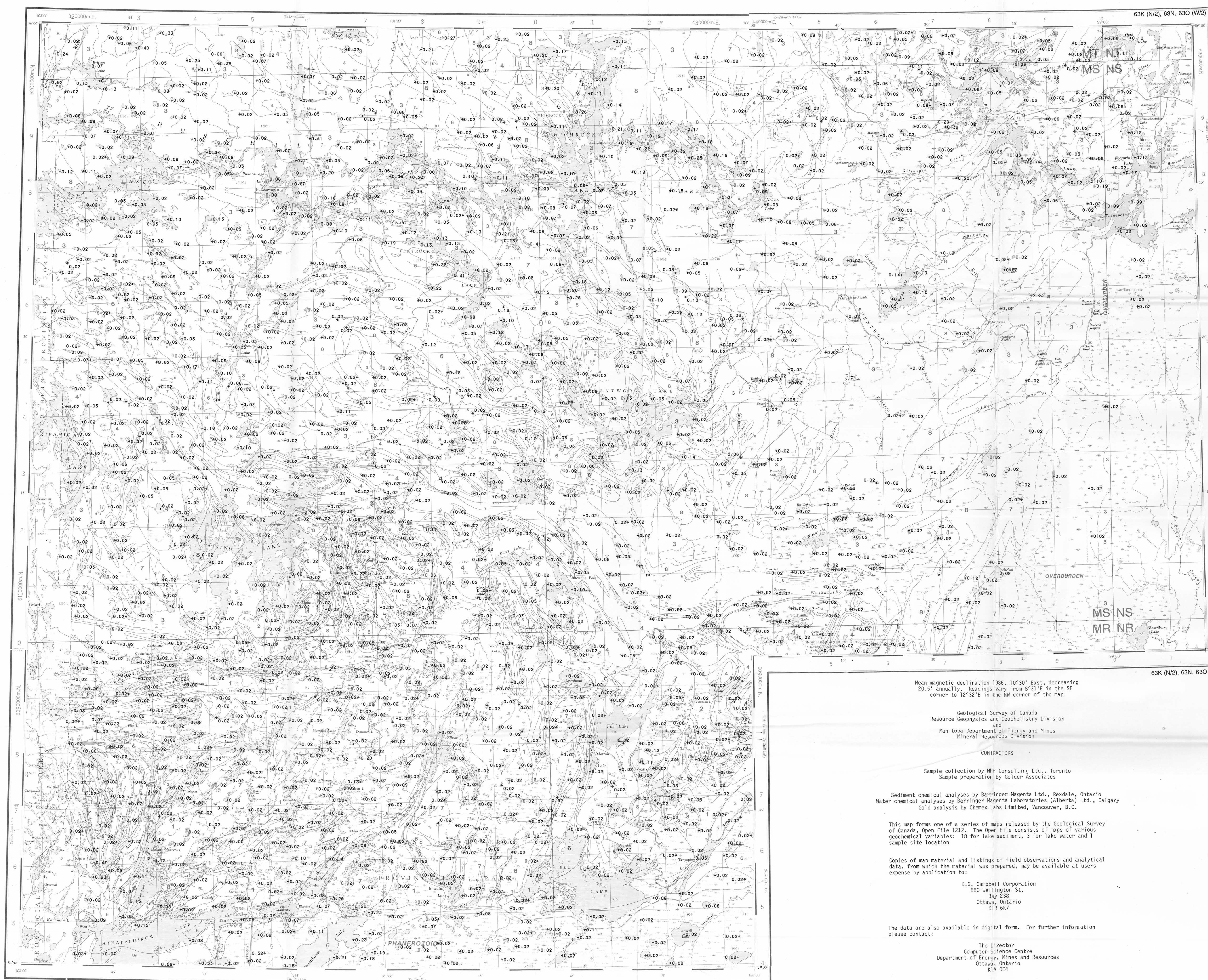
2 IEXV 04 Intermediate to felsic volcanic rocks.

1 BEVX 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.



Mean magnetic declination 1986, 10°30' East, decreasing 20.5' annually. Readings vary from 8°31' in the SE corner to 10°32' in the NW corner of the map.

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

#### CONTRACTORS

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

Sediment chemical analyses by Barringer Magenta Ltd., Rexdale, Ontario  
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 0K7

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 0G4

#### URANIUM in water (ppb)

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

