

ENVIRONMENT CATEGORY

- Organic
- Glaciolacustrine
- Glacioluvial
- Morainal
- Rock
- Eolian

GEOGRAPHIC MODIFIER

- c concealed
- w weathered
- e eroded
- g gullied
- k collapsed
- v veneer
- r ridged
- h hummocky
- d drumlinoid
- t terrace

Complexes: where two or more classes of terrain are interspersed in a mosaic or repeating pattern the proportion of each component in the combination is given in a three-position designation set off by slashes denoting arbitrary percentage limits. For example, "W/W/R" means that at least 60% of the area is underlain by thin till, with up to 40% boggy areas and less than 10% scattered rock outcrops. "Rg/R" indicates more than 60% bedrock concealed by vegetation and less than 10% outcrop. "M/R" indicates at least 60% morainal veneer and up to 40% bedrock exposures.

GLACIAL FEATURE SYMBOLS

Boundary of overburden unit

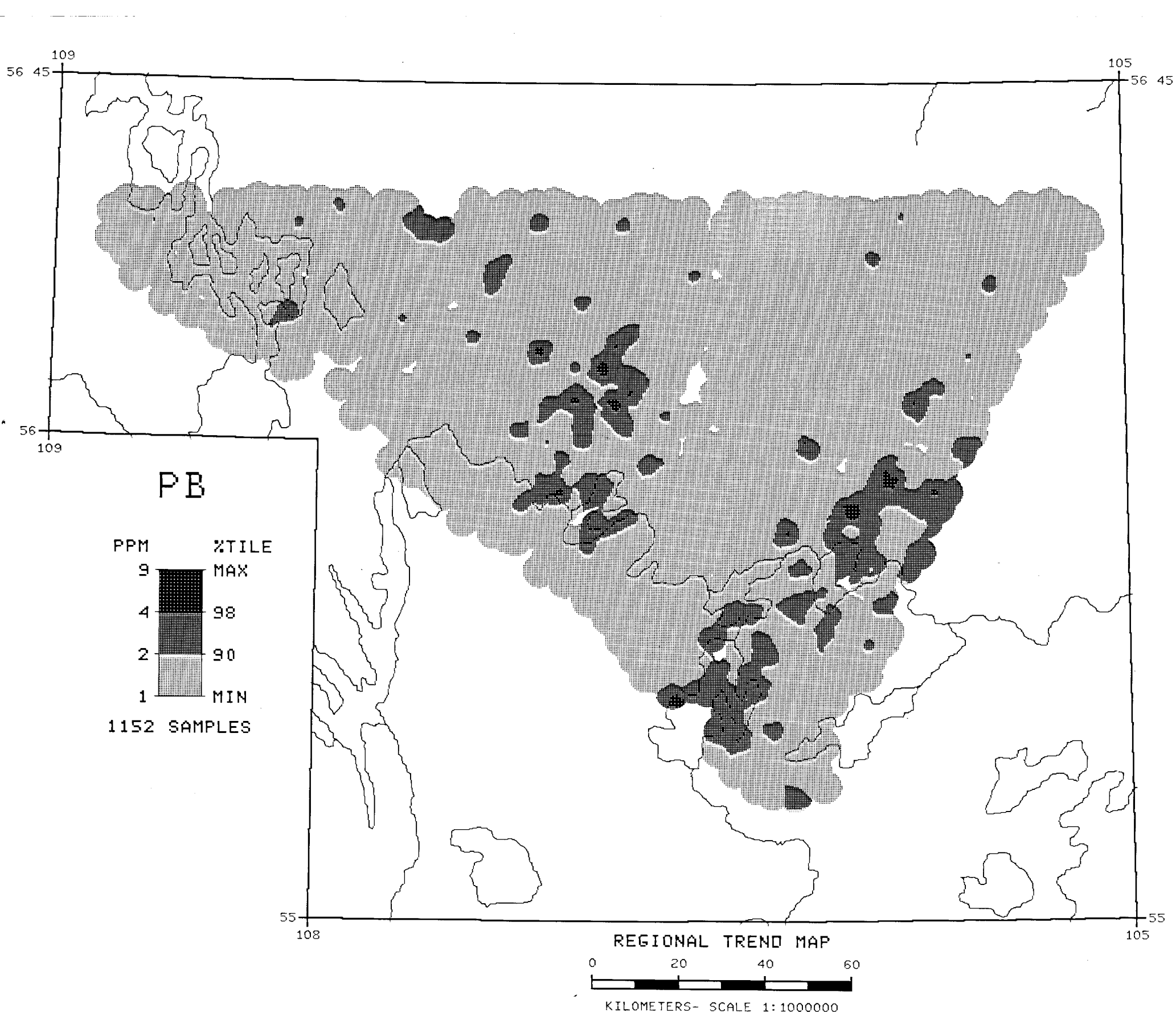
Drumlin, drumlinoid ridge, fluting

Striation, groove (ice direction inferred)

End moraine

Esker, crevasse filling

Surficial geology modified from:
 Schweiner, B.T. (1964) Quaternary Geology of the Precambrian Shield, Map 221A (1:1,000,000 scale), to accompany Report 221, Saskatchewan Energy and Mines.



The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function (1/r²) 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.

Geological Survey of Canada
 Resource Geoscience and Geochemistry Division
 and
 Department of Mineral Resources
 Saskatchewan Geological Survey

CONTRACTORS

Sample collection by MPH 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

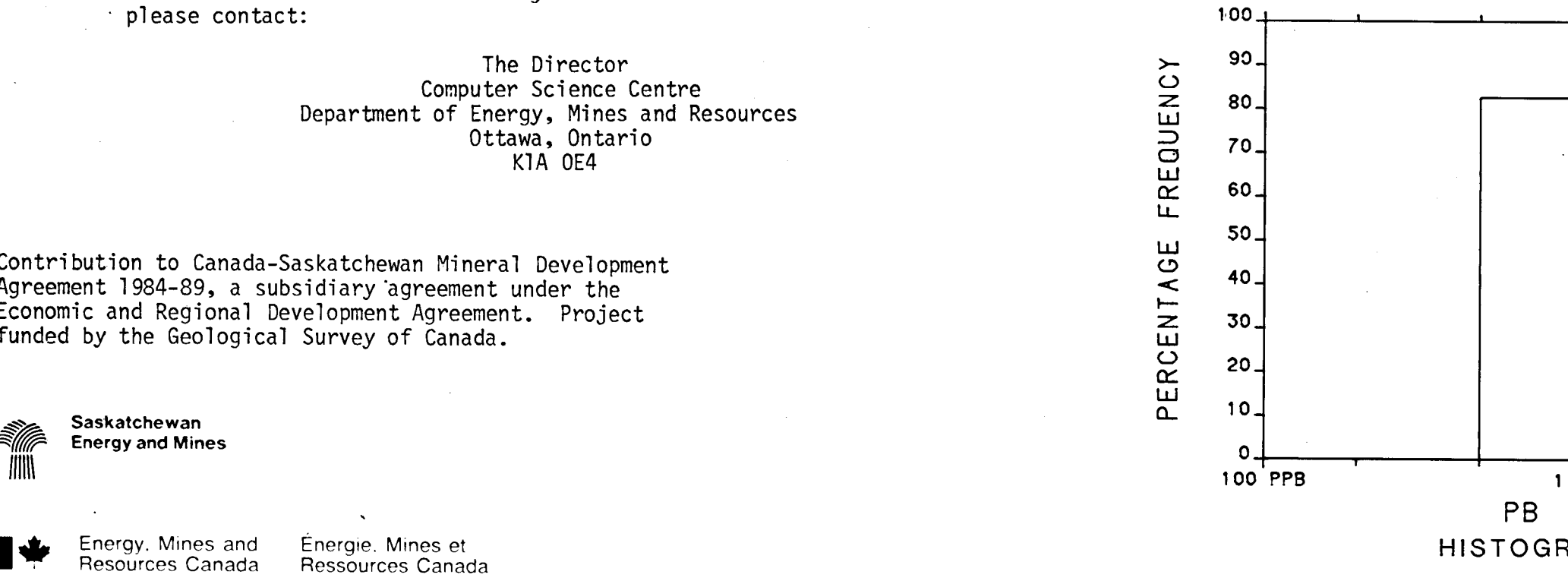
This map forms one of a series of maps released by the Geological Survey of Canada, Open File 1213. The Open File consists of maps of various geochemical variables: 16 for lake sediments; 3 for lake water and 1 sample site location.

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
 K1K 6K7

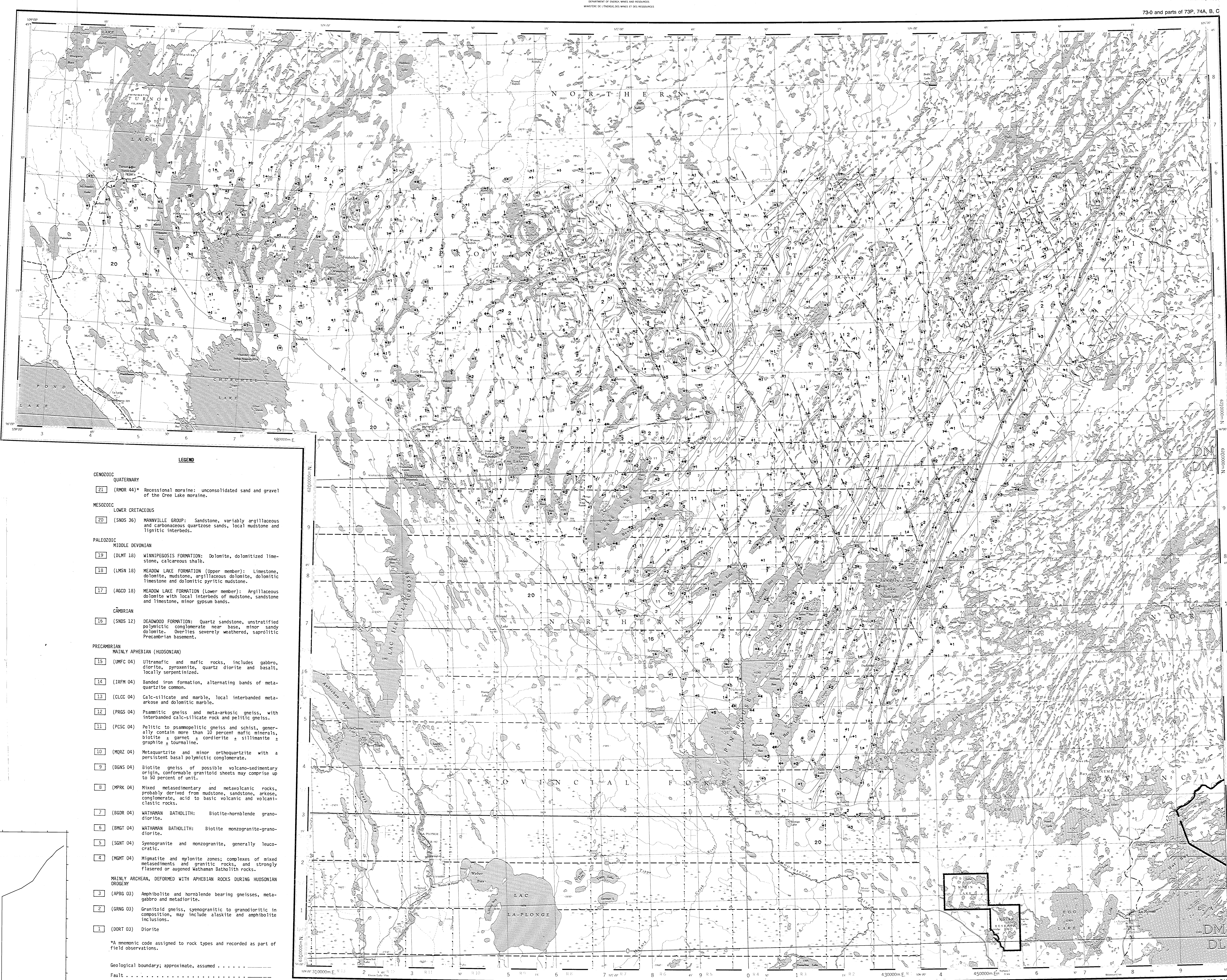
The data are also available in digital form. For further information please contact:

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



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Saskatchewan Energy and Mines
 Energy, Mines and Resources Canada
 Energy, Mines and Resources Canada



LEGEND

CENOZOIC

QUATERNARY

21 (RMR 44)* Recessional moraine: unconsolidated sand and gravel of the Cree Lake moraine.

MESOZOIC

LOWER CRETACEOUS

20 (SND3 36) MANVILLE GROUP: Sandstone, variably argillaceous and carbonaceous quartzose sands, local mudstone and lignitic interbeds.

PALEOZOIC

MIDDLE DEVONIAN

19 (DLMT 18) WANNIPEGOSSIS FORMATION: Dolomite, dolomitized limestone, calcareous shale.

18 (LMSN 18) HEADON LAKE FORMATION (Upper member): Limestone, dolomite, mudstone, argillaceous dolomite, dolomitic limestone and dolomitic pyritic mudstone.

17 (AGCD 18) HEADON LAKE FORMATION (Lower member): Argillaceous dolomite with local interbeds of mudstone, sandstone and limestone, minor gypsum beds.

CAMBRIAN

16 (SND3 12) DEADWOOD FORMATION: Quartz sandstone, unstratified polytictic conglomerate near base, minor sandy dolomite. Overlies severely weathered, saproplitic Precambrian basement.

PRECAMBRIAN

MAINLY APHEBIAN (HUDSONIAN)

15 (UMPC 04) Ultramafic and mafic rocks, includes gabbro, diorite, gneiss, quartz diorite and basalt, locally serpentinized.

14 (IRPM 04) Banded iron formation, alternating bands of meta-quartzite and magnetite.

13 (CLCC 04) Calc-silicate and marble, local interbedded meta-arkose and dolomitic marble.

12 (PRGS 04) Psammite gneiss and meta-arkose gneiss, with interbedded calc-silicate rock and pelitic gneiss.

11 (PSCS 04) Pelitic to psammopelitic gneiss and schist, generally contain more than 10 percent mafic minerals, biotite + garnet + cordierite + sillimanite + graphite + tourmaline.

10 (MOR2 04) Metaquartzite and minor orthoquartzite with a persistent basal polytictic conglomerate.

9 (BGKS 04) Biotite gneiss of possible volcano-sedimentary origin, conformable granitoid sheets may comprise up to 50 percent of unit.

8 (MPRK 04) Mixed metasedimentary and metavolcanic rocks, probably derived from mudstone, sandstone, arkose, conglomerate, acid to basic volcanic and volcaniclastic rocks.

7 (SGDR 04) WATHAMAN BATHOLITH: Biotite-hornblende granodiorite.

6 (BRGT 04) WATHAMAN BATHOLITH: Biotite monzogranite-granodiorite.

5 (SGNT 04) Syenogranite and monzogranite, generally leucocratic.

4 (MMDT 04) Migmatite and mylonite zones; complexes of mixed metasediments and granitic rocks, and strongly flattened or augen Wathaman Batholith rocks.

MAINLY ARCHEAN, DEFORMED WITH APHEBIAN ROCKS DURING HUDSONIAN OROGENY

3 (APRS 03) Amphibolite and hornblende bearing gneisses, meta-gabbro and metadiorite.

2 (GRNS 03) Granitoid gneiss, syenogranitic to granodioritic in composition, may include alaskite and amphibolite inclusions.

1 (DORT 03) Diorite

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

Geological boundary, approximate, assumed

Fault

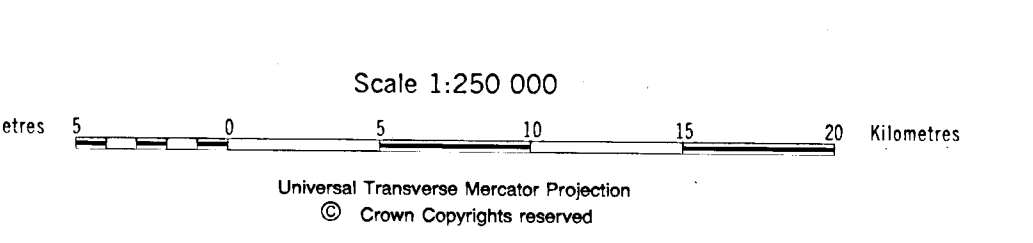
No analytical result

Geological base and legend are derived from: Thomas, W.W. and Stilleme, W.L. (1983): Compilation Bedrock Geology, Uva-la-Crosse, NTS Area 730; Saskatchewan Energy and Mines, Report 245 (1:250,000 scale map with marginal notes).
 Lowry, J.F. and Stilleme, W.L. (1985): Compilation Bedrock Geology, Lac La Ponge, NTS Area 739/731; Saskatchewan Energy and Mines, Report 228 (1:250,000 scale map with marginal notes).
 Thomas, W.W. (1984): Preliminary Compilation Bedrock Geology, Mudjatik, NTS Area 748 (1:250,000 scale map with marginal notes).
 Macdonald, G. and Broughton, F. (1982): Geological Map of Saskatchewan Provisional Edition, North Half, Saskatchewan Mineral Resources, (1:1,000,000 scale map with marginal notes).

LEAD (ppm)
 GSC OPEN FILE 1213
 REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 78-1985

CANADA - SASKATCHEWAN
 MINERAL DEVELOPMENT AGREEMENT (1984-89)

LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY
 NORTH-CENTRAL SASKATCHEWAN, 1985



Elevation in feet above mean sea level

Mean magnetic declination 1985, 17° 29' East, decreasing 20.4' annually. Readings vary from 15° 38' East in the SE corner to 20° 02' East in the NW corner of the map area

Base map assembled by the Geological Survey of Canada from maps published at the same scale by Mapping and Charting Establishment, Department of National Defence and the Survey and Mapping Branch, Department of Energy, Mines and Resources in 1974, 1977, 1982