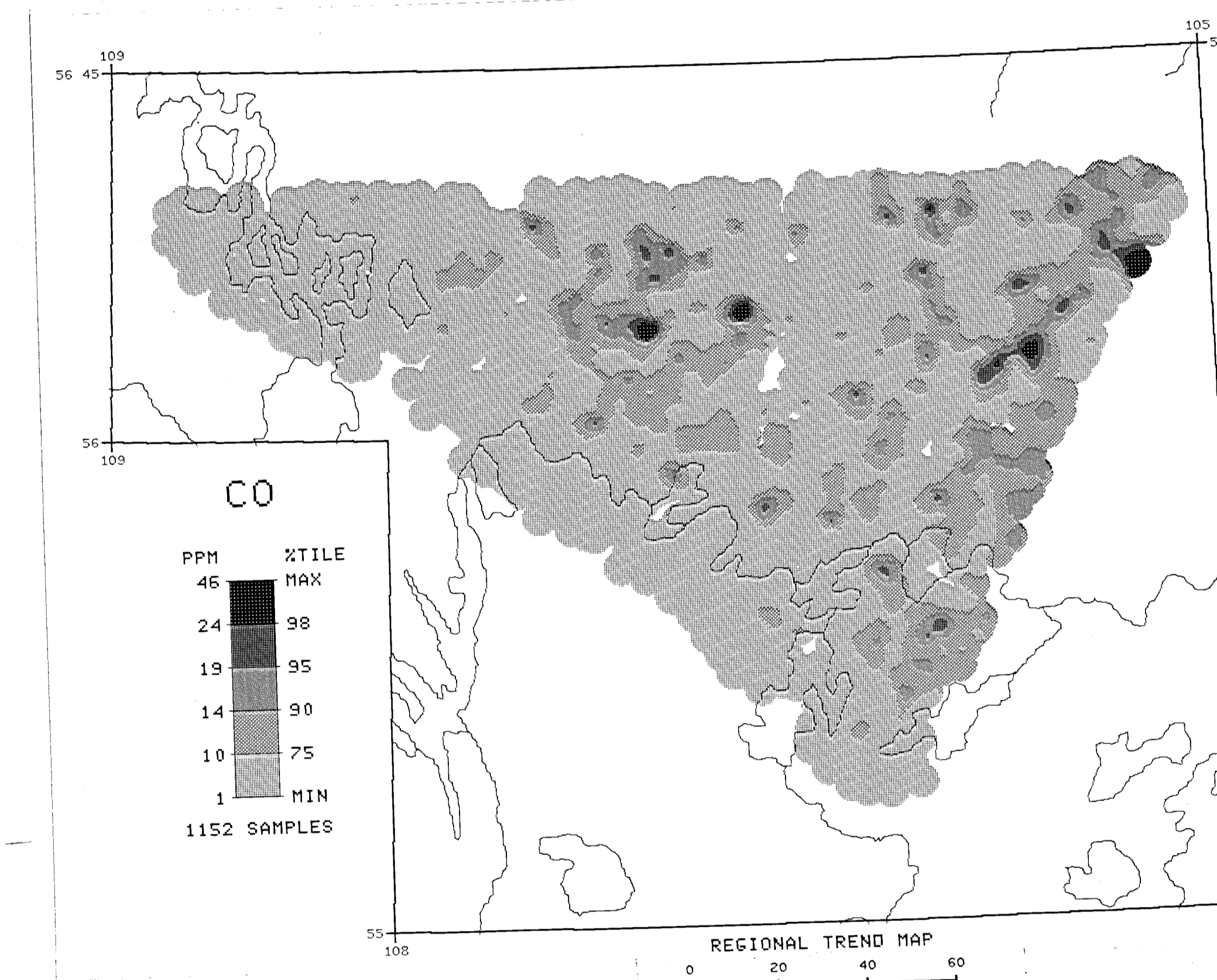


ENVIRONMENT CATEGORY	GEOMORPHIC MODIFIER
Organic	c concealed
Glaciolacustrine	w weathered
Glaciolacustrine	e eroded
Glaciolacustrine	g gullied
Glaciolacustrine	p plain
Morainal	v veneer
Rock	r ridged
Rock	h hummocky
Rock	d drumlinoid
Rock	t terrace

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, "MWD/VP" 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. "M//R" indicates more than 60% bedrock concealed by scattered rock outcrops. "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 derived from:  
 Schreiner, R. L. (1984) 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 Geophysics and Geochemistry Division  
 Department of Energy, Mines and Resources  
 Saskatchewan Geological Survey

CONTRACTORS  
 Sample collection by MPM Consulting Ltd., Toronto  
 Sample preparation by Golder Associates

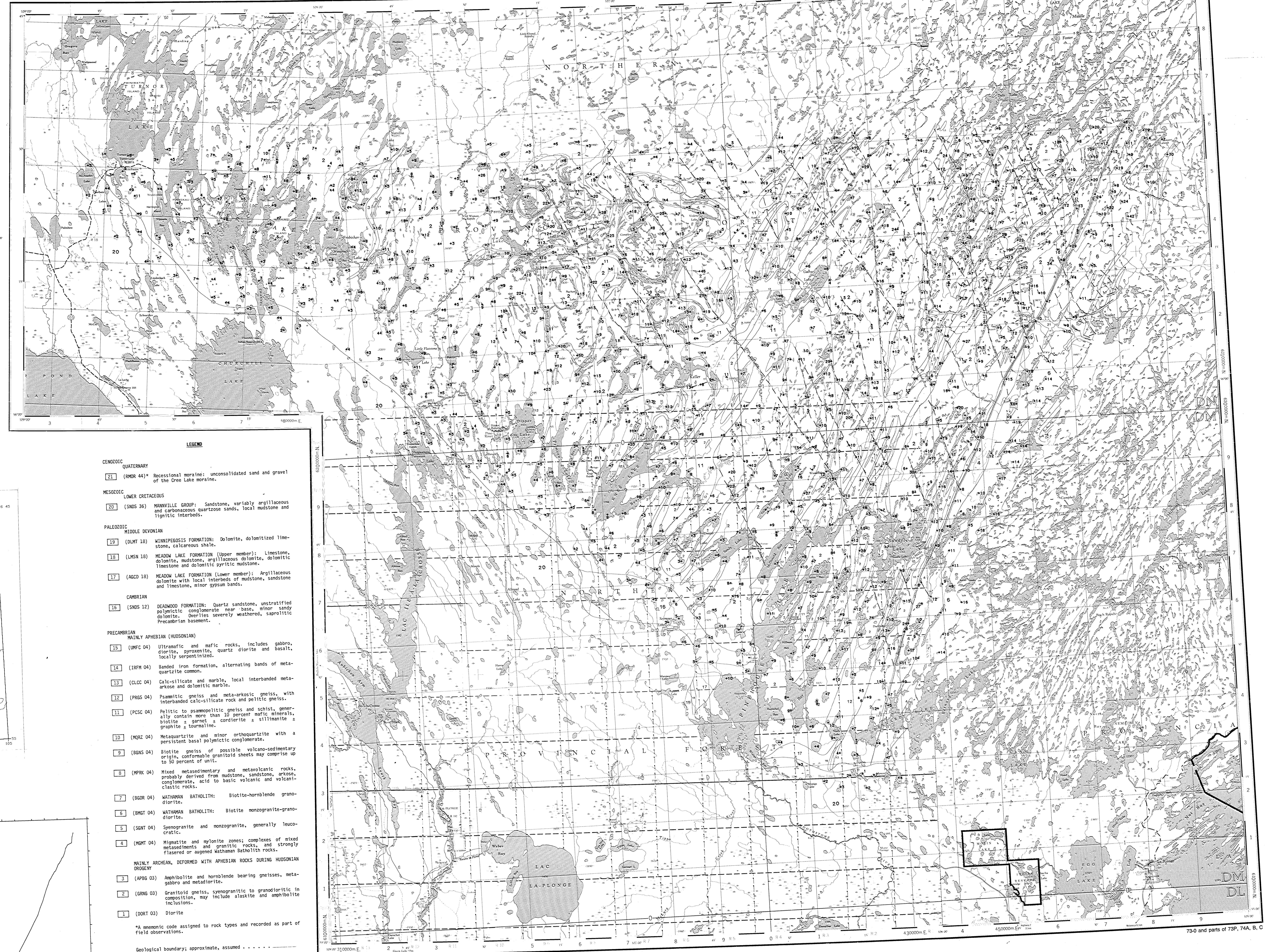
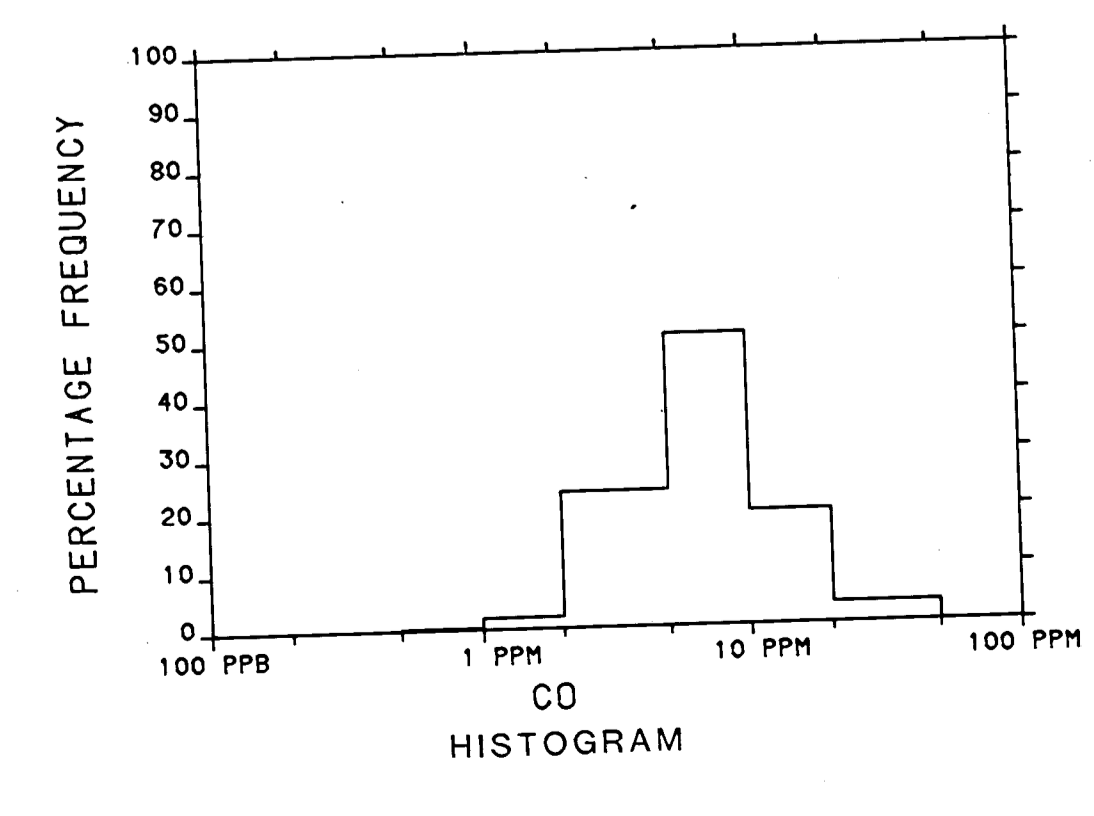
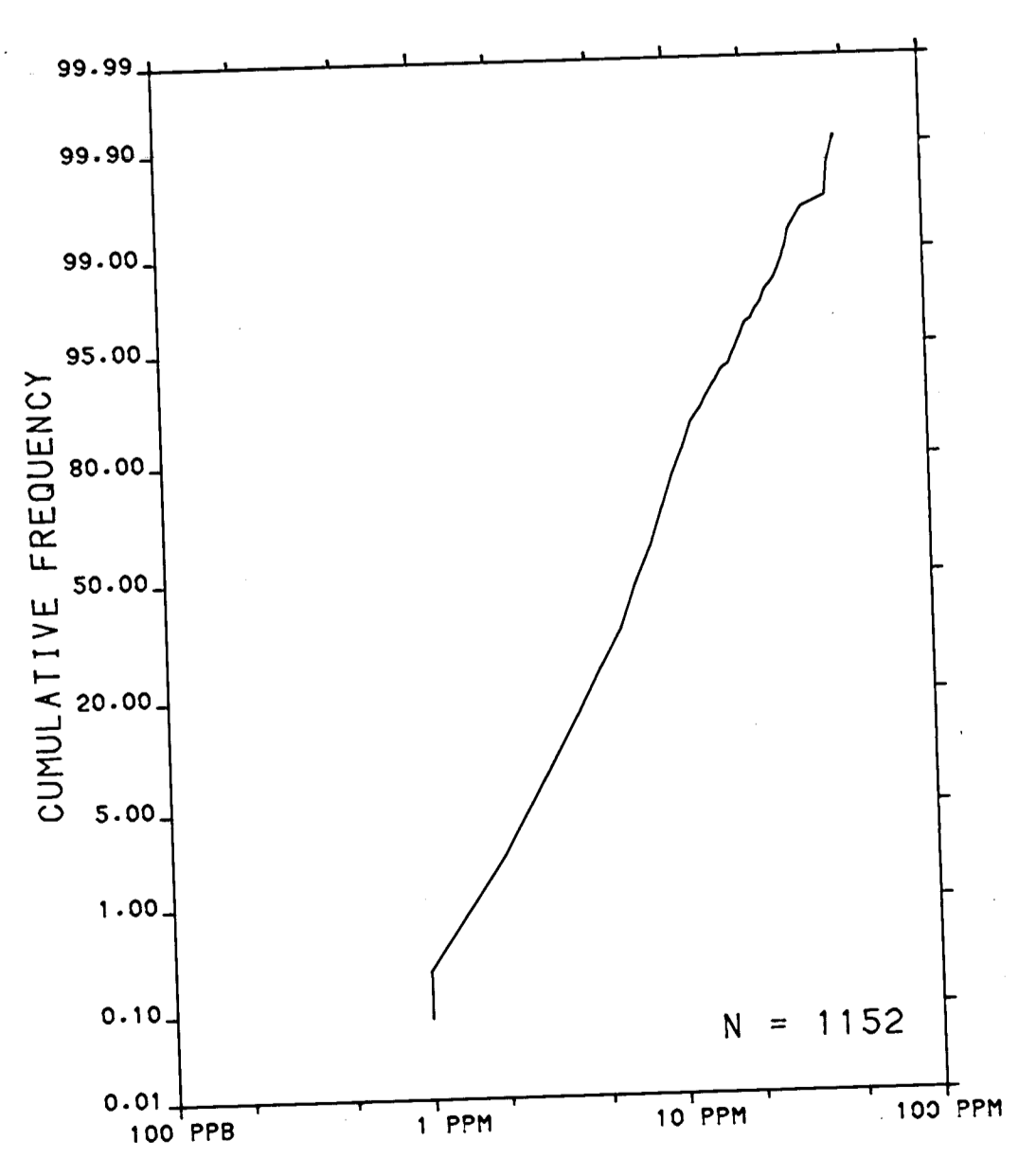
Sediment chemical analyses by Barringer Magenta Ltd., Rosedale, Ontario  
 Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

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 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.  
 Bay 238  
 Ottawa, Ontario  
 K1R 6C7

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

Contribution to Canada-Saskatchewan Mineral Development Agreement 1984-89, a subsidiary agreement under the Economic and Regional Development Agreement. Project funded by the Geological Survey of Canada.



LEGEND

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

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

PALEOZOIC  
 MIDDLE DEVONIAN  
 19 (DUNT 18) WENNIPEGOSSIS FORMATION: Dolomite, dolomitized limestone, calcareous shale.  
 18 (LMSN 18) MEADOW LAKE FORMATION (Upper member): Limestone, dolomite, mudstone, argillaceous dolomite, dolomitic limestone and dolomitic pyritic mudstone.  
 17 (ASCO 18) MEADOW LAKE FORMATION (Lower member): Argillaceous dolomite with local interbeds of mudstone, sandstone and limestone, minor gypsum beds.  
 CAMBRIAN  
 15 (SNDS 12) DEACWOOD FORMATION: Quartz sandstone, unstratified polymictic conglomerate near base, minor sandy dolomite. Overlies severely weathered, saprolitic Precambrian basement.

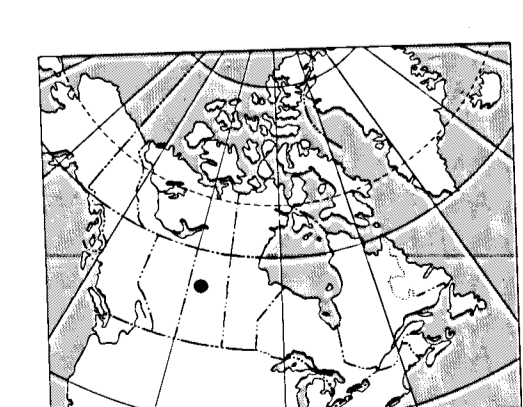
PRECAMBRIAN  
 MAINLY APHEBIAN (HUDSONIAN)  
 13 (LWFC 04) Ultramafic and mafic rocks, includes gabbro, diorite, gneiss, quartz diorite and basalt. Locally serpentinitized.  
 14 (IRFN 04) Banded iron formation, alternating bands of meta-quartzite and marble, local interbedded meta-arkose and dolomitic marble.  
 12 (CLCC 04) Calc-silicate and marble, local interbedded meta-arkose and dolomitic marble.  
 11 (PRSS 04) Psammite gneiss and meta-arkose gneiss, with interbedded calc-silicate rock and pelitic gneiss.  
 10 (PSCS 04) Pelitic to psammopelitic gneiss and schist, generally contain more than 10 percent mafic minerals, biotite + garnet + cordierite + sillimanite + graphite + tourmaline.  
 9 (MQR 04) Metaquartzite and minor orthoquartzite with a persistent basal polymictic conglomerate.  
 8 (BGNS 04) Biotite gneiss of possible volcano-sedimentary origin, conformable granitoid sheets may comprise up to 50 percent of unit.  
 6 (MPCX 04) Mixed metasedimentary and metavolcanic rocks, probably derived from mudstone, sandstone, arkose and calc-silicate, acid to basic volcanic and volcanoclastic rocks.  
 7 (BGDR 04) WATHAMAN BATHOLITH: Biotite-hornblende granodiorite.  
 5 (BNGT 04) WATHAMAN BATHOLITH: Biotite monzogranite-granodiorite.  
 4 (SNGT 04) Syenogranite and monzogranite, generally leucocratic.  
 3 (MNGT 04) Migmatite and mylonite zones, complexes of mixed metasediments and granitic rocks, and strongly flattened or augered Wathaman Batholith rocks.

MAINLY ARCHEAN, DEFORMED WITH APHEBIAN ROCKS DURING HUDSONIAN DOROGENY  
 2 (APBG 03) Amphibolite and hornblende bearing gneisses, metabasite and metadiorite.  
 1 (GNGS 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.

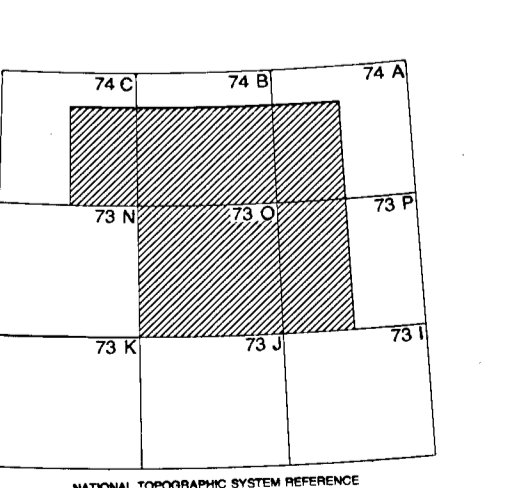
Geological boundary: approximate, assumed  
 Fault  
 No analytical result

Geological base and legend are derived from: Thomas, M.W. and Slomow, K.L. (1985): Compilation Bedrock Geology, 1:1250,000 scale map with marginal notes. Saskatchewan Energy and Mines, Report 285 (1:1250,000 scale map with marginal notes).  
 Lewis, J.F. and Slomow, K.L. (1985): Compilation Bedrock Geology, Lac La Poudre, NTS Area 739/73; Saskatchewan Energy and Mines, Report 225 (1:250,000 scale map with marginal notes).  
 Thomas, M.W. (1983): Compilation Bedrock Geology, Foster Lake, NTS Area 744; Saskatchewan Energy and Mines, Report 228 (1:250,000 scale map with marginal notes).  
 Thomas, M.W. (1984): Preliminary Compilation Bedrock Geology, Nut Lake, NTS Area 748 (1:250,000 scale map with marginal notes).  
 MacDonald, R. and Broughton, P. (1980) Geological Map of the Precambrian Shield, North Half, Saskatchewan Saskatchewan Energy and Mines, Report 228 (1:1,000,000 scale map with marginal notes).



COBALT (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

Scale 1:250,000  
 UNCLASSIFIED TOPOGRAPHIC INFORMATION  
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Elevation in feet above mean sea level  
 Mean magnetic declination 1985, 17°38' 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.

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11 of 20  
 COBALT (ppm)  
 GSC OPEN FILE 1213  
 NORTH-CENTRAL SASKATCHEWAN, 1985