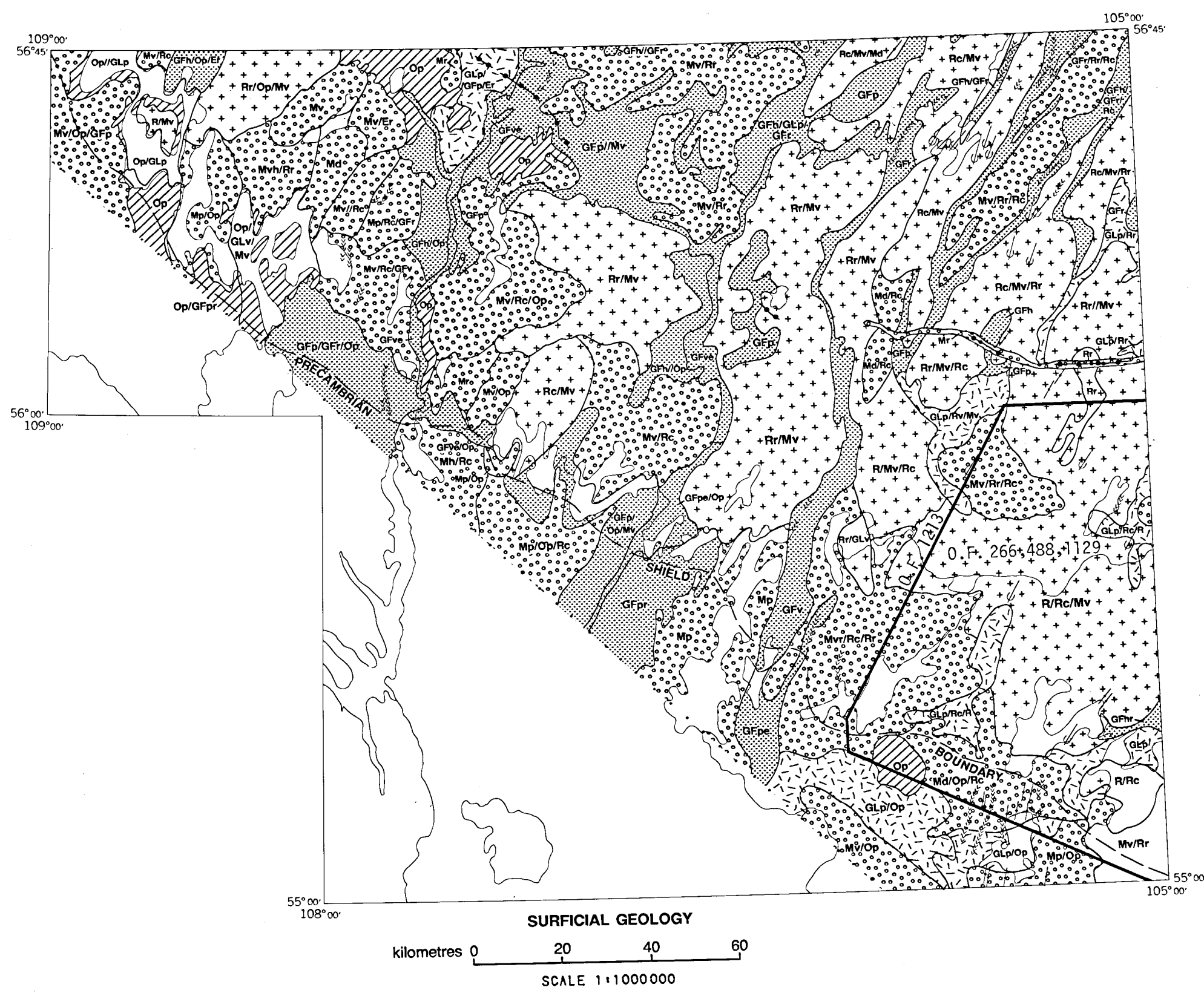
GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

ANTIMONY (ppm)

GSC OPEN FILE 1213
NORTH-CENTRAL SASKATCHEWAN, 1985

73-0 and parts of 73P, 74A, B, C



SURFICIAL GEOLOGY

kilometres 0 20 40 60
SCALE 1:1000000

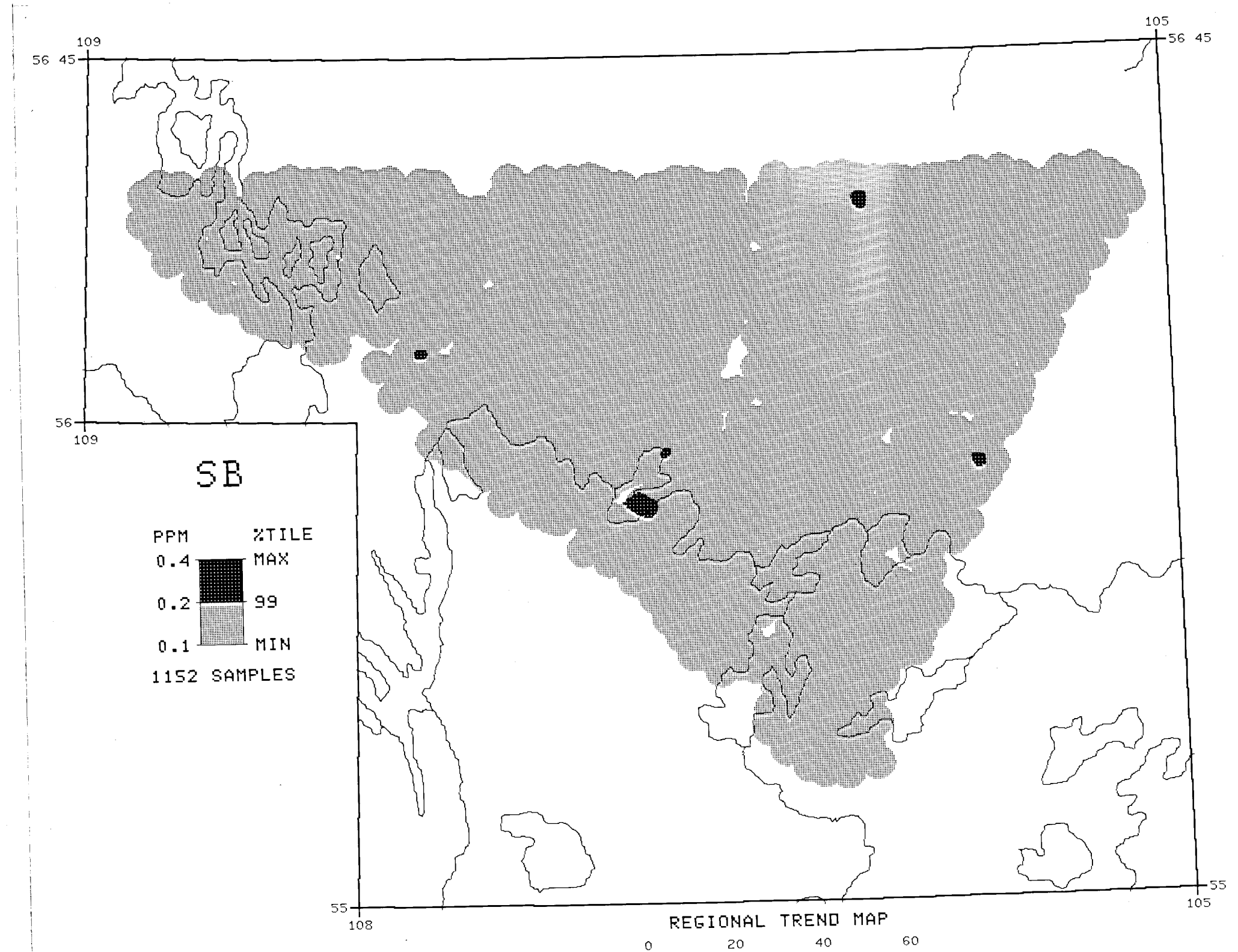
ENVIRONMENT CATEGORY		GEOMORPHIC MODIFIER	
O	Organic	c	concealed
GL	Glaciolacustrine	w	weathered
GF	Glaciofluvial	e	eroded
M	Morainal	g	gullied
R	Rock	k	collapsed
E	Eolian	p	plain
		v	veneer
		r	ridged
		h	hummocky
		d	drumlinoid
		t	terrace

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, "Mv/O/R" means that at least 60% of the area is underlain by thin till, with up to 40% boggy areas, and less than 15% scattered rock outcrops. "Rc//R" indicates more than 60% bedrock concealed by vegetation and less than 15% outcrop. Mv/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:
Schreiner, B.T. (1984) Quaternary Geology of the Precambrian Shield, Map 221A (1:1,000,000 scale), to accompany Report 221, Saskatchewan Energy and Mines.



REGIONAL TREND MAP

0 20 40 60
KILOMETERS- SCALE 1:1000000

The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function ($1/d^3$) 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
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 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 6K7

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

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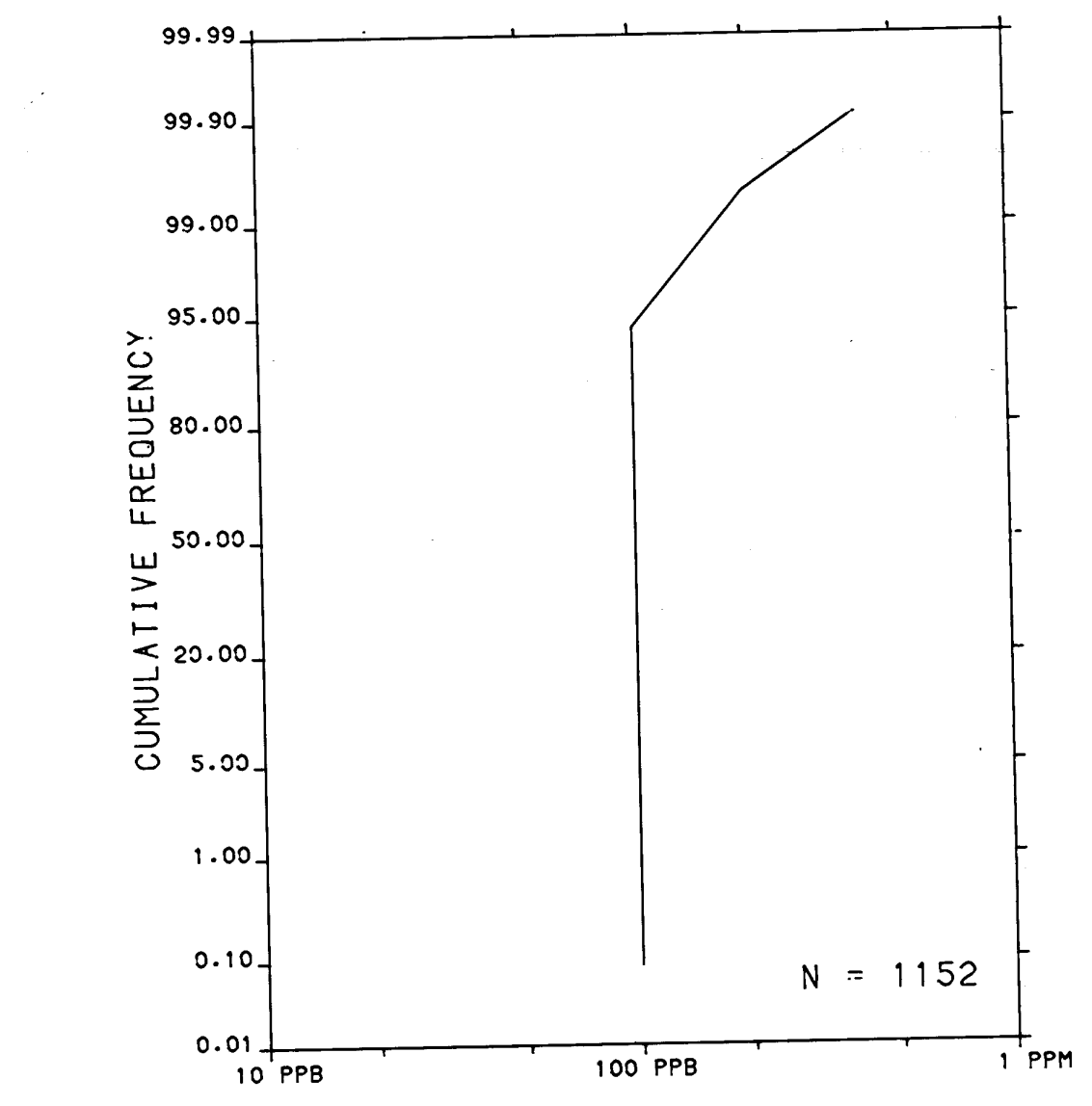
Department of Energy, Mines and Resources
Ottawa, Ontario
K1A 0E4

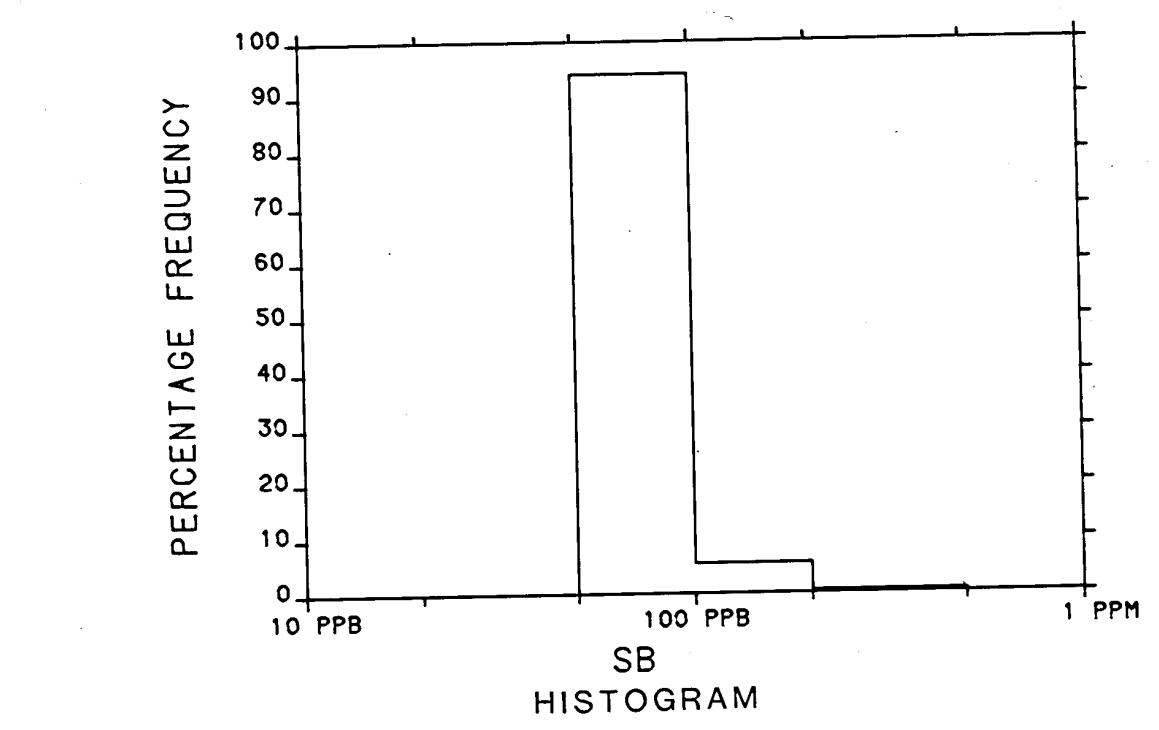
Contribution to Canada-Saskatchewan Mineral Development Agreement 1984-89, a subsidiary agreement under the Economic and Regional Development Agreement. Project funded by the Geological Survey of Canada.

Saskatchewan Energy and Mines

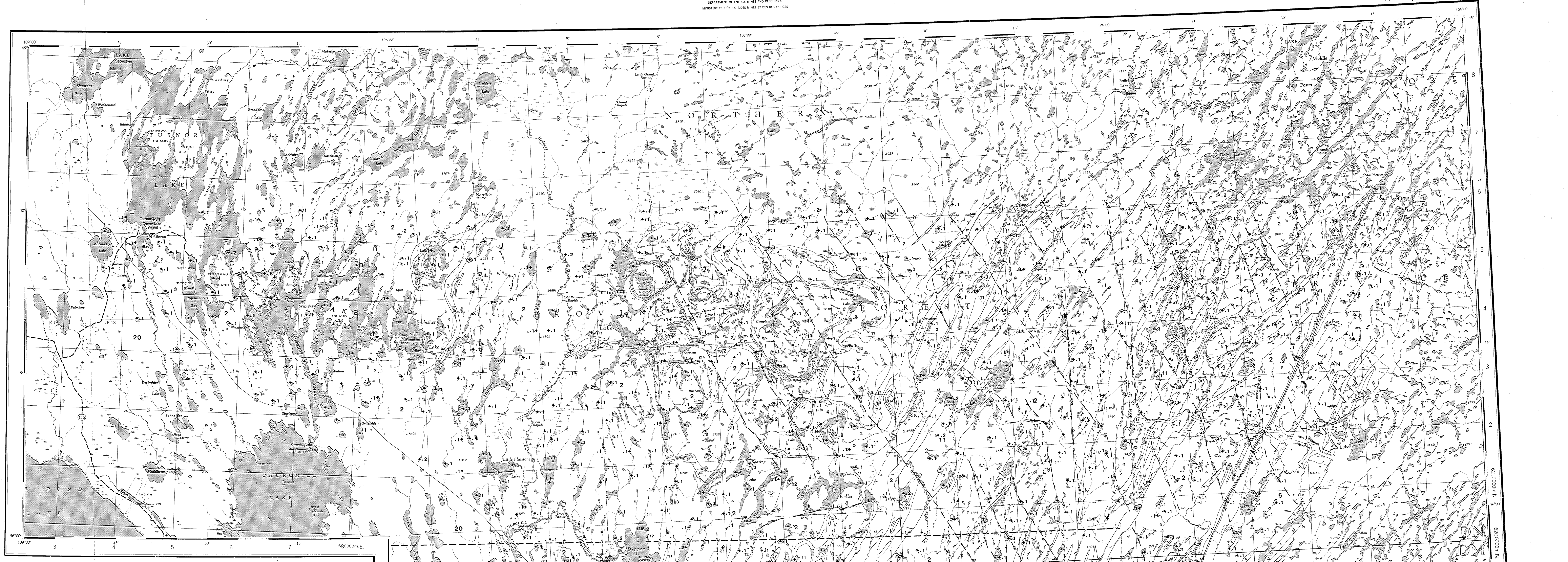
Energy, Mines and Resources Canada Énergie, Mines et Ressources Canada

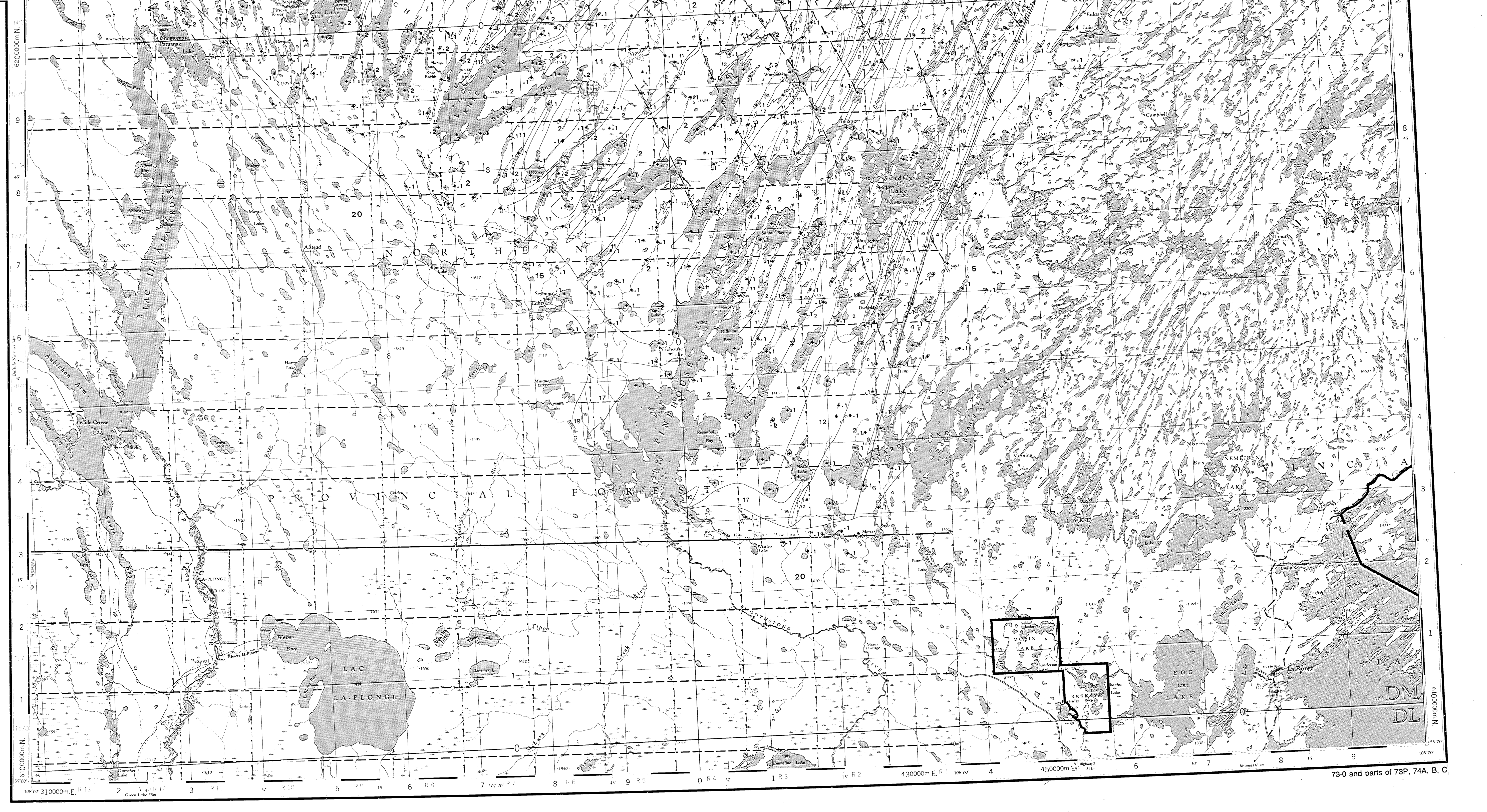
Canada





SB
HISTOGRAM





LEGEND

CENOZOIC
QUATERNARY

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

MESOZOIC
LOWER CRETACEOUS

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

PALEOZOIC
MIDDLE DEVONIAN

19	(DLMT 18)	WINNIPEGOSIS 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	(AGCD 18)	MEADOW LAKE FORMATION (Lower member): Argillaceous dolomite with local interbeds of mudstone, sandstone and limestone, minor gypsum bands.

CAMBRIAN

16	(SNDS 12)	DEADWOOD FORMATION: Quartz sandstone, unstratified polymictic conglomerate near base, minor sandy dolomite. Overlies severely weathered, saprolitic Precambrian basement.

PRECAMBRIAN
MAINLY APHEBIAN (HUDSONIAN)

15	(UMFC 04)	Ultramafic and mafic rocks, includes gabbro, diorite, pyroxenite, quartz diorite and basalt, locally serpentinized.
14	(IRFM 04)	Banded iron formation, alternating bands of metaquartzite common.
13	(CLCC 04)	Calc-silicate and marble, local interbanded meta-arkose and dolomitic marble.
12	(PRGS 04)	Psammitic gneiss and meta-arkosic gneiss, with interbanded calc-silicate rock and pelitic gneiss.
11	(PCSC 04)	Pelitic to psammopelitic gneiss and schist, generally contain more than 10 percent mafic minerals, biotite ± garnet ± cordierite ± sillimanite ± graphite ± tourmaline.
10	(MQRZ 04)	Metaquartzite and minor orthoquartzite with a persistent basal polymictic conglomerate.
9	(BGNS 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	(BGDR 04)	WATHAMAN BATHOLITH: Biotite-hornblende granodiorite.
6	(BMGT 04)	WATHAMAN BATHOLITH: Biotite monzogranite-granodiorite.
5	(SGNT 04)	Syenogranite and monzogranite, generally leucocratic.
4	(MGMT 04)	Migmatite and mylonite zones; complexes of mixed metasediments and granitic rocks, and strongly flasered or augened Wathaman Batholith rocks.

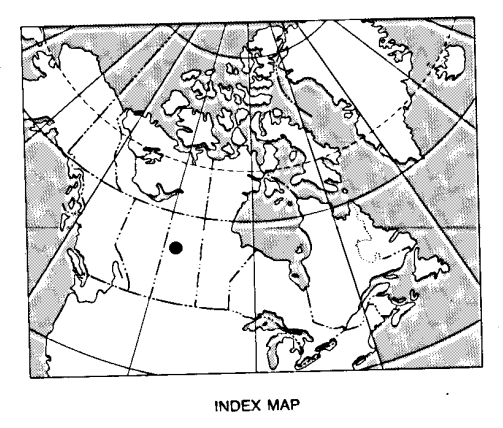
MAINLY ARCHEAN, DEFORMED WITH APHEBIAN ROCKS DURING HUDSONIAN OROGENY

3	(APBG 03)	Amphibolite and hornblende bearing gneisses, metagabbro and metadiorite.
2	(GRNG 03)	Granitoid gneiss, syenogranitic to granodioritic in composition, may include alaskite and amphibolite inclusions.
1	(DORT 03)	Diorite

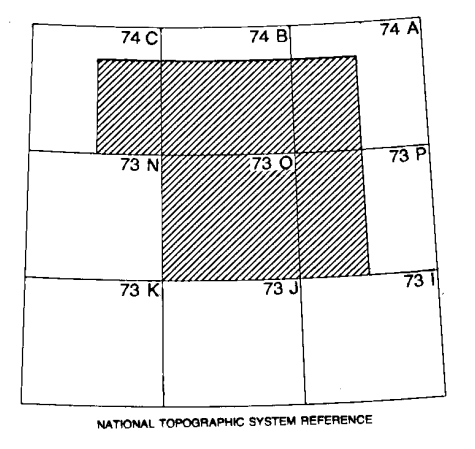
*A mnemonic code assigned to rock types and recorded as part of field observations.

Geological boundary; approximate, assumed . . . . . .
Fault . . . .
No analytical result . . . . *

Geological base and legend are derived from: Thomas, M.W. and Slimmon, W.L. (1985): Compilation Bedrock Geology, Ile-a-la-Crosse, NTS area 730; Saskatchewan Energy and Mines, Report 245 (1:250,000 scale map with marginal notes).
Lewry, J.F. and Slimmon, W.L. (1985): Compilation Bedrock Geology, Lac La Ronge, NTS Area 73P/73I; Saskatchewan Energy and Mines, Report 225 (1:250,000 scale map with marginal notes).
Ray, G.E. (1983): Compilation Bedrock Geology, Foster Lake, NTS Area 74A; Saskatchewan Energy and Mines, Report 228 (1:250,000 scale map with marginal notes).
Thomas, M.W. (1984): Preliminary Compilation Bedrock Geology Mudjatik, NTS Area 74B (1:250,000 scale map with marginal notes.
MacDonald, R. and Broughton, P. (1980) Geological Map of Saskatchewan Provisional Edition, North Half, Saskatchewan Mineral Resources, (1:1,000,000 scale map with marginal notes).



INDEX MAP



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE

ANTIMONY (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
Kilometres 5 0 5 10 15 20 Kilometres
Universal Transverse Mercator Projection

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 Surveys and Mapping Branch, Department of Energy, Mines and Resources in 1974, 1977, 1982

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