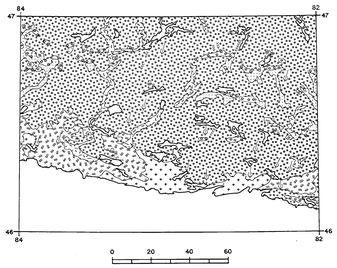

SURFICIAL GEOLOGY

This legend is common to Open Files 1356 and 1357

PROGLACIAL AND GLACIAL ENVIRONMENTS

Glaciolacustrine Deposits:

- Varved or massive clay and silt
- Fine Sands, sands, and deltaic sand

Glaciofluvial and Ice Contact Deposits:

- Outwash sands and gravel
- End moraine, interlobate moraine; sand, gravel and boulders
- Esker or kame complex: sand, gravel, boulders

Glacial Deposits:

- Predominantly clayey till
- Predominantly silty to sandy till

NONGLACIAL ENVIRONMENT

- Bedrock

Complexes: when two or more types of glacial or non-glacial environment are interspersed in a mosaic or repeating pattern, the relative dominant/subordinate amount of each type is indicated by sequential order. For example, 2/1 indicates predominantly silty to sandy till with lesser clayey till.

SYMBOLS

Surficial geological boundary . . . . . ~

Striae . . . . . /

Fluting, drumlin or drumlinoid ridge . . . . . /

Esker, kame or kame complex . . . . . ~~~~

Surficial geology derived from:
Boissonneau, A.N. (1965), Map 5465, Ontario Department of Lands, Forests.
Prest, V.K., Grant, D.R., and Rampton, V.N. (1969), Glacial Map of Canada, Geological Survey of Canada, Map 1253A (Scale: 1:5 000 000).

Geological Survey of Canada
Mineral Resources Division
Exploration Geochemistry Subdivision

CONTRACTORS

Sample collection by SIAL Geophysique Inc., Montreal
Sample preparation by Golder Associates, Ottawa

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

Au analyses by Chemex Labs Limited, Vancouver
Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

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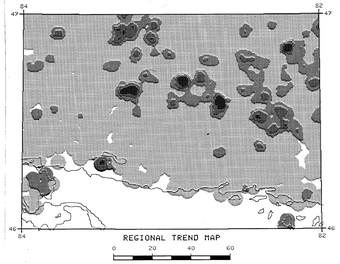
Ministry of Northern Development and Mines Ontario

Energy, Mines and Resources Canada / Energie, Mines et Ressources Canada

Canada

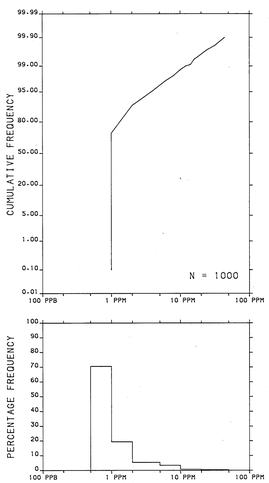


MO

PPM	%TILE
44	MAX
8	98
4	95
2	90
1	MIN

1000 SAMPLES

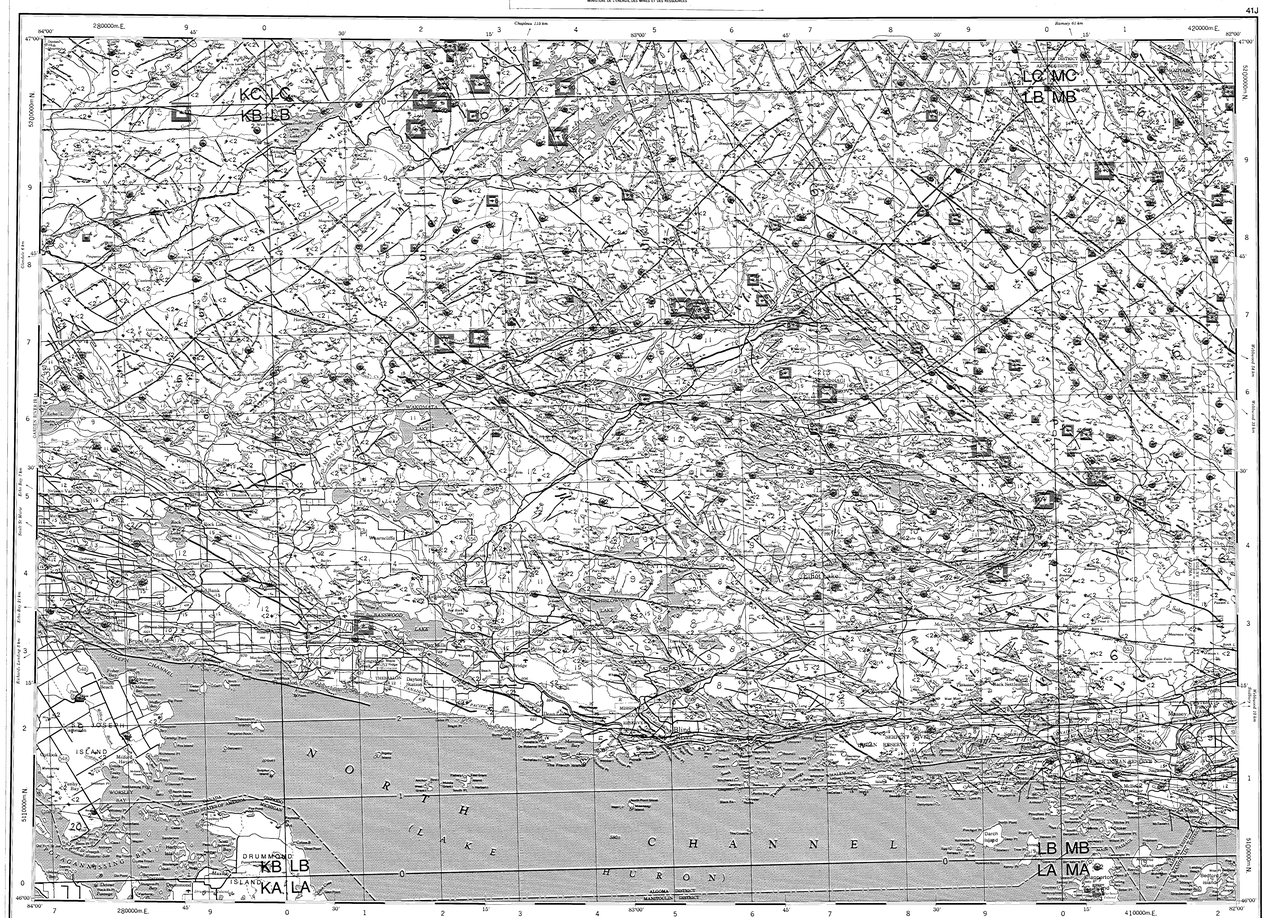
The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function ($1/d^2$) to filter out minor irregularities and emphasize broad-scale regional features. Single point anomalies may be suppressed or eliminated, however, geological units which are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



CONCENTRATION		FREQUENCY
9 to 44	■	N= 18(1.8%)
5 to 8	▣	N= 28(2.8%)
3 to 4	▤	N= 54(5.4%)
2	◒	N= 194(19.4%)
<2	·	N= 706(70.6%)

GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA

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



MOLYBDENUM (ppm)
LAKE SEDIMENTS
GSC OPEN FILE 1356
REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 92-1986
CANADA - ONTARIO
MINERAL DEVELOPMENT AGREEMENT (1986-1990)
LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY
CENTRAL ONTARIO, 1986

Scale 1:250 000 - Échelle 1/250 000

Kilometres 5 0 5 10 15 20 Kilometres

Universal Transverse Mercator Projection
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Projection transverse universelle de Mercator
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Copies of map material and listings of field observations, analytical data and methods, from which the open file was prepared, are available from:

K.G. Campbell Corporation
880 Wellington St.
Bay 238
Ottawa, Ontario
K1R 6K7

Digital data are available on IBM-PC compatible diskette from:

Geological Survey of Canada
Publications Distribution
601 Booth St.
Ottawa, Ontario K1A 0E8
Tel: (613)995-4342

Elevation in feet above mean sea level

Mean magnetic declination 1987, 7°48' West, increasing 10.6' annually. Readings vary from 8°33'W in the SE corner to 7°00'W in the NW corner of the map area

Base map at the same scale published by the Surveys and Mapping Branch in 1979

MOLYBDENUM (ppm)
LAKE SEDIMENTS
GSC OPEN FILE 1356
CENTRAL ONTARIO, 1986

LEGEND

PALEOZOIC

SILURIAN

20	SCP*	Limestone, shale

UPPER CAMBRIAN AND ORDOVICIAN

19	OCCS	Limestone, shale, sandstone, includes Munising Formation; sandstone

PRECAMBRIAN AND ARCHEAN

18	LPAD	Diabase, gabbro, diorite

PRECAMBRIAN

LATE PRECAMBRIAN

17	LPAC	Fenite, ijolite, pyroxenite, carbonatite

MIDDLE TO LATE PRECAMBRIAN

16	MPCC	Croker Island Complex; granite, syenite, diorite, gabbro Cutler Pluton; granite, quartz monzonite, granodiorite, trondhjemite, pegmatite

MIDDLE PRECAMBRIAN

15	MPND	Nipissing Diabase; diabase, gabbro, metagabbro, granophyre

HURONIAN SUPERGROUP

COBALT GROUP

14	MPBR	Bar River Formation; quartzite
13	MPGL	Gordon Lake Formation; siltstone, argillite, quartzite
12	MPL	Lorrain Formation; quartzite, arkose, conglomerate
11	MPG	Gowganda Formation; conglomerate, argillite, greywacke, quartzite, siltstone

QUIRKE LAKE GROUP

10	MPQL	Serpent Formation; quartzite, conglomerate Espanola Formation; limestone, dolomite, calcareous siltstone Bruce Formation; conglomerate

HOUGH LAKE GROUP

9	MPHL	Aweres Formation; conglomerate, arkose, quartzite Mississagi Formation; quartzite, conglomerate Pecors Formation; argillite, siltstone Ramsay Lake Formation; conglomerate

ELLIOT LAKE GROUP

8	MPEL	McKim Formation; siltstone, argillite, quartzite Matinenda Formation; quartzite, arkose, conglomerate, uraniferous conglomerate
7	MPVB	Basalt, andesite, amphibolite, gabbro, anorthosite, ultramafic rocks and minor rhyolite

ARCHEAN

6	AGM	Massive felsic to intermediate plutonic rocks; granite, granodiorite, tonalite, quartz monzonite, monzodiorite, pegmatite
5	AGN	Foliated to gneissic felsic to intermediate plutonic rocks; granite, granodiorite, tonalite, quartz monzonite, diorite, migmatite
4	AUB	Gabbro, diorite
3	ACSP	Conglomerate, greywacke, arkose, quartzite, siltstone, argillite, chert
2	AMVF	Felsic to intermediate metavolcanics
1	AMVB	Mafic to intermediate metavolcanics; includes flows, minor mafic pyroclastics and interflow sediments.
	IF	Iron formation

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

Geological boundary . . . . . ~

Fault . . . . . ~

No analytical results . . . . . *

The geology base and legend for these geochemical maps were derived from: Geology - Sault St. Marie - Elliot Lake, Map 2419 Geological Compilation Series, Ontario Department of Mines, 1:253 440.
McCrank, G.F.D., Misiura, J.D., and Brown, P.A. (1979): Geology - Plutonic Rocks in Ontario, Geological Survey of Canada Map 1933A, to accompany GSC Paper 80-23.

MOLYBDENUM (ppm)
LAKE SEDIMENTS
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