

LEGEND

PALEOZOIC

SILURIAN

20 SCP* Limestone, shale

UPPER CAMBRIAN AND ORDOVICIAN

19 OCS 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 Oaker 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 Gowanda 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 MPH L Aweres Formation; conglomerate, arkose, quartzite
 Mississagi Formation; quartzite, conglomerate
 Pecora Formation; argillite, siltstone
 Ramsay Lake Formation; conglomerate

ELLIOT LAKE GROUP

8 MPGL 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 Ste. Marie - Elliot Lake, Map 2419 Geological Compilation Series, Ontario Department of Mines, 1:250 000.
 McCrack, G.F.D., Misura, J.D., and Brown, P.A. (1979): Geology - Plutonic Rocks in Ontario, Geological Survey of Canada Map 1333A, to accompany GSC Paper 89-23.

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: Boissoneau, A.R. (1965), Map 5465, Ontario Department of Lands, Forests, and Parks, Ottawa; 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).

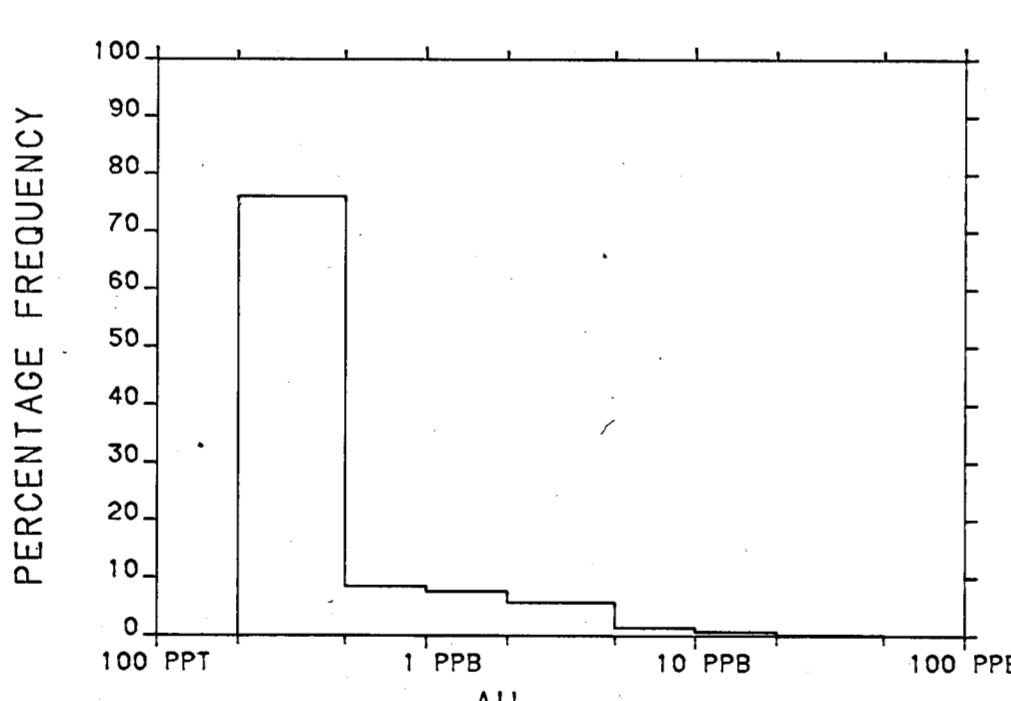
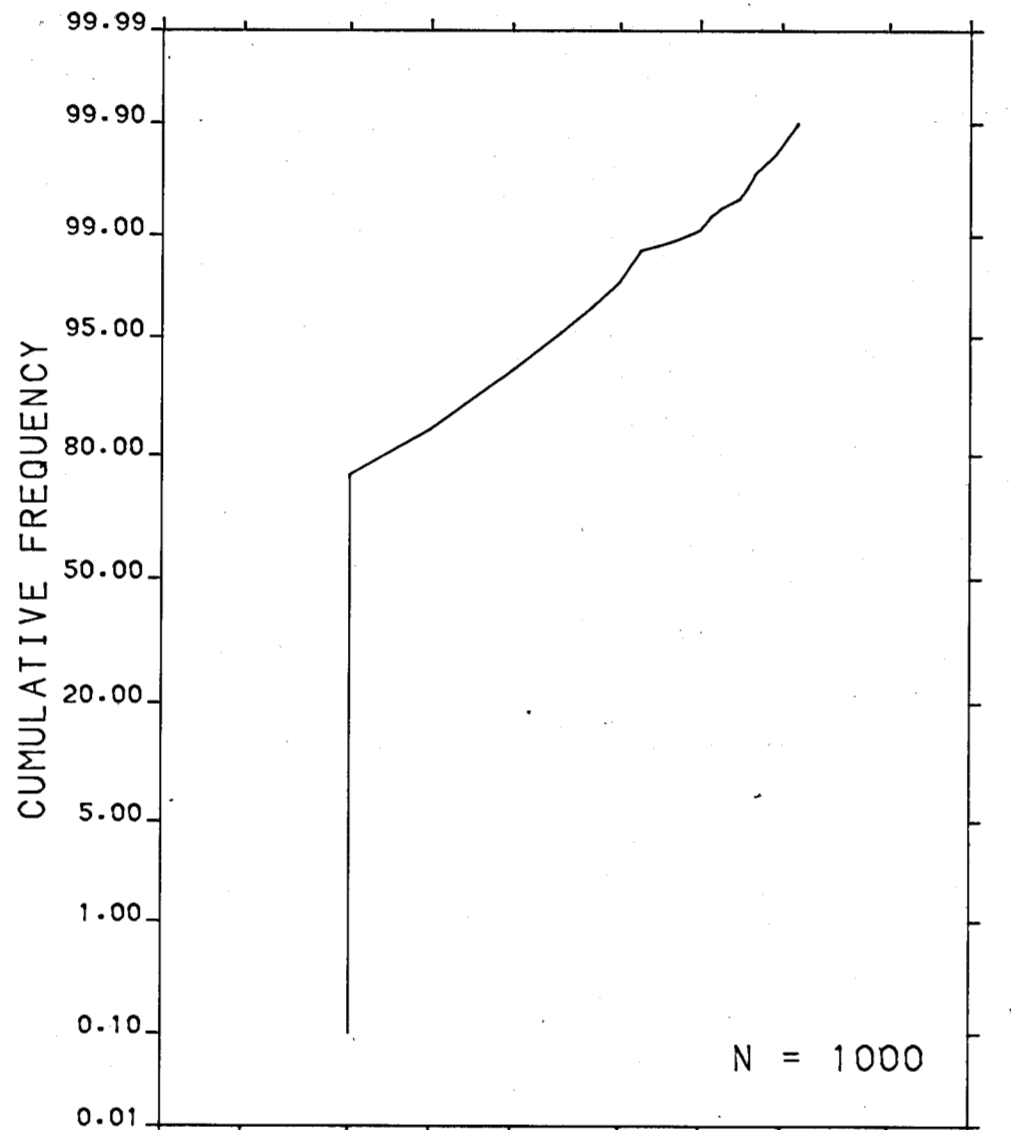
Geological Survey of Canada
 Mineral Resources Division
 Exploration Geochemistry Subdivision

CONTRACTORS

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

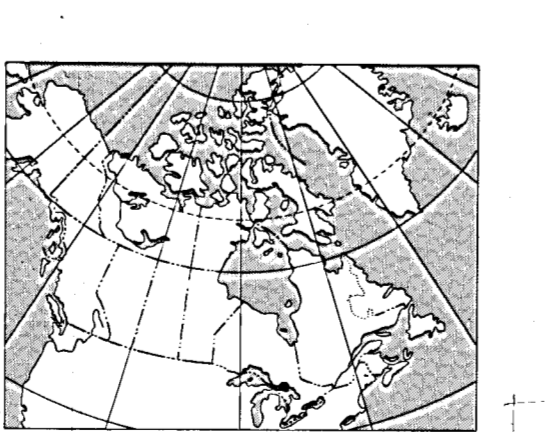
Sediment chemical analyses by Barringer Magenta Ltd., Rexdale, Ontario

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



CONCENTRATION	FREQUENCY
7 to 23	N = 12 (1.2%)
4 to 6	N = 35 (3.5%)
3	N = 31 (3.1%)
1 to 2	N = 150 (15.0%)
<1	N = 772 (77.2%)

Please refer to Open File text for discussion of gold presentation format and geochemical interpretation.



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

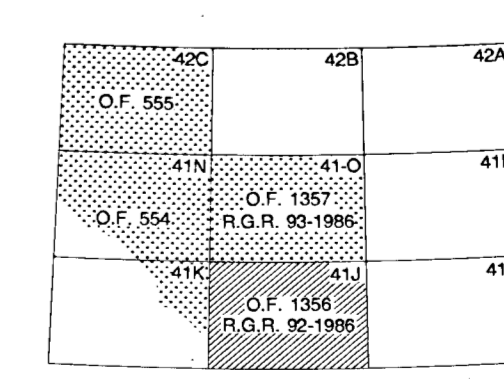
GOLD (ppb)
LAKE SEDIMENTS
 GSC OPEN FILE 1356
 REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 92-1986
 CANADA - ONTARIO
 MINERAL DEVELOPMENT AGREEMENT (1986-1990)
 LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY
 CENTRAL ONTARIO, 1986

Scale 1:250 000 - Echelle 1/250 000
 Kilometres / Kilomètres
 Universal Transverse Mercator Projection / Projection Transverse Universelle de Mercator
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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



Au value (ppb) +17
 * denotes an analysis performed on a sample weight <10 g.
 () identifies Au values corresponding to repeat analyses.
 <n denotes a result less than detection level n (ppb).
 consult text for actual sample weight when Au values denoted by * or < detection level

Examples:
 +21* Au value of 21 ppb determined on sample weight <10 g.
 +38(27*) Au value of 38 ppb on first analysis. Au value of 27 ppb on repeat analysis for sample weighing <10 g.
 +4 Au value less than detection limit of 4 ppb.

GOLD (ppb)
LAKE SEDIMENTS
 GSC OPEN FILE 1356
 CENTRAL ONTARIO, 1986
 1 of 25

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Ministry of Northern Development and Mines
 Ontario

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

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