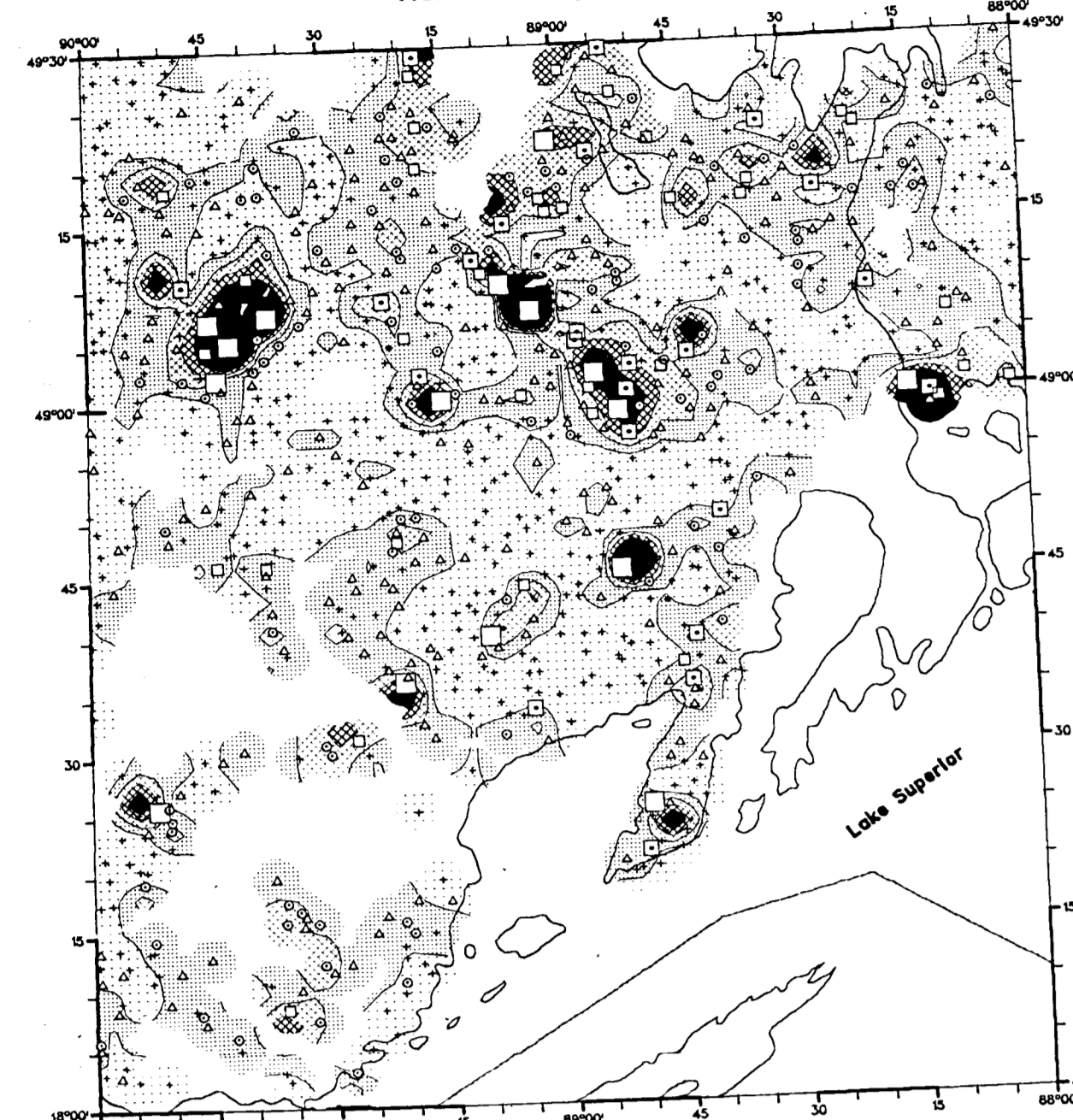
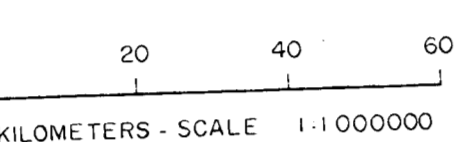
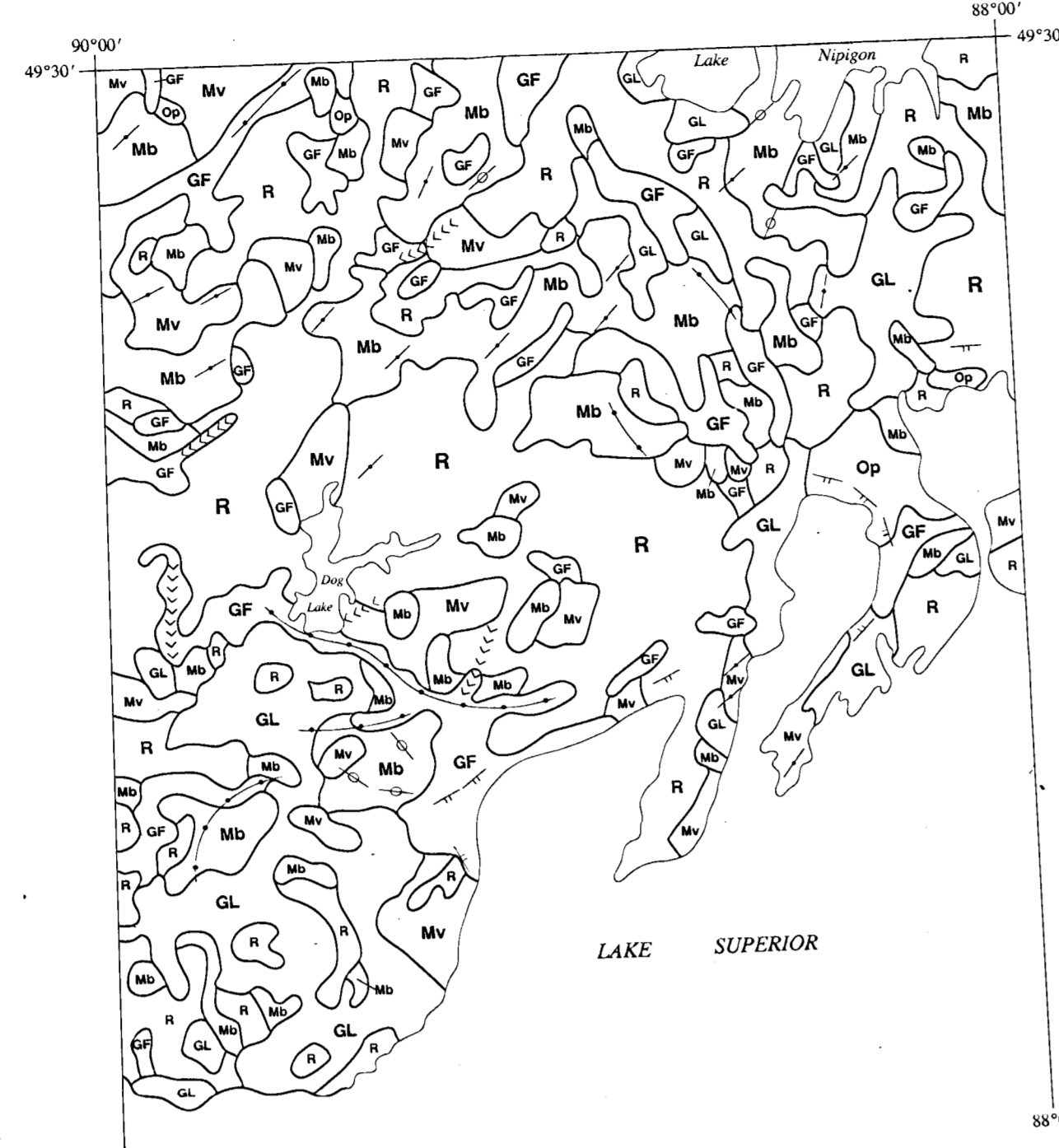
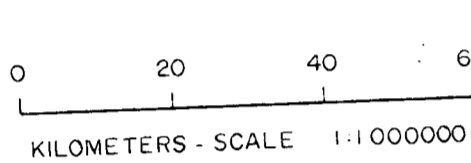


**GSC OPEN FILE 2179  
CANADA - ONTARIO  
MINERAL DEVELOPMENT  
AGREEMENT (1985-1990)**



**REGIONAL TREND MAP**



**SURFICIAL GEOLOGY**

- Op** Organics, peatland deposits
- GL** Glaciolacustrine and glaciomarine deep water deposits; clay, silt and sand
- GP** Glacioluvial deposits; includes shallow water glaciolacustrine and glaciomarine deposits; predominantly sand and gravel
- MB** Till; unsorted mixture of boulders, sand, silt and clay sized particles, sufficiently thick to mask bedrock topography
- MV** Shallow drift; thin glacial sediments, mostly overlying bedrock
- R** Bedrock; predominantly bare rock or thin glacial sediment cover

**SYMBOLS**

- Major moraines . . . . .
- Drumlin, drumlinoid forms . . . . .
- Crag and tail forms . . . . .
- Esker . . . . .
- Relict beach and bar forms . . . . .

**Sources of Information:**

Sado, E.V. and Curswell, B.F. 1987. Surficial Geology of Northern Ontario. Ontario Geological Survey, Ministry of Mines and Northern Development, Map 2318, Scale 1:11,200,000.

**GEOLOGICAL SURVEY OF CANADA  
MINERAL RESOURCES DIVISION  
EXPLORATION GEOCHEMISTRY SUBDIVISION**

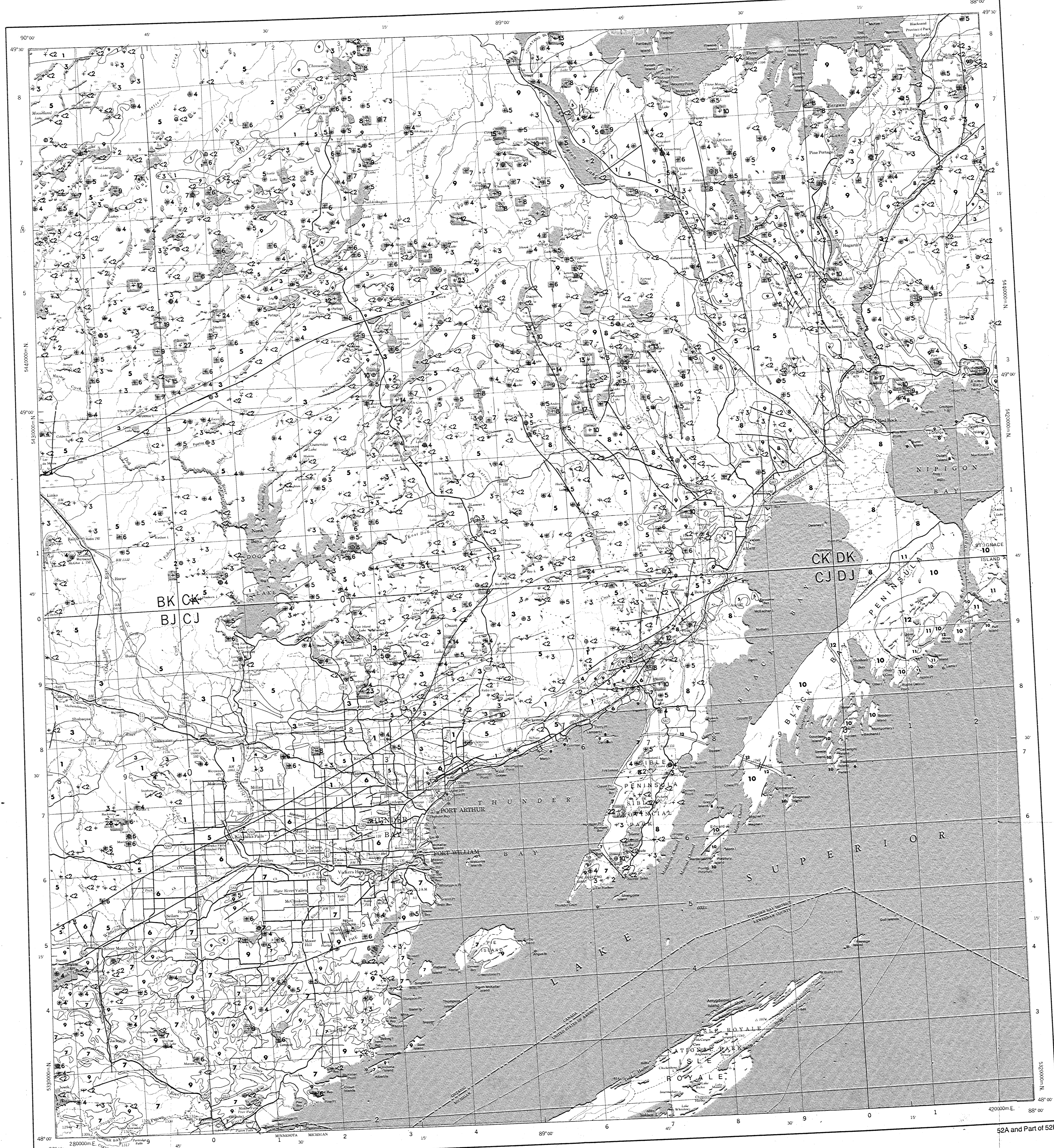
**CONTRACTORS**

- Collection:** Marshall Macklin Monaghan Ltd. Toronto, Ontario
- Preparation:** Colder Associates Ottawa, Ontario
- Sediment Re-analysis (1989):** Bondar-Clegg & Co. Ltd. Ottawa, Ontario
- Sediment Analysis (1977):** Chemex Labs Ltd. North Vancouver, British Columbia  
Atomic Energy of Canada Ltd. Ottawa, Ontario
- Water Analysis (1977):** Barringer Research Ltd. Toronto, Ontario
- Cartography:** Les Services Cartographiques 2 + 1 inc. Gatineau, Quebec
- Reproduction:** Ashley Reproductions Ltd. Ottawa, Ontario

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Publications Distribution  
601 Booth Street  
Ottawa, Ontario, K1A 0E8  
Tel: (613) 995-4342

**Elevation in feet above mean sea level**

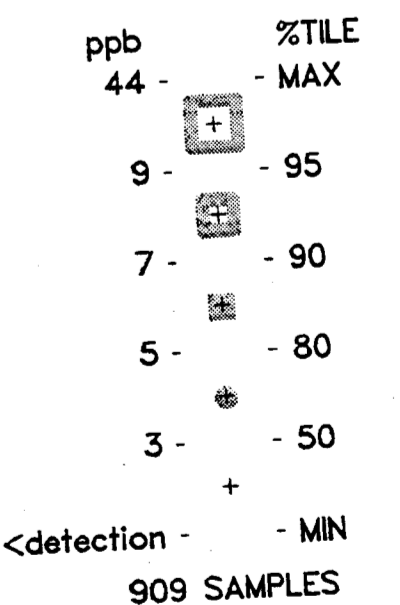
Magnetic declination in 1990 for the central part of the map area (48°45'N; 89°E) is 2°04'W increasing 6.1' annually. Magnetic declination ranges from 0°43'W increasing 6.4' annually in the southwest corner of the map area, to 3°13'W increasing 5.7' annually, in the northeast corner of the map area.



- LEGEND**
- PRECAMBRIAN**  
**LATE PRECAMBRIAN (HELIKIAN)**  
**Keweenaw**
- 13** CARBONATITE - ALKALIC COMPLEXES [AKRK]<sup>\*</sup>  
Carbonatite; nepheline, hornblende, augite syenites, gabbro; olivine, nepheline gabbro
  - 12** LATE MAFIC IGNEOUS ROCKS  
Diabase, gabbro, anorthosite
  - 11** OSLER GROUP  
Porphyritic rhyolite or dacite, quartz porphyry, felsite
  - 10** Diabase, basalt, minor pyroclastic rocks, conglomerate, sandstone
  - 9** MAFIC IGNEOUS ROCKS  
Diabase (DIBS), porphyritic diabase, gabbro, anorthositic gabbro (sills and dykes)
  - 8** SIBLEY GROUP [SMRK]  
Conglomerate, sandstone, chert, shale, carbonate rocks
  - MIDDLE PRECAMBRIAN (APHEBIAN)**  
**ANIMIKIE**
  - 7** Rove Formation [ARGL]: argillite, shale, greywacke
  - 6** Gunflint Formation: chert [CHRT], chert-carbonate, carbonate rocks, argillite, tauff, taconite
  - EARLY PRECAMBRIAN (ARCHEAN)**  
**FELSIC IGNEOUS AND METAMORPHIC ROCKS**
  - 5** Granite [GRNT], granite gneiss [GRNS], granodiorite [GRDR], quartz-feldspar porphyry [QFSP], monzonite, magnetite [MAGT], syenite, pegmatite
  - MAFIC AND ULTRAMAFIC IGNEOUS ROCKS [UMFC]**
  - 4** Gabbro, diorite, serpentine, hornblende, amphibolite
  - METASEDIMENTS**
  - 3** Conglomerate [CGLM], greywacke [GRCK], arkose, quartzite, argillite, slate, mica schist and gneiss, quartz-feldspar schist and gneiss [SCST], garnet-feldspar schist and gneiss [GRSC]
  - METAVOLCANICS**
  - 2** Felsic to intermediate metavolcanics [BEXV]: rhyolite, pillow lava, porphyritic lava, pyroclastic rocks, dyked schists
  - 1** Intermediate to mafic metavolcanics [BEXV]: massive, schistose, pillow lava, porphyritic and amygdaloidal lava, pyroclastic rocks and derived schists, undifferentiated metavolcanics with some metasediments [MVCC]
- <sup>\*</sup> A four letter mnemonic name recorded as rock type as part of field observations
- Geological boundary . . . . .
- Fault . . . . .
- Limit of geological mapping [LGM] . . . . .
- No data . . . . . +27
- Single analysis . . . . . +27, 14
- Repeat analysis . . . . . +27, 14
- Single analysis, less than detection limit . . . . . +C1

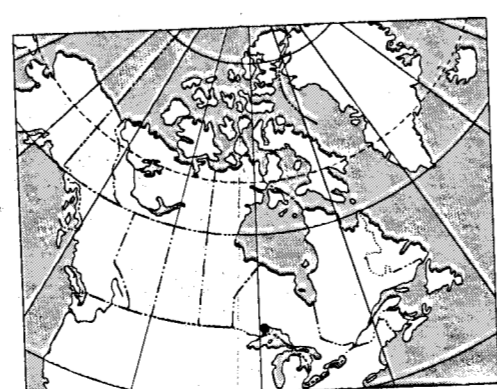
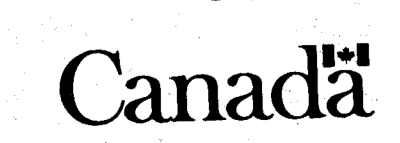
The legend modified and geology derived for this geochemical map from Geology Compilation Series maps 2220 and 2232, Ontario Division of Mines and map 2065, Ontario Department of Mines

**Gold-INA  
IN  
Lake Sediment**

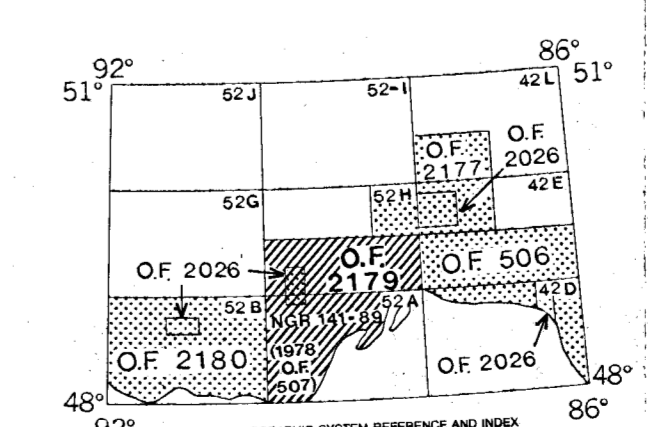
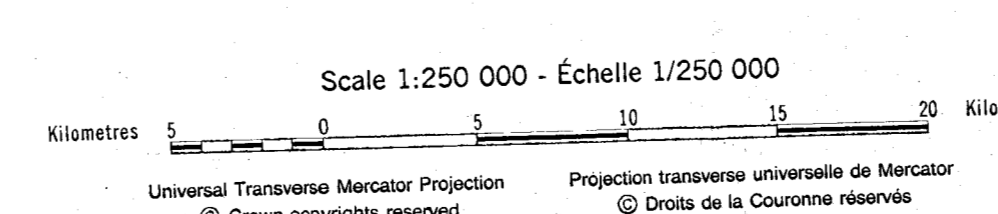


909 SAMPLES

**CANADA ONTARIO**  
Mineral Development Agreement  
Contribution to the Canada-Ontario Mineral Development Agreement 1985-1990, a subsidiary agreement under the Economic and Regional Development Agreement. Project funded by the Geological Survey of Canada.  
Contribution à l'Entente auxiliaire Canada/Ontario sur l'exploitation minière 1985-1990 dans le cadre de l'Entente de développement économique et régional. Ce projet a été financé par la Commission géologique du Canada.



**GOLD (ppb)  
LAKE SEDIMENTS**  
GSC OPEN FILE 2179  
NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 141-89  
**CANADA - ONTARIO  
MINERAL DEVELOPMENT AGREEMENT  
(1985-1990)**  
LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY  
NORTHWEST ONTARIO, 1989



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