

NOTE: This legend is common to Open File 405, 406

MIDDLE ORDOVICIAN		APHERIAN OR HELIKIAN	
33	TRENTON GROUP: limestone	16	16a Granodiorite 16b Granite
34	BLACK RIVER GROUP: limestone	15	15a Migmatite 15b Biotitic migmatite 15c Biotitic quartzofeldspathic gneiss
32	ROCKCLIFFE sandstone, shale, limestone	14	Quartzofeldspathic gneiss, leucogranulite
LOWER ORDOVICIAN		APHERIAN	
31	MARCH: sandstone, dolomite	13	13a Biotite gneiss 13b Hornblende-biotite gneiss
30	NEPEAN: sandstone	12	Hornblende-garnet-biotite gneiss
CAMBRIAN		11	Sillimanite-garnet-biotite gneiss
UPPER CAMBRIAN		10	Hornblende gneiss
THERIA: sandstone, dolomite		9	Biotitic quartzofeldspathic gneiss
		8	Biotitic migmatite
		7	Amphibole-hypersthene gneiss
HELIKIAN		PROTEROZOIC	
23	Slate	28	28a Syenite 28b Hornblende syenite 28c Nepheline syenite
24	Marble	27	27a Granite 27b Potassic granite 27c Biotitic potassic granite 27d Hornblende potassic granite
22	Andesite	6	6a Potassic granite 6b Biotitic potassic granite
21	Rhyolite	5	5a Gabbro 5b Diorite
20	20a Amphibolite 20b Hornblende gneiss	4	Paragneiss
19	Paragneiss	3	Hornblende gneiss
18	Migmatite, granitic gneiss	2	Migmatite, granitic gneiss
17	Amphibole-pyroxene gneiss	1	Amphibole-hypersthene gneiss

Geological contact.....
Fault.....
Dyke.....

Geology derived from the map 1334-A, Rivière Gatineau at the scale of 1:1,000,000. Compiled by A.J. Bear, W.H. Poole and B.V. Sandford, 1971

Geological cartography by the Geological Survey of Canada

Base-map at the same scale published by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa, 1975

Mean magnetic declination 1977, 11°10.2' West decreasing 0.6' annually. Readings vary from 12°04.2' in the S.E. corner to 10°21.0' in the N.W. corner of the map area

Elevation in feet above mean sea-level

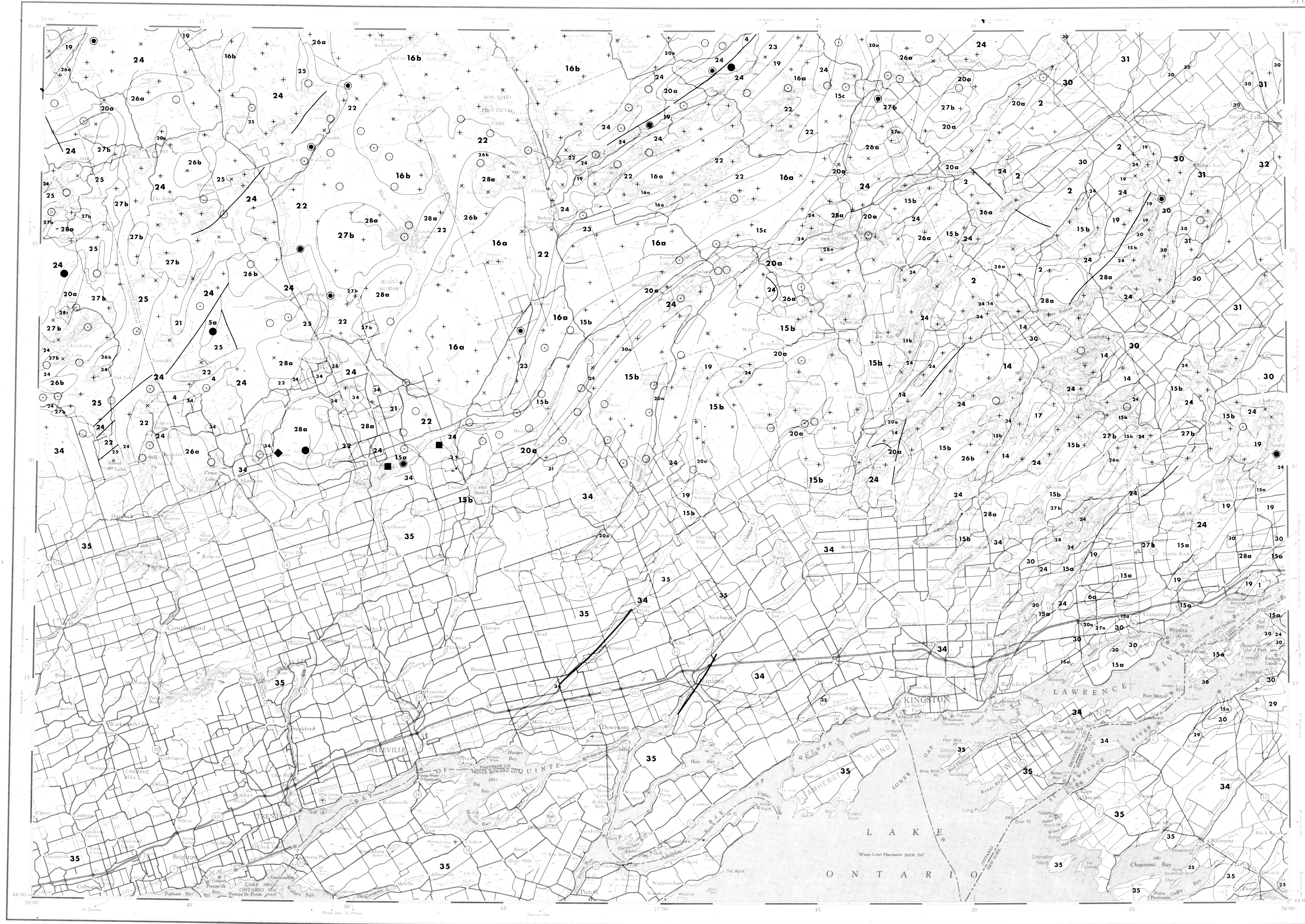
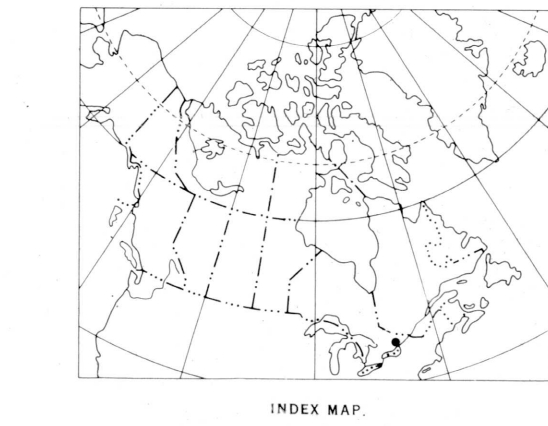
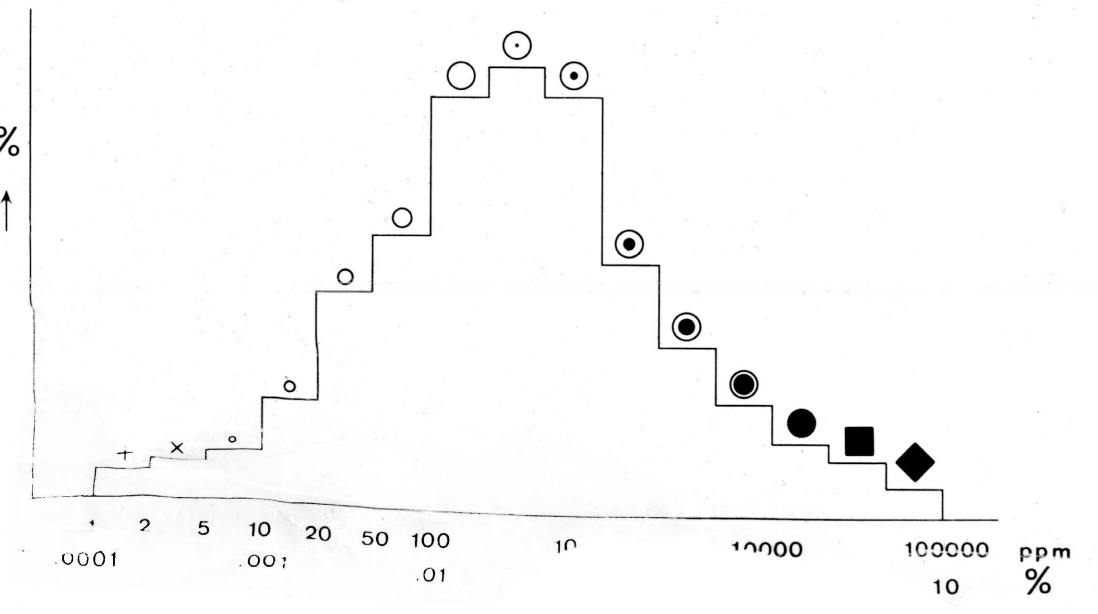
Geochemical Symbol and Data Presentation

The concentration of an element at a sample site is graphically represented as one of 15 symbols, if a sample was collected but there is no data available a dot is plotted. The symbols are symmetrically arranged so that they first increase in size to the eighth symbol and then increase in blackness to the fifteenth. The two small crosses at the low end of the scale are used to respectively denote concentrations below the analytical detection limit, or, in the data group containing the detection limit. The data are grouped on a semi-logarithmic scale, i.e. 1,2,5,10,20,50,100 etc. Five decades can be spanned and this arbitrary division has been chosen for the continuing Canada wide series of maps constituting the National Geochemical Reconnaissance. The choice of symbols and the data groups they represent for any specific element is based on the histogram and cumulative frequency plot for the total survey data from one, or more contiguous, open file sheets covered in one field season. The eighth symbol is used for the model group as defined by the histogram, this group usually includes the median of the data as defined by the 0.5 (50%) point on the cumulative frequency plot. Some, or all, of the remaining 14 symbols are chosen so as to achieve an appropriate graphical impact. An example of all 15 symbols is given below.

The symbol maps, being based on the total survey data distributions, are unaffected by the availability of ever increasing levels of knowledge in bedrock and surficial geology, and other environmental factors. Therefore, the raw data symbol maps are only intended to assist the rapid inspection of the data for gross regional features. To fulfil the needs of a more specific and thorough interpretation, the raw symbol maps should be modified using the field and analytical data provided in the data listings and any other knowledge available. To assist in the appraisal and modification of the data in terms of the symbol map bedrock geology, a table of summary statistics and proposed threshold values for each mapped bedrock unit, or broad lithologic unit, again based on the total survey data, is presented below the histogram. This table can be used along, or in conjunction, with the sample location map and data listings to indicate above threshold samples where they occur on the map. In many instances, the table will also illustrate, more clearly than the map, the dependence of mean geochemical levels on bedrock type. It may often be also observed that while the total data appears to approximate a log-normal distribution the data for individual map or lithologic units appears to approximate a normal distribution. The proposed thresholds presented are believed to be useful in interpreting the data from a mineral exploration viewpoint. Locations of samples with concentrations in excess of the threshold for the rock unit they appear to be derived from, should be studied carefully. The above threshold concentration can be due to a wide range of geological and environmental factors, but one of these could be the presence of abnormal concentrations of the element in a form of interest to the mineral explorationist.

To comprehensively study an area, all available geological, environmental and recorded data should be utilized. The data separation by bedrock type can often be improved by constructing new data subsets and deriving local threshold levels based on the most detailed and up-to-date knowledge available.

The term reliability factor and value that appears below the table is an estimate of the reliability of the geochemical map. On the basis of duplicate sampling 5% of all lakes sampled it can be stated that there is a 95% chance that if any lake is resampled and identical methods of sample preparation and analysis are used the new value will lie between $X + RF$ and $X - RF$ where X is the original value obtained. This factor takes into account variability due to both heterogeneity of the centre-lake bottom sediments and sample preparation and analytical causes.



NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 1-1976
ARSENIC IN LAKE SEDIMENTS
CANADA-ONTARIO SUBSIDIARY AGREEMENT ON MINERAL EXPLORATION AND DEVELOPMENT
Scale 1:250,000
Kilometres 0 6 12 18
Miles 0 4 8
Universal Transverse Mercator Projection
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31L	31K	31J
31E	31F	31G
31D	31C	31B

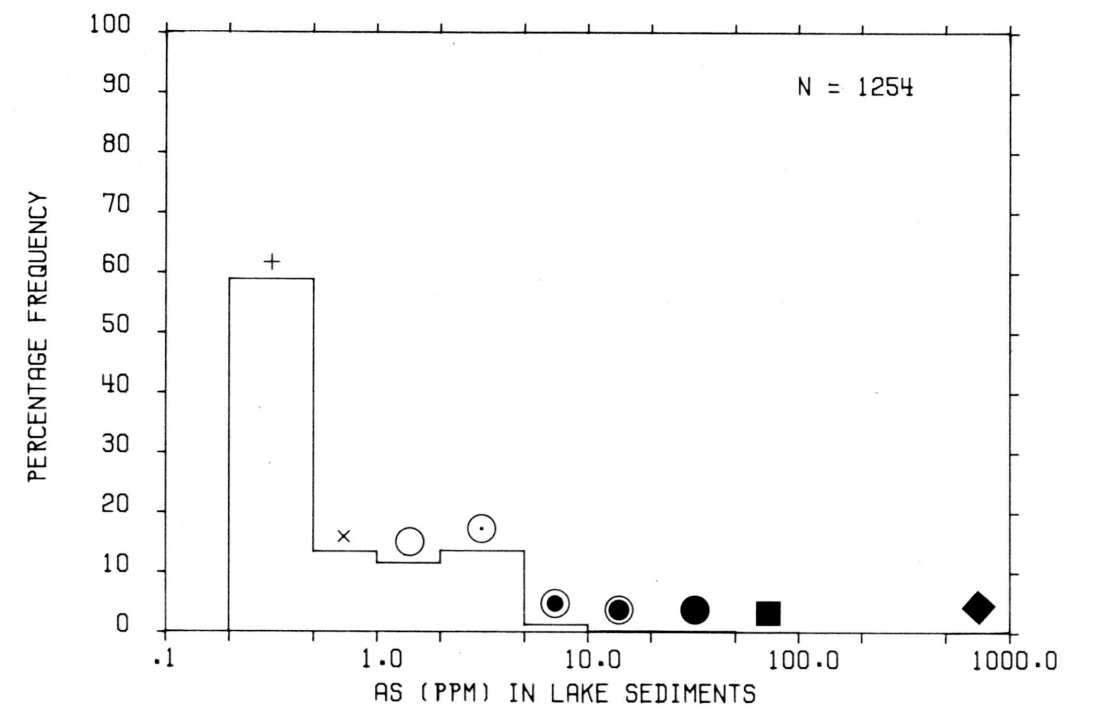
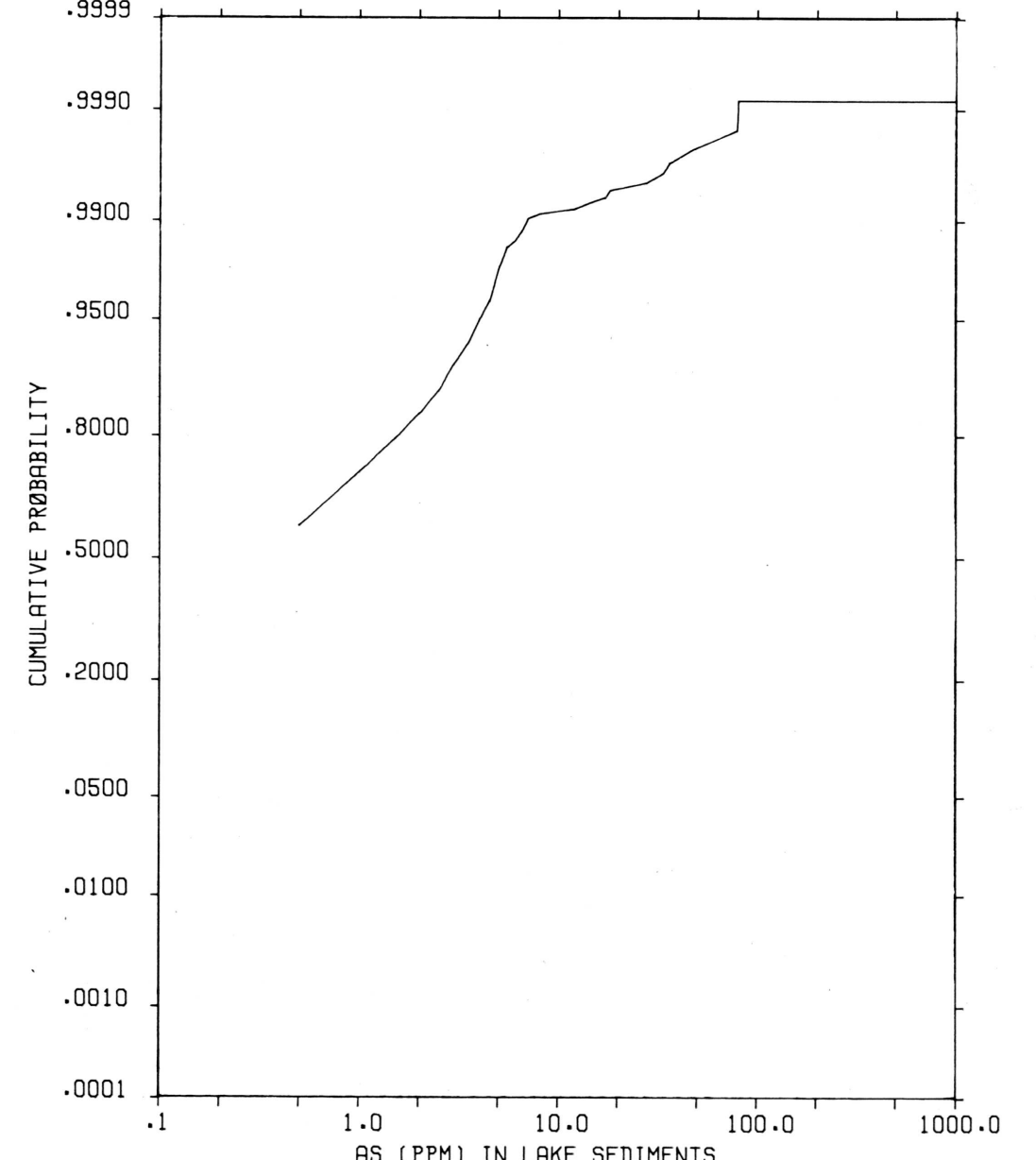


Table of Thresholds for Major Geological Units

Lithology	No. of Samples	Mean	S.D.	C.V. %	Threshold
Limestone	13	8.8	21.3	242	8
Sandstone	27	1.2	1.3	109	6
Dolomite	2	0.5	0.0	0	6
Slate	21	1.1	0.9	82	6
Marble	263	1.4	3.2	226	8
Conglomerate	3	1.8	1.9	103	6
Andesite	79	1.7	2.3	135	8
Rhyolite	2	0.8	0.4	47	6
Syenite	29	36.3	185.4	510	6
Granite	187	1.0	1.1	106	6
Granodiorite	47	0.9	1.1	127	6
Gabbro	51	2.4	1.6	267	6
Diorite	5	1.6	2.0	122	6
Amphibolite	43	1.4	1.3	94	6
Gneiss	307	1.3	1.2	95	6
Paragneiss	71	1.5	2.0	132	8
Migmatite	93	1.8	8.2	469	6
Unknown	8	0.6	0.2	31	6

Data units are ppm Reliability Factor = 2.75

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 1-1976
OPEN FILE 405
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Contractors
Sample preparation by Golder Associates
Chemical analyses by Chemex Labs Ltd.

This map forms one of a series of 28 sheets released under Geological Survey of Canada, Open Files 405-406. The open files consist of data for 12 elements each, per cent loss on ignition and sample site location.

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

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