

Note: This Report is the property of the National Geological Reconnaissance Branch, N.G.R.B., Geological Survey of Canada, Ottawa, Ontario K1A 0E6, Canada. Copy right © 1975, Royal Canadian Geographical Society. Reproduction or distribution, in whole or in part, without written permission of the National Geological Reconnaissance Branch, N.G.R.B., Geological Survey of Canada, Ottawa, Ontario K1A 0E6, Canada, is prohibited by law.

**LEGEND**  
 ✓ General, metamorphic and sedimentary series (2000)  
 □ Igneous, plutonic and volcanic provinces (North Lake granite) (400)  
 + Igneous, plutonic and volcanic (600)  
 ● Igneous, plutonic, metamorphic and granulite (600)  
 • Igneous, plutonic, metamorphic and granulite (600)  
 1 Igneous granulite to leucogranite (8000)  
 □ Igneous, metasedimentary (1000)  
 ✓ Igneous, metasedimentary rocks and rifts (2000)  
 □ Intrusive, pegmatitic, calcarous boulders derived from 12 (1000)  
 ✓ Intrusive 12, 13 and 13 (1000)  
 ○ Intrusive 12, 13 and 14 (1000)  
 ■ Igneous, plutonic, metamorphic and/or amphibole (1000)  
 □ Igneous, plutonic, metamorphic, rare mineral (1000)  
 □ Igneous, plutonic, metamorphic (1000)  
 ✓ Igneous, amphibolite, orthopyroxenite (1000)  
 ■ Igneous, amphibolite, orthopyroxenite (1000)  
 ARRESTED  
 ✓ Metamorphic rocks (1000)  
 □ Metamorphic rocks (1000)  
 ✓ Metamorphic rocks, metasedimentary and granulite, mesoclinite to foliated (600)  
 □ Metamorphic rocks (600)  
 ■ Metamorphic rocks (600)  
 □ Shallow and shallow (500)  
 □ Grey biotite granulite gneiss (500)  
 □ Metasedimentary, orthopyroxene gneiss (500)  
 □ Metapelite, orthopyroxene gneiss (500)  
 □ Igneous, plutonic-complexionite, amphibole, pyroxene, ultra-fine-grained (1000)  
 □ Metasedimentary rocks (1000)

**Geological symbols:**  
 Dotted lines = drainage divides.  
 Dashed lines = faults.  
 Line of geological section.  
 Boxes (direction of flow lines).  
 Dotted line = stream.  
 Dotted lines = river network.

Legend modified and scaling derived for the geophysical map by R.E. Garrett from maps PL 1165-A, 1:100,000 and 4198 and G.S.C. Paper 4400 by R.E. Garrett.

Geophysical cartography by the Geological Survey of Canada

Base-map at the same scale published by the Mapping and Charting Establishment, R.C.E., 1966.

Near magnetic declination 1971, 150°08' 9.1° decreasing 3.6° annually. Required correction for 1966 is +0.2°. To be 50% accurate to 1500 m, use the corner of the map area.

#### GEOSTATISTICAL SYMBOL AND DATA PRESENTATION

The concentration of an element at a sample site is statistically represented as one of 15 samples of a sample size, which is not available at all sites. The symbol is placed at the sample site and is geometrically arranged on the map. The first row of symbols is aligned horizontally to the left of the first five points on the map. The second row of symbols is aligned horizontally to the right of the first five points on the map. The third row of symbols is aligned vertically above the first five points on the map. Sample concentrations below the analytical detection limit, i.e., in the data group  $<10$ , are represented by a small circle (•). The data group  $<10$  includes samples with values less than 10 ppm, i.e.,  $<10$ ,  $10-12$ ,  $12-15$ ,  $15-20$ ,  $20-25$ , etc. Five checks can be summed and this arbitrary classification will result in a maximum value of 100. This procedure follows the normal statistical procedures of the National Geological Reconnaissance.

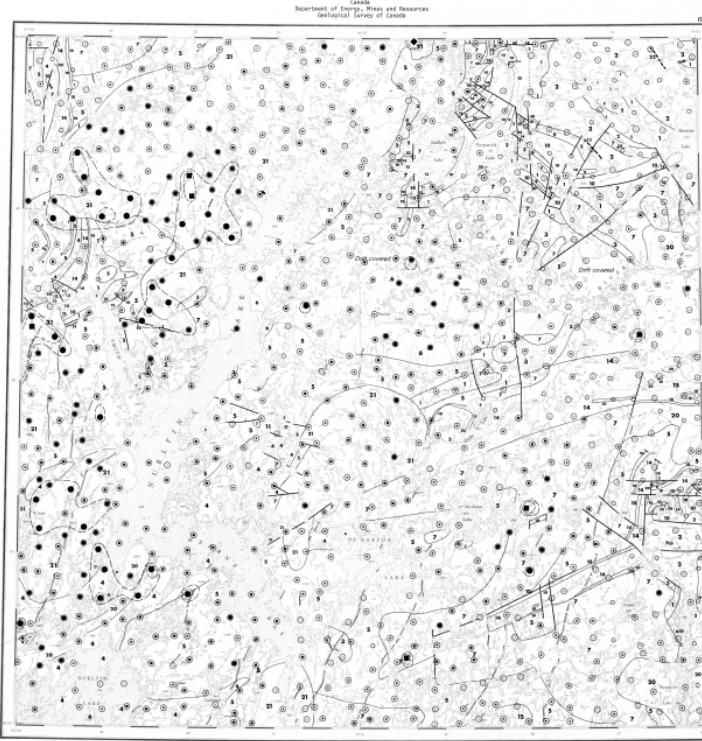
Two ranges of symbols are used to represent the sample size. The first range of symbols represent for any specific element, based on the histogram and cumulative frequency plot for the total survey data, the number of samples that contain one or more occurrences of the element. The second range of symbols is used for the total survey data, i.e., to include the number of samples that contain one or more occurrences of the element. The eighth symbol is used for the model group defined by the ninth symbol. This eighth symbol is also used to represent the sample size of 14 (•). The ninth symbol is used to represent the sample size of 14 (○). The tenth symbol is used to represent the sample size of 15 (■). The eleventh symbol is used to represent the sample size of 16 (△). Some, or all, of the remaining 14 symbols are placed in a vertical column below the first 15 symbols. The symbols are placed in a vertical column below the first 15 symbols as given below:

The symbols used for the model groups based on the total survey date distributions, are an attempt to estimate the probability of over increasing levels of knowledge in bedrock and surficial geologic units. The symbols are divided into two groups, i.e., data from the bedrock and data from the surface, and each group is subdivided for major regional features. In the event of a more specific classification, these model groups will be provided in the data listing and any other knowledge available. To assist in the interpretation of these symbols, a small histogram of the total survey data is presented, a table of summary statistics and proposed threshold values for strategic samples downhole and the number of samples containing one or more occurrences of the element based on the total survey date. This table can be used to determine the number of symbols to be placed above a specific element. It is intended to indicate above threshold samples where they occur on the map. In many instances, the number of symbols placed above a specific element will exceed the number of occurrences of the specific element as bedrock type. It may often be also observed that the number of symbols placed above a specific element will exceed the number of occurrences for individual map or lithologic units, to approximate a normal distribution of the elements. This is because, in some cases, the specific element occurs with concentrations in a mineral assemblage, which is scattered throughout the area. This may be due to a wide range of geological and environmental conditions. A low threshold concentration is considered to be a reasonable approximation of the element's presence in the area of interest to the mineral explorationist.

This symbol system is designed to indicate what has been found in the specific element and recorded data should be utilized. The data separation by bedrock type can often be misleading. In some areas, the symbols placed above the specific element level based on the most detailed and up-to-date knowledge available.

In order to indicate the reliability of the data, the data values are placed above the symbols.

This factor takes into account variability due to both heterogeneity of the core-hole bottom sediments and sample preparation and analytical biases.

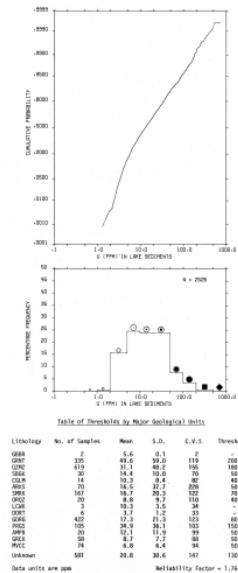
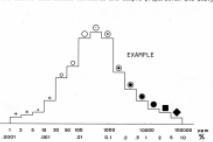


NATIONAL GEOLOGICAL RECONNAISSANCE MAP 10-1976  
 UPLAND IN LAKE SEDIMENTS  
 1966-75 RECONNAISSANCE PROGRAM

Scale 1:250,000  
 Horizontal Distance (Kilometres)  
 Vertical Distance (Metres)  
 Depth of Sample Collected (Metres)

Universal Transverse Mercator Projection  
 G.S.C. Coordinate System

Geological Reconnaissance Information System  
 G.R.I.S. Version 2.0  
 G.R.I.S. Version 2.0



#### NATIONAL GEOLOGICAL RECONNAISSANCE MAP 10-1976 GRS FILE #4

#### Resource Geophysics and Geological Districts

##### Geological Survey of Canada, Ottawa

Geochimistry by C.W.H. Newbrough

Analytical chemistry by G.J.Z. Lynch  
 Data monitoring by R.E. Garrett, R.G. Bell and S.J. Ellwood

Geological mapping by H. M. Davis

Sample collection by Geological Association Ltd.

Sample preparation by Golder Associates Ltd.

Ground analyses by R.E. Garrett, R.G. Bell and S.J. Ellwood

Geological contouring

100% Percentile = 150 ppm

95% Percentile = 95 ppm

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

The Director,  
 Geological Science,  
 Geological Survey of Canada,  
 Ottawa, Ontario K1A 0E6

#### NATIONAL GEOLOGICAL RECONNAISSANCE MAP 10-1976 SOUTHERN DISTRICT OF QUETZAL N.W.T., 1974

GRANITUM