REFERENCE FOR ONLY
Do not remove from Library
GEOLOGICAL SURVEY OF CANADA
601 BOOTH STREET
OTTAWA, ONTARIO
K1A 0E8

LEGEND

Note: This legend is common to National Geochemical Reconnaissance Map 13-1976, Open File 416; Map 13-1976, Open File 417

PROTEROZOIC

ANORTHOSIAN (UPPER PROTEROZOIC)

31 — 23a, gabbro and diabasic-gabbro dykes [GBBR]

HELIKIAN (MIDDLE PROTEROZOIC)

31 — Conglomerate, pebble sandstone, some intercalated sandstone. In part, may be older than 29 or 19 [CGLM]

29 — Mainly porphyritic (quartz and/or feldspar, biotite and/or pyroxene) igneous rocks; probably mainly extrusive, but in part intrusives; some breccia, tuff, agglomerate; minor sub-porphyritic syenitic rocks [QZFP]

19 — Sandstone and pebbly sandstone, grit, arkose; siltstone and minor breccia, probably includes some undifferentiated conglomerate (18 and/or 21) [SNDS]

16 — Conglomerate; intercalated gritty sandstone [CGLM]

ARCHEAN (LOWER PROTEROZOIC)

13 — Granite, granodiorite and allied rocks: in large part gneissic and impure, with many bands of partly assimilated schists, gneiss, amphibolites; stratiform granite-gneiss; mylonitic gneisses of granitic composition; some pyroxene granulite. In part probably older than 9 and, rarely, 7 [GRNT]

19 — Gneiss, schist, amphibolite, and granulite derived mainly from sedimentary and volcanic rocks of Archean and/or Lower Proterozoic (Aphebian) age, some impure quartzite and greywacke; commonly with some granitic material [GNSS]

ARCHEAN

3 — Intermediate to basic volcanic rocks (greenstones) and derived amphibole schist and gneiss; in part includes much schistose greywacke (Lower Thelon belt); some agglomerate, tuff, agglomerate; minor quartz-mica schist and magnetite iron formation (Southern Kenaddi); undifferentiated basic intrusions. May be younger in part (Kenaddi) [VOLS]

8 — Diorite and gabbro in granitic and gneissic terranes [DORT]

7 — Basic syenites, diorites, gabbros [GBBR]

Geological contact
Fault
Mineral prospect

Geological cartography by the Geological Survey of Canada

Legend and geology for the geochemical map by R.G. Garrett, from map 1216A of G.S.C. Memoir 350 by G.M. Wright

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

Mean magnetic declination 1977, 29°00' East increasing 2.3' annually. Readings vary from 19°30.6' in the SE corner to 39°59.4' in the NW corner of the map area.

Elevations 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, then increase in number of segments as the data values increase. The two small crosses at the low end of the scale are used to respectively denote concentrations below the analytical detection limits, or, in the data group containing the detection limit. The data are grouped on a semi-logarithmic scale, i.e. 1,2,3,5,10,20,30,100 etc. Five decades can be spanned and this arbitrary division of the data is common to all Canada wide series of maps constituting the National Geochemical Reconnaissance.

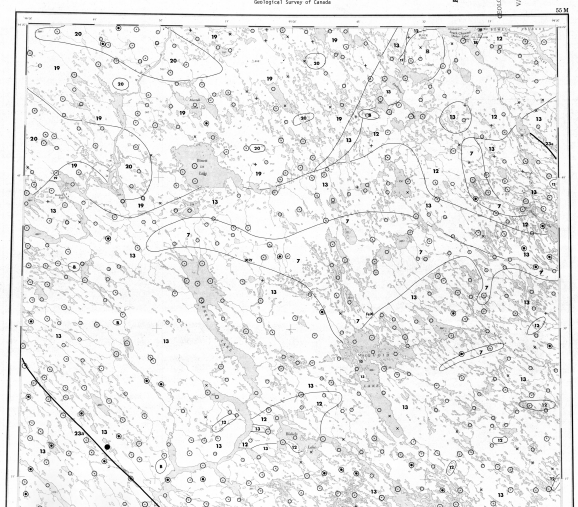
The choice of symbols and the data groups they represent for any specific element is based on the histogram and cumulative frequency plot for the total survey data from one, or more contiguous, open file sheets covered in one field season. The eighth symbol is used for the model group as defined by the histogram, this group usually includes the median of the data as defined by the 0.5 (50%) point of the cumulative frequency plot. Groups 1,2,3,5,6,7 and 8 are mapped. Symbols are chosen so as to achieve an appropriate graphical impact. An example of all 15 symbols is given below.

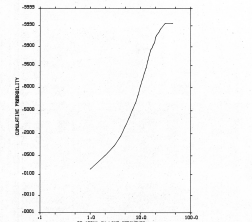
The symbol maps, being based on the total survey data distributions, are unaffected by the availability of ever increasing levels of knowledge in bedrock and surficial geology. The distributions displayed by the 15 class interval data symbol maps are only intended to assist the rapid inspection of the data for gross regional features. To fulfill the needs of a more specific and thorough interpretation, the raw symbol maps should be modified using the field and statistical data provided in the data listings and any other knowledge available. To assist in the selection of data groups to be mapped, for each element in each bedrock geology, a table of summary statistics and proposed threshold values, for map symbols predominantly derived from each mapped bedrock unit, or broad lithological groups based on the total survey data, is presented below the histograms. This table can be used along, or in conjunction, with the sample location map and data listings to select the sample populations where they occur on the map. In many instances, the table will also indicate, more clearly than the map, the dependence of mean geochemical levels on bedrock units. It should be noted, however, that while the 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 anomalous concentrations, relative to the values in the table, should always be derived from, and 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 exploitationist.

Before selecting data from the full available geological, environmental and recorded data should be collated. 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 sampling and analytical precision. Based on a 10% duplicate sampling SO 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 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.

Canada
Department of Energy, Mines and Resources
Geological Survey of Canada





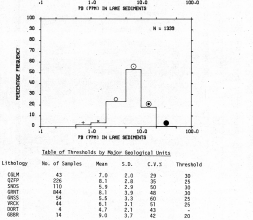


Table of Thresholds by Major Geological Units

Lithology	No. of Samples	Mean	S.D.	C.V.%	Threshold
CGLM	43	7.0	2.0	29	30
GPPP	208	8.1	2.8	35	25
SNDS	146	5.9	2.9	50	30
GRNT	844	5.3	2.3	43	20
GNSS	54	5.5	1.3	24	25
VOCK	64	6.1	2.1	01	25
DORT	4	4.7	2.1	43	-
GBBR	14	9.0	3.7	42	20

Data units are ppm — Reliability Factor = 1.45

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 13-1976
OPEN FILE 417

Resource Geophysics and Geochemistry Division

Geological Survey of Canada, Ottawa

Geochemistry by E.M.W. Hornbrook
Analytical chemistry by J.J. Lynch
Data monitoring by R.G. Garrett, N.G. Lund and D.J. Ellwood

Contractors

Sample collection by Trigg, Woollett & Associates Ltd.
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 416-417. The Open Files consists of data for 11 elements each for lake sediments, percent loss on ignition, uranium in lake waters and sample site location

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

The Director,
Computer Science Centre,
Department of Energy, Mines and Resources,
Ottawa, Ontario K1A 0E8

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 13-1976
OPEN FILE 417
BAKER LAKE N.W.T., 1976
LEAD

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 13-1976

LEAD IN LAKE SEDIMENTS

URANIUM RECONNAISSANCE PROGRAM

Scale 1:250,000

Kilometres 0 5 10 15
Miles 0 5

Universal Transverse Mercator Projection

© Crown Copyrights reserved

This map reproduced from a scanned version of the original map. Reproduction per Australian Crown Copyright Act 1968

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE

EXAMPLE

1 2 5 10 20 50 100 1000 10000 100000 ppm
0.001 .002 .01 0.1 .2 .5 1 2 5 10 %