LEGEND

Note: This legend is common to National Geochemical Reconnaissance Map 9-1976, Open File 415, March 1976, Open File 414 and Map 11-1976, Open File 416

KEILOR

25 Gabbro, meta-gabbro and diabase dykes [GBBR]

35 Granite, quartz monzonite and granodiorite (Scarlet Lake granite) [GRNT]

30 Granite, quartz monzonite and granodiorite [GRNT]

29 Granite, quartz monzonite and granodiorite [GRNT]

28 Ultramic pyroxenite to subpyroxenite [UMPX]

16 Conglomerate [CLMR]

17 Arkose to subpyroxenite [ARKO]

18 Lutite, wacke lutite,dacitic and tuff [DUTT]

19 Ferruginite, ferrachert, calc-silicate bands derived from 16 [CMBA]

16 Undivided 11, 12 and 13 [CMBA]

13 Dolostite, limestone and minor argillite, phyllite [CMBA]

12 Dolomite silts [DOMS]

11 Argillite, phyllite, greywacke, some minor dolostite [CMBA]

10 Quartzite, protoquartzite [QRQT]

9 Greywacke-conglomerate, greywacke, protoquartzite [CLGR]

KEVANA

6 Meta-gabbro dykes [MGBR]

5 Quartz monzonite, granodiorite and granite; massive to foliated [GLTO]

4 Diorite and gabbro [GBTO]

3 Grey biotite granodiorite gneiss [GBNG]

2 Ferruginite, minor paraschist [FEQZ]

1 Amphibolite, amphibolite gneiss [AMPH]

0 Greywacke, greywacke-conglomerate, argillite, phyllite, minor tuff [GRCK]

? Metavolcanic rocks [MVCC]

Drift-covered areas
Geological contact
Fault
Limit of geological mapping
Inlier; intersection of flow trend
Mineral occurrence

Legend modified and geology derived for the geochemical map by R.G. Garrett from maps 26-1970, 5-1972 and 4-1-1972 and N.S.C. Paper 74-54 Pt. 2, Cade

Geological cartography by the Geological Survey of Canada

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

Mean magnetic declination 1977, 0°15'E decreasing 2.4' annually. Readings vary from 7°22.8' in the SE corner to 17°22.4' in the NW corner of the map area

Elevation in feet above mean sea-level

Geochemical Symbol and Data Presentation

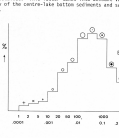
The concentration of an element at a sample site is graphically represented as one of 15 symbols. If a sample was collected but there is no data available a dot is plotted. The symbols are symmetrically arranged so that they appear to increase in size as the eighth power and tree increase in blackness to the fifteenth. The two small crosses at the low end of the scale are used to respectively denote samples which fall below the detection limit and those for which no analysis (allowing for dilution 1:on). 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 contouring Canada wide series of maps constituting the National Geochemical Reconnaissance.

The class limits for each element are chosen they represent for any specific element as listed in 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 weak groups as defined by the histograms. Only group usually includes the median of the data as defined by the 0.5 (50%) probit. The class limits corresponding to probits of 2.5 (99%) and 4.5 (99.9%) probits are chosen to achieve an appropriate graphical impact. An example of all 15 symbols is given below.

Map-to-map comparisons, being based on the total survey data distributions, are unaffected somewhat by the effect of ever increasing levels of knowledge in bedrock and surficial geology and other environmental factors. Hence the class limits for 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 of the data, the class limits should be modified using the field and analytical data provided in the data listings or any other knowledge available. To assist in the appraisal and modification of the class limits for each element, the histogram, a table of summary statistics and proposed threshold values for drainage sampling dominantly derived from each mapped bedrock unit, or broad lithologic unit, again for the total survey data, are 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 the data is clustered. In some 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 the data for each bedrock unit approximates a log-normal distribution. Data for individual map or lithologic units does not approximate a normal distribution. The proposed thresholds presented in the table are intended for interpreting the data from a regional exploration viewpoint. Locations of samples with concentrations in excess of the threshold for the rock unit they appear in should be studied in detail. The use of the above threshold concentration data for individual map or lithologic units does not approximate a normal distribution. The proposed thresholds presented in the table are intended for interpreting the data from a regional exploration viewpoint. Locations of samples with concentrations in excess of the threshold for the rock unit they appear in should be studied in detail. The use of 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 exploration.

To comprehensively study an area, all available geological, environmental and geochemical data should be used. The proposed thresholds presented here 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 multiplicity factor and value that appears below the table is an estimate of the reliability of the geochemical map. On the basis of duplicate analyses, the F.V. is defined as the factor by which the data must be multiplied if any two it resampled and identical methods of sample preparation and analysis are used the new value will lie between X ÷ MF and X x MF where X is the original) value obtained. This factor takes into account variability due to both heterogeneity of the concre-tale bottom sediments and sample preparation and analytical causes.



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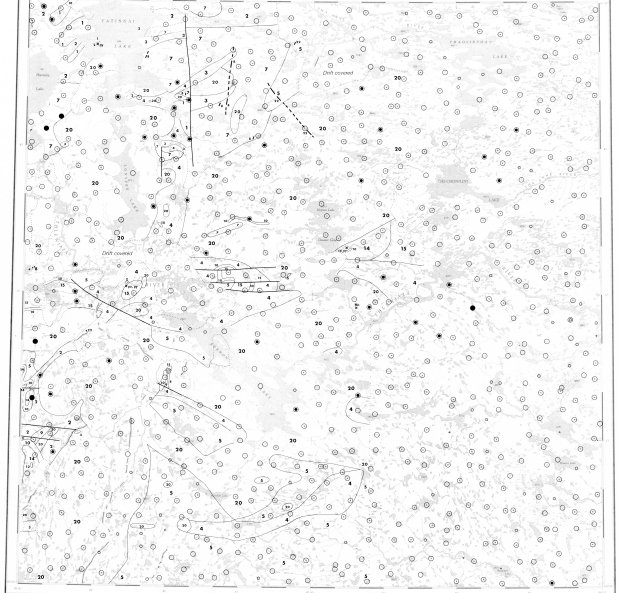

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 9-1976
COPPER IN LAKE SEDIMENTS
URANIUM RECONNAISSANCE PROGRAM

Scale 1:250,000

Kilometres 5 0 5 10 15 Kilometres
Miles 4 0 4 8 Miles

Universal Transverse Mercator Projection
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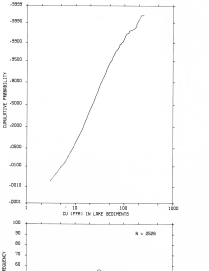

Table of Thresholds by Major Geological Units

Lithology	No. of Samples	Mean	S.D.	C.V.%	Threshold
GBBR	2	50	21	41	-
GRNT	135	23	13	56	100
GLMC	619	26	16	59	100
GBNG	30	19	11	59	90
CLGR	16	18	9	49	90
QRQT	14	16	8	49	90
CMBA	167	29	20	72	100
DMSI	20	47	34	72	100
CLMR	3	52	20	40	-
DDMT	6	29	19	66	-
GRCK	402	29	19	65	100
FEQZ	106	47	34	73	100
AMPH	20	23	17	73	100
GBCK	58	41	34	83	100
MVCC	74	28	21	77	100
Unknown	501	24	13	55	100

Data units are ppm

Reliability Factor = 1.37

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 9-1976
OPEN FILE 413

Resource Geophysics and Geochemistry Division

Geological Survey of Canada, Ottawa

Geochemistry by I.H.W. Hornbrook
Geochemistry Laboratory, Ottawa
Data monitoring by R.E. Garrett, V.G. Lund and D.J. Ellwood

Contractors:

Sample collection by Trigg, Woollett & Associates Ltd.
Sample preparation by Soldier Associates
Chemical analyses by Chemex Labs Ltd.

This map forms one of a series of 65 sheets released under Geological Survey of Canada, Open Files 413, 414, 415. The Open Files consists of Maps 9-1976 to 73-1976 inclusive and 11-1976 and represent loss on ignition, two elements for 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 0E9

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 9-1976
OPEN FILE 413
SOUTHERN DISTRICT OF KEEWATIN N.W.T., 1976
COPPER