LEGEND

Note: This legend is common to National Geochemical Reconnaissance Map Sheets 95E, Open File 415; Map 51-1976, Open File 414 and Map 51-1976, Open File 415

QUIESCENT

20 Gabbro, meta-gabbro and diabase dykes [QUIGB]

QUINTETTE

21 Granite, quartz monzonite and granodiorite (Saritte Lake granite) [QUIGT]

PRIDEAUX

18 Granite, quartz monzonite and granodiorite [QUPGT]

19 Lithic greywacke to subgreywacke [QUGW]

14 Conglomerate [CLCM]

17 Arkose to subgreywacke [QUKS]

16 Lapilli, quartz lapilli,ash and tuff [QCLT]

15 Paragneiss, pyroxenite, calc-silicate bands derived from 16 [PGNG]

13 Undivided 11, 12 and 13 [QUMG]

12 Dolomite, limestone and minor argillite, phyllite [QMG]

11 Gabbro sills [QUGB]

10 Argillite, phyllite, greywacke, some minor dolomite [QUMG]

9 Quartzite, orthoquartzite [QMQZ]

8 Greywacke-conglomerate, greywacke, protoquartzite [CLGW]

GOSSAN

Meta-gabbro dykes [MGBX]

7 Quartz monzonite, granodiorite and granites; massive to foliated [GJMZ]

6 Diorite and gabbro [GJDT]

5 Grey biotite granodiorite gneiss [GJMG]

4 Paragneiss, minor pyroxenite [PMGG]

3 Amphibolite, amphibolite gneiss [AMPG]

2 Greywacke, greywacke-conglomerate, argillite, phyllite, minor tuff [GJGC]

1 Meta-volcanic rocks [MVCC]

Drift covered area.....

Geological contact.....

Faults.....

Limit of geological mapping.....

Dikers (direction of flow known).....

Mineral occurrence.....

Legend modified and geology derived for the geochemical map by R.G. Garrett from maps 24-1970, 1-1972 and 4-1972 and G.S.C. Paper 74-54 BY R.E. Eade

Geological cartography by the Geological Survey of Canada

Base-map at the same scale published by the Mapping and Charting Establishment, M.C.E., 1963

Mean magnetic declination 1977, 16°25.5'E decreasing 8.8' annually. Readings vary from 14°35.4' in the SE corner to 18°22.2' in the NW corner of the map area

Elevation in feet above mean sea-level

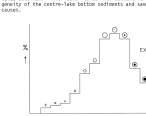
Geochemical Symbol and Data Presentation

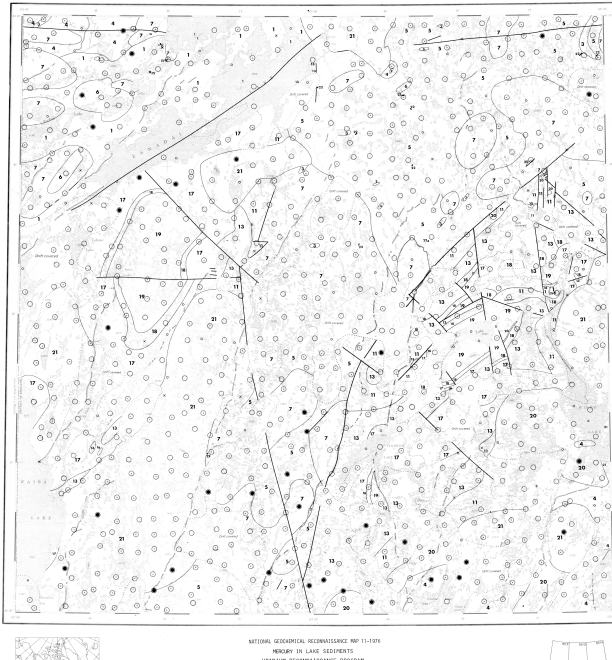
The concentration of an element at a sample site is graphically represented as one of 15 symbols. If a sample was collected but there is no data available a dot is plotted. The symbols are symmetrically arranged so that they first increase in size to the eighth symbol and then increase in blackness to the fifteenth. The two small crosses at the low end of the scale are used to respectively denote anomalous Fluorine and Loss on Ignition values. The class limits are determined by taking the distance from the data arrays 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 symbol on maps 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 modal group as defined by the histogram, this group usually includes the median of the data as defined by the 0.5 (50%) probability point on the cumulative frequency plot. The class limits for each symbol are chosen so as to produce approximate graphical equality. 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 geology, soil types, overburden thickness, etc. Therefore the individual symbol maps are only intended to assist the user in the logical inspection of the data for gross regional features. To fulfil the needs of a more specific and thorough interpretation, the raw sample maps should be modified using the field and analytical data provided in the data listings and any other knowledge available. To assist in the latter, the following are given for each element mapped: a histogram, a probability, a table of summary statistics and proposed threshold values for thresholds subjectively derived from 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 those bedrock units where values may occur on the map. In many instances, the table will also illustrate, more clearly than the relative dispersion of the geochemical units on the map, the degree to which the background that emfilt the total data appears to approximate a log-normal distribution the data for individual map or lithologic units appears to approximate a normal distribution. Exceptions to these generalizations are believed to be useful in interpreting the data from a mineral exploration viewpoint. Locations of samples collected from areas of outcrop, as opposed to those from areas of drift cover should 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 exploration. Consideration of all available geological, environmental and recorded data should be attitued. 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 degree to which the threshold value is valid. For example, sampling 57 of all lakes sampled it can be stated that there is a 90 chance that if any lake is resampled and identical methods of sample preparation and analysis are used the new value will lie between 0.1 RF and 3 x RF where R 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 11-1976

MERCURY IN LAKE SEDIMENTS

URANIUM RECONNAISSANCE PROGRAM

Scale 1:250,000

Kilometres 0 5 10 15 20 Kilometres

Miles 0 2 4 6 8 Miles

Universal Transverse Mercator Projection

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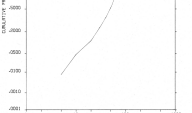

Table of Thresholds by Major Geological Units

Lithology	No. of Samples	Mean	S.D.	E.V.%	Threshold
GBBR	2	110	14	13	
GJDT	105	59	25	42	150
GJMZ	619	55	27	50	160
GJMG	30	54	21	40	150
CGLM	14	51	25	50	150
AMPG	110	52	27	52	150
PMGG	17	58	23	40	150
QMQZ	73	67	22	33	150
CLGW	3	103	46	45	
QUKS	6	55	31	56	
QUMG	606	55	28	51	160
PMVG	100	61	29	47	160
QCLT	70	64	24	38	150
QUCG	58	74	31	42	200
MVCC	74	67	27	40	160
Unknown	501	55	29	53	160

Data units are ppb Reliability Factor = 1.67

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 11-1976
OPEN FILE 415

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Analytical chemistry by J.C. Lynch
Data monitoring by R.G. Garrett, S.G. Lund and D.J. Ellwood

Contractors

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

This map forms one of a series of 45 sheets released under Geological Survey of Canada, Open Files 413, 414, 415. The Open Files consists of data for 11 elements each for lake sediments, percent 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:

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NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 11-1976
OPEN FILE 415
SOUTHERN DISTRICT OF KEEWATIN N.W.T., 1976
MERCURY