NOTE: This legend is common to Open File 420, 421

Geology derived from the map 1204-A, Kitikmeot Sediments at the scale of 1:1,000,000. Compiled by A.C. Grun, A.H. Poole and R.V. Sandford, 1971

Geological cartography by the Geological Survey of Canada

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

Mean magnetic declination 1977, 19°00'E, west decreasing 3.4' annually. Magnetic vary from 19°54'E in the S.E. corner to 17°31' W 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 geographically represented at one of 19 symbols. If a sample was not collected but there is no data available a dot is plotted. The symbols are numerically arranged so that they first increase in size and then increase in density as the concentration of the element increases. The small crosses at the top and of the scale are used to respectively denote concentrations below the analytical detection limit, or, in the data group containing the detection limit, the presence of the element in concentrations too low to be accurately read. Five decades can be summed and this arbitrary division has been chosen for the contouring tends with series of maps constituting the National Geochemical Reconnaissance. The boundaries between symbols are not meant to represent "breaks" in the data. It is based on the Fisherman and Lawrence Prospecting Kit for the 1977 survey data which cannot be used to plot other data as the remaining 4 symbols are chosen so as to achieve an asymptotic graphical increase in the number of symbols given below.

The symbol mean, being based on the total survey data distribution, is controlled by the availability of ever increasing levels of knowledge in bedrock and surficial geology, and the interpretation of these data. The symbol mean is therefore not necessarily intended to control the final boundaries of the data for press contact fashion. To fulfill the needs of a more specific and thorough interpretation, the raw symbol data should be plotted on a base-map of the appropriate scale and the Geological Tinting 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, including the symbol mean, is provided for each lithology. Where the symbol mean is right below on the total survey data, it presumable below the histogram. This table can be used along, or in conjunction, with the sample location map and data listings. Where the symbol mean is left of the histogram, the data is skewed to the right and the table will also illustrate, more clearly than the map, the dependence of major geochemical levels on bedrock type. It may often be also observed that whilst the symbol mean is left of the histogram, the symbol mean is right of the arithmetic mean and in lithologies sorts accepts is explainable a normal distribution. The proposed thresholds presented are believed to be useful in interpreting the data from a mineral exploration standpoint. However, they are not intended to imply that all values above threshold for the rock unit they appear to be anomalous, should be studied carefully. Factors, but one of importance is that concentrations can be due to a wide range of geological and environmental processes, and not necessarily to the mineral exploitation.

To compensate for variations in the available geological, environmental and recorded data should be written. The data should be interpreted by those with knowledge of the local geology and surficial materials. Detailed sampling should be carried out on the soil detailed and on-to-data irregularities. Local thresholds levels based on the soil detailed and on-to-data irregularities.

The lithology factor and value that appears below the table is an estimate of the relative abundance of the lithology in the survey area. The sum of the (L) of all lakes sampled is (n) be closest that there is a 95% chance that (L) is the recognized and identical methods of sample preparation and analysis are used the new survey data. The (L) factor is used to calculate the (T) threshold for detailed. This factor takes into account variability due to both heterogeneity of the centre-lake bedrock sediments and sample preparation and analytical causes.

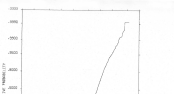

Table of Thresholds for Major Geological Units

Lithology	No. of Samples	Mean	S.D.	F.A.1	Threshold
Limestone	33	63.8	36.7	58	200
Sandstone	27	90.3	47.2	52	250
Siltstone	7	96.0	57.7	60	288
Shale	21	136.3	97.4	72	400
Marls	5	79.5	45.1	57	225
Argillaceous	26	136.3	97.4	72	400
Dolomite	76	111.3	71.3	72	338
Gabbro	29	97.7	67.8	72	325
Syenite	29	92.0	67.8	72	325
Granite	192	110.3	54.3	56	233
Granodiorite	57	94.2	54.3	56	233
Gabbro	16	73.4	51.0	64	225
Diorite	5	76.0	23.7	57	200
Granodiorite	43	110.3	54.3	56	233
Quartz	152	95.2	26.1	61	213
Porphyries	11	106.2	68.0	67	300
Gneiss	11	104.2	68.0	67	300
Unknown	6	71.0	41.4	62	250

Data units are ppm

Reliability Factor = 1.66

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 1:1356
OPEN FILE 420

Resource Geophysics and Geochemistry Division

Geological Survey of Canada, Ottawa

Geochemistry and Federal-Provincial coordination by E.A.K. Hendrickson
Field operation supervised by C.E. Dorman
Sample preparation by Mary Lawrence
Data monitoring by R.G. Garrett, R.G. Lund and E. Ellwood

Intern, Geological Branch

Federal-Provincial coordination by T.D. Card

Contractors

Sample preparation by Golder Associates
Chemical analyses by Chemex Labs Ltd.

This map forms one of a series of 23 sheets released under Open File 420 and 421 by the Geological Survey. The open files consist of data for 27 elements each, per cent loss on ignition and sample site location.

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

The Director,
Canadian Mineral Centre,
Department of Energy, Mines and Resources,
Ottawa, Ontario K1A 0E8

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 1:1356
OPEN FILE 420
SOUTHAMPTON ORTHOSS, NWT
ZINC