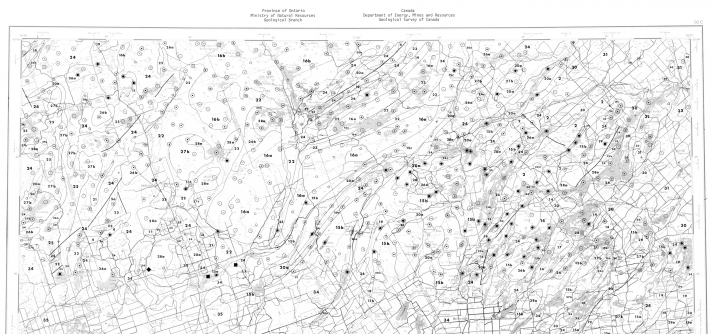
LEGEND

NOTE: This legend is common to both this and the next sheet.

POST-PRECAMBRIAN
QUATERNARY: Pleistocene and Recent
Pl Pleistocene: unconsolidated deposits
TERTIARY: Pliocene and Miocene
Pm Miocene and Pliocene: sandstone, shale, limestone
EARLY PALEOZOIC
Ol ORDOVICIAN: dolomite
Ss SILURIAN: sandstone, dolomite
DEVONIAN
Dv DEVONIAN: sandstone, dolomite
MIDDLE PALEOZOIC
Ol ORDOVICIAN: limestone
Ss SILURIAN: sandstone, dolomite
Dv DEVONIAN: sandstone, dolomite
Dl Dolomite
Ls Limestone
Ss Sandstone
Sh Shale
Cg Conglomerate
Ev Evaporite
Ig Igneous rocks
Mt Metamorphic rocks
Dl Dolomite
Ls Limestone
Ss Sandstone
Sh Shale
Cg Conglomerate
Ev Evaporite
Ig Igneous rocks
Mt Metamorphic rocks
PRECAMBRIAN
Ss Sandstone, quartzite, conglomerate
Ls Limestone, dolomite
Sh Shale, slate, argillite
Ig Granite, granodiorite, syenite, gabbro, diabase, basalt, rhyolite, andesite
Mt Gneiss, schist, migmatite, amphibolite, quartzite, marble, slate, iron formation
Ss Sandstone, quartzite, conglomerate
Ls Limestone, dolomite
Sh Shale, slate, argillite
Ig Granite, granodiorite, syenite, gabbro, diabase, basalt, rhyolite, andesite
Mt Gneiss, schist, migmatite, amphibolite, quartzite, marble, slate, iron formation
Geological contact
Fault
Dyke
Geology derived from the map 1124-A, Hudson Bay-Ontario, at the scale of 1: 1,000,000; compiled by A.C. Bear, W.A. Fyfe and D.F. Sandford, 1971
Geological cartography by the Geological Survey of Canada
Base-map at the same scale published by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa, 1975
Mean magnetic declination 1971, 1°19.2' east decreasing
Annual rate of change: 0.1' increasing
Contour interval is 100 feet
Elevations in feet above mean sea-level
Geochemical Symbol and Data Presentation
The concentration of an element at a sample site is graphically represented on one of 11 symbols, if a sample was collected but there is no data available a dot is plotted. The symbols are numerically arranged so that the first symbol is for the lowest 10% of the data, the second symbol for the next 10% and so on. Consequently small circles at the bottom of the scale are used to represent relatively low concentrations and large circles at the top of the scale are used to represent relatively high concentrations. The data are grouped on a semi-logarithmic scale, i.e. 1,2,5,10,20,50,100 etc. This method of presentation is commonly used in geochemical exploration and tracing Canada wide series of maps contributing the National Geochemical Reconnaissance.
The choice of symbols and the data groups they represent for any specific element is based on the statistical parameters of the data, such as the mean, standard deviation, or more complicated, when finite density control is one field reason. The eighth symbol is used for the model group as defined by the histogram, this group usually contains the largest number of data. The ninth, tenth and 11th are based on cumulative frequency plot. Some, or all, of the remaining 19 symbols are chosen so as to achieve an appropriate graphical impact. An example of all 11 symbols is given below.
The symbol maps, being based on the total survey data distributions, are unaffected by the availability of your increasing levels of knowledge to bedrock and surficial geology. Although the symbol distributions may, in fact, be used to some extent to help expanded to restrict the rapid recognition of the data for areas regional features. To fulfill the needs of a more specific and thorough interpretation, the raw symbol maps should be used in conjunction with the regional geology, drift thickness, soil fittings 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 is presented for each of the rock units. Interpretation of the symbol maps, once again based on the total survey data, is presented below the histogram. Until soils can be used alone, or in conjunction, with the sample location map and data listing, the symbol maps should be interpreted with caution. The use of the information in the table will also illustrate, more clearly than the map, the dependence of base metal concentrations in soils on the underlying bedrock and surficial geology. Total data appears to approximate a log-normal distribution the data for individual rock units usually approximate a normal distribution. The statistical parameters presented are believed to be useful in interpreting the data from a mineral exploration viewpoint. Locations of samples with concentrations in excess of the 90th percentile may be significant in the search for mineral deposits of economic quality. 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 elements in the bedrock or surficial geological environment.
To comprehensively study an area, all available geological, environmental and recorded data should be utilized. The data presented by bedrock type can often be misleading when the sample site is underlain by residual overburden tends toward 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 probability that a sample collected from the rock unit will contain a value in excess of that sample in the same geology. There is a 95% chance that if any take is resampled and identical methods of sample preparation and analysis are used the new sample will contain a value in excess of the threshold value. The reliability factor takes into account variability due to both heterogeneity of the centre-line bottom sediments and sample preparation and analytical causes.

Province of Ontario
Ministry of Natural Resources
Geological Branch

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



NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 1-1976
NICKEL IN LAKE SEDIMENTS

CANADA-ONTARIO SUBSIDIARY AGREEMENT ON MINERAL EXPLORATION AND DEVELOPMENT

Scale 1:250,000

Kilometres 0 5 10 15 20 25
Miles 0 5 10 15

Universal Transverse Mercator Projection
10 thousand kilometre square

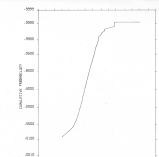


Table of Thresholds for Major Geological Units

Lithology	No. of Samples	Mean	S.D.	C.V.†	Threshold
Limestone	53	21.3	40.3	707	50
Sandstone	17	9.0	5.1	57	20
Dolomite	7	6.3	3.3	47	10
Shale	21	15.8	11.8	75	50
Marble	2	10.0	7.1	71	20
Conglomerate	9	11.3	7.1	63	20
Gabbro	42	57.4	31.0	54	100
Basalt	24	36.5	40.1	110	100
Rhyolite	2	10.0	7.1	71	20
Syenite	107	96.8	403.0	416	100
Granite	68	6.3	2.3	37	10
Granodiorite	37	6.7	3.5	52	10
Diorite	6	11.8	5.0	42	20
Diabase	4	11.8	5.0	42	20
Andesite	10	10.0	7.1	71	20
Amphibolite	482	93.9	52.2	56	100
Paragneiss	31	134.9	84.2	62	200
Migmatite	80	56.2	38.2	191	100
Unknown	8	11.9	8.9	75	20

Data units are ppm

Reliability Factor = 1.44

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 1-1976
OPEN FILE 405

Resource Geophysics and Geochemistry Division

Geological Survey of Canada, Ottawa

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Data processing by F.J. Grunsky
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Federal-Provincial coordination by F.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 the National Geochemical Reconnaissance Program. The open-file consists of data for 23 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,
Computer Science Centre,
Department of Energy, Mines and Resources,
Ottawa, Ontario K1A 0G1

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 1-197N
OPEN FILE 405
DISTRIBUTION DETAILS, 197N
NICKEL