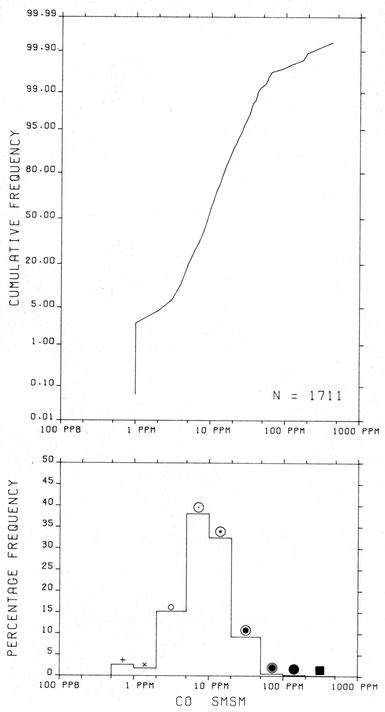
Canada
Department of Energy, Mines and Resources
Geological Survey of Canada

116 B and Parts of 116 C, 116 F, 116 G

COBALT (ppm)

OPEN FILE 520

CENTRAL YUKON 1977



Geochemical Symbol and Data Presentation

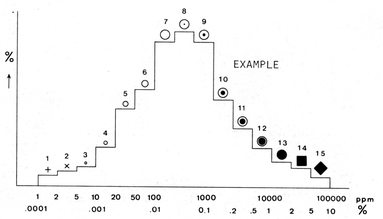
The concentration of an element at a sample site is graphically represented as one of 15 symbols. If a sample was collected but there is no data available a dot is plotted. The symbols are symmetrically arranged so that they first increase in size to the eighth symbol and then increase in blackness to the fifteenth. The two small crosses at the low end of the scale are used to respectively denote concentrations below the analytical detection limit, or, in the data group containing the detection limit. 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 continuing 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 (above). 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 on the cumulative frequency plot. Some, or all, of the remaining 14 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 distribution, are unaffected by the availability of ever increasing levels of knowledge in bedrock and surficial geology, and other environmental factors. Therefore, the raw 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 analytical data provided in the data listings and any other knowledge available.

The data listings contain notes on survey and analytical methods, raw data listing with legend and statistics for total data as well as for data grouped on the basis of rock type.

To comprehensively study an area, all available geological, environmental and recorded data should be utilized. 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.



Copies of map material and listings of field observations and analytical data from which the material was prepared may be available at users expense by application to:

K.G. Campbell Corporation
880 Wellington Street
Bay No. 238
Ottawa, Ontario
K1R 6K7

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

The Director
Computer Science Centre
Department of Energy, Mines and Resources
Ottawa, Ontario
K1A 0E4

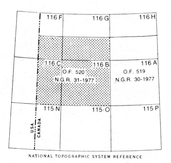
Elevations in feet above mean sea level

Mean magnetic declination 1978, 32°41.0' East, decreasing 1.6' annually. Readings vary from 32°48.6' in the SE corner to 32°27.9' in the NW corner of the map-area

COBALT (ppm)
OPEN FILE 520
NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 31-1977
URANIUM RECONNAISSANCE PROGRAM
CENTRAL YUKON 1977
Scale 1:250,000

Kilometres 6 0 6 12 18 Kilometres
Miles 4 0 4 8 Miles
Universal Transverse Mercator Projection

Base-map assembled by the Geological Cartography Unit from maps published at the same scale by the Surveys and Mapping Branch in 1957, 1958



LEGEND

QUATERNARY
- 26 Unconsolidated glacial and alluvial deposits

TERTIARY
- 25 Quartz porphyry
- 24 Andesite and basalt; minor shale, sandstone and conglomerate
- 23 Arkosic and micaceous sandstone, shale, conglomerate and minor lignite

CRETACEOUS AND TERTIARY (?)
- 22 Monster Formation: 22a, sandstone, siltstone, shale and chert-pebble conglomerate

CRETACEOUS
- 21 21a, biotite granodiorite and quartz monzonite; 21b, hornblende and hornblende/biotite syenite; minor diorite
- 20 Diroite and gabbro; 20a, may be older
- 19 Green and maroon shale and brown siltstone
- 18 Keno Hill Quartzite: massive quartzite; minor slate and phyllite; 18a, phyllitic quartzite, graphitic and chloritic slate and phyllite; minor limestone and massive quartzite; 18b, as 18 but may be older

JURASSIC
- 17 Lower Schist division: argillite, slate, phyllite, quartzite; minor phyllite and limy quartzite

TRIASSIC
- 16 Black limy shale and limestone; grey- to buff-weathering limestone

PERMIAN
- 15 Tahkandit Formation: chert, cherty limestone and limestone; 15a, limestone with some chert

CARBONIFEROUS TO PERMIAN
- 14 Limestone, black shale, chert and chert-pebble conglomerate; 14a, dark shale, limestone, sandstone; minor chert-pebble conglomerate; 14b, shale and slate; minor limestone and impure sandstone

DEVONIAN TO CARBONIFEROUS
- 13 Black shale, argillite and slate, limestone, chert, chert-pebble conglomerate and quartzite; 13a, Nation River Formation: chert-pebble conglomerate and chert-grain sandstone

ORDOVICIAN AND SILURIAN
- 9 Road River Formation: back chert and argillite, green and grey chert and argillite; minor quartzite and chert-pebble conglomerate
- 8 Dolomite and limestone; 8a, dark volcanic rocks partly serpentinized, tuff and argillite, and limestone

LOWER CAMBRIAN TO ORDOVICIAN (?)
- 7 Limestone and limestone conglomerate; 7a, limestone and dolomite

PRECAMBRIAN AND/OR LATER
- 4 Dark green volcanic rocks, breccia, tuff and agglomerate; minor shale, chert, siltstone and limestone; 4a, dark green volcanic rocks, breccia, tuff and agglomerate; 4b, dark green andesite

PRECAMBRIAN AND/OR CAMBRIAN
- 3 Quartzite, sandstone, quartz-pebble conglomerate; shale and slate; quartzite, quartz chlorite schist, quartz-mica schist and phyllite; minor limestone and chert; 3a, limestone

PROTEROZOIC
- 2 Orange-weathering dolomite, dark slate, minor phyllite and quartzite; 2a, pink-, orange- and grey-weathering dolomite, shale, quartzite, conglomerate and limestone; 2b, buff and orange dolomite, slate, quartzite, limestone and conglomerate; 2c, grey dolomite, shale and quartzite; 2d, dolomite-boulder conglomerate; 2e, shale, argillite, siltstone and minor dolomite
- 1 Argillite, slate, phyllite; minor quartzite dolomite and conglomerate; 1a, limestone

METAMORPHIC ROCKS SOUTHWEST OF TINTINA TRENCH
- E Serpentinized ultrabasic rocks
- D Quartz-biotite gneiss; minor quartzite, quartz-mica and biotite-chlorite schist, and quartz-feldspar pegmatite
- C Greenstone and amphibolite gneiss; minor chloritic quartz-mica schist, quartzite, and limestone
- B Klondike Schist: quartz-muscovite-chlorite schist, and schistose chloritic quartzite; muscovite schist, quart-biotite gneiss, quartz-graphite-sericite schist and quartzite
- A Nasina Series: micaceous quartzite, quartz-mica schist, quartz biotite gneiss, graphitic schist and quartz-muscovite-chlorite schist; Aa, metamorphic rocks with biotite and garnet; Ab, limestone

GEOLOGICAL BOUNDARY.....

FAULT.....

The legend modified and geology derived for this geochemical map from G.S.C. map 1284A.

Geological Survey of Canada
Resource Geophysics and Geochemistry Division

CONTRACTORS

Sample collection by Semco
Sample preparation by Golder Associates
Uranium in sediment chemical analyses by Atomic Energy of Canada Ltd.
Other sediment chemical analyses by Chemex Labs Ltd.
Water chemical analysis by Bondar-Clegg & Co. Ltd.

This map forms one of a series of 42 sheets released under the Geological Survey of Canada. Open Files 518, 519, 520. The Open Files consist of maps for 11 elements, each for stream sediments, 2 elements for stream waters and sample site locations.

COBALT (ppm)
OPEN FILE 520
CENTRAL YUKON 1977