

**Geochemical Symbol and Data Presentation**

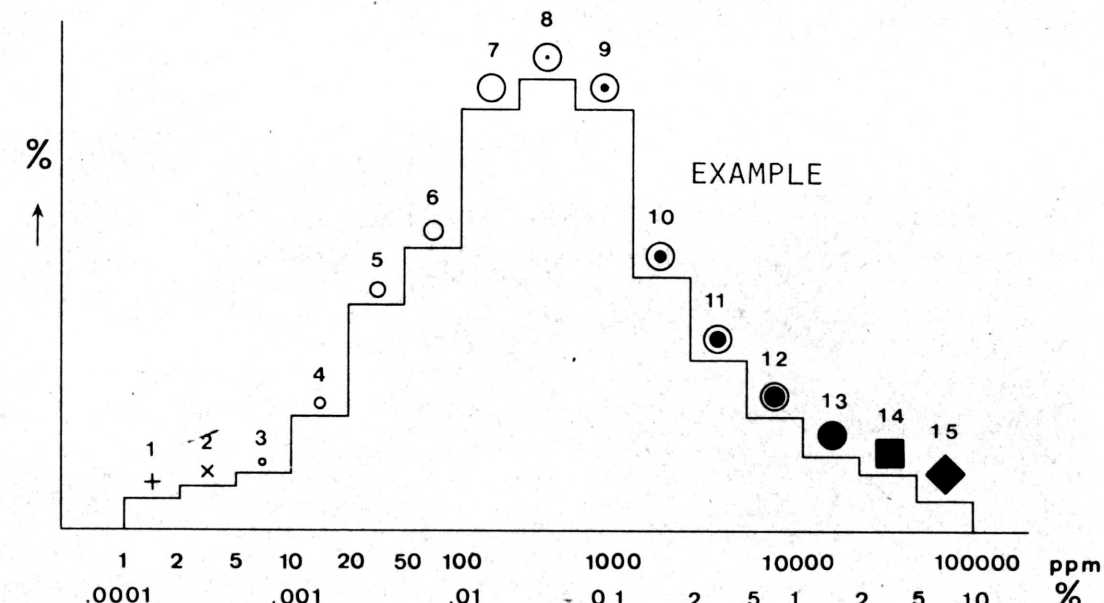
The concentration of an element at a sample site is graphically represented as one of 15 symbols. If a sample was collected but there is no data available a dot is plotted. The symbols are symmetrically arranged so that they first increase in size to the eighth symbol and then increase in blackness to 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 distributions, 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.

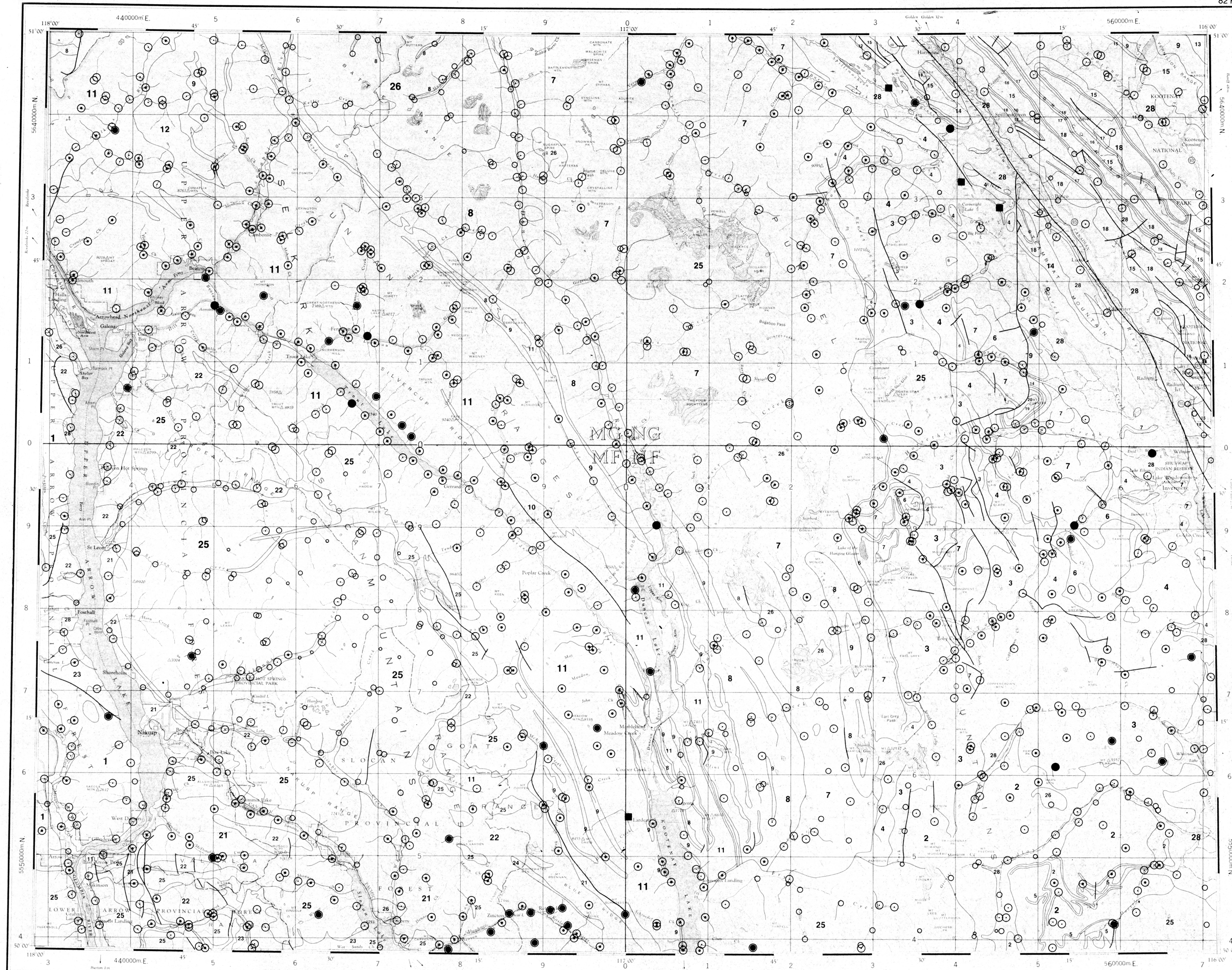


Copies of map material and listings of field observations and analytical data from which the material was prepared may be available at users expense by application to:

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



**MANGANESE (ppm)**

OPEN FILE 515

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 26-1977

URANIUM RECONNAISSANCE PROGRAM

SOUTHEASTERN BRITISH COLUMBIA 1977

Scale 1:250,000

Kilometres 0 6 12 18 Kilometres

Miles 0 4 8 Miles

Universal Transverse Mercator Projection

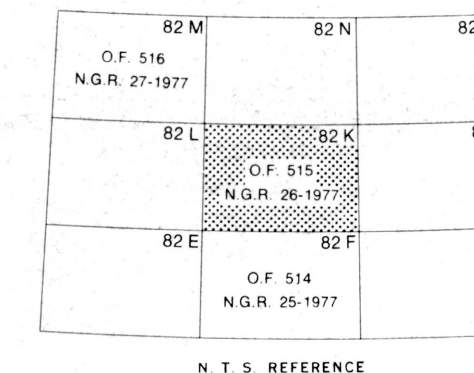
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Elevations in feet above mean sea level

Mean magnetic declination 1978, 21°45.3' East, decreasing 5.1 annually. Readings vary from 21°04.2' in the SE corner of the map-area to 22°24.6' in the NW corner of the map-area

Base map modified by the Geological Cartography Unit from map published at same scale by Surveys and Mapping Branch, 1959. Additional drainage obtained from Department of Lands, Forests and Water Resources, British Columbia Land Use maps, 1:125,000 scale

This map has been reprinted from a scanned version of the original map. Reproduction par numérisation d'une carte sur papier



**MANGANESE (ppm)**

OPEN FILE 515

SOUTHEASTERN BRITISH COLUMBIA 1977

**LEGEND**

Note: This legend is for the National Reconnaissance Map 26-1977, Open File 515. CENOZOIC (TERTIARY)

- 28 (TILL) Unconsolidated recent sediments
- 27 (SYMT 42)\* MCGREGOR INTRUSIONS: shonkinite; SHEPPARD PLUTONIC ROCKS: leuco-granite; CORRELL PLUTONIC ROCKS: syenite, minor granite, monzonite, shonkinite, agglomerate

MESOZOIC

- 26 (GRDR 35) GALENA BAY and SUGAR PLUM STOCKS, BATTLE RANGE and BOUGABOUB BATHOLITHS: granodiorite, quartz monzonite, alaskite, quartz diorite
- 25 (QZMZ 35) NELSON BATHOLITH: CARIBOU CREEK PLUTON, GOAT CANYON-HALIFAX CREEK and WRAGGEE CREEK STOCKS, RUBY RANGE STOCK, MEADOWS MOUNTAIN AND EAST CARIBOU STOCKS, KUSKANAX BATHOLITH AND STOCK: quartz monzonite, granodiorite, quartz diorite, syenite
- 24 Serpentinite, minor schist
- 23 (SCST 32) SLOCAN GROUP: paragneiss, mica schist
- 22 (ANDS 32) KASLO GROUP: greenstone, metabasalt and meta-andesitic flows and tuffs
- 21 (SLTE 32) SLOCAN GROUP: slate, argillite, quartzite, limestone, conglomerate, tuff, phyllite; YMR GROUP: paragneiss; MILFORD GROUP: chert, greenstone

PALEOZOIC

- 20 STARBUCK FORMATION: limestone
- 19 MOUNT FORSTER FORMATION: argillite, limestone
- 18 (DLMT 15) BEAVERFOOT FORMATION: dolomite, limestone
- 17 MOUNT WILSON: quartzite
- 16 GLENOGLE SHALES: black shale, argillaceous sandstone
- 15 (LMSN 13) MCKAY GROUP: argillaceous limestone, conglomerate
- 14 (DLMT 12) JUBILEE FORMATION: dolomite
- 13 (SHLE 12) EAGER FORMATION: shale, gritty limestone, argillite; CHANCELLOR GROUP: shale, limestone
- 12 (QRTZ 10) CRANBROOK FORMATION: quartzite, conglomerate, grit
- 11 (SCST 10) schist, quartzite, phyllite, limestone-LARDEAU GROUP: paragneiss, greenstone, amphibolite, marble; MILFORD GROUP: gneiss, conglomerate, metabasalt flows; HAMILL GROUP, MOHICAN FORMATION: greenstone, amphibolite
- 10 (LMSN 10) LARDEAU GROUP, INDEX FORMATION: phyllite and arenaceous limestone
- 9 (LMSN 12) NELWAY, BADSHOT-MOHICAN and JUBILEE FORMATIONS: limestone, dolomite, phyllite, schist
- 8 (QRTZ 12) HAMILL GROUP, MARSH ADAMS, MOUNT GAINER, RENO and QUARTZITE RANGE FORMATIONS: argillaceous quartzite schist, quartzite, minor limestone

PROTEROZOIC

- 7 (SLTE 46) THREE SISTERS FORMATION, HORSETHIEF CREEK GROUP: slate, argillite, conglomerate, quartzite, grit, sandstone, arkose, limestone; MONK FORMATION: phyllite, schist
- 6 (CGLM 46) TOBY FORMATION: conglomerate, minor argillite, limestone
- 5 MOYLE INTRUSIONS: meta-quartz diorite, diorite
- 4 (DLMT 45) MOUNT NELSON FORMATION: dolomite, argillite, shale, quartzite
- 3 (ARGL 45) DUTCH CREEK and KITCHENER-SIVETH FORMATIONS: argillite, dolomite, quartzite
- 2 (QRTZ 45) CRESTON and ALDRIDGE FORMATIONS: argillaceous quartzite, quartzite, argillite
- 1 (GNSS 04) SHUSAP METAMORPHIC COMPLEX: gneiss, quartzite, schist, marble, amphibolite, pegmatite

\* A four letter mnemonic name recorded as rock type and two digit number recorded as age as part of field observations

Geological boundary .....  
Fault .....

The legend modified and geology derived for this geochemical map from G.S.C. map 1090A, 603A and 1326A, and from G.S.C. Open File 432.

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Resource Geophysics and Geochemistry Division

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Ministry of Mines and  
Petroleum Resources

**CONTRACTORS**

Sample collection by Semco Ltd.  
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 analyses by Chemex Labs Ltd.

This map forms one of a series of 26 sheets released under the Geological Survey of Canada, Open Files 514, 515. The Open Files consist of maps of 10 elements, each for stream sediments, 2 elements for stream waters and sample site location.

**MANGANESE (ppm)**

OPEN FILE 515

SOUTHEASTERN BRITISH COLUMBIA 1977