

LEGEND

Note: This legend is common to National Geochemical Reconnaissance Map 5-1976, Open File 409; Map 6-1976, Open File 410 and Map 7-1976, Open File 411

QUATERNARY

- 8 Glacial, lacustrine, and fluviatile gravel, sand, silt and clay
- 7 Plateau basalts, olivine basalts
- 6 Volcanic flow rocks with interbedded sedimentary rocks; 6a, conglomerate, sandstone, shale and tuff
- 5 CORRELL: alkalic plutonic rocks; porphyritic granite and rhyolite

JURASSIC - CRETACEOUS

- 4 NELSON and VALHALLA: granitic plutonic rocks

JURASSIC

- 3 Mafic and ultramafic intrusive rocks, pyroxenite, hornblende serpentine

PALEOZOIC (including UPPER PROTEROZOIC and TRIASSIC)

- 2 Basaltic and andesitic lavas, greenstone, tuff, quartzite, limestone and argillite; 2a, quartzite, argillite, limestone, slate, schist, phyllite, sandstone and conglomerate

PROTEROZOIC (SHUSWAP TERRANE)

- 1 Gneiss, minor schist, limestone, marble, dolomite, slate, phyllite; 1a, schist, quartzite, limestone, slate, argillite

Geological contact...
Fault.....
Dyke.....
Mineral occurrence.....
Zn x

Legend modified and geology compiled for the geochemical map by T.E. Kalinins from maps 1059A, by H.M.A. Rice 1945, 1946, and A.G. Jones 1947, 1951

Geological cartography by the Geological Survey of Canada

Base-map at the same scale published by the Mapping and Charting Establishment, M.C.E., 1966. Additional drainage obtained from Department of Lands, Forests and Water Resources, British Columbia Land Use maps, 1:125,000 scale

Mean magnetic declination 1977, 23°07.2' East decreasing 4.9' annually. Readings vary from 21°49.2' in the SE corner to 23°04.2' 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 concentrations below the analytical detection limit or near the analytical detection limit. The data are grouped on a semi-logarithmic scale, i.e. 1, 2, 5, 10, 20, 50, etc. Five decades can be spanned and this arbitrary division has been chosen for the continuing Canadian wide series of maps constituting the National Geochemical Reconnaissance.

The 15 symbols are grouped into 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 files for a single field season. 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 of 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.

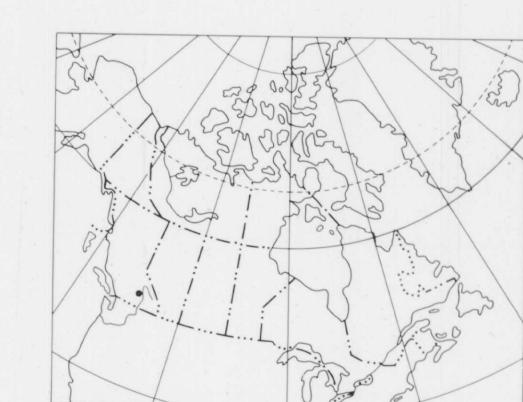
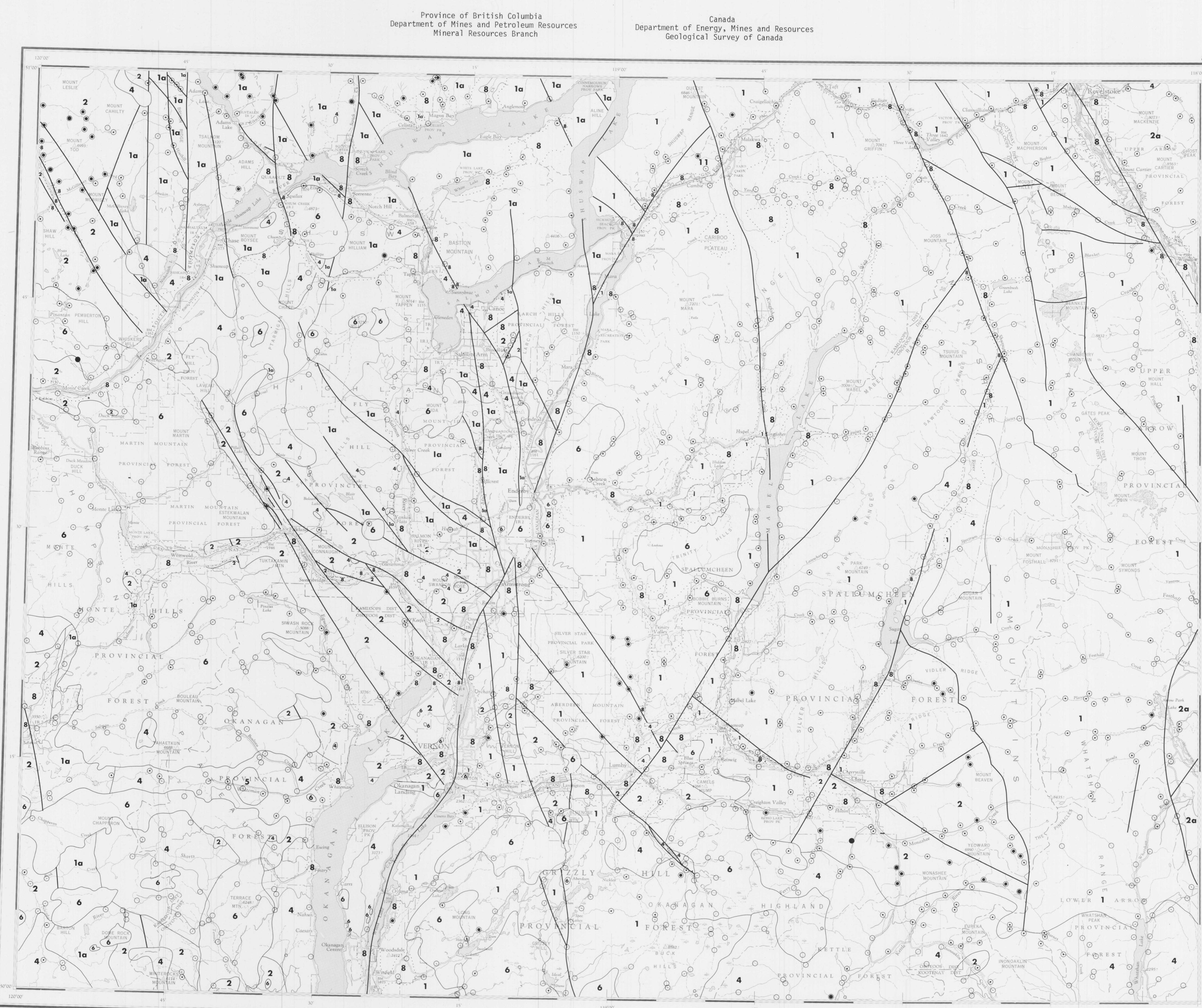
The symbol maps, being based on the total survey data distributions, are unaffected by the availability of ever increasing levels of knowledge of bedrock and surficial geology, and other environmental factors. Therefore, the raw data symbols may be only intended to assist the rapid inspection of the 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. To assist in the appraisal and modification of the data in terms of the bedrock and surficial geological units, a table of summary statistics and proposed threshold values for each mapped bedrock unit and lithologic unit, again based on the total survey data, is presented below the histogram. This table can be used alone, or in conjunction, with the sample location map and data listings to evaluate above threshold samples where they occur on the map. In many instances, the table will illustrate more clearly than the map, the dependence of mean geochemical levels on bedrock type. It may often be also observed that whilst the total data appears to approximate a log-normal distribution the data for individual map or lithologic units appears to approximate a different distribution. The proposed thresholds presented are believed to be useful in interpreting data from mineral exploration viewpoint. Locations of samples with concentrations in excess of the threshold for the rock unit they appear to derive from, should be recorded carefully.

The above threshold concentration can be due to a wide range of geological and environmental factors, but one of these may be the presence of abnormal concentrations of the element in a form of interest to the mineral explorationist.

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.

The objective of the survey is to outline broad areas of increased mineral potential worthy of further study leading to the identification of exploration targets. Individual samples with high metal content should not be automatically regarded as finite exploration targets. It is recommended that the data levels vary across the survey area with local geology and surficial environment.

The dispersion of elements in stream sediments is controlled by both mechanical processes and chemical processes. An insight into the relative importance of these processes can be gained by a study of local topography, bedrock and surficial geology particularly in terms of host minerals and the chemical properties of each element. Field observations on sediment composition and sample site environment recorded in the data listings can yield information on the relative importance of clastic versus chemical dispersion.



NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 6-1976
COPPER IN STREAM SEDIMENTS
CANADA-BRITISH COLUMBIA AGREEMENT ON A URANIUM RECONNAISSANCE PROGRAM

Scale 1:250,000
Kilometres 6 Miles 4 Kilometres 12 Miles 8 Kilometres
Universal Transverse Mercator Projection
© Crown Copyrights reserved

92 P 82 M 82 N
Map 7-1976
Open File 411
92 Q 82 L 82 K
Map 6-1976
Open File 410
92 R 82 E 82 F
Map 5-1976
Open File 409

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE

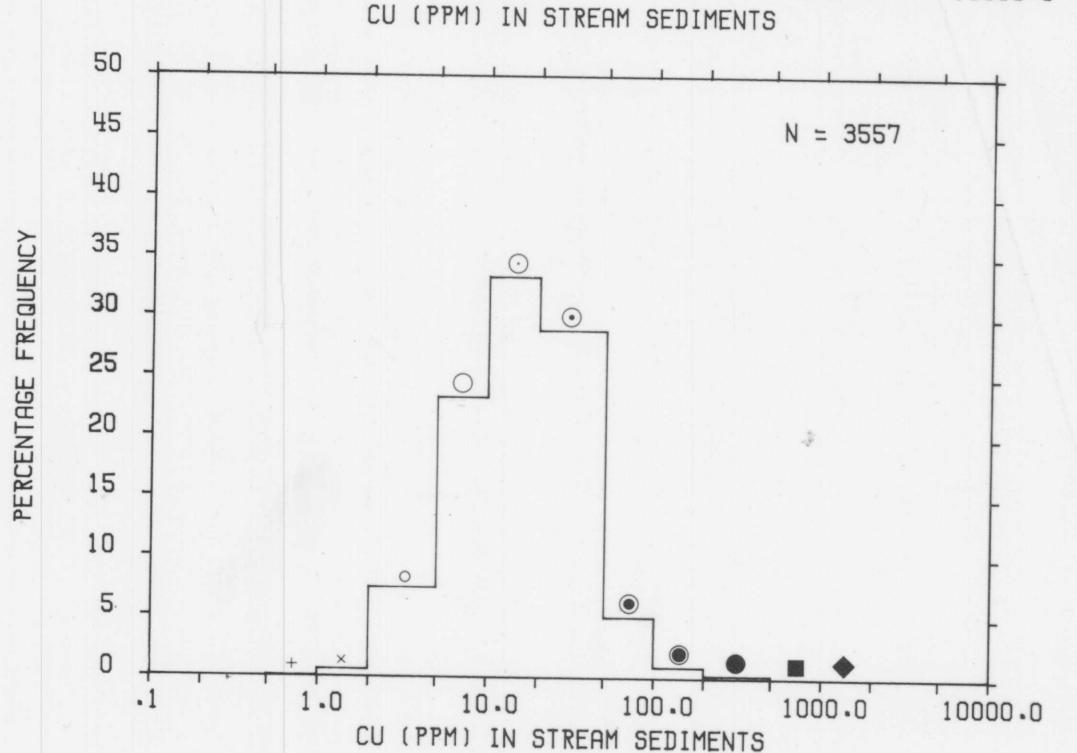
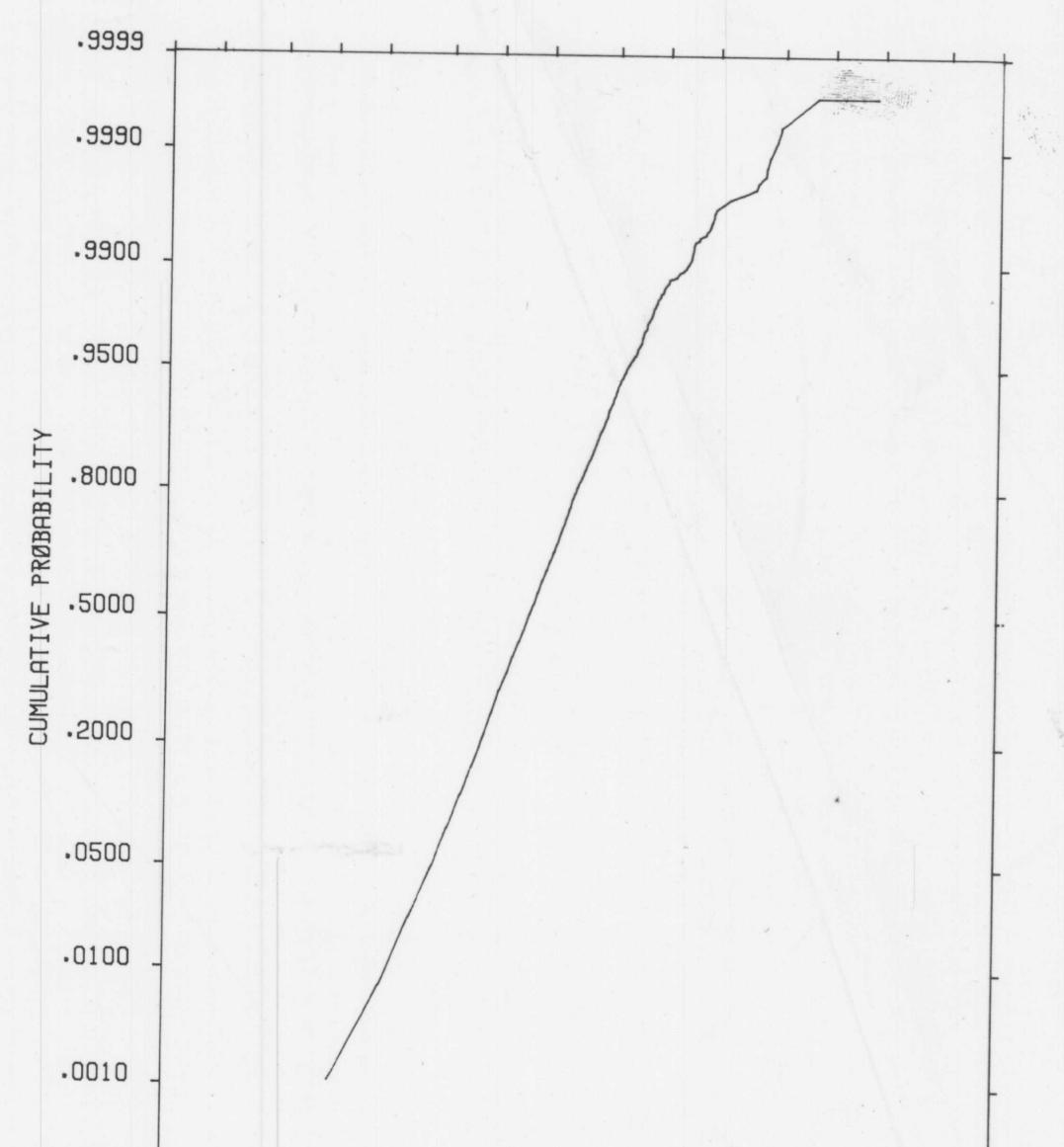


Table of Thresholds for Major Geological Units

Lithology	No. of Samples	Mean	S.D.	C.V.%	Threshold
8 TILL	405	21	26	120	70
7 OLVB	197	15	16	106	110
6a GLM	23	38	86	228	180
6 ANDS	118	19	12	57	60
5 SYNT	146	15	10	68	100
4 GRNT	966	18	62	337	70
3 UMFC	3	44	44	100	70
2a QRTZ	50	26	10	37	70
2a TSIS	321	46	63	135	50
1a SCST	241	33	30	93	50
1 GNSS	1087	19	14	74	80

Data units are ppm
NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 6-1976
OPEN FILE 410

Resource Geophysics and Geochemistry Division

Geological Survey of Canada, Ottawa

Geochimistry and field operations supervised by S.B. Ballantyne
Federal-Provincial coordination by E.H.W. Hornbrook
Analytical chemistry by J.J. Lynch
Data monitoring by R.G. Garrett, N.G. Lund and D.J. Ellwood

British Columbia, Mineral Resources Branch

Federal-Provincial coordination by A. Sutherland Brown, N.C. Carter and P.A. Christopher
Field operation assistance by T.E. Kalinins

Contractors
Sample collection staff and vehicles supplied by Stokes Exploration Management Co. Ltd.
Sample preparation by Golder Associates
Chemical analysis by Chemex Labs Ltd.

This map forms one of a series of 39 sheets released under Geological Survey of Canada, Open Files 409, 410, 411. The Open Files consists of data for 10 elements each for stream sediments, two elements for stream waters and sample site location. The data listing of each Open File includes pH data.

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 0E8

NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 6-1976
OPEN FILE 410
SOUTH EASTERN BRITISH COLUMBIA, 1976
COPPER IN STREAM SEDIMENTS