

MERCURY (ppb)

G.S.C. OPEN FILE 868
YUKON AND NORTHWEST TERRITORIES, 1981
NAHANNI MAP (NTS 1051)

Geochemical Symbol and Data Presentation

The concentration of each element is represented by the actual value plotted adjacent to the sample site represented by a "+" symbol. In addition to enhance visual impact, values over the 75th percentile are designated by grey solid squares which are symmetrically arranged so that they increase in size from the 75th to the 99th percentile. The actual concentration range represented by each symbol is illustrated below with a histogram.

In addition to 25 geochemical maps, each Open File contains an appendix consisting of a short discussion of the geochemistry, survey and analytical methodologies, listing of field and analytical data, and statistical data. The statistical data is provided for the total data set as well as for data subsets grouped on the basis of major stratigraphic units.

CONCENTRATION	PERCENTILES
580. TO 784.	99TH TO MAX.
531. TO 579.	98TH TO 99TH
413. TO 530.	95TH TO 98TH
317. TO 412.	90TH TO 95TH
160. TO 316.	75TH TO 90TH

SELECTED MINERAL DEPOSITS AND OCCURRENCES

- Stratabound Zn-Pb (Lower Silurian Age)
- ▲ Stratabound Zn-Pb-Ba (Devonian Age)
- Stratabound Barite (Devonian Age)
- ◆ Replacement Zn, Pb (age unknown)
- Vein Zn, Pb, Ag, Au, Sb (age unknown)
- ▼ Skarn W, Zn (Cretaceous)

Note: Further information on each occurrence or deposit is given in the Appendix which accompanies this open file.

Geochemistry by W.D. Goodfellow
Geological Survey of Canada
Resource Geophysics and Geochemistry Division

CONTRACTORS

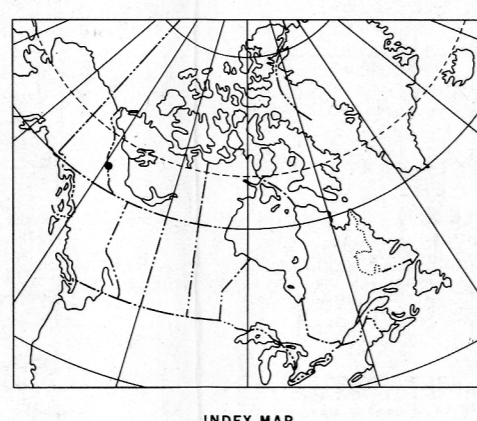
Sample collection by Marshall Macklin Monaghan Ltd.,
Toronto, Uranium in sediment chemical analysis by Nova Track
Ltd., Vancouver. Other sediment chemical analysis by
Bondar-Clegg and Company, Ottawa

This map forms one of a series of 26 maps released by the
Geological Survey of Canada on Open File 868. Each Open
File consists of maps for 19 elements for stream sediments,
5 elements for stream waters, and 1 each for water pH and
sample site location.

The Director
Geological Survey of Canada
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Ottawa, Ontario
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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 0E4



Mean magnetic declination 1982, 32°58.1' East,
decreasing 8.8 annually. Readings vary
from 32°44.2' in the SE corner to 33°5.6'
in the NW corner of the map.

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NATIONAL GEOCHEMICAL RECONNAISSANCE MAP 51-1981

STREAM SEDIMENT AND WATER GEOCHEMICAL SURVEY

YUKON AND NORTHWEST TERRITORIES, 1981
NAHANNI MAP (NTS 1051)

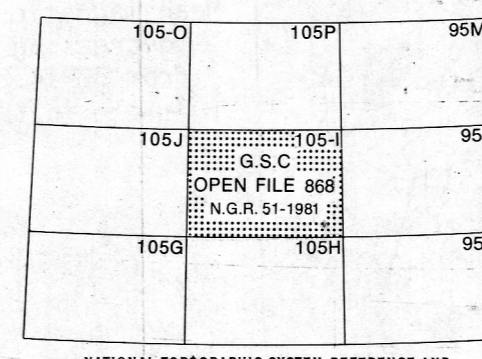
Scale 1:250,000

Kilometres 6 0 6 12 18 Kilometres

Miles 4 0 4 8 Miles

Universal Transverse Mercator Projection
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Elevation in feet above mean sea level
Base map drawn and printed by the
Army Survey Establishment R.C.E. 1949-54



LEGEND	
CRETACEOUS	<ul style="list-style-type: none">Kpm Grey weathering, resistant, medium to coarse-grained, megacrystic (K-feldspar), biotite quartz monzoniteW Pelitic hornfels: red-rust to brown weathering, extremely well indurated, massive, fine grained
TRIASSIC	<ul style="list-style-type: none">Ks Tan weathering, thin bedded, ripple cross-laminated siltstone, fine grained sandstone, and shale
PERMIAN	<ul style="list-style-type: none">Pt Orange to grey weathering, thin bedded, locally lenticular, pale green to blue-grey chert; minor dark green to brown weathering, pale green, silty shale
CARBONIFEROUS	<ul style="list-style-type: none">Cp Brown weathering, resistant, thin bedded, blue-grey shale, black laminated quartz siltstone, and pale green shale; minor fine- to medium-grained quartz areniteCs Grey weathering resistant, massive, fine- to medium-grained quartz areniteWmgs Grey weathering, resistant, thin- to very thick-bedded, massive, chert pebble conglomerate, and medium- to coarse-grained, light- to dark-grey, chert-quartz arenite and wacke; minor brown weathering, blue-grey to black shale, siltstone, and slateBlack to gun-blue weathering, massive, chert and shale clast granule to pebble conglomerate with mud matrix; contains minor quartz sand; clasts commonly matrix supported
DEVONIAN	<ul style="list-style-type: none">mdpt Black weathering, thin- to medium-bedded, black chert; minor black weathering, black, siliceous shaleBlack, gun-blue or silvery white weathering, thin bedded, siliceous, black shale, chert, and slate; merges with mud to southwest by increase in proportion of chertmd12 Light grey weathering, resistant, thin- to thick-bedded, fine- to medium crystalline, dark grey limestonemd1 Orange weathering, recessive, thin bedded, finely crystalline, dark blue-grey limestonemd11 Orange-brown weathering, thin- to medium-bedded, finely crystalline, light- to dark-grey limestonelmd11 Light grey weathering, resistant, thin- to thick-bedded, fine- to medium crystalline, dark grey limestone, in part crinoidalld1 Dark grey weathering, recessive, thin bedded, platy, finely crystalline, black limestone; minor grey weathering, medium bedded, finely crystalline, grey limestonemd4 Dark grey weathering, thick bedded, finely crystalline black dolomite; white dolomite filling veins and vugs; sparse chert nodulesld6 Light grey weathering, medium bedded, fine- to medium crystalline light- to dark-grey dolomite; member in middle part of unit of dark grey weathering, medium to thick-bedded, fine- to medium crystalline, in part crinoidal, dark grey dolomite; top of unit marked by alternating light and dark grey dolomiteld101 Blue-grey weathering, resistant, thin- to very thick-bedded, grey crinoidal limestone characterized by abundant crinoid stem fragments with twin axial canals; massive fine- to medium crystalline, grey limestone; minor limestone brecciald1 Dark grey weathering, thin- to medium-bedded, finely crystalline, black limestone
DEVONIAN, SILURIAN AND ORDOVICIAN	<ul style="list-style-type: none">Tan, buff or dark grey weathering, recessive, thin bedded, laminated, argillaceous, finely crystalline, black limestone; in the northeast, black weathering, finely crystalline, black, crinoidal limestone with crinoid stem fragments having twin axial canals occurs near top of unitBlue-grey weathering, thin bedded, finely crystalline, porcellaneous, black or dark blue-grey limestoneOrange weathering, resistant, thick bedded, dolomitic, silty, grey mudstone characterized by discontinuous wavy black lamination and locally by abundant small pyrite cubesBlack, gun-blue or silvery white weathering, recessive, black slate; minor thin interbeds of finely crystalline, black limestone and black chert; merges with ld1 to southwest by increase in proportion of chert, and with upper part of ld6 to east by increase in proportion of limestoneBlack weathering, thin- to medium-bedded, dark grey to black chert; rare black siliceous shale; minor tan to brown weathering, recessive dark grey shale at base
SILURIAN, ORDOVICIAN AND CAMBRIAN	<ul style="list-style-type: none">ld55 White to grey weathering, thick- to very thick-bedded, massive, medium crystalline, grey dolomite, locally containing abundant nodules of black or grey chertld55d Grey to white weathering, medium- to thick-bedded, massive, fine- to medium crystalline, grey dolomite; in upper part minor thick beds of medium crystalline, black dolomiteld55d Brick red weathering, thin- to thick-bedded, maroon mudstone; orange to grey weathering, thick bedded, fine- to medium crystalline, light coloured dolomite; medium bedded, medium- to coarse-grained, dolomitic, grey quartz arenite; thick bedded, finely crystalline, blue-grey limestoneld55d White to orange weathering, massive, fine- to medium crystalline, grey dolomiteld55d Rust-brown weathering, resistant, pyritic, amygdaloidal basalt; grey and rust-grey weathering, fissile, green tuff, minor dolomiteld55d Buff to grey weathering, recessive, thin bedded, finely crystalline, dark grey to black limestoneld55d Blue-grey weathering, thin bedded, finely crystalline, porcellaneous, black limestone, minor grey weathering, thin bedded, finely crystalline, grey dolomiteld55d Grey to buff weathering, thick bedded, massive, fine- to medium crystalline, grey to black dolomite; local dolomite breccia with large blocks of finely crystalline, grey dolomite in matrix of coarsely crystalline, white dolomiteld55d White to buff weathering, laminated or thin bedded, finely crystalline, blue-grey limestone; includes in upper part northeast of Hoad's Pass, thin bedded, finely crystalline, nodular, silty limestone; local thin bedded to massive, pale green, lapilli tuffld55d Tan to orange brown weathering, thin bedded, finely crystalline, blue-grey limestone, locally nodular; at base is minor thin bedded, fine grained, grey quartz areniteld55d Light grey weathering, resistant, thick bedded, massive, fine- to medium crystalline, grey dolomiteld55d Tan to brown weathering, recessive, thin bedded, finely crystalline, grey limestoneld55d Orange weathering, thin- to thick-bedded, finely crystalline, locally sandy, cream, orange, or grey dolomite; minor medium- to thick-bedded, medium grained, white quartz arenite; minor purple weathering, thin bedded, purple siltstone
CAMBRIAN	<ul style="list-style-type: none">upper - bright orange weathering, thin- to thick-bedded, finely crystalline light coloured dolomitemiddle - purple weathering, recessive, thin- to thick-bedded, brown to purple siltstone and dolomitic siltstone, minor thin bedded, orange weathering dolomitelower - light orange to brown weathering, resistant, medium- to thick-bedded, medium grained, grey quartz arenite and interbedded brown siltstone, thin to thick interbeds of orange weathering dolomite towards topGrey to buff weathering, thin bedded, locally wavy bedded and nodular, finely crystalline blue-grey to black limestone; minor limestone conglomerate with rounded to subangular clasts of blue-grey weathering grey limestone and dolitic limestone in orange weathering, locally sandy, limestone matrix; upper 1/3 of ld5 is white weathering, massive, finely crystalline, grey dolomiteld5 Tan weathering, resistant, medium bedded, variably calcareous and dolomitic, blue-grey siltstone and mudstone; parallel lamination in grey to black disrupted to discontinuous wavy laminationBrown to orange brown weathering, recessive, thin bedded, blue-grey slate and siltstone; minor fine grained subarkose to quartz areniteLenticular bodies of white weathering limestone conglomerate and minor blue-grey finely crystalline limestone; conglomerate clasts include fine grained blue-grey limestone, dolitic limestone, and archaeocyath; matrix is orange to grey weathering, fine grained, locally sandy limestoneld5d Dark brown to rust weathering, thin- to thick-bedded, greenish grey siltstone; very fine grained quartz arenite and/or subarkose; slate; southwest of South Nahanni River - dark brown weathering, pale green to blue-grey slate and siltstone, and minor greenish grey, very fine grained, quartz sandstoneld5d Buff weathering massive dolomiteld5d Maroon, purple or green weathering, recessive, thin bedded or laminated in like colours; minor thin intervals of thin- to medium-bedded, fine grained, pale green, quartz arenite to subarkose and interbedded pale green to tan slateld5d Orange, grey or tan weathering, thin- to medium-bedded, fine grained, pale green, quartz arenite to subarkose and interbedded pale green to tan slateld5d Grey to brown weathering, thin- to thick-bedded, coarse grained, calcareous, grey quartz arenite and subarkose; quartz pebble conglomerate; brown to pale green slate; minor thin bedded grey or white finely crystalline limestone; sandstone contains conspicuous blue quartz, minor plagioclase and orthoclase
CAMBRIAN AND HADRONIAN	<ul style="list-style-type: none">ld5d Grey to brown weathering, thin- to thick-bedded, coarse grained, calcareous, grey quartz arenite and subarkose; quartz pebble conglomerate; brown to pale green slate; minor thin bedded grey or white finely crystalline limestone; sandstone contains conspicuous blue quartz, minor plagioclase and orthoclase

Geology by S.P. Gordey 1977, 1978, 1979, 1980 (with contributions from previous work by S.L. Blusson, J.A. Roddick, and L.H. Green (1967))

Limit of outcrop:
Geological boundary (defined, approximate, assumed or extrapolated beneath overburden):
Fault, steeply dipping (defined, approximate, assumed or extrapolated beneath overburden; barb on downthrow side):

No analytical result:
Geology by S.P. GORDEY (1981), Geological Survey of Canada, Open File 780

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