

## SAMPLE LOCATION

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 "u" 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.

### 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

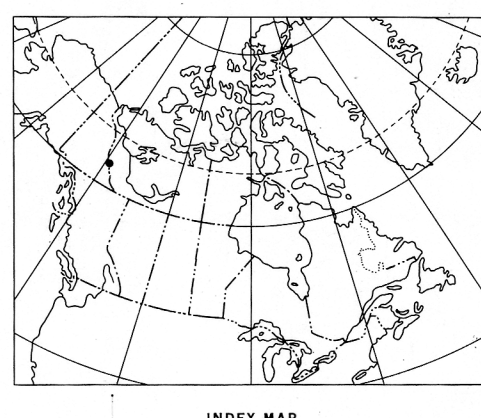
Sample collection by Marshall Macklin Monaghan Ltd.,  
Toronto. Uranium in sediment chemical analysis by Nova Track  
Ltd., Vancouver. Other sediment chemical analysis by  
Bondar-Clegg and Company, Ottawa

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  
601 Booth Street  
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, 32058.1' East,  
decreasing 8.0 annually. Readings vary  
from 32044.2' in the SE corner to 3205.6'  
in the NW corner of the map.

## SAMPLE LOCATION

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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)

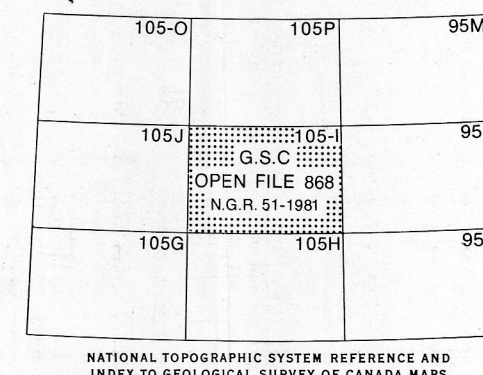
Scale 1:250,000

Kilometres 0 6 12 18  
Miles 0 4 8

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                        | Grey weathering, resistant, medium to coarse-grained, megacrystic (K-feldspar), biotite quartz monzonite   |
| TRIASSIC                          | Tan weathering, thin bedded, ripple cross-laminated siltstone, fine grained sandstone, and shale   |
| PERMIAN                           | Orange to grey weathering, thin bedded, locally lenticular, pale green to blue-grey chert; minor dark green to brown weathering, pale green, splintery shale   |
| CARBONIFEROUS                     | Brown weathering, recessive, thin bedded, blue-grey shale, black laminated quartz siltstone, and pale green shale; minor fine- to medium-grained quartz arenite  |
| DEVONIAN                          | Black to gun-blue weathering, massive, chert and shale clast granule to pebble conglomerate with mud matrix; contains minor quartz sand; clasts commonly matrix supported  |
| SILURIAN, DEVONIAN AND CAMBRIAN   | Black weathering, thin- to medium-bedded, black chert; minor black weathering, black, siliceous shale  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Black, gun-blue or silvery white weathering, thin bedded, siliceous, black shale, chert, and slate; merges with mud to southwest by increase in proportion of chert  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Light grey weathering, resistant, thin- to thick-bedded, fine- to medium crystalline, dark grey limestone  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Orange weathering, recessive, thin bedded, finely crystalline, dark blue-grey limestone  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Orange-brown weathering, thin- to medium-bedded, finely crystalline, light- to dark-grey limestone   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Light grey weathering, resistant, thin- to thick-bedded, fine- to medium crystalline, dark grey limestone, in part crinoidal   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Dark grey weathering, recessive, thin bedded, platy, finely crystalline, black limestone; minor grey weathering, medium bedded, finely crystalline, grey limestone   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Dark grey weathering, thick bedded, finely crystalline black dolomite; white dolomite filling veins and vugs, sparse chert nodules   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | 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 dolomite   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | 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 breccia  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Dark grey weathering, thin- to medium-bedded, finely crystalline, black limestone  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | 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 unit   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Blue-grey weathering, thin bedded, finely crystalline, porcellaneous, black or dark blue-grey limestone  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Orange weathering, resistant, thick bedded, dolomitic, silty, grey mudstone characterized by discontinuous wavy black lamination and locally by abundant small pyrite cubes  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Black, gun-blue or silvery white weathering, recessive, black slate; minor thin interbeds of finely crystalline, black limestone and black chert; merges with OSt to southwest by increase in proportion of chert, and with upper part of u601 to east by increase in proportion of limestone  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Black 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   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | White to grey weathering, thin- to very thick-bedded, massive, medium crystalline, grey dolomite, locally containing abundant nodules of black or grey chert   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Grey to white weathering, medium- to thick-bedded, massive, fine- to medium crystalline, grey dolomite; in upper part minor thin beds of medium crystalline, black dolomite  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | 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 limestone   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | White to orange weathering, massive, fine- to medium crystalline, grey dolomite  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Rust-brown weathering, resistant, pyritic, amygdaloidal basalt; grey and rust-grey weathering, fissile, green tuff; minor dolomite   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Buff to grey weathering, recessive, thin bedded, finely crystalline, dark grey to black limestone  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Blue-grey weathering, thin bedded, finely crystalline, porcellaneous, black limestone, minor grey weathering, thin bedded, finely crystalline, grey dolomite   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Grey to white 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 dolomite  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | White to buff weathering, laminated or thin bedded, finely crystalline, blue-grey limestone; includes in upper part northeast of Bonanza River, thin bedded, finely crystalline, nodular, silty limestone; local thin bedded to massive, pale green, lapilli, buff   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Tan to orange brown weathering, thin bedded, finely crystalline, blue-grey limestone, locally nodular; at base is minor thin bedded, fine grained, grey quartz arenite   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Light grey weathering, resistant, thick bedded, massive, fine- to medium crystalline, grey dolomite  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Tan to brown weathering, recessive, thin bedded, finely crystalline, grey limestone  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | 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  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Upper - bright orange weathering, thin- to thick-bedded, finely crystalline light coloured dolomite middle - purple weathering, thin- to thick-bedded, brown to purple siltstone and dolomitic siltstone, minor thin bedded, orange weathering dolomite lower - 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 top |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Grey to buff weathering, thin bedded, locally wavy bedded and nodular, finely crystalline blue-grey to black limestone; minor limestone moderate 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 l61d is white weathering, massive, finely crystalline, grey dolomite   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Tan weathering, resistant, medium bedded, variably calcareous and dolomitic, blue-grey siltstone and mudstone; parallel lamination in grey to black disrupted to discontinuous wavy lamination   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Brown to orange brown weathering, recessive, thin bedded, blue-grey slate and siltstone; minor fine grained subarkose to quartz arenite  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Lenticular 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 limestone   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | 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 sandstone   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Buff weathering massive dolomite   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | 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 slate   |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Orange, grey or tan weathering, thin- to medium-bedded, fine grained, pale green, quartz arenite to subarkose and interbedded pale green to tan slate  |
| DEVONIAN, SILURIAN AND ORDOVICIAN | Grey to brown weathering, thin- to thick-bedded, coarse grained, calcareous, grey quartz arenite and subarkose; quartz pebble conglomerate; brown, 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).....  
Fault, steeply dipping (defined, approximate, assumed or extrapolated).....  
Isolated beneath overburden; bars on downthrown side.....  
No analytical result.....  
Geology by S.P. GORDEY (1981), Geological Survey of Canada, Open File 780

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