

**SURFICIAL GEOLOGY**

- Thermokarst depression developed on alluvial floodplain
- Pits and kettles developed on gravelly glaciofluvial plain
- Organic deposits mantling lacustrine floodplain, glaciofluvial plain, or less commonly, moraine deposits
- Undivided surficial deposits; includes alluvium, glacial till, glaciofluvial and glaciolacustrine deposits, ice contact deposits, colluvium, volcanic ash, loess, and scattered bedrock exposures.
- Colluvium; poorly sorted blanket of rubble commonly <3 m thick overlying bedrock, ubiquitous in unglaciated terrain.
- Bedrock exposures; includes discontinuous veneer of undivided glacial drift, local alpine glaciation features.

**Symbols**

- Surficial deposit boundary
- Limit of Reid ice advance, maximum extent of glaciation
- Major meltwater channels, outwash deposits, indicating direction of flow
- Drumlinoid form; rock drumlin, crag and tail, fluted bedrock or till, direction of movement not inferred
- Esker, direction of flow indicated

**Sources of information:**  
 Hughes, O.L., Campbell, R.B., Muller, J.E., and Wheeler, J.O. (1968) Glacial Map of Yukon Territory. Geological Survey of Canada, Map 6-1968, (1:1,000,000 scale) to accompany GSC Paper 68-34.  
 Prest, V.K., Grant, D.R., and Rampton, V.N. (1967) Glacial Map of Canada, Geological Survey of Canada (1:5,000,000 scale).  
 Rampton, V.N. (1977) Surficial Geology and Geomorphology, Koldern Mountain, Yukon Territory, Geological Survey of Canada, Map 5-1978, 1:100,000 scale.  
 (1977) Surficial Geology and Geomorphology, Mirror Creek - Yukon Territory, Geological Survey of Canada, Map 4-1978, 1:100,000 scale.  
 Tempelman-Kluit, D.J. (1972) Geology, Snag - Yukon Territory, Geological Survey of Canada, Map 16-1973 (1:250,000 scale) to accompany GSC Paper 73-41.

Geological Survey of Canada  
 Mineral Resources Division  
 Exploration Geochemistry Subdivision

**CONTRACTORS**

Sample collection by Monaghan Delph Miller Limited, Don Mills, Ontario  
 Sample preparation by Golder Associates, Ottawa

Sediment chemical analyses by Bondar Clegg and Company Ltd., Ottawa, Ontario

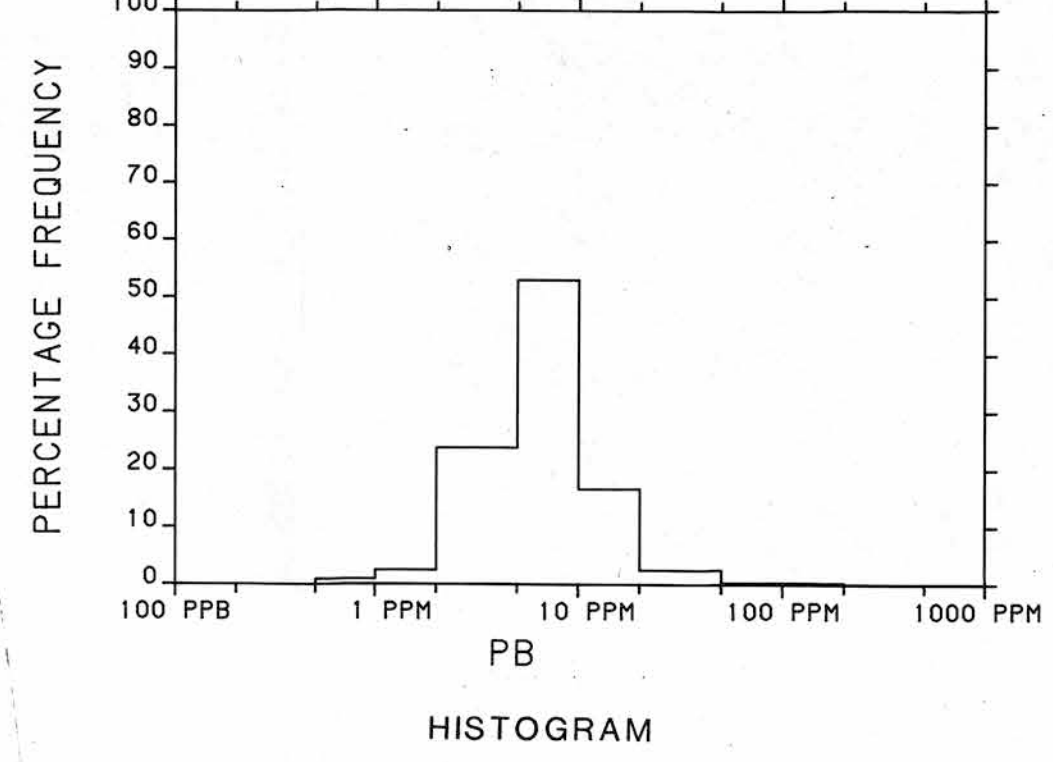
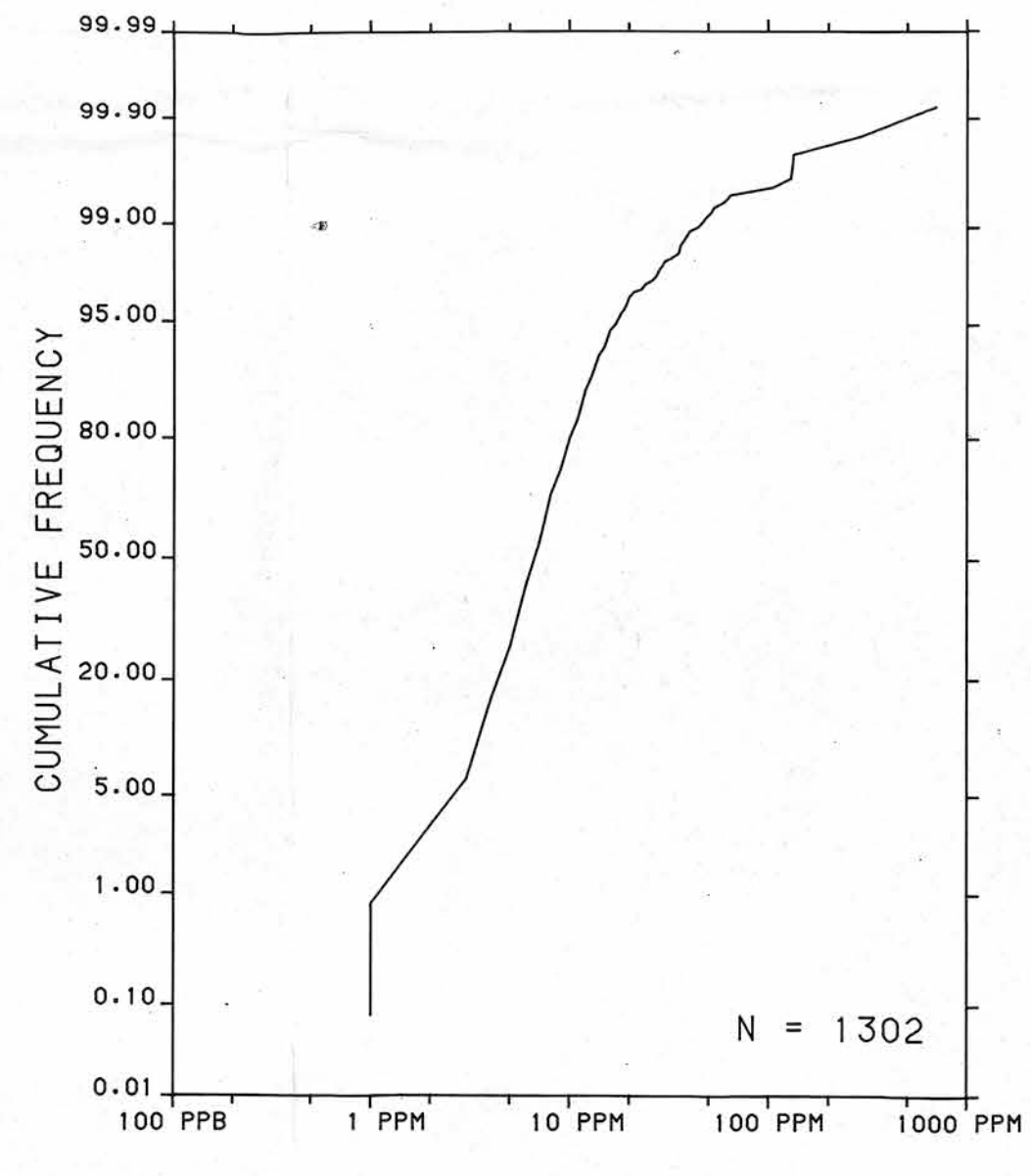
Au analyses by Chemex Labs Limited, Vancouver  
 Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

Copies of map material and listings of field observations, analytical data and methods, from which the open file was prepared, are available from:

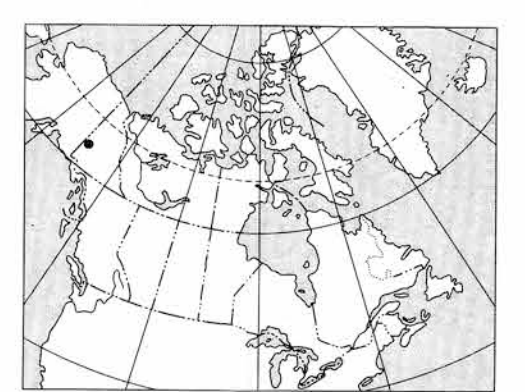
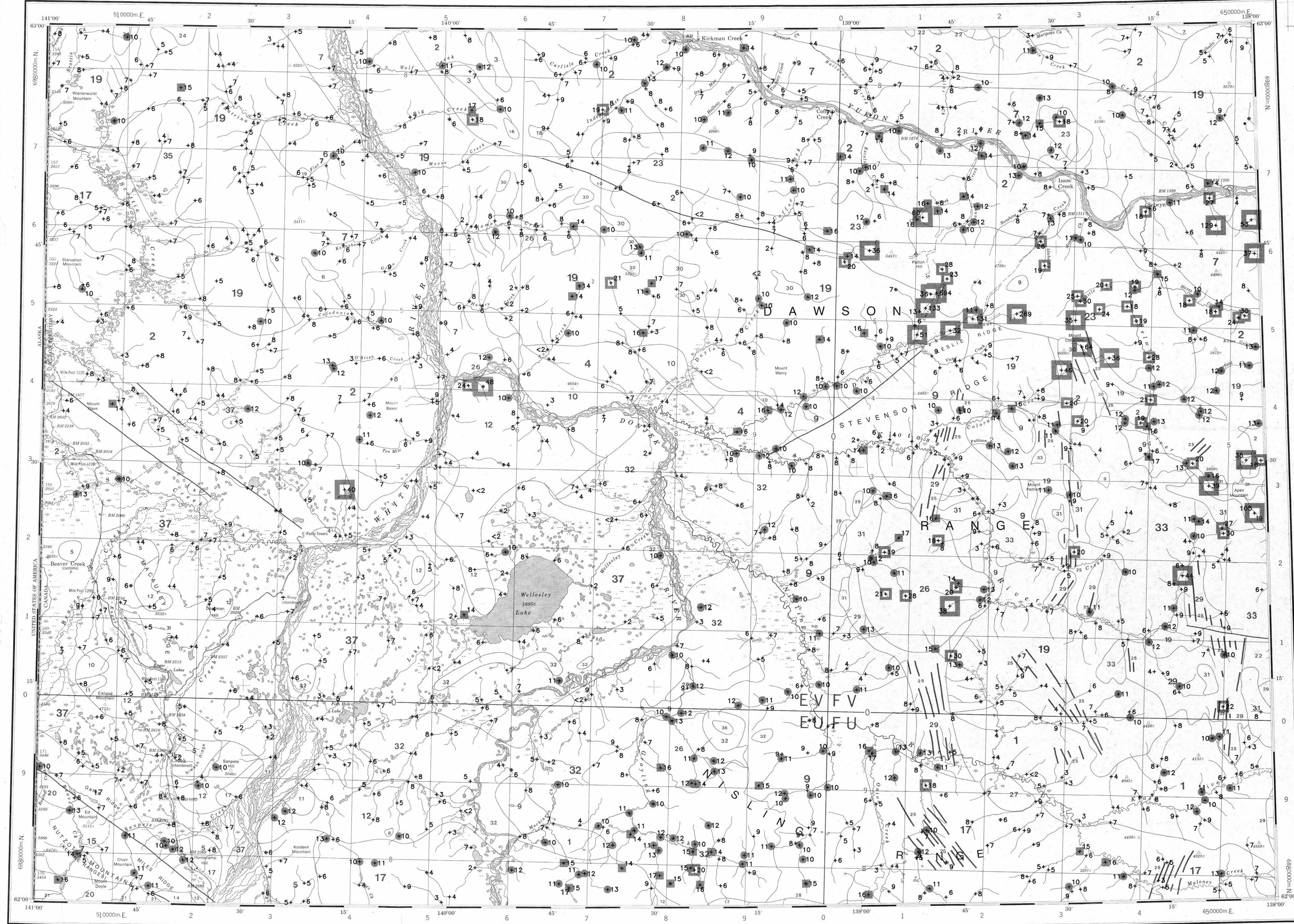
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Digital data are available on IBM-PC compatible diskette from:  
 Geological Survey of Canada  
 Publications Distribution  
 601 Booth St.  
 Ottawa, Ontario K1A 0E8  
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The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function (1/d<sup>2</sup>) to filter out minor irregularities and emphasize broad-scale regional features. Single point anomalies may be suppressed or eliminated, however, geological units which are chemically enriched, or large metallic deposits undergoing weathering would be expected to produce identifiable anomalies.



CONCENTRATION	FREQUENCY
31 to 694	N = 23 (1.8%)
18 to 30	N = 42 (3.2%)
14 to 17	N = 63 (4.8%)
10 to 13	N = 216 (16.6%)
<2 to 9	N = 958 (73.6%)



Elevation in feet above mean sea level

Mean magnetic declination 1987, 29°37' East, decreasing 13.4' annually. Readings vary from 29°37'E in the SE corner to 29°32'E in the NW corner of the map area

**LEAD (ppm)**  
**STREAM SEDIMENTS**  
**GSC OPEN FILE 1963**  
 REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 99-1986  
 CANADA - YUKON  
 SUBSIDIARY AGREEMENT ON MINERAL RESOURCES (1985-1989)  
 STREAM SEDIMENT AND WATER GEOCHEMICAL SURVEY  
 SOUTH-WEST YUKON, 1986

Scale 1:250 000 - Echelle 1/250 000

Universal Transverse Mercator Projection  
 Projection transverse universelle de Mercator  
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Base map at the same scale published by the Surveys and Mapping Branch in 1971

**LEGEND**

**QUATERNARY**

- 37 QS 64\* Glacial and surficial deposits

**TERTIARY AND QUATERNARY**

- 36 PPV 63 Olivine basalt

**PALEOCENE AND PLEISTOCENE**

- 35 LATE TERTIARY
- LTG 62 Rhyolite porphyry, granite, granodiorite

**OLIGOCENE AND MIOCENE**

- 34 OMA 61 AMPHITHEATRE: Sandstone, conglomerate, shale, coal

**CARMACKS GROUP**

- 33 OMCV 61 Andesite, basalt, breccia
- 32 OMD 61 DONJEK: Tuff, breccia

**Eocene**

- 31 ENM 59 Acid to intermediate tuff, breccia

**MOUNT NANSSEN GROUP**

- 30 TC 58 CASINO: Tuff, ignimbrite, breccia
- 29 TFP 58 Feldspar porphyry dykes, flow
- 28 TVM 58 Andesite, porphyritic basalt flows and dykes

**EARLY TERTIARY**

- 27 ETG 57 Granodiorite, granite
- 26 ETGA 57 Alaskite, granite, quartz monzonite
- 25 FPPP 57 Feldspar porphyry dykes

**CRETACEOUS**

- 24 KY 52 Syenite, monzonite
- 23 KG 52 Granite
- 22 KQM 52 Quartz monzonite, granodiorite; CASSIAR quartz monzonite, alaskite
- 21 KGM 52 Granodiorite, quartz diorite, diorite, agmatite complex

**JURASSIC AND CRETACEOUS**

- 20 JXD 51 Argillite, graywacke, conglomerate, volcanics

**DEZADASH GROUP**

- 19 TGM 42 Foliated hornblende granodiorite, quartz

**TRIASSIC**

- 18 MM 41 Porphyritic quartz monzonite
- 17 MGD 41 Granodiorite, quartz monzonite
- 16 MDI 41 Diorite

**PERMIAN AND TRIASSIC**

- 15 PTV 40 Greenstone, graywacke, shale, limestone
- 14 PTY 40 Greenstone, diorite
- 13 PTB 40 Pyroxenite, serpentinite

**PALEOZOIC AND MESOZOIC UNDIVIDED**

- 12 PW 40 Basic to intermediate volcanic rocks
- 11 PNB 40 Hornblende gabbro
- 10 PNB 40 Ultramafic rocks

**PALEOZOIC UNDIVIDED**

- 9 PN 09 NASINA: Graphitic quartzite, schist
- 8 PC 09 Limestone
- 7 PGM 09 PELY GNEISS: Foliated to gneissic granodiorite
- 6 PM 09 Amphibolite, schist, gneiss
- 5 PIP 09 Chert, argillite, quartzite
- 4 PV 09 Greenstone, amphibolite

**CARBONIFEROUS AND PERMIAN**

- 3 CPS 35 Quartz-muscovite schist
- 2 CPSM 35 Schist, gneiss, includes BIG SALMON METAMORPHIC COMPLEX

**MADRYNIAN AND CAMBRIAN**

- 1 MCM 08 Schist, gneiss, quartzite

\*A mnemonic code assigned to rock types and recorded as part of field observations.

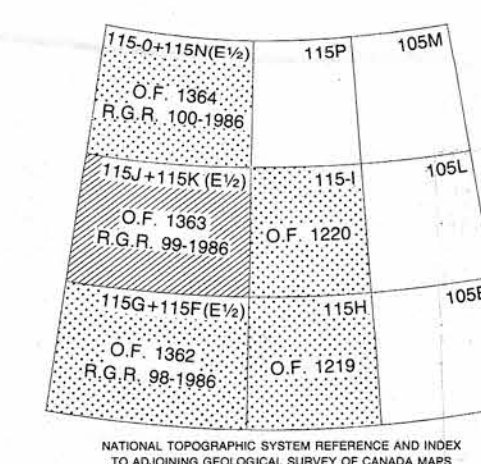
Geological boundary

Fault

No analytical result

Field duplicate sample sites

Geological base and legend are derived from:  
 Gabrielle, H., Tempelman-Kluit, D.J., Blusson, S.L., and Campbell, R.B. (1980) Map 1380, MacMillan River, Yukon - District of Mackenzie - Alaska, NTS Sheet 105, 115, Geological Survey of Canada, Energy, Mines and Resources Canada, 1:1 000 000 Scale.



**LEAD (ppm)**  
**STREAM SEDIMENTS**  
**GSC OPEN FILE 1963**  
 SOUTH-WEST YUKON, 1986