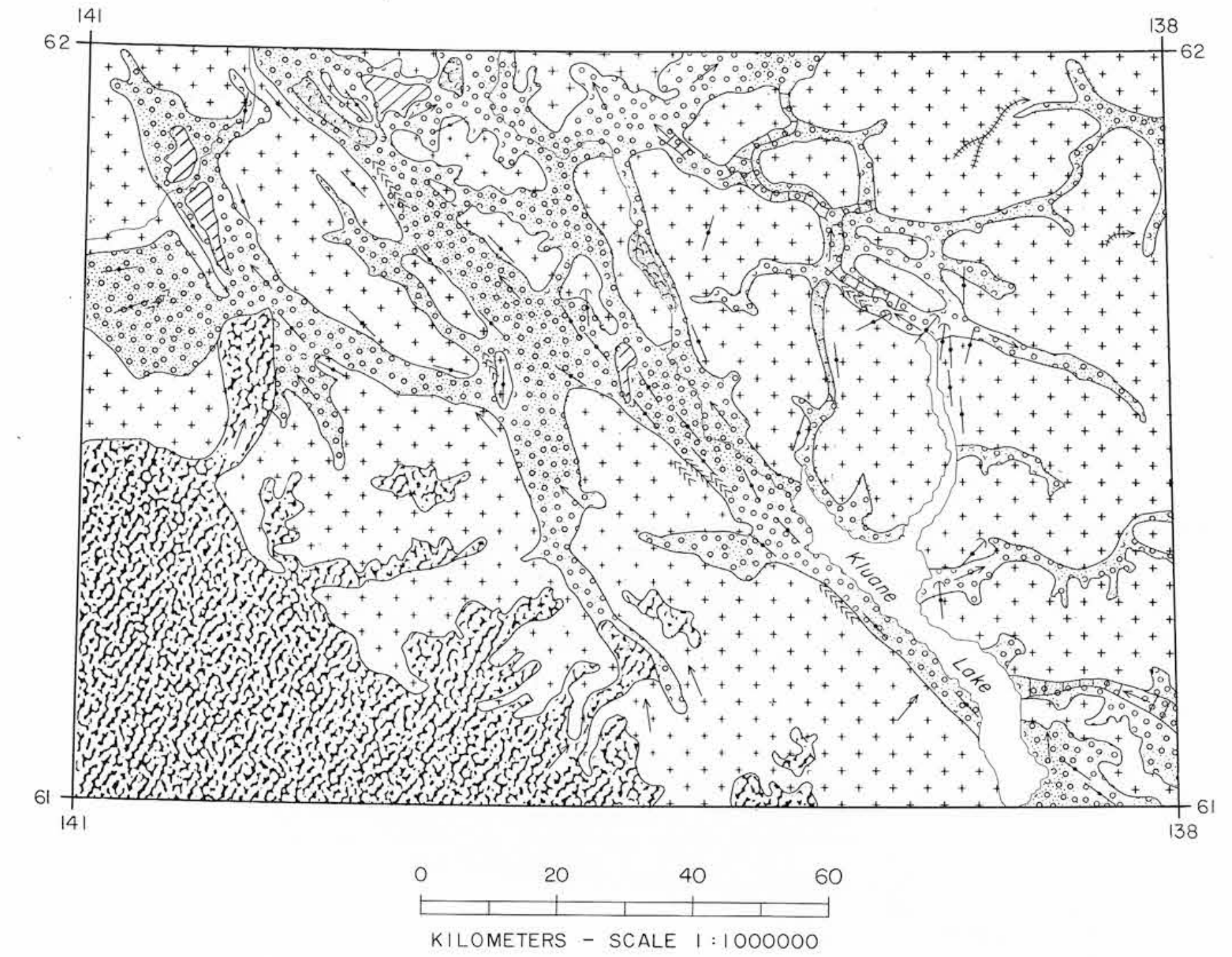
GEOLOGICAL SURVEY OF CANADA — COMMISSION GÉOLOGIQUE DU CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

COBALT (ppm)
STREAM SEDIMENTS
GSC OPEN FILE 1362
SOUTH-WEST YUKON, 1986



SURFICIAL GEOLOGY

▨	Thermokarst depression developed on alluvial floodplain
▨	Organic deposits mantling lacustrine floodplain of silt and clay, or less commonly, moraine or eolian deposits
▨	Undivided surficial deposits; includes alluvium, glacial till, glaciofluvial and glaciolacustrine deposits, ice contact deposits, colluvium, volcanic ash, loess, and scattered bedrock exposures.
▨	Glacial ice, snow, and firn veneer with seasonal bedrock exposures.
+	Bedrock exposures; includes discontinuous veneer of undivided glacial drift, local alpine glaciation features.

Symbols

Surficial deposit boundary . . . .

Major meltwater channels, outwash deposits, indicating direction of flow . . . .

Glacial lineation parallel to ice flow direction, includes fluting, crag and tail, roches moutonees and drumlinoid forms, direction of flow indicated . . . .

Drumlinoid form; rock drumlin, crag and tail, fluted bedrock or till, direction of movement inferred, 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.

Muller, J.E. (1966) Geology Kluane Lake - Yukon Territory, Geological Survey of Canada Map 1177A, (1:253 440 scale), to accompany GSC Memoir 340.

Prest, V.K., Grant, D.r., and Rampton, V.N. 91967) Glacial Map of Canada, Geological Survey of Canada (1:5 000 000 scale).

Rampton, V.N. (1977) Surficial Geology and Geomorphology, Burwash Creek - Yukon Territory, Geological Survey ofCanada, Map 6-1978, 1:100 000 scale.
Surficial Geology and Geomorphology, Generc River - Yukon Territory, Geological Survey of Canada, Map 7-1978, 1:100 000 scale.
Surficial Geology and Geomorphology, Congdon Creek - Yukon Territory, Geological Survey of Canada, Map 8-1978, 1:100 000 scale.

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:

K.G. Campbell Corporation
880 Wellington St.
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Ottawa, Ontario
K1R 6K7

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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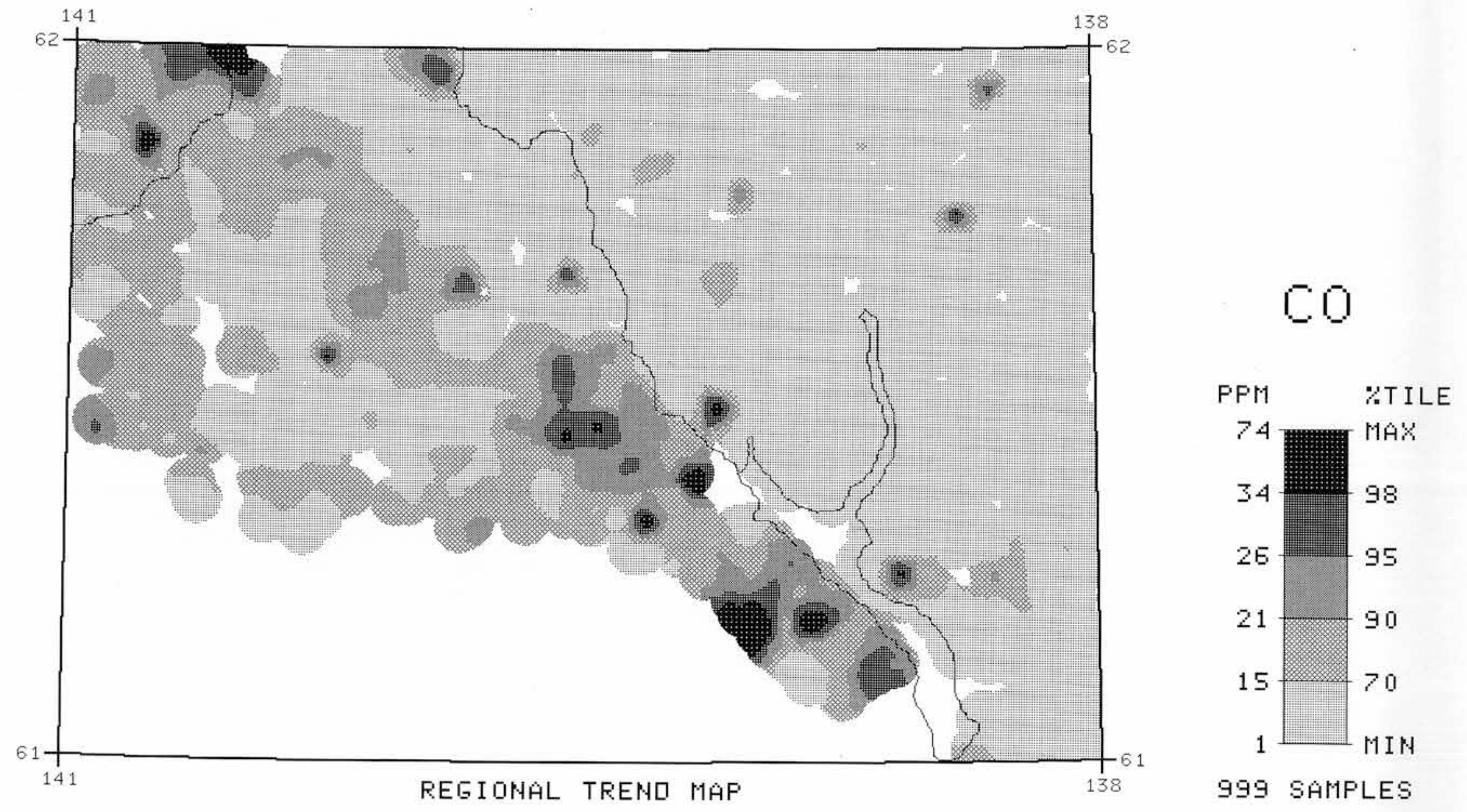
Canada

Contribution to the Canada/Yukon Subsidiary Agreement on Mineral Resources 1985-1989 under the Canada/Yukon Economic Development Agreement

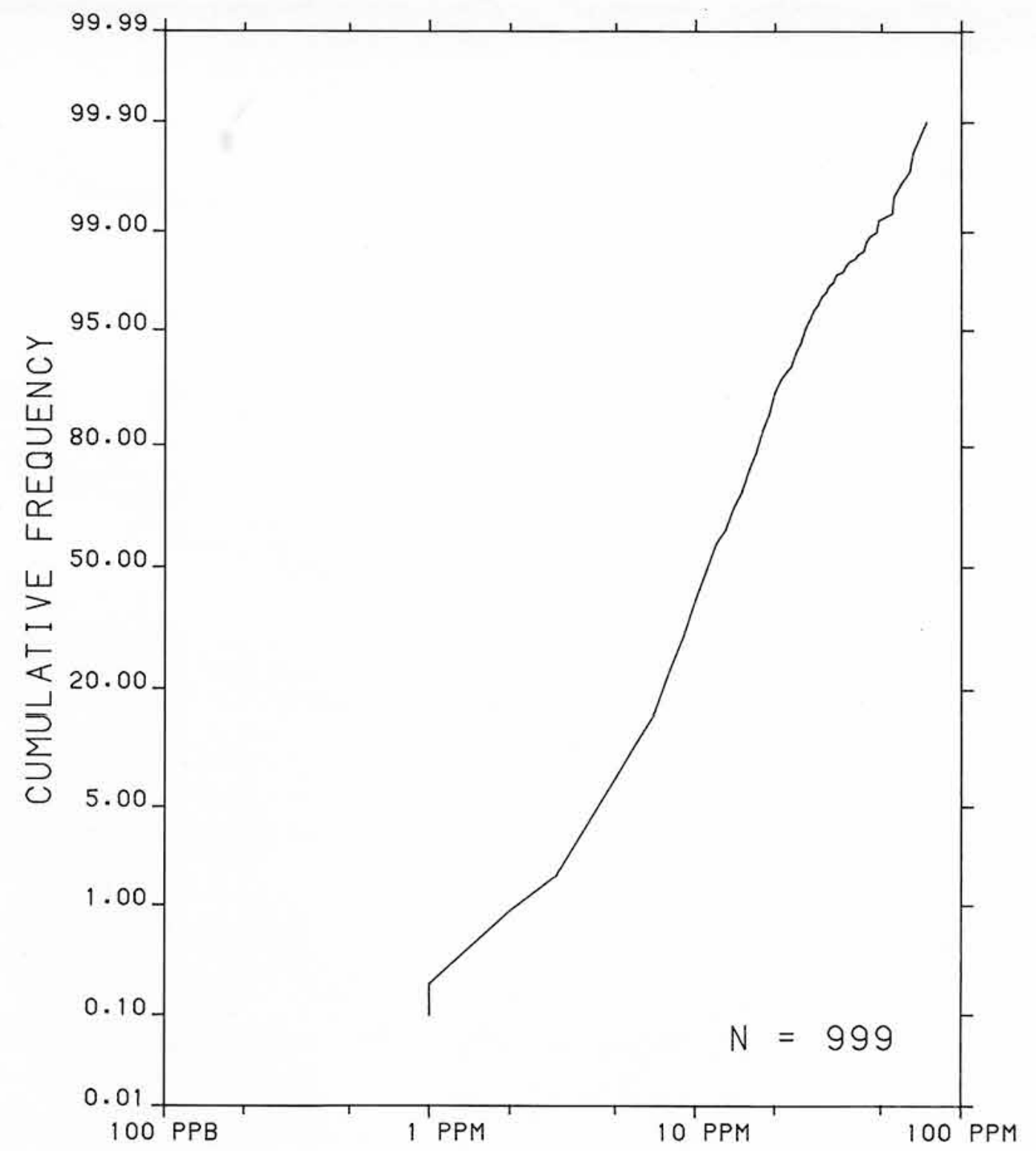
Yukon
Government

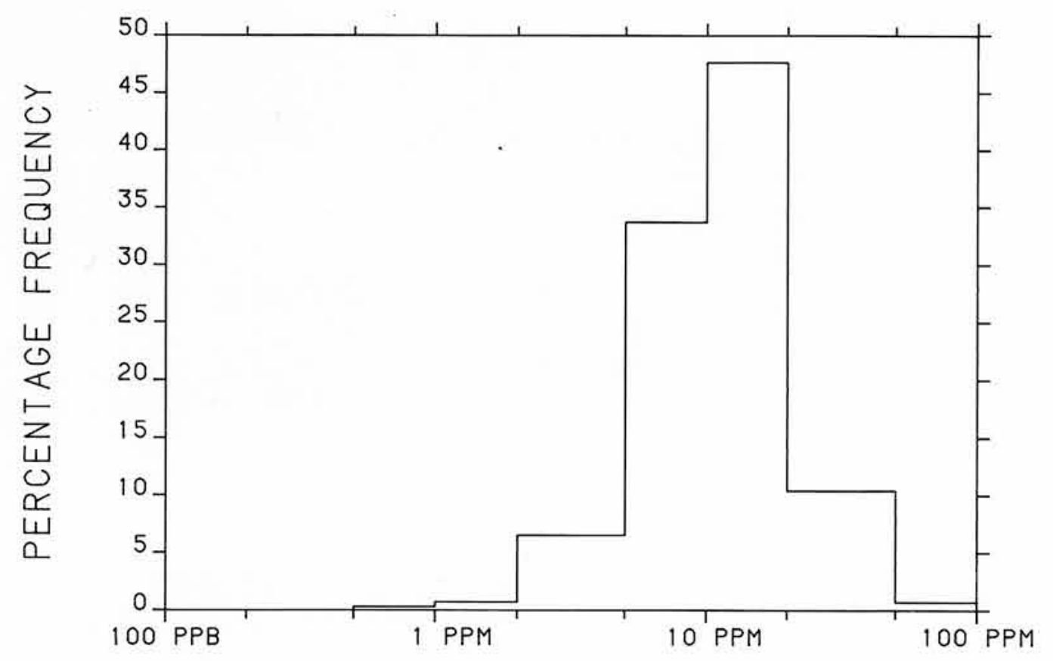


REGIONAL TREND MAP

0 20 40 60
KILOMETERS - SCALE 1:1000000

The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function ($1/d^3$) 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.



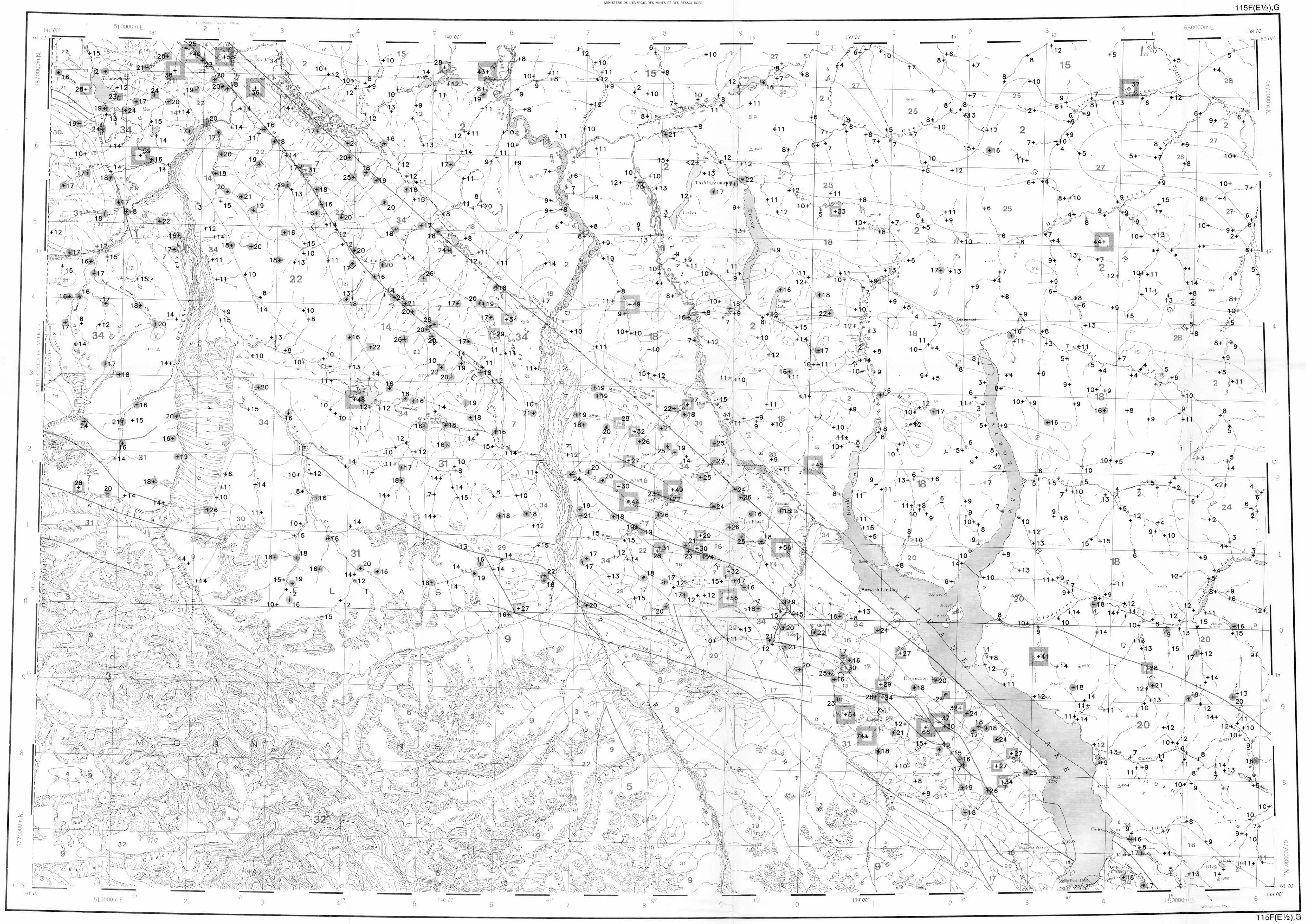


CO

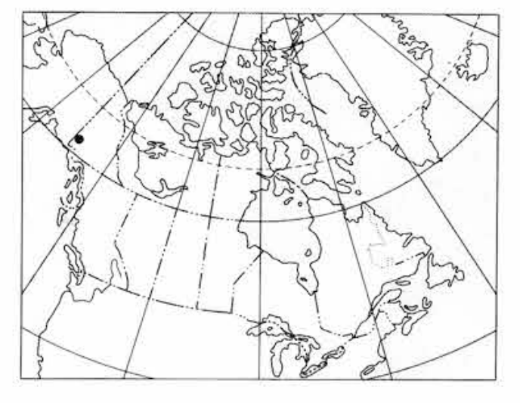
HISTOGRAM

CONCENTRATION		FREQUENCY
35 to 74	+	N= 20(2.0%)
27 to 34	+	N= 28(2.8%)
22 to 26	+	N= 48(4.8%)
16 to 21	+	N= 203(20.3%)
<2 to 15	+	N= 700(70.1%)

115F(E½),G



115F(E½),G



Elevation in feet above mean sea level

Mean magnetic declination 1987, 28°52' East, decreasing 13.3' annually. Readings vary from 28°52'E in the SE corner to 28°46'E in the NW corner of the map area

COBALT (ppm)
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REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 98-1986

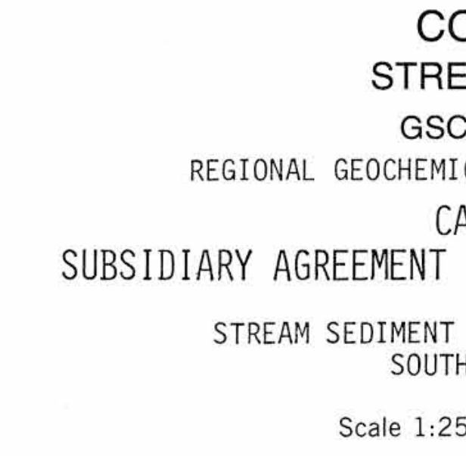
CANADA - YUKON
SUBSIDIARY AGREEMENT ON MINERAL RESOURCES (1985-1989)

STREAM SEDIMENT AND WATER GEOCHEMICAL SURVEY
SOUTH-WEST YUKON, 1986

Scale 1:250 000 - Échelle 1/250 000
Kilometres 5 0 5 10 15 20 Kilomètres

Universal Transverse Mercator Projection — Projection transverse universelle de Mercator

Base map at the same scale published by the Surveys and Mapping Branch in 1961



LEGEND

QUATERNARY		
		PLEISTOCENE AND RECENT
34	**QS 64***	Glacial and surficial deposits
TERTIARY		
33	**TQM 57**	Quartz monzonite, granodiorite
32	**TGD 57**	Quartz diorite, granodiorite
		MIOCENE AND PLIOCENE
31	**MPV 62**	WRANGELL: Basalt, andesite pyroclastics, sediments
		LATE TERTIARY
30	**LTF 62**	Felsite, granite porphyry
		OLIGOCENE AND MIOCENE
29	**OMA 61**	AMPHITHEATRE: Sandstone, conglomerate, shale, coal
		LOWER (?) TERTIARY
28	**TFP 58**	Feldspar porphyry dykes, flows
27	**TVD 58**	Andesite, porphyritic basalt flows, dykes
		EARLY TERTIARY
26	**ETG 57**	Granodiorite, granite
25	**ETGA 57**	Alaskite, granite, quartz monzonite
24	**ETQM 57**	Granite, quartz monzonite
23/	**FPPP 57**	Feldspar porphyry dykes
CRETACEOUS		
22	**KGDN 52**	Granodiorite, quartz diorite, diorite, agmatite complex
JURASSIC AND CRETACEOUS		
		DEZADEASH GROUP
21	**JKD 51**	Argillite, greywacke, conglomerate, volcanics
20	**JKK 51**	KLUANE: Sericitic, biotitic schist, gneiss, amphibolite
19	**JKGD 51**	Granodiorite, quartz diorite, quartz monzonite, diorite
TRIASSIC		
18	**TGD 42**	RUBY RANGE: Granodiorite
		UPPER TRIASSIC
17	**UTS 45**	CHITISONE, McCARTHY: Limestone, dolomite, shale
16	**UTN 45**	NIKOLAI: Greenstone, basalt, andesite, limestone
MESOZOIC UNDIVIDED		
15	**MGD 41**	Granodiorite, quartz monzonite
PERMIAN AND TRIASSIC		
14	**PTV 40**	Greenstone, diorite
13	**PTUB 40**	Pyroxenite, serpentinite
PALEOZOIC AND MESOZOIC UNDIVIDED		
12	**PMV 40**	Basic to intermediate volcanic rocks
PALEOZOIC UNDIVIDED		
11	**PN 09**	NASINA: Graphitic quartzite, schist
10	**PTP 09**	Chert, argillite, quartzite
9	**PS 09**	Greywacke, argillite, limestone; local basalt, andesite, volcaniclastic sediments
		EARLY PALEOZOIC
8	**EPUB 09**	Gabbro complex
PERMIAN		
		SKOLAI GROUP
7	**PS 36**	Andesite, basalt, ultramafics, pyroclastics, phyllite, chert, limestone, conglomerate
PENNSYLVANIAN AND PERMIAN		
6	**PPQM 35**	Quartz monzonite
5	**PPGD 35**	Granodiorite, diorite, agmatite complex
4	**PPQD 35**	Quartz diorite, diorite, granodiorite
DEVONIAN		
3	**DC 25**	Limestone, marble
HADRYNIAN AND CAMBRIAN		
2	**HCSN 08**	Schist, gneiss, quartzite
HADRYNIAN		
1	**HC 07**	Crystalline limestone

*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:
Gabrielse, H., Tempelman-Kluit, D.J., Blusson, S.L. and Campbell, R.B. (1980) Map 1398A, 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.

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