

**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, 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 moutonnées 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., Müller, J.E., and Wheeler, J.O. (1968) Geological Map of Yukon Territory, Geological Survey of Canada, Map 6-1968, (1:100 000 scale), to accompany GSC Paper 68-34.
- Müller, J.E. (1966) Geology Kluna 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. (1967) Glacial Map of Canada, Geological Survey of Canada (1:5 000 000 scale).
- Rampton, V.N. (1978) Surficial Geology and Geomorphology, Burwash Orisk, Yukon Territory, Geological Survey of Canada, Map 6-1978, 1:100 000 scale.
- Surficial Geology and Geomorphology, Generic 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

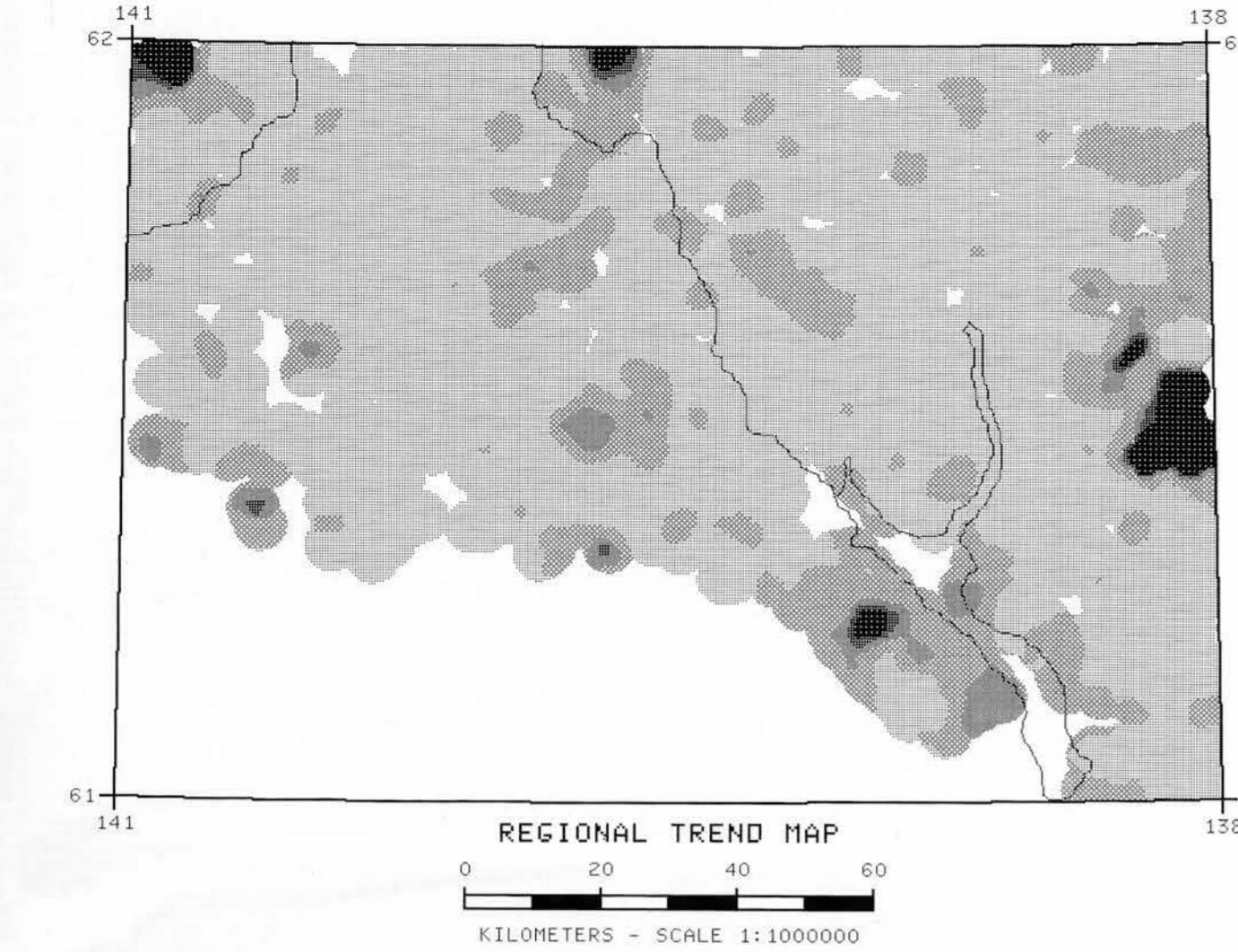
Au analyses by Chemex Labs Limited, Vancouver  
Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

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

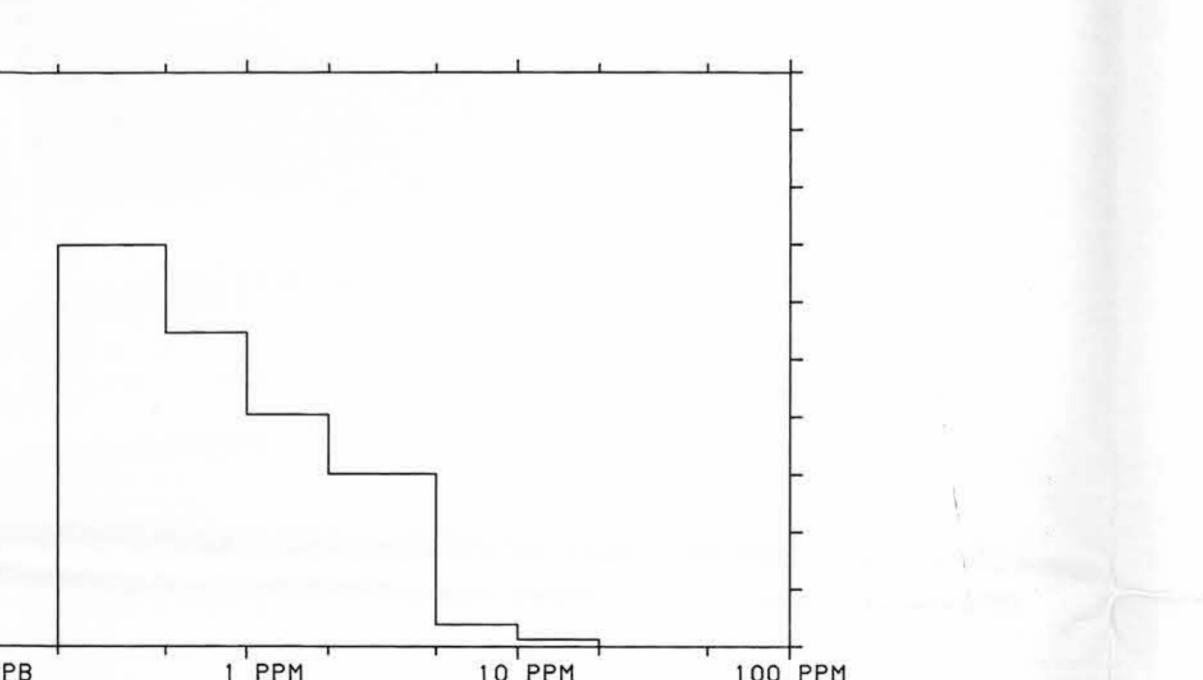
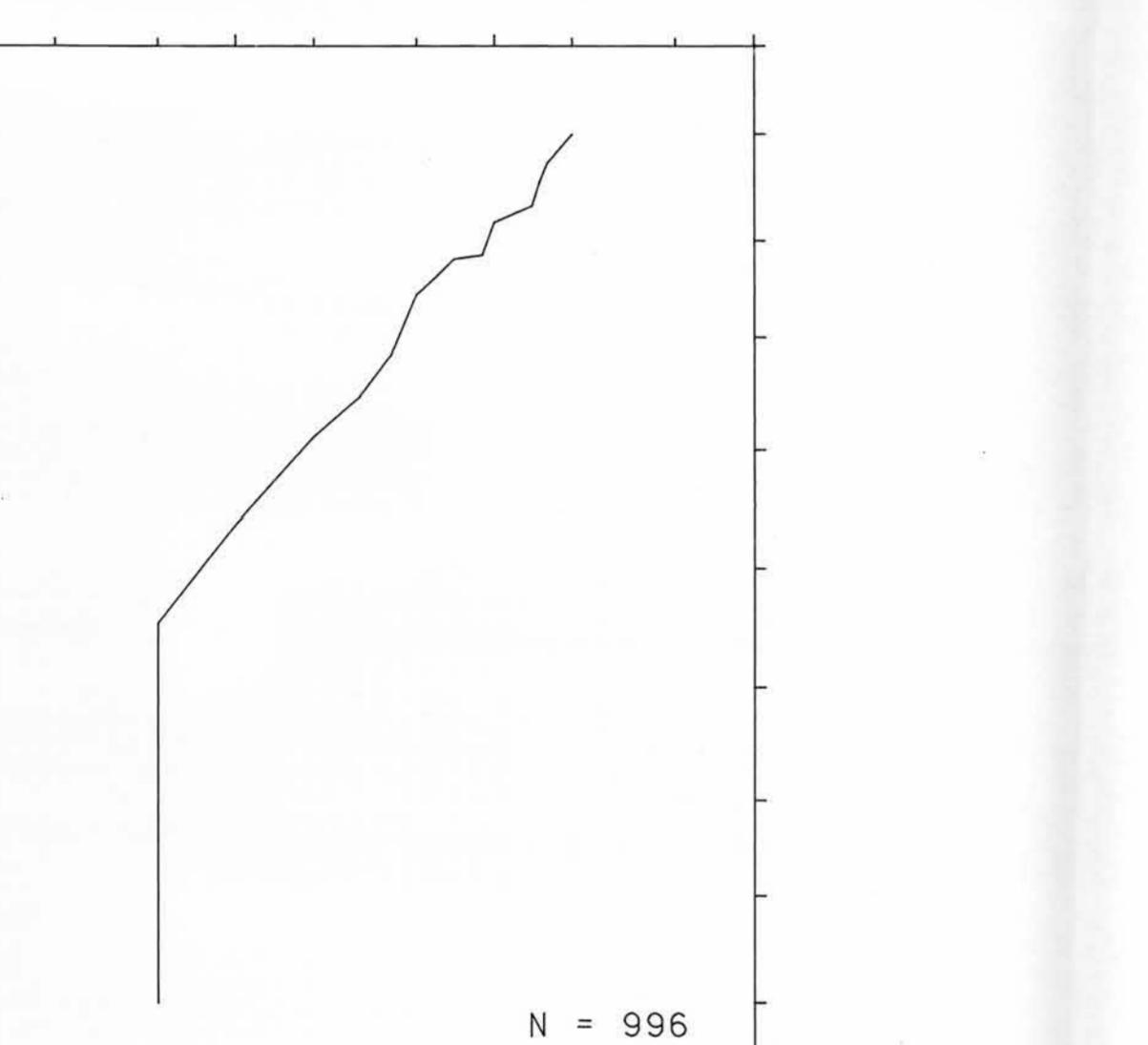
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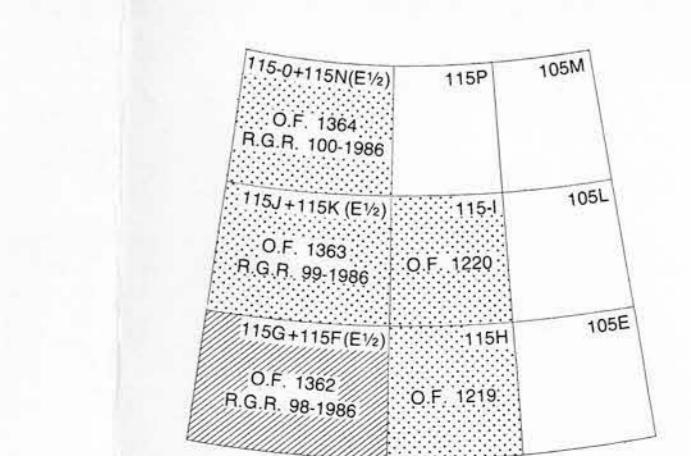
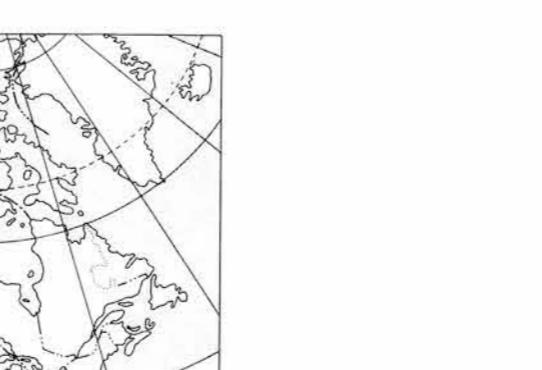
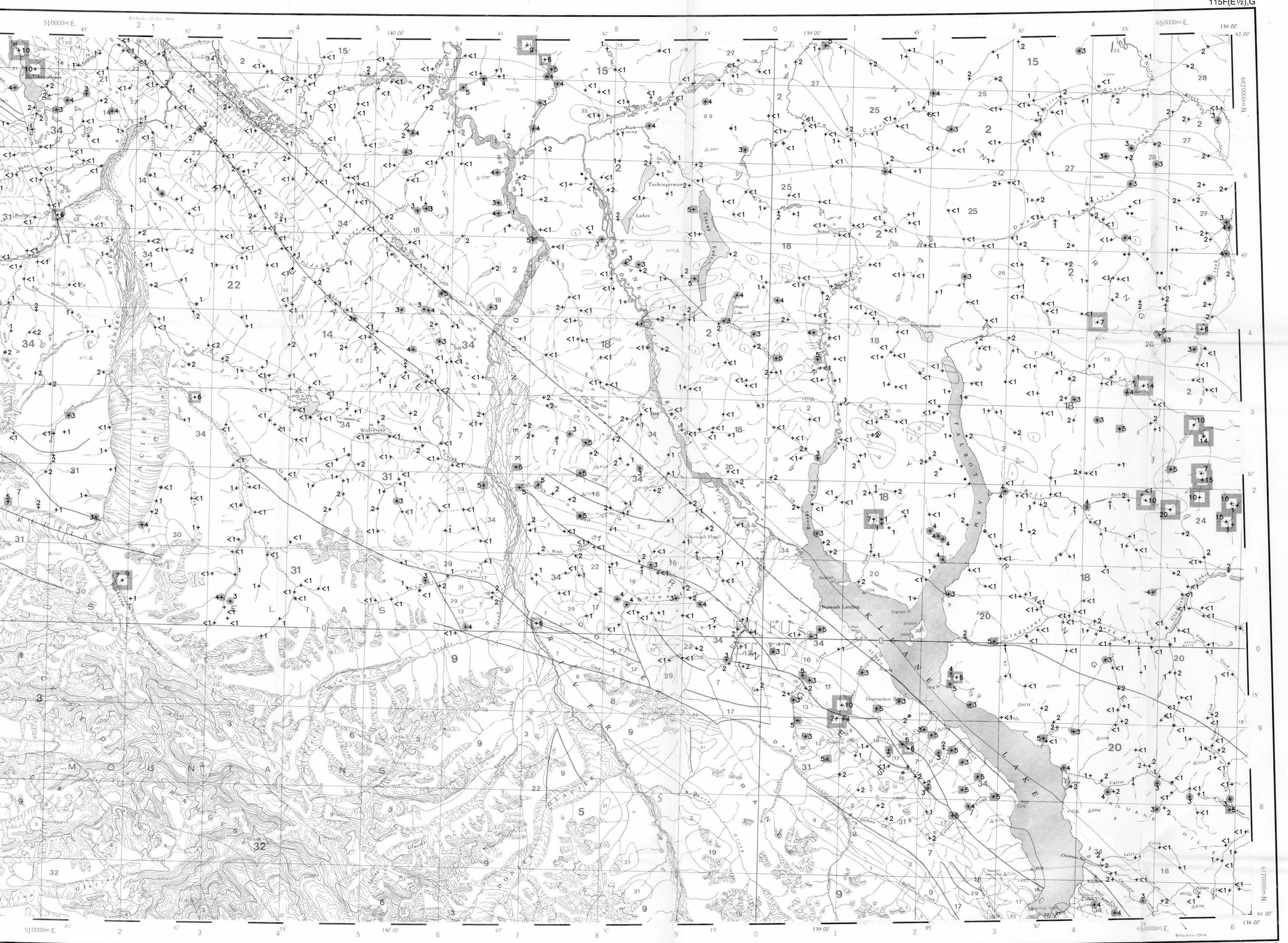
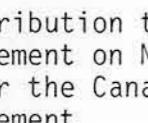


The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function ( $1/d^3$ ) to filter out minor irregularities and suppress small-scale regional features. Single point anomalies may be suppressed or eliminated, however, geological units which are chemically enriched, or large metallic deposits undergoing weathering would be expected to produce identifiable anomalies.



**HISTOGRAM**

CONCENTRATION	FREQUENCY
7 to 20	N = 18 (1.8%)
6	N = 7 (0.7%)
5	N = 38 (3.8%)
3 to 4	N = 112 (11.2%)
<1 to 2	N = 821 (82.4%)



LEGEND	
QUATERNARY	
34	PLEISTOCENE AND RECENT
QS 64*	Glacial and surficial deposits
33	TERTIARY
TGM 57	Quartz monzonite, granodiorite
32	TGD 57 Quartz diorite, granodiorite
MPV 62	WRANGELL: Basalt, andesite pyroclastics, sediments
31	LATE TERTIARY
LTF 62	Felsite, granite porphyry
30	OLIGOCENE AND MIOCENE
OMA 61	AMPHIBOLITE: Sandstone, conglomerate, shale, coal
29	LOWER (?) TERTIARY
TFP 58	Feldspar porphyry dykes, flows
28	TVB 58 Andesite, porphyritic basalt flows, dykes
27	EARLY TERTIARY
ETG 57	Granodiorite, granite
26	ETGA 57 Alaskite, granite, quartz monzonite
25	ETQH 57 Granite, quartz monzonite
24	FPF 57 Feldspar porphyry dykes
22	KGD 52 Granodiorite, quartz diorite, diorite, agmatite complex
JURASSIC AND CRETACEOUS	
21	DEADEASH GROUP
JKD 51	Argillite, greywacke, conglomerate, volcanics
20	JKK 51 KLUANE: Sericitic, biotitic schist, gneiss, amphibolite
19	JKG 51 Granodiorite, quartz diorite, quartz monzonite, diorite
18	TGD 42 RUBY RANGE: Granodiorite
17	UTS 45 CHITISON, McCARTHY: Limestone, dolomite, shale
16	UTN 45 NIKOLAI: Greenstone, basalt, andesite, limestone
MESOZOIC UNDIVIDED	
15	MGD 41 Granodiorite, quartz monzonite
PERMIAN AND TRIASSIC	
14	PIV 40 Greenstone, diorite
13	PTB 40 Pyroxenite, serpentinite
PALEOZOIC AND MESOZOIC UNDIVIDED	
12	PMV 40 Basic to intermediate volcanic rocks
PALEOZOIC UNDIVIDED	
11	PNS 09 NASINA: Graphitic quartzite, schist
10	PTP 09 Chert, argillite, quartzite
9	PS 09 Brecciated argillite, limestone; local basalt, andesite, tuffaceous sediments
EARLY PALEOZOIC	
8	EPUB 09 Gabro complex
PERMIAN	
7	SKOLAI GROUP
6	PPM 35 Quartz monzonite
5	PPGD 35 Granodiorite, diorite, agmatite complex
4	PPD 35 Quartz diorite, diorite, granodiorite
DEVONIAN	
3	DC 25 Limestone, marble
HADYRIAN AND CAMBRIAN	
2	HCSW 08 Schist, gneiss, quartzite
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., Tempehan-Kluit, D.J., Blussen, S.L. and Campbell, R.B.  
1986, Macmillan River, Yukon - District of Mackenzie - Alaska, NTS Sheet 101N, Geological Survey of Canada, Energy, Mines and Resources Canada, 1:110,000 Scale.