

COMINCO LTD.

EXPLORATION

NTS: 82E/4W

WESTERN DISTRICT

GEOLOGICAL MAPPING AND SOIL GEOCHEMICAL

SURVEY ON THE OK MINERAL GROUP

KEREMEOS AREA

Osoyoos Mining District, B.C.

LATITUDE: 49⁰02'N; LONGITUDE: 119⁰52'W

PERIOD OF WORK

July 28 to August 19, 1980

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

8579

DECEMBER 11, 1980

T.W. HODSON

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EXPLORATION
NTS: 82E/4W

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WESTERN DISTRICT
11 December 1980

GEOLOGICAL MAPPING AND SOIL GEOCHEMICAL

SURVEY ON THE OK MINERAL GROUP

KEREMEOS AREA

Osoyoos Mining District, B.C.

SUMMARY

A geological mapping and soil geochemical survey was carried out on the OK claim group during 1980. This program concentrated its efforts on the southern portion of the claim group and was intended to locate and define all phases of the Similkameen batholith within the claim boundaries, locate molybdenite and tungsten showings, and locate any anomalous soil areas which may indicate mineralization at depth. A soil sampling grid was established and 377 soil samples plus two rock chip samples were collected. All soil samples were analysed for copper, lead, zinc, molybdenum and tungsten.

Results indicate no chemical enrichment in the soils for copper, lead, or zinc and only scattered high values in tungsten. Molybdenum enrichment in soils was found over a large portion of the soil grid and was found to be related to scattered molybdenite showings.

Further work is recommended to determine the significance of molybdenum within the anomalous zone.

LOCATION

Latitude: 49°02'N
Longitude: 119°52'W
NTS: 82E/4W
Osoyoos Mining District, B.C.

The OK mineral group is situated along the United States-Canada boundary at the headwaters of Snehumption Creek south of Keremeos, B.C. The claims are accessible by helicopter, the nearest helicopter base being Penticton, which is 52 km to the NNE. Elevation ranges from 1600 to 2600 meters, with open forests at lower levels giving way to alpine meadows at high elevations.

HISTORY

Interest in the general area has been strong in recent years due to the occurrence of tungsten bearing skarns and numerous molybdenite and tungsten

showings.

Cominco first acquired the ground in December, 1979 and conducted a program of semi-detailed mapping and contour sampling during the 1979 field season.

OWNERSHIP

The OK mineral group consists of 15 claims comprising 118 units. Fourteen of these claims are 100% owned by Cominco Ltd. and one, the U.C. claim, has been optioned to Cominco by D. Brewer of Vernon, B.C.

<u>Claims</u>	<u>Units</u>	<u>Record Number</u>	<u>Recorded</u>	<u>Due Date</u>
OK 1-13	94	622(1) to 634(1)	Jan. 25, 1979	Jan. 25, 1982
OK 14	8	1229 (9)	Sept. 4, 1980	Sept. 4, 1981
U.C.	16	786 (7)	July 17, 1979	July 17, 1981

GEOLOGY

The Cretaceous Similkameen batholith, which is part of the Nelson Plutonic Rocks, occurs within the OK mineral group. It intrudes marine sediments and volcanics of the Independence, Barslow, Shoemaker, and Old Tom Formations. This intrusion predominantly consists of a porphyritic quartz monzonite with 3-5 cm k-spar phenocrysts set in a medium grained, grey matrix which is composed of quartz, k-spar, plagioclase, hornblende, biotite, and minor muscovite. This quartz monzonite is in gradational contact with a porphyritic quartz monzonite to monzonite which contains 4-6 cm k-spar phenocrysts set in a coarse grained, grey to dark grey matrix consisting of k-spar, plagioclase, abundant hornblende and biotite, and minor quartz. The quartz monzonite porphyry is typically found separating the medium grained quartz monzonite from the country rock. The contact between these two intrusive phases is gradational and ranges from as few as 20 meters to as much as 150 meters.

The country rock, exposed along the northwest section of the claim group, consists of metamorphosed ribbon cherts and amphibolite, with minor argillite, limestone, and tuffaceous rocks. Foliation within these rocks varies but generally is found to strike north to north-west and dip steeply eastward.

Mineralization found on the property consists mainly of series of molybdenite showings located on the OK 9,11,13,14, and UC claims. These showings contain minor molybdenite within quartz veins which cut the porphyritic quartz monzonite. Only one tungsten showing was found, located to the southwest of Snowy Mountain. All tungsten and molybdenite showings are located on Plate 3.

SOIL GEOCHEMISTRY AND ANALYTICAL PROCEDURE

The 1980 field work was conducted by T.W. Hodson, B.Sc. 1980, assisted by M. Seifert, K. MacDonald, and T. Wells.

A soil sample grid was established with an east-west base line having north-south crosslines every 200 or 400 meters. Samples were collected at 100 meter intervals along this soil grid. Only two rock samples were taken, both coming from trenches located on the U.C. claim.

Soil samples were dried and sieved to minus 80 mesh and weighed into 200 mg. portions. Copper, lead, zinc, and silver were determined by aqua regia digestion followed by atomic absorption. Molybdenite was determined by nitric-perchloric acid extraction followed by thiocyanate colourimetry with butyl acetate extraction. Tungsten was determined by potassium pyrosulphate fusion and HCl extraction followed by zinc dithiol colourimetry, gold by aqua regia digestion followed by organic solvent extraction and atomic absorption, and fluorine by specific ion electrode analysis. All samples were analysed at Cominco's Vancouver Research Laboratory.

RESULTS AND INTERPRETATION (Plates 4-8)

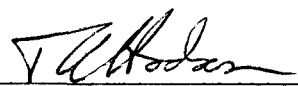
Sample locations and analytical results for molybdenum, tungsten, copper, lead, and zinc are presented in Plates 4-8 respectfully.


Molybdenum analyses range from <2 to 130 ppm with 10 ppm Mo considered to be the threshold for anomalous values. Results indicate a large plus 10 ppm Mo anomaly within the OK 11,13,14, and U.C. claims. This anomaly is associated with the many molybdenite showings found within these claims. All molybdenite showings are within the medium grained, porphyritic quartz monzonite.

No significant anomalies for tungsten, copper, lead, and zinc were indicated by the soil sample survey. Only one small isolated tungsten showing was found to which no significance was placed.

CONCLUSIONS

The 1980 mapping, prospecting and soil sampling survey on the OK mineral group has defined an area of scattered molybdenite showings within a plus 10 ppm Mo anomaly. The importance of these showings and anomalies should be determined by surface trenching, rock sampling and through an I.P. survey.

Report by: 
T.W. Hodson, Geologist

Approved for
Release by: 
G. Harden, Manager
Western District

Endorsed by: 
D.L. Cooke, Senior Geologist

TWH/skg

Distribution
Mining Recorder(2) Western District(1)
Administration (1) TWH/DLC (2)

EXPLORATION
NTS: 82E/4W

COMINCO LTD.

WESTERN DISTRICT
11 December 1980

APPENDIX A

Statement of Expenditures

Cost of geological mapping and soil geochemical surveys on the OK mineral claims, Keremeos area, Osoyoos Mining District, B.C.

SALARIES:

T.W. Hodson	(28 days @ \$123.03/day)	\$ 3,444.84
M. Seifert	(23 days @ \$ 96.36/day)	2,116.28
K. MacDonald	(23 days @ \$ 77.88/day)	1,791.24
T. Wells	(23 days @ \$ 73.26/day)	1,684.98

TRANSPORTATION:

Truck rental - 1 vehicle, Agsut, 1980 including, gas, oil, etc.	882.45
Helicopter - 7.6 hrs. @ \$407.26/hr including fuel and oil	3,095.19

FIELD COSTS:

Food and accommodation - 97 man days @ \$15.09/day	1,463.38
Equipment - tents, field gear, etc.	2,465.61

GEOCHEMISTRY:

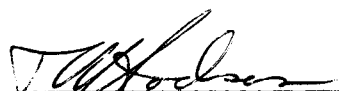
377 soil samples @ \$7.30 for Cu,Pb,Zn,Mo,W	2,925.25
2 rock samples @ \$15.45 for Cu,Pb,Zn,Mo,W,Ag,Au,F	30.90

MISCELLANEOUS:

Freight	20.60
Communications	256.20

Total: \$20,176.92

Signed:


T.W. Hodson, Geologist

11 December 1980

APPENDIX B

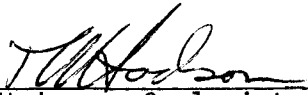
In the matter of the B.C. Mineral Act and in the matter of a geological and geochemical program carried out on the OK mineral claims located in the Osoyoos Mining District of the Province of British Columbia more particularly N.T.S.: 82E/4W

A F F I D A V I T

I, Terence W. Hodson, of the Municipality of Surrey, in the Province of British Columbia, make oath and say:

1. THAT I am employed as a geologist by Cominco Ltd., and as such have a personal knowledge of the facts to which I hereinafter depose;
2. THAT annexed hereto and marked as Appendix A to this my affidavit is a true copy of expenditures incurred in connection with a geological and geochemical program carried out on the OK mineral claims;
3. THAT said expenditures were incurred between the 28th day of July and the 19th day of August 1980 for the purpose of mineral exploration on the above noted claims.

Signed: _____


T.W. Hodson, Geologist

11 December 1980

COMINCO LTD.

EXPLORATION
NTS: 82E/4W

WESTERN DISTRICT
11 December 1980

APPENDIX C

STATEMENT OF QUALIFICATIONS

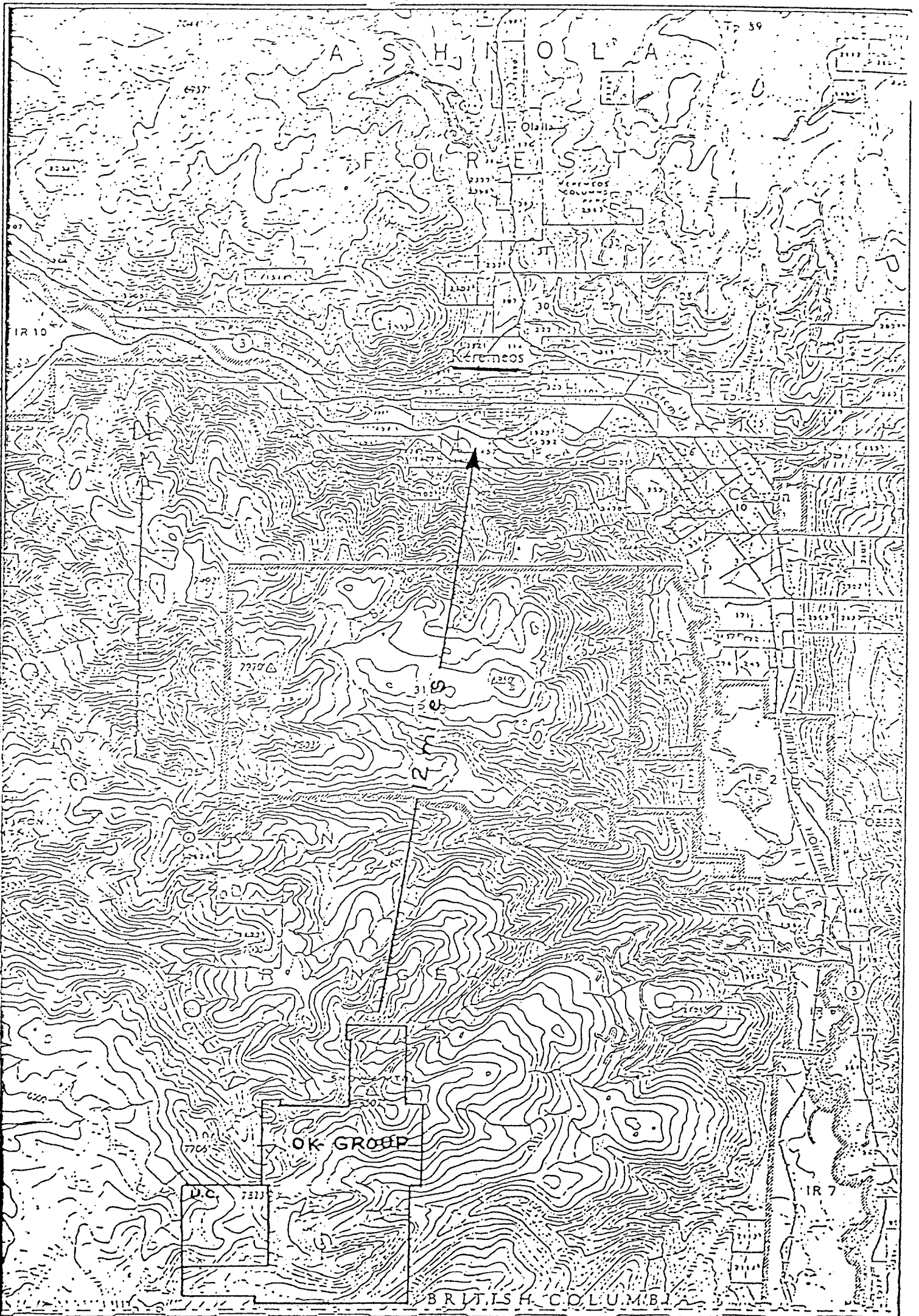
I, Terence W. Hodson, of the Municipality of Surrey, in the Province of British Columbia, hereby certify:

1. THAT I am a geologist residing at 1455 129 B Street, Surrey, British Columbia, with a business address at 700-409 Granville Street, Vancouver, British Columbia.
2. THAT I graduated with a B.Sc. in geology from the University of British Columbia in 1980.
3. THAT I have practised geology with Cominco Ltd. from May 1980 to the present.

Dated this 11 day of December, 1980 at Vancouver, British Columbia.

Signed: 
T.W. Hodson, Geologist

11 December 1980



BRITISH COLUMBIA
WASHINGTON

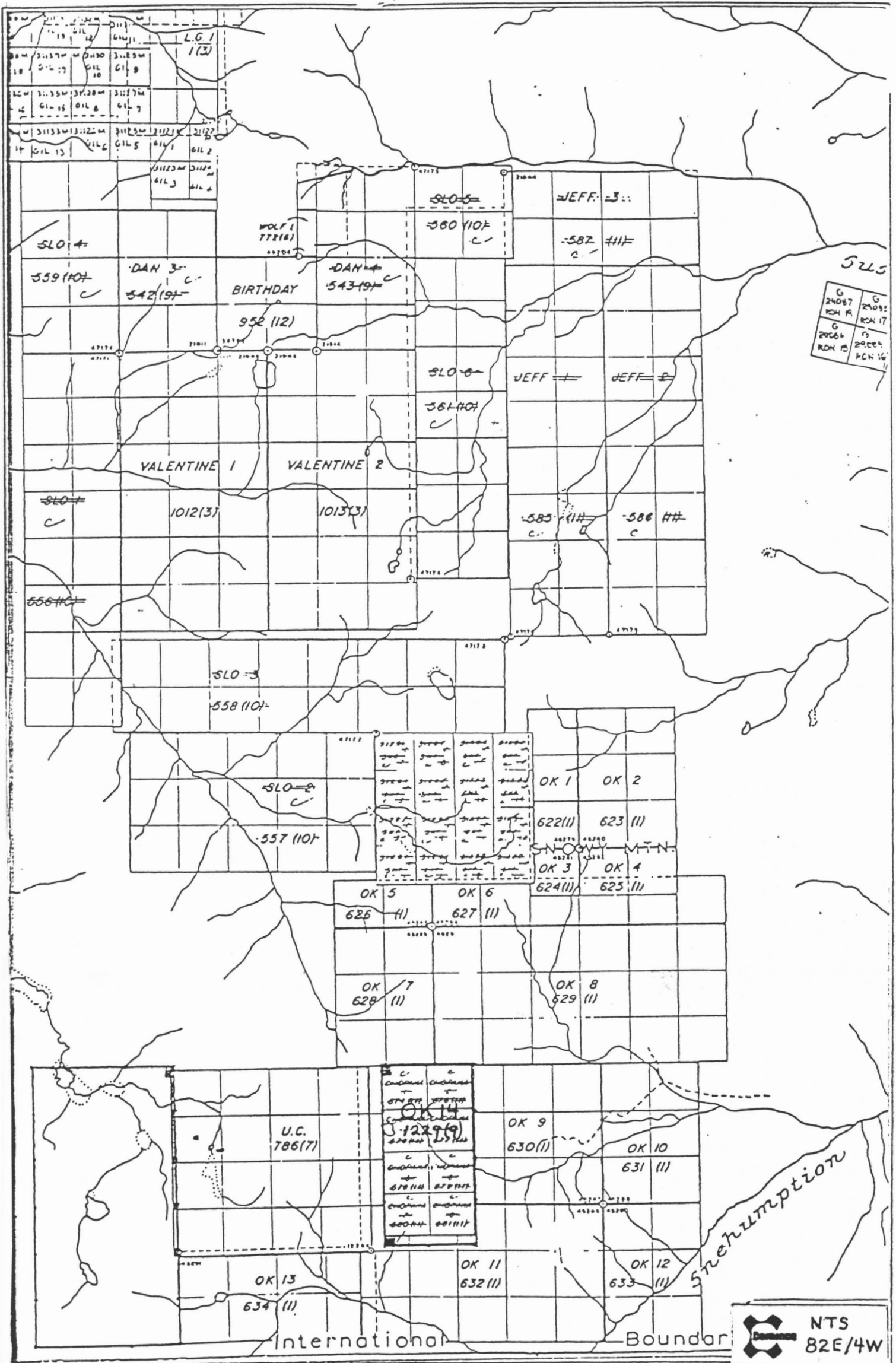
NTS
82E/4W

8579

OK GROUP LOCATION MAP

Drawn by: TWH		Traced by:	
Revised by	Date	Revised by	Date

Scale: 1:125,000 Date: DEC. 11, 1980 Plate: 1



Drawn by: TWH		Traced by:	
Revised by	Date	Revised by	Date

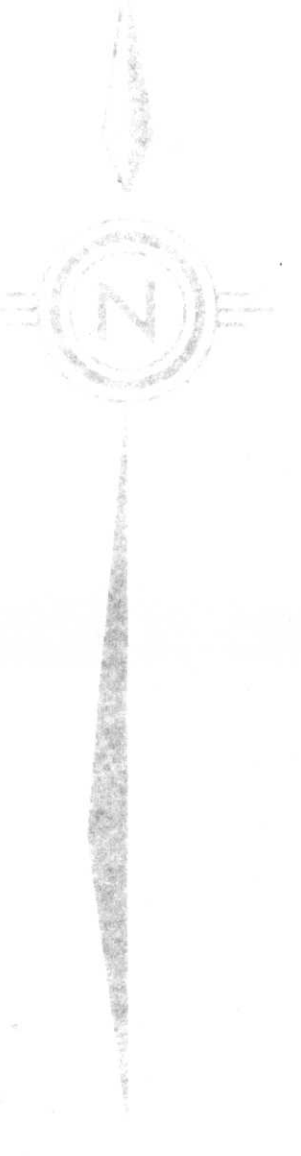
OK GROUP CLAIM MAP

Scale: 1:50,000

Date: Dec. 11, 1980

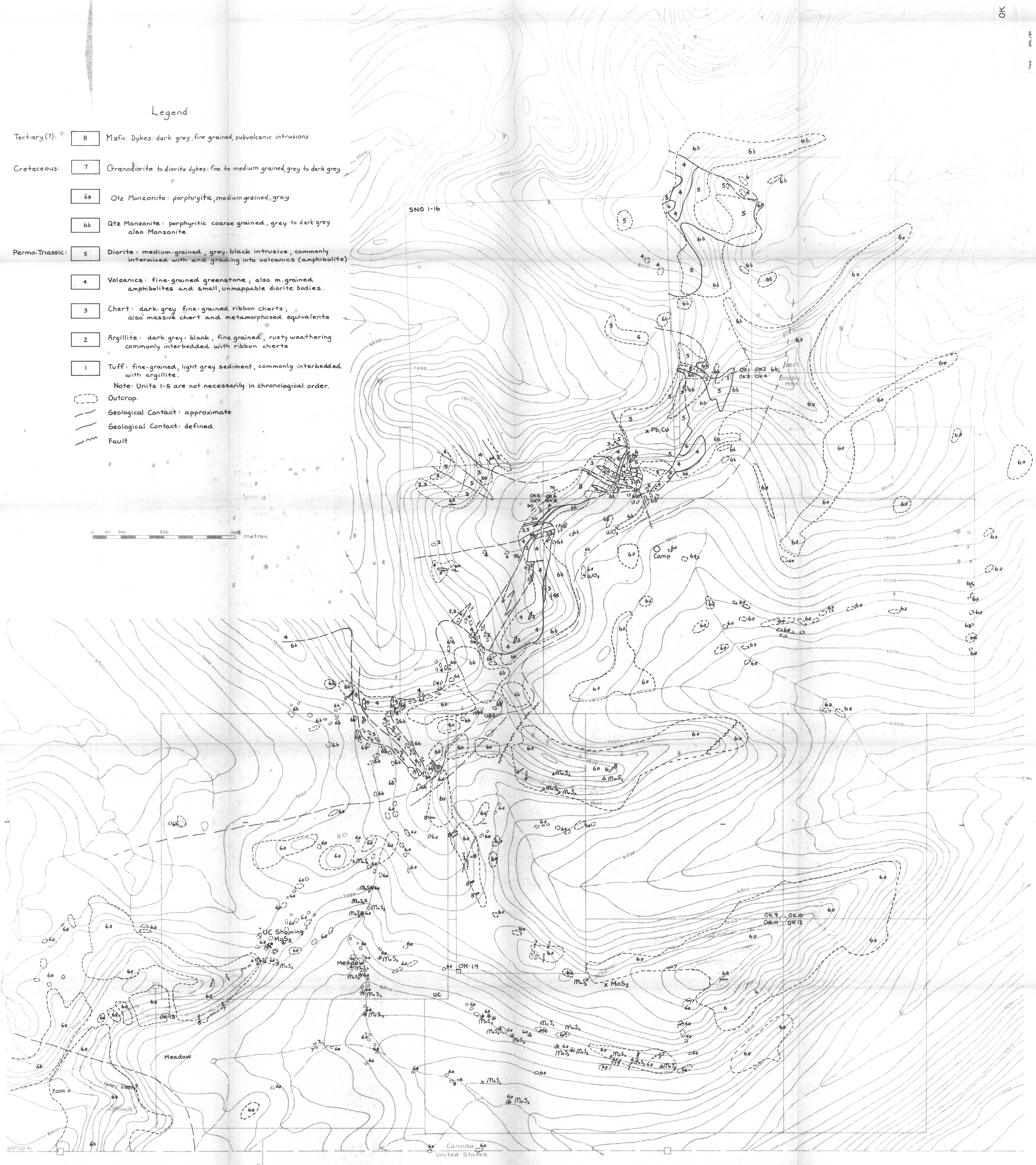
Plate: 2

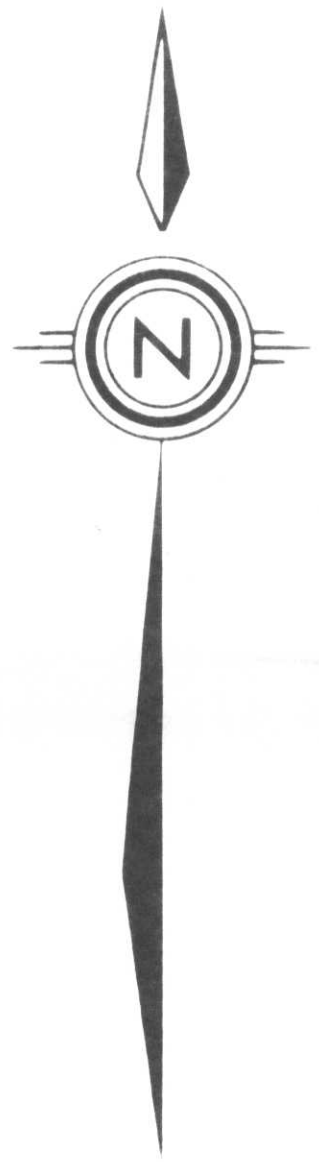
MINERAL RESOURCES BRANCH
ASSESSMENT UNIT
8579



Legend

- Tertiary(?): 8 Mafic Dykes: dark grey, fine grained, subvolcanic intrusions
 - Cretaceous: 7 Granodiorite to diorite dykes: fine to medium grained, grey to dark grey
 - 6a Qtz Monzonite: porphyritic, medium grained, grey
 - 6b Qtz Monzonite: porphyritic coarse grained, grey to dark grey also Monzonite
 - Permo-Triassic: 5 Diorite: medium-grained, grey-black intrusive, commonly intermixed with and grading into volcanics (amphibolite)
 - 4 Volcanics: fine-grained greenstone; also m. grained amphibolites and small, unmappable diorite bodies.
 - 3 Chert: dark grey fine-grained ribbon cherts; also massive chert and metamorphosed equivalents
 - 2 Argillite: dark grey-black, fine grained, rusty weathering commonly interbedded with ribbon cherts
 - 1 Tuff: fine-grained, light grey sediment, commonly interbedded with argillite.
- Note: Units 1-5 are not necessarily in chronological order.
- Outcrop.
 - Geological Contact: approximate
 - Geological Contact: defined
 - Fault





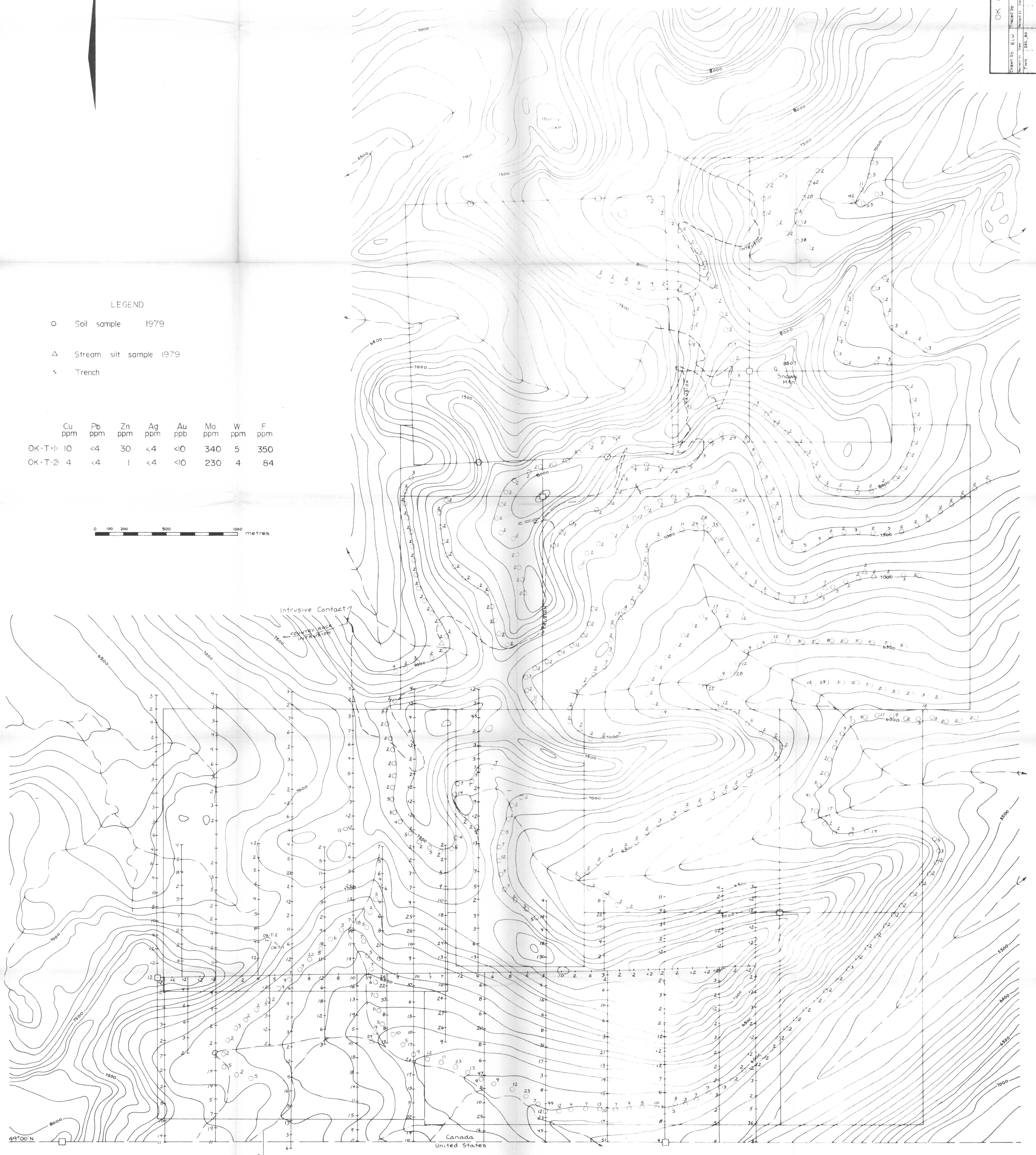
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8579

OK GROUP
N25 R2E 4W
Mc Geochemistry (ppm)
Date Jun 10 1980
Scale 1:10,000
Plate 4

LEGEND

- Soil sample 1979
- △ Stream silt sample 1979
- ∨ Trench

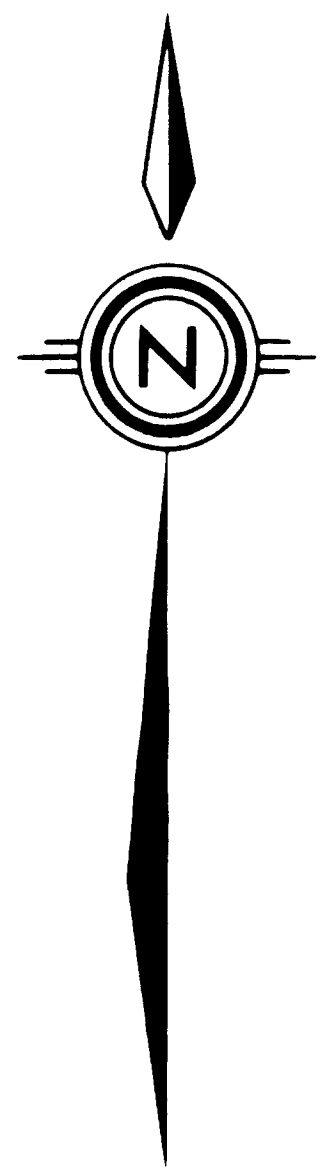
	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Mo ppm	W ppm	F ppm
OK-T-1	10	<4	30	<4	<10	340	5	350
OK-T-2	4	<4	1	<4	<10	230	4	84



Canada
United States

119° 55' W

49° 00' N

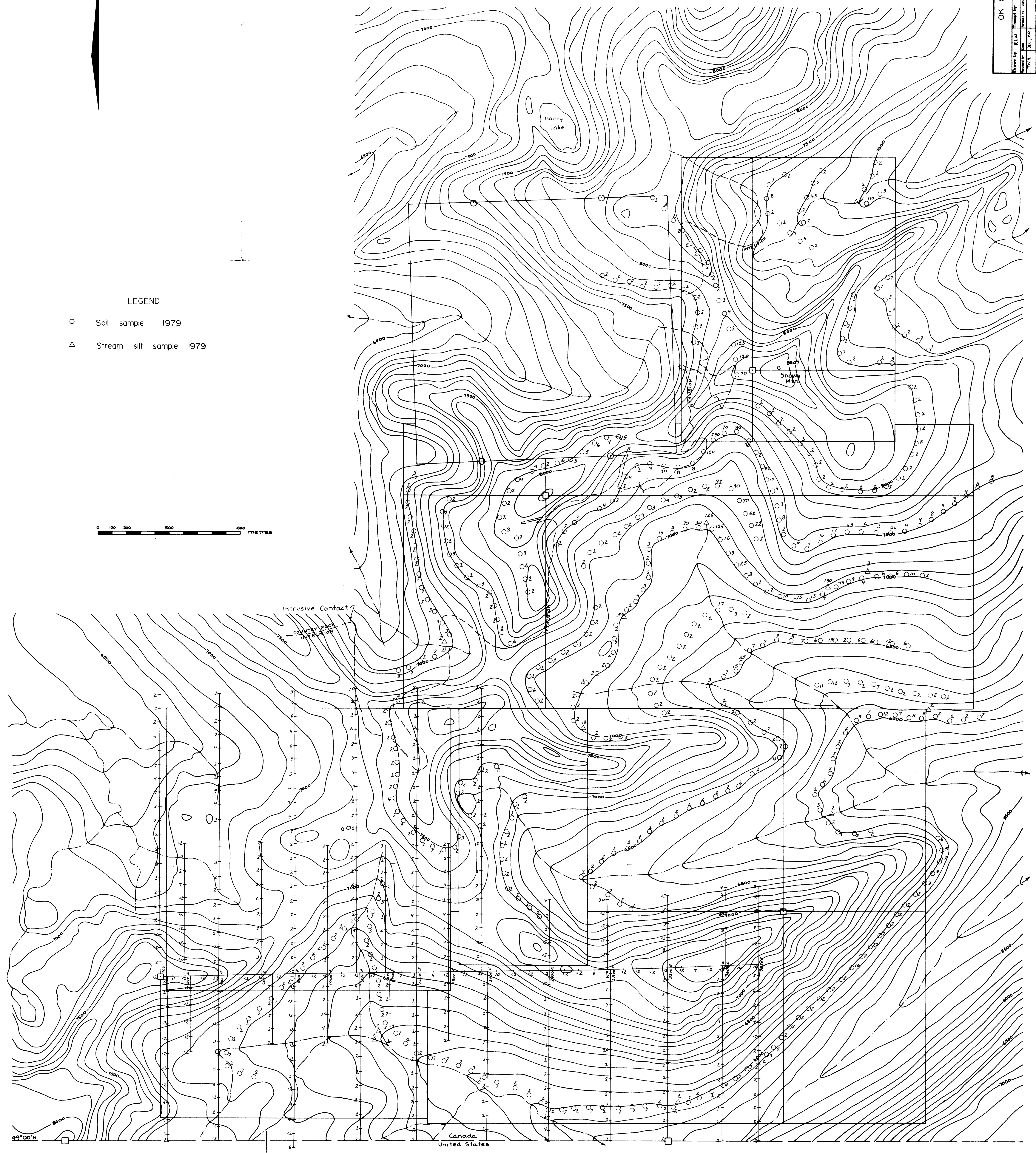


MINERAL RESOURCES CANADA
ASSESSMENT REPORT
8579

OK GROUP	
Drawn by: R. Lu	Traced by: [blank]
Checked by: [blank]	Number of [blank]
Scale: 1:10,000	Date: Jan. 10, 1980
Project: W Geochemistry (ppm)	Sheet: 5

LEGEND

- Soil sample 1979
- △ Stream silt sample 1979



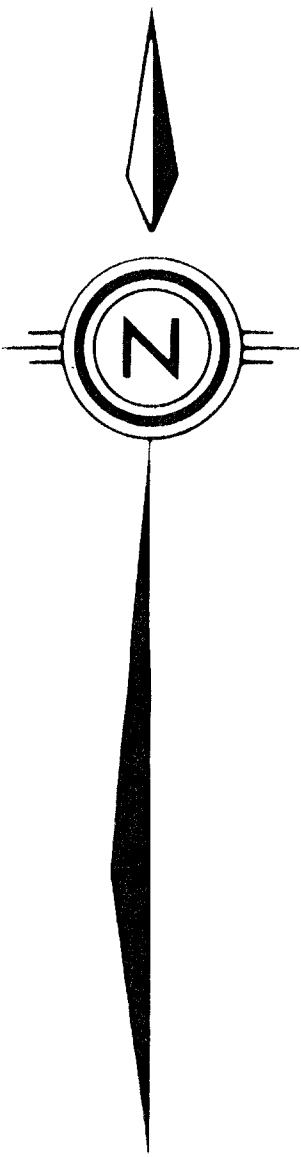
Intrusive Contact
covered by
glacial till

44°00' N

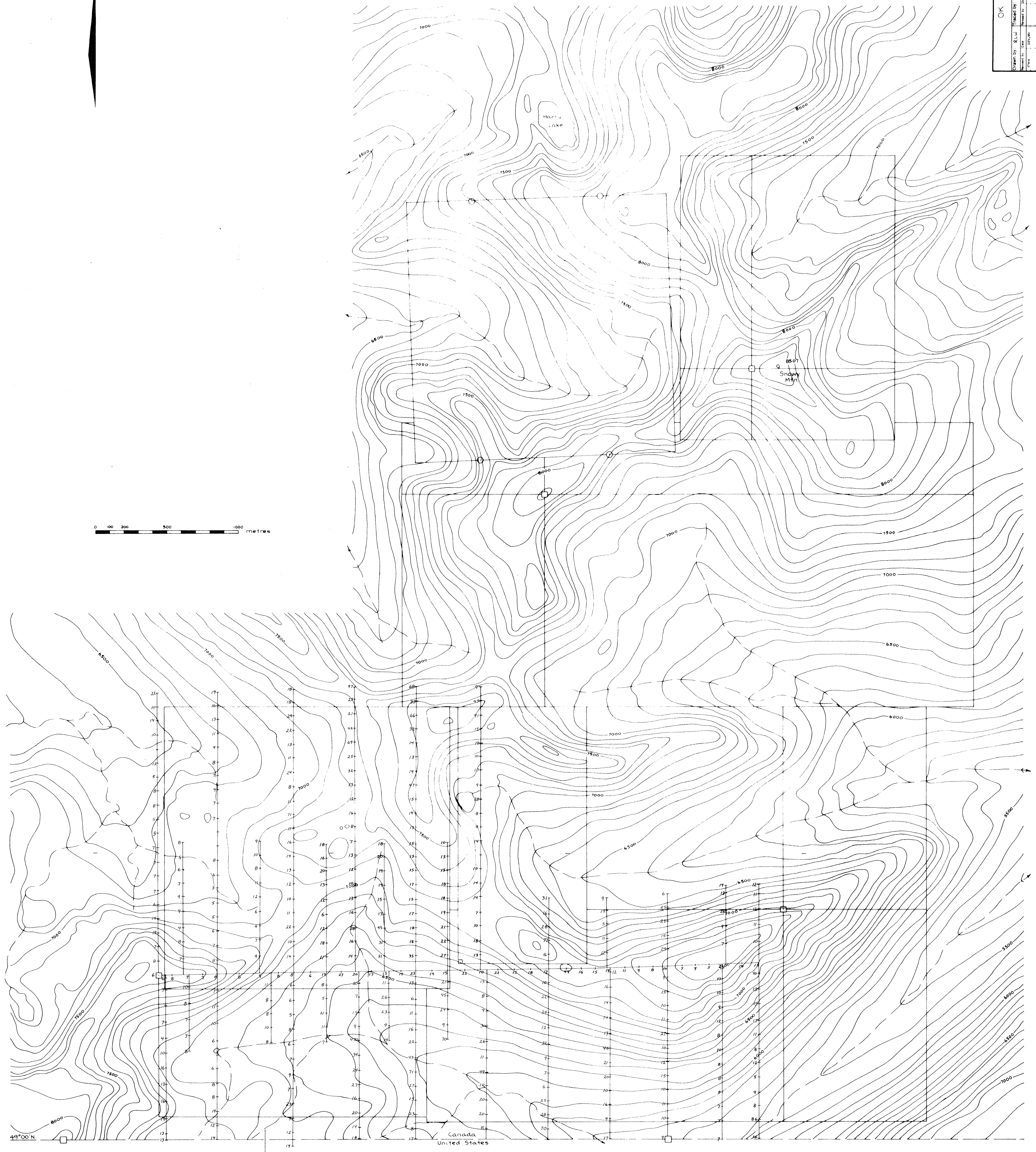
118° 55' W

Canada
United States

1:10,000



0 100 200 500 1000 metres



8579

OK GROUP

NTS 82E/4W

Cu Geochemistry (ppm)

Observed M.D.

Scale 1:10,000 Date 30.10.1980 Page 6

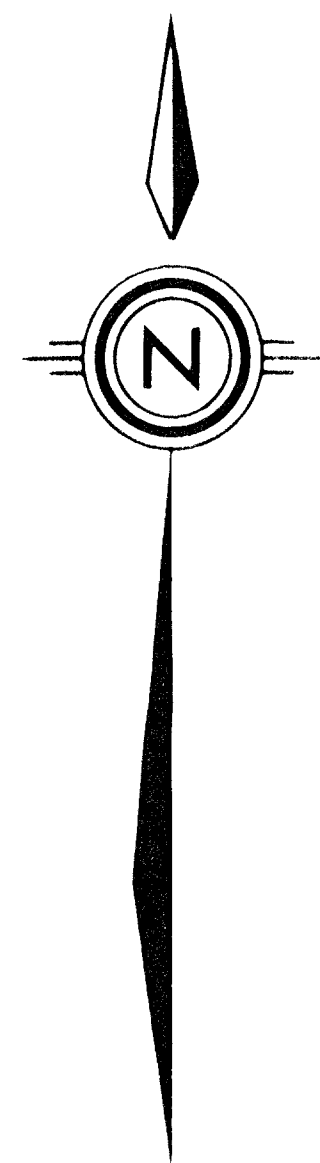
Drawn by: K.L.W.	Traced by:
Checked by: J.C.D.	Reviewed by:
Date: 10/2/80	Date:

49°00' N

119°55' W

Canada

United States



0 100 200 500 1000 metres



MINERAL RESOURCES DIVISION
ASSESSMENT BRANCH
8579

OK GROUP

Drawn By: R.L.W.
Traced By:
Checked By:
Date:

NTS
BEE/AM

Pb Geochemistry (ppm)

0.5 sheets, N.D.
Scale: 1:10,000
Date: Jan. 10, 1980
Sheet: 7

49°00' N
119° 55' W
Canada
United States

10/21/80

8579

MINERAL RESOURCES DIVISION
Geological Survey of Canada

OK GROUP

NTS 82E/4W

Zn Geochemistry (ppm)

Osceyo, MD

Scale: 1:10,000

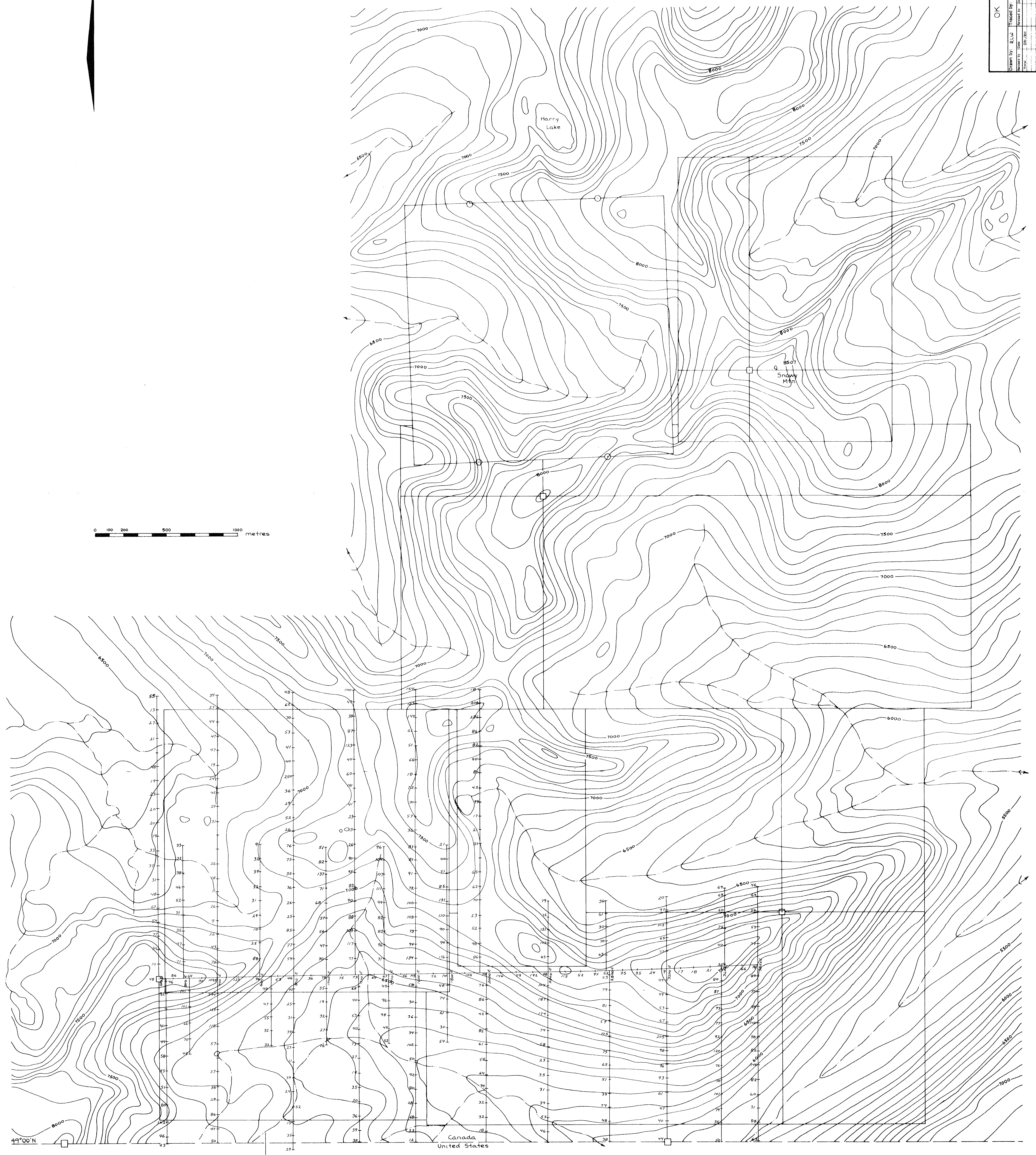
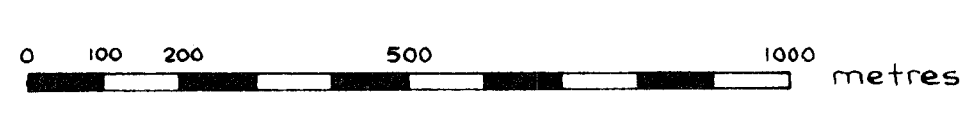
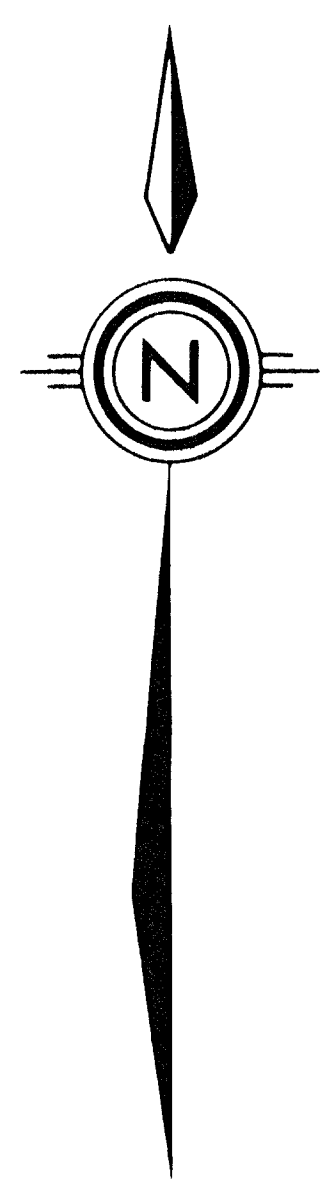
Date: Jan. 10, 1980

Page: B

FORM 21-086

Drawn By	Traced By
K.L.W.	

Name	Date
100-800	



49°00' N

119°55' W

Canada
United States