CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

GEOLOGY, GEOCHEMISTRY AND GROUND MAGNETOMETRY

OF THE

HATCH CLAIMS

Claims - Hatch 1 to 36

GROUND MAGNETOMETRY

OF THE

THATCH CLAIMS

Claims - Thatch 1 to 8
15 to 22
29 to 36

Claim Sheet No. 115-H-12

Lat. 61°50'N
Long. 137°75'W

By:

N. Saracoglu, M.Sc.

Duration of Work:

June 17, 1973 to July 2, 1973

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$ 11,959.72

A.R. Craig

Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

GEOLOGY, GEOCHEMISTRY AND GROUND MAGNETOMETRY OF THE HATCH CLAIMS

AND

GROUND MAGNETOMETRY OF THE THATCH CLAIMS

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PLANS ACCOMPANYING REPORT

ABSTRACT

The Hatch claims are extensively covered by glacial moraine often in excess of 100 feet thick. A kame and kettle structure in the southwest marks various retreat phases of the ice sheet.

Exposures are very rare and consist of micaceous quartzite with interbedded lenses of marble in the south, centre and northeast parts of the area and an aplitic and porphyritic quartz monzonite in the central part of the area. Yukon Group rocks dip gently to the north and east.

An extensive area of molybdenum anomaly was outlined in the southern half of the Thatch claims. This anomalous zone extends southeast in the Hatch claims where the peak values of 140 and 294 ppm molybdenum are found in a 5700 x 1600 feet anomalous area.

No significant copper and zinc anomalies were discovered. Some coincident copper values exist in molybdenum anomalous areas.

Ground magnetometer survey established a parallelity between the high molybdenum and magnetic anomalies. High magnetic relief together with the elongated shape suggests a pyrrhotite and/or magnetite concentration in a lithological horizon in the micaceous quartzite near the quartz monzonite intrusive. Molybdenum was probably introduced into the micaceous quartzite by this intrusive. A small exposure of micaceous quartzite within this magnetic and molybdenum anomalous

area contains trace amounts of pyrrhotite and 0.012% molybdenum.

The occurrence of significant molybdenum anomalies over the possible area of the intrusive which is extensively covered by glacial moraine and the size of the anomalous area justifies further follow-up work by IP surveys and, if warranted, diamond drilling.

INTRODUCTION

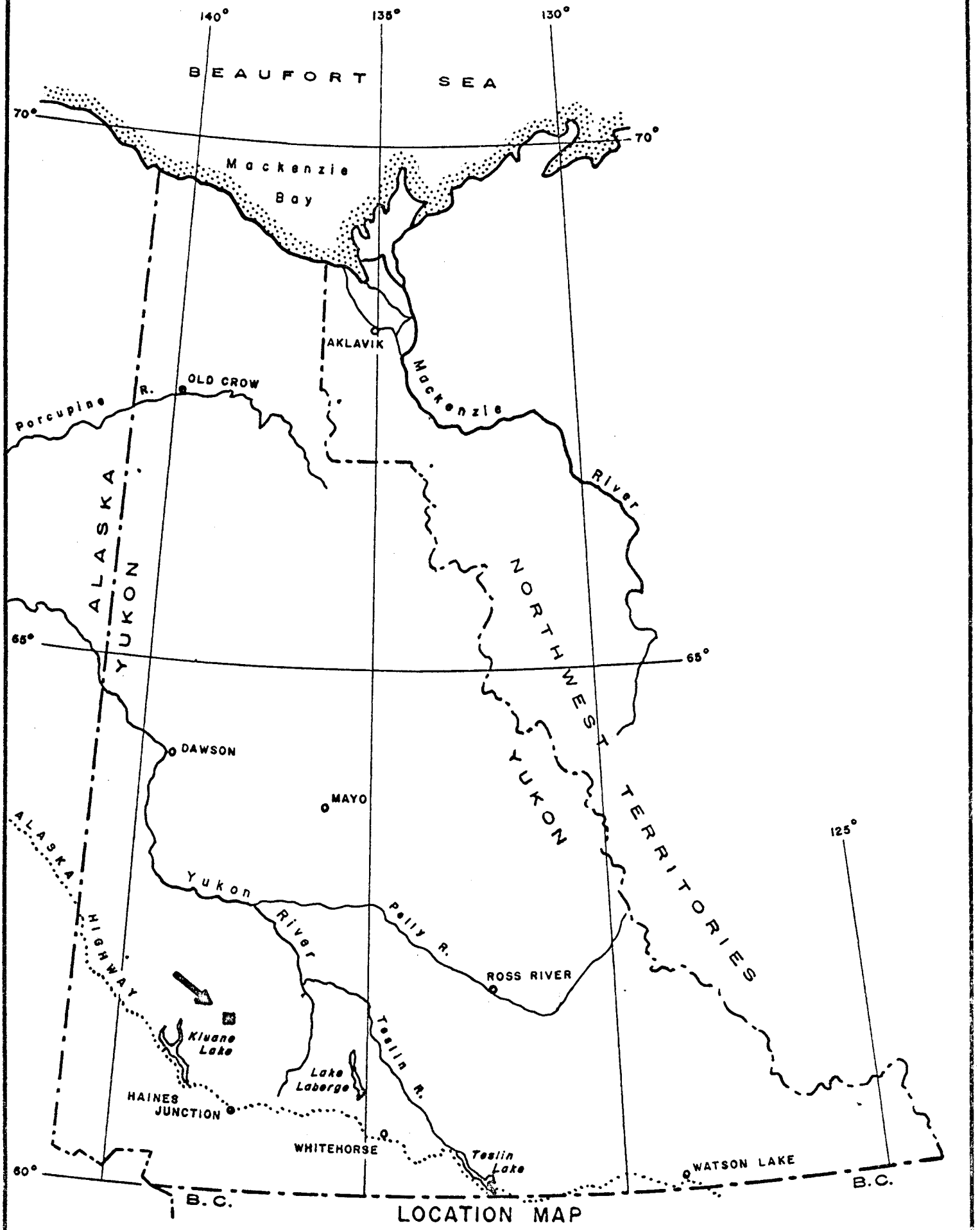
The Hatch (1-36) claims form the easterly and the southerly extensions of the original Thatch claims of the company. The Hatch claims were staked to protect the south half of a 100-gamma aero-magnetic anomaly and the southerly extension of a soil molybdenum anomaly situated in the southeast corner of the Thatch claims. Staking was done under contract by Eastern Associates of Whitehorse on October 22, 1972.

This report will describe and discuss the results of the exploration work done in the Hatch and the southern half of the Thatch claims during the 1973 field season. This includes line cutting, geochemical surveys, geological mapping in the Hatch claims; and ground magnetometer survey in the Hatch and twenty-four of the Thatch claims. All this work was done by Canadian Occidental Petroleum Limited, Minerals Division, between June 17 and July 2, 1973.

LOCATION AND ACCESS

The claim group is recorded on Claim Map 115-H-12 in the Whitehorse Mining District. The property is located five air miles due SW of Aishihik village on Aishihik Lake (Figure 1).

The claim area can be reached by road and air.



LOCATION MAP

HATCH CLAIM GROUP — 115-H-12

YUKON TERRITORY

July/73 S.

FIG. 1

It is possible to drive up the Aishihik road to Aishihik village and to cover the remaining distance by helicopter.

VEGETATION

Tree line is at an elevation of about 3900 feet. The eastern portions of the claim group is moderately wooded with black spruce, poplars and willows. Towards the west the vegetation becomes sparse and occasional spruce, poplars and willows are found in the valleys and along the streams, the remainder of the area being covered with grass and dwarf birch.

WORK COMPLETED

(a) Line Cutting

The line cutting and tagging of claims were performed by Canadian Occidental Petroleum personnel during the period June 18th to July 1st,1973.

Base line "O" of the original Thatch claims was extended east to 128+00. A new base line was cut at 60+00S. Survey lines were cut at 015^{o}T every 800 feet. A total of 109,600 line feet or 20.8 line miles were cut at a rate of 2,740 feet per man per day.

(b) Geological Mapping

The area was mapped during the period June 18 to June 30, 1973 by N. Saracoglu, geologist.

(c) Geochemical Survey

The geochemical soil sampling was carried out by D. Pedlar during the period June 18 to July 1st, 1973 under the supervision of N. Saracoglu.

Dr. C. F. Gleeson, Consultant Geologist and Geochemist, spent two days in the property to initiate the survey and to train D. Pedlar in soil sampling.

(d) Ground Magnetometer Survey

The ground magnetometer survey was conducted by J. Hickman, under the supervision of N. Saracoglu.

(e) Names and Addresses of Personnel

Canadian Occidental Petroleum Ltd.

N. Saracoglu	Canadian Occidental Petroleum Ltd., Minerals Division 801 - 161 Eglinton Ave. E. Toronto 12, Ontario	Geologist
J. Hickman	" " " "	Magnetometer Operator
D. Pedlar	" " " "	Soil Sampler
R. Mazur	" " " "	Line Cutter
S. McLennan	" " " "	" "
R. Stanton	" " " "	Cook
Dr. C. F. Gleeson	764 Belfast Road Ottawa, Ontario	Consultant Geologist-Geochemist

PHYSIOGRAPHY

The area consists of rolling terrain sloping gently from west to east. Ridges generally trend in an east-west direction along the southwestern portion of the area. The highest part of the area is the southwest corner at an elevation of 4600 feet above sea level. The extreme east end of the group is at an elevation of 3200 feet above sea level. The maximum relief in the claim group is 1400 feet.

Drainage in the area is fair. The streams are intermittent. They obtain their water either from thawing of the permafrost or from rain. The only creek with a continuous moderate flow is Thatchell Creek draining one small lake in the northwest corner of the claim group and flowing to the east in the eastern central part of the area. A flat area dammed with a morainic ridge in the southwest portion of the area and several valleys are covered by swamps.

Valleys in the area are broad and "U" shaped with gentle gradients.

According to Hughes*, the area of the Thatch and Hatch claims has been covered by the Ruby and Reid ice advances.

*Hughes, O.L. et al (1969) Glacial Limits and Flow Patterns. Yukon Territory, G.S.C. Paper 68-34.

The younger of the two advances, the Ruby ice sheet originated in the St. Elias Mountains and advanced northward. This ice advance probably did not reach an elevation greater than 4000 feet in the area.

The Reid advance, dated as more than 42,900 years old, originated in the Kluane Ranges and covered the area to an average elevation of 5,000 feet.

The area is extensively covered by moraines. Rounded boulders of varying sizes and petrology are found over the entire area in the glacial moraine.

Morainic ridges at four different levels and several kettle lakes in the southwest part of the claim group are typical of a "kettle and kame structure" related to various retreat phases of the ice sheet. The larger lake in the northwest corner of the area appears to be also a kettle lake.

No glacial striae were observed in the area.

GEOLOGY

Introduction

Outcrops are very sparse in the area and it is difficult to establish the spacial and age relations of the formations. Most frequent exposures belong to the "Yukon Group" and consist of quartzites, marble, and locally quartz-mica schist. The following rock types are present in the claim group:

Tertiary	Nisling Range Alaskite: porphyritic and aplitic quartz monzonite
Paleozoic	Yukon Group: Marble, Micaceous quartzite Metasiltstone

Yukon Group

Marble: was found as lens-like masses interbedded with micaceous quartzite on hill tops in the northeast and south central parts of the area.

The marble is whitish to bluish-white in colour when fresh but becomes light-brown to earthy white when weathered. It has a sugary texture with well developed calcite crystals.

Generally, the marble is limonitic and/or micaceous, and very weathered and crumbly.

Micaceous quartzite: A large exposure of micaceous quartzite occurs in the south central part of the group, south of base line 60S between lines 40E and 56E. Small exposures were mapped in the southeast quarter of the group.

The rock is composed of quartz and biotite and muscovite. It is hard and light to dark grey in colour. When weathered the rock has a phyllitic appearance.

At 88E, 50S the micaceous quartzite has a distinct schistosity and as such could be called a quartz-mica schist.

Metasiltstone: One outcrop of this rock type was found in the northeast corner of the claim group. The rock is very fine grained and dark grey in colour. It corresponds to a fine grained and mafic rich micaceous quartzite.

Nisling Range Alaskite

Aplitic and Porphyritic Granite: An area near the southeast corner of the Thatch group contains abundant, angular boulders, up to 3 X 4 X 5 feet in dimensions, of a porphyritic leucogranite, a quartz monzonite in composition. In places a pegmatitic phase is developed with large flakes of muscovite and phenocrysts of orthoclase, up to 2 cm long.

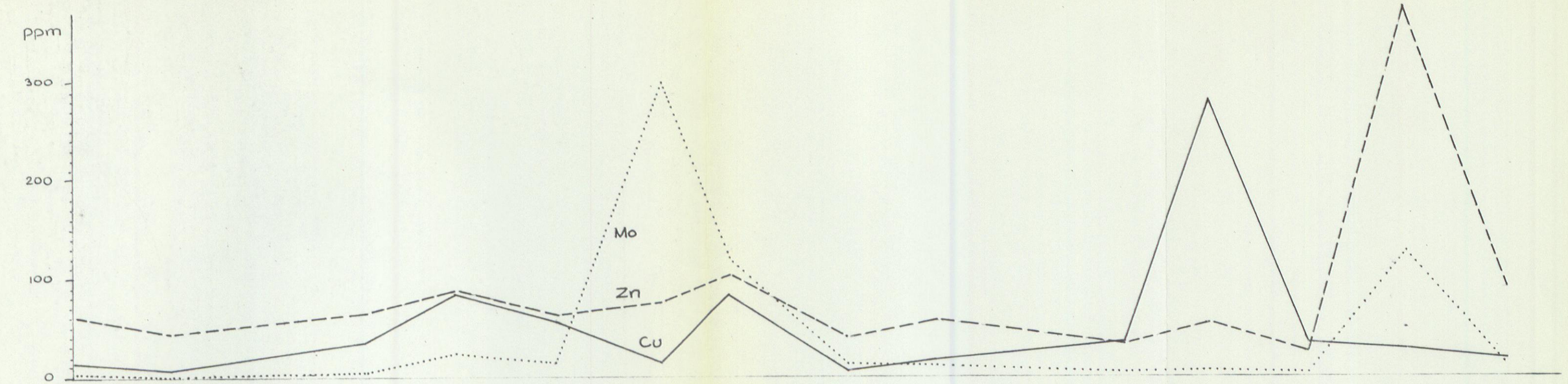
The rock is white to light grey in colour. Feldspars are largely kaolinized.

Structure

Outcrop is sparse in the area. It is difficult to define the true structure. Micaceous quartzites mapped in the south central portion of the area strike west to west-northwest and dip between 20° and 33° north. In the northeast corner of the property the rocks strike north-northwest and dip 30° east.

A porphyritic quartz-monzonite appears to intrude the Yukon Group in the centre of the property.

Section PP' gives a rough idea of the structure of the area (Figure 2).



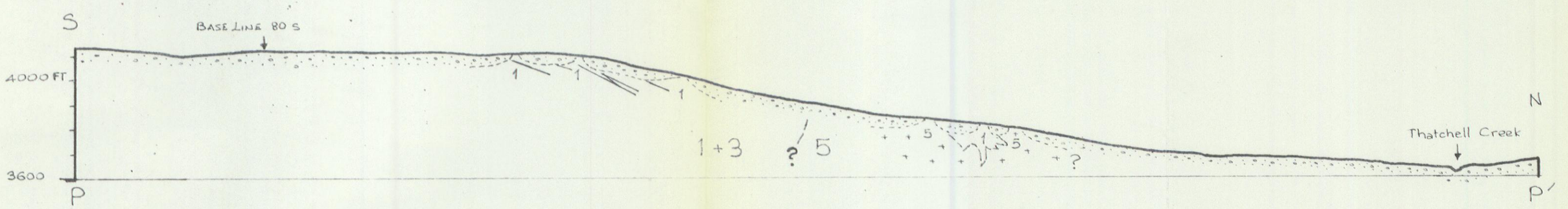


FIGURE 2

THATCH CLAIMS
GEOLOGICAL & GEOCHEMICAL SECTIONS
(LOOKING WEST)

SCALE
400 0 400 800 FT

LEGEND :

GLACIAL DEPOSITS

5 : APLITIC AND PORPHYRITIC QUARTZ-MONZONITE

3 : MARBLE

1 : MICACEOUS QUARTZITE

Metamorphism

The rocks have undergone regional metamorphism of the biotite facies. An exposure of garnet schist in the Thatch claims suggests that the metamorphism may locally reach the garnet grade.

ECONOMIC GEOLOGY

The only sulphide occurrence in the area was obtained in a small micaceous quartzite exposure 150 ft. west of L112E, 40S, near the proposed contact between the porphyritic monzonite and the Yukon Group. Sulphides, consisting mainly of pyrite and minor pyrrhotite are disseminated in the rock and occupy about 1 per cent of the volume. A sample from this exposure returned the assay values of 0.02% copper, 0.05% zinc and 0.012% molybdenum.

Two boulders of micaceous quartzite and metasiltstone in the moraine contain up to one per cent disseminated pyrrhotite and pyrite. The origin of these boulders are not known.

Limonitic alteration is locally observed in the micaceous quartzite.

SOIL GEOCHEMISTRY

Introduction

The soil sampling was done to help determine the possible presence of a copper-molybdenum mineralization.

Generally the "A" horizon is well developed throughout the claim area. This horizon is considerably thicker in the low lying areas.

An ash layer, average 5 inches thick, separates A and B horizon. This recent volcanic ash is whitish grey, generally powdery and granular. Occasionally the thickness of the ash layer reaches one foot at the bottom of the hill slopes where the ash has been transported downhill and accumulated. Frequently two ash horizons are developed in the low-lying, swampy areas.

"B" horizon is well developed and clayey, varying in colour from greyish brown to reddish brown. The clayey nature of this horizon helps in differentiating between a weathered ash which begins to form a soil of a brown colour and the proper "B" horizon. The ash layer is always sandy.

Sampling was made difficult by the presence of permafrost. In places it was necessary to dig through more than 2 feet of frozen organic material and ash to reach the "B" horizon.

Sampling Procedure

Soil samples were taken from the "B" horizon every 400 feet along the survey lines 800 feet apart and the sample numbers were marked on the station pickets. The samples were stored in heavy-duty, high wet-strength Kraft envelopes, semi-dried in the field and shipped to Whitehorse for analyses.

A total of 295 soil samples were collected in the claim group in ten man-days.

Laboratory Procedure

The samples were sent to Bondar-Clegg Laboratory in Whitehorse where they were dried and sieved at -80 mesh, and analyzed for copper, zinc and molybdenum using a Tectron, Model AA5, atomic absorption spectrometer after digestion with hot HNO_3-HCl

Standard Samples

To check on the reproducibility of the results, standard samples were included in the shipment. The standard samples were also analyzed for copper, zinc and molybdenum. The results are given below and they are within acceptable limits:

STANDARD SAMPLE 1

Sample No.	ppm Cu	% variation	ppm Zn	% var.	ppm Mo.	% va
2091	560	3	30	3	4	
2102	580	0.5	31	0	4	
2113	600	4	32	6	1	
2131	560	3	29	6	1	
2142	570	1.2	30	3	3	
2153	570	1.2	31	0	1	
2171	590	2.3	31	0	1	
2182	590	2.3	31	0	1	
MEAN	577		31		2	

STANDARD SAMPLE 2

Sample No.	ppm Cu	% variation	ppm Zn	% var.	ppm Mo.	% va
2092	230	4.4	33	0	2	
2103	220	0	33	0	1	
2121	220	0	35	5.7	ND	
2132	206	7	32	3	ND	
2143	210	5	34	3	ND	
2161	220	0	34	3	ND	
2172	230	4.4	34	3	1	
2183	220	0	31	5.7	1	
MEAN	220		33			

STANDARD SAMPLE 3

Sample No.	ppm Cu	% variation	ppm Zn	% var.	ppm Mo.	% va
2093	20	5	33	0	ND	
2111	19	0	32	3.1	2	
2122	17	11.8	30	10	ND	
2133	19	0	32	3.1	1	
2151	19	0	34	3.1	1	
2162	20	5	33	0	1	
2173	19	0	30	10	ND	
2191	17	11.8	36	10	ND	
MEAN	19		33			

STANDARD SAMPLE 4

Sample No.	ppm Cu	% variation	ppm Zn	% var.	ppm Mo.	% va
2101	24	0	58	4.3	12	21.7
2112	24	0	62	2.5	9	4.4
2123	24	0	62	2.5	8	17.5
2141	24	0	62	2.5	8	17.5
2152	22	9	60	0.8	10	6
2163	24	0	60	0.8	8	17.5
2181	23	4.3	59	2.5	10	6
2192	24	0	61	0.8	10	6
MEAN	24		60.5		9.4	

The reproducibility was not possible of the results for samples with low (less than 2-3 ppm) molybdenum content.

Statistical Treatment of Results

Histograms were drawn for each element and these are presented in Figures 3, 5 and 7. All three histograms clearly illustrate the presence of a non-anomalous and an anomalous distribution. The histogram for molybdenum is multi-modal. This is caused probably by changes in geology.

Cumulative frequency graphs were drawn for each element for the non-anomalous population. (Background values were established at the 50% and anomalous values at the 97% of the non-anomalous population and the following results were obtained (Figures 4, 6, 8):

Element	Background	Anomalous
Copper	18 ppm	50 ppm
Zinc	72 ppm	138 ppm
Molybdenum	2 ppm	14 ppm

Results

Copper

Anomaly No. 1 - the most extensive and the highest copper anomalies located in the area are in this anomalous zone. Copper anomalies in this zone extend between lines 88E and 96E, and 112E and 128E with the east extension open.

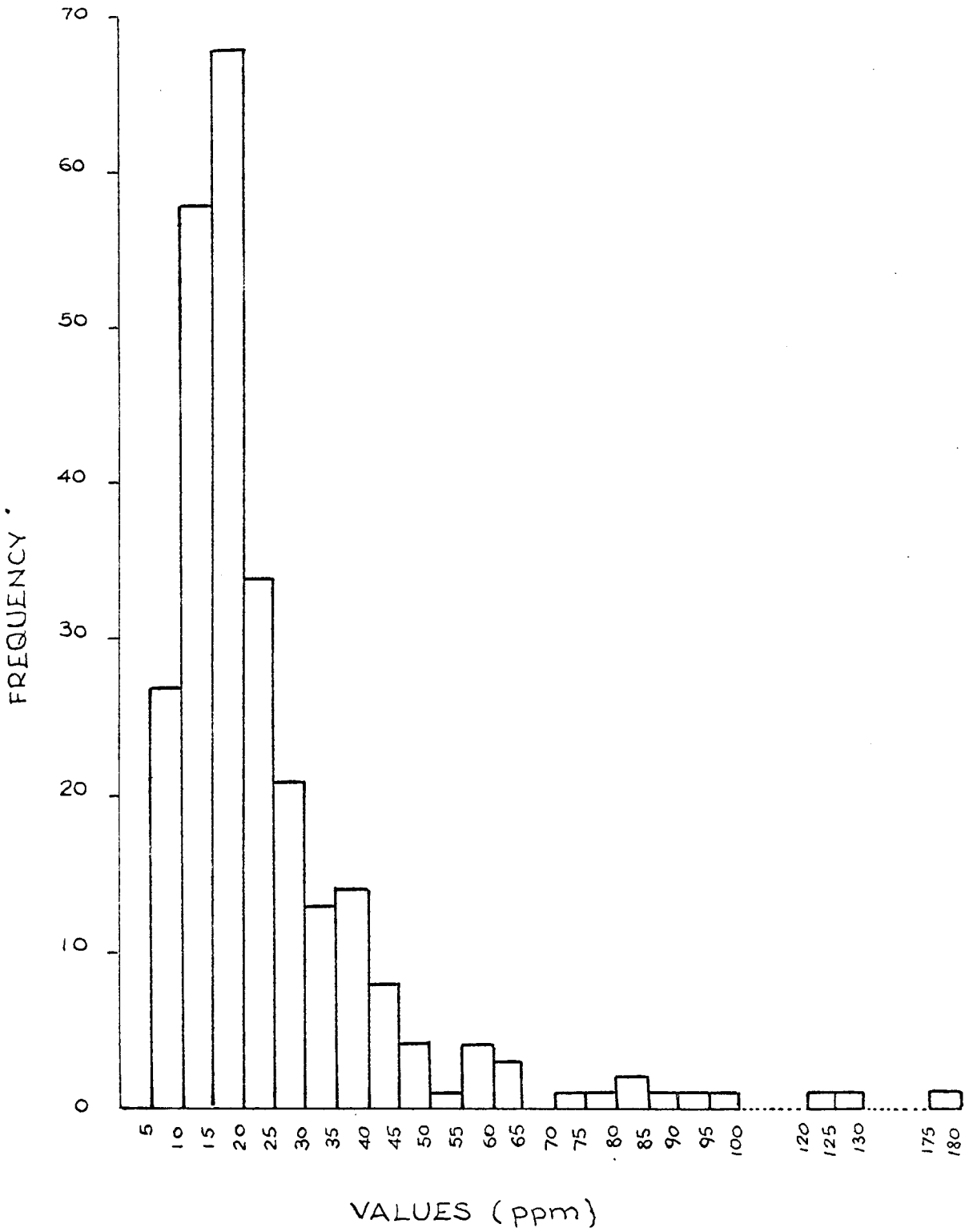


FIGURE 3

HATCH CLAIMS
FREQUENCY DISTRIBUTION
FOR
COPPER

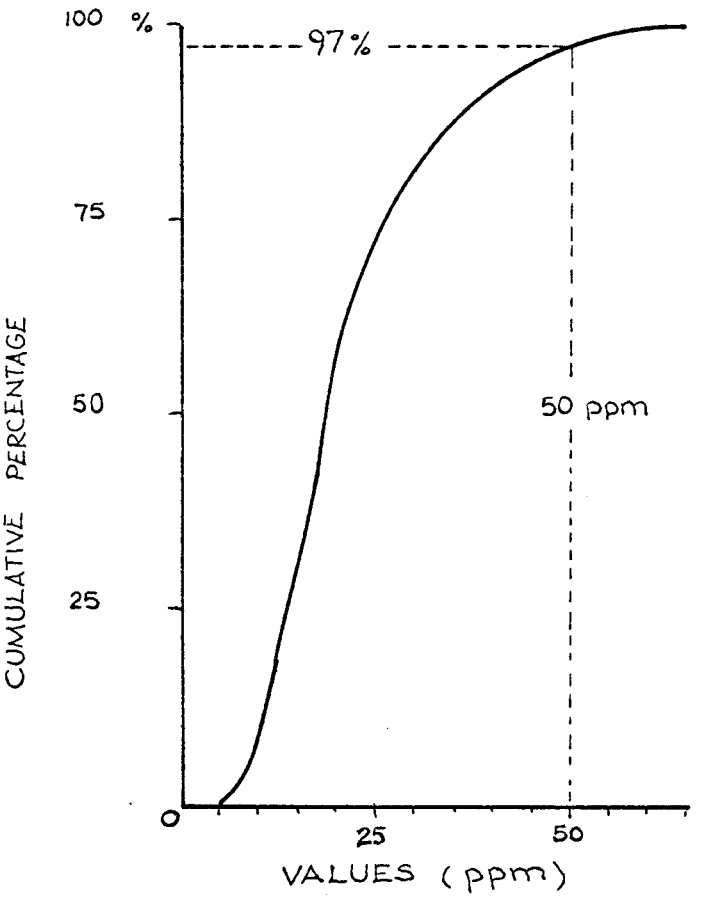


FIGURE 4

HATCH CLAIMS

CUMULATIVE FREQUENCY

GRAPH

FOR

COPPER

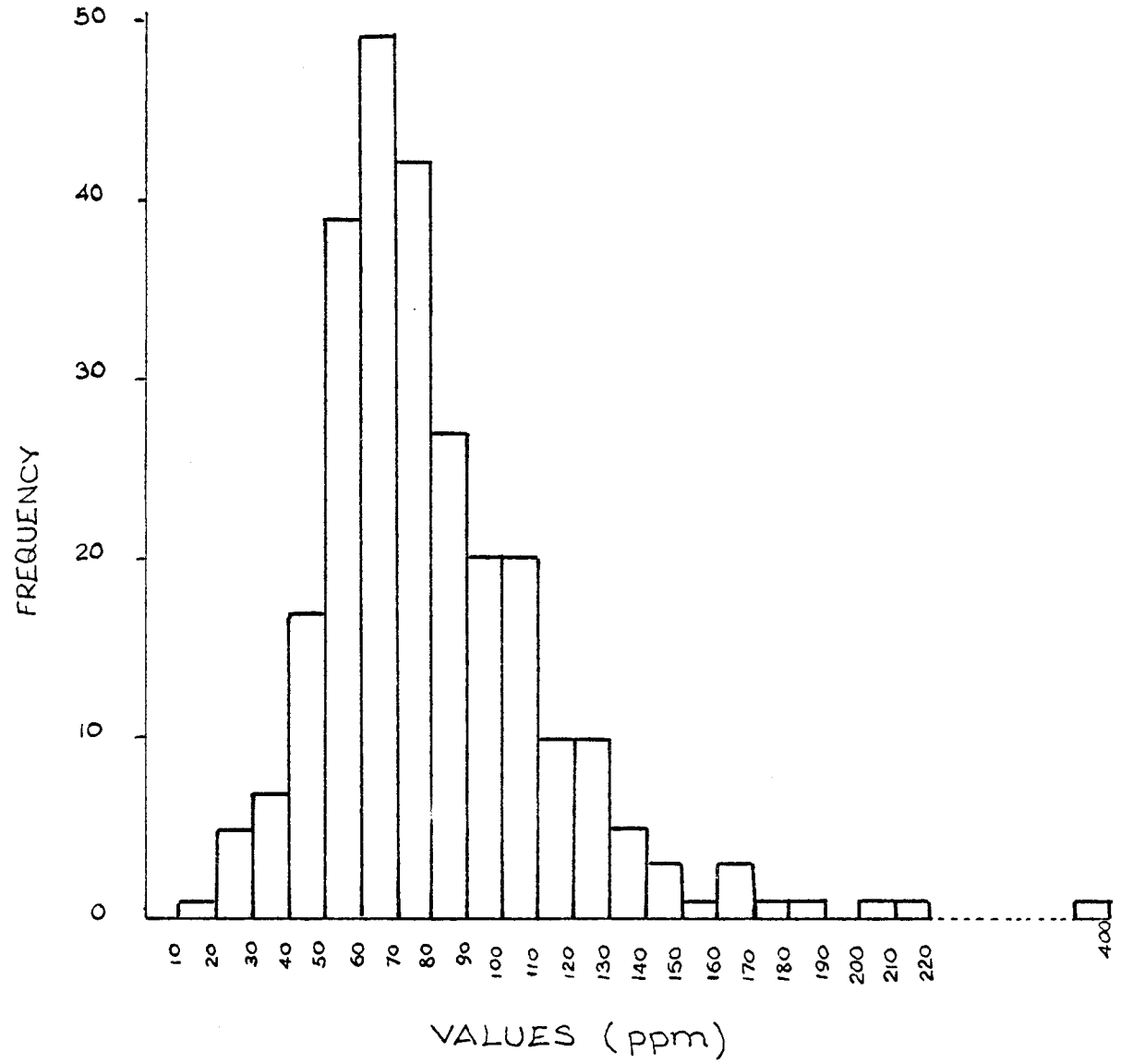


FIGURE 5

HATCH CLAIMS

FREQUENCY DISTRIBUTION

FOR

ZINC

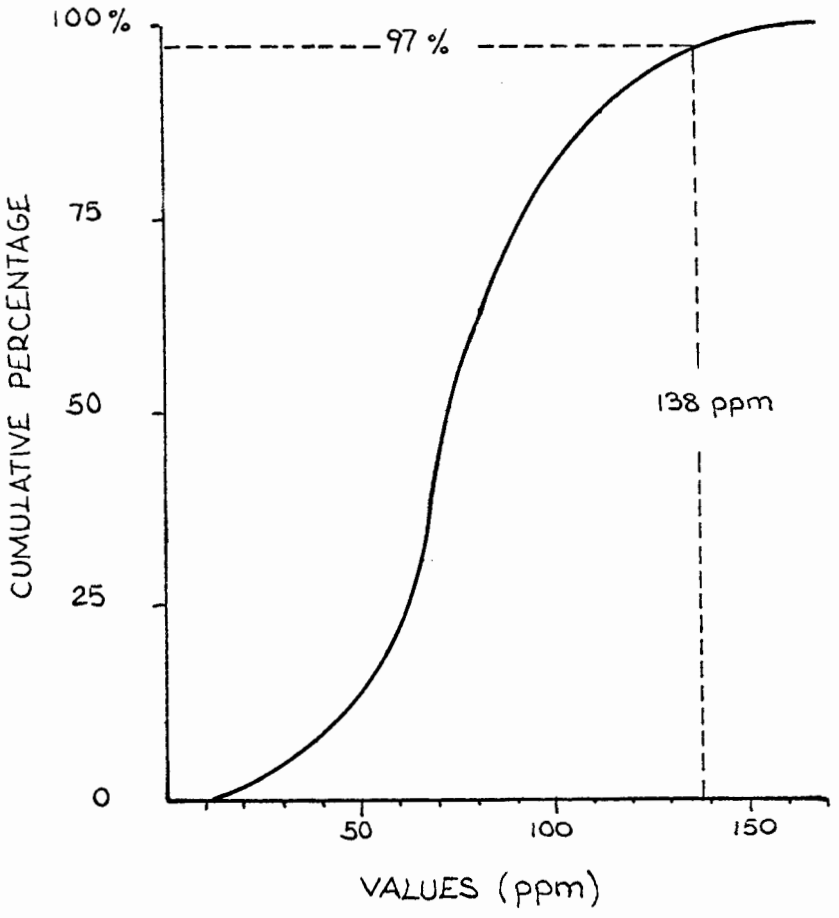


FIGURE 6

HATCH CLAIMS
CUMULATIVE FREQUENCY GRAPH
FOR
ZINC

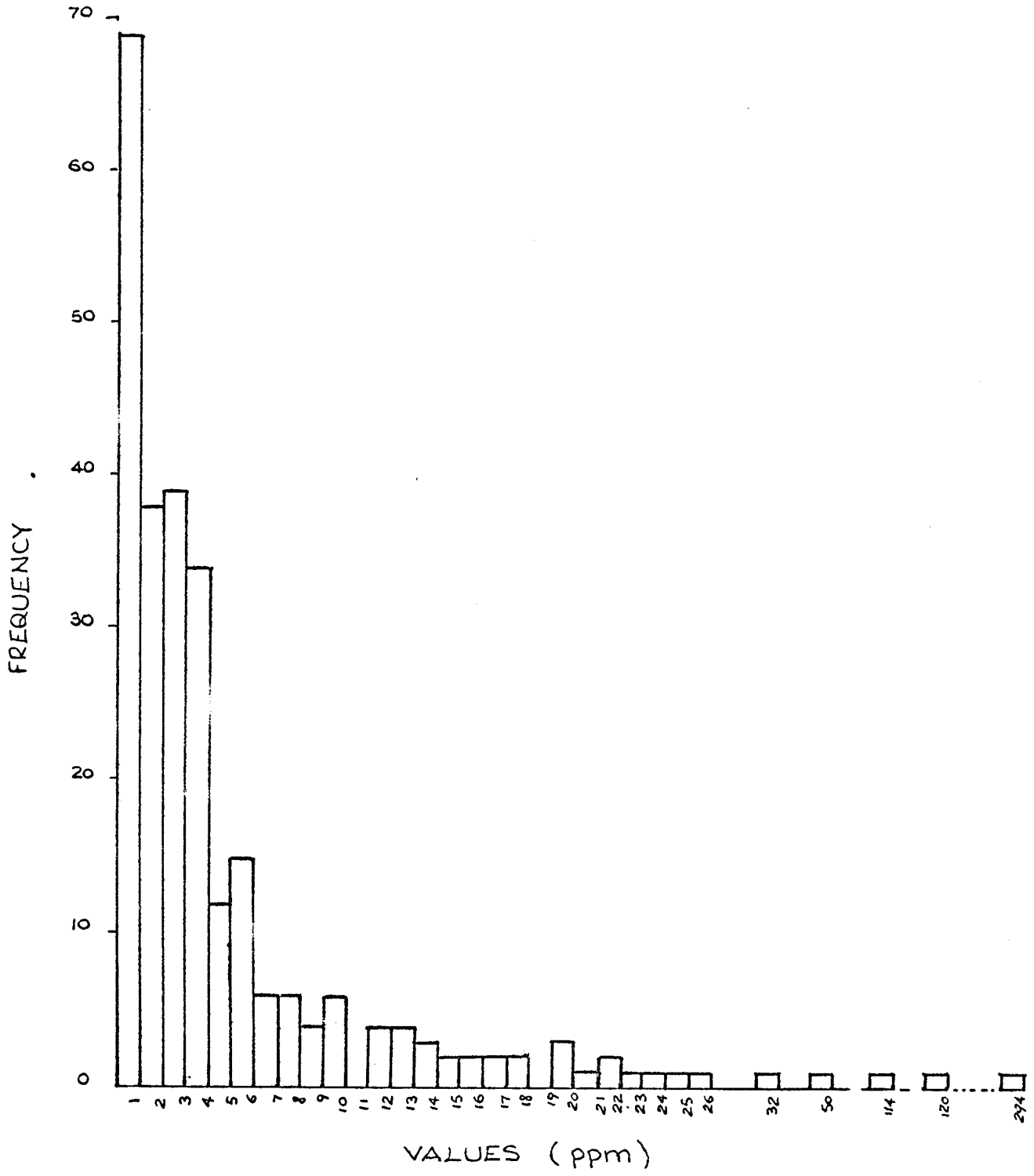


FIGURE 7

HATCH CLAIMS
FREQUENCY DISTRIBUTION
FOR
MOLYBDENUM

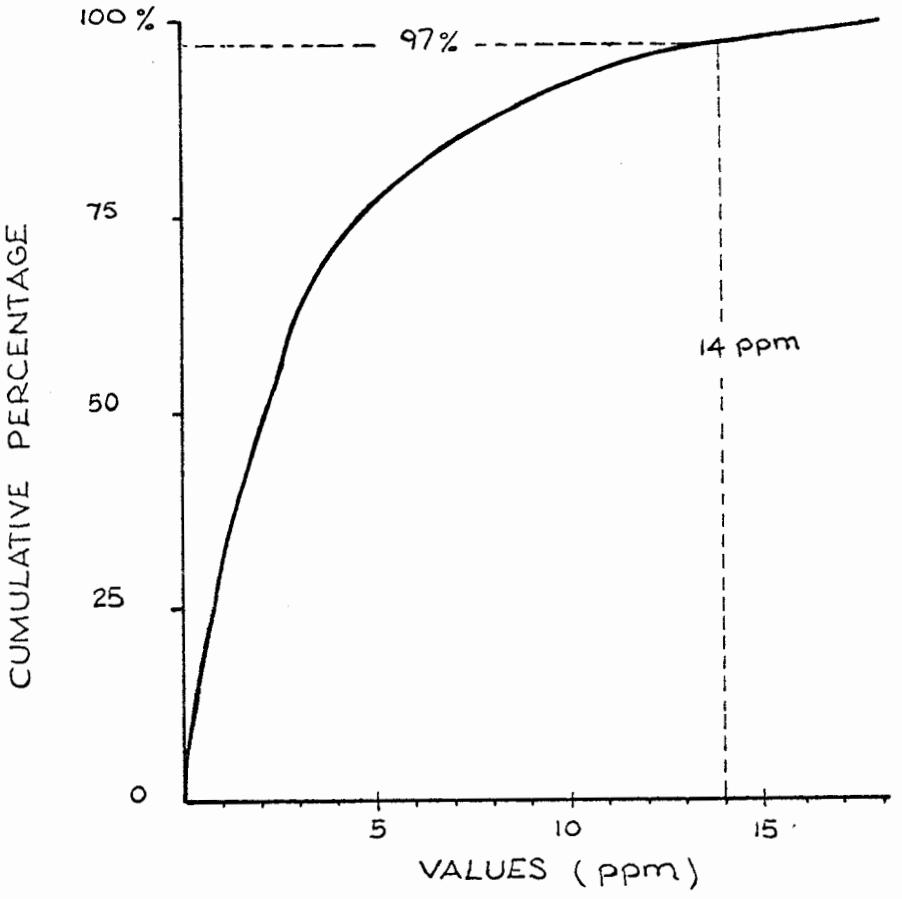


FIGURE 8

HATCH CLAIMS
CUMULATIVE FREQUENCY GRAPH
FOR
MOLYBDENUM

The anomaly between lines 88E and 96E occupies an area of about 1800 X 700 feet. Anomalous copper values were obtained in three stations on these two lines and they range from 50 ppm to 83 ppm copper. The anomalous stations on line 88E are 48S and 52S and on line 96E, 52S. About 1000 feet north of this anomalous zone a one station anomaly is located on line 88E, station 40S. The copper value in this station is 83 ppm. These two anomalous zones flank the peak of a molybdenum anomaly situated on Line 88E, station 40S. A small outcrop of limonite weathered quartz-mica schist contains 94 ppm copper in the rock-chip. The anomaly appears to be caused by trace amounts of copper in the micaceous quartzites. The anomalous zone to the east extends for 2400 feet between lines 112E and 128E. Anomalous values occur at only one station (40S on lines 112E and 120E, 44S on line 128E) on each line. Copper values range from 58 ppm to 180 ppm within the zone. An outcrop of pyritic quartzite 150 feet west of station 40S on line 88E contains 0.02% copper and the anomaly appears to be caused by this type of mineralization in the micaceous quartzite.

Copper anomaly No 2 is a southeast extension of an anomaly in the Thatch claims. It is defined by 59 ppm and 61 ppm copper values on line 96E, stations 4S and 8S, respectively. The area is partly swampy and deeply

covered by glacial moraine. The cause of the anomaly is not known.

Copper anomaly No. 3 extends between lines 112E and 120E in the southeast corner of the area. It is defined by 56 ppm and 71 ppm copper values on lines 112E and 120E, station 40S, respectively. The anomaly is open to south and occurs in a wet and moraine covered area. The cause is not exposed.

Copper anoamly in anomalous zone No. 4 is located on line 104E, 4N and is a one station anomaly with a copper value of 99 ppm. A zinc anomaly is coincident with this anomaly. The anomaly occurs in a moraine covered area.

Copper anomaly in zone No. 6 is situated on Line 128E, 12N. This is a one station anomaly which is open to east. It is situated in an area of micaceous quartzite with interbedded marble. A chip samples from an outcrop immediately to the south does not substantiate this anomaly.

ZINC

Zinc anomalies are all one station anomalies occupying limited areas.

The highest zinc value in the area was obtained on Line 128E, station 44S.

A zinc value of 400 ppm at this position defines a zinc anomaly at the east end of anomalous zone No. 1. The zinc anomaly is coincident with a copper anomaly. No exposure is present in the area. The anomaly is open to the east. It might be caused by pyrite mineralization in the micaceous quartzites.

The zinc anomaly in zone 4 is located on line 112E station 4N and is a one-station anomaly of 150 ppm zinc with coincident copper. It occurs in a moraine covered area.

The zinc anomaly in zone 6 is open to the east and is situated on line 128E, 12N. It is defined by a zinc value of 180 ppm. An outcrop of micaceous quartzite immediately south contains 230 ppm Zn in the rock-chip.

Zinc anomaly in zone 7 is a one-station anomaly defined by a zinc value of 186 ppm on line 72E, 48S and occurring in moraine covered area.

Molybdenum

The original molybdenum anomaly located in the southern part of the Thatch claims extends southeast into the Hatch claims, in anomalous zone No. 1.

The areal extent of the molybdenum anomaly as defined by 15 ppm contour is 5700 X 1600 feet in the Hatch group, between lines 72E and 120E. Peak values of 294 ppm and 114 ppm molybdenum occurs within this zone on line 88E, station 44S and line 112E, station 40S, respectively.

High molybdenum concentrations appear to be located in a micaceous quartzite near its contact with an aplitic and porphyritic quartz monzonite. A pyritic micaceous quartzite exposure 150 feet west of station 40S on line 112E contains 0.012% molybdenum in a rock sample.

Rock-chip samples of quartz monzonite from stations 30S on line 88E and 31S on line 96E contain 18 and 19 ppm molybdenum, respectively, indicating a source for molybdenum anomalies in this area.

A molybdenum anomaly in zone 2 extends from the Thatch claims to station 12S on line 96E. A peak value of 124 ppm molybdenum was obtained in the Thatch claims in this anomalous zone which is located in a swampy area where the thickness of the glacial moraine appears to be in excess of 100 feet.

A one-station molybdenum anomaly was located in anomalous zone 5, on line 16E, station 40S. A molybdenum value of 18 ppm was obtained at this locality.

Discussion

Copper and zinc anomalies in the area are limited in extent and appear to be related with pyrite and trace amounts of copper in the micaceous quartzite.

Molybdenum anomalies are of the primary importance. Although the peak molybdenum values appear to be related with sulphide mineralizations in micaceous quartzites, probably intruded by an aplitic and porphyritic quartz-monzonite, molybdenum values are also

significantly high over the probable quartz-monzonite intrusive, despite a considerable thickness of glacial moraine (in excess of 100 feet).

Some coincident copper exists over the area of quartz mica schist near the monzonite contact. No coincident copper was obtained over the possible area of the quartz monzonite.

Molybdenum anomalies in the Thatch and Hatch claims are important enough to justify further exploration work.

GROUND MAGNETOMETER SURVEY

Introduction

A magnetometer survey was conducted in the Thatch claims 1-8, 15-22 and 29-36, and the Hatch claims 1-36 to help understand the structure of the area deeply covered by the moraine. A total of 35.0 line-miles of survey was completed at a rate of 3.9 line-miles per man per day.

Instrument

A geometrics model GM-816 magnetomer was used. The instrument was carried on a staff at all times and a sensitivity of one gamma was achieved.

Magnetometer GM-816 measures the earth's total magnetic field.

Procedure

Base stations were established along Base line "O" and base line 60S. Measurements were taken every 200 feet along survey lines 800 feet apart. Care was taken to return to a base station within 90 minutes in order to measure diurnal variations. Values were corrected for diurnal variations.

Results were plotted on a map at one inch to four hundred feet scale. Contouring was done at 100-gamma intervals.

Results

A background vaue of 57,900 gammas was obtained.

The most prominent magnetic anomaly was obtained between lines 56E and 112E and stations 34S and 44S. This is an elongated anomaly trending WNW-ESE. Magnetic reliefs of 1100 to 1670 gammas were obtained within this anomalous zone which appears to parallel the contact zone between quartz-monzonite and micaceous quartzite. The elongated shape and the high magnetic relief suggest a high concentration of pyrrhotite and/or magnetite along a lithological horizon. Trace amount of pyrrhotite was observed in an exposure 150 feet west of station 40S on line 112E.

A second elongated magnetic anomaly, about 2600 feet long was located between station 20S on line 88E and station 30S on line 104E. A magnetic relief of about 1000 gammas was obtained in this anomalous zone which appears to correspond also to a zone of concentration

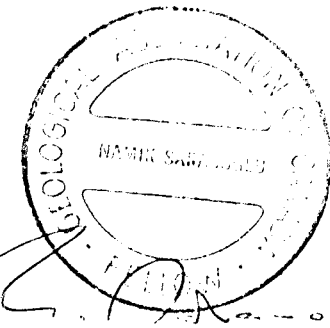
of pyrrhotite and/or magnetite.

Several isolated anomalies of little magnetic relief and areal extent are present in the west, south and central parts of the area as well over the probable quartz monzonite intrusive as Yukon Group formations.

RECOMMENDATIONS

Coincident high magnetic anomaly and high molybdenum anomaly between lines 72E and 112E suggest that the source of the molybdenum anomaly is in the bedrock generally deeply covered by the glacial moraine. In only one small exposure of micaceous quartzite a molybdenum value of 0.012% Mo was obtained. Both magnetic and molybdenum anomalies appear to be situated near the contact of an aplitic and porphyritic quartz-monzonite which occurs only in a limited area in the central portion of the group and which itself appears to give rise to molybdenum anomalies.

It is possible that the molybdenum was introduced into the quartzites by the quartz monzonite but high anomalous values over the possible area of monzonite and further north in the Thatch claims where the glacial moraine is as much as 100 feet thick should be further explored by IP surveys and diamond drilling. IP profiles should be established between lines 56E and 120E and stations 10N to 52S on these lines prior to drilling.



SUBMITTED BY _____

N. Saracoglu, M.Sc.

October 4th, 1973

TORONTO

APPENDIX I

CLAIM DATA

Ref No. on Map	Claims		Tags	Location	Staker	Date Staked
25	Hatch	1	Y67644-1	14+00E,26+50S	R. Morin	Oct 22/72
		2	Y67645-1	" "	" "	" "
26		1	Y67644-2	13+23E,39+70S	" "	" "
		2	Y67645-2	" "	" "	" "
		3	Y67646-1	" "	" "	" "
		4	Y67647-1	" "	" "	" "
27		3	Y67646-2	13+15E,54+40S	" "	" "
		4	Y67647-2	" "	" "	" "
		5	Y67648-1	" "	" "	" "
		6	Y67649-1	" "	" "	" "
28		5	Y67648-2	12+80E,69+20S	" "	" "
		6	Y67649-2	" "	" "	" "
29		7	Y67650-1	33+00E,24+30S	" "	" "
		8	Y67651-1	" "	" "	" "
30		7	Y67650-2	36+50E,36+70S	" "	" "
		8	Y67651-2	" "	" "	" "
		9	Y67652-1	" "	G. Grondin	" "
		10	Y67653-1	" "	" "	" "
31		9	Y67652-2	40+40E,50+65S	" "	" "
		10	Y67653-2	" "	" "	" "
		11	Y67654-1	" "	" "	" "
		12	Y67655-1	" "	" "	" "
32		11	Y67654-2	42+40E,65+40S	" "	" "
		12	Y67655-2	" "	" "	" "
33		13	Y67656-1	70+80E,28+00S	" "	" "
		14	Y67657-1	" "	" "	" "
34		13	Y67656-2	72+18E,43+75S	" "	" "
		14	Y67657-2	" "	" "	" "
		15	Y67658-1	" "	" "	" "
		16	Y67659-1	" "	" "	" "
35		15	Y67658-2	71+70E,58+60S	" "	" "
		16	Y67659-2	" "	" "	" "
		17	Y67660-1	" "	R. Laramee	" "
		18	Y67661-1	" "	" "	" "
36		17	Y67660-2	74+60E,79+20S	" "	" "
		18	Y67661-2	" "	" "	" "
37		19	Y67662-1	87+20E,57+20S	" "	" "
		20	Y67663-1	" "	" "	" "
38		19	Y67662-2	101+40E,55+00S	" "	" "
		20	Y67663-2	" "	" "	" "
		21	Y67664-1	" "	" "	" "
		22	Y67665-1	" "	" "	" "

Ref. No. on Map	Claims	Tags	Location	Staker	Date Staked
39	Hatch 21	Y67664-2	118+65E,52+80S	R. Laramee	Oct 22/72
	22	Y67665-2	" "	" "	" "
	23	Y67666-1	" "	" "	" "
	24	Y67667-1	" "	" "	" "
40	23	Y67666-2	131+65E,54+25S	" "	" "
	24	Y67667-2	" "	" "	" "
41	25	Y67668-1	86+90E,21+00S	R. Voisine	" "
	26	Y67669-1	" "	" "	" "
42	25	Y67668-2	101+50E,21+00S	" "	" "
	26	Y67669-2	" "	" "	" "
	27	Y67670-1	" "	" "	" "
	28	Y67671-1	" "	" "	" "
43	27	Y67670-2	115+70E,19+45S	" "	" "
	28	Y67671-2	" "	" "	" "
	29	Y67672-1	" "	" "	" "
	30	Y67673-1	" "	" "	" "
44	29	Y67672-2	128+00E,24+15S	" "	" "
	30	Y67673-2	" "	" "	" "
45	31	Y67674-1	88+00E,0+00	M. Curry	" "
	32	Y67675-1	" "	" "	" "
46	31	Y67674-2	102+60E,1+00N	" "	" "
	32	Y67675-2	" "	" "	" "
	33	Y67676-1	" "	" "	" "
	34	Y67677-1	" "	" "	" "
47	33	Y67676-2	116+90E,0+70N	" "	" "
	34	Y67677-2	" "	" "	" "
	35	Y6767801	" "	" "	" "
	36	Y67679-1	" "	" "	" "
48	35	Y67678-2	131+85E,1+38N	" "	" "
	36	Y67679-2	" "	" "	" "

APPENDIX II

ROCK DESCRIPTIONS AND GEOCHEMICAL ANALYSES

Sample No.	Name	Location	Description	Values in p Cu	Zn	Mo
NS 1	Micaceous quartzite	L40E,66S	light brown, f-grd., well bedded	19	58	13
NS 2	Marble	L80E,50S	white, very weathered, crumbly	10	21	11
NS 3	Micaceous quartzite	L80E,52S	limonitic weathering phyllitic appearance	39	40	3
NS 4	Marble	L80E,54S	light grey-whitish honeycombed, highly weathered	9	18	8
NS 5	Pegmatite	L88E,30S	pegmatitic phase of a porphyritic quartz monzonite, with large flakes of muscovite and phenocrysts of orthoclase	17	30	18
NS 6	Micaceous quartzite	L88E,31S	dk.grey, metasiltstone very fine grained,veined with quartz.	12	79	14
NS 7	Micaceous quartzite	L88E,43S	quartz rich, little mica massive	16	99	14
NS 8	Biotite-quartz schist (Phyllitic micaceous quartzite)	L88E,50S	fine grained, well schisted, no visible sulphides but highly weathered (limonitic weathering)	94	174	17
NS 9	Micaceous quartzite	L128E,10N	finely bedded, dark brown mafic rich, a metasiltstone	34	230	4

Sample No.	Name	Location	Description	Values in pp Cu	Zn	Mo
NS 10	Marble	300' East of L120E,14N	Sugary textured,light brown, very weathered, crumbly	8	16	7
NS 11	Porphyritic Alaskite	L96E,31S	leucocratic quartz-monzonite, white, largely kaolinized, quartz porphyroblasts.	12	24	19
NS 12	Alaskite	L112E,10N	Med-grd.,quartz monzonite boulder in the moraine	12	95	2
NS 13	Metasiltstone	L112E,19N	f-grd., pyrite-rich metasiltstone boulder in the moraine	30	95	ND
NS 14	Marble	400'East of L80E,60S	whitish-grey,very weathered, crumbly	56	46	10
NS 15	Alaskite	L16E,26S	a med-grd., leucocratic quartz-monzonite boulder in the moraine	14	82	9
NS 16	Alaskite	L16E,26S	as above but more dioritic in composition in the moraine.	9	70	ND

APPENDIX III

STATISTICAL DATA

Line Cutting

Total line miles cut	20.8
Man/days line cutting	40
Progress/man/day (line-miles)	0.52

Geological Mapping

Total line-miles mapped	20.8
Man-day mapping	5
Progress/man/day (line-miles)	4.16

Soil Sampling

No. of soil samples collected	295
Man-days soil sampling	10
Progress/man/day (No. of samples)	30
No. of analyses	885
No. of rock-chip samples collected	16
No. of analyses	48
No. of rock samples collected	2
No. of assays	6

Ground Magnetometer Survey

Total line-miles surveys	35.0
Man/days surveying	9
Progress/man/day (line-miles)	3.9

THATCH CLAIMS

Thatchell Creek

HATCH 31 Y 67674
HATCH 33 Y 67676
HATCH 35 Y 67678
HATCH 32 Y 67675
HATCH 34 Y 67677
HATCH 36 Y 67679
HATCH 25 Y 67668
HATCH 27 Y 67670
HATCH 29 Y 67672
HATCH 26 Y 67669
HATCH 28 Y 67671
HATCH 30 Y 67673
HATCH 2 Y 67645
HATCH 1 Y 67644
HATCH 7 Y 67650
HATCH 8 Y 67651
HATCH 13 Y 67656
HATCH 14 Y 67657
HATCH 9 Y 67652
HATCH 10 Y 67653
HATCH 4 Y 67647
HATCH 3 Y 67646
HATCH 16 Y 67659
HATCH 15 Y 67658
HATCH 19 Y 67662
HATCH 23 Y 67666
HATCH 21 Y 67664
HATCH 11 Y 67654
HATCH 12 Y 67655
HATCH 22 Y 67665
HATCH 24 Y 67667
HATCH 6 Y 67649
HATCH 5 Y 67648
HATCH 18 Y 67661
HATCH 17 Y 67660
HATCH 20 Y 67663

BASE LINE 0+00
BASE LINE 60+00 S

L 0 L 8E L 16E L 24E L 32E L 40E L 48E L 56E L 64E L 72E L 80E L 88E L 96E L 104E L 112E L 120E L 128E

No. 1601: 0.03 % Cu, 0.04 % Zn, 0.003 % Mo
No. 1602: 0.02 % Cu, 0.05 % Zn, 0.012 % Mo

1+3

SCALE : 800 400 0 400 800 FT.

TABLE OF FORMATIONS

RECENT	GLACIAL DEPOSITS	6
TERTIARY	NISLING RANGE ALASKITE Aplitic quartz-monzonite porphyritic quartz-monzonite	5
PALEOZOIC	YUKON GROUP Marble	3
	Micaceous quartzite	1

SYMBOLS

- FLOAT (MINERALIZED)
- OUTCROP
- STRIKE & DIP
- GEOLOGICAL CONTACT
- KETTLE LAKE
- MORAINIC RIDGE
- STREAM
- SWAMP
- CLAIM POST, CLAIM LINE
- MINERALIZATION SITE
- LINE OF SECTIONS

ROCK SAMPLE — SAMPLE No. — COPPER (ppm) — ZINC (ppm) — MOLYBDENUM (ppm)

30°32' M N T N

CANADIAN OCCIDENTAL PETROLEUM LIMITED
MINERALS DIVISION

HATCH CLAIMS 1-36

Aishihik Lake area Y.T. 115-H-12

GEOLOGY

DATA BY : N.SARACOGLU – July 1973

FIG. 9

THATCH CLAIMS

Thatchell Creek

HATCH 1 Y 67644
HATCH 2 Y 67645
HATCH 3 Y 67646
HATCH 4 Y 67647
HATCH 5 Y 67648
HATCH 6 Y 67649
HATCH 7 Y 67650
HATCH 8 Y 67651
HATCH 9 Y 67652
HATCH 10 Y 67653
HATCH 11 Y 67654
HATCH 12 Y 67655
HATCH 13 Y 67656
HATCH 14 Y 67657
HATCH 15 Y 67658
HATCH 16 Y 67659
HATCH 17 Y 67660
HATCH 18 Y 67661
HATCH 19 Y 67662
HATCH 20 Y 67663
HATCH 21 Y 67664
HATCH 22 Y 67665
HATCH 23 Y 67666
HATCH 24 Y 67667
HATCH 25 Y 67668
HATCH 26 Y 67669
HATCH 27 Y 67670
HATCH 28 Y 67671
HATCH 29 Y 67672
HATCH 30 Y 67673
HATCH 31 Y 67674
HATCH 32 Y 67675
HATCH 33 Y 67676
HATCH 34 Y 67677
HATCH 35 Y 67678
HATCH 36 Y 67679

No. 1601
0.03 % Cu
0.06 % Zn
0.005 % Mo
Po, Py

No. 1602
0.025 % Cu
0.05 % Zn
0.002 % Mo
Py, Po

BASE LINE 0+00 S

EXPLANATION

SAMPLE No → 2034 24 ← Cu (ppm)
Mo (ppm) 3 23 Zn (ppm)
Probably anomalous
Anomalous
Soil Geochemistry

SAMPLE No NS3 39 ← Cu (ppm)
Mo (ppm) 3 40 Zn (ppm)
Probably anomalous
Anomalous
Rock Geochemistry

SWAMP
STREAM
CLAIM POST, CLAIM LINE
4500 CONTOURS (ELEVATION)

	Background	Anomalous
Cu	18 ppm	+ 50 ppm
Zn	72 "	+ 138 "
Mo	2 "	+ 14 "

TN MN 30°32'

Scale: 800 400 0 400 800 FT

CANADIAN OCCIDENTAL PETROLEUM LIMITED
MINERALS DIVISION

HATCH CLAIMS 1-36

Aishihik Lake area, Y.T. 115-H-12

GEOCHEMISTRY

DATA BY : N. SARACOGLU - July 1973

FIG. 10

THATCH CLAIMS

BASE LINE 0+00

BASE LINE 60+00 S

L 0 L 8E L 16E L 24E L 32E L 40E L 48E L 56E L 64E L 72E L 80E L 88E L 96E L 104E L 112 E L 120E L 128 E

0+00 8+00E 16+00E 24+00E 32+00E 40+00E 48+00E 56+00E 64+00E 72+00E 80+00E 88+00E 96+00E 104+00E 112+00E 120+00E 128+00E

60S

No. 160Z
0.03 % Cu
0.04 % Zn
0.003 % Mo

No. 160Z
0.02 % Cu
0.05 % Zn
0.012 % Mo

SCALE :
800 400 0 400 800 FT.

EXPLANATION

APLITIC & PORPHYRITIC QUARTZ-MONZONITE	5
YUKON GROUP :	
MARBLE	3
MICACEOUS QUARTZITE	1
KETTLE LAKE	
SWAMP	
STREAM	
MINERALIZATION SITE	×
FLOAT (MINERALIZED)	⊗
GEOCHEMICAL CONTOURS	
COPPER (ppm)	50
ZINC "	150
MOLYBDENUM "	10

ANOMALY NUMBER ● 4

30°32' M N T N

CANADIAN OCCIDENTAL PETROLEUM LIMITED
MINERALS DIVISION

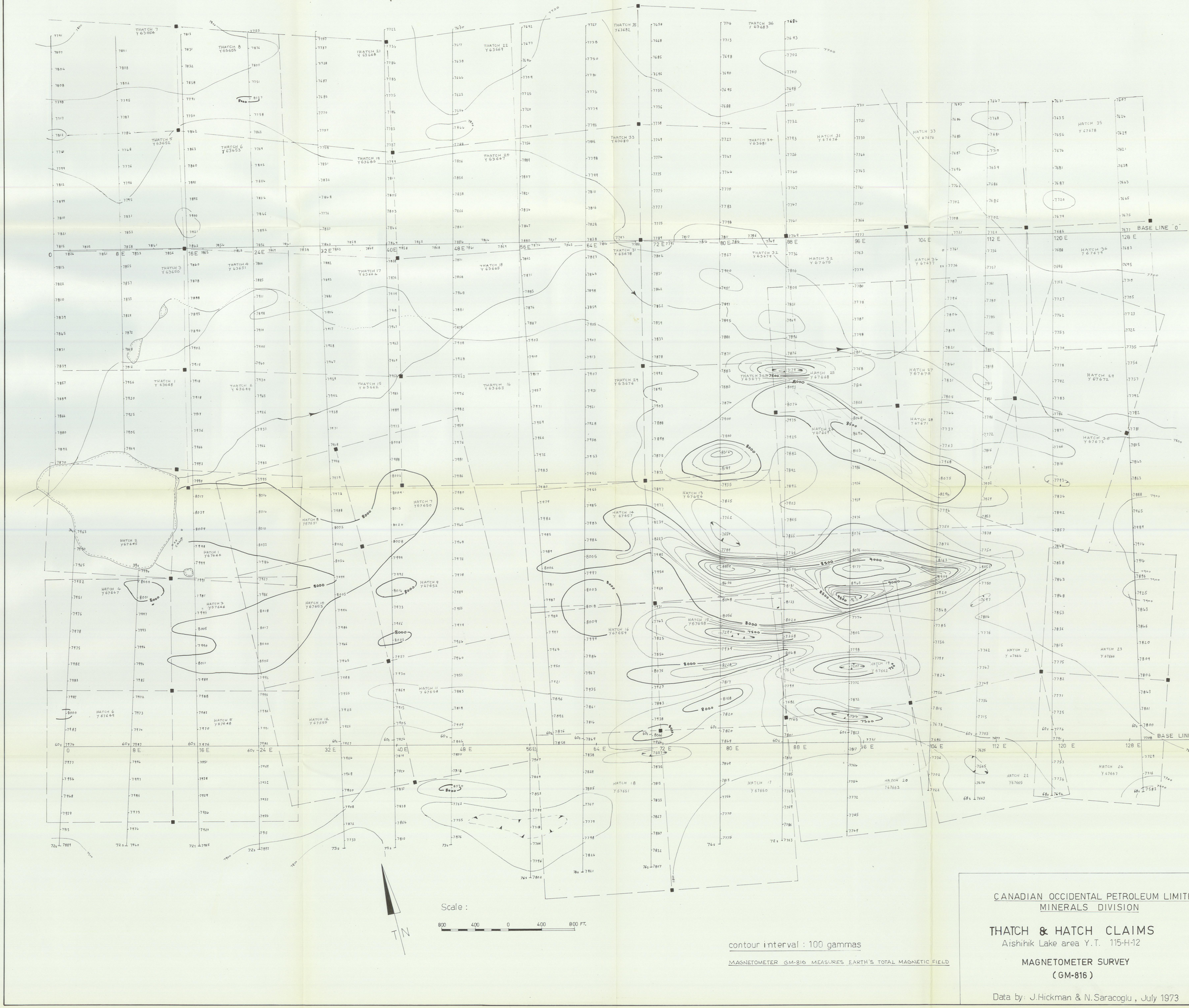
HATCH CLAIMS 1-36

Aishihik Lake area Y.T. 115-H-12

GEOLOGY AND GEOCHEMISTRY
(compilation)

DATA BY N.SARACOGLU - September 1973

FIG. II



CANADIAN OCCIDENTAL PETROLEUM LIMITED
MINERALS DIVISION

THATCH & HATCH CLAIMS

Aishihik Lake area Y.T. 115-H-12

MAGNETOMETER SURVEY
(GM-816)

Data by: J.Hickman & N.Saracoglu, July 1973

FIG. 12