

4132

COMINCO T.D.

EXPLORATION

WESTERN DISTRICT

N.T.S. 82 F/10W

GEOCHEMICAL SURVEY

ON THE CRAW MINERAL CLAIMS

CRAWFORD BAY AREA

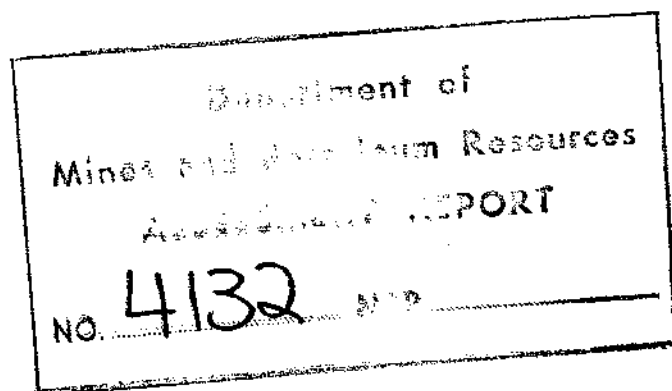
SLOCAN MINING DISTRICT, BRITISH COLUMBIA

January 31, 1973

Nicholas L. Szabo

PERIOD OF WORK

SEPTEMBER 1, 1972 TO JANUARY 15, 1973



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GEOCHEMICAL SURVEY
ON THE CRAW MINERAL CLAIMS

SUMMARY

A total of 530 soil samples were collected on the Craw group, and were analyzed for copper, lead, zinc and silver. A large coincident lead, zinc and silver anomaly was outlined on the property.

INTRODUCTION

The Craw claims are located in southeast British Columbia on the shore of Kootenay Lake. The group is 8 miles south of Riondel and is approximately 25 miles northeast of Nelson, B.C. The group consists of 31 claims, which were staked in order to protect an area of known mineralized boulder occurrence.

GEOLOGY

The Craw claims from west to east are underlain by the Hamill, Badshot, and the Lardeau formations of Precambrian and Cambrian age. The formations strike north-northeast and dip moderately to the west in the northern claim area and strike northeast in the southern claim area. The Hamill Formation in the area consists of pink quartzites and quartz mica schists, the Badshot is a white, generally coarse grained limestone, and the Index Formation in the area consists of black siltstones and argillites. The area is complex structurally and four days of mapping concurrent with the soil survey was not sufficient to clarify the structural picture.

GEOCHEMICAL SURVEY

Method

The soil survey was performed by A.J. Boronowski, R. Musser, and W. Hagedorn under the direction of the writer. Lines were spaced at 400' intervals and samples were collected along the lines at 200' intervals. Lines were run by pace and compass, and with few exceptions all samples were collected from the B₁ horizon.

Sample Preparation and Analysis

All samples were oven dried and sieved. The -80 mesh fraction was then analyzed for Cu , Pb , Zn and Ag . Analysis was by atomic absorption using a hot nitric acid attack to bring ions into solution. Statistical analysis gave the following threshold ($X + 2s$) values: $\text{Cu}_t = 64$ ppm, $\text{Pb}_t = 140$ ppm, and $\text{Ag}_t = 1.4$ ppm. No threshold could be derived for Zn as most of the samples were considered to be anomalous.

DATA PRESENTATION

Plate 1	Location Map Craw Claim	1" = 4 Miles
Plate 2	Copper Geochemistry	1" = 1000'
Plate 3	Lead Geochemistry	1" = 1000'
Plate 4	Zinc Geochemistry	1" = 1000'
Plate 5	Silver Geochemistry	1" = 1000'

...continued...

Results

All metals with the exception of copper outline a large anomalous area on the property. The anomaly is elongated roughly in a north-south direction and is fairly typical of a glacial dispersion fan. The magnitude of both the lead and zinc anomalies is high with zinc being roughly three times as high as the lead. The northern extension of the anomaly is roughly coincident with the known northern limit of the mineralized boulder-train, but the regularity of the anomaly makes it unlikely that the high results are due to metals being weathered and dispersed from these mineralized boulders. The anomaly, although much broader, generally overlies what is thought to be the Badshot limestone.

CONCLUSIONS

The soil geochemical survey outlined a large significant anomaly in all metals except copper. The soils on the Craw Group have developed over a sandy silty lodgement till, and the anomaly is typical of anomalies resulting from glacial dispersion of particles from a mineralized source.

Submitted by N. L. Szabo
N.L. Szabo,
Geochemist
West. Dist., Exploration

Endorsed for
Release by W.T. Irvine
W.T. Irvine, P. Eng.
Manager,
Western District,
Exploration

ATTACHMENTS

Plate 1	Location Map showing Craw Group	1" = 4 Miles
Plate 2	Copper Geochemistry	1" = 1000'
Plate 3	Lead Geochemistry	1" = 1000'
Plate 4	Zinc Geochemistry	1" = 1000'
Plate 5	Silver Geochemistry	1" = 1000'
Exhibit "A"		

DISTRIBUTION

Administration
Western District
DWH
NLS

NLS/mjw

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of

STATUTORY DECLARATION RELATING
TO EXPENDITURES ON THE GEOCHEMICAL
SURVEY ON THE CRAW GROUP.
SLOCAN MINING DISTRICT.

I, **NICHOLAS LOUIS SZABO**
of **City of Vancouver**

in the Province of British Columbia, do solemnly declare that

- (1) Copies of a report regarding a geochemical survey on certain claims situated in the Slocan Mining Division are being filed with the Mining Recorder in Vancouver.
- (2) Attached hereto, and marked with the letter "A" upon which I have signed my name at the time of declaring hereof, is a Statement of Expenditures incurred in connection with the geochemical survey of the said claims showing in addition the period during which those making the said survey performed their work.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the **City**
of **Vancouver**, in the
Province of British Columbia, this **20th**
day of **February** **1973**, A.D.

Nicholas L Szabo

Joan Paul SUB-MINING RECORDER
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

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EXPLORATION

WESTERN DISTRICT

EXHIBIT "A"

COST PER GEOCHEMICAL SAMPLE

CRAW GROUP

CRAWFORD BAY AREA

SLOCAN MINING DISTRICT

N.T.S. 82 F/10W

116° 49'W, 49° 38'N

1. Report writing and field supervision by N.L. Szabo, Project Geologist - 2 man days at \$80.00	\$ 160.00
2. Drafting - 2 man days at \$45.00	\$ 90.00
3. R. Haggadorn - 5 man days at \$25.00	\$ 125.00
4. A. Boronowski, Geologist - 10 man days at \$62.50	\$ 625.00
5. R. Musser, Technician - 10 man days at \$52.20	\$ 522.00
6. Analytical Cost - \$2.15 X 530	\$1,139.00
7. Truck Rental and Gas	\$ 122.00
8. Domicile	\$ 409.00
	<hr/>
TOTAL -	<u>\$3,192.00</u>

SAMPLING AND ANALYSIS WERE DONE BETWEEN

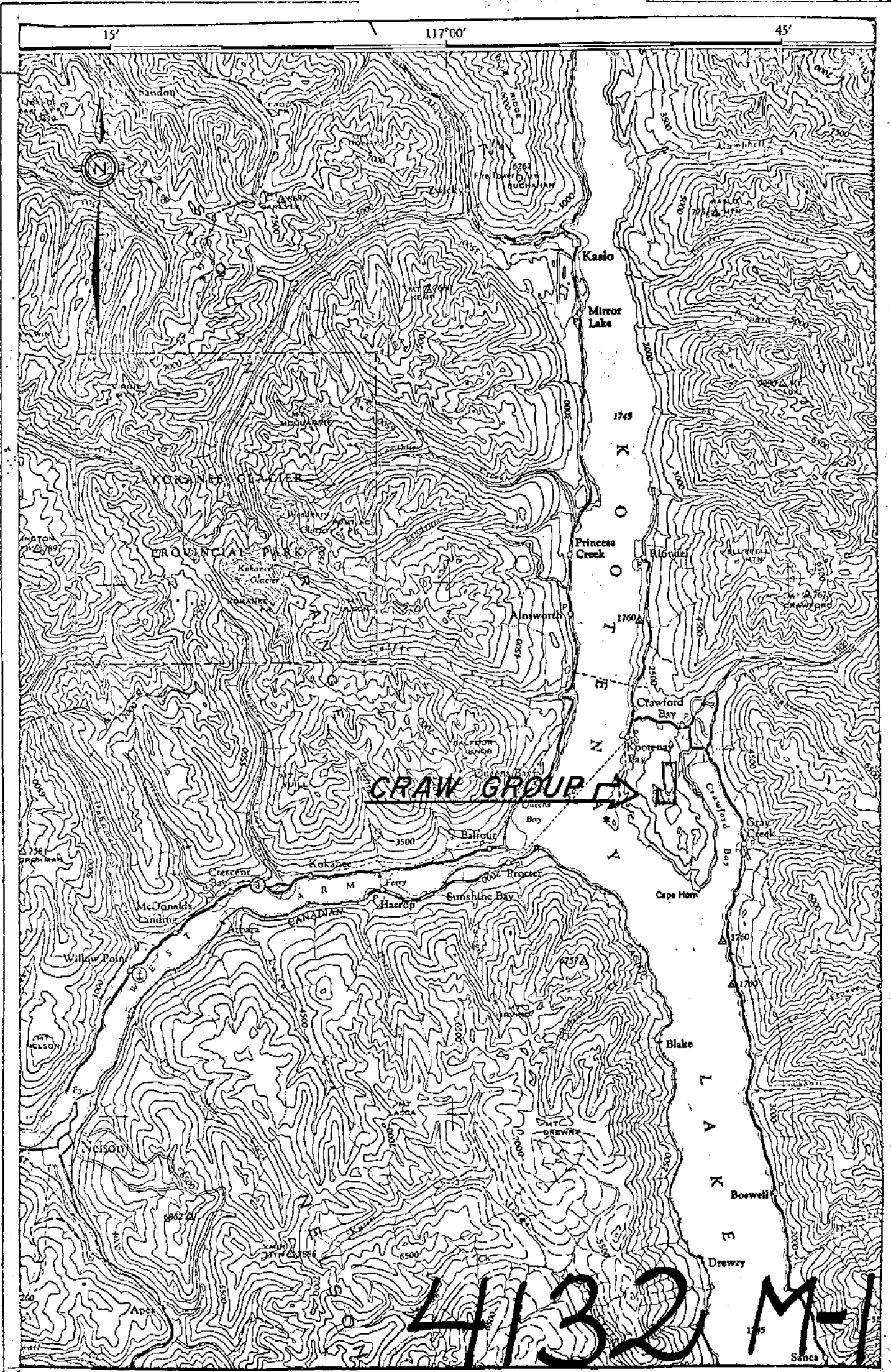
DECEMBER 1, 1972 - JANUARY 15, 1973

Signed: Nicholas L Szabo
N.L. Szabo,
Geochemist

THIS IS EXHIBIT "A" TO THE STATUTORY DECLARATION OF NICHOLAS L. SZABO

DECLARED BEFORE ME THIS 20 DAY OF February 1973.

John Paul SUB-MINING RECORDER
& COMMISSIONER FOR TAKING
AFFIDAVITS FOR BRITISH COLUMBIA



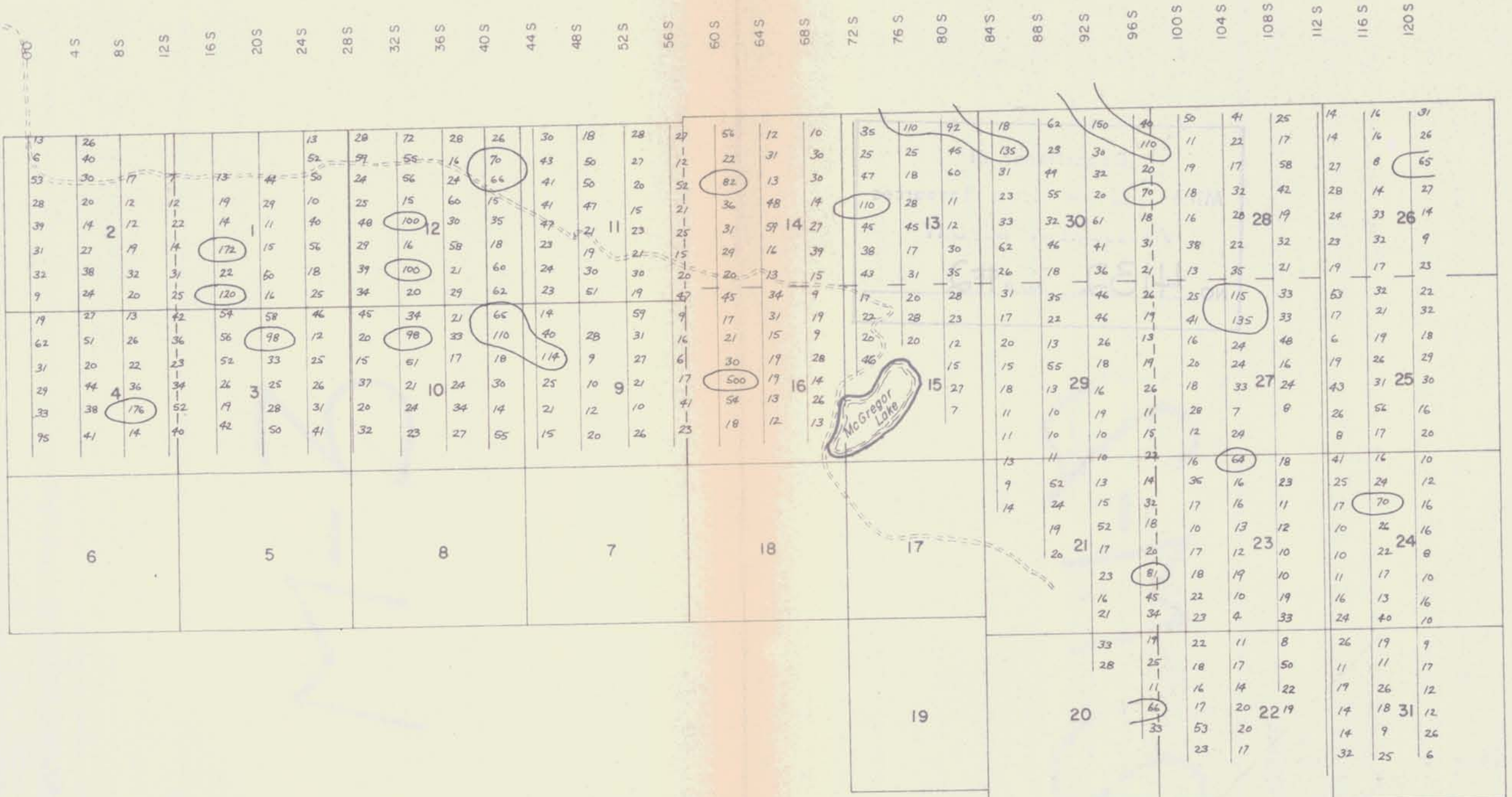
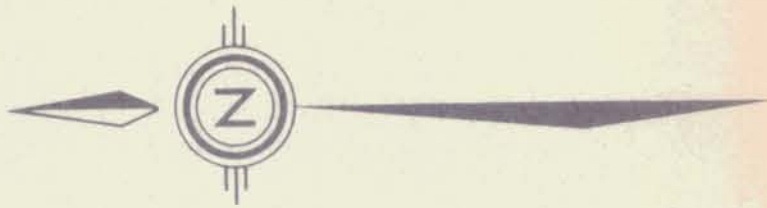
M & Szabo



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

**CRAW GROUP
LOCATION MAP.**

Scale: 1" = 4 miles Date: Nov. 17, 1972 Plate: 1



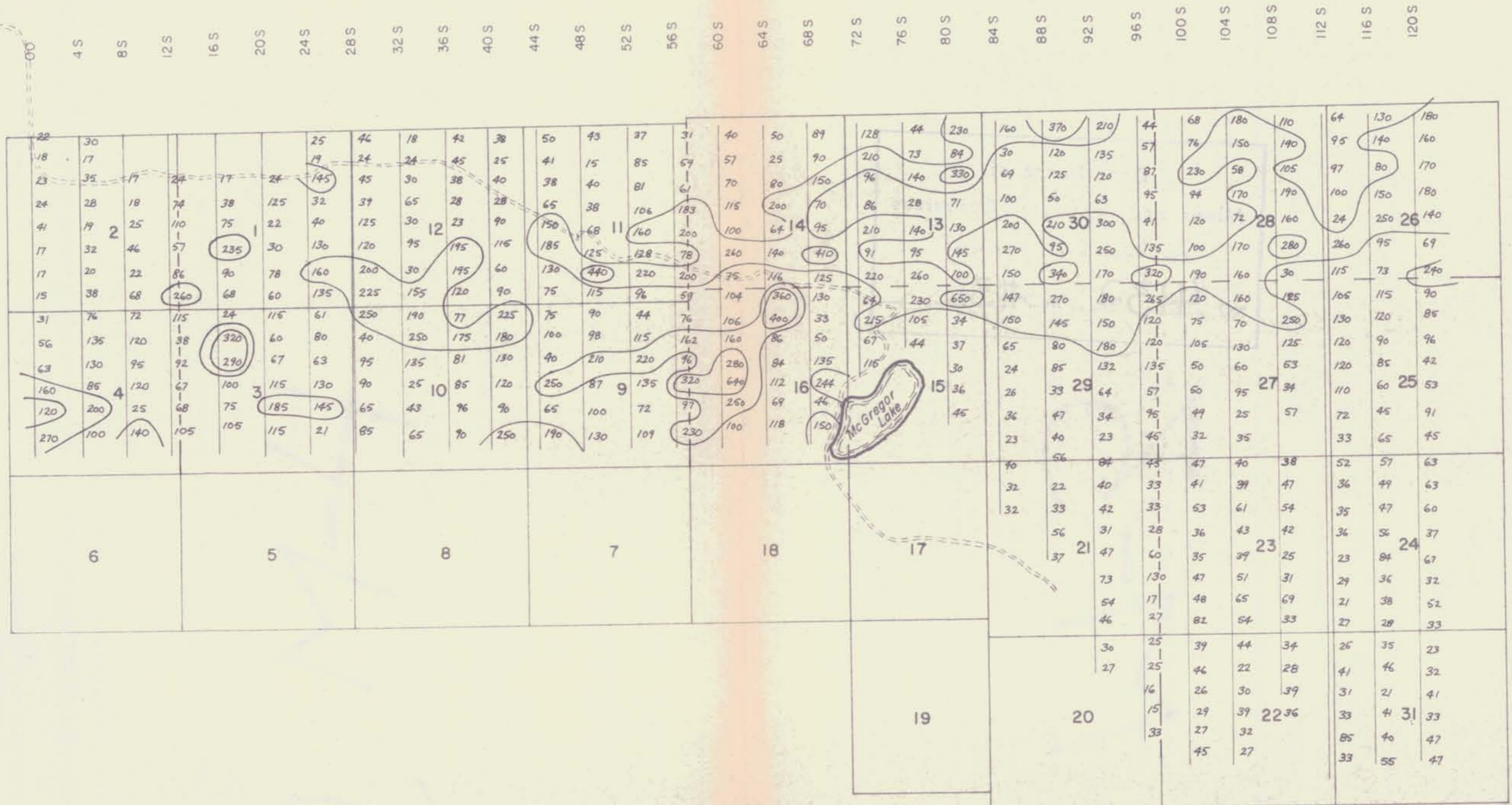
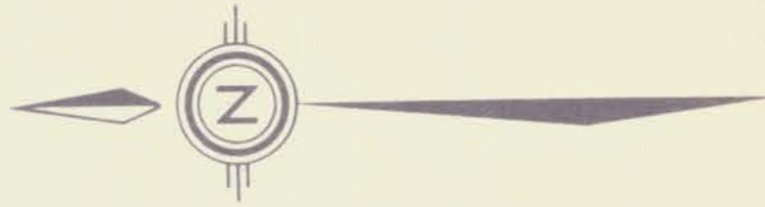
4132 M-2

- 64 p.p.m.

To accompany a report by N.L. Szabo *N.L. Szabo*



Drawn by: N.L.S.		Traced by: T. Bjorgan	
Revised by	Date	Revised by	Date
CRAW GROUP COPPER GEOCHEMISTRY (p.p.m)			
Scale: 1" = 1000'	Date: November, 1972	Plate: 2	



4132 M-3

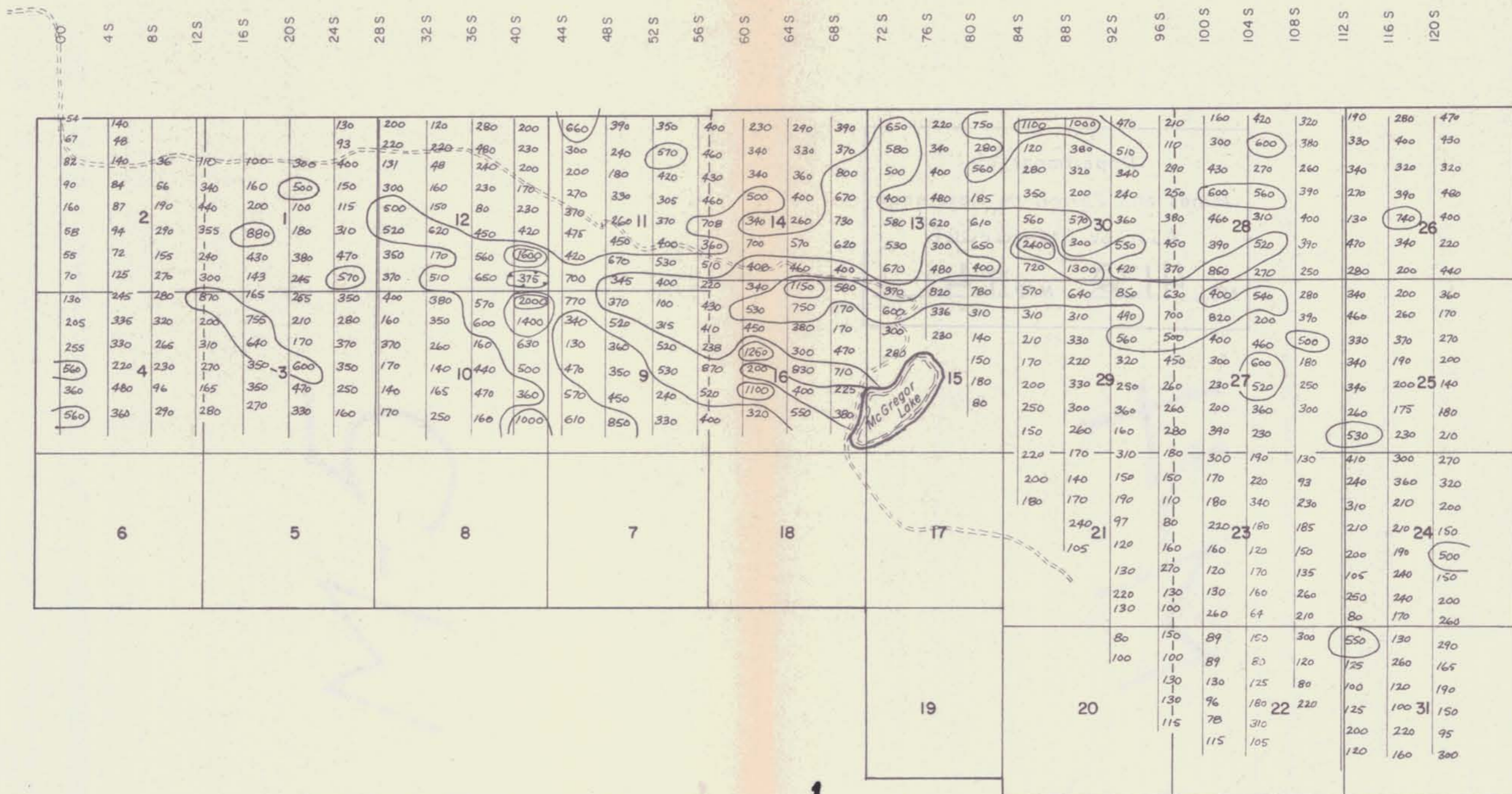
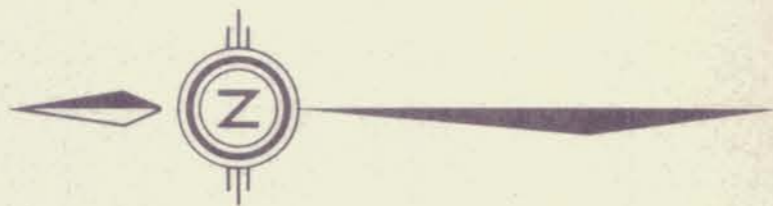
280 p.p.m.

- 140 p.p.m. (threshold)

To accompany a report by N.L. Szabo

N.L. Szabo

Drawn by: N.L.S. Revised by: _____ Date: _____	Traced by: T. Bjorgan Revised by: _____ Date: _____	<p>CRAW GROUP</p> <p>LEAD GEOCHEMISTRY (p.p.m)</p>
Scale: 1" = 1000'		Date: November, 1972
		Plate: 3



4132 M-4

To accompany a report by N.L. Szabo *N.L. Szabo*

— 500 p.p.m.
 — 1000 p.p.m.
 — 1500 p.p.m.

Drawn by: N.L.S.	Traced by: T. Bjorgan	CRAW GROUP ZINC GEOCHEMISTRY (p.p.m.)	
Revised by: _____	Date: _____		
Revised by: _____	Date: _____		
Scale: 1" = 1000'		Date: November, 1972	Plate: 4

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

STATEMENT OF QUALIFICATIONS

N. L. Szabo was responsible for conducting the geochemical survey described herein. Mr. Szabo has received his M.Sc. from the University of Connecticut and expects to receive his Ph.D. in the coming academic year from the University of New Brunswick. He has worked with the New Brunswick Mines Branch and the Geological Survey of Canada, and I consider him a competent and experienced geochemist.

Signed:

J. Richardson.
J. Richardson, P. Eng.