

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, P. Eng.

5241

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT
N.T.S. 82 F/15
49° 52' N 116° 47' 30"

82F/15W

GEOCHEMICAL SOIL SURVEY

GOPA PROPERTY

RIONDEL AREA, SLOCAN M.D., B. C.

October 25, 1974

N. L. Szabo

PERIOD OF WORK

July 1 to September 28, 1974

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5241 M.P.

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ATTACHMENTS

PLATE 1	#1 Topography and Geology; 1" = 400'; and Location Map 1:50,000
PLATE 2	#2 Copper Geochemistry 1" = 400'
PLATE 3	#3 Lead Geochemistry 1" = 400'
PLATE 4	#4 Zinc Geochemistry 1" = 400'
EXHIBIT "A"	

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

SUMMARY

A total of 291 soil samples and 16 stream silt samples were collected on the Copa property, and were analyzed for hot extractable copper, lead, and zinc. Four copper anomalies were located by the survey, however, all of these are small in size and magnitude, and are of probably little significance. An essentially coincident lead zinc anomaly was located on Copa claims # 11, 12, and 13.

INTRODUCTION

The Copa Property is located on Bernard Creek, three miles east of Kootenay Lake and approximately eight miles north of the town of Riondel. Access is by dirt road from Riondel. The property is approximately at 3500 feet in elevation, and includes sixteen mineral claims called Copa Nos. 1 - 16 inclusive, Record Nos. 17744 - 17759 inclusive respectively.

The property was staked to protect an area of known mineralized float occurrence. The float consisted of minor chalcopyrite and malachite in quartzites, and this year's exploration program, consisting of four miles of I.P. work and the soil survey, was an attempt to locate the source of the float.

GEOLOGY

The property is underlain by Windermere sediments of late Proterozoic age which dip moderately to steeply to the west. The formations on the property consist of Hamill quartzite, the Badshot limestone, and schists, quartzites and paragneiss of the Lardeau Series.

GEOCHEMICAL SURVEYS

a) Method

The soil survey was performed by P.W. Ransom under the direction of the writer. North-south oriented lines were spaced at 400' and samples were collected along the lines at 100' intervals where possible. Streams were sampled at the places where the lines crossed them. The horizon sampled was the B₁ horizon, located between 4 and 8 inches below surface.

The samples were treated and analyzed by Bondar-Clegg and Company Ltd. The air-dried samples were sived to 80 minus mesh and analyzed by atomic absorption using hot aqua regia to bring the ions into solution. Statistical analysis gave the following threshold ($x+2s$) values: Cu_t = 81 ppm, Pb_t = 57 ppm, and Zn_t = 155 ppm.

b) Data Presentation

The following maps are included in this report.

Plate 1 Topography and Geologic Map 1" = 400'
Plate 2 Copper Geochemistry 1" = 400'
Plate 3 Lead Geochemistry 1" = 400'
Plate 4 Zinc Geochemistry 1" = 400'

c) Results

Four copper anomalies are outlined by the survey. One anomaly is a single sample anomaly, all the others are both small in size as well as in magnitude. The three sample anomaly straddling claims

Nos. six and eight is partially coincident with the mineralized float.

Three lead anomalies were located by the survey. One of these is a single sample anomaly. The anomaly located on claim 13 consists of two high values, the rest are in the from threshold to twice threshold range. The third anomaly, on Copa No. 12, is both small in size as well as in magnitude.

The soil survey outlined three zinc anomalies. Of these a small anomaly on claim No. 6 is associated with the copper bearing float. One large anomaly covers parts of Copa Nos. 11, 12, and 13. The third anomaly of small size and magnitude occurs on claim No: 12.

CONCLUSIONS

The small size and magnitude of the copper anomalies indicated that the sub-cropping source of the copper bearing float is probably small in size and/or grade. The lead and zinc anomalies located on claims 11, 12, and 13 seem to be more significant both in terms of size and magnitude, however, the geologic significance of these anomalies is not yet known.

Submitted by: Nicholas L Szabo
N. L. Szabo
Geochemist, Exploration

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

NLS/dr

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

In the Matter of

STATUTORY DECLARATION RELATING
TO EXPENDITURES ON A GEOCHEMICAL
SURVEY OF THE COPA PROPERTY,
SLOCAN MINING DIVISION.

I, NICHOLAS LOUIS SZABO
of MUNICIPALITY OF RICHMOND

in the Province of British Columbia, do solemnly declare that

1. COPIES OF A REPORT REGARDING A GEOCHEMICAL SURVEY ON CERTAIN MINERAL 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 DATES 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 25th
day of OCTOBER 1974, A.D.

Nicholas L Szabo

Margaret Brown

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

M. E. BROWN

EXHIBIT "A"

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

COST OF GEOCHEMICAL SURVEY

COPA PROPERTY

SLOCAN M.D., RIONDEL AREA

N.T.S. 82-F-15

49° 52' N 116° 47' 30"

1)	Report writing, N. L. Szabo, Project Geologist 1 man day at \$80.00	\$ 80.00
2)	Drafting, P. W. Ransom, Geologist II 1 man day at \$80.00	80.00
3)	Sample collecting, P. W. Ransom 5 man days at \$80.00	400.00
4)	Analythical cost	621.68
		<hr/>
	TOTAL	\$1,181.68

SAMPLING AND ANALYSIS WERE DONE BETWEEN

JULY 1 AND SEPTEMBER 28, 1974

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

THIS IS EXHIBIT "A" TO THE STATUTORY DECLARATION OF NICHOLAS L. SZABO
DECLARED BEFORE ME THIS DAY OF 1974.

Murray P. Brown
A COMMISSIONER FOR TAKING
AFFIDAVITS FOR BRITISH COLUMBIA



BONDAR-CLEGG & COMPANY LTD.

784 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 • PHONE: 237-3110

Cominco Ltd.
2200 - 200 Granville Square
Vancouver, B. C.
V6C 2R2

INVOICE: No 8463

DATE: Oct. 2, 1974

REPORT NO: 24 - 707

PROJECT:

W. O. No. 5860

307	Copper, Lead, & Zinc	Analyses	@ \$ 2.00	\$ 614.00
307	Sample Preparations		@ \$ 0.25	<u>76.75</u>
				\$ 690.75
		Less 10% Discount		<u>(69.07)</u>
				<u>\$ 621.68</u>

Charge ~~Exp~~ (COPA) Project

W 74-25. 1499

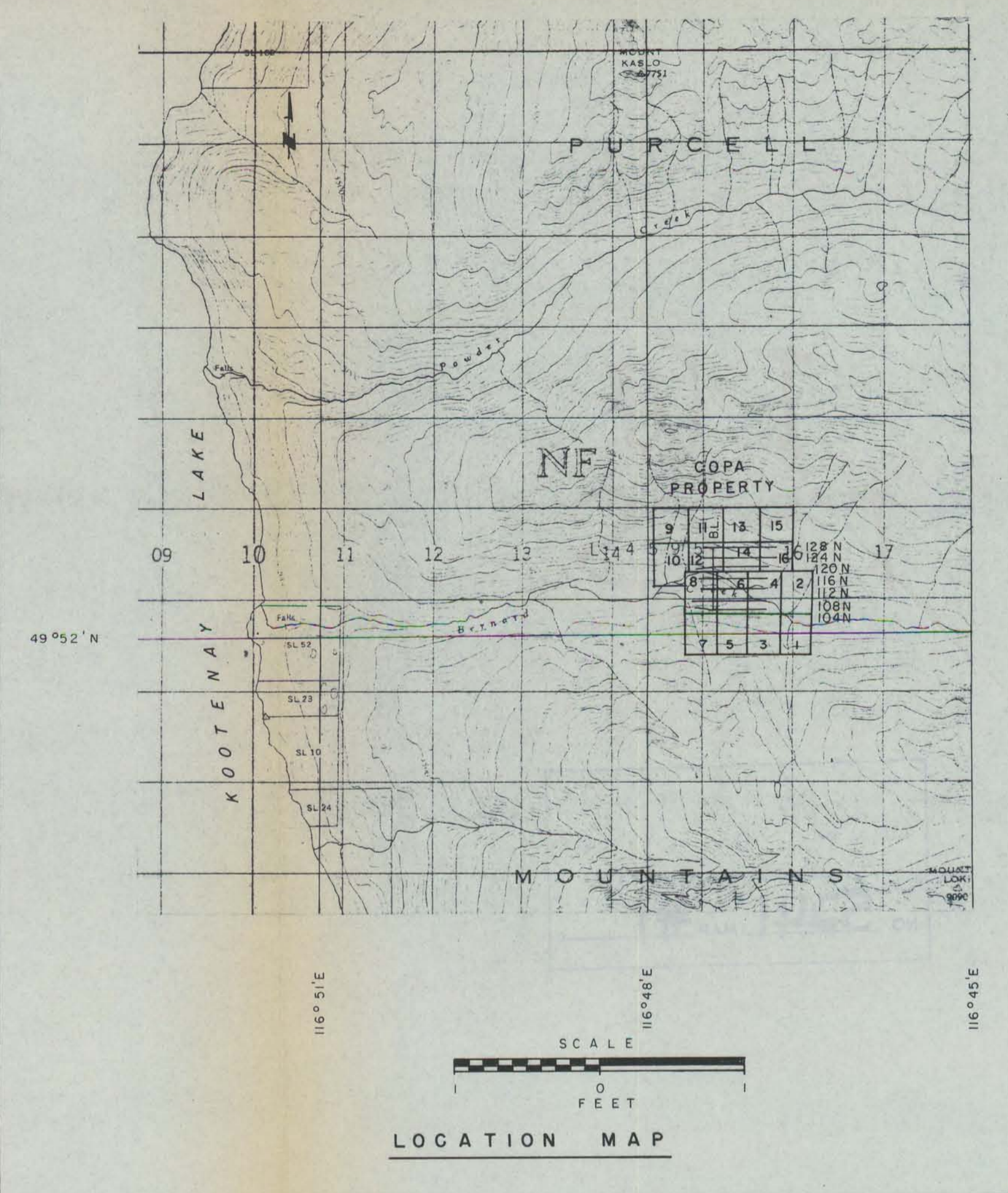
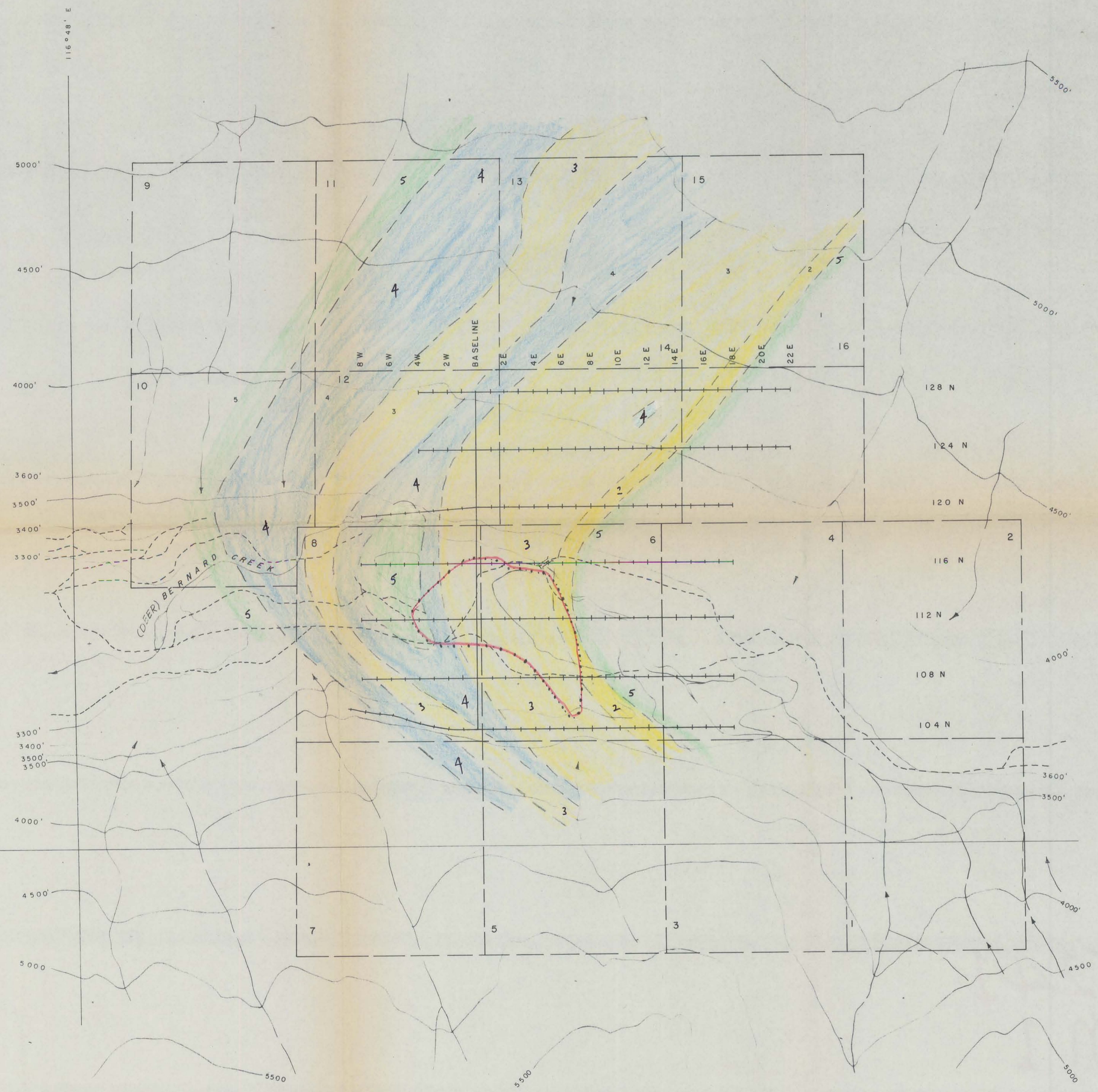
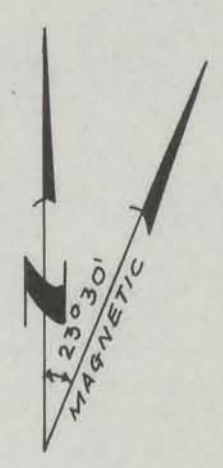
L0547.80 (Kimberley w.o.)

Paul W. Ransom

*To Jack Ratchiff
Oct 20/74*

sjm

THIS IS A PROFESSIONAL SERVICE
ACCOUNTS ARE WHEN RENDERED



LEGEND

- CREEK
- LAKE
- - - ROAD
- - - CLAIM BOUNDARY
- TOPOGRAPHIC CONTOUR

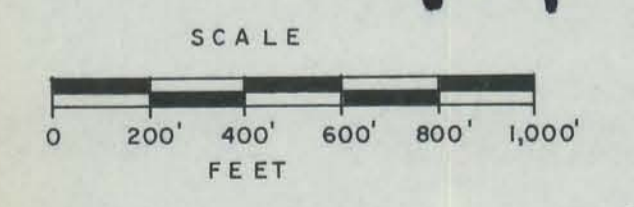
GEOPHYSICS LEGEND

- 1974 GEOPHYSICS IP SURVEY

GEOLOGY LEGEND

- HAMILL GROUP
- 1. QUARTZ-MICA SHIST, MINOR QUARTZITE
 - 2. QUARTZITE
 - 3. QUARTZITE, MINOR QUARTZ-MICA SHIST
- BADSHOT FORMATION
- 4. LIMESTONE
- LARDEAU GROUP INDEX FORMATION
- 5. AMPHIBOLITE
 - 6. IMPURE QUARTZ-MICA SCHIST
- MINERALIZED QUARTZITE
 - APPROXIMATE GEOLOGICAL CONTACTS

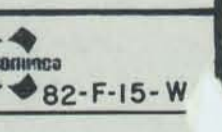
5241
M 1



TO ACCOMPANY A REPORT BY N. L. SZABO

N. L. Szabo

COPA PROPERTY		TOPOGRAPHIC AND GEOLOGIC MAP
Drawn by	Traced by	
Prepared by	Reviewed by	Scale AS SHOWN
		Date OCT, 1974
		Plate 1

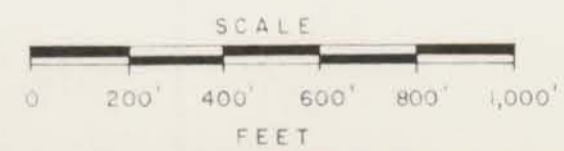


82-F-15-W

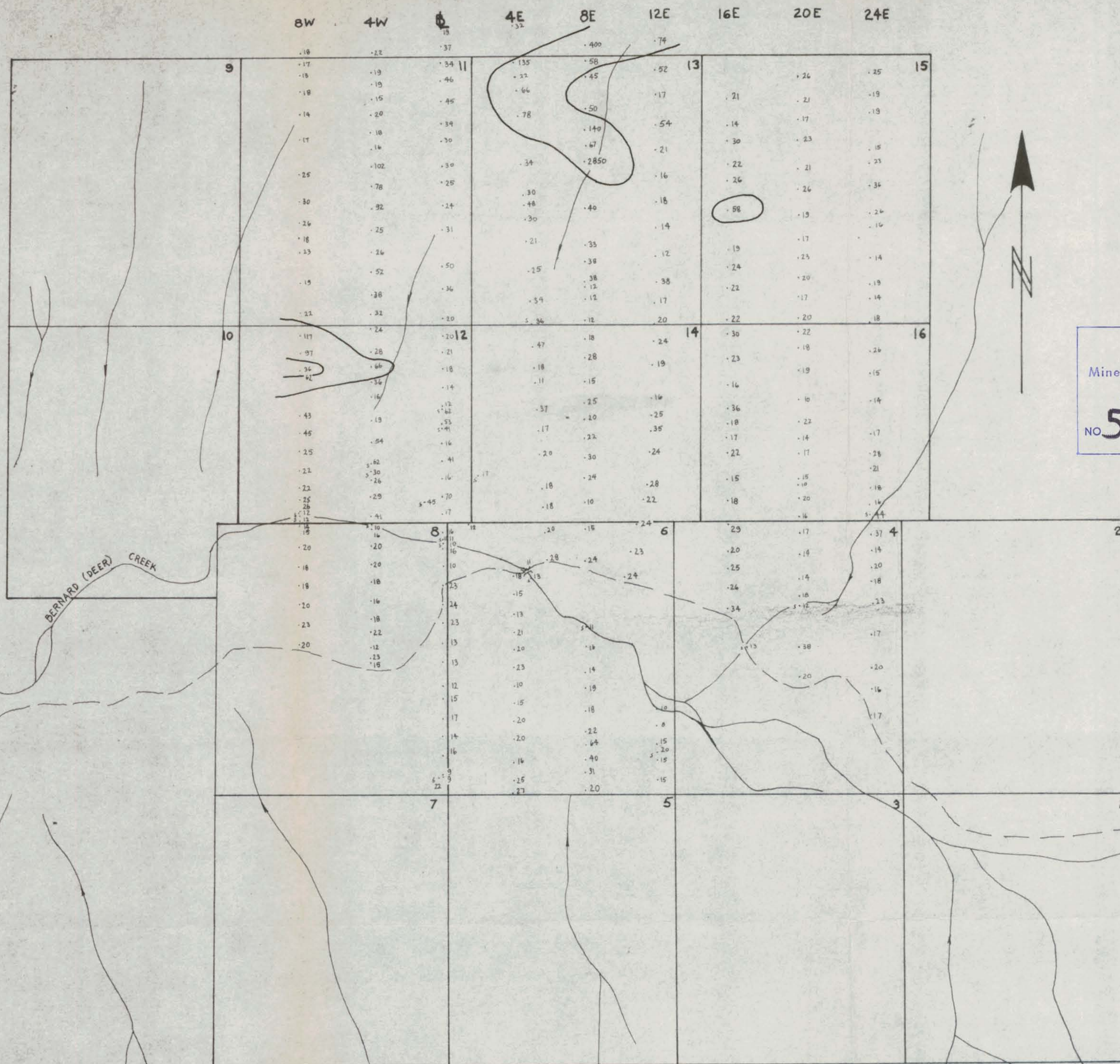


Department of
Mines and Petroleum Resources
ANALYSIS REPORT
NO. 5241 MAP #2

5241
M2

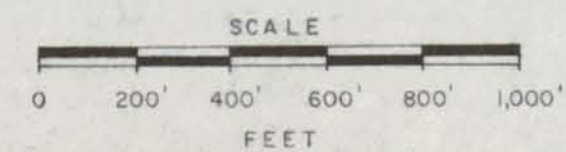


THRESHOLD - 81 ppm
To accompany report by N.L Szabo *N.L Szabo*



Department of
Mines and Petroleum Resources
ANNUAL REPORT
NO. 5241 M.P. #3

5241
M3



THRESHOLD - 57 ppm

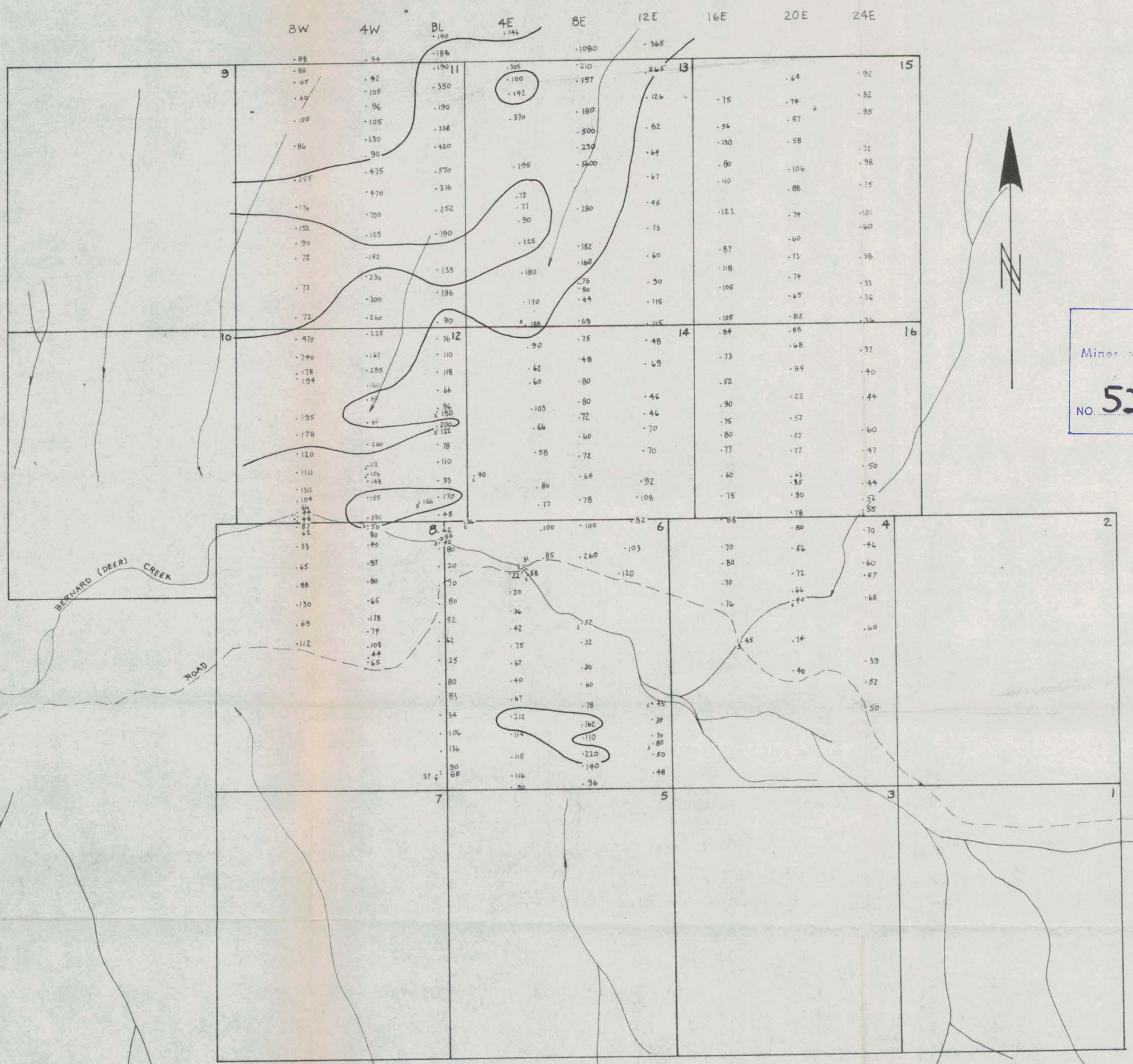
To accompany report by N.L. Szabo *N.L. Szabo*

Mine Engineering
Made by *P.V. Ransom* Date *Oct. 1974*
Traced by _____ Date _____
Approved _____

COPA GEOCHEMISTRY Pb PPM



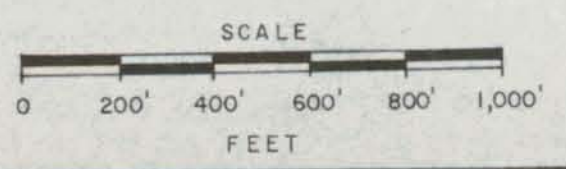
Scale: 1" = 400'
Drawing No. _____
M - Plate No 3



Department of
Mines and Technical Resources
NO. 5241 MAP #4

5241
MA

THRESHOLD - 155 ppm



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

Mine Engineering
Made by **R.W. RANSOM** Date **Oct. 1974**
Traced by _____ Date _____
Approved _____

COPA GEOCHEMISTRY ZN PPM



Scale: 1" = 400'
Drawing No.
M-Plate No. 4