

# 3325

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

N.T.S. 82-G-12

116° 50° S.E.

GEOPHYSICAL SURVEYS

KK GROUP

KOOTENAY KING MINE AREA

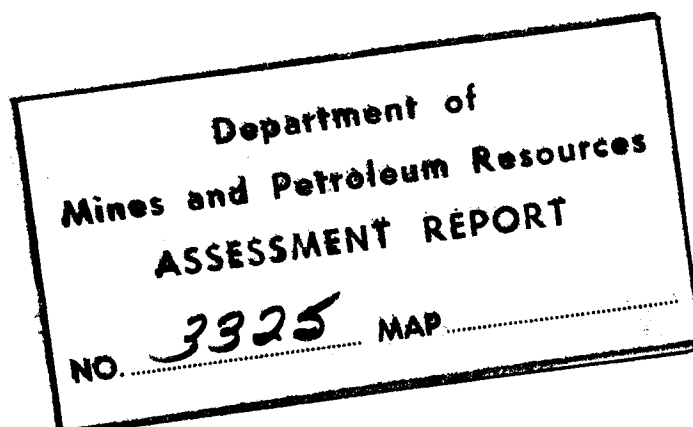
FORT STEELE M.D., B.C.

October 20, 1971

John M. Hamilton, P. Eng.

Work Performed During the Period

September 6 to September 11, 1971



## TABLE OF CONTENTS

	<u>PAGE</u>
SUMMARY.....	1
INTRODUCTION.....	1
GEOLOGY.....	1
GEOPHYSICAL SURVEYS.....	1
(a) Methods .....	1
(b) Data Presentation .....	1
(c) Results .....	1

## ATTACHMENTS

Statutory Declaration Relating to Expenditures

Statement of Expenditures

- # 1 Claim Location Sketch, Scale 1:50,000
- 2 Electromagnetic Survey Plan, Scale 1" = 400'
- 3 Detail Geophysical Profiles, Scale 1" = 200'

## SUMMARY

Horizontal loop electromagnetic traverses along strike from the Kootenay King Mine failed to locate responses of significance. A profile close to the mine was surveyed by horizontal loop EM, VLF-EM and magnetics. A broad VLF-EM response was located. It is regarded as being of no importance.

## INTRODUCTION

The Kootenay King Mine was operated by Kootenay Base Metals in the early 1950's and the ground was held by them under a lease which expired in 1969. Cominco Ltd. subsequently acquired the ground by staking the 18 mineral claims of the KK group. This group was later expanded by the addition of 12 more claims. This report discusses the results of geophysical data obtained on the property in the summer of 1971.

## GEOLOGY

The Kootenay King mineralization consists of a fine grained mixture of pyrite, sphalerite and galena in argillite and impure quartzite of the Alderidge formation. Mineralization occurs in the crest and adjoining limbs of a closed anticline which plunges gently north into a mountainside. A significant unit in the section is the Kootenay King quartzite, with which mineralization at the old mine is associated.

Unfortunately, mine geology and production figures are most scanty, and treacherous underground conditions make mapping of existing workings extremely risky at present.

## GEOPHYSICAL SURVEYS

### (a) Methods:

The horizontal loop surveys were done with an ABEM Minigun operating at a frequency of 3520 cps and a coil spacing of 100 feet. The surveys were done on widely-spaced profiles which were run along steep ridges, with a reading interval of 100 feet.

The VLF profile was done with a Geonics EM-16 tuned to N.A.A. Maine, and the magnetic profile was done with a Sharpe MF-1 fluxgate magnetometer. The reading interval for this work was 50 feet. All field work was done by D.P. Dorval and B.A. Imhoff, geophysical technicians with Cominco Ltd.

### (b) Data Presentation:

The following data is included with this report:

- (i) Claim location sketch, Scale 1:50,000
- (ii) Horizontal loop EM Plan, Scale 1" = 400'
- (iii) Detail Profiles, Scale 1" = 200'


### (c) Results:

The electromagnetic data plan, Plate 2, shows no responses of interest. Occasional readings which are significantly different from zero are probably caused by misaligned coils or short cables due to the steep terrain.


The detail profile results are shown on Plate 3. No magnetometer or Minigun responses are present. A broad noisy VLF response is thought to be due to the fact that the traverse crossed a slight topographic ridge.

...continued...

Submitted by

  
John M. Hamilton, P. Eng.  
Geophysicist

Endorsed for  
Release by

  
H.C. Morris,  
Asst. Chief Geologist,  
Mines

DISTRIBUTION

Exploration, Vancouver  
Mining Recorder, Cranbrook (2) *N*  
Sullivan Geology Office (2)  
Western District  
Geophysics File

JMH/mjb

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

In the Matter of

Statutory Declaration  
Relating to Expenditures on  
A Geophysical Survey of the  
KK Group, Fort Steele  
Mining Division

I, JOHN MURRAY HAMILTON, PROFESSIONAL ENGINEER

of City of North Vancouver

in the Province of British Columbia, do solemnly declare that

1. Copies of a report regarding a geophysical survey on certain mineral claims situated in the Fort Steele Mining Division are being filed with the Mining Recorder in Cranbrook.
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 geophysical 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 20<sup>th</sup>  
day of October, 1971, A.D.

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

C O M I N C O L T D.

EXPLORATION

WESTERN DISTRICT

GEOPHYSICAL SURVEY COSTS

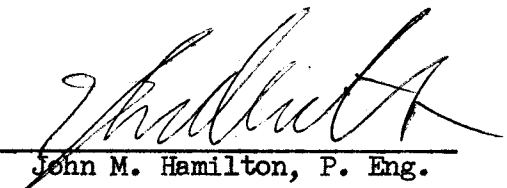
KK GROUP, FORT STEELE M.D.

N.T.S. 82-G-12, 116° 50' S.E.

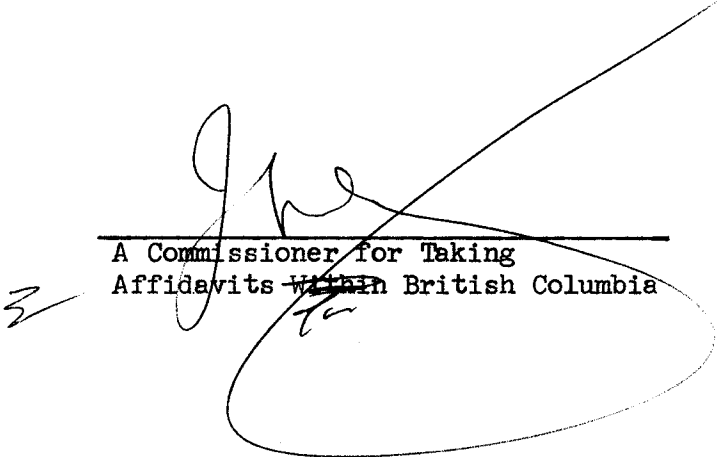
1. Technician Cost, Dennis P. Dorval and Barry A. Imhoff, September 6-11 inclusive, 2 men X 6 days X \$40	\$480
2. Operating Day Charge (Includes Supervision, Drafting, Report) 2½ at \$65	\$162
3. Instrument Rentals	
Minigun, 6 days at \$7.50	\$45.00
Magnetometer 1 day at \$5.00	\$ 5.00
V.L.F.-E.M., 1 day at \$5.00	\$ 55
4. Domicile, 12 man-days at \$5.00	\$ 60
5. Transportation, Communication, Prorated Mobilization	\$100
	<u>TOTAL</u>
	<u>\$857</u>

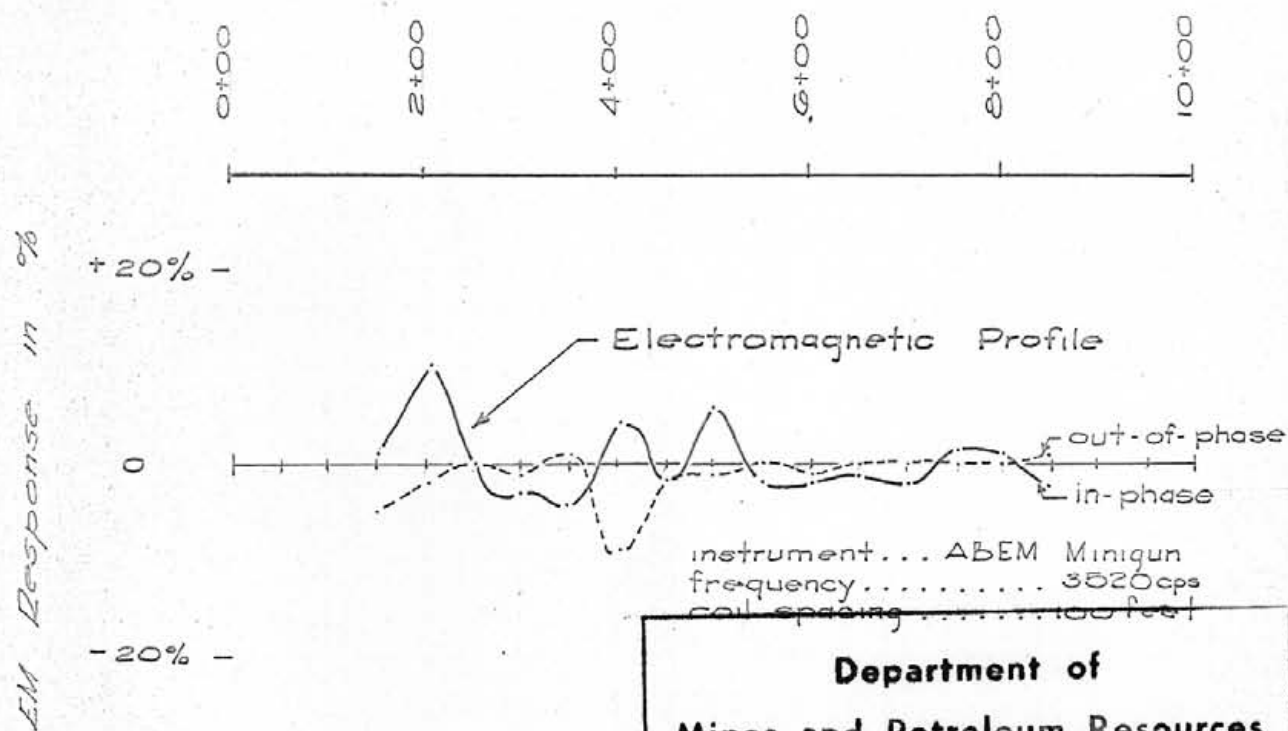
Worked performed during the period September 6 to September 11, 1971.

Signed

  
John M. Hamilton, P. Eng.

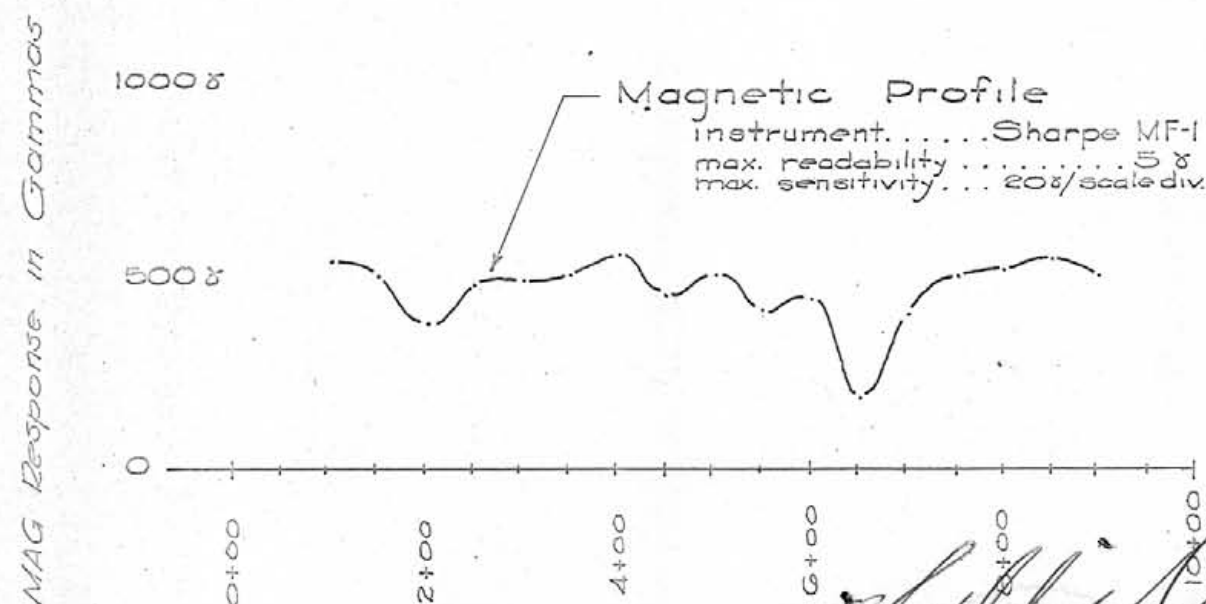
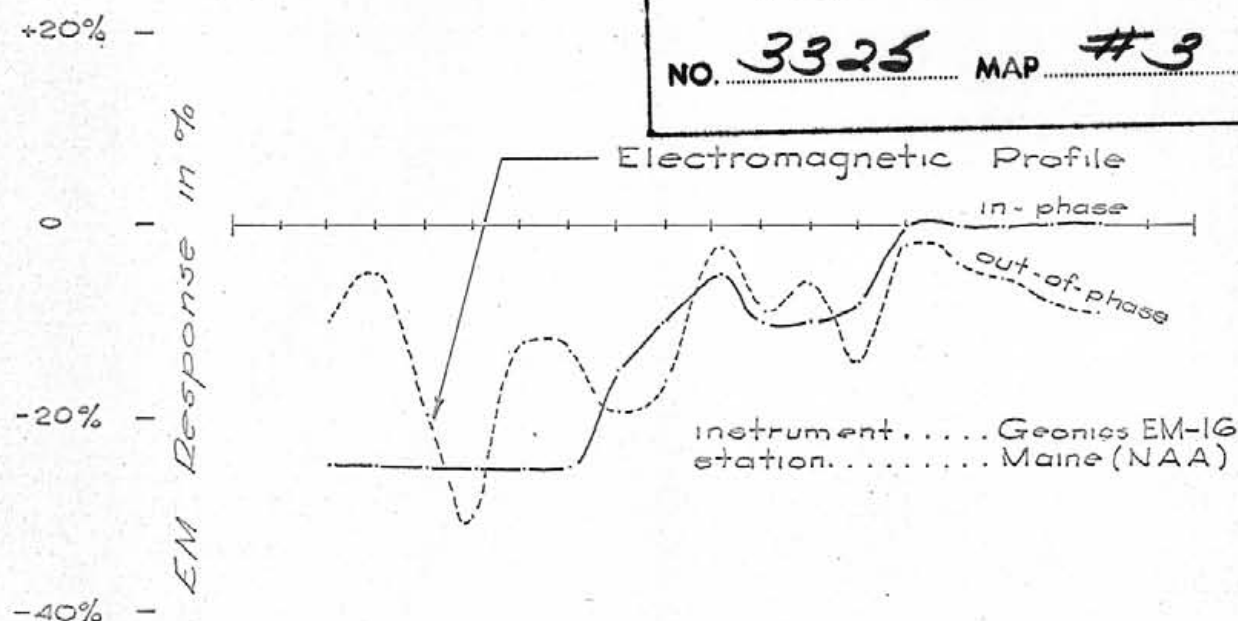
This is "Exhibit A" to the Statutory Declaration of  
John M. Hamilton declared before me this 20 day of October, 1971.

  
A Commissioner for Taking  
Affidavits within British Columbia



**Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT**

NO. **3325** MAP **#3**



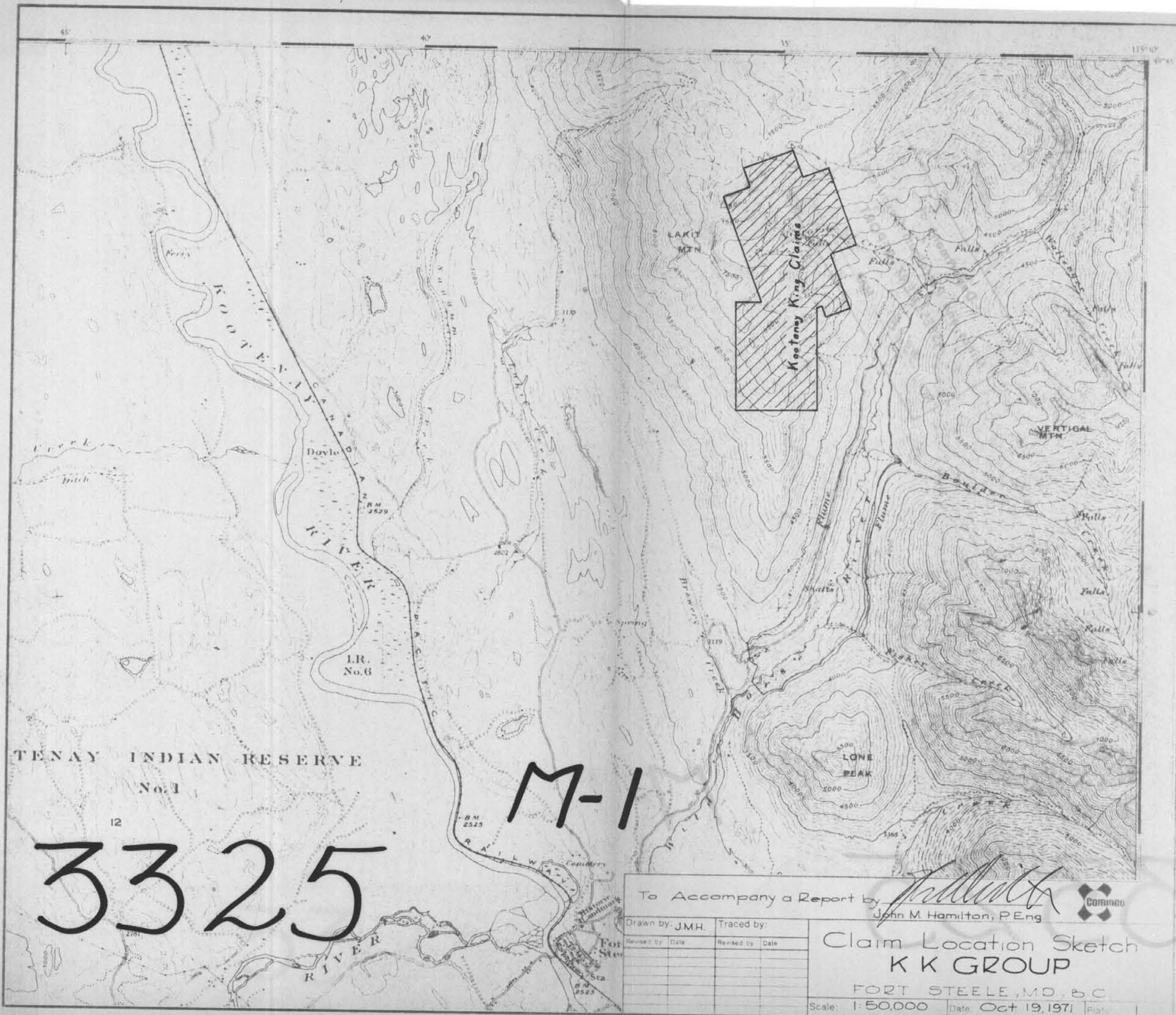
To Accompany a Report by *J.M. Hamilton*  
J.M. Hamilton, P.Eng.

Drawn by: JMH	Traced by: jpr
Revised by: _____	Date: _____
Revised by: _____	Date: _____
Revised by: _____	Date: _____
Revised by: _____	Date: _____
Revised by: _____	Date: _____
Revised by: _____	Date: _____
Revised by: _____	Date: _____

**Detail Geophysical Profiles**  
**KK GROUP**  
FORT STEELE, M.D., B.C.

Scale: 1" = 200' Date: Oct. 19, 1971 Plate: 3





To Accompany a Report by *John M. Hamilton*  
John M. Hamilton, P.Eng



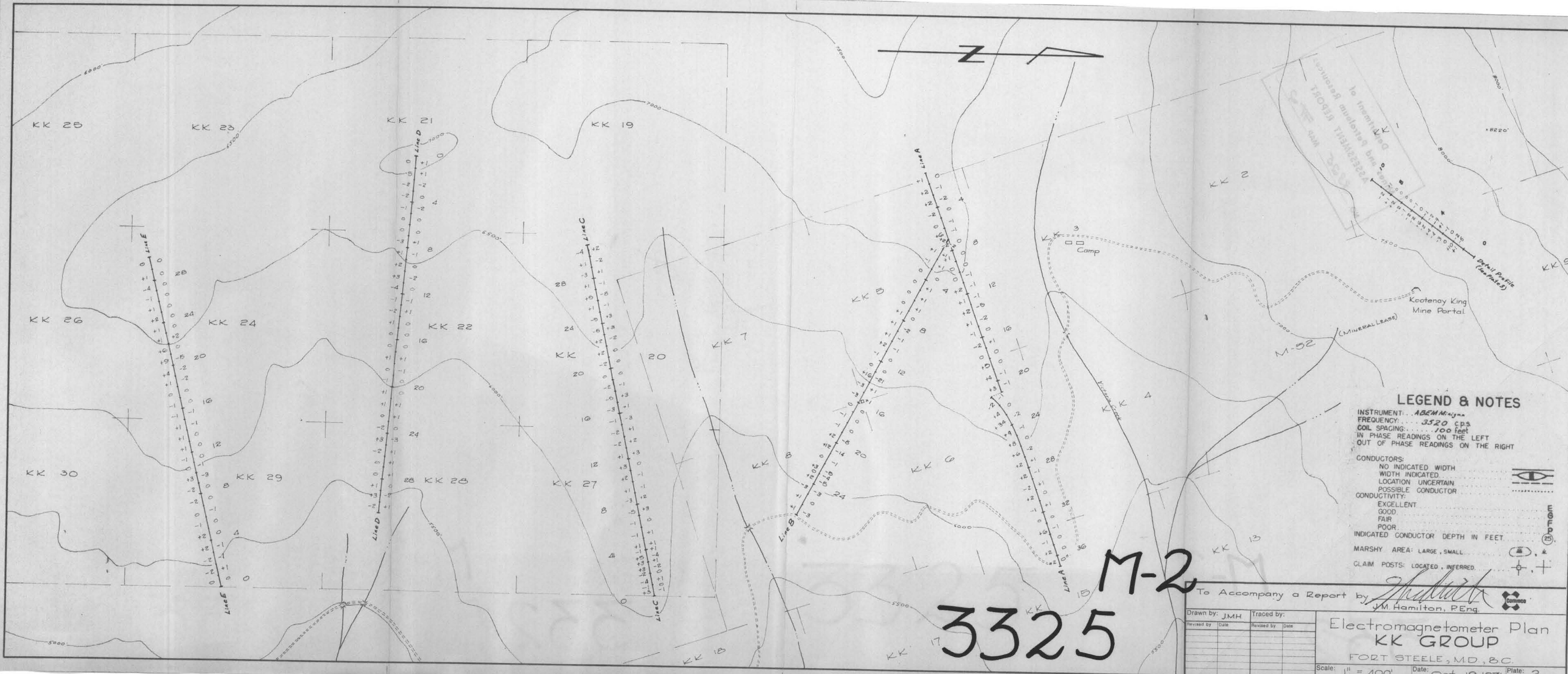
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Revised by: Date	Revised by: Date

Claim Location Sketch  
K K GROUP

FORT STEELE, MD. & C.

Scale: 1:50,000 Date: Oct 19, 1971 Plate: 1





**LEGEND & NOTES**

INSTRUMENT: ABEM Magna  
FREQUENCY: 3520 cps  
COIL SPACING: 100 feet  
IN PHASE READINGS ON THE LEFT  
OUT OF PHASE READINGS ON THE RIGHT

CONDUCTORS:  
NO INDICATED WIDTH  
WIDTH INDICATED  
LOCATION UNCERTAIN  
POSSIBLE CONDUCTOR

CONDUCTIVITY:  
EXCELLENT  
GOOD  
FAIR  
POOR

INDICATED CONDUCTOR DEPTH IN FEET

MARSHY AREA: LARGE, SMALL

CLAIM POSTS: LOCATED, INFERRED



M-2  
3325

To Accompany a Report by *JM Hamilton, P.Eng.*

Drawn by: JMH	Traced by:
Revised by: _____	Revised by: _____
Date: _____	Date: _____

Electromagnetometer Plan  
KK GROUP  
FORT STEELE, M.D., B.C.

Scale: 1" = 400' Date: Oct. 19, 1971 Plate: 2