

2851

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT  
N.T.S. 82-G-6W  
49° 115° N.W.

GEOPHYSICAL SURVEYS

ON THE

TIE MINERAL CLAIMS

TIE LAKE AREA, FORT STEELE M.D., B.C.

February 4, 1971

John M. Hamilton, P. Eng.

PERIOD OF WORK

June 30, 1970 - November 30, 1970

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 2851

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Statutory Declaration re Expenditures

Statement of Expenditures

Plate 1, Claim Location Map, 1:50,000

Plate 2, Electromagnetometer Survey, 1" = 400'

Plate 3, Magnetometer Survey, 1" = 400'

## SUMMARY

Electromagnetic surveys comprising some six miles of traverse on a grid located over an airborne geophysical anomaly located two parallel intermittent conductive trends. Magnetic surveys along roughly every second line in the grid, comprising some three miles of traverse, are everywhere without indication of magnetic disturbance.

## INTRODUCTION

The Tie Property, consisting of eight mineral claims, was staked in June 1970 to cover an Input anomaly located by Cominco during an airborne geophysical survey of the area flown in May, 1969. This report discusses ground geophysical results obtained during ground follow-up of the airborne responses.

## GEOLOGY

No outcrops were observed on the property, and none are shown on the 1" = 2 miles G.S.C. geological coverage of the area. The closest outcrops to this claim group shown on that map, located  $\frac{1}{2}$  to 1 mile away, are of Upper Devonian Palliser Formation (nodular and nodular shaley limestone) and Mississippian Rundle Group (fetid limestone).

## GEOPHYSICAL SURVEYS

### (a) Method

The magnetic surveys were conducted by N.L. Graham using a Sharpe MF-1 Fluxgate magnetometer. This instrument was set at its maximum sensitivity scale, which is 20 gammas per scale division. The effects of diurnal variation and instrument drift were monitored in the usual way by establishing base stations and returning to them every hour or two. The reading interval was 100 feet.

The electromagnetic surveys were done by L. Souliere and the writer with some local help using horizontal loop electromagnetic systems operating at a frequency of 1600 cycles per second. Originally, the grid was surveyed with a Sharpe SE-600, using a coil spacing of 300 feet. Later, some fill-in lines and check traverses were surveyed with a Geonics EM-17, using a coil spacing of 400 feet and for part of Line 12 N, 200 feet.

### (b) Data Presentation

The following maps are included with this report:

- Plate 1: Location Map, 1:50,000
- Plate 2: Electromagnetic Survey, Tie Group, 1" = 400'
- Plate 3: Magnetometer Survey, Tie Group, 1" = 400'

### (c) Results

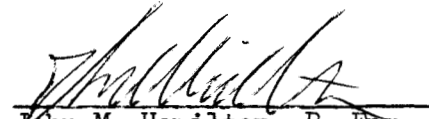
Reference to Plate 2 suggests that the Input anomaly located in this area is caused by two parallel intermittent conductors. The westerly one, located closest to the Base Line, has fair to good conductivity, with excellent conductivity suggested at the north end of the zone. The central portion of this conductor has indicated widths of up to 100 feet, and indicated depths commonly in the 50 to 150 foot range. The second intermittent conductive trend, located about 400 feet east of the first, shows poorer conductivity, narrower widths, and similar depths. It is not as continuous as the first trend.

...continued...

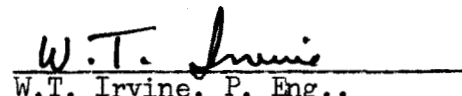
(c) Results con't.

The magnetic data from this grid are everywhere featureless, as shown on Plate 3, suggesting that these conductors do not contain appreciable pyrrhotite.

Submitted by

  
John M. Hamilton, P. Eng.,  
Geophysicist

Endorsed for  
Release by

  
W.T. Irvine, P. Eng.,  
Manager, Western Exploration

DISTRIBUTION

Director, Exploration (1)  
Mining Recorder, Vancouver (2) ~  
Exploration, Western District (1)  
Geophysics File, Vancouver (1)

JMH/mjb

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

In the Matter of

Statutory Declaration Relating  
to Expenditures on Geophysical  
Surveys on the Tie "A" 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 geophysical surveys on certain mineral claims situated in the Fort Steele 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 geophysical surveys of the said claims showing in addition the period during which those making and said surveys 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 4<sup>th</sup>  
day of February, 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

LINE CUTTING AND GEOPHYSICS COSTS

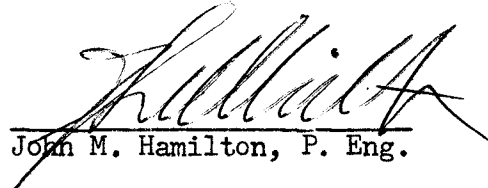
TIE PROPERTY, TIE LAKE AREA, FORT STEELE M.D., B.C.

N.T.S. 82-G-6W, 49° 115° N.W.

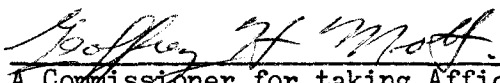
1. Line cutting,	4.10 miles at \$100 per mile	\$ 410
2. Line chaining (fill-in lines),	2.00 miles at \$ 25 per mile	\$ 50
3. Electromagnetic Survey,	5.90 miles at \$100 per mile	\$ 590
4. Magnetic Survey,	2.8 miles at \$ 60 per mile	\$ 168
		<hr/>
		\$1,218

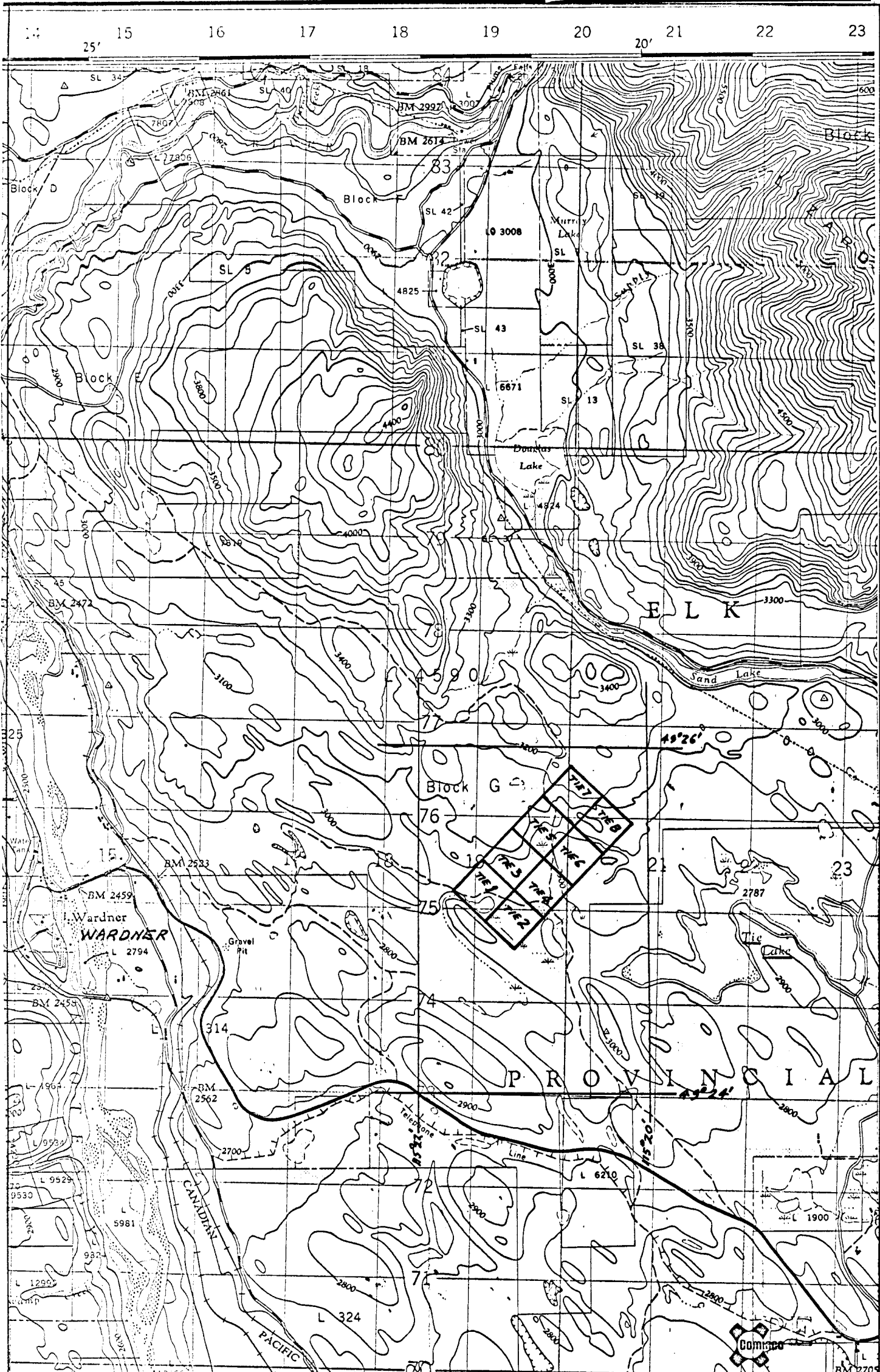
The above work was performed during the period  
June 30 - November 30, 1970

Signed

  
John M. Hamilton, P. Eng.

This is Exhibit "A" to the Statutory Declaration of John M. Hamilton  
declared before me this 4<sup>th</sup> day of February, 1971.

  
A Commissioner for taking Affidavits  
within British Columbia.



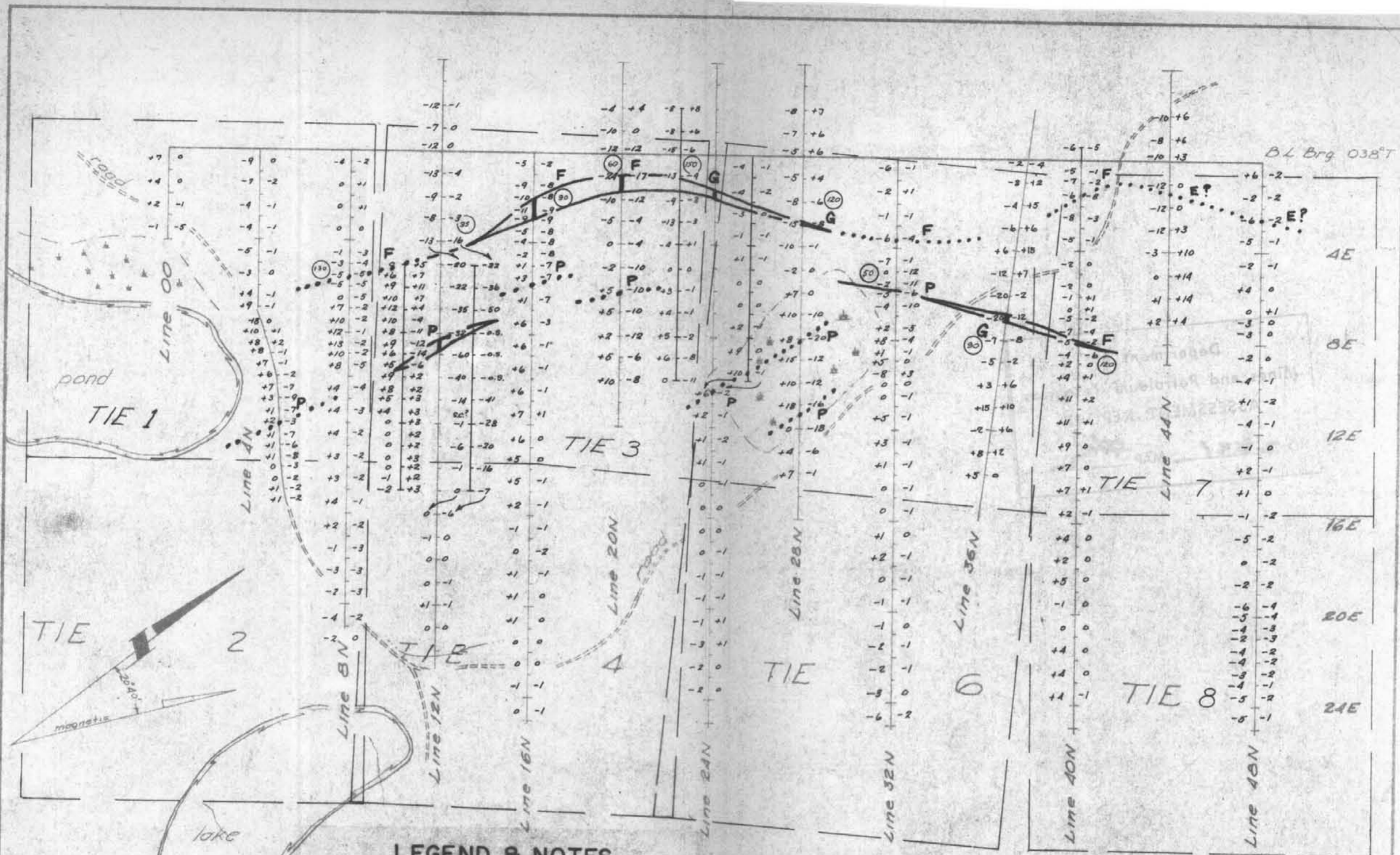
Drawn by:	JMH			Traced by:	
Revised by	Date	Revised by	Date		

**CLAIM LOCATION MAP**  
**TIE GROUP, WARDER AREA**  
 FORT STEELE MINING DIVISION, B.C.

Scale: 1:50,000      Date: February, 1971      Plate: 1







### LEGEND & NOTES

INSTRUMENT: SE 600, EN-17  
 FREQUENCY: 1600 cps  
 COIL SPACING: AS NOTED  
 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



COIL SPACING:	200'	300'	400'
LINE NOS.	12N(5-15E)	00, 4, 8, 16, 24, 32, 40, + 48N	12, 20, 24N(2W-11E), 28, 36, +44N

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

*J.M. Hamilton*

Drawn by: L.S. Traced by: jpr

Revised by: Date: Revised by: Date:

TRENCH AIRBORNE PROJECT  
 ELECTROMAGNETIC SURVEY  
 AREA 14, TIE CLAIMS  
 TIE LAKE AREA, FORT STEELE, M.D., B.C.

Scale: 1" = 400'

Date: November, 1970 Plate: 2