

737

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#1	In Pocket: Fig. 1	:	Sheet S.W.1
#2	2		N.W.1
#3	3		N.W.2
#4	4		S.E.2
#5	5		S.E.1
#6	6		N.E.1
#7	7		N.E.2

- readings are in gammas.

GEOPHYSICAL REPORT ON THE SOUTH WEST, SOUTH EAST,

MID EAST AND NORTH GROUPS OF CLAIMS

GYPSUM LAKE : 50° 120° S.W.

NICOLA MINING DIVISION

OWNER:

CHATAWAY EXPLORATION CO. LTD. (N.P.L.)

BY

J.P. WEEKS, P. ENG.

FOR

BRALORNE PIONEER MINES LIMITED

August 3rd, 1965

To

February 4th, 1966.

Introduction

This report has been prepared for submission as assessment work and describes a magnetometer survey carried out on the above claims during the period August 3rd to December 21st, 1965. The maps and report were prepared during the period January 18th, 1966 to February 4th, 1966.

Location and Access

The property is situated some 16 miles North of Merritt, B.C. and to the West of Guichon Creek. The claims lie between elevations of 3500' and 5000' and cover Gypsum Mountain and Gypsum Lake.

The Western boundary of the claim group is somewhat precipitous, but generally the topography is characterized by a series of thickly timbered bench-like areas.

Precipitation is moderate being largely confined to the winter months and temperatures similarly are not extreme.

Access is by rough dirt road which leaves the highway close to the Craigmont Mill.

Property

The area has been staked many times in the past, the present claims having been located between 1963 and 1965. The claim group consists of 126 claims, the names of which follow:

WIZ	Nos. 12 to 31 inclusive
"	" 34 to 107 "
"	" 108 Fraction to 113 Fraction inclusive
"	" 120 " to 121 " "
DOT	" 2, 4, 6, 8, 10, 12, 23, 24, 25, 26
SHO	" 7 and 8
ROSE	" 1 and 2
INS	" 1 to 3 inclusive
"	" 10 to 12 inclusive
"	" 14 and 15
INS	A and B Fractions.

For purposes of recording assessment work the claims have been divided into four groups which are detailed under that heading.

Regional Geology

The regional geology is well described by W.E. Cockfield in G.S.C. Memoir 249, "Geology and Mineral Deposits of Nicola Map Area, B.C." and the accompanying Map No. 886 A, published

Regional Geology (C'td.)

in 1948. Additional information on the rock types found in the region may be obtained from papers by J.M. Carr in the Annual Report of the B.C. Minister of Mines and Petroleum Resources for the years 1960 and 1962 and no purpose will be served by repeating this information here.

Property Geology

The property is on the eastern flank of the Guichon batholith, a large body of plutonic rock classified as being of Mesozoic age. On the claims the most commonly occurring rocks are medium grained to fine grained quartz monzonite with smaller areas of quartz diorite and granodiorite.

The earlier granitic rocks have been intruded locally by dykes of quartz porphyry similar to those at the Bethlehem Mine some 10 miles to the North. ✓

The batholith is overlain by volcanic flows and tuffs of the Kamloops group of Cenozoic age in the North East corner of the claim block. Some volcanic rocks are also present in the South East corner of the property and are believed to be older than the granite. However the area has not been mapped in detail and the relationship between the two rock types cannot yet be established with any degree of certainty.

Copper mineralization, consisting principally of chalcocite and bornite with lesser amounts of malachite is principally found in shear planes traversing the granitic rocks. Structurally it is evident that movement along the faults, which mostly strike N 30° W and dip at 65° to the South West, has produced tension fractures in the hanging wall that were later healed with quartz and mineralized with copper sulphides. Subsequent movement on the fault has produced gouge containing comminuted fragments of chalcocite, some of which show slickensides. ✓

In the vicinity of the mineralization the country rock shows considerable alteration, the most distant from the veins being a change of the feldspars to a salmon pink colour. More pronounced alteration closer to the veins is exhibited by the presence of marked chloritization. Talc and sericite are developed to some extent wherever there is shearing.

### Work Program

As stated above, a close examination of the rock in the vicinity of the mineralization indicated a substantial amount of alteration. This, in part, consists of alteration of the small quantities of magnetite contained in the rocks of the Guichon batholith to ferro-magnesium minerals and it was felt therefore, that a magnetometer survey would indicate the presence of any large sheared area as a magnetic low.

- (a) Lines: Close attention was paid to cutting lines and initially a North-South baseline was cut by hand and controlled by tape and Brunton Compass.

Although the individual shears strike generally to the West of North, there is some evidence in the trenches that the zone of shearing has a general North-South strike. From this baseline therefore, East-West lines were turned off at 400' intervals and cut and picketed towards the boundaries of the property. Straightness of the lines was maintained by pickets and frequent checks by Brunton Compass. A D7 Cat, rented from a contractor in Merritt, was used to cut the lines in areas of particularly heavy vegetation and dead falls.

- (b) Magnetometer: The instrument used was a Sharpe M.F.-1 Fluxgate Magnetometer and throughout the survey readings were taken at 50' intervals to the nearest 10 gammas in the most sensitive scale range. All traverses were closed to the starting point and readings corrected for diurnal variation.

Initially a closed traverse was run along the baseline and stations of known magnetic intensity established at the origin of all East-West lines. Commencing at these stations, traverses were run along the lines, closed to the baseline and corrected.

### Magnetometer Survey

Excluding readings along the baseline and those required to close traverses, more than 7000 significant readings were taken, representing approximately 67 line miles. They are plotted on the attached plans, figures 1 to 7, and contoured at 200 gamma intervals.

Magnetometer Survey (C'td.)

Since readings were taken at 50' intervals in an East-West direction and the spacing between the lines in a North-South direction is 400', it was clear that any contouring would have a North-South bias. To counteract this, a preliminary map was drawn and contoured on which only readings taken on a grid with a spacing of 400' in each direction were plotted. In this way the general trend of the magnetic intensity was established and used as a guide during the final contouring.

The most striking areas are situated in the North East and South East corners of the property. As far as is known, the former shown on figure 6, records the presence of volcanic rocks rather than any significant decrease in the amount of magnetism exhibited by the batholith itself.

The area in the South East corner (figure 4) is of more interest. The Minister of Mines report for 1923 mentions the presence of volcanics at the Vimy property, but surface indications are that the quantity of them is limited. Additional work is required before a definite explanation for these lows can be advanced but, being near the perimeter of the batholith some concentric fracturing could be expected which possibly facilitated the circulation of later mineral fluids. This area is definitely worthy of further exploration.

In addition, the abrupt change from low readings on line 440 N between 535 E and 545 E to high readings on line 444 N (figure 4) should be investigated. It is possible that a contact between two phases of the intrusive may exist in this area and geological mapping is recommended.

Generally the contouring shows an arcuate shape, trending N.N.E. at the South end and changing to N.W. at the North end.

In addition to the above, five other areas are worthy of further investigation. These are the lows which trend:

- (a) From 484 N at 511E through 500N at 502E to 532N at 472E (figures 5 and 2).
- (b) From 476N at 455E to 500N at 457E (figure 1).
- (c) From 448N at 490E to 492N at 484E (figure 1).
- (d) From 484N at 544E to 500N at 547E (figure 5).

Magnetometer Survey (c'td.)

(e) From 452N at 558E to 464N at 562E (figure 1).

Numerous other smaller areas exhibit low magnetism but generally they are without continuity and probably represent either areas of above average depth of overburden or isolated patches of alteration.

Statement of Qualifications

The magnetometer survey was carried out by Mr. Gordon Leamy, a geophysical operator employed by Bralorne Pioneer Mines Limited. A summary of his experience follows:

- 1957 to 1959 - Assistant Geophysical Operator with Geo Technical Development and Moreau and Woodward Co. Ltd. of Toronto, Ontario.
- 1960 to 1962 - Geophysical Operator with Moreau and Woodward, Newconex and Sheridan Geophysics of Toronto, Ontario.
- 1962 to date - Geophysical Operator with Anaconda and Bralorne Pioneer Mines Limited of Vancouver, B.C.

The entire program was carried out under my supervision.

Statement of Expenditures

(a) Line Cutting:

A D7 Cat was employed on line cutting between the 7th September and 9th October and during this time cut some 18 miles of line. In addition the crews were paid \$25.00 per mile for chaining this line.

Line cut by hand was paid at a rate of \$100.00 per mile including chaining and the total expenditure for the 67 line miles cut was as follows:

18 miles cut by Cat: 106 hours at \$16.50/hr.	\$ 1,749
18 miles chained at \$25.00 per mile	450
49 miles cut by hand at \$100.00 per mile	4,900
Fringe benefits: 18.2% of \$5,350	974
Field Maintenance: 16 man months at \$150.00/month	2,400

Statement of Expenditures (C'td.)

(b) Magnetometer:

Geophysical Operator: 3 months at \$450.00/month	\$ 1,350
Fringe benefits: 18.2% of \$1,350	246
Field Maintenance: 3 man months at \$150.00/man month	450

(c) Supervision:

Field Supervisor: 10% of 2½ months at \$575.00/month	\$ 144
Chief Geologist: 5% of 5 months at \$900.00/month	225
Fringe benefits: 18.2% of \$369	67
Field Maintenance: ½ month at \$150.00/month	75

(d) Equipment:

Rental of M.F.-1 Fluxgate Magnetometer: 3 months	\$ 300
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(e) Preparation of Report:

Plotting and Drafting: ½ month at \$450.00/month	\$ 225
Supervision and Report: 1/6 month at \$1,000.00/month	167
Fringe benefits: 18.2% of \$392	71

Total Expenditure	\$13,793
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Assessment Work

The survey covered 4 claim groups as detailed below:

<u>Mid East Group</u>	<u>South East Group</u>	<u>South West Group</u>	<u>North Group</u>
WIZ 20, 21	WIZ 46 to 48	INS 1 to 3	ROSE 1, 2
" 22A, 23A	" 51 to 71	" A, B Frs.	DOT 8, 10, 12
" 24, 25	" 96 to 107	" 10 to 12	" 23 to 26
" 34 to 45	" 108 Fr.	" 14, 15	WIZ 72 to 79
" 49, 50		SHO 7, 8	
" 80 to 95		DOT 2, 4, 6	
" 112 Fr.		WIZ 12 to 19	
" 120, 121 Frs.		" 26 to 31	
		" 109 to 111 Frs.	
		" 113 Fr.	
39 Claims	37 Claims	33 Claims	17 Claims



Assessment Work (C'td.)

Line Miles run per claim group:

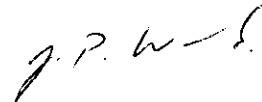
<u>Mid East Group</u>	<u>South East Group</u>	<u>South West Group</u>	<u>North Group</u>
20 Miles	20 Miles	18 Miles	9 Miles

Average cost per line mile = \$206. Cost applicable to assessment work per claim group:

\$4,120	\$4,120	\$3,708	\$1,854
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One year's assessment work is to be applied to each of the above claims.

Respectfully submitted,



J.P. Weeks,  
Chief Geologist.

JPW:md  
Vancouver, B.C.  
February 21st, 1966.



Canada

Province of British Columbia

To Wit:

In the Matter of

Assessment work on the Mid East, South East, South West and North Group of mineral claims.

I, James Peter Weeks

, of 1285 Bracknell Place,

North Vancouver

in the Province of British Columbia.

Do Solemnly Declare that the following persons were employed on the field work:

R. Osterhout, Line Cutter.	Aug.3 to Dec.21	- 99 working days - \$1,625	) Cutting and ) chaining at ) \$100.00/mile
M. Beaulne, Line Cutter.	Aug.3 to Sep.6	- 24 working days - \$ 394	)
B. Findlay, Line Cutter.	Aug.3 to Dec.21	- 99 working days - \$1,625	)
C. McGary, Line Cutter.	Aug.9 to Aug.12	- 4 working days - \$ 65	) Chaining only ) at \$25.00/mile
K. Brown, Line Cutter.	Sep.14 to Oct.13	- 22 working days - \$ 361	)
J. Rolph, Line Cutter.	Oct.12 to Dec.21	- 50 working days - \$ 821	)
L. Cormack, Line Cutter.	Oct.12 to Nov.20	- 28 working days - \$ 459	)
G. Leamy, Geophysical Operator.	Sep.30 to Dec.21	- 58 working days - \$1,350 - \$450.00/month	
G. Rose, Field Super- visor.	Oct.11 to Dec.21	- 6 working days - \$ 144 - \$575.00/month	
P. Weeks, Chief Geologist.	Aug.3 to Dec. 21	- 6 working days - \$ 225 - \$900.00/month	

Persons employed in the preparation of this report were:

G. Leamy, Drafting	Jan.18 to Feb. 1	- 11 working days - \$ 225 - \$450.00/month	1966.
P. Weeks, Chf. Geologist	Feb.1 to Feb.4	- 4 working days - \$ 167 - \$1000.00/month	1966

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

VANCOUVER

in the Province of British Columbia.

this

2

day of

MARCH

A.D. 19 66

Susan Matz  
A Notary Public in and for the Province of British Columbia  
A Commissioner for taking affidavits for British Columbia

SUB-MINING RECORDER

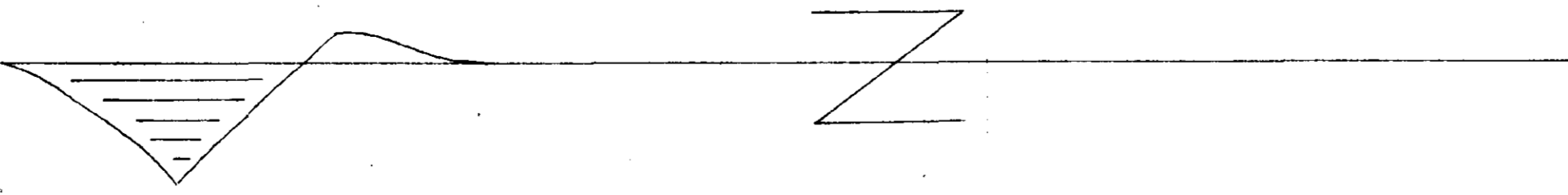
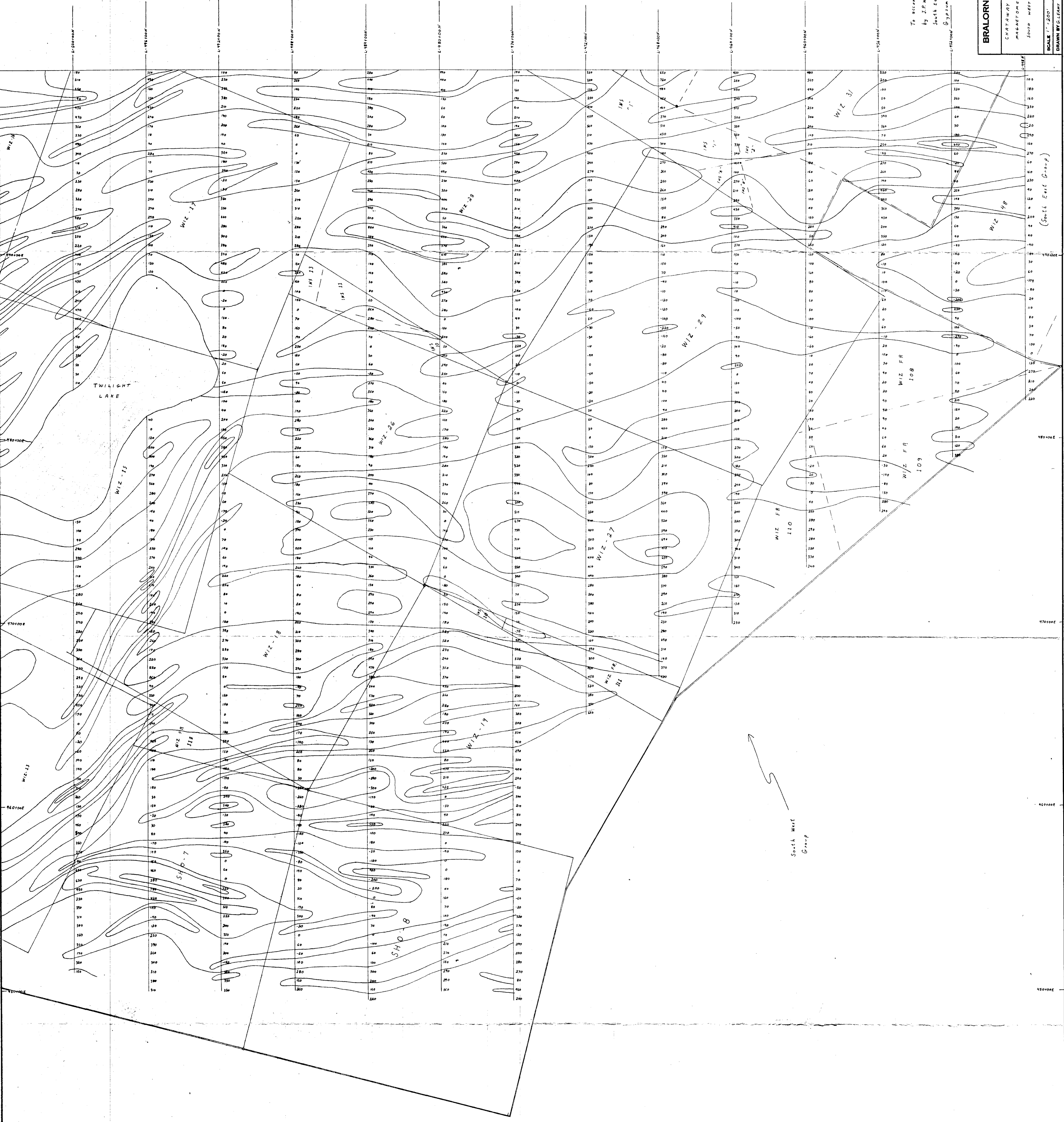
J.P.W. - S.



**737**

Figure #1  
 To accompany geological report  
 by J.P. Mease, P. Eng. on the mid East,  
 South East, South West and North groups,  
 Gypsum Lake, Misaki, M.D.  
 dated 25 February 1966  
 P. Mease

**BRALORNE PIONEER MINES LTD.**  
 CHATSWAY PROPERTY  
 METEOROLOGICAL SURVEY - SOUTH WEST GROUP  
 SOUTH WEST SUGAR #1 SOUTH WEST GROUP  
 SCALE 1"=200'  
 DRAWN BY GLENN  
 DATE DEC. 1965  
 No.



Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 737 MAP #2



In accompany geological report  
 by J.R. Weiler, P.E.G., on the Mid East,  
 South East, South West and North Group,  
 Gypsum Lake, Nicolls, M.D.  
 dated 25th February 1966

**BRALORNE PIONEER MINES LTD.**  
 CHATHAM PROPERTY  
 MAGNETOMETER SURVEY - SHARPE MF-1  
 NORTH WEST GROUP  
 SCALE 1" = 200'  
 DRAWN BY G. L. COOPER DATE NOV. 1962



737 MAP #2  
 1966

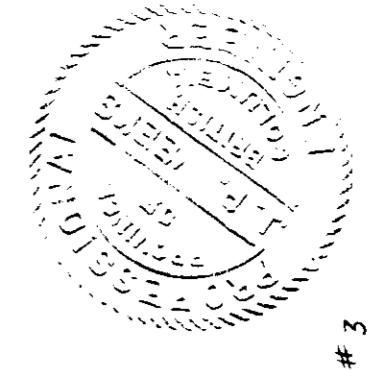
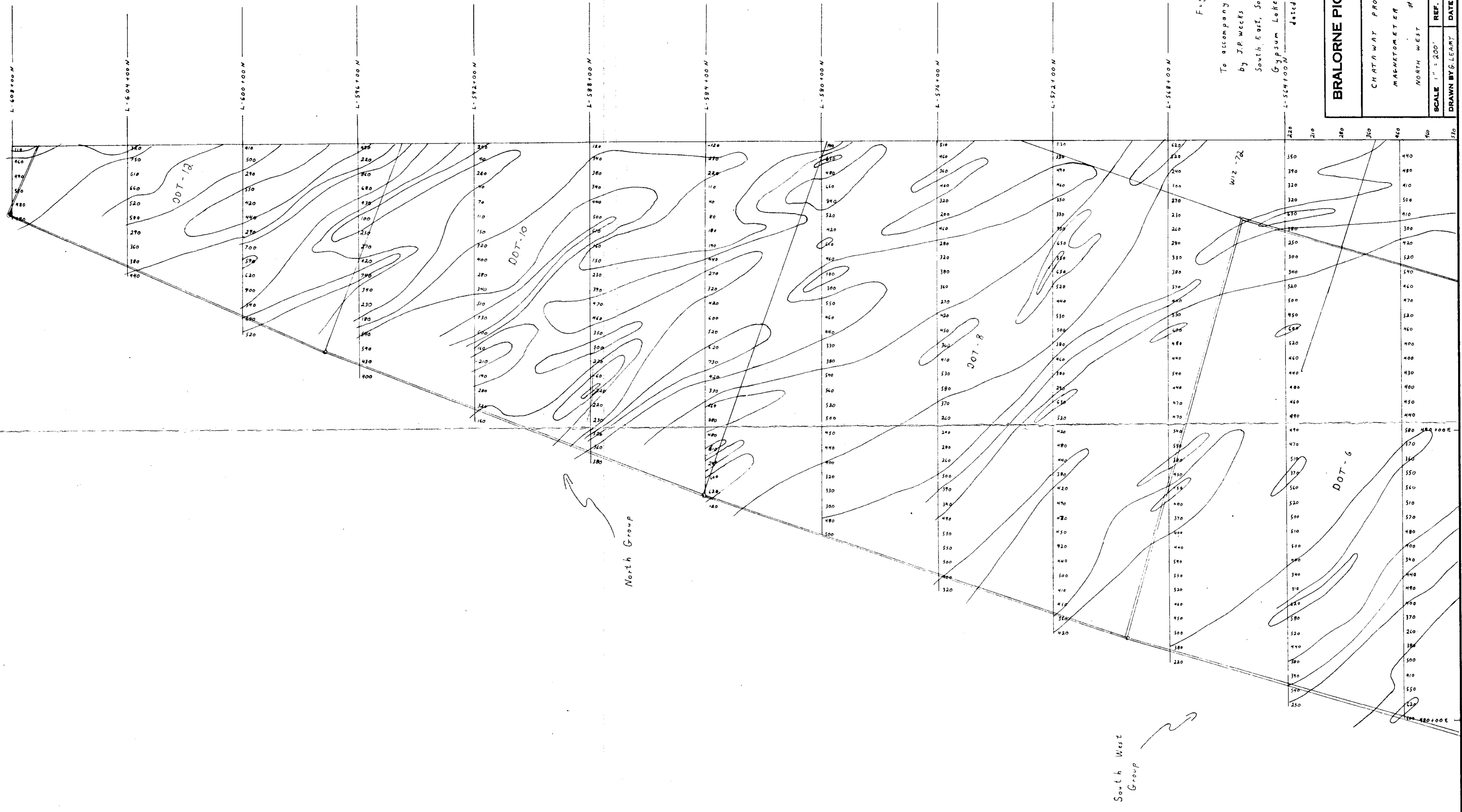


Figure # 3  
To accompany geological report  
by J.P. Wicks B. Eng. on the Mud Bur, South West, South West and North groups, Gypsum Lake, Nicola, M.D.  
4150 25 February 1966  
J.P. Wicks

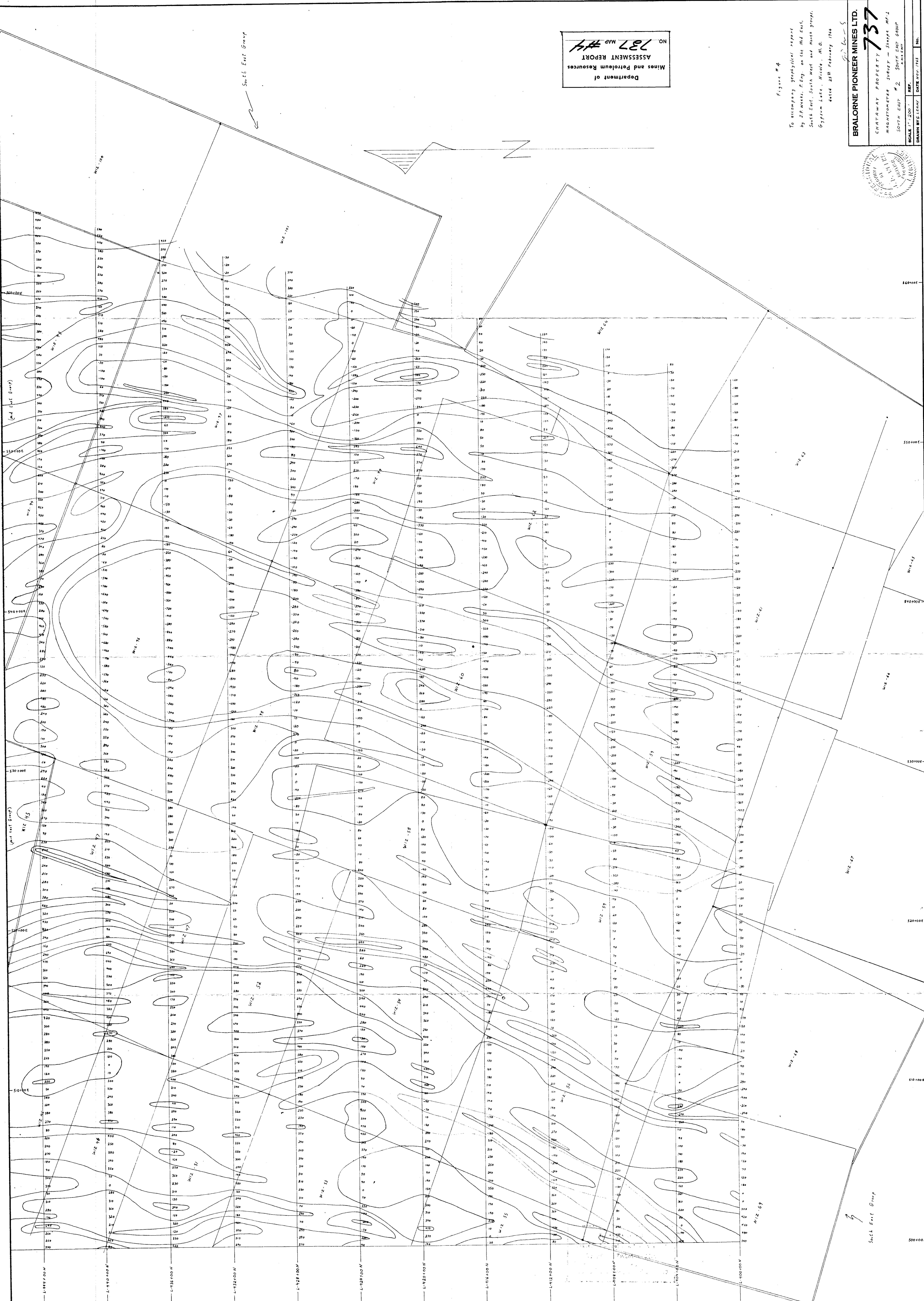
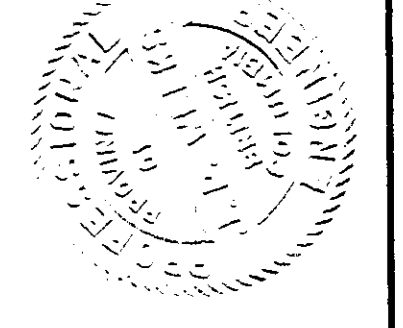
**BRALORNE PIONEER MINES LTD.**  
CURRENT PROPERTY **737**  
MANAGEMENT SURVEY - SHARPS M.F.J.  
NORTH WEST #2 NORTH GROUP  
SCALE 1" = 100'  
DRAWN BY LEAHY DATE NOV. 75 NO.



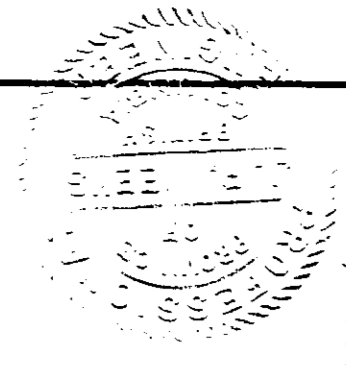
Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
#137 MAP #44

Figure #4  
To accompany geological report  
by J.P. Weeks, P. Eng. on the Mid East,  
South East, South West and West Group,  
Cypress Lake, Nicola, B.C.  
dated 25th February 1966

BRALORNE PIONEER MINES LTD.  
CHATWAY PROPERTY 737  
MAGNETOMETER SURVEY - SHEETS #1-1  
SOUTH EAST #2 SOUTH EAST GROUP  
SCALE 1" = 2000'  
DRAWN BY: [Name] DATE: 1966/1/25

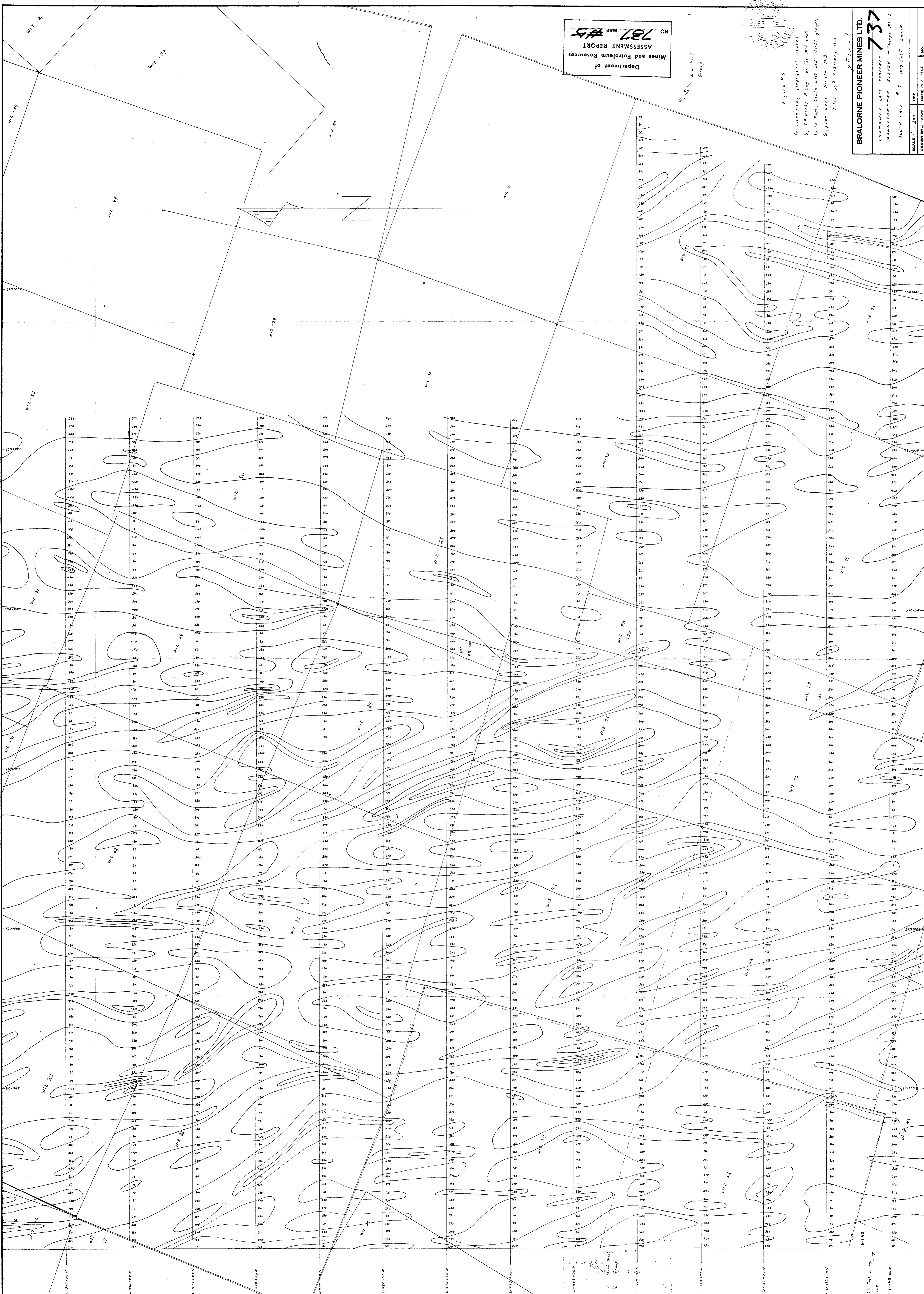


Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
737  
MAP #5



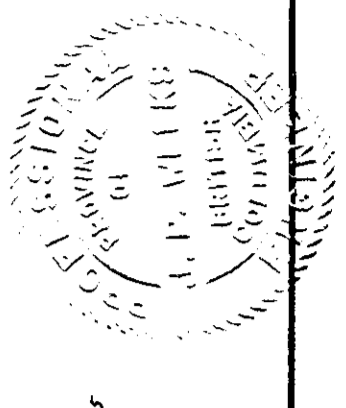
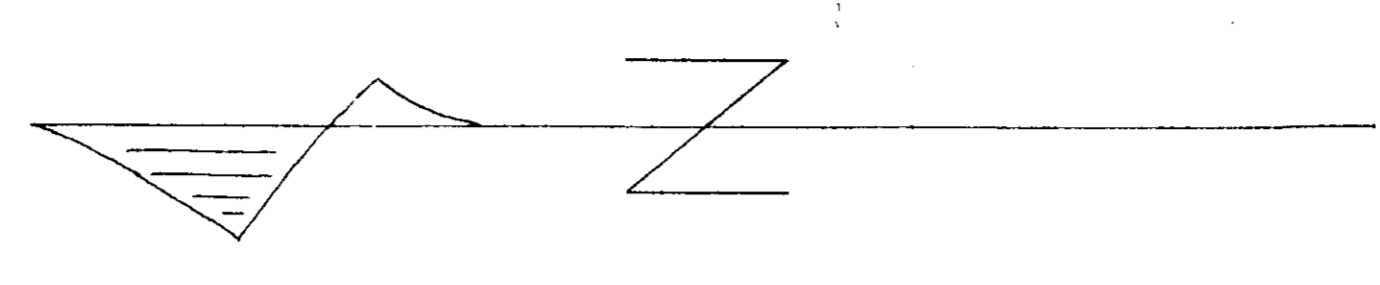
To accompany topographical report  
by T.P. Weeks, P. Eng. on the Mid East,  
South East, South West and North groups,  
Gaspard Lake, Alberta, M.D.  
Field 21-8 February 1966

**BRALORNE PIONEER MINES LTD.**  
CHARTWAY LAKE PROPERTY  
MAGNETOMETER SURVEY - SHEET MF-1  
SOUTH EAST # 1 MID EAST GROUP  
SCALE: 1" = 200'  
DRAWN BY: GLENN  
DATE: OCT. 1962



737  
 ASSESSMENT REPORT  
 No. 737 MAP # 6  
 Mines and Petroleum Resources  
 Department of  
 Geology  
 Ottawa, Canada

Figure # 6  
 To accompany geophysical report  
 by J.P. Miller, P. Eng. on the and East,  
 South East, South West and North Group,  
 Gypsum Lake, Nevada, U.S.A.  
 Dated 23rd February 1966



W1Z-82  
 W1Z-83

W1Z-81

W1Z-80

W1Z-79

W1Z-78

W1Z-77

W1Z-76

W1Z-75

W1Z-74

W1Z-73

W1Z-72

W1Z-71

W1Z-70

W1Z-69

W1Z-68

W1Z-67

W1Z-66

W1Z-65

W1Z-64



Figure #7  
To accompany geophysical reports  
by J.F. Wess, P. Eng. on the mid east,  
South East, South West and North Groups,  
Capitol Lake, Alaska, M.D.  
dated 28 February 1962

BRALORNE PIONEER MINES LTD.  
CHATAWAY PROPERTY  
PARAMETER SURVEY - SHEET NO. 1  
NORTH EAST #2 NORTH GROUP  
SCALE 1" = 200'  
DRAWN BY G. CLARY  
DATE NOV 65

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 737  
Map #17

