

GEOPHYSICAL REPORT of MAGNETOMETER  
SURVEY

On The Bob 1 to 10 Mineral Claims  
At Aspen Grove, Nicola Mining Division  
British Columbia, Canada

Longitude  $120^{\circ} 37'W$ , Latitude  $49^{\circ} 58'N$   
May 4 to May 8, 1972

Conducted by - N. Orr, P.Eng.  
Interpreted by - R. B. Galeski, P. Geoph.

92H/15E

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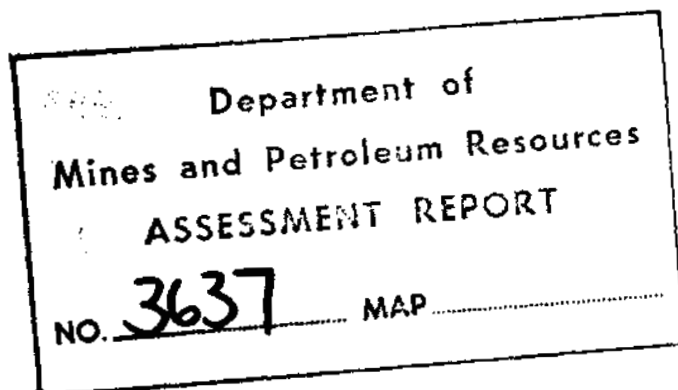
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N. ORR, P.ENG.

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R. B. GALESKI, P. GEOPH.



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# MAGNETOMETER SURVEY

BOB 1 TO 10

MINERAL CLAIMS

NEAR ASPEN GROVE, BRITISH COLUMBIA

## INTRODUCTION

A Magnetometer Survey was conducted over the major portion of the Bob 1 to 10 Mineral Claims, Record Numbers 49387 to 49396, comprising the Bob Group. The survey was conducted during May 1972. The field work was started on May 4 and was completed on May 8, 1972. A total of 10.2 line miles of survey was completed. Portions of the claims group were necessarily missed from the survey because of the presence of lakes or small ponds of water on the surface. Two men were engaged throughout the entire period when field work was in progress.

The reduced field data, suggest the presence of a small magnetically anomalous region in the southerly two-thirds of the claims group as well as a strongly localized anomaly in the region of the rock outcrop in the north-eastern two claims. It is concluded that additional work will be required to further define these features. This work should take the form of additional geophysical work followed by work to remove the overburden as may be later indicated.

GEOPHYSICAL INTERPRETATION  
of  
MAGNETOMETER SURVEY

Bob 1 to 10 Claims

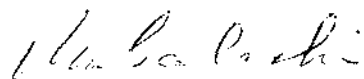
Conducted by N. Orr, P. Eng.  
Between May 4 and May 8, 1972

The magnetometer survey run on the Bob Claims appear to have been well run. Maximum diurnal shift of 30 gammas is less than normal and anomalies in excess of 50 gammas may be considered to be significant indicators of change in rock type. However, except in the northeast corner, these changes may occur in the overburden.

With a 200 foot spacing interval it is not possible to accurately define the apex of any of the anomalies or to compute source depth. It is noted that along the northern part of the easternmost line there is a gradual increase in magnetic level as the line proceeds from overburden cover to rock outcrop. On the line immediately west of this there are two one-point anomalies in excess of 1,000 gammas. These may be of considerable significance; however, eastward and westward projections of the anomalies are not apparent. It is recommended that that particular line be re-run at a 25 foot spacing interval and that lines be run at 100 feet on each side to help define the causative masses. Results of this additional work might be expected to lead to further development.

In the southwest part of the area, there are three anomalies on the westernmost two lines. Amplitudes are 300 to 800 gammas and orientation appears to be east-west. The northernmost of the three appears to be deeper-seated than the others. Here, again, added programme with closer station spacing and closer line spacing should be undertaken for further evaluation.

Except in the northeastern and southwestern parts of the area mentioned above, no further work -based on the magnetics obtained to date - is recommended at this time.



R. B. Galeski, P. Geoph.

## LOCATION AND ACCESS

The settlement of Aspen Grove is some 23 miles south of Merritt and 35 miles north of Princeton on Highway No. 5. The Bob Claims group lie approximately one-quarter mile north to three-quarter mile north of Aspen Grove, straddling Highway No. 5. Access to the claims off the highway can be gained by several unsurfaced roads and trails. The claims lie very nearly 49° 58' North Latitude and 120° 37' West Longitude.

Figure 1 is a photo copy of a portion of the Tulameen Map Sheet 92 H/NE published by the Department of Lands and Forests, British Columbia with the claims marked thereon.

## CLAIMS AND OWNERSHIP

This property is held by NORMAN ORR by virtue of staking in 1971. An agreement with National Nickel Ltd. also covers the property. The Claim numbers and Record numbers are as follows:

Claim No.	Record No.
Bob #1	49387
Bob #2	49388
Bob #3	49389
Bob #4	49390
Bob #5	49391
Bob #6	49392
Bob #7	49393
Bob #8	49394
Bob #9	49395
Bob #10	49396

These claims were grouped on May 8, 1972 as the Bob Group.

## GEOMORPHOLOGY

The Bob Claims are situated in the Thompson Plateau Subdivision of the British Columbian Interior Plateau Physiographic System. This is generally a gentle rolling upland of low to moderate relief. The local Aspen Grove Area lies within the Fair Weather Hills with elevations between 3,500 and 4,500 feet above sea level.

The general region is underlain dominantly by the Upper Triassic Nicola Group intermediate Volcanics, with minor amounts of sediments. It is intruded by stocks, plugs and dykes of Jurassic Coast Acidic intrusions. A series of north striking faults trend across the general area. There is only a relatively thin mantle of glacial drift over much of the bedrock in the general area. However, the majority area of the Bob Group is covered by soil and glacial till. The limited number of rock outcrops seriously hinders geological mapping of the area. The southerly three-fifths of the Claims group are in a pasture. Trees are sparse, there are three ponds in this area. The northerly two-fifths are also in a pasture area, more trees are present, some of timberable size. Rock outcrops occur on both the westerly and easterly side of the northerly claims. A highway cut, on the southern group, has exposed mineralized rock.

## DISCUSSION

A magnetometer survey was conducted over the Bob Group of Mineral Claims near Aspen Grove, British Columbia. The Bob Group consists of the Bob 1 to Bob 10 claims and is located approximately one-quarter mile north of the Village of Aspen Grove. Figure I is a photo copy of the British Columbia Government issued map, Tulameen Map Sheet 92 H/NE. The claims are marked on the figure. The purpose of the survey was to establish the location and extent of any magnetic anomalies within the claims group. Portions of the group which were not covered by the survey were either under water, heavily treed or in the region of a power line crossing the claims, parallel to Highway 5. A total of 10.23 line miles of survey was completed.

Prior to beginning the survey, Notice to Work a Mine or Quarry, was filed with the Mines Inspector at Kamloops and with the Forestry Officer at Merritt. Mr. L. Bryant the surface rights owner of a portion of the claims and Mr. J. Madison of the Douglas Lake Cattle Company were also advised of the program. Permission to work was obtained from all parties concerned.

A Grid of lines was laid out over the claims group using a 300' chain and compass. The centre line of the claims, a north-south line, was used as a base line. Stations were established at 200' intervals east and west of this line thus creating several parallel north-south lines. Colored flagging was used to mark the lines. No line cutting was undertaken as much of the area is either open or sparsley treed. Laths were used where necessary as markers. At the conclusion of the survey as much as possible of the flagging was picked up in order to avoid danger to cattle at some future time.

Figure III is a copy of a rough topographical map of the area made during the time the grid lines were being laid out. The magnetometer survey was carried out by traversing firstly along the centre line and then back and forth along the north-south lines as the terrain permitted. Readings were taken at 200' intervals. Paces were counted to establish the 200' interval and occasional checks of the accuracy of the pacing were made using the chain.




## DISCUSSION (Continued)

A Sharp Fluxgate Magnetometer, Model M-F-1, Serial Number 410-112 was used for the survey. A magnetometer base station was located. To this station an arbitrary value of 500 gammas was assigned. This station was visited with the magnetometer at intervals during the course of the survey to confirm the accuracy of readings taken throughout the survey. The readings and times were recorded. The diurnal variation was thus established. Readings were taken to the nearest 20 gammas while the zero to 1,000 gamma scale was in use. As each reading was taken the position on the grid line and the time of day was recorded. The time was recorded to the nearest minute. All readings were corrected for daily magnetic variation before plotting. A "Type" Data Sheet is enclosed following the Cost Summary. The average diurnal variation was either subtracted from or added to the observed reading to obtain the corrected reading. A straight line graph, Figure II, of Time Versus Variation was used to establish diurnal correction factors. No correction was made to remove the original 500 gamma arbitrary value before plotting. A plot of all readings is presented in Figure IV.

Figure V is a graphical presentation of readings taken along the grid lines. Since no negative readings were taken, the base line of zero is used, with a vertical scale of 1/2" equal to 1,000 gammas.

Because of the relatively even readings taken at the base station it was assumed that any "Solar Storms" occurring at the time of the survey were having very little to no effect in the area of the survey. No contact was made with the "Space Disturbance Forecast Centre," for this reason.

No unforeseen problems were encountered during the survey and I believe the data collected to be reliable.

  
Norman Orr, F. Eng.

PERSONNEL

Name: Norman Orr

Education: B. Sc Chemical Engineering  
University of Alberta - 1950

Professional Association: Registered Professional Engineer of  
Alberta

Member of C. I. M. M.

Experience: Engaged in Field Engineering since 1950,  
including extensive work in field surveying  
of lands, building site and data observation.  
Experience in Canada, United States and  
Italy.

Job: Conducted Magnetometer Survey.

Name: Donald A. Carr

Education: Grade X1 at Calgary, Alberta

Experience: Supervisor of oilwell drilling in Alberta  
and Foreign for 35 years, including  
layout of oil fields and plant construction,  
flow line cutting, etc.

Job: Assisted in laying out and marking grid,  
Maintaining lines of sight and keeping  
magnetometer operator on line.

## DAILY DIARY

- May 4, 1972 Orr and Carr left Calgary by car at 6:30 P. M. and drove to Revelstoke, arriving at 10:30 P. M. Stopped overnight at the Big Six Motel.
- May 5, 1972 Left Revelstoke at 7:30 A. M. drove to Kamloops. Called at the office of the District Forester to File Notice of Working a Mine or Quarry. Directed to Mining Inspectors Office. Mr. D. Smith accepted Notice to Work and directed us to Forestry Office at Merritt. Drove to Merritt, arrived 1:30 P. M. Called on Forest Ranger. Drove to Aspen Grove, located Mr. Les Bryant, land owner, advised him of our desire to enter property. Received approval for survey. Drove to Tulameen, located Mr. Jerry Madison of Douglas Lake Cattle Company. Advised him of our desire to do survey. Received permission. Returned to claims. Walked centre line north south line. Began marking out grid on east side of claims area. Set up Magnetometer base point. Checked magnetometer. Returned to Merritt and checked into Willow Motel at 9:30 P. M.
- May 6, 1972 Left Merritt at 8:00 A. M. Drove to claims, continued work on grid on most southerly claims. Orr began survey while Carr laid out grid on North western end of group. Stopped for lunch at noon, continued work to 6:30 P. M. Estimated 4.5 miles of line completed.
- May 7, 1972 Left Merritt at 9:00 A. M. Drove to Base Point. Set instrument. Worked most westerly side of Group, then north eastern side over outcrop. Finishing at south easterly side of Block.
- May 8, 1972 Reported to Mining recorders office. Filed Affidavit of Work, etc. Returned to Calgary via Kamloops, arrived in Calgary 11:00 P. M.

COST SUMMARY

1.	Rental of Magnetometer from Kenting Earth Sciences 4 days at \$10.00 per day	\$ 40.00
2.	Travel Expenses N. Orr & D. Carr	
	(a) Meals on road Calgary to Merritt, at Merritt and back to Calgary 2 men for 5 days	72.60
	(b) Mileage from Calgary to Merritt and Merritt to Calgary 920 Miles at 15¢/mile	138.00
	(c) Mileage from Merritt to and from claims area 260 Miles at 15¢/mile	49.00
	(d) Hotel (Orr and Carr) 4 nights at \$10.50 (1) at \$ 9.00 (3) plus tax	10.50 28.35
3.	Wages	
	(a) Orr (P. Eng) May 4 to May 8 inclusive 5 days at \$140/day	700.00
	(b) Carr (Helper) May 4 to May 8 Inclusive 5 days at \$50/day	250.00
4.	Supplies	
	(a) 4 rolls flagging at \$1/roll	4.00
	(b) 1 bundle lath	4.80
	1 roll electric tape	.35
5.	Geophysical Interpretation 1 day at \$210/day	210.00
		<hr/>
		\$1,507.60
		<hr/> <hr/>

MAGNETOMETER SURVEY  
DATA SHEET

CLAIM Bob #1 to #10 - CENTERLINE DATE MAY 6 - 1972

LINE # 1 - CENTERLINE of CLIPPS SHEET NO. 1

Station	Reading	Time	Diurnal Time Correction	Corrected Reading	Constant	Adjusted Reading	Notes
000	840	1105	-6	835			
200	980	1107	-6	975			
400	980	1108	-6	975			
600	980	1110	-6	975			
800	750	1112	-6	745			
1000	700	1114	-6.5	795			
1200	760	1116	-6.5	755			
1400	720	1117	-6.5	775			
1600	700	1118	-6.5	795			
1800	840	1119	-7	835			
2000	840	1120	-7	735			
2200	750	1124	-7	745			
2400	480	1125	-7	475			
2600	540	1126	-7	535			
2800	600	1127	-7.5	590			
3000*	640	1128	-7.5	630			
3200	680	1129	-7.5	70			
3400	680	1130	-7.5	670			
3600	400	1132	-7.5	390			
3800	380	1133	-7.5	370			
4000	380	1134	-8.0	290			
4200	530	1135	-7.0	490			
4400	620	1136	7.0	610			
4600	590	1138	9.0	580			
4800	640		9.0	630			
5000	560	1145	-9.0	550			
5200	560	1149	-9	550			
5400	700	1151	-9	790			
5600	560	1152	-10	550			
5800	600	1156	-10	590			
6000	680	1200	-10	670			
6200	660	1201	-10	650			
6400	780	1203	-10	770			

RECORD OF BASE POINT READINGS

<u>DATE</u>	<u>TIME</u>	<u>READING</u>	<u>NOTES</u>
May 5	6:30 P. M.	+ 500	Set Instrument to read + 500
May 6	9:15 A. M.	+520	Reset to + 500
May 6	10:45 A. M.	+505 $\pm$	Started Survey
May 6	1:06 P. M.	+515 $\pm$	Lunch Break
May 6	4:20 P. M.	+485 $\pm$	
May 6	6:20 P. M.	+500 $\pm$	End of Day
May 7	9:45 A. M.	+520	Reset to + 500
May 7	9:46 A. M.	+500	As Reset
May 7	3:30 P. M.	+520 $\pm$	
May 7	5:50 P. M.	+510 $\pm$	
May 7	6:45 P. M.	+515 $\pm$	End of Day

DEPARTMENT OF LANDS AND FORESTS  
BRITISH COLUMBIA

HONOURABLE R. G. WILLISTON, MINISTER  
E. W. BASSETT, DEPUTY MINISTER OF LANDS G. S. ANDREWS, DIRECTOR OF SURVEYS AND MAPPING

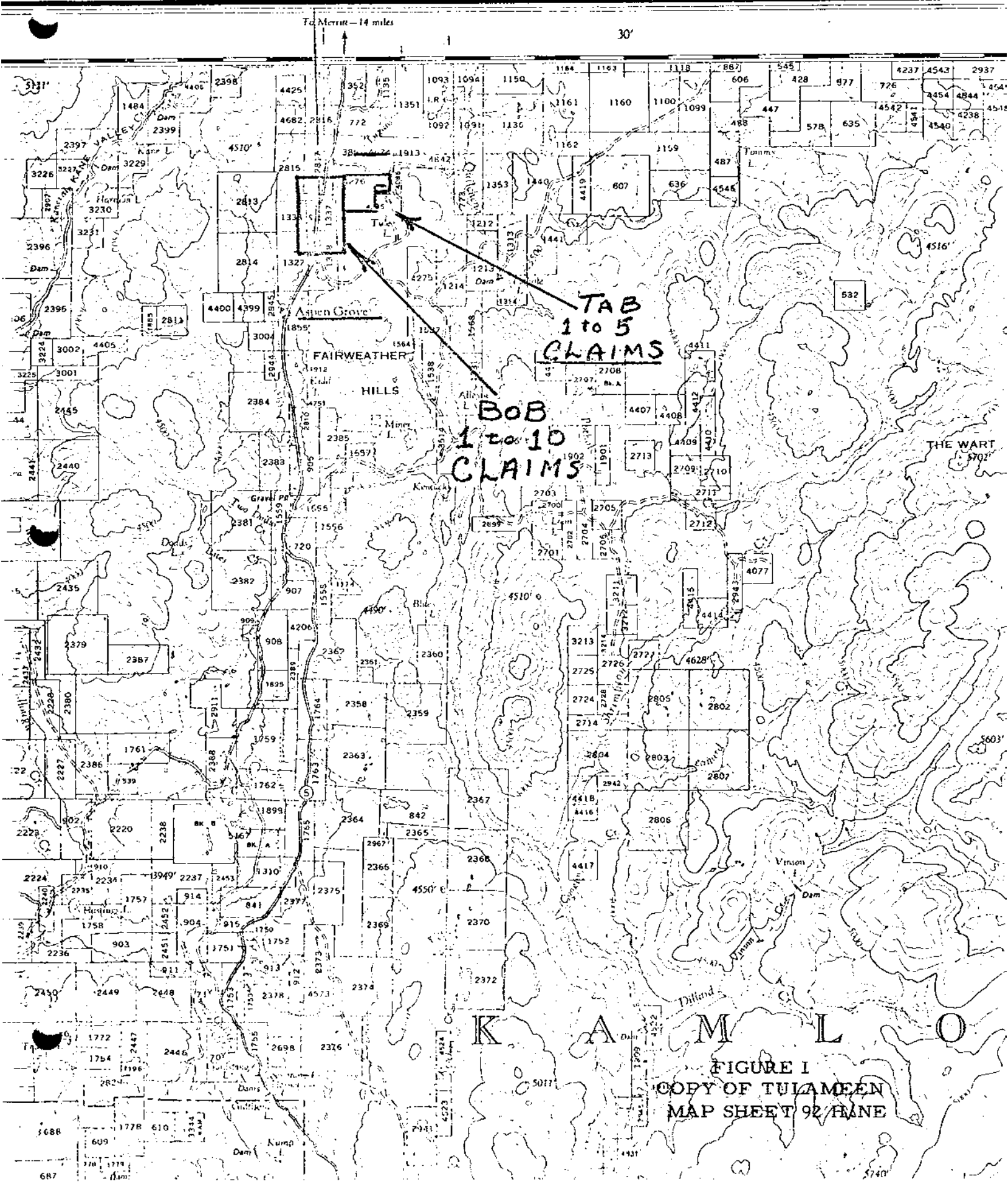


FIGURE I  
COPY OF TULAMEEN  
MAP SHEET 92 FRAME

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 3637 MAP # 1



DIURNAL MAGNETIC VARIATION  
CORRECTION CHART

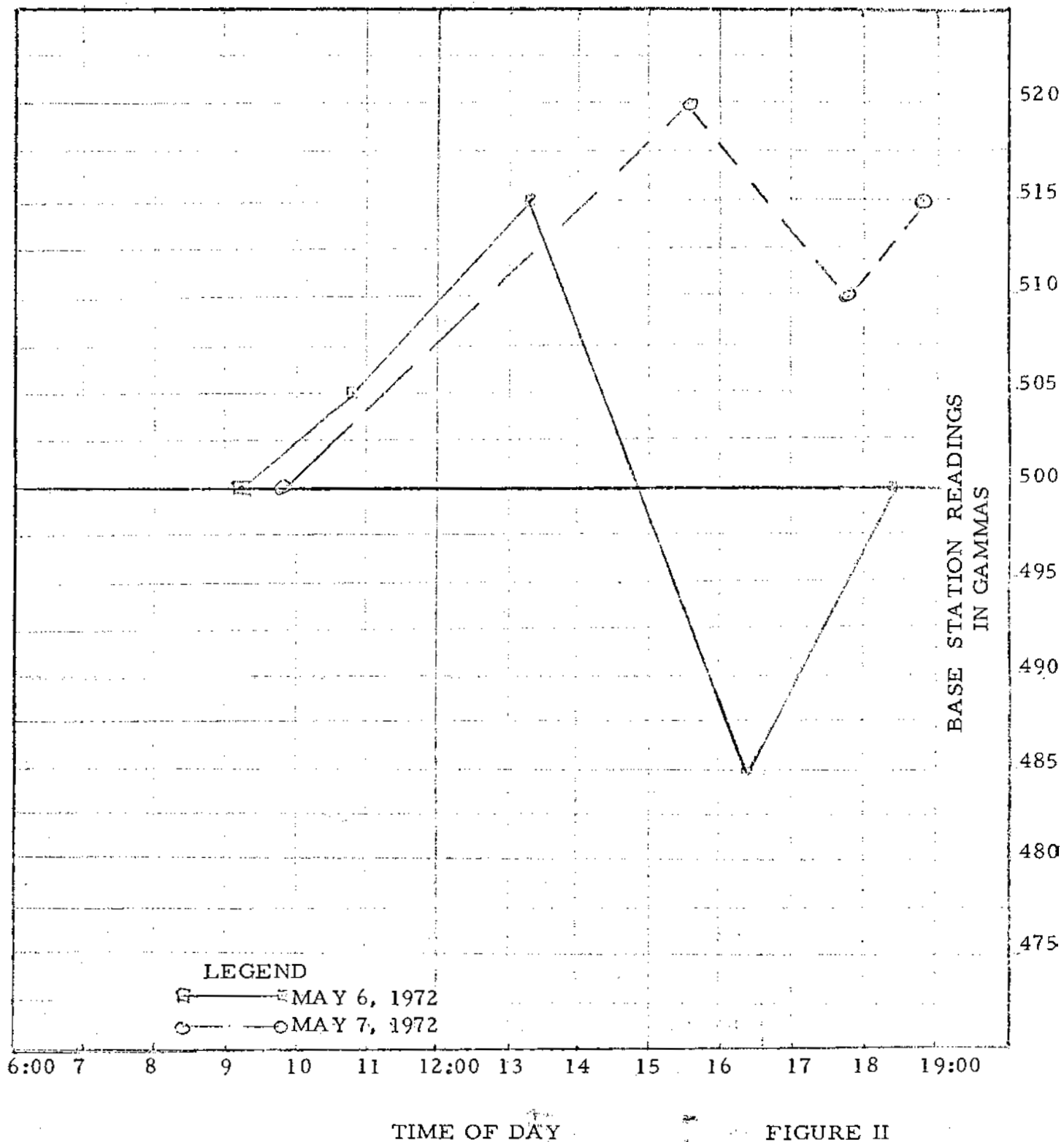
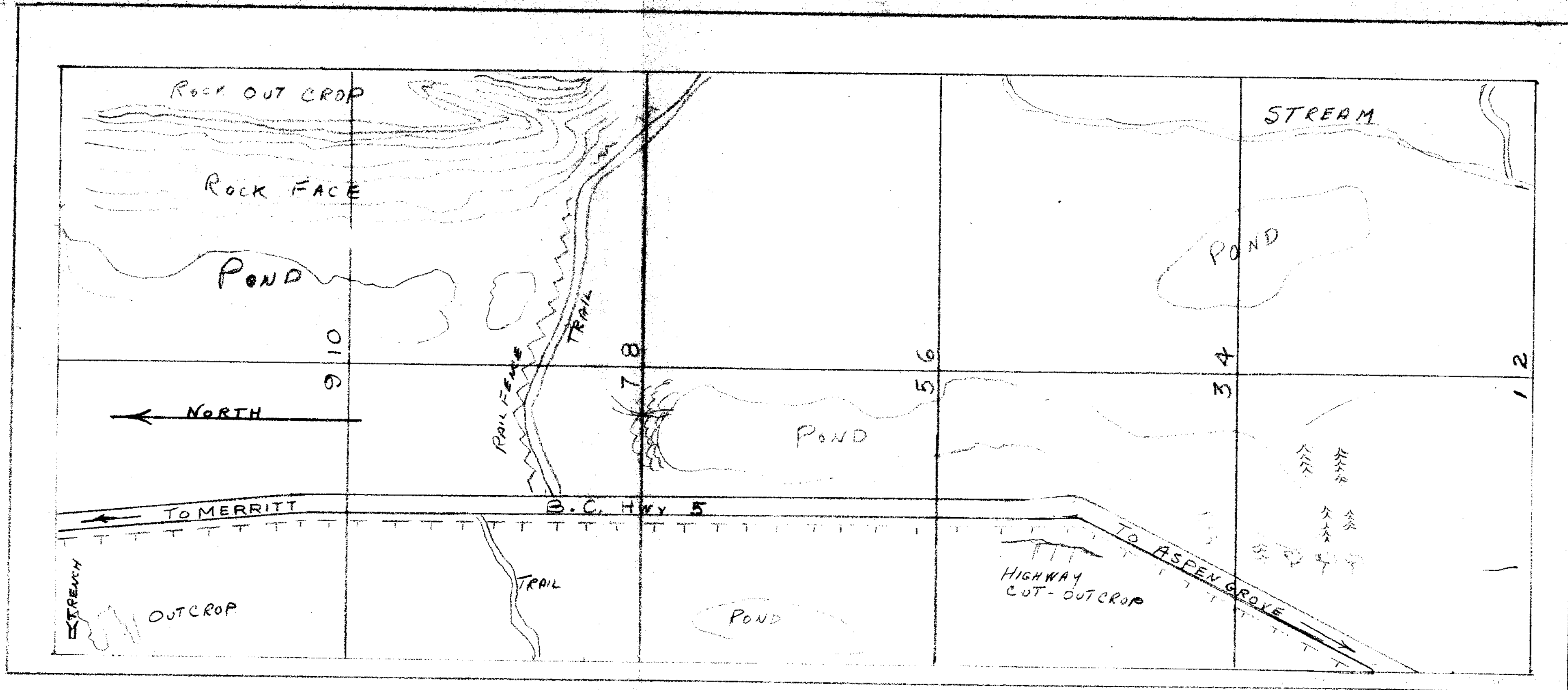


FIGURE II  
MAGNETIC CORRECTION  
CHART

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 3637 MAP #2



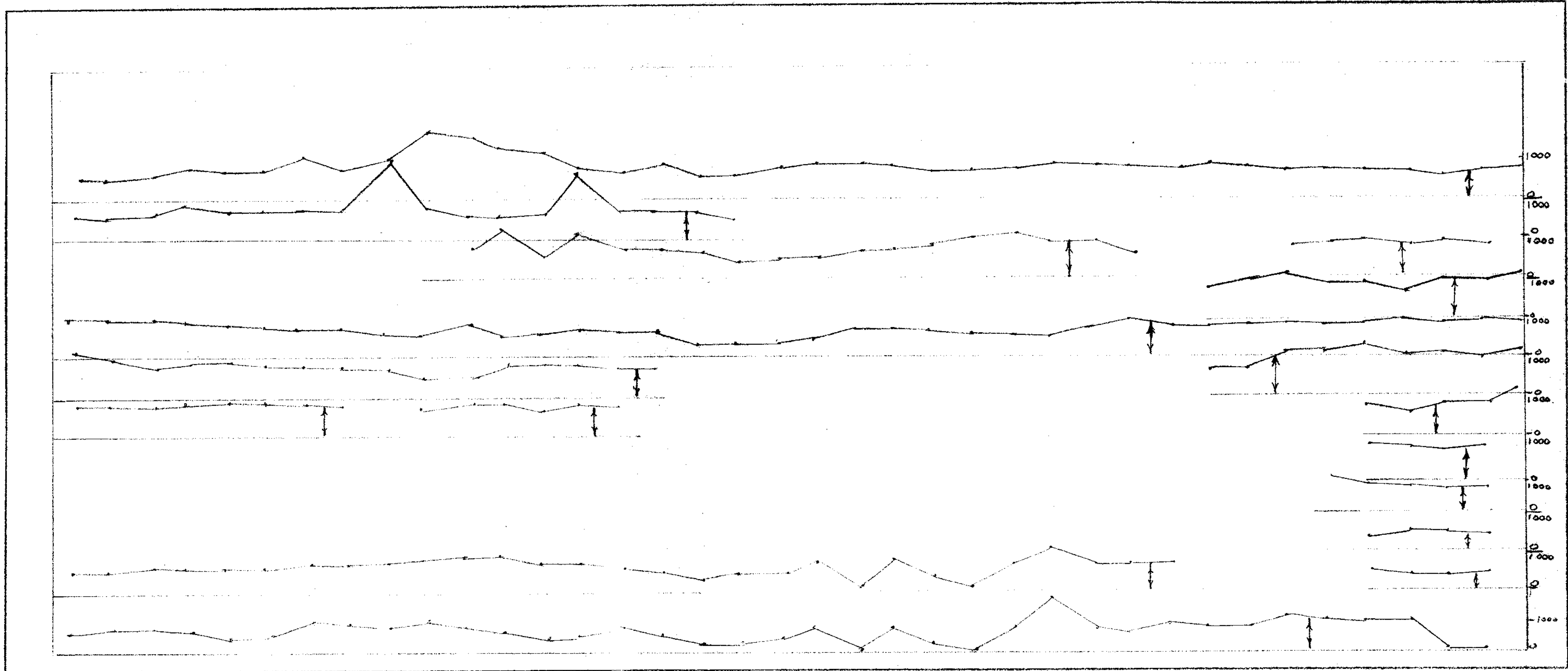
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GEOPHYSICAL REPORT  
 MAGNETOMETER SURVEY  
 Bob 1 to 10 MINERAL CLAIMS  
 ASPEN GROVE  
 BRITISH COLUMBIA

FIGURE III  
 CLAIMS MAP  
 AND  
 TOPOGRAPHIC DETAILS  
 Scale: 1" = 400'

REPORT OF R. B. GALESKI, P. Geoph. and N. ORR, P. Eng.





3637 M-5

GEOPHYSICAL REPORT  
 MAGNETOMETER SURVEY  
 Lots 1 to 10 MINERAL CLAIMS  
 ASPEN GROVE  
 BRITISH COLUMBIA

FIGURE V  
 GRAPHICAL PRESENTATION OF  
 MAGNETIC PROFILES  
 ALONG GRID LINES  
 Scale: Horizontal - 1" = 400'  
 Magnetic - 1/2" = 1,000 gammas

REPORT OF R. B. GALESKI, P. Geoph. and M. ORR, P. Eng.