

**REPORT**

on the

**Thor 3 and Thor 4**

**VANCOUVER, B.C.**

**Mineral Claim**

**Ketchan Creek Area  
Similkameen Mining Division, British Columbia**

**Latitude 49° 45' 30" N., Longitude 120° 32' 45" W.  
NTS Map Sheet 92H/15E**

by

**James P. Balmer, B.Sc., P.Geo.**

on behalf of

**Gary Brown**

**November 25, 2003**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

**27.279**

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## SUMMARY

The Thor 3 and Thor 4 mineral claims described in this report are located immediately west of the south end of Missezula Lake in the Similkameen Mining Division, southern British Columbia, Canada.

The property is underlain by units of the Upper Triassic Nicola Group, which is regionally divided into three N-S trending belts: the Central, Eastern & Western from oldest to youngest. The Thor 3 and Thor 4 claims are underlain by the Central Belt, which hosts a number of alkalic igneous porphyry and volcanic skarn Cu-Au-PGE showings. In addition to this intrinsically interesting setting, there are major structurally effected zones and numerous known mineral occurrences in the area.

Current activity on the claims is concentrated on prospecting and reconnaissance surface magnetometer surveying, which is useful in identifying underlying rock type variations, alteration zones, mineralization and/or the presence of dykes. Future work should include rock and soil geochemistry analyzed for copper, lead, precious metals, and the platinum group elements (PGE).

## INTRODUCTION

The prospecting and reconnaissance magnetometer survey conducted during May 01-08, 2003 is an effective method to cover an area such as this to identify anomalous areas for further, more detailed methods of exploration in the future.

This report has been prepared at the request of Gary Brown of North Vancouver, BC.

## LOCATION AND ACCESS

The claim area falls on the NTS Map Sheet 92H/15E at latitude 49° 45' 30" N and longitude 120° 32' 45" W. and is situated approximately 21 km. south southeast of Aspen Grove, BC and immediately west of the south end of Missezula Lake. The property lies within the Similkameen Mining Division, British Columbia, Canada.

Access to the property is via Highway 5 for 26 km. south southeast from Aspen Grove to the Hornet Lake turn-off, and then east and north for 6 km. on the Ketchan Creek road to the Thor 3 mineral claim. A due east traverse for 2 km. along the south boundary claim line of the Thor 3 claim takes you to the common N-S boundary of the Thor 3 and Thor 4 mineral claims (see Figure 2). This point is on the 0+00 N Baseline at 12+00 W and is the southeast corner and starting point for the magnetometer grid for the survey described in this report.

## TOPOGRAPHICAL AND PHYSICAL ENVIRONMENT

The Thor3 and Thor 4 mineral claims lie within the Thompson Plateau area of the larger Interior Plateau region of BC. The physiographic setting is that of the Dry Interior and/or Sub-Alpine belt, depending on the local elevation. The property covers low, rounded, well-defined north-south trending hill approximately 3 km. long and 2 km. wide with a relative relief of about 250 meters and falls within an area of low, rounded mountainous terrain.

The claim area is one of open range with patches of coniferous and deciduous trees, and elevations range from 1360 to 1525 meters.

Precipitation in the area is approximately 90 cm. per annum, of which 25-30% occurs as a snow equivalent. Winters are generally moderately cold, and summers are usually hot and dry.

## PROPERTY AND OWNERSHIP

The Thor property is comprised of two west-east contiguous, 4-post, 4x5 unit mineral claims with a total of 40 units (see Figure 2). The claims are listed as follows:

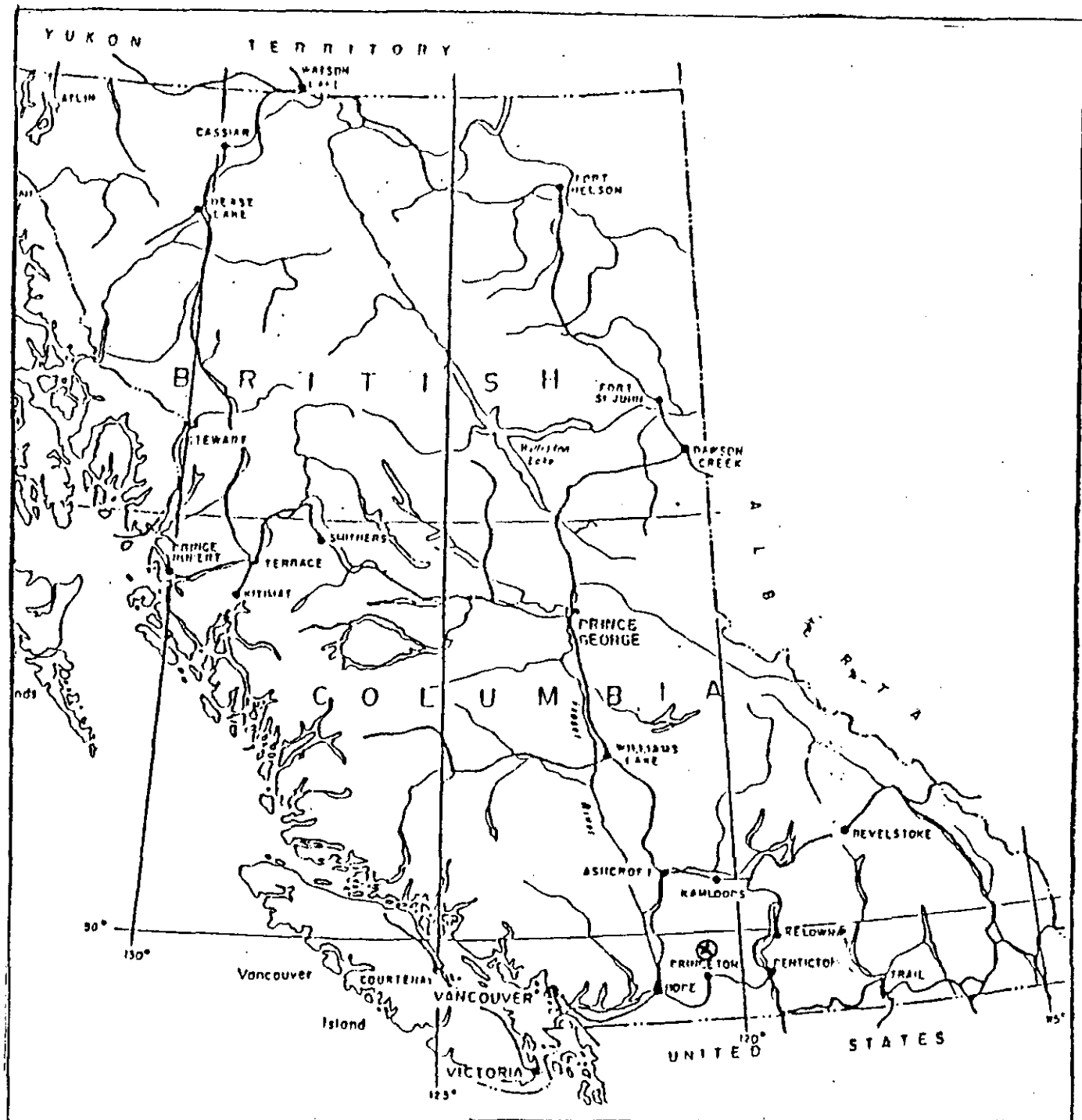
<u>Name</u>	<u>Tenure No.</u>	<u>Units</u>	<u>Anniversary Date</u>
Thor 3	389010	20	August 04
Thor 4	389011	20	August 03
	<u>Total</u>	40	

The mineral claims have not undergone a legal survey, but the legal corner post and other intermediate posts have been examined and appear to be in the recorded location. The claims total an area of approximately 900 hectares.

Mr. Gary Brown of North Vancouver, BC is the owner of the above-listed mineral claims.

## HISTORY

Mining activity in southern BC began with the discovery of the large Cu-Au-PGE, alkalic porphyries of the Copper Mountain area in 1884, which was staked in 1892 and brought into production in 1925 by the Granby Consolidated Mining, Smelting and Power Company and operated intermittently from then until 1957. In 1972 the adjacent Ingerbelle volcanic skarn deposit was put into production by Newmont and was later consolidated with Copper Mountain and produced until 1996 as the Similco Mine. Lode gold was discovered in the Hedley area in 1894, with the Nickel Plate Mine going into production there in 1904. This mine also produced intermittently until 1996. Exploration in the Aspen Grove "Copper Camp" between about 1900 and 1930 did not produce any encouraging results. Later developments such as the discovery of the huge porphyry copper deposits of the Highland Valley (specifically, at first, Bethlehem Copper)



THOR 3 and THOR 4  
 Mineral Claims  
 Location Map  
 Ketchikan Lake Area  
 Similkameen M.D. B.C.

0 180 360 Km

NOV/02	JWM	GAH/ISE	FIG. 1
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as well as the activities around the Craigmont, Phoenix and Afton deposits served to rekindle interest in the Aspen Grove area with an eye to using the models which were developed following their discovery.

One other development that helped fuel further exploration work in this, as well as other, areas was, of course, the unpegging of the price of gold in 1973.

### REGIONAL GEOLOGY

There is an abundance of information about the geology of the area within which the claims herein described fall as well as typical mineral deposits, which might be expected to occur in such a setting. Please refer to the publications listed in the References section at the end of this report.

### LOCAL GEOLOGY

The Thor Property is underlain by interlayered volcanic flows and volcanoclastics belonging to the Central Belt of the Nicola Group.

No mineralization and/or significant alteration has yet been found in the grid area described in this report, but copper mineralization and alteration has been reported near the headwaters of Allison Creek and intense alteration over a large adjoining area. Pyrite, galena and chalcocite have also been reported in the neighbouring area.

### PREVIOUS WORK

The area covered by the Thor claims was prospected and geochemically sampled in 1973-74 for Bronson Mines Ltd. and in 1985-88 for Vanco Explorations Ltd. of Toronto, ON. Some hand and bulldozer trenching was also carried out.

### CURRENT WORK PROGRAM

The present program was conducted on the Thor 3 mineral claim for the claim group of Thor 3 and Thor 4.

The work program consisted of grid installation with a line spacing of 200 meters and a station interval of 25 meters (see Figure 3). The grid began at the Thor 3 – 2E post and consisted of lines 12+00 W, 14+00W, 16+00W, 18+00W, 20+00W, 22+00W, 24+00W, 26+00W, 28+00W, 30+00W and 32+00W and all the lines extended to the north for 2500 meters. The magnetometer traverses closed loop intermittently to check for diurnal variations in the data. The magnetometer used for the survey was a Scintrex fluxgate-type, Model MF-1.

676000

678000

Missegular Lake

5517000

Nicola H.D.

Similkameen H.D.

Ketchikan Creek

Thor 4

Thor 3

5513000

Thor 3 & Thor 4 Mineral Claims

Claim Map  
Ketchikan Lake Area  
Similkameen H.D. B.C.



Nov/02

JWM

92H/5E

FIG. 2

## CONCLUSIONS

The present reconnaissance magnetometer survey appears to be useful as a good "first pass" method for finding gross underlying bedrock features such as alteration patterns and major structures, which could be related to mineralization.

## RECOMMENDATIONS

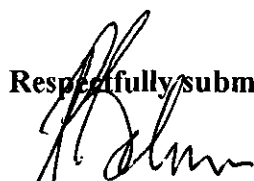
Any anomalous areas identified within the data from the present survey should be surveyed in more detail by both geophysical and geochemical methods. Following that, any coincident anomalous areas should be trenched and possibly drilled as warranted.

The initial follow-up of the anomalous areas should be a detailed magnetometer survey using a 25-meter by 25-meter grid in conjunction with a coincident base station survey. VLF-EM surveying for conductive patterns and self potential surveying for oxidation responses should also be considered. Soil geochemical sampling should accompany any geophysical survey. It may slow down the geophysical survey, but the time saved in having to go back and do any or all of it later would be well worth it. Analysis should include Au, Cu, Pb, Zn, Ag and PGE for any samples anomalous for Cu/Au.

## STATEMENT OF COSTS

Grid installation & prospecting	\$1900
Magnetometer survey	\$1400
Transportation	\$400
Camp & board	\$400

Respectfully submitted,



James P. Balmer, BSc, P.Ge



## **REFERENCES**

**British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Reports.**

**Camsell, Charles, 1910. Memoir No. 2: Geology and Ore Deposits of the Hedley Mining District, British Columbia. Geological Survey Branch, Dept. of Mines, Canada**

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**Lisle, T.E., 1985. Geological and Geochemical Report on the Bloo, Etc. Mineral Claims for Vanco Explorations Limited.**

**McMechan, R.D., 1983. Geology of the Princeton Basin, Paper 1983-3. British Columbia Ministry of Energy, Mines and Petroleum Resources.**

**Montgomery, Joseph Hilton, 1967. Petrology, Structure and Origin of the Copper Mountain Intrusions near Princeton British Columbia. Ph.D. Thesis, UBC**

**Mortimer, N., 1987. The Nicola Group: Late Triassic and Early Jurassic Subduction-related Volcanism in British Columbia. Canadian Journal of Earth Sciences, Vol. 24:2521 – 2536.**

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**Preto, V.A., 1972. Geology of Copper Mountain. Bulletin 59, British Columbia Department of Mines and Petroleum Resources.**

**Preto, V.A., 1977. The Nicola Group: Mesozoic volcanism related to rifting in southern British Columbia. In Geological Association of Canada, Special Paper 16, pp. 39-57.**

**Preto, V.A., 1979. Geology of the Nicola Group between Merritt and Princeton. Bulletin 69, British Columbia Ministry of Energy, Mines and Petroleum Resources.**

**Rice, H.M.A., 1947. Memoir 243: Geology and Mineral Deposits of the Princeton Map Area, British Columbia. Mines and Geological Branch, Dept. of Mines and Resources, Canada.**

**CERTIFICATE**

**I, JAMES P. BALMER, of the Powell River Regional District, Province of British Columbia, hereby certify as follows:**

**I am a Geologist residing in Blubber Bay, BC, V0N 1E0**

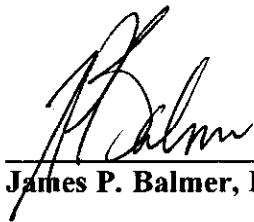
**I am a Professional Geoscientist registered in the Province of British Columbia.**

**I graduated with a degree of Bachelor of Science, Geology Major, from the University of British Columbia in 1972.**

**I have practiced my profession since 1972.**

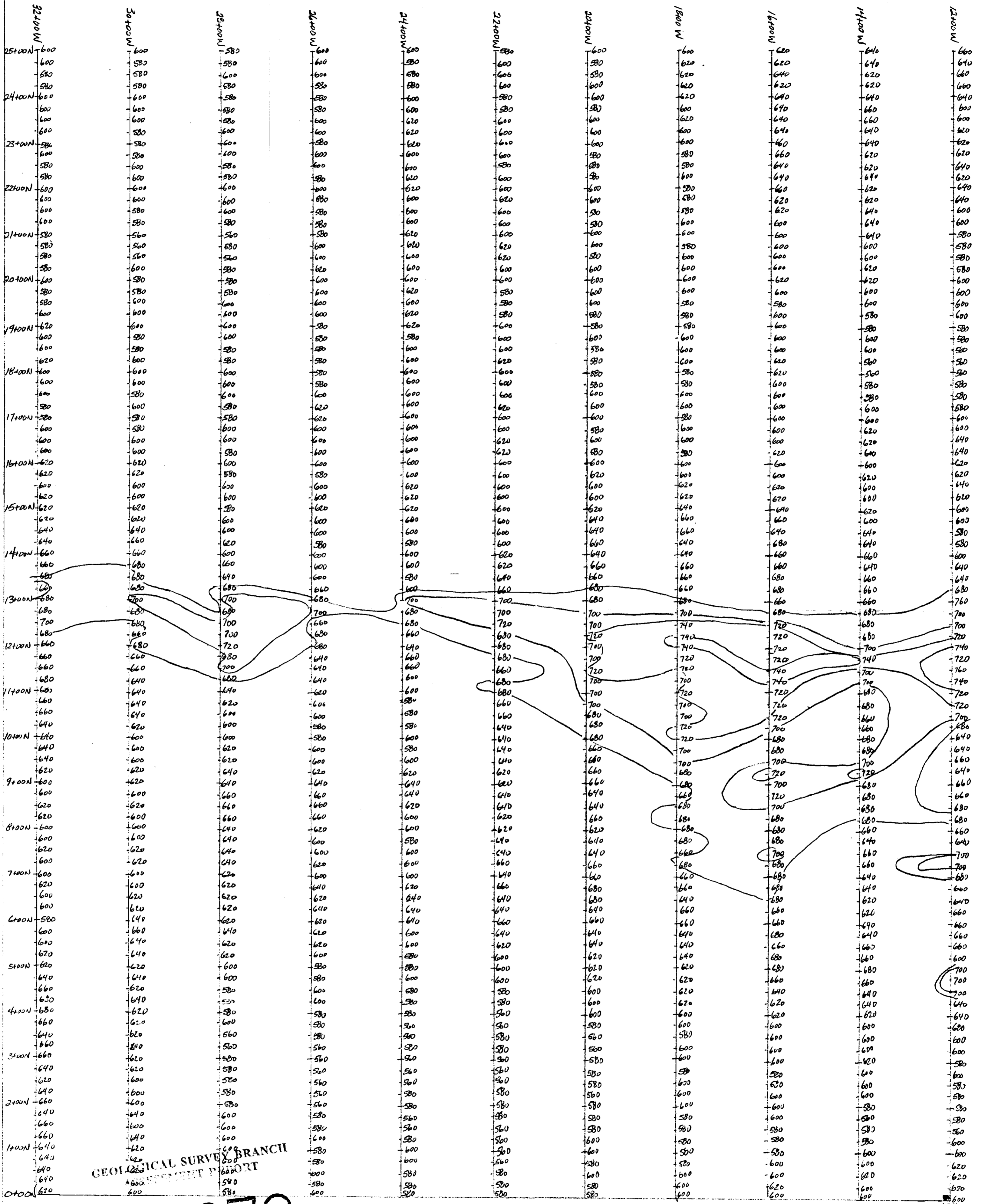
**I have no beneficial interest nor otherwise in the mineral claims that are the topic of this report.**

**Dated at Blubber Bay, Province of British Columbia this 25<sup>th</sup> day of November 2003.**



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**James P. Balmer, BSc, P.Ge**



GEOLOGICAL SURVEY BRANCH  
 MAGNETOMETER SURVEY REPORT

27,279



FIGURE #3  
 MAGNETOMETER SURVEY FIELD DATA  
 1:500

LC 7102 3/