

NEW WESTMINSTER MINING DIVISION  
BRITISH COLUMBIA

PROCEDURE

812487 92 G10

LOCATION

GEOLOGY

FOR

CHAPMAN, WOOD & GRISWOLD LTD.  
NORTH VANCOUVER, BRITISH COLUMBIA

REPORT ON

AN AEROMAGNETIC SURVEY OF EXPLORER,  
DD, SE AND PITT MINERAL CLAIMS

NEW WESTMINSTER MINING DIVISION  
BRITISH COLUMBIA

**812487** 92610

FOR

CARIBBEAN EXPLORATION CORPORATION  
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October, 1967

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REPORT ON AEROMAGNETIC PROSPECTING OF  
BOISE CREEK PROJECT  
FOR  
CARIBBEAN EXPLORATION CORPORATION

INTRODUCTION

On January 23 and 24, 1967, personnel of Chapman, Wood & Griswold Ltd. prospected the area of the Boise Creek Project with a helicopter-borne magnetometer. This work was conducted by P. H. Blanchet for the purpose of obtaining an approximate indication of the distribution of magnetite in the vicinity of the Boise Creek Project. It was hoped that knowledge of the distribution of magnetite might enhance knowledge of the geologic environment and in particular might aid in localizing drilling targets.

PROCEDURE

A Varian Associates proton precession magnetometer, model M4937A, was used in conjunction with a Bell G3B1 helicopter to permit continuous magnetic measurements to be made over the entire area of the Project. The magnetic sensor was towed about 60 feet below and behind the helicopter while the associated electronic equipment was mounted inside the bubble of the helicopter. The noise level of the magnetometer was about 2 gammas during the survey.

The helicopter was flown at a mean terrain clearance of about 400 feet as estimated by eye. Positioning of the



helicopter and subsequent flight path recovery were made by visually estimating the lateral position of the helicopter and marking this position on a topographic map frequently while on a traverse across the area. Flight lines were spaced approximately every quarter mile and three tie lines were added to check diurnal drift and to provide additional coverage.

The lateral departure from a perfect quarter-mile spacing of lines was usually less than 1/8 mile, while variations from the nominal 400 foot terrain clearance were apt to be as much as +400 feet over deep V valleys and as much as -200 feet over sharp ridges. Because the magnetometer work was designed as prospecting, and not as surveying, those departures from flight control could be tolerated. Tighter flight control would demand use of a flight path recovery camera, a radio altimeter, and numerous reflights; all of these factors would have led to a cost considered to be prohibitive in light of the purpose of the work.

A total of 124 line miles was flown covering an area of approximately 25 square miles.

The resulting data are presented on paper charts by the magnetometer. The values from these charts have been transferred to the plan map of C. W. and G. Ltd. Drawing No.502 and contoured at 100 gamma intervals by personnel of C. W. and G. Ltd.

### LOCATION, DESCRIPTION AND ACCESS\*

The Boise Creek Project is located in the Coast Mountains some thirty miles north-easterly from Vancouver. The relatively steep slopes on either side of the east-west valley of Boise Creek are heavily timbered. At present, the only practical means of access is by helicopter.

### GEOLOGY\*

The rocks of the area seem to be almost entirely intrusive, falling into a quartz-diorite or diorite classification. The content and nature of the mafic minerals appears from reports to be variable. A high degree of silicification is reported in the central gossaniferous area.

### INTERPRETATION

From the plan map of C. W. and G. Ltd. Drawing No.582, it is evident that a ring of irregular magnetic highs, surrounding the mineral showings, has been traced by the magnetometer. Several interpretations of this magnetic pattern are possible.

First, the highs could represent a concentration of magnetite formed, in a reducing environment, within the diorite. Second, the internal low could reflect the

\* For more detailed descriptions of Location, Description and Access and of Geology, reference is directed to "Cariboo Exploration Corporation, Boise Creek Project, Progress Report No.1, January 31, 1967, C. W. and G. Ltd.

destruction of magnetite in an oxidizing environment over a limited region of the diorite. Third, the content of magnetite, throughout that portion of the diorite which has been flown, is constant, but the ring anomaly is due to the combined effects of the magnetic attraction of topographic highs and the reduction of terrain clearance over the topographic highs,

Regardless of the source of the ring high, we observe the relatively linear magnetic lows labelled A, B, C and D in coincidence with topographic depressions and airborne lineaments. If in fact lows A and B are caused by destruction of magnetite in zones spanning major fractures, then these zones could be favourable for the occurrence of economic mineralization. Particular attention then, should be paid to the intersection of lows A and B.

The character of the magnetic signature in the Boise Creek area is similar to those found over some porphyry copper deposits in the south-western United States, although allowance must be made for the effect of topography which could substantially modify deductions presented herein.

#### CONCLUSIONS AND RECOMMENDATIONS

No small target area has been delineated, but some broad guides for possible ore occurrence have been indicated by the magnetics. In view of the importance of linear

structural features as ore controls in general, and in view of the possible relationship between magnetics and lineaments, it is recommended that consideration be given to mapping of all major faults and shears by means of an airborne AFMAG survey.

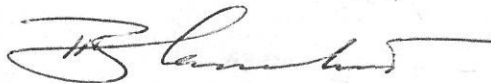
Test drilling of the several possibly different geologic environments suggested by the magnetics should be contemplated as should orientation surveys using induced polarization apparatus.



S. H. Ward, Ph.D., P. Eng.

March 13, 1967

*I certify that this is a valid  
copy of an original report, signature  
and seal*



## SUMMARY OF COSTS

<u>LINE MILES SURVEYED</u>	-	124 Miles
<u>AREA SURVEYED</u>	-	25 Sq. Miles
<u>PERSONNEL EMPLOYED</u>	-	
S. H. Ward	Consultant	- January 15 - March 13, 1967
P. H. Blanchet	Operator	- January 15 - March 1, 1967
V. W. Shuttleworth	Project Geologist	- January 15 - March 1, 1967
R. Nygaard	Draftsman	- February, 1967
 <u>COST</u>		
Magnetometer Unit		\$ 240.00
Geologist - Observer		\$ 240.00
Helicopter		\$ 1,350.00
Data Reduction		\$ 900.00
Consulting		\$ 140.00
Total		<u>\$ 2,870.00</u>

C E R T I F I C A T E

I, PETER H. BLANCHET, of the Municipality of Langley, B. C., do hereby certify that:

- 1) I personally know Dr. Stanley H. Ward and know him to be:
  - a) a geophysicist residing at 8119 Phaeton Drive, Oakland California,
  - b) a graduate of the University of Toronto with a B.A.Sc., degree (1949) in Engineering Physics (Geophysics) and a Ph.D. degree (1952) in Physics (Geophysics),
  - c) a member of the Association of Professional Engineers of British Columbia, and to have:
    - d) been practicing his profession for 18 years,
    - e) no direct or indirect interest, nor does he expect to receive any interest, direct or indirect, in the property or any related securities,
    - f) supervised and consulted on the work described in this report.
- 2) I am a graduate of the University of British Columbia with a B.A.Sc. degree (1943) in Geological Engineering.
- 3) I am a member of the Association of Professional Engineers of British Columbia.
- 4) I am a geologist and have been practicing my profession for 24 years.

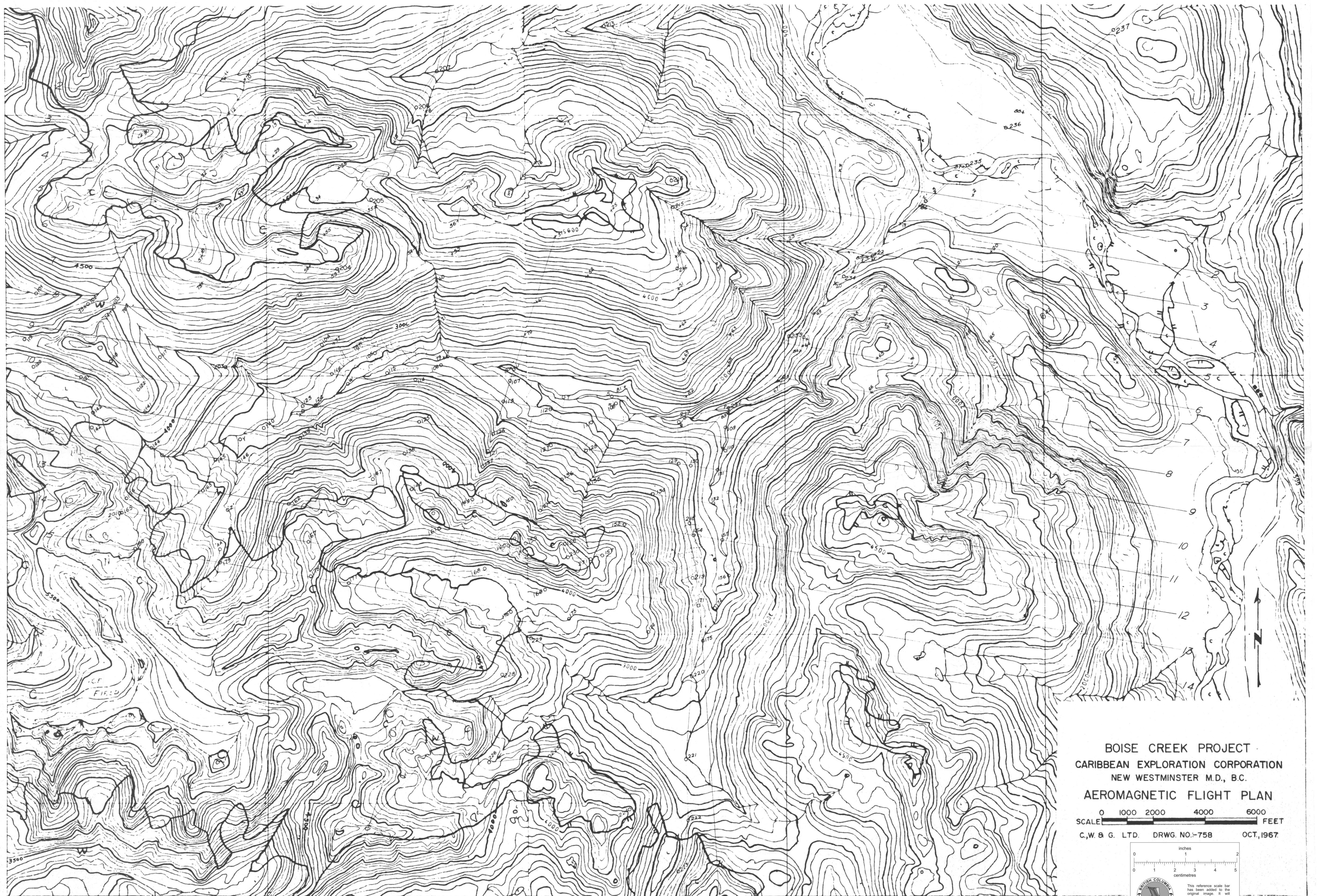
- 5) I neither have nor expect any kind of interest in the property or related securities.
- 6) I performed the work described in this report.

Peter H. Blanchet, B.A.Sc., P. Eng.

Dated at North Vancouver, B. C.

this 25th day of October, 1967

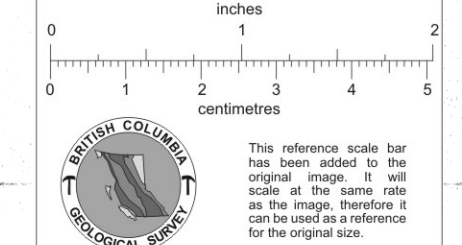




BOISE CREEK PROJECT  
CARIBBEAN EXPLORATION CORPORATION  
NEW WESTMINSTER M.D., B.C.  
AEROMAGNETIC FLIGHT PLAN

0 1000 2000 4000 6000  
SCALE ————— FEET

C.W. & G. LTD. DRWG. NO.-758 OCT, 1967



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.