

**ATLAS EXPLORATIONS LIMITED**

(N.P.L.)

330 MARINE BUILDING  
355 BURRARD STREET  
VANCOUVER 1, B.C.

May 16, 1967.

Mr. Herb Thomson,  
2664 Sutherland Ave,  
Powell River, B.C.

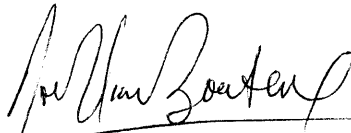
Dear Mr. Thomson:

Enclosed please find a report  
and cost summary on the Ace Group project carried  
out from April 21st to May 12th 1967. The final  
maps will have to be mailed later on as the  
drafting office is very busy now in anticipation  
to go to the Yukon for the summer project.

Thank you for your kind attention  
in this matter.

Yours very truly.

ATLAS EXPLORATIONS LIMITED (N.P.L.)



Joe N. Boateng.  
Mining Engineer.

MAGNETIC, ELECTROMAGNETIC  
SURVEYS AND DRILLING PROGRAMS  
A C E M I N E R A L C L A I M S  
POWELL RIVER AREA  
MINING DIVISION  
B R I T I S H C O L U M B I A

T A B L E   O F   C O N T E N T S

INTRODUCTION:

LOCATION, ACCESS & PHYSIOGRAPHY:

ECONOMIC GEOLOGY:

GEOPHYSICAL SURVEY:

DRILLING PROGRAMME:

CONCLUSIONS & RECOMMENDATIONS:

SUMMARY OF COSTS:

by:    Joe N. Boateng

## I N T R O D U C T I O N:

After an examination by T.L. Sadlier-Brown on the main showing on the Ace Mineral Group in Powell River Area, ~~was~~ magnetic and electromagnetic surveys were carried out on Ace Group # 1-24. A drilling programme was initiated on the main showing concurrently with this geophysical survey. The drilling programme was to find the depth and width extensions of the main showing while the Geophysical survey was to find more drilling targets. 162.5' of drilling using a Winkie Drill was accomplished and 20,000 line feet of Geophysical work was done from the period April 21st 1967 to May 12th 1967, with a crew of one driller and his helper, a propector and the supervisor who did the Geophysical survey and supervised the whole operation.

## L O C A T I O N   A C C E S S   a n d   P H Y S I O G R A P H Y:

The Ace Mineral Calims are located about 12 miles East of the Muncipal town of Powell River and just North-West of Lois Lake, on map 92 - F - 16 W. The claims area is traversed by many logging roads, the main one, running North from Lang Bay on Highway 101, and from Mile 6 past runs parallel to the Claims. The Claims and surrounding country side are well forested with heavy coastal vegetation. Relief is about 1000' with the lowest ground near Lois Lake. Outcrop is abundant along roadways but not common on the surveyed area. Overburdon is moderate with very little residual soils.

## E C O N O M I C   G E O L O G Y:

On the main showing, where an area of about 100 sq ft has been blasted, mineralization mainly

Chalcopyrite occurs in coarse biotite granite along parallel fractures. Mineralization occurs beneath a highly weathered granite, locally called "capping" which may be a leached zone of the main body or a separate body of unmineralized granite. The granite is very Siliceous and contains hornblende with fine very fine grained magnetite.

Mineralization as found here is very diverse ranging from massive Chalcopyrite, pyrite and magnetic (highly localised) to finely disseminated Chalcopyrite, dense fine grained magnetite and specks of molybdenite. The major portion of all the mineralization is within a sheared zone which has an apparent strike of  $290^{\circ}$ , and slightly folded to the south East and plunging at about  $40^{\circ}$  to the north East. A small showing of Chalcopyrite and molybdenite was reported by Pete Risby at ( 11E + 25E, 2N + 25' N ).

#### G E O P H Y S I C A L   S U R V E Y :

Instruments Used: Sharpe MF-1 magnetometer was used in the magnetic survey. This instrument is hand held and measures the vertical magnetic component. The range of this instrument is 10 - 100,000 gammas over five sensitivity ranges.

For the Electromagnetic survey, Rhonka E.M. - 16 was used. Concentric horizontal magnetic fields produced by VLF - radio operating for communications with submarines from Seattle, creates secondary magnetic fields when the primary fields meet a conductive body. The equipment measures the vertical components of these secondary fields. The instrument has two receiving coils. The signal from one of the coils, vertical axis, is first minimized by tilting the coil. The tilt angle is calibrated in percentages and degrees.

The remaining signal in this coil is finally balanced out by a measured percentage of a signal from the other coil after being shifted by  $90^{\circ}$ .

In the field, the reference coil is oriented along the magnetic lines. The instrument is then rocked back and forth to get minimum sound intensity in the headphone. The quadrature component dial is then adjusted to further minimise the second. The tilt angle and the quadrature components are then read.

Survey Method: The <sup>9</sup>frid was laid out at 100' intervals on both line spacing and station intervals. This was chosen because of the relatively small area envisaged in the survey and also because of the lack of knowledge of ~~several~~ <sup>several</sup> geological strikes in the grid area.

In the magnetometer survey, the values as determined on the base stations were checked every evening and also whenever <sup>the</sup> ~~a~~ surveyor was crossing the base line.

The EM survey was done on the same travers lines, checks on base line stations were as of 'the magnetometer survey.

Magnetometer results were corrected for diurnal and drift each night by the operator. The values were then plotted on a grid plan using a scale of 1" to -0200'. A contour and profile maps were made. The EM results were plotted on the same scale and contour and profile maps made.

D R I L L I N G   P R O G R A M :

A Winkie drill program was carried out from April 26th 1967 to May 12th, 1967 on the main showing on the Ace Group. Four holes were drilled, the deepest being 75', the #2 hole. #1 hole was drilled on bearing N20°E at an angle of -45° to a depth of 17.5'. Small Chalcopyrite mineralization was found along fractures.

#2 hole was drilled to a depth of 75' and small quartz <sup>veins</sup> ~~showings~~, occurring at almost 10' intervals contained very small amounts of Chalcopyrite, pyrite and molybdenum at some places.

#3 hole was drilled, a length of 10' at log of N30°E and 50° was abandoned due to casing problems. No significant mineralization was found.

#4 hole drilled at bearing of N30°E and -30° reached a length of 25' and was stopped. Holes #3 and #4 were drilled directly into the sheared zone to test its extensions to the north East.

Hole #M-1 vertical was drilled on the magnetic anomaly to a depth of 45'. A 2" quartz vein at 37' was highly fractured and contained highly mineralized molybdenite and specks of Chalcopyrite mainly in small hair line fractures in the granite. The Magnetic anomaly was caused by the finely grained magnetite in biotite hornblende *granite*.

I N T E R P R E T A T I O N :

A moderate magnetic anomaly located about 300' from the main showing and having an east west strike was drilled. This anomaly has an average width of about 70'. The drill results show the anomaly to have been caused by very dense fine grained magnetite in the granite and the hole M-1 was thus stopped at 45'. No significant EM anomaly was present.

C O N C L U S I O N S and R E C O M M E N D A T I O N S :

The magnetic anomaly, which was drilled was caused by fine,grained magnetite in the granite, with very little mineralization association. However, the source of the massive Chalcopyrite, pyrite, <sup>and magnetite</sup> located at 7E. 50's is still unknown even though the same type was found at the main showing in place ( downstream from the float). If further work is planned, over the Ace Group, in general, then the grid should be extended North - West up stream, and a larger area should be covered to give a better contrast for magnetic anomalies.



ACE MINERAL CLAIMS

POWELL RIVER PROJECT

SUMMARY OF COSTS

1. Salary and Wages:

Propector	@ \$500. per month for 21 days	= \$350
Driller	@ 25. Per day for 18 days	= \$450
Drillers Helper	@ 25. for 18 days	= \$450
Supervisor	@ \$550. per month for 21 days	= \$385
Exploration Manager		= \$250

2. Room and Board:

Supervisor	@ \$ 13. a day + Telephones etc	= \$370
Driller and Helper		= \$352.54

3. Magnetometer Rental @ \$110 per month = \$110

4. Transportation = \$289.39

5. Drill Supplies:

Pump rental	@ \$ 6.00 per day	= 12.00
Drill bits, rods, etc		= \$922.39
Hardware		= 3.23
Miscellaneous		= 21.47

G R A N D T O T A L

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\$3966.02

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