GEOLOGICAL AND GEOCHEMICAL REPORT ON ANTLER CLAIM

Cariboo Mining Division
93H/5E
Lat. 53°20' Long. 121°30'

ESSO RESOURCES CANADA LIMITED
ESSO MINERALS CANADA
600 - 1281 West Georgia St.
Vancouver, B.C.
V6E 3J7

by

WALTER MELNYK

OCTOBER 1982

GEOLOGICAL BRANCH ASSESSMENT REPORT

10,731
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LIST OF MAPS

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Map 1b  ANTLER soil sample location map
        2b  ANTLER soil sample location map

Map 1c  ANTLER soil geochem results
        2c  ANTLER soil geochem results
INTRODUCTION

The ANTLER claim consists of 4 units and is located in east central British Columbia approximately 75 km east northeast of Quesnel and 30 km north of Barkerville.

The ANTLER claim was staked in October 1981 on the basis of one assay sample collected from a rusty, rubbly outcrop which ran 0.359 oz/T Au over 1.1 m. The claim was staked by and is owned by Esso Resources Canada Limited, 600 - 1281 West Georgia St., Vancouver, B.C.

Property evaluation consisted of geochemical soil sampling, lithogeochemical rock sampling, assaying, and geological mapping. Geological mapping was done at a scale of 1:1,000 covering an area of 63 hectares.

LOCATION AND ACCESS

The ANTLER claim is located in east central British Columbia, 75 km east northeast of Quesnel and 30 km north of Barkerville, on the west bank of the Bowron River, 6 km north northwesterly of Bowron Lake.

Access to the property is readily gained by a well maintained logging road that branches off the Wells-Bowron Lake road approximately 5 kilometres southwest of the Bowron Lake campsite. The logging road follows a circuitous route
northerly, west of the Bowron River for approximately 15 km to the location of the ANTLER property between Towkuh and Fourteen Mile Creeks. Extreme caution must be exercised during the summer months while active logging operations are under way.

CLAIM STATUS

The ANTLER 1 claim consists of 4 units and was staked on behalf of Esso Resources Canada Limited in October, 1981 and recorded October 26, 1981.

<table>
<thead>
<tr>
<th>CLAIM NAME</th>
<th>RECORD NO.</th>
<th>UNITS</th>
<th>ANNIV. DATE</th>
<th>EXPIRY DATE</th>
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<tr>
<td>ANTLER 1</td>
<td>4090</td>
<td>4</td>
<td>Oct. 26</td>
<td>1982/10/26</td>
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SUMMARY OF WORK DONE

Work on the ANTLER 1 claim was conducted during the period May 31 to June 8 inclusive, 1982, by a three man crew consisting of a staff geologist and two student assistants. Work consisted of geological mapping, geochemical soil sampling, lithogeochemical sampling and assay sampling.

A picket grid was established on the property with the baseline trending 135°. Crosslines were run at 100 meter
intervals and stations were established at 25 m intervals. A total of 284 soil samples were collected at regular intervals utilizing the grid as control. In addition 15 lithogeochem samples and 12 assay samples were collected from select outcrops within the confines of the grid.

Geological mapping was conducted over the entire grid area at a scale of 1:1,000. Rock exposure is limited to road cuts and represents less than 5% of the entire grid surface area.

GEOLOGICAL SURVEY

The ANTLER property was mapped at a scale of 1:1,000 utilizing the established picket grid as control. The total area mapped was 63 hectares.

According to the geological report by R.B. Campbell, E.W. Mountjoy, and F.B. Young entitled "Geology of McBride Map-Area, British Columbia", the rocks within the surrounding area of the ANTLER claim belong to the Lower Mississippian Slide Mountain Group, Antler Formation. The Antler Formation occupies the western portion of the McBride map area and occurs within a major northwesterly trending structural feature referred to as the Black Stuart Synclinorium.

The Antler formation is primarily composed of basic volcanic rocks, thinly bedded cherts, argillite and sandstone with minor mafic intrusive rocks, diorites and gabbros.
The basic volcanic rocks are fine-grained, dark grey-green basalt pillow lavas and to a lesser extent flow breccias and breccias. Vari-coloured cherts, grey, green and red occur interbedded within the volcanic sequence especially in the lower portion of the Antler Formation. Minor argillite and thin beds of black fine-grained lithic greywackes are occasionally associated with the cherts. The total thickness of the formation is approximately 1,100 meters.

The ANTLER claim is underlain by mafic volcanic rocks mainly pillow basalts, flow breccias, breccias, and an intermediate, somewhat more siliceous, volcanic rock termed a dacite.

Rock exposure within the ANTLER claim grid area is restricted to a northwesterly trending zone through the center of the property which corresponds to a height of land which has recently been logged.

Pillow basalts underlie the central portion of the grid. These rocks are dark green, fine-medium grained, massive with pillows up to 1 meter across. Pillow selvages are well developed, chloritic, to 2 cm thick. The pillow basalts are intimately interbedded with brecciated flows which are characterized by partially resorbed angular basaltic fragments to 5 cm, locally larger clasts are present. The intersticies exhibit a lineation of chloritic material with minor quartz-carbonate infillings. Some of the basalts are porphyritic, containing white feldspar crystals 2-4 mm in diameter comprising 15% of the rock.
A basalt breccia occupies the west central portion of the grid area across lines 3, 4 and 5N. The rock is compositionally a basalt containing angular breccia fragments comprising 75% of the rock with individual fragments from .5 to 5 cm. In part some fragments are subrounded and resorbed but in large part are angular. The rock is a typical medium green color with fragments slightly darker. This rock unit contains a minor amount of quartz-carbonate veining.

An intermediate volcanic rock occurs near L1N and L1+50W. Four separate outcrops reveal a siliceous rock light grey-green in colour, very fine-grained with a pseudo-choncoidal fracture. For the most part this unit is brecciated and sheared. Fragments are medium grey in colour, fused together, and range in size to about 5 cm. The matrix is a lighter green color than the fragments and the intersticies are infilled by white pearly quartz with a light green fine-grained undetermined mineral.

Sulfide Mineralization

Sulfide mineralization on the ANTLER property is restricted to very weak disseminations of pyrite through the basaltic pillow flows, flow breccias and breccias. The intermediate rocks are virtually void of sulfide mineralization except for minor amounts of pyrite on fracture surfaces.
The most significant concentrations of sulfides occur in the main showing area where a 0.7 m wide fracture zone trending 268° and 76° N contains a great deal of gossanous material and the surrounding fractured basaltic flows contain approximately 10-15% pyrite.

Geochemical Survey

Geochemical sampling consisted of collecting 284 soil samples at regular intervals utilizing a picket grid for control, and collecting 15 lithogeochemical rock chip samples from select rock exposures within the grid area. In addition 12 samples were collected for assay from the vicinity of the main showing.

Procedure

Soil samples were collected at 25 meter stations along lines spaced 100 meters. The average depth of sample collection was 30 cm. A prospector's mattock was used to collect the samples and an attempt was made to collect 'B' horizon soils. Several samples were not collected due to wet, marshy conditions.

Samples were collected in brown Kraft paper envelopes,
dried, and sent for analysis to Min-En Laboratories in North Vancouver, B.C. All samples collected were analysed for Au, As and Sb.

Soil Sampling

A total of 284 soil samples were collected at intervals of 25 meters on lines spaced 100 meters. All soil samples were analysed for gold, arsenic, and antimony. Arsenic values outlined two significant anomalous zones coalescing at the main showing area. Gold and antimony soil geochem values resulted in background results except in the vicinity of the main showing, where a single sample ran 5900 ppb Au and 63750 ppm As.

Arsenic

Background for arsenic is visually estimated at approximately 20 ppm which includes 45.5% of all arsenic values. Arsenic values are arbitrarily contoured at intervals of 100 ppm and shown on map 1c. The contoured anomalies outlined indicate two linear trends, one of which, Anomaly 1, trending 297°, is similar to the apparent trend of the mineralized gold bearing structure of the main showing which trends 268°. The second linear trend, Anomaly 2, strikes 357°.
Gold

Gold soil geochemistry resulted in only background values of 5 ppb over the entire grid area. The single highest value of 5900 ppb at the main showing corresponding to an assay of 0.158 oz/T over 0.9 m. There is a slightly elevated gold content 10-15 ppb in areas strongly anomalous in arsenic.

Antimony

Antimony geochem values resulted in background readings over the entire grid area. Values are consistently in the range of 15-45 ppm with no enhancement of antimony in the main showing area nor in the vicinity of the two strong arsenic anomalies.

Lithogeochemistry

Lithogeochem rock chip samples were collected from 15 separate outcrops with the objective of determining the bedrock content of gold, arsenic, and antimony. With the exception of one sample, 1022, gold values range from 5 to 15 ppb, arsenic values range from 1 to 59 ppm and antimony values range from 28 to 60 ppm. Sample 1022, collected near L3N, 1+50W, a gossanous
carbonaceous outcrop, ran 25 ppb Au, 260 ppm As, and 65 ppm Sb. Two soil geochem samples collected 30 meters north and west of this lithogeochem sample site resulted in arsenic values less than 50 ppm.

The lithogeochem sampling suggests that in general, Au, As, Sb content of the country rocks within the grid area approaches background levels.

Assay Sampling

A total of 12 assay samples were collected in the vicinity of the main showing. Samples were collected from outcrops which exhibited significant limonitic signatures indicating elevated sulfide content. Samples collected in the main showing area were reasonably anomalous in arsenic with values ranging from 120 - 14,000 ppm. Antimony values were depressed ranging from 51 to 69 ppm and with the exception of one sample, gold resulted in values of .002 to .003 oz/T. Only one sample, #1002, proved anomalous in gold and arsenic with 0.158 oz/T Au, and 14,000 ppm As over 0.7 m true width.
CONCLUSIONS AND RECOMMENDATIONS

Geological mapping has identified the presence of a mafic volcanic environment on the ANTLER property which appears to be undisturbed by any subsequent geologic processes necessary for localizing economic concentrations of metals.

Soil geochem sampling resulted in two intense arsenic anomalies trending 297° and 357°. The linear nature of the anomalies is attributed to structural control.

Lithogeochemical sampling indicates that country rocks within the ANTLER property contain background levels of Au, As, Sb.

Assay sampling confirmed the presence of gold mineralization in the main showing fracture zone, however, all other assay samples in the immediate area resulted in background values for Au, As, Sb.

The absence of quartz-carbonate veining in the main showing area suggests that gold is hosted by pyrite and/or arsenopyrite, thereby lending significance to the arsenic soil anomalies.

The very weak sulfide content and lack of hydrothermal alteration in the basalts indicates that limited potential exists for discovering economic concentrations of precious metals on the ANTLER property.

The magnitude of the arsenic soil anomalies should not be overlooked and it is therefore recommended that detailed soil
sampling be undertaken to delineate more precisely the arsenic soil anomalies. Lines should be spaced 25 meters and samples collected at 25 meter intervals. A VLF and magnetometer survey should be conducted over the grid to check for structural breaks such as faults and shear zones. Finally, cat trenching should be considered contingent on the results attained from the above prescribed work.
COST STATEMENT
ANTLER PROPERTY - 1982

1. LABOUR

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4. EQUIPMENT RENTAL

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<td>i) Truck @ $1100/month for 9 days</td>
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5. ANALYSIS COSTS

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<td>Geochem 284 soil samples (Au, Sb, As) @ $12.60</td>
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<td>Assays 12 (Au, Sb, As) @ $31.75</td>
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<td>Geochem rocks 15 (Au, Sb, As) @ $14.25</td>
<td>213.75</td>
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TOTAL 8105.15
STATEMENT OF QUALIFICATIONS

I, Walter D. Melnyk of North Vancouver, British Columbia hereby certify the following qualifications:

I obtained a B. Sc. (Eng.) in 1972 in Geological Engineering from the University of Saskatchewan, Saskatoon.

I am a registered member of the Association of Professional Engineers in the provinces of British Columbia and Ontario.

I have been practising my profession as a geologist in Canada for the past eleven years.

Walter D. Melnyk
Esso Resources Canada Ltd.
LIST OF REFERENCES

R.B. Campbell, E.W. Mountjoy, and F.G. Young

Sutherland Brown, A.
