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1947 WEST KING EDWARD AVENUE
VANCOUVER 9, BRITISH COLUMBIA

BARTLE GROUP OF MINERAL CLAIMS

CASSIAR DISTRICT

OF

VENTURES MINING LIMITED N.P.L.

by

Allan P. Fawley

Field Examination October 27, 1963

Report Written November 1963

59-129 SE

BARTLE GROUP OF MINERAL CLAIMS

CASSIAR DISTRICT

VENTURES MINING LIMITED, N.P.L.

INTRODUCTION

The Bartle Group of silver-lead-zinc-copper claims of Ventures Mining Limited was examined on October 27, 1963. Snow covered the flat lying ground but the steep canyon walls and most of the mineralized showings were fairly well exposed. Mr. R. Garth Hawley, who geologically surveyed the area and sampled the mineralized zones this year, accompanied the writer.

LOCATION AND ACCESS

Claims are under
option from Jhm
Bartle - lower
Post.

The Bartle Group consists of 54 claims in the Cassiar District, Northern British Columbia. The claims are on both sides of McDame Creek and are about 16 miles east of the town of Cassiar.

Access is by a 67-mile gravel road from Watson Lake, Yukon Territory. A trail, about one mile long, runs from the gravel road to near the main mineralized zone at the base of Bartle Canyon.

A new road is under construction which will connect the property to the port of Stewart, which is 240 miles to the south-south-west.

GENERAL GEOLOGY AND TOPOGRAPHY

The claims group are in a broad, fairly flat valley which has been eroded by McDame Creek to form Bartle Canyon. The canyon has walls that rise abruptly for 100 to 150 feet above the creek level. The lower canyon walls are almost bare, the upper walls are covered with only a few feet of overburden; the thickness of overburden in the flat and gently rising areas beyond the canyon is not known.

The general geology in the claims area (as shown by Price and Gabrielse, Map 54-10, Geological Survey of Canada) is metamorphosed sedimentary rocks that strike to the north-west and dip to the south-west. The rocks are probably folded. Rocks for a width of about one mile at Bartle Canyon belong to the Hidden Valley Group and are probably of Devonian age; they comprise dolomite, limestone, quartzite and phyllite. The Hidden Valley group of rocks are bounded on the north by Cambrian age rocks of the Atan Group (quartzite, limestone, shale, etc.) and on the south by Devonian and Mississippian age rocks of the Sylvester Group (lava, greywacke, limestone, etc.).

DETAILED GEOLOGY AND MINERALIZED ZONES

A 2,600 foot section along the Bartle Canyon section of McDame Creek was carefully mapped by R. G. Hawley on a scale of 1 inch to 40 feet during the summer and fall of 1963 and mineralized

zones were mapped in greater detail (see enclosed map and insets). Outcrops of rock are almost continuous on both sides of the canyon for widths of about 50 to 200 ft., but there are only a few scattered outcrops away from the river. The rock formations generally trend to the north-west and dip steeply to the south-west. The predominant rocks in the section mapped are limestone and dolomite; however mineralized zones are generally associated with argillite bands lying within the limestone and dolomite. Mineralized (silver-lead-zinc-copper) showings occur periodically along the canyon for a distance of 1,700 ft. (A more detailed description of the geology is to be given in a report by Hawley.)

The deposits are a replacement type and occur as massive to disseminated lenticular veins and also as small blebs or pockets of massive sulphides. The main sulphides are galena and sphalerite with pyrite, pyrrhotite and chalcopyrite in places. Silver is probably mainly associated with galena. Gold is usually only present in trace amounts. Sampling results, mainly channel samples taken by R. G. Hawley, are shown for the various mineralized zones on the enclosed map.

The Caribou Zone

This mineralized silver-lead-zinc zone is the one where most work and sampling has been done, and where an old adit was driven years ago. Ore occurs along faults and shear zones and parallel to bedding planes, in places it is highly oxidized. The

zone is irregular in shape due to faulting, shearing, brecciation and the replacement nature of the deposit but has a width of up to 30 ft. Samples, mostly taken over narrow widths, are generally high in silver, lead, and zinc; for example, eight samples taken over an average width of $1\frac{1}{2}$ ft. along a 70 ft. lens assayed from 15 to 57 oz. silver per ton, 8 to 27% lead, 3 to 19% zinc, and 0.1 to 1.0% copper. Three samples of a stockpile of hand-sorted ore from this zone assayed:

88.5 oz. silver per ton	33.8% lead	19.8% zinc	(Plumb)
50.5 " " " "	22.6 " "	15.5 " "	(Coulson)
86.7 " " " "	35.3 " "	22.8 " "	(Hawley)

Sampling across the full width of the zone has not been done, and it would be difficult to obtain accurate results due to the irregular nature of the ground and because of surface oxidation, except by diamond drilling; however a 9 ft. channel sample across part of the zone assayed 34.9 oz. silver, 14.2% lead and 6.5% zinc; and a 10 ft. sample assayed 21.0 oz. silver, 9.2% lead and 6.2% zinc.

East Caribou Zone

This zone is about 20 ft. wide and is on a steep cliff. Sulphide lenses occur within an argillite-limestone complex band that lies within dolomite. Sampling of the full width of the zone could best be done by diamond drilling. Channel samples across 2 to 4 ft. widths in different beds within the zone assayed 5 to 9 oz. silver,

9 to 13% lead, 2 to 4% zinc, and 1 to 3% copper.

West Caribou Zone

This zone is a 5 ft. band of argillite bounded by limestone. It has been exposed by a pit at an elevation of 150 ft. above McDame Creek. The zone is partially exposed towards the river, the other end is covered by overburden. The argillite contains galena and a minor amount of other sulphides and is somewhat copper stained. A sample across ^{5/2} 5-1/2 ft. assayed 8 oz. silver, 6.5% lead, 0.25% zinc and 0.6% copper.

North Creek Zone

This is a small zone, with a maximum known width of 6 ft., lying within a faulted section of dolomite in contact with limestone. Three samples of massive sulphides across 0.9 to 1.3 ft. assayed 16 to 24 oz. silver, 16 to 22% lead, 7 to 10% zinc and 4 to 5% copper. Three other samples across a 0.9 to 1.5 ft. band of disseminated sulphides assayed 3 to 8 oz. silver, 11 to 29% lead, 0.4 to 1.2% zinc and 0.1 to 0.4% copper.

The Yellowjack Zone

This zone was trenched during the summer of 1963 and appears most promising. It is highly oxidized near the surface for a width of 15 ft. or more. At the base of the trench a 5 ft. section is nearly massive sulphides with considerable pyrrhotite (unusual for these claims). The probable line of extension of this zone is

covered by overburden in both directions. A 5.3 ft. channel sample of the massive sulphide section assayed 33.6 oz. silver, ^{0.02}~~0.2~~ oz. gold, 18.4% lead, 7.3% zinc, and 1.0% copper.

This zone appears to be of sufficient size and to contain enough sulphides to be traced by E.M. or S.P. geophysical surveys.

CONCLUSIONS AND RECOMMENDATIONS

Small but high-grade irregular shaped bodies of silver-lead-zinc-copper ore occur periodically, where the rocks are well exposed, along a section of McDame Creek. Most of the area of the 54 claims group, except for the strip along McDame Creek, is covered by overburden. High-grade float is reported by R. G. Hawley to have been found in various places on the property, and McDame Creek was an important source of placer gold. Considering the number of mineralized showings that have been found in the small exposed area it is logical to expect that many other showings exist below overburden within the claims group. Also the boundaries of known ore occurrences have not yet been determined.

On present evidence, it is probable that a profit could be made by mining and shipping high-grade ore (once the Cassiar-Stewart road is completed) from the known showings; however far greater profits should be possible if sufficient low-grade ore can be found for, say, a 500 ton per day mill. It is possible that some of the mineralized zones will be large enough to be mined by cheap

open-pit methods. Hence an attempt should be made to determine the size and overall grade of the zones by geophysical methods and/or diamond drilling.

The following program is suggested:

1. Try out both E.M. (electro-magnetic) and S.P. (self potential) geophysical methods over the Caribou and Yellowjack Zones. If either method proves capable of indicating these mineralized zones then that method should be used for a geophysical survey of the area that has already been mapped by Hawley, and then extended to cover, on a least a reconnaissance scale, the entire claims area.
2. Drill the Caribou and East Caribou Zones with a series of short holes from the base of the cliff. Drill the holes upwards at an angle of about 5 degrees so that it will be easier to obtain full sludge recovery (the mineralized zones are highly oxidized in places so that core recovery may be low, and water and sludge recovery is frequently difficult to obtain in limestone and dolomite). The entire core and sludge should be sampled and assayed. The Yellowjack and West Caribou Zones should also be tested by short drill holes.
3. Following completion of the geophysical survey and the above drilling, sufficient information should be available to plan the next program, which if the original work has proved encouraging will require a large amount of drilling and possibly underground exploration by adits.

ESTIMATED EXPLORATION EXPENSES

As usual with prospects, it is difficult to estimate exploration costs as the results obtained while exploration is in progress determine what further expenses are necessary. Expenses in this area are high at present as all supplies have to be transported via Watson Lake, Yukon Territory. Geophysical work will cost about \$100.00 per day and diamond drilling may cost \$10.00 per foot for a small drilling contract even though limestone and dolomite are comparatively soft rocks. Also there will be engineering, surveying, administrative and assaying expenses.

Roughly, \$15,000.00 should be available to conduct a reconnaissance geophysical survey over the property and for shallow drilling of the known mineralized showings; and a further \$20,000.00 should be available, in case results from the above program are encouraging, to complete the geophysical survey in greater detail and to do preliminary shallow drilling on any anomalies discovered.

Respectfully submitted,



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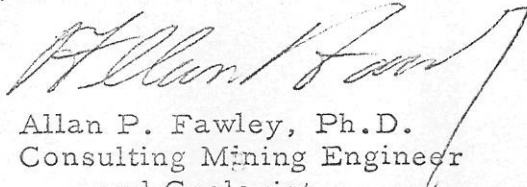
November 18, 1963

CERTIFICATE

I, ALLAN PRIEST FAWLEY, of the City of Vancouver in the Province of British Columbia, HEREBY CERTIFY:

- (1) THAT I am a Consulting Mining Engineer and Geologist and my address is 1947 West King Edward Avenue, Vancouver 9, B. C.
- (2) THAT I am a graduate of the University of British Columbia with the degree of B.A.Sc. (1937) in Mining Engineering, of Queen's University with the degree of M.Sc. (1946) in Geology and of the University of California with the degree of Ph.D. (1948) in Geology.
- (3) THAT I am a registered Professional Engineer in the Geological Section in the Province of British Columbia and also a member of the Society of Economic Geologists, of the Canadian Institute of Mining and Metallurgy, and of the Geochemical Society.
- (4) THAT I have practised my profession as a geologist for more than twenty years.
- (5) THAT I have no direct interest or indirect interest, nor do I expect to have any interest in the Bartle Group of Mineral Claims of Ventures Mining Limited N.P.L.
- (6) THAT I have no direct or indirect interest in any company acquiring control or intending to acquire control of the Bartle Group of Mineral Claims of Ventures Mining Limited N.P.L.
- (7) THAT the report on the Bartle Group of Mineral Claims of Ventures Mining Limited N.P.L. is based on personal examination of the property on October 27, 1963.

DATED this 18th day of November, 1963


Allan P. Fawley, Ph.D.
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