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December 16th, 1968.

The President & Directors,
Ajax Mercury Mines Ltd.,
115 - 815 W. Hastings St.,
Vancouver, 1, B.C.

Dear Sirs:

Pursuant to your recent request regarding your Company's Highland Silver property in the Beaverdell, B.C., area, I am pleased to supply you with the following information and recommendations:

PROPERTY, LOCATION & ACCESS

The claim group consists of the Standard Fraction, Gold Drop Fraction, Gold Drop #2 Fraction, Buster M.C., Alaska M.C., Rambler Fraction, Relief Fraction, Homestake M.C. and the Gold Drop M.C.

The claims are situated on Wallace Mountain to the south of the Mastodon-Highland Bell mine workings and the old Silver-Lee workings, as shown on the attached sketch. Elevations range from 4100' to 5000' above sea level.

A good gravel truck road connects the village of Beaverdell to the property.

GENERAL

The Beaverdell camp has produced more than 30,000,000 ounces of silver during the past 67 years. Most of this amount has come from ground now mined by Mastodon-Highland Bell Mines Ltd. who have been operating a concentrator continuously since the early 1950's and who are currently treating 125 tons of ore per day to produce about

700,000 ounces of silver per year. It is reported that the Wellington mine (now part of the Silver-Lee holdings) produced 1,500,000 ounces of silver during the period 1920-1941, all essentially from one vein.

Almost all of the productive veins in the district carry 1% to 4% lead and similar quantities of zinc, in the form of sulphides, together with minor amounts of cadmium.

GEOLOGY

The rocks of the Beaverdell camp consist of the Wallace formation of tuffs and lavas which have been intruded by a quartz diorite mass of batholithic proportions. A stock-like mass of porphyritic quartz monzonite occurs in Beaverdell and this is probably a differentiate of the larger intrusive mass.

The contact between Wallace and batholithic rocks is high on the west flank of Wallace Mountain. It dips gently eastward and has a sinuous southerly trend from Highland Bell through the Buster claim and beyond. Much of the best ore mined at Highland Bell is in the quartz diorite within a few hundred feet of the Wallace, hence the significance of the Wallace-batholith contact.

This contact area has been traced on your claim group recently, and is shown on the map accompanying this report.

The lodes in the Mastodon-Highland Bell area have been followed down dip for 2000 feet with little appreciable change in mineralogy. Pyrite, sphalerite and galena are the most common metallic minerals. The richer ore shoots are thus because of the presence of one or more of the following: argentiferous tetrahedrite, ruby silver, native silver

The lodes in the Lass and Bell mines of Highland Bell Mines Ltd. strike northeasterly and dip southeasterly. In the Sally and Wellington, the veins strike east-west and dip steeply to the south.

An incredible number of faults displace the lodes. The faults fall into four categories with two strikes, north-south and northeasterly. The north-south faults that dip steeply eastward are the strongest, most continuous but none of the faults or fault directions is of paramount importance from an ore-making standpoint.

A study of the mapping completed in the Rambler mine (see section attached) shows that, in all likelihood, two and possibly three faults, striking northeasterly and dipping northwesterly at 30° to 65°, have displaced a single vein, producing four segments. The vein segments are steep, narrow (rarely more than one foot) and are each about one hundred and thirty feet in length.

Similar repetitions of vein segments, but with more complicated results, have been exposed in the Standard workings.

This pattern of vein segments, disrupted by faulting, appears to present the same general picture that has been developed in the Mastodon-Highland Bell mine, some four to five thousand feet farther north.

PREVIOUS WORK & PRODUCTION

(1) BUSTER

An adit approximately 600' long has been driven easterly across the Standard-Buster boundary. This working follows intermittently a much faulted vein structure that dips southward.

The face of this adit is still in diorite, some distance away from the Wallace-diorite contact which is generally considered to be the favourable area.

A twenty-foot winze, close to the face, has been sunk on the vein, from which it is reported a few tons of high-grade ore was hand-sorted.

(2) RAMBLER

The Rambler workings consist of three levels spaced approximately 50 feet apart vertically, from 4280 feet above sea level upwards. A short shaft was sunk on a vein segment at the east end, and connected with one of the levels.

Incomplete data suggests that former operators obtained assays of the order of 30 ounces of silver per ton across widths averaging 2.5 feet. The B.C. Minister of Mines Annual Report for 1950 reports a hand-sorted shipment, from No. 2 adit and the shaft area, amounting to 46 tons containing 1138 ozs. of silver per ton, 1333 pounds of lead and 2514 pounds of zinc.

(3) STANDARD

Three or four hundred feet of underground workings have been driven on the Standard vein system.

~~Production~~

(4) GOLD DROP

The workings consist of an adit level, approximately 300 feet long, and two partly caved shafts. In 1950, 8 tons of ore hand sorted from the old dumps were shipped and found to contain 250 ounces of silver, 449 pounds of lead and 761 pounds of zinc.

(5) HIGHLAND SILVER

A shipment to Trail, totalling 13 tons, described in the Minister of Mines Report for 1949 as originating from the "Highland Silver Mines Limited" group of claims, contained 867 ounces of silver, 1685 pounds of lead and 2222 pounds of zinc.

1968 EXPLORATION

Work completed during 1968 included compilation of a topographical map from aerial photographs on a scale of 1" = 400', detailed ground surveying of the various adits and other workings, and geological mapping.

Two narrow veins, each about one foot to two feet in width and fifty feet long, were uncovered by Mr. W. Knox, the Company's President, during careful surface prospecting. These represent new discoveries.

Chip sampling was carried out in numerous places in the underground workings and on the surface, across the more promising looking portions of the veins.

Tractor trenching was conducted for a limited period of time in selected places.

A total of 1107 feet of underground, "E" size core, diamond drilling was completed on the Standard and Rambler workings to test possible vein extensions above and below the various levels.

A geochemical soil survey was conducted using lines spaced at 200' intervals, with samples taken every 100' along the lines. The samples were submitted for silver analysis to a Vancouver laboratory, and the results plotted as per the attached map.

CONCLUSIONS

Although a relatively large number of short, narrow, vein segments have been explored and isolated interesting assays have been obtained, nothing of economic significance has been indicated in the old workings or on the surface.

The general geological setting, however, remains favourable. Several veins, and vein segments, with silver, lead and zinc values have been discovered in the diorite near its contact with the Wallace sediments. The veins are striking in the same direction as those in the lower workings of the Mastodon-Highland Bell mine, they possess the same general characteristics, and undoubtedly constitute part of the general vein pattern of the district.

It is apparent that only a small portion of this general vein system occurring on your Company's group of claims has been explored by the old workings and the surface trenching. Geochemistry was therefore recommended and has produced areas of interest. The accompanying geochemical map of your Beaverdell mineral claims shows four anomalous areas of interest with samples in excess of two parts per



million silver with high values greater than five parts per million silver. Background is considered to be 0.7-0.8 parts per million.

ZONE 1 (see map) is downslope from the Rambler and the Standard mine portals but is most probably not related to these veins. The isolated "highs" south of Zone 1 are considered to be the trace of the structures and Zone 1, a parallel silver-bearing vein a few hundred feet to the north, or the faulted portion of the veins mentioned above.

ZONE 2 appears to be an 1800 foot long, westerly extension to the Buster vein, and is the most interesting single item of information resulting from the soil survey. The Buster vein, as drifted on to date, appears as a weakly anomalous zone with readings of 1.3 ppm silver.

ZONE 3 may be a westerly extension of Zone 2 and is 500' x 200' in area.

ZONE 4 is new, in an area not known to contain any mineral.

RECOMMENDATIONS

It is recommended that the sum of \$15,000 be expended in exploring the four principal geochemical zones referred to above. This should be done initially by tractor trenching across the anomalous zones.

The sum of \$50,000 should be made available for diamond drilling the indications exposed by the trenching. ~~These expenditures are detailed in the following estimate:~~

(1) Tractor Trenching

(a) D-7 Caterpillar type tractor rental - 40 days = 320 hrs. x \$25/hr.	\$8,000
(b) Vehicle expense - 1-1/3 mos. @ \$500/mo.	650
(c) Surface labour - 1-1/3 mos. @ \$500/mo.	650
(d) Sampling & assaying - 200 samples @ \$5 per sample	1,000
(e) Board loss - equivalent of 3 men x 40 days x \$8/day - say	1,000
(f) Small tools	200
(g) Supervision - 1 man x \$1000/mo. x 1-1/3 mos. - say	1,300
(h) Engineering, geological mapping & consulting fees	<u>1,200</u>
<u>Sub Total</u>	\$14,000
Plus 10%	<u>1,400</u>

\$15,400

(2) Diamond Drilling.

(a) Diamond drill contractor cost 5000' @ \$8.00 overall per foot	\$40,000
(b) Vehicle expense - 3½ mos. @ \$500/mo.	1,750
(c) Core boxes - delivered - 250 @ \$5.00 each	1,250
(d) Surface labour - 1 man x 2 mos. @ \$500/mo.	1,000
(e) Sampling & assaying - 200 samples @ \$5/sample	1,000
(f) Supervision - 3½ mos. @ \$1,000/mo.	3,500
(g) Engineering & consulting fees	<u>1,500</u>
<u>Sub Total</u>	50,000
Plus contingencies @ 10%	<u>5,000</u>
	<u>\$55,000</u>
<u>TOTAL</u>	\$70,400

