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D.H. James

Lustdust

In response to your enquiries I have re-examined Bronlund's reports of 1952, 1953, 1954, and 1960, to attempt an assessment of the data.

The property is owned by the Bralorne Pioneer - Canex - Noranda joint venture.

The 15 claims require next work recorded in August 1964 and payments or production in April 1966. They are 210 miles by gravel road from rail at Vanderhoof.

### Geology

The showings are in a structurally complicated assemblage of Permian limestone, argillite, chert, schist, and greenstones intruded by various dykes and by granite. Faulting occurs.

The deposits are partly replacement and partly fissure filling and contain pyrite, pyrrhotite, siderite, quartz, arsenopyrite, sphalerite, galena, tetrahedrite, antimonides, and chalcopyrite.

# No. 1 Zone

This is the original discovery in 1944. In 1945 it was investigated by Leta Exploration Ltd., who outlined by trenching four shoots in a length of 1500 feet. These are as follows:

	1	25"	X	13'	.07 oz. Au	36 oz. Ag
	2	251	x	61	.07	34
	3	2551	x	7.	.13	23
	4	751	x	31	.08	15

It is to be noted that the 0.127 oz. gold value given in the 1952 report is incorrectly quoted at .27 oz. in the 1953 report.

Leta drifted 320' on this showing under the first two shoots and got generally very poor results, with only three samples higher than 10 oz. silver.

In 1953, 8 holes were drilled at fairly shallow depth under the #3 shoot and north of it. Only one commercial assay was obtained,  $l_2^{1}$  of sulfides in hole #2 ran .28 oz. Au, 252 oz. Ag, and 8% Zn, 5% Pb, 9% Sb. The next highest gold assay was .19 oz. across  $l_2^{1}$  and the next highest silver assay was 39 oz. across  $l_2^{1}$ .

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In 1954 one hole was drilled in a direction opposing the others and deeper. It cut 8 bands of sulfides, the best of which ran .12 oz. Au, 17 oz. Ag., 7% Zn. 3% Pb. 4% Sb across 4 feet.

Bronlund considers the surface showings and the vein cut by this hole are separated by a fault parallel to the vein, and that the 8 shallow holes want through the gap created by the fault and cut only drag material. This interpretation is legitimate, but I think it equally likely the deposit is a series of pods branching from and within a shear zone.

### No. 2 Zone

This zone lies west of the north end of #1 zone. The principal shoot in it is 330' x 3.5' at 0.12 oz. Au, 4.6 oz. Ag, and 4.8% Pb plus Zn. It is oxidized on surface.

### No. 3 Zone

This zone, like the others, appears related to a shear which has been traced for 2200 feet. There are six shoots of oxidized sulfides and numerous small deposits of zinc carbonate.

Four shoots are similar to the other deposits and average about .10 oz. Au, 2 oz. Ag, 4% Pb, and 3% Zn.

The other two shoots were evidently fairly massive sulfides, now gossan. They are wider than the other zones, on surface at least. Surface sampling indicates low values in gold, silver, lead, and zinc.

Twelve holes were drilled. In the four drilled in 1953, only sludges were recovered and the best ran .16 oz. Au, and 6.5 oz. Ag for five feet. Gold in the gossan is described as free, and the values may be very inaccurate. In the 8 holes drilled in 1954, it was determined that gossan extends to 170' depth. Again, almost no core was recovered and in spite of close casing sludge recovery was only 20%. Under these conditions, assays can be highly misleading, but gold ranged up to .95 oz. with an average of about .1 oz., silver ranged up to 3.5 oz. with an average under an ounce, zinc ranged up to 17½% in fault gouge with an average in the order of 3%.

Except for small particles no primary ore was recovered. The section 160-180 in hole 30 is described as sulfides, and sludges ran .25 oz. Au, 1.47 oz. Ag, 0.7% Zn. At least two holes which should have cut sulfide got nothing and Bronlund postulates a similar fault to that in the #1 zone as terminating the deposit. Again I believe the "pod" alternative is possible and viewing the two zones together, it is really more likely.

An extension to #3 zone found in 1954 and trenched further in 1960, returned .26 oz. Au, .5 oz. Ag, .6% Zn across 12 feet and .11 oz. Au, 3.2 oz. Ag, and .5% Zn across 11 feet in two trenches.

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### No. 4 Zone

This occurs on the bank of Canyon Creek and trends at right angles to the other showings. It is a contact area showing some copper with silver and zinc. Not much work has been done.

# No. 4B Zone

This is structurally similar to the others and was evidently first worked on in 1960. It has been trenched at intervals for 920 feet. Fresh material in a shoot 260' x 10' ran .10 oz. Au and 4.1% Zn., with negligible silver and copper. Other values from questionable fresh material ranged up to .18 oz. Au across 10 feet with up to 9% Zn, 4% Pb, and .9 oz. Ag.

# Discussion

It is fairly obvious the showings are numerous and irregular due either to original deposition or faulting or both. Extensive overburden and deep weathering make surface work difficult and uncertain. Exploration is warranted only if there is reason to expect high tonnage or adequate values.

It is my opinion, based only on examination of the reports, that the deposits are characteristically in shoots or lenses of limited size, excepting the #4 zone about which little is known and whis is of a different type.

Grade is difficult to estimate. Gold appears to be generally present to the extent of .1 oz. in all zones. Higher assays are either offset by lower ones or are from sludge and accordingly doubtful. Silver appears to occur in important amounts only in No. 1 zone and may be restricted to a second stage of mineralization. The No. 1 zone values in the order of 25 oz. would be about minimum for an operation in this area. Elsewhere silver is in the 1 - 5 oz. range. The antimonides and arsenopyrite may adversely affect recovery of precious metals.

Lead and zinc are difficult to estimate also, due to oxidation, core loss, and some omissions in sampling and assaying such as the omission of lead assays in most of the #3 zone oxide material. Zinc is greatly enriched in some places and leached in others. It appears that lead plus zinc runs roughly 10%.

Antimony is erratically assayed for and its mode of occurrence not stated.

Copper is significant only in #4 zone.

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### Conclusion

The indicated grade of .10 oz. Au, 3 oz. Ag, 10% Fb + Zn is not particularly attractive in this area. The possibility of higher silver indicated by No. 1 zone and copper indicated in No. 4 zone suggests some further testing of No. 4 zone and prospecting of the area in general, particularly if some geochemical or geophysical method can be employed as well.

It would probably be best to have a couple of days on the property for a preliminary "orientation" examination, but a program of soil sampling, mapping, and hand trenching around the #4 zone could well be planned to employ a 4 - 5 man crew all next summer. I see no reason to plan for expensive work at this stage.

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