

KERR ADDISON MINES LIMITED
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To D.A. Lowrie *From* W.M. Sirola
Subject Aspen Mine Property, *Date* February 13, 1981.
..... Salmo Region, B.C. (82F-3E½)

Herewith Fred Chow's report on this situation.

Fred describes the known silver zone as having a length of 110m, a thickness of 7-9m and a width of 5-30m. This zone contains about 45,000 tons averaging 5-6 ozs. silver per ton using a cut-off grade of 2 ozs. per ton.

Mel DeQuadros has agreed to give us drilling results on the QT but it will take some time to build this reserve to a point where the property becomes truly interesting. The breccia/dolomite host rock is discontinuous and it remains to be seen whether the requisite 200,000 tons can be drill-indicated. It is however, an interesting property and we will continue to monitor the results as they become available.



W.M. Sirola,
Regional Exploration Manager.

WMS/al:

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To W.M. Sirola From F. Chow

Subject Report on visit to the Aspen Mine Date February 12, 1981.
Property, Salmo Region, B.C.
(82F-3E½)

INTRODUCTION

The Aspen Mine property was presented to Kerr Addison Mines in late 1979 as a zinc-silver property, by John Mirko and Mel DeQuadros, the owners.

The probable reserves of the zinc mineralization is about 30,000 - 40,000 tons at 3% zinc, both figures too low to be economically viable as an operation and the potential for finding additional reserves is not encouraging.

Viewed as a silver prospect the property was more interesting but the tonnage appeared to be limited. A present value calculation at that time, based on an guesstimated tonnage and payments to the owners, indicated it to be a poor investment.

Mirko and DeQuadros later uncovered unpublished B.C. Department of Mines reports, in which mapping and sampling indicated a wide occurrence of 1-15 oz. Ag/ton mineralization in the silver zone. After check sampling confirmed the silver values the owners submitted the property again to Kerr Addison and other parties in early 1980. Cominco's check sampling of ten locations gave results of 1 to 45 oz. Ag/ton and averaging 16 oz. Ag/ton.

The property was optioned by a group of promoters who formed Extotal Resources Inc. and hired the owners to do the initial exploration work consisting of rehabilitation, mapping, sampling, prospecting, and diamond drilling. Extotal Resources does not wish to be developer and operator, and Mirko and DeQuadros prefer Kerr Addison over other companies to option and develop the property.

The writer visited the property, examined the drill core, and obtained check samples from the underground workings on January 24 and 25, 1981.

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PROPERTY LOCATION AND ACCESS

The property consists of nine reverted crown granted mineral claims acquired by John Mirko, plus two mineral claims containing 18 units each located by Extotal Resources. It is situated near the head of Aspen Creek, at an elevation of 1400m - 1460m (4600' - 4800'), in the Nelson Mining Division. Access to the property from Salmo, B.C. is by road 13 km. south-east to the H.B. Mine, then 5 km. north on an old dirt road.

HISTORY

The Aspen claims were first worked during the turn of the century. During the next 20 or more years development work was confirmed to open cuts. In 1927, the property was turned over to Salmo-Malartic Mines Limited of Toronto, Ontario. During the next three years the mineral occurrences were explored by underground x-cuts, drifts, raises, shaft, and winzes. Further development work plus diamond drilling were done during 1933 to 1937. Total underground work amounts to about 1210 metres (4000'). The policy had been to follow mineralization or whatever was regarded as the most favourable indicator. Consequently, the workings are irregular, with drifts, inclines, raises interconnecting one another.

The property was shut down after 1937 when financing was interrupted by a B.C. Department of Mines' letter to the Northern Miner, informing the public that the property had not developed enough ore to be commercially viable.

In 1951, Sheep Creek Gold Mines Limited obtained an option from Salmo-Malartic, completed 11 diamond drill holes - 7 underground holes towards the granite contact southeast of the workings, and 3 surface holes near the northwest end of the silver zinc. The option was dropped at the end of the work.

In 1959, Cominco optioned the property and completed 541 metres of surface diamond drilling plus 456 metres of underground drilling. All the drilling was designed to explore the zinc zone. In addition, Cominco channel sampled the drift on the zinc zone, and estimated a reserve of 30,000 tons of 3% zinc. Cominco dropped the option after this program.

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GEOLOGY

The Aspen deposits occur in a dolomite and limestone strata of Cambrian age. These rocks plus argillites have been folded to form a *syncline overturned to the southwest. Drilling data indicate that the sedimentary units have a maximum thickness of 180-220m thick and are underlain by granites of the Nelson Batholith. The granite surrounds the area and forms dykes and sills within the sedimentary units. It is apparent that the sedimentary rocks are a roof pendant forming a trough-like shape running northwest to southeast.

The bands of dolomite and limestone may vary from a few millimeters to tens of meters thick. Much more rock intermediate between dolomite and limestone is present, consisting of alternating bands of dolomite/limestone.

MINERALIZATION

There are three types of mineralization: (1) Chiefly zinc mineralization with minor lead, copper, gold and silver; (2) mainly silver mineralization with moderate amounts of zinc and gold and lesser quantities of lead and copper; and (3) lead-zinc-silver mineralization with minor gold. The mineralization has been classified as replacement deposits in dolomitized limestone.

A. Zinc Zone

The zinc zone is about 100m long, located in the northwest section of the underground workings, approximately between 1430-1460m elevation. It is more or less continuous on strike, offset by small faults, and the dip is about 45° but appears to be steepening down dip. the width probably varies between 3m to 5 metres. Two other bands of zinc mineralization grading 3-4% Zn over 3 metres, were located by diamond drilling, in the F.W. and H.W. of the main shoot, but are ill-defined.

Most of zinc occurs as brown sphalerite with some black sphalerite, and is associated with minor amounts of pyrrhotite, pyrite, galena and chalcopyrite, plus much lesser values of gold and silver. The sulphides occur in bands parallel to the banding of the dolomite/limestone. The zinc mineralization lies nearest to the hangingwall side of the sedimentary unit. Cominco estimated this zone to contain 30,000 tons of 3% zinc.

* Bulletin 41 B.C. Dept. of Mines - J. Fyles
Bulletin 29 G.S.C. - Lou Green

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B. Silver Zone

The silver zone starts about 35 metres south-east and on the F.W. side of the zinc mineralization. A projection of the two zones places them about 15 metres apart, and occurring about the same elevation. Viewed as a overturned synclinal structure then the silver zone would be stratigraphically higher than the zinc mineralization. Overlapping of the two zones have not been proven although high silver values in pits and in a winze downhill from the zinc zone were noted in old reports.

Silver in the dominant metal value in this zone, followed by zinc and gold, then copper and lead. Associated sulphides are pyrrhotite and pyrite but in small quantities. Total sulphide content is very low. Black sphalerite appears to be more common than the brown variety. The sulphide minerals occur as fine grain disseminations, sometimes along fractures, but erratic in distribution, within a zone of fractured and silicified dolomite/limestone. Mineralization is difficult to distinguish underground. This zone has been classified as dolomite breccia by Mel DeQuadros, who has re-mapped the underground workings.

Recent underground sampling indicate a zone about 5 metre wide at the northwest end and increasing to about 30 metre wide towards the southeast, totalling about 110 metres long. The thickness is unknown, but is estimated, by the writer, to be about 7m to 9m thick, with maximum thickness of 12 metres. Estimated grades are: 5-6 oz. Ag/ton, 0.01-0.02m Au/ton, 0.8-1.5% Zn, 0.2-0.5% Pb, and 0.1-0.2% Cu. This zone contains about 45,000 tons with a cut-off grade of 2 oz. Ag/ton.

C. Lead - Zinc - Silver Zone

The Pb-Zn-Ag zone is located about 300 metres southwest of the silver zone, approximately at the 1370m elevation. The stratigraphic relationship to the other mineralized strata is unknown. It was explored by two adits ("H" adits) and has been reported to be mined out.

The deposit is apparently of replacement type in silicified limestone (or dolomite/limestone), though contact metamorphism by nearby granitic stocks was noted in written reports. B.C. Minister of Mines 1927 Report notes a grab sample taken from a pile of ore taken from the last 8' of the crosscut assayed 0.02 oz. Au, 8.5 oz. Ag, 24.2% Pb, and 6.6% Zn. Mineralization occurs in bands, stringers, and as disseminations in a fractured zone within the limestone. Entry into the workings is to be rehabilitated this summer.

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ECONOMICS

The zinc deposit is too low grade and lacks appreciable precious metals to be of any economic value in the foreseeable future. The silver zone, with moderate values in gold plus probable recoveries in Pb-Zn, and possible recovery in Cu is the one deserving the most scrutiny. The Pb-Zn-Ag zone is an unknown quantity at present because little information is available.

RESULTS OF CHECK SAMPLING

Seven samples were taken from four locations by the writer on January 24, 1981, to check the assays obtained by Extotal's (Mel DeQuadros') sampling. A comparison of the assay results with samples taken by others are as follow:

- (a) 2 samples : Kerr's Ag assays is about 40% lower than Extotal's and is about 92% and 72% lower than Cominco's sample taken 3m and 1.5m respectively from Kerr's sample location.
and is 77% lower than B.C.D.M.'s sample taken on opposite rib.
- (b) 1 sample : Kerr's Ag assay is similar to Extotal's.
- (c) 1 sample : Kerr's Ag assay is 70% lower than Extotal's and is 49% lower than B.C. Dept. Mines' sample taken 6 metres up-dip.

It is difficult to duplicate the results of any sample when the distribution of mineralization is so erratic within the silver zone at the Aspen property. Also, wide changes do occur over a short distance. The writers' check sampling confirmed the presence of silver mineralization and also indicated a sharp cut-off in grade in both the H.W. and F.W. rocks. The four samples averaged 4 oz. Ag/ton compared to Extotal's 5-6 oz. Ag/ton in their 1980 sampling results.

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PRESENT WORK BY EXTOTAL RESOURCES

Extotal's initial objective is to define the limits and grade of the silver zone by underground diamond drilling. Also, to explore for extension of the Pb-Zn-Ag mineralization of the "H" Adit zone on the south and that of the winze or inclined shaft on the northwest.


DISCUSSION

Presently, proven and probably mineral reserves in the silver zone ~~is~~^{are} about 45,000 tons of 5-6 oz. Ag/ton. For an economically viable operation it is estimated that the deposit(s) should contain a minimum of 200,000 tons of 5 oz. Ag/ton. Additional reserves probably exist southeast of the present workings, extending for a maximum distance of 240 metres to the granite contact. Possible mineral reserves may be found along the same structure, towards the inclined shaft 55 metres northwestward.

My guess is that there is a 40% chance of finding sufficient silver reserves for a small operation.

RECOMMENDATION

Kerr Addison should continue to monitor the development on the property and, if possible, await for the results of the present work before making any commitments.


Fred Chow,
Exploration Engineer.

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