Location and Access

The Atlin Silver District is located in the extreme North central part of British Columbia. The Atlin District is served by a well maintained all weather gravel road which connects to Whitehorse Yukon 110 miles to the North on the Alaska Highway or the town of Atlin 15 miles to the south.

History

Silver-lead mineralization was first discovered in the Atlin District during the Klondike Gold Rush days in 189?. Superficial development and prospecting was carried out, but it was not until between the years 1925 and 1933 that any important showings were exposed and developed. The property then lay dormant until 1951-52 at which time it was re-activated by Atlin-Ruffner Mines(B.C.) Ltd. More work was then carried out in 1965 and between 1966 and 196? over one million dollars was spent by Interprovincial Mines Ltd.

Between 192? and 1966 the No.2 vein system was explored by 6 adits, one shaft and numerous trenches for a total length of 5,500 ft. The No.4 system has been explored by 3 adits and numerous open cuts for a horizontal length of 5000 feet. During the afore mentioned period a total of 281.3 tons of hand sorted ore was shipped from the property. The average grade of that ore was Au. .12oz. Ag. 113.3 oz., Pb. 24.7% and Zn. 5.6%.

The property then remained idle until the summer of 1975 when Atlin Silver Corporation started to work on the property.

Geology

The Atlin District lies just East of the main mass of the Coast Range batholith and is centered in the Atlin Horst. The Silver District lies within a stock of zoned intrusives which lie East of the North end of Atlin Lake. The mineral bearing stock East of Atlin Lake has been mapped as Jurassic granite and gransdiorite with a central core of Cretaceous Alaskite and monzonite. The silver-lead deposits described in this report lie within the Jurassic granites.

The mineral deposits are marked by wide spaced strong fault-shear zones spaced several hundred feet apart. These shear zones strike northeast and dip 65 degrees to 70 degrees to the northwest. The fault zones have been intruded by dykes ranging from one to fifty in width.

The silver-lead-zinc mineral deposits occur either as fissure filling in granite along branch faults, or more commonly as fissure filling through the dyke system or as replacement or breccia ore. The zone is generally confined to simple or double veins with low grade ore between the two. These veins are irregular varying in width and grade and can change abruptly to fault gouge and fault gouge to massive mineralization.

The principle sulphide minerals present in the ore are as follows:

1. Galena 2.Sphalerite 3. Arsenopyrite 4. Pyrite
5. Chalcopyrite 6. Pyrrhotite 7. Tetrahedrite
8. Enargite 9. Ruby Silver 10. Native Silver.

Mining

The mining method recommended is a compromise between open stope-room and pillar method. The ore is scraped into ore passes by way of slusher drifts. These drifts are advanced on ore while slashing of the backs and walls is done daily, after the ore behind the face has been examined visually. Small open stopes are mined from the slusher drifts leaving when possible lower grade or waste pillars. When it is necessary to leave hi-grade pillars these can be removed while retreating from the stope after all available ore has been mined. The advantages of the mining method are mainly:

1. Excellent ground and grade control
2. Versatility
3. Little to no timber required

The main disadvantage lies in the area of ore storage. Very little ore can be stored underground because usually when mining narrow hi-grade veins waste and low-grade sections are encountered. These sections sometimes have to be removed and cannot be mixed with ore, thus all ore has to be removed so that waste rock can be properly disposed.

Work during the past summer indicated that open stopes will range downward from 25'x 25' x 4' in size. Time study has indicated very good drill penetration and one man is expected to be able to deliver to the ore pass 25 tons per 8 hour shifts. Thus it is expected that 2 stope miners, 1 development miner and 1 helper-trammer will supply sufficient ore to sustain a 50 TPD milling operation. In order to develop and mine as much ore as possible from above the 5000ft. elevation the underground staff should be increased by 2 men during the summer of 1977.

Ore Reserves

Offered with this study are ore reserve calculations, calculated independently by five geologists-engineers. It is assumed that similar data for those calculations, was made available to each geologist-engineer. The writer, however, was able to take advantage of knowledge gained during the bulk sampling and mining program carried out during the summer of 1975. Those reserves as calculated are shown below

Vein	Mine Level	Proven & Probable	Ag (oz/T)
No 2	3900-2	Possible reserves	
No 2	4100-2		
No 2	4300-2 -37,520		21.7
No 2	5000-2	Possible reserves	
No 2	5600-2	3,150	26.2
No 2	5800-2		
No 4	5150-4	6850	21.5
No 4	5300-4	2612	15.6
No 4	5700-4	3440	29.2
Total Proven and Probable		53,572 tons	
Average Grade		20.2 ozs. per ton	

Dilution factor has been included ~~in each individual~~ in each individual level calculation. Assays for gold and for lead-zinc have not been included however, the average gold assay is expected to be 0.05 ozs per ton with a combined lead-zinc assay of 7.0% per ton.