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REPORT ON

QUEENSBERRY MINE, ZEEHAN

1981/1982

REPORT FOR: Mines Department

REPORT BY: Malcolm Bendall

DATE: March, 1982

**OPEN FILE**

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INTRODUCTION:

Because of serious delays in the granting of the environmental licence, temporarily stopping mining operations, the time was used to re-examine and re-locate the exact positions and accuracy of the drilling and the geology. This was done in the summer, between November and February as in this time, the access and weather was most conducive to work. The hut on the lease was cleaned out, beds installed and made liveable as the travelling time from Zeehan made it impractical to commute daily. Track clearing and making was necessary as most of the old workings, trenches and roads were overgrown.

GEOLOGY:

Repetition of previous reports will not be undertaken as Reid's (1927) and Minops report (1970) cover the mine geology and drilling information. What I have done is critically examine and evaluate this information by detailed ground survey and geological work. The results of this work, as well as of some prospect holes dug by myself and a field assistant, are included in Map 1.

GEOLOGICAL REPORT:

Special interest was taken in the examination of No. 4 lode as this is intended to be mined first as an open cut operation. On examination, the lode was not as it had been interpreted previously. The lode is basically a fault fill, increasing in width proportional to brecciation along two faults, one minor and one major. The major fault takes a curved path between lodes 1 and 4, implying a shallow dip, and the mineralization follows this path; the separate lodes being fault intersections and, therefore, places of optimum brecciation and mineralization. The ore bodies, therefore, must be considered in relation to these formation parameters, and the existing breccia pipe. Number 4 lode, when examined, has at its intersection, over 10 metres of brecciated material within a matrix of quartz, sphalerite, chalcopyrite and galena. The lodes cutting the brecciation at an angle is common and one must always consider not the course of the lode so much as the course of its feeder and kind host (Brecciation) which, in this case, as my Map 1 shows, is  $30^{\circ}$  different to that of the lode course.

Minops interpretation of the ore body seemed based upon the orientation of the ore bodies within the brecciated zone more than the course of brecciated zone it-self. This led to the mapping shown in their report and the resultant positioning of drill hole No. 5, 30 metres North of the fault intersection, in my opinion, only hit a small zone of mineralization associated with a shear 5 metres wide. The main ore body, 30 metres south of D.D.H. 5 occurs within the fault intersection and although the ore seems to dip under the hill, excavation will find, I think, that it does, in fact, follow a course along the brecciation of the main fault.

This would mean the ore body would cross the existing road and not, as Minops stated, into the hill. This means an open cut operation would not be faced with removing large amounts of over burden and also would not have to disturb any of the climax native vegetation. The ore body was more flat lying, (because of the mentioned shallow dip of the major fault), than interpreted, and this also will lend to easier open cut extraction.

Considering this new appraisal, the dimensions of the lode are 70 metres (long) x 15 metres (deep) x 5 metres (wide), equals 5,250 x specific gravity of 5 equals 26,250 tons of 20% zinc, 20% lead and 1% copper. This is only approximate however. An excavator is recommended to open up exploratory trenches across the path of the major faults, this would, if opening a flat lying ore body crossing the existing road confirm the following:

- (A) The ore body follows the major fault, that fault being flat lying.
- (B) Minops drilling a vertical hole 30 metres north would not have cut the body's major width at the two faults intersection (the Breccia pipe).
- (C) The depth of the body is in no way determined and the existence of a Breccia pipe would imply a reasonable extension at depth of the body.

Map 1 shows the results of my geological work, the roads, my interpretation of the lodes and the positions of the drill site and holes. It shows the position of the main shaft which has an estimated 1,000 tonnes of 50% zinc ore left in the side walls, as only

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lead was removed, leaving the adjacent zinc body exposed, but untouched in the old workings, 30 metres deep. Other lodes of economic significance are mentioned in Reid's and Lennox's reports, no repeating of that information seems relevant to this initial report.

CONCLUSIONS:

With everything considered, the Queensberry Mine is a good prospect and should yield good ore in 1982, in great quantity if a contract is secured with the Electrolytic Zinc Company of Australasia. Upon recent discussions with the E.Z. Company, it was determined that the ore was treatable, and indication was made that the E.Z. Company would be prepared to enter into a contract.

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"Preliminary report on Queensberry Mine - Western District"

Tasmanian Department of Mines - Unpublished Report 1927A.

M.J. Lennox: 1970, May (Minops Pty. Ltd.)

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