Zeehan Mining Propositions

Awaiting Attack.

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(1) Previous Summary and later Researches.

In February 1947 a summary was prepared showing the relative importance at that time of the old Zeehan mines on siderite or similar lodes. Since that time the results of research and exploration have accumulated and the position has become appreciably clarified both favourably and unfavourably.

At this stage it must be helpful to review the established facts relating to those mines or occurrences which present attractions for attack in the near future.

(2) The Embarrassment of Numerous Propositions.

There are so many old mines at Zeehan and so many lodes that the selection of those to concentrate on requires careful and detailed consideration. The liability to error in such judgments is illustrated by the case of the No 5 Argent which was chosen as the scene of a State Mining Enterprise. There was pronounced divergence of opinion as to this selection and the ultimate unsatisfactory outcome demonstrated that the critics of the site were correct. It would be easy for an inexperienced group to enter upon operations at Zeehan, make an unsound choice of their point of attack and be unsuccessful. Of the old mines of Zeehan there are those which would not justify reopening at present. Those mines which do justify reopening vary quite largely in regard to the amount of work needed before production stage is reached.

The propositions to be presented herein are selected as justifying reopening or attack. They are given in alphabetical order and not in order of preference. But in order to enable such priority to be decided, the pertinent

facts are presented in standardised form under the following sub-headings:-

(i) Construction for Access
(ii) Preliminary Picking-up.
(iii) Extent of Unwatering.
(iv) Ore Available
(v) Scope for Exploration.

The propositions presented are divided into two groups. First and foremost of course are those in limestone. These are by no means all of the known or suspected deposits of this type, but they are the ones which at present most attract attention. There are then presented four propositions involving the old siderite lodes. There are, however, several others in this latter group which by no means can be discarded, but which must await the establishment of a sound producing nucleus before being the subjects of attack.

(3) The Propositions in Limestone.

(a) Austral.

(i) Construction for Access.

Nil.

(ii) Preliminary Picking-up.

Nil

(iii) Extent of Unwatering

Nil

(iv) Ore Available

Large quantity of low-grade pug by open-cutting.

(v) Scope for Exploration.

Apart from the exploration of the downward continuation of the values in the pug, there is the depth exploration of the iron-manganese ore-body which when penetrated at one solitary point for one & inch by the diamond-drill showed galena + sphalerite. Inability to successfully diamond-drill necessitates sinking a shaft in the conglomerate conglomerate to the west of the outcrop and exploring both ore deposits from that access.

The neighbouring Austral Valley Shaft sunk to 300 feet gave 13,000 to 14,000 gals per hour. It is a possibll approach from this shaft if it were unwatered. The nearest point in the 300 ft level workings is about 1000 feet from the replacement ore penetrated at the Montagu but is 100 feet deeper. Alternatively unwatering of the Austral Valley Shaft would put the Balstrup Tear Fault eastwards of the Montagu No1 within 600 feet of the north workings at the 300 ft level.

The unexplored possibilities at Ruby Corner would be within 550 feet of the Montagu shaft & could be explored at the 195 ft level or above that level by drowing or diamond-drilling.

(b) Montague No 1

(i) Construction for Access.

Twentytwo (22) chains of old tramway formation from Smeltus Road to be converted to road involving three short low-level bridges.

(ii) Preliminary Picking-up.

The old shaft is intact. Collar to be timbered. Cross cut at 195ft level probably requires picking-up.

(iii) Extent of Unwatering.

Workings limited and therefore no large quantity of stored water. Current water not large, probably 9,000-10,000 gals per hour.

(iv) Ore Available.

The workings at the 195ft level penetrated limestone replaced by galena, sphalerite and ~~silica~~ quartz. This ore was never stoped. First met with in the shaft it continued to the bottom (195ft) level.

(v) Scope for Exploration.

Only the top and southern edge of the limestone was touched in the old workings. All the rest awaits exploration northwards, eastwards and westwards and downwards.

(c) Pyramid

(i) Construction for Access.

Twenty (20) chains of old tramway formation converted to road will connect with the Zeehan-Strahan Railway. Alternatively conversion of old Oceana Tram from the Oceana Mine to road, involving a bridge over the Pyramid Creek at the Pyramid mine.

(ii) Preliminary Picking-up.

The collar of the 33ft shaft to be retimbered.

(iii) Extent of Unwatering.

Very small.

(iv) Ore Available

Only a few hundred tons extracted. One body 14ft wide and one 9ft wide practically untouched.

(v) Scope for Exploration.

This practically virgin deposit awaits exploration laterally and vertically. The two lodes intersect near the old shaft. There seems to be an absence of blocks

(d) Rotunda

(i) Construction for Access.

Nil.

(ii) Preliminary Picking-up.

Nil

(iii) Extent of Unwatering

Nil

(iv) Ore Available.

A virgin deposit

(v) Scope for Exploration.

This is a potential low-grade open-cut ~~proposition~~ proposition. Its exploitation will be dependant upon the abandonment of that portion of the Teetan town. Its exploration by systematic crosscutting and driving at say 100 feet is, however, a practicable present possibility.

(e) South Oceana.

(i) Construction for Access

Thirty (30) chains of old Oceana Tram to be surfaced for motor traffic.

(ii) Preliminary Picking-up.

Nil

(iii) Extent of Unwatering

Nil

(iv) Ore Available

A virgin deposit, but sinking is essential before ore becomes available.

(v) Scope for Exploration.

With good grade ore outcropping at the surface, there exists free scope for exploration. The alternatives are shaft-sinking or diamond drilling. It would seem, however, that the

pug and the conditions are thus favourable for diamond-drilling. Short drill-holes should get good intersections.

latter method of attack should be withheld until the detailed geological mapping outlined but not yet complete is available. There seems to be a faulted overfold, the details of which must determine the lay-out of diamond-drill bores.

(f) Tasmania Crown.

(i) Construction for Access.

No more than surfacing on the Dunbley's Tram for a distance of 36 chains with some draining.

(ii) Preliminary Picking-up.

Assuming that the attack is made from the old Tasmania Crown Shaft, the completely collapsed collar must be picked up. This shaft is in the Nubeena Quartzites & Slates and should be in good condition below the 20 feet of collapsed collar. It is about 150 feet from the limestone.

The original trenches of 1890 are traceable and could be cleaned up and sampled.

(iii) Extent of Unwatering.

The shaft depth being 200 ft with only a total of 800 to 900 ft of drives and crosscuts at the 100 ft + 170 ft levels, the amount of water requiring removal cannot be large. The rate of flow when working is not available. It must be remembered however, that the workings at the 100 ft and 170 ft levels both crosscuts and drives penetrated the limestone and water from these workings should be reckoned with.

(iv) Ore Available.

The replacement deposit in the limestone is practically virgin. Of the workings at the 100 ft + 170 ft levels are open ore is available for stoping over a length of 240 feet at the 100 ft level, and the 170 ft level

(v) Scope for Exploration.

The width of mineralised zone shown in the 1890 trenches to be 80 feet, and the width penetrated in the 100 ft + 170 ft levels provides appreciable scope for exploration. In view of the difficulty in diamond-drilling from the surface, it would seem preferable to attack from the recovered and deepened Tasmania Crown Shaft.

7. driven 40 feet north which could be continued to connect under the 104 feet deep prospecting shaft.

(4) Propositions on Old Zeehan Lodes.

@ Florence Hill — Argent Flat.

(i) Construction for Access.

There are 12 chains of road to be formed on a level grade to connect the Florence with No 6 Argent.

(ii) Preliminary Picking-up.

On the assumption that any attack on this proposition is on a comprehensive scale embracing all the favourable locations, there will be some picking-up required.

Florence Shaft:- Open & only requires timbering

No 6 Argent:- Removal of the heavy beams of the old Cornish lift and clearing the adit to the Internal Shaft.

New Mount Zeehan:- Picking-up and retimbering the collar of the Main Shaft.

No 1 Argent:- Picking-up and retimbering the collar of the Main Shaft.

(iii) Extent of Unwatering.

Will not be a light task in the aggregate. No 6 Argent will not be difficult. The workings are not extensive and the rate of flow when working was 20,000 gals per hr.

New Mount Zeehan would not be difficult. Stored water will not be great owing to absence of much stoping and the rate of flow was only 13,000 gals per hour.

The Florence presents a major task but the old-timers did it on two separate occasions. Nevertheless it is essential to realise that pumping capacity up to 90,000 gals per hour should be provided.

(iv) Ore Available.

At the No 6 Argent there exists in No 3 lode

a length of 220 feet of lode underfoot averaging 3 ft 6 ins in width assaying Pb 20%, Ag 300 ozs.
There is also the No 4 lode virgin at the bottom level above
Moyle's lode in the Florence was being worked
at the last flooding and there are ore reserves
above the bottom level both in that lode and others.

There is justification in assuming that there are available in the New Mount Zeehan quantities of ore of the general grade of Pb 12%, Ag 13 ozs.

There was good milling ore left in No 6 lode in No 1 Argent.

(v) Scope for Exploration.

An attack on this proposition is in effect the exploration and exploitation of the much-discussed Argent Flat. The accumulated geological evidence will now permit this to be done with discrimination and discretion.

At both the Florence and No 6 Argent lodes showed good values going underfoot at the bottom levels. These lodes are Moyle's, Astles, No 3 and No 4. On these, quite apart from others, depth exploration is called for.

Unexplored areas between No 6 Argent and Florence, between Florence and No 1 Argent, between the western workings of New Mount Zeehan and Montana No 2, and between the northern workings of New Mount Zeehan and the Montana Tear Fault, are calling for attack.

In addition there is still the buried limestone to be found. The essential evidence bearing on this problem will be disclosed in both the Florence and No 6 Argent underground workings. With the workings open, drilling for the limestone will become facilitated.

(b) Montana No 2.

(i) Construction for Access

Nil

(ii) Preliminary Pitching-up

Nil

Pb. 20%, and Ag. 20 ozs

(iii) Extent of Unwatering.

A shaft to 520 feet with drives and crosscuts totalling approximately 8000 feet together with stopes from which about 40,000 tons of ore were extracted, represent the stored water. The rate of flow when working was 26,000 gals per hour.

(iv) Ore Available

It can scarcely be expected, in view of Twelvetrees & Ward's report of 1910, that ore was left standing ready for extraction. A possible exception is the pyritic lode between Nos 1 & 2 lodes. This was neglected although it carries disseminated galena. If and when the mine is unwatered this occurrence must be investigated.

(v) Scope for Exploration.

It is in this connection that unwatering of Montana No 2 presents attractions.

The depth of 500 feet could be very useful as a starting point for exploration in any direction desired.

The east and west long crosscuts cut lodes which are calling for driving on northwards towards the Montana Tear Fault and southwards to and beyond the Oonah Tear Fault.

In addition the west crosscut should be extended to cut the lodes, worked at the 80 ft level of the Silver Queen No 5 Shaft, at the deeper level of 218 feet.

(c) South Spray:

(i) Construction for Access.

Conversion of old tramway formation to a road for a distance of 73 chains to reach Beaumont's Adit. This would involve two low-level bridges over narrow creeks, several culverts and some sidelog cutting.

(ii) Preliminary Picking-up.

Nil

(iii) Extent of Unwatering.

Nil

(iv) Ore Available.

None can be so designated, but the long adit cut the lode and about 50 feet of driving on the lode was done. Stoping could be started for this length.

(v) Scope for Exploration.

In fact the lode is ready for systematic development and exploration. The lode is known to extend some thousands of feet north and south. The Beaumont Adit is the lowest point of penetration. The lode is upwards of 5 feet in width and rich shoots were mined at higher levels both north + south. The lower grade ore was ignored as there never was a mill.

Exploration of this important belt could not be considered as adequately undertaken without continuing Beaumont's Adit westwards to explore the parallel lode system known as Barnetts.

(d) Western.

(i) Construction for Access

Nil

(ii) Preliminary Picking-up.

Collar to be picked up and retimbered with due attention to undercut masonry.

(iii) Extent of Unwatering.

Not a light task. Upwards of 50,000 feet of drives and crosscuts. Stoped down to 1000 feet but only a short crosscut at that level and no drives. Filled stopes from which were extracted about 160,000 tons of ore averaging about Pb 15%.

During working, water was pumped at the rate of 27,000 gals per hour.

(iv) Ore Available

It is the tetrahedrite-chalcopyrite-siderite

ore which would be the objective of any reopening of the Western mine. Ore of this type and width was recently the subject of jubilant discovery at Coeur d'Alene, Idaho, U.S.A. at a depth of 4000 ft.

It is unfortunate that so far we have no precise information as to the bulk assay value. We do know that the average silver content paid for was from 18 to 30 ozs per ton.

This type of ore occurs in the Main lode from the 360 ft level down to the 1000 ft level. The lode width is from 4 to 12 feet and at the 600 ft level the length was proved to be 1000 feet, averaging 4 feet wide. At the 600 ft level 8 to 10 tributes were let each of 100 feet in length.

The ore was unmillable and was sold to the Zeehan Smelters who paid only for silver.

The old records of the Zeehan Smelters should show some complete analyses if they were available and carefully searched. It is suggested that the E.Z. Coy be approached to put those old records at our disposal. This seems an essential preliminary to any consideration of unwatering the Western mine.

(V) Scope for Exploration

Once the mine is unwatered the lode driven on at all levels between 360 ft and 800 feet is available for stoping. At the 900 ft and 1000 ft levels the lode will have to be driven on.

The values at 1000 ft in the small section of lode penetrated were, according to asseverations by old miners, richer than in the levels above & a winze showed really rich ore. Therefore exploration below the 1000 ft level is called for.

C. Loftus Hills
18th October 1949.