

# Old Zeehan Mines

## Present Relative Importance

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# Old Zeehan Mines.

## Present Relative Importance.

### ① Historic Background.

In the few years preceding 1913 mine after mine at Zeehan closed down. By 1913 the debacle was complete, and with the exception of the Nike (1915-1926) and the Sunshine 1923 and 1931, no mines have operated since.

The disappearance of galena at a depth of anything up to 300 feet in those mines worked to any appreciable depth gave rise to the fixation in the mining community that the Zeehan lodes changed at a shallow depth to siderite without any galena.

Twelvetrees and Ward in 1910 attempted to change such a generalisation into a broader view of recurring ore-shoots, but signally failed to convince the mining community.

Recent studies at Zeehan, however, have produced evidence that certain of the lode groups and lode-types possess characteristics and possibilities pointing to an economic importance not previously realised.

### ② Geologic Background.

#### Ⓐ Structure.

A study of the fracture pattern has disclosed criteria for selecting those lodes possessing characteristics favourable to persistence.

There have also been observed striking indications of the existence of mineralised <sup>larger</sup> shatter zones which are potential mining propositions than those on the lodes worked in the past.

#### Ⓑ Lode Composition.

From a study of the lode material throughout the Zeehan Field there has emerged the classification of the Zeehan lodes into two distinct types. The more important of these is characterised by a siliceous

gangue. The other type is that which in the past has been regarded as the typical Tecton lode - possessing a siderite gangue. Examples of the two types are Spray (siliceous) and Montara (sideritic).

There has also emerged a realisation of a vertical change in the nature of the metallic constituents of the lodes. Such change is clear-cut and impressive. In the Spray it takes the form of a change from galena to a mixture of jamesonite and tetrabedrite immediately below the No 4 level (R.L. 500 feet). In the Western Mine it is a mixture of chalcopyrite and tetrabedrite which takes the place of galena from <sup>just below</sup> the No 5 level (R.L. 425 feet).

It was the refractory nature of such ore opened up in the lower levels which was the deciding factor in determining the abandonment of <sup>the Spray and Western</sup> ~~these~~ mines (both closed down in 1908).

### ③ Mines Warranting Reopening.

In regard to certain of the old mines at Tecton the stage has been reached of deciding that the reopening of them is justified. This applies to the following mines. The nature of the initial operations is indicated in each case: -

Spray: Clean out "A" + "E" Adits  
 Unwater from No 1 + Internal Shafts.  
 Systematic sampling.

King: Unwater  
 Systematic sampling  
 Geological survey  
 Diamond-drilling from surface

Bell: Unwater  
 Systematic sampling  
 Geological survey  
 Diamond-drilling from surface

South Spray: Clean out + open up all adits  
 Systematic sampling  
 Detailed geological survey.  
 Diamond-drilling from surface

North Spray: Clean out Anigley's + low-level adit  
 Unwater  
 Systematic sampling.  
 Crosscutting, Diamond-drilling

## ④ Mines to be Held Provisionally

There are several other old mines which, while disclosing interesting possibilities, do not come within the category of mines for definite immediate action. They require further study before a precise method of attack can be designed or even a decision made as to whether or when they should be dealt with. Pending such decisions, however, it is desirable to hold them.

They can be specified thus:—

Western: Possibility of working from the No 6 level downwards as a copper-silver proposition.

Town lodes: Five lodes in Main Street with galena at surface awaiting <sup>freeing</sup> freeing from the 'town embargo'.

Fowler St. lode: Ready to open up under 'Authority to Enter'.

Austral Valley: At least 11 lodes partially worked by hand-picking.

## ⑤ Mines with No Immediate Attraction.

A general study of the remaining old mines of Zeelan has disclosed no outstanding attraction. It cannot be accepted, however, that more detailed study or future developments and disclosures at Zeelan may not indicate possibilities. Nevertheless that eventuality at present appears too remote to justify holding the ground at this juncture.

But it is important to have the full stories of them complete with plans available for future eventualities. It is intended that D. S. Hills should carry this work to its final conclusion.