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BORING AT ROSSARDEN

by

Mr. H.E. Brock

A visit was made to the scene of operations at Rossarden where Mr. H.E. Brock has been for three years carrying out a boring campaign to determine the extent of Tin deposits there. Mr. Brock is the holder of a 40 acre lease, No. 61M/51, situated about half a mile to the west of the Avoca-Rossarden road on the bank of Storeys Creek.

The area has been visited previously by two departmental officers, Mr. T.D. Hughes who submitted a report dated 11th January, 1952, and Mr. G. Everard, who recorded the positions of the eleven bores then completed.

Work carried out previous to the boring campaign consisted of a main shaft, with a slight westerly underlay, carried to a depth of 54 feet, from which some driving and stoping has been done. A shaft 50 feet to the north west was intended as an air shaft but was not completed and did not connect with the workings.

At a position 350 feet to the south east of the main shaft an inclined shaft has been sunk. For a depth of approx. 15 feet the underlay is about 10 degrees to the south west. From that point the shaft has collapsed but it appears to flatten considerably towards the south west.

Still further to the south east there are two prospect holes and a number of trenches.

It is unfortunate that the existing shafts and trenches have not been made accessible so that sampling could have indicated the nature and position of the shoots of ore, if any, which were previously known, and could have served as a guide to further prospecting. Such trenching as has been done is insufficient and has not been designed to reveal surface occurrences which may exist. Work has been concentrated on only a small section of the holding.

During the boring campaign nineteen bores have been completed and the twentieth bore has reached a depth of 88 feet. A total of 1339 feet has been bored.

It is obvious from the bore plan that a considerable amount of this boring has been misdirected and has yielded little information.

Within a length of 200 feet seventeen bores have been completed. Of these bores only six have revealed tin ore. In one section four bores have been placed in line across the formation. Bore No. 1 met tin ore over an inclined depth of 18 feet, from 14 to 32 feet, or a horizontal distance of 10.8 feet. With this knowledge at hand Bore No. 6 was directed away from the formation. Bore No. 10 was driven more or less parallel with the assumed direction of the formation and was terminated at the depth of 30 feet. Bore No. 8 was driven 157 feet in anticipation of cutting the ore, shown in Bore No. 1, at a depth of upwards of 100 feet. The same result could have been obtained by steepening the inclination of a second bore from site No. 1 with a saving of footage bored.

Bores Nos. 11 and 12 were directed away from and not towards the formation whilst the inclination of Bore No. 12 would make it more or less parallel with the land surface.

Of the remaining bores five have shown the presence of tin bearing formation.

Bore No. 4 passed through two sections of tin bearing formation each four feet in width along the bore. These sections occurred at from 28 to 32 feet and from 42 to 46 feet. The horizontal width of the sections would be 2.5 feet and Mr. Brock reported the grades as being 1.5% and 3.5% tin.

In like manner bore No. 7 disclosed two sections slightly wider than in Bore No. 4, but lower in grade. These sections from 18 to 26 feet and 34 to 40 feet were reported by Mr. Brock as poor.

Bores Nos. 17 and 18 had an inclination of 80 degrees and were placed one foot apart. Both bores cut tin bearing formation from 4 to 16 feet and being situated between and practically on the line of Bores 4 and 7 may be regarded as proving the depth of the more eastern of the two formations cut by these bores.

Bore No. 19 passed through a tin-bearing formation comparable with that in bore No. 1 and may be regarded as a continuation of it.

As there was no information relative to the Vertical extent of this formation a bore site was selected between bores Nos. one and 19 from which a Vertical bore will be driven to prove the depth of the formation. If this bore reveals ore of a comparable grade a second vertical bore should be placed south east of No. 19 to determine the thickness of the formation there. There will then be sufficient information available to determine the pitch of the formation.

The grade of ore from Bore No. 1 was reported as 7.6% and the sample from Bore No. 19 has only recently been sent for analysis but dish prospects are reported as showing about 3% tin.

To the east of the inclined shaft a trench has been cut, partly by sluicing, from which it is reported good grades of tin ore have been won. It is stated that the bottom of the trench is barren of tin. It is obvious that this ore has been shed from the vicinity of the inclined shaft. The nearest bores to this area are Bores 14 and 15 which were terminated at depths too shallow to be sure that any formation occurring in the inclined shaft had been cut.

From the information supplied it would therefore appear that in four of the inclined bores tin ore was cut. Of these four bores, two bores, Nos. 1 and 19 passed through formations of approximately the same width, approx. 10 feet, and with a reported grade of 7.6% for bore No. 1. The grade of bore No. 19 is as yet unknown, the sample from the bore having only recently been sent for analysis. There is no knowledge of the vertical thickness of the formation and a site for a vertical bore has been selected. The information from this bore will indicate the vertical extent of the formation.

From the bore plan it is seen that the formation cut by No. 1 and 19 trends W.N.W.

From bores Nos. 4 and 7 the information is that two comparatively narrow formations have been cut by the bores. In one bore No. 4 the grade of ore is satisfactory, 1.5% and 3.5%, but in bore No. 7 the grade is poor.

Bores No. 17 and 18 driven on an inclination of 80 degrees have apparently cut the more eastern formation and have shown it to persist to a depth of only 16 feet. The trend of these formations is also W.N.W. and is therefore parallel to the wider formation of Bores Nos. 1 and 19.

The site for Bore No. 20 has been selected in order that the bore would cut the tin formations at depth. Its present depth is 88 feet and, assuming that the tin bearing formations cut by Bores 4 and 7 are vertical, should have cut these formations at depth of 60 and 84 feet respectively. It would appear that the formations do not persist to these depths.

It is evident from bore records that there is no well defined lode or vein of tin bearing material. The formations appearing in the shafts are not well defined and specimens obtained suggest that the tin ore has been depasited in the cracks and joint planes of the country rocks any concentration being due to local fracturing yielding additional fracture planes. Specimens generally show the tin ore deposited as tin laminae on the surface of fragments of Quartzites or Sandstones.

It is to be expected therefore that the deposit will be of an irregular nature without persistence in either length, breadth or depth.

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