

UR 1953/34-39

AREAS SELECTED FOR BORING NORTH
EASTERN TIN FIELDS

During the investigation of the tin resources of the north eastern portion of the state certain areas suggested themselves as being worthy of consideration from the point of view of boring to determine their tin potential.

This report is, therefore, supplementary to the Report on the "Tin Fields of North-eastern Tasmania" and will deal particularly with the areas selected as being worthy of boring.

Five areas have been selected and are recommended as being worthy of testing by boring. Of these five areas two were the subject of a recommendation for boring in the year 1945 and on one of these some boring was carried out early in 1946. The areas recommended in 1945 are situated to the south east of Gladstone as follows.

AREA NEAR THE GREAT FRASER RIVULET

This area is situated to the east of and adjoining the Great Fraser Rivulet. It has an approximate length of 2 1/2 miles and a width, towards the Ansons River of a mile.

MUSSEL ROE RIVER AREA

This area is situated on either side of the Mussel Roe River extending from the Three Bridges, the river crossing of the Gladstone - Ansons Bay Road, in a southerly direction for approximately three miles.

The three remaining areas recommended are situated to the north and west of Mount Cameron as follows:-

AREA TO THE NORTH OF MOUNT CAMERON

This area is bounded on the south by Mount Cameron and on the north by the Ringarooma River. Numerous mine workings occur within the area and boring should prove additional deposits.

AREA NEAR BOOBYALLA

This area lies to the west of and adjoins the Boobyalla River from the township of Boobyalla southward for a distance of approximately three miles.

AREA NORTH OF WINNALEAH

This is an extensive area situated between the Boobyalla and Little Boobyalla Rivers and extending in a northerly direction from a line a mile south of the Banca workings for a distance of perhaps six miles.

Area near the Great Fraser Rivulet

This area was selected during investigations carried out in 1945 as being potentially tin bearing. It is situated about 10 miles south-east from Gladstone, east of and adjoining the Great Fraser Rivulet along

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which it extends in a southerly direction for a distance of approximately three miles. It extends easterly towards the Ansons River for a distance of about one and a half miles. A poor road crosses the area. The road branches from the Gladstone - Ansons Bay Road at a point about $7\frac{1}{2}$ miles from Gladstone and enters the area immediately after crossing the Great Fraser Rivulet. The road leaves the area again at the Spurr Rivulet, a tributary of the Ansons River. The road continues in a southerly direction to junction with the road which connects Ansons Bay with both Goulds country and St Helens. There has been no mining development on this area but prospects tried in the Great Fraser Rivulet showed some tin and over the area there is a widespread distribution of water worn boulders of quartz and gravels similar to those which occur in an area already productive.

It is considered, therefore, that boring may reveal the presence of tin ore of an economic grade.

This area would be more accessible from Goulds country and St Helens, the southern section of the road being generally in a better condition than the northern section.

Mussel Roe River Area

The Mussel Roe River Area is situated on either side of the Mussel Roe River extending for a distance of approximately two and a half miles south from the Three Bridges where the Gladstone-Ansons Bay Road crosses the Mussel Roe River. The area varies in width in an easterly direction to approximately one and a half miles and covers a considerable area of flat country. The area was originally selected for boring in the year 1945 and early in 1946 some boring was carried out near its southern extremity. During the boring campaign 26 bores were completed ranging in depth from 14 to 32 feet. The bores were spaced at 200 feet intervals with bore lines 200 feet apart. Where high grade ore was proven, closer boring was done. Although the grade of ore revealed by the boring was in general negligible a number of the bores did show grades ranging from 4.9 oz. p.c.y. to 9.0 oz. p.c.y. over depths of from 22 to 29 feet and the bore plans show the possibility of a narrow lead which has an average grade of 6.5 oz. p.c.y. over a depth of 23 feet. The width of the lead has not been determined except at one point where two bores at 100 feet interval both proved tin-bearing wash and gravel.

Recently the mining operations carried out by Messrs. Park, Richardson and Groves, in the northern part of the selected area, have proved ground of economic value and further testing by boring may reveal further deposits of an economic grade.

Area to the North of Mount Cameron

The area lying to the north of Mt. Cameron and extending thence to the Ringarooma River must

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always be regarded as a potential tin field. Within this area, mining operations have been carried out at Chinaman's (Mt. Cameron) Creek, Native Lass and Vulcan mines near Princess Creek, the Boomerang mine just south of Hardwick Creek, the Dry Gut and Delta just north of Hardwick Creek, in Hardwick creek, near the source of Princess Creek and Sextus Creek and in the upper portions of Alhambra Creek. Though numerous outcrops of slate occurring within the area justify its being mapped as slate country there are comparatively large areas where no outcrops are visible and the occurrence of gravels suggests the presence of remnants of Tertiary or recent sediments of varying depths.

The Boomerang workings show depths varying to 20 feet whilst in the Dry Gut the average depth of the workings would not exceed 10 feet and those of the Delta a depth of 15 feet to water level, the depth to bottom being unknown.

In the vicinity of O'Hallerans workings the depth ranges from 15 to 5 feet but earlier workings a short distance to the north show depths of 30 feet. Still further to the north but with the surface at a lower altitude, the Native Lass workings show a depth of 15 feet and the Vulcan works, still to the north, a depth of 10 feet.

The most extensive workings in this area are those of Chinamans Creek where the workings have been extended in a southerly direction slightly beyond the position of the Mount Cameron water race. At this position working pressure at the face must have been negligible and work ceased. It is possible also that the grade of ore had deteriorated about this point as monazite occurs in the ore as an impurity and may have increased sufficiently in parts to render the ore too low in grade to be saleable particularly as monazite was then regarded as a penalty.

Still further south from the Chinaman's Creek workings, areas of shallow ground have been worked during winter months of high rainfall. Storage of water is by small dams in the heads of the creeks. The dams are capable of storing only small supplies and most of the work is done during periods of actual rainfall with the stored water prolonging operations for short periods between rains. Any extended period of fine weather causes a stoppage of work. The grade of ore in these small workings is sufficiently high to yield a profitable return for the actual period of operation and would, with an adequate water supply, maintain continuous and profitable employment.

The workings referred to are widely distributed over the area. Still further to the west but not included in the area are the Monarch workings where operations have been carried on for many years. Lately the water supply has become more limited and operations are now carried on only during the winter months, the mine being idle for the greater part of the year.

It is reasonable therefore to expect the extensive flats north of Mt. Cameron to contain further tin bearing leads similar in character to those already worked. The depths of ground mentioned previously are well within the limits of depth suitable for testing by hand boring plants and it is anticipated that boring would reveal additional leads.

The Area near Boobyalla

This area adjoins the Boobyalla River on its western bank and extends southward along the river for a distance of at least two miles from the Boobyalla settlement. It attains a maximum width of about three quarters of a mile close to the township. An extension of this area occurs on the eastern side of the river along the course of Dugarde Creek where some development has taken place at the Delta Mine under the supervision of Mr. Howard Dobson. The name Delta was originally given to workings about a mile to the east of this position which were at one time held by the same proprietor. On transferring his scene of operations the name of the Mine was apparently also transferred. Apparently high grade ore was won at the Delta mine for prospects taken from the tailings were fairly high grade in tin and at one point it was rumoured that 15 bags of tin were won from the retreatment of approximately 1,000 cubic yards of tailings.

On the area now recommended for boring, Dunn Bros. have recently done some prospecting. Their work has shown a depth of 28 feet and mining operations in the top layers of drift to a depth of ten feet revealed an economic grade of ore. The treatment of the lower drifts would require the use of elevators for the bottom as proven would be well below river level. It is more than probable that boring would reveal narrow leads of tin bearing drifts traversing this flat country.

It is also to be remarked that this area occurs on the line believed to be the outlet to the sea of the main Ringarooma deep lead. There is, however, the possibility that denudation has removed the greater part of the drifts of that lead or that the present drifts have resulted from the re-distribution of the original Tertiary drifts by the action of the sea on the foreshore. The occurrence of large quantities of shingle in the Dugarde Creek workings would tend to support the latter view.

The Area North of Winnaleah

This area is an extensive one bounded on the west by the Boobyalla River and on the east by the Little Boobyalla River. It has a meridional length of approximately six miles. Mine workings occur on the margins of the area at White Rocks and the Banca on the west and at Hasties workings and Walpole Creek on the east. Within the main area there are no mine workings but the area is of particular interest because it lies across the possible course of the main Ringarooma lead which tends

northerly from Derby towards Winnaleah and beyond.

Some boring has been carried out in the vicinity of the Banca workings and proved the occurrence of tin ore on several leases in the vicinity of Simpsons Creek and across the Boobyalla River. The Endurance Tin Mining Company has also done some boring easterly across the Boobyalla River from the Banca mine to reveal depths of upwards of 100 feet and drift of a low grade in tin.

The mine workings on the margins of the area reveal narrow leads of tin bearing drift with the highest grade of ore at the Banca mine where the grade is reputedly of the order of 1 lb p.c.y.

It appears that in the western section of the area, comparatively deep ground occurs. As the hand boring plant is unsuitable for depths in excess of fifty feet it is obvious that for some parts of the area a mechanical boring plant will be necessary but a considerable portion of the area will lend itself to testing by hand boring plant and boring may reveal extensions of the known narrow leads or may even show the presence of new leads.

Testing by Boring

In testing an area by boring it is usual practice to place a series of scout bores on grid positions spaced at intervals of four to ten chains with the intention of placing additional bores on a closer grid to complete the close boring campaign.

This presupposes that an area of some appreciable size exists which is tin bearing.

Experience from actual mining operations in the North-eastern part of Tasmania has shown that in almost every instance the tin ore is occurring in comparatively narrow leads which could easily be missed by all bores placed on a four or even three chain grid pattern. In the boring of 1946 at Mussel Roe River with bores spaced at intervals of 200 feet only one bore in each line revealed tin bearing drift and in one instance where closer boring was done, two bores spaced at 100 feet interval showed tin ore. For that area, therefore, on a 200 feet interval it was shown that details of the occurrence could be missed. Operations at the Monarch, Delta, Banca etc. all show that the tin ore occurs in narrow leads.

For the purpose of scout boring any of the foregoing areas in the north-east of the state it is suggested that the primary bores be spaced at either 1 chain or 100 feet intervals on a line trending westerly. Should tin-bearing leads be shown to occur, a second line of bores at the same interval should be placed parallel to the first line but at five to six chains

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distance to either the north or the south of the original line. Choice of positions would be made on the site and if boring reveals the leads on each of the test lines then close boring in the vicinity of the higher grades will reveal the extensions of the deposit and will enable the course of the leads to be finally mapped with some degree of certainty. In general, however, on all the areas recommended for boring the lines of trial bores should trend westerly to intersect any northern trending leads which may occur.

In passing it may be mentioned that in the use of a hand boring plant it is not advisable to use the plant in ground much in excess of fifty feet in depth.

SGD.

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