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ROOKS RIVER TINFIELD - CAPE BARREN ISLAND

Location and Access:

This tin-field is situated on the North side of Cape Barren Island and occurs on the south-east side of Rooks River, adjacent to Deep Bay. Access is gained by means of a recently formed road from the landing jetty at The Corners, a distance of approximately nine miles to the west. The field is also accessible from vessels via Deep Bay where landings are made by means of row-boats and where the tin concentrates are loaded by that method.

Topography:

The area constitutes an open plain rising to a height of 250 feet in a distance of 60 chains from the shores of Deep Bay to the steep northern foothills of Double Peak, at the eastern end of Mt. Munro range. The surface, after abruptly attaining a height of 30 feet above high water mark, continues on an even grade to southern edge of plain. The north-western boundary coincides with Rooks River, a stream rising on Mt. Munro and flowing north-easterly to Deep Bay. Along eastern side of the plain East Creek flows northerly from the vicinity of Double Peak, and a low ridge on the east side of this watercourse defines the periphery of the area in that direction.

History:

The mining history of Rooks River tin-field dates back to the year 1882 when alluvial tin was first discovered and worked to a limited extent by J. Summers and E.T. Miles. From that time up to the present different individuals and syndicates have operated with varying success and tin has been produced throughout the years in an intermittent manner. No official records of production are available for this area.

Geology:

Granite of Devonian age outcrops over the high-lands to the south, east and west of the area. The rock generally consists of normal biotite granite but varies in places to porphyritic types. At Lode Hill to the north of Double Peak fine grained granite and tin bearing aplites occur. In the low-lands Upper Tertiary drifts represented by sands, clays, grits and fine gravels overlie granite to depths varying from 5 feet to 50 feet.

The Workings:

This tin-field has been developed to a larger extent than other tin-fields of the Furneaux Group and to date has proved to contain greater concentrates of tin oxide.

Three comparatively large workings have been opened up at different periods in close proximity to each other, and several smaller ones occur widely separated through the area. The main workings are developed on the

south-east side of Rooks River at a point 100 feet above and 60 chains to the south-west of the mouth of the stream.

Several adjoining mineral leases are now (1935) held by G. & A.M. Perry in this vicinity but mining is only progressing on No. 8803/M of 5 acres in extent. E. Webb has obtained a tribute from the lease holders and is working the ground by means of hydraulic sluicing.

The workings extend south-westerly for 11 chains and vary in width from one to five chains, being widest in the newer portion at the western end. The drifts exposed in the old workings at the eastern end show a thickness of 5 feet, but deepen towards the west to 11 feet. The present working face further west is much deeper and the deposit there reaches a thickness of 25 feet.

A section of the drifts at this point is as follows:-

Surface sands	1 foot 6 inches
Sands and quartz grits with small distributed pebbles	20 feet
Coarse sands, quartz pebbles, lignite and pyrite with tin oxide showing freely in places.	3 feet 6 inches
Hard cemented nodules of pyrite carrying tin oxide.	3 inches

The top portion of the deposit is light in colour, while the bottom 10 feet is almost black, due to the presence of lignite and pyrite. In places the drifts are partly cemented, by silica and oxides of iron, and difficulty is often experienced in disintegrating the material.

The granite bottom is found to be irregular, having no defined gutter but occurring in a rolling manner with frequent pot holes.

Mining is carried out by means of hydraulic sluicing methods under a head pressure of 60 feet. Sluice boxes 380 feet in length are used for saving the tin which is of a moderately fine grain size. A deep tail race, excavated in granite carries the tailings to Rooks River for disposal.

Nodules of hard cemented pyrite from the bottom layer, often rich in tin, are stacked and in time become partially disintegrated by weathering agents, when portion of the tin is liberated. The latter is passed through screens and streamed, while the remainder is treated to several applications of boiling cuastic soda to remove the pyrite. After streaming three grades of tin concentrates are collected the first average 74% tin, seconds 72% tin and thirds 51% tin.

Over a period of seven months (1935) 14 tons 14 cwt. 3 qrs. 18 lbs. of tin concentrates were won from an estimated amount of 12,154 cubic yards of drifts, at Webb's workings on Section No. 8803/M.

Old workings, carried out by Clark and Davis on Section 10952/M of 10 acres, are situated 5 chains to the south-east, of, and are roughly parallel to, Webb's workings. This excavation is 5 chains long over an average width of one chain and averages 20 feet in depth. The drifts are similar to those described except that the bottom three to seven feet, above the granite, consists of cemented wash with granite and quartz pebbles of 3 inches average size, together with grits, sand, lignite and pyrite. Although this cemented portion contains tin oxide it has only been worked to a limited extent.

The bottom has a slight dip to the south and the wash is deepening in that direction.

Two chains further to the south-east Watson's old workings on Section 11193/M of 5 acres extend over a distance of 4 chains on a bearing of 3°, and are one chain wide. This face is now collapsed and overgrown. A thickness of 20 feet of fine sands and grits overlies 10 feet of cemented drifts containing granite pebbles of 4 inches average size. The granite bottom is not exposed since little of the lower drifts have been mined.

Near the mouth of Rooks River at north boundary of Section 11398/M a sluicing face has recently been opened up by G.G. Fisher in old workings. The area sluiced is two chains long over a width of two chains and the drifts vary from 15 to 20 feet in thickness. Above the granite bottom 15 inches of wash and grits contain a large proportion of the tin oxide content in association with quantities of fine grained ilmenite.

At the mouth of East Creek and along the stream in abandoned Section 6030/M, shallow drifts have been worked to a small extent in the past. Small amounts of tin are present in beach sands along Deep Bay shoreline about the mouth of Rooks River. A boring campaign was instituted about the year 1927 but results were not published.

Water Supply:

Water supply for sluicing the main workings at Webb's Tribute is obtained from Gorge Creek, a branch of RooksRiver, and conveyed by race for approximately one mile to within 10 chains of the face. Sufficient water is thus obtained for use during wet months.

To allow for continuous sluicing throughout the year conservation is needed. This could be accomplished by constructing a dam at a suitable position below the two upper branches of Rooks River about 200 feet above sea level.

Water is also available from East Creek and a race commencing at the 200 feet level on that stream conveys it to the old workings on Perry's sections.

A race with intake at Rooks River, below Webb's tail race, supplies the present requirements for sluicing on G.G. Fishers lease.

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