

UR 1954/88-90 REPORT ON PROBABLE TIN AREA - COLES BAY - BICHENO

During the period 22nd April to 18th May the Coles Bay area was visited to enable an assessment to be made of the potential value of the area as a tin producer.

The area examined extended from Coles Bay in the south to the township of Bicheno in the north and embraced all the areas in which mining leases had at any time been held.

The area has been recognised as potentially tin-bearing for upwards of 50 years for as early as July of the year 1899 tin rewards of 80 acres each, situated on Middleton Creek, were granted to Messrs. W. Singline and F.M. Gibbs and in August of the same year an area of 20 acres, on Saltwater Creek, was held as a lease by Mr. A.B. Duncombe who also leased additional areas of 40 acres in each of the years 1900 and 1901.

In the years 1905-6 a comparative boom in mining occurred in the southern part of the area, for, in the vicinity of Saltwater and Middleton Creeks approximately 2,000 acres of land was held as tin mining leases. Although so much land was held as leases actual mining operations were not of an extensive nature. In the Middleton Creek area a substantial dam had been built prior to the year 1905 but in its immediate vicinity mining operations were confined more or less to the creek bed although to the north east of the dam some further work had been done.

Near Fresh Water Lagoon at the mouth of Middleton Creek some further mining has been done and some of the gravels have been lifted by Gravel Pump. The extent of the working is limited although use of the Gravel Pump suggests more than average depths.

On Saltwater Creek near its crossing with the Coles Bay road some workings have reached a depth of perhaps 12 feet. The workings have been confined to the creek-bed and although high grade wash has been reported the workings are not extensive. On this creek the main object seems to have been the treatment of the shallow, comparatively high grade gravels occurring on the terrace to the north of the creek. Operations have not always been continuous because of water shortage.

In the year 1944 boring was carried out on Saltwater Creek under the supervision of the Department of Mines. During the boring programme some 160 bores were put down of which 57 bores penetrated wash of a grade considered to be economic. A total area of 6.8 acres of land containing 98,000 cubic yards was proved to have an average depth of nine feet and an average grade of 8.73 oz. per cubic yard calculated to a grade of 70% Sn. There is, therefore, a reserve of 23.5 tons of concentrates of a 70% grade.

In the northern section of the area under review a little mining has been carried out near Lilla Villa holding about three miles by road south from Bicheno. The workings are situated about a quarter of a mile to the east from the main highway. The depth of the ground treated was not more than two feet and the area treated was sufficient to yield not more than 100 cubic yards. The wash was treated by cradling and both the wash and the water were carried to the site of cradling.

The wash, however, was high grade in tin for reports state that from the area treated six bags of tin were won. The resultant heap of tailings would not contain more than 40 cubic yards and it is doubtful whether more than 60 yards were treated. A sample from the tailings heap, taken at random, was washed and the concentrates weighed. The result was equivalent to eight pounds per cubic yard.

It is reported that some boring has been carried out in this area by private enterprise and by the Department of Mines. The position of the private boring could not be fixed but in the year 1927 some Departmental boring was done on the Lilla Villa area where nine bores were put down with unfavourable results.

Mining operations have been carried on at several other points in the area.

On Middleton Creek, near its source and a little to the north-east of the Dam, some shallow workings exist along the creek bed. No records of production are available.

A little to the north-east of these workings some further mining has been carried out.

About half a mile south from Fresh Water Lagoon, on Middleton Creek, mining has been carried out on comparatively deep ground. A gravel pump has been in operation to lift the wash for treatment. The workings are not extensive and there are no records of production from this site.

Near the 5 mile peg from Coles Bay on the western-side of the road and on the edge of Moulting Lagoon some mining has been carried on. An old motor engine remains on the site and it appears that the engine was used for pumping water under pressure to the working face. The area treated is small despite the fact that local reports assert that boring by Johns Brothers proved deep high grade ground towards the Lagoon.

During the examination of the area it was obvious that where mining operations had taken place the principal handicap to continuous operation was lack of an adequate water supply although in the upper Middleton Creek area this could not apply because of the substantial dam built there and shortage of water should not limit production at the five mile peg for at insignificant cost water could be pumped from Moulting Lagoon.

It is, therefore, problematical whether or not further investigation will prove additional areas of economic value, but it must be placed on record that-

- (1) - Boring in Saltwater Creek in the year 1944 proved an area of 6.8 acres containing 98,000 cubic yards of 8.73 oz grade of tin concentrate calculated to 70% tin and it is certain that shortage of water caused stoppage of operations.

In the second, northern, branch of Saltwater Creek there is an area of land which, on the surface, appears to be similar to the area already bored at the southern branch of the creek. Boring at this site may prove an additional area of an economic grade.

- (2) at the five mile peg from Coles Bay on the main road high grade wash occurs in shallow ground. At this point the wash is in places overlain by a few feet of Tertiary sandstones. Some mining has been carried out and an attempt has been made to deliver water under pressure to the working face. It is reported also that Johns Brothers bored the area to prove deep ground of high grade towards the Lagoon. It is considered, therefore, that these reports should be checked by boring for it is only by boring that extensions of the known limited area can be proved.
- (3) In the Lilla Villa area where the known tin bearing area is limited in extent and has only a shallow depth, it is also known that the grade in tin is high. In the year 1927 some boring was done at a position further south than the known tin bearing area the results being disappointing. With further boring it is possible that an extension of the high grade material could be proved.
- (4) In the upper reaches of Middleton Creek, in the vicinity of Montgomery's dam, a fairly extensive flat occurs. Although mining operations are limited in extent the deposits has been shown to be tin bearing. Further boring could, therefore, prove an extension of the tin-bearing area which if present could be worked with water from the existing dam.
- (5) Of the area on Middleton Creek near Fresh Water Lagoon little is known but that a gravel pump was used during the period of operation. There is considerable doubt as to the grade of wash treated. It is, therefore, advisable that this area should be checked by boring to reach finality with respect to grade and quantity of wash available.
- (6) Near the junction of the Coles Bay Road with the main highway about eight miles from Bicheno, a road trends more or less easterly to the east coast at Coolum. On the western section of this road from the Apsley River eastwards dolerites occur and the road encircles on its northern side a comparatively high Dolerite Hill. Leaving the Dolerites one traverses for upwards of a mile a series of sands and gravels, in places waterworn, on a gradually rising road until Granites are met near the coast. In a corresponding position and to the south of this area sandstones occur and there is a doubt as to whether this deposit has resulted from the weathering of the granites or is the faulted continuation of the more southern sandstones. In the more southern section of these gravels a prospect hole was sunk to prove the grade of ore there, at a depth of five feet bottom had not been met neither had any tin been revealed. It is considered, however, that should boring take place in the district this area should be tested.

In conclusion, therefore, it is considered that there are at least six comparatively small areas in the Coles Bay-Bicheno district which may on testing reveal tin bearing areas of economic grade.

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