UR 1928B/141-143

Report on Mineral Leases Nos 9024/M, 20 acres, 917/M, 5 acres, chartered in the name of J.F. Reynolds, Gipps Creek, Ben Lomond District.

Location and Access.

These leases are situated on the southern foothills of the Ben Lomond mountain range. Access to the locality is by road from Avoca, the distance being about 15 miles. The road to Storys Creek from Avoca is followed for a distance of ten miles, a branch road thence leads to the property.

The Storys Creek road is in fair condition but the branch leading from it to Gipps Creek is generally speaking in a rough condition. It is passable for motor traffic at a slow rate of speed. The route is undulating with fairly steep grades on sections of it.

Economic Geology

The country rock consists of granite of Devonian age being of the normal East Coast District type. It is traversed by a series of small parallel lodes these being composed chiefly of quartz though some of them are of the greisen type. The associated minerals are cassiterite wolfram, chalcopyrite and tourmaline.

The lodes so far as they have been developed by underground and surface prospecting have been proved to be fairly continuous lineally. They assume a strike with a bearing almost due north. In width they vary from one to four feet, the angle of dip being about 40 degrees from the horizontal.

Tin oxide and wolfram are the only mineral constituents of the lodes of economic importance. These occur in a characteristic way being irregularly distributed through the stone in the form of aggregates of fairly coarse crystals. The tin oxide being brown in colour is readily distinguished from the wolfram which occurs in lustrous black crystals. In the scale of hardness wolfram is 5 to 5.5, tin oxide is (cassiterite) is 7. The specific gravity of wolfram is slightly higher than that of tin being 7.2 and 6.8 to 7. respectively.

Proportionately there is considerably less wolfram than tin in the stone, the former being present in quantities that are almost negligible.

The lode quartz is more than usually vitreous, considerable sections of it are devoid of any associated minerals. A feature of that portion of the lode developed is the complete absence of anything in the nature of vein form of the occurrence of tin oxide in the lode., in this sense its occurrence here may be considered as being very sporadic.

Tourmaline is sparsely distributed, occasional bunches are met with in the form of radiating groups of crystals and sometimes in massive compact form, as a rule it is associated with a high proportion of cassiterite. A

sample piece from the lode assayed 21.9 per cent tin, this sample gave a negative res. in a test for tungstic acid.

The outcrops of the lodes have no specially distinguishing features, the stone at the surface being practically unchanged from that exposed in the tunnel workings.

Mine Workings

These are of very limited extent. The principal opening consists of a tunnel driven in a north easterly direction from a point a short distance above the creek which flows through the section in a southeasterly course. The hillside slopes gently towards the higher ground lying to the east. The outcrop of the lode takes a diagonal course along the slope of the hill. At 86 feet from the entrance to tunnel the lode was intersected and driving was extended along its course for a distance of 27 feet passing through it obliquely at that point.

A drive to the left at 95 feet from the entrance was put in on the course of the lode for a distance of 20 feet which at the end shows a strong body of quartz 4 feet wide with occasional small bunches of tin oxide.

At 104 feet from the entrance a winze has been sunk to a depth of 20 feet on the lode, this excavation being full of water an examination of it could not be made.

In the end of the tunnel, 30 feet beyond the winze, and 21 feet further on from where the lode was passed through a parallel lode was intersected. It has not been cut through or developed in any way. It appears to be a much smaller formation than the one passed through, the latter being considered the main lode.

In driving on the main lode a fair proportion of the stone has been removed without the necessity of providing much in the way of timbering to support the hanging wall country which consists of fairly solid granite.

The lode as broken out when driving and sinking were in progress is said to have yielded a fair quantity of tin. The richer portions of the stone have been mapped out for dollying purposes. The remaining portion of the stone excavated has been stacked on the tunnel dump and in order to ascertain the general average of the quartz composing the lode, the writer took two representative samples of this material. These samples were assayed at the Government Laboratory, Launceston, returning 0.05% and 0.13% respectively of tin. A trace only of wolfram was recorded.

The general appearance of the quartz would indicate similar values. A sample broken from the lode in the tunnel assayed 0.18% tin.

The lode at the point where it is cut in the tunnel is not more than 20 feet below the surface. The lode can be traced at the surface for a considerable distance on its northerly extension, at intervals it has been prospected by shallow shafts and trenches. Where rich bunches of tin ore have been found they have been removed for dollying purposes. It is the common practice of miners or prospectors to pick out the richer occurrences of stone, subject it to a kiln roast, which in addition to removing any associated sulphides it may contain renders it much

easier to break up for the subsequent separation of the tin in a sluice box.

On the surface immediately to the east of the tunnel is an area of alluvial ground of about an acre in extent which has been worked by sluicing. The average depth of the deposit which consists of loamy gravel, is about 6 feet. The tin found in this material has no doubt been shed from the lode in the vicinity.

A few chains to the west of the workings described, a parallel lode occurs. This lode is of the greisen type and is said to be about a foot in width. What little work has been done on it is by means of shafts, no work is now proceeding and the shafts being filled with water an examination of the workings could not be made. Fragments of the lode material lying about the surface showed fine veins of tin oxide on the marginal faces. The better quality of stone raised from these workings has been dollied for its tin contents.

Mining Economics

The tin and wolfram occurring in association with the quartz of this lode are very erratically distributed. The greater portion of the lode is practically devoid of these minerals. With development it is probable that rich shoots of ore will be met with when productive work would necessarily be confined to these only. It remains to be proved how frequently the richer parts of the lode occur. The average value of the stone exposed in the tunnel workings and along the outcrop of the lode is considerably below payable. Developments may reveal quantities of payable stone, there is nothing however to indicate that the richer portions will be sufficiently extensive to give an economic value to the lode as a whole.

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