R 1926/167-169

Report on Section 9177/M - D. Baker - Branxholm.

Location and Access :

This section 9177/M of 420 acres, is held under mineral lease by D. Baker. A water right 2300/W, of one head is held in connection with the working of the section while another (2416/W, of two heads) has been recently applied for. The lease is situated in the Ruby Flat District about 3 miles to the South-south-east of Branxholm with which township it is connected by road.

Geology :

Granite of Devonian age occupies practically the whole of the lease, with the exception of the south-east corner where Cambro-Ordovician slates and quartzites occur. The granite is intrusive into the Cambro-Ordovician rocks and this junction of granite and Cambro-Ordovician rocks represents the roof of this portion of the granitic intrusion. A large amount of debris from the hills to the south covers the surface and generally obscures the bedrock.

Economic Geology :

The granite is the usual type of the north-east district and consists of quartz, felspar and biotite. It contains numerous veins of quartz and mica greisen as well as soft formations consisting of altered granite, all of which have contributed to the alluvial tin deposits of the north-eastern districts. In the Ruby Flat area the greisen veins have a general bearing of 110° (20° south of east). They are generally of the quartz greisen type with smaller amounts of the mica greisen type. The cassiterite is usually associated with the mica greisen and veins of crystalline quartz in the quartz greisen.

The Ore-Body ;

One large quartz greisen vein traverses the northern portion of lease 9177/M. Near the eastern boundary, the quartz greisen is very conspicious on the surface and appears to have a considerable width, amounting in places to 30 feet at least. To the east of the lease, the greisen can be traced for a few chains and again about half a mile to the east, the "Big" Lode of the Mt. Ruby leases appears on the same line, Going westerly across the lease (9177/M) the quartz greisen diminishes in width and average 10 to 20 feet. About five chains from the north-western corner the recent discovery has been made. It is on the line of the quartz greisen, but this type is subordinate and the mica greisen abundant. The mica greisen was discovered at its western end during the sluicing of the surface detrital matter. It was followed to the east and soon attained a width of 3 feet and contained abundant cassiterite. Since its discovery it has been uncovered for a length of 35 feet but only to a depth of a foot or thereabouts. At the eastern end of the working, cassiterite has been found over a width of seven feet, the southern wall being weathered granite, and the northern wall not being exposed. A prospect hole has been sunk to a depth of 6 feet from the surface. Below the detrital material about 18 inches of quartz greisen in the form of a flat "make"was exposed and then 4 feet of mica greisen with abundant cassiterite was passed through. Bore-holes were put down a further distance of nearly 8 feet and passed through soft greisen. The bore bottomed on a hard substance probably quartz, but this does not necessarily represent the bottom of the mica greisen. Prospects were taken from the lower

portions of the bore hole, and yielded abundant cassiterite but in the absence of casing during the boring operations, little reliance can be placed upon the quantity obtained. The bore-hole passed through mica-greisen which would probably carry cassiterite as in the prospect hole above. A sample was taken across a width of seven feet at the top of the prospect hole and was assayed in the Mines Department Laboratory, Launceston, with the folowing result:-

Tin - 5.23%

The southern wall (granite) of the lode is exposed, but the northern wall is not visible. The above value (5.23%) represents the average value across the seven feet. Near the walls the ore is poorer than in the centre where the mica greisen is most developed and which possibly has a value in places in excess of the above.

Other Deposits :

The detrital material and any alluvial deposits along the small creeks and gullies which occur in the lease contain detrital and alluvial cassiterite. The old workings appear to have been confined to the north-west corner of the present section, while the workings of the present holder (Mr. D. Baker) have been carried out on the northern half of the section. During the past two years it is stated that Mr. Baker has won £2000 worth of tin ore. The detrital material is much richer in the vicinity of greisen (both mica and quartz) veins such as that recently uncovered and another (chiefly quartz greisen) near the dam on 2263/M. The ore from such veins considerably augments the production of ore and in connection with the latest discovery it is stated that 30 cwt. of ore was won in 2 weeks. The detrital and alluvial deposits on the southern half of the section do not appear to have been worked. They will undoubtedly contain cassiterite but the amount can only be determined by testing. Other greisen veins, on the line of extension of the Contact lodes, may possibly occur in this part of the lease. As the hill to the south is ascended the Cambro-Ordovician slates and sandstones are approached. It is exceptional to have tin ore shed from these rocks and so it is anticipated that the deposits will decrease in value as the workings progress to the south, except in so far as any rich and large greisen veins may occur there.

Conclusions and Recommendations:

The discovery to which attention has been given recently is a soft lode of mica greisen containing cassiterite. Its western end has been exposed and it has been traced to the east for 35 feet. In this distance the width ranges from nothing at the western to at least 7 feet at the eastern end, where the lode has also been proved to a depth of 13 feet from the surface. Further west, quartz greisen containing cassiterite appears along the same general line, but no mica greisen has been exposed. To the east of the present workings the lode is continuous with that indicated on the surface by the quartz greisen. The lode here needs surface prospecting for a distance of 4 or 5 chains to determine the exact proportions of mica greisen, if such is present, and quartz greisen in the lode. The lode also requires prospecting in depth. It is a vertical ore and will be found to extend in depth while the values and extent of the contained ore would be determined by the prospecting work. Such prospecting is certainly warranted and it is essential in order to prove the values of the lode.

As regards the working of the lode the general idea seeems to be to treat the soft mica greisen by sluicing methods. It needs to be pointed out that this could be carried out to only shallow depths especially in view of the fact that the lode is a narrow vertical one. Further harder parts occur even in the present exposures and a considerable amount of hard tin bearing quartz greisen will be developed along the lode to the east, which apparently is not to be treated. The treatment of all the lode material, including hard and soft, by crushing and concentrating appliances is another matter and one which should be proceeded by a large amount of prospecting work along the lines indicated above.

The detrital and alluvial deposits are of such extent and value that they would be suitable for working by individuals or a small syndicate or company.

Sgd. P.B. Nye

GOVERNMENT GEOLOGIST.

Hobart,
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