REPORT ON A.L. FOWLERS ALLUVIAL DEPOSIT, ALBERTON.

Location and Access

This deposit is included in lease 100P/7 of 7 acres held in the name of A.L. Fowler. This lease forms part of the purchase block of 19 acres charted in the name of L.P. Burr.

It is situated on the eastern side of the Dorset R. about half a mile north of the township reserve of Alberton.

Access is gained by good motor road from Legerwood, a station on the State railway from Launceston to Herrick.

Physiography

The section embraces the flats along the lower portions of the Ringarooma and Forest Ring Creeks. These creeks rise on the respective leases to which they own their names on the high ridge separating the Forset and the New Rivers. They flow in general westerly directions and unite about 10 chains east of the Dorset River. The combined stream has an ill-defined course over the flats sloping to this river which it ultimately joins.

Geology

The greater part of the surface of the lease is occupied by alluvial material along the courses of the Ringarooma and Forset Ring Creeks. This material occurs in the form of a narrow and shallow deposit. The bedrock and the sides of the valleys are composed of Cambro-Ordovician slates, sandstones and quartzites. These are the typical rocks found in all the North-Eastern goldfields and contain the gold-bearing quartz veins.

The alluvial consists of the soil derived from these rocks and also small particles of them and the contained quartz veins. In addition larger pieces (pebbles and boulders) also occur and form the layers of "wash" contained in the alluvial deposit

Economic Geology

Along with the pieces of slate, sandstone, quartzite, quartz etc. washed down the valley of the above creeks, gold must also have been carried from any outcropping quartz reef, parts of the above rocks and minerals have gone to form the alluvial deposits which must therefore contain some gold. By virtue of its greater specific gravity the gold would tend to be concentrated in the alluvial material and wash being formed at any particular time.

The alluvial deposits are essentially connected with the present streams and so are directly associated with the development of the present drainage system. The district was originally much more elevated and covered by strata of the Permo-Carboniferous and possibly Tria-Jura systems remnants of which are found around the flanks of Mount Victoria. When these were more or less completely removed by denudation the surface then consisted of re-exposed pene-plain of Cambro-Ordovician rocks with a general altitude of 2,500 feet. The streams started to corrode their courses in these rocks and on the above lease have

reached an altitude of 1,000 feet above the sea. Thus a thickness ranging up to 1,500 feet of these rocks and their contained quartz reefs has been removed and passed down the streams. Considerable quantities of gold must therefore have passed down the valleys of the Ringarooma and Forest Ring Creeks. Not all of this would be retained in the existing alluvial deposits and indeed only a small proportion may be contained therein, but even this may render the deposits of economic value.

Mine Workings

A deep tail-race has been cut from the Dorset River in an easterly direction for 12 or 13 chains to the central portion of the northern part of the lease. It is intended to open out from this a face about 20 feet wide and to carry it in a general southerly direction.

At least nine shafts have been sunk on the lease. Two of these were sunk on opposite sides of the creek in the south-eastern part of the lease to depths of 30 feet. These were also on opposite sides of the gutter of the Ringarooma Creek lead as proved by the dips of the "bottom" in them. It is stated that gold was obtained at depths of 5 feet in each of them and continued to 20 feet at which depth the higher parts of the "bottom" was cut.

To the north-west three shafts (two being 10 feet deep and one being 5 feet) were sunk in the valley of the Ringarooma Creek and are stated to have given fair prospects.

Just near where the Forest Ring Creek crosses the North-eastern boundary the bed of the creek consists of hard rock, no alluvial being present. Upstream from here all the alluvial is stated to have been worked. About 60 feet to the north-west of the rock bottom, a shaft on the toe of the hill reached the "high reef" at 14 feet and it is stated that the material carried gold.

About 30 feet to the west a ten-foot shaft did not bottom, but it is stated that the shingle encountered yielded payable prospects.

Further west two other shafts bottomed on smooth rock at 30 feet.

The plant erected on the mine consists of a 6½h.p. oil engine and a 3 inch centrifugal pump. This will be used as a nozzle pump and it is anticipated that it will give a pressure of 25 lbs. per square inch.

Object of the Above Workings

The above workings have of course been carried out to determine the course of the leads and to enable them to be worked. Shaft sinking has been difficult on account of the water in the alluvial and sufficient shafts have not been sunk to determine the courses of the leads in the north-western part of the lease. This special point desired to be elucidated is the junction of the two leads and the course of the combined lead. The present stream joins right at the foot of the hill but from the appearance of the spur between the two creeks it is possible that the "toe" of it may extend some distance west and so cause the gutter of the Ringarooma lead to have a general westerly direction for some distance at least. The present work viz. the working of the 20 foot face southwards is designed to cut this "toe" if such exists and so endeavour to settle this point. This face will be 12 to 15 feet deep, the bottom

5 or 7 feet at least of which represents some gold-bearing wash, and so gold will be won during these operations.

The steep fall of the high reef westwards on the north-eastern edge of the flat neat the Forest Ring Creek is somewhat suggestive that the Ringarooma gutter is situated close to the foot of the hills. If such actually occurs the gutter must be deep and narrow and exist between the 14 foot and the more eastern of the 30 foot shafts in the northern part of the lease. If the above work fails to prove the existence of the spur between the two leads it is possible thatthis latter view will be the correct one.

Conclusions

Considerable quantities of gold must have passed down the valleys of the Ringarooma and Forest Ring Creeks. Owing to the denudation of 1,500 feet of Cambro-Ordovician rocks and the quartz reefs contained therein. Even if a small fraction of this is contained in the alluvial along these creeks the deposits may be of economic importance. The finding of gold in the wash exposed in the numerous shafts confirms the fact that some at least of the gold has been retained.

The present work is designed to locate as far as possible the courses of the leads in the country at the north end of the lease. Whether the "toe" is cut or not in the 20 foor face the latter can be continued until bedrock is reached in the Ringarooma lead, and then continued upstream, all the wash in this part of the lead, then being worked. For the deeper ground in the north-western part, a small gravel pump or hydraulic elevator will be required.

Pioneer,
October 30th, 1926

GOVERNMENT GEOLOGIST.

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