REPORT

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ROMA AND LONE BROTHER MINES.

These mines were visited at the request of Mr. P.W. Edwards of Branxholm, who desired information on certain features in connection with the tin-bearing materials being worked in these mines.

ROMA MINE

This mine is situated about one mile to the north north-east of the township of Branxholm. The mine is located upon private land west of and adjoining mineral leases 9931/M and 8731/M and owned by Mr. Edwards.

The workings are situated on the western edge of the plain along rhe Branxholm creek. There is a narrow strip of the plain between the above leases and the low hills to the west.

The low hills are composed of basalt overlying Tertiary "drifts" of the Ringarooma system of deep leads. The plain of Branxholm Creek is composed of Pleistocene to Recent gravels sands etc. In the workings of the Roma Mine these gravels have a thickness of 15 to 20 feet. The bottom layers contain water-worn pebbles and boulders of different rock types including Tertiary basalt. These gravels overlie Tertiary drifts, clays etc.

The material being treated is the Recent deposits of Branxholm Creek. These are tin-bearing, being richer, of course, in the bottom layers. The Tertiary beds which immediately underlie the gravels are not tin-bearing at this locality. Only the Recent deposits are therefore being mined and treated.

The mine is worked by hydraulic sluicing methods. Elevation of the broken material is carried out by a gravel pump driven by a portable steam engine and boiler, wood being the fuel used for the latter.

The particular information that Mr. Edwards required was in connection with the material he was mining. If it was of Tertiary age it would extend under the basalt covered hill to the west. If of more recent age its western boundary would be approximately the foot of the hills. The presence of basalt boulders in the bottom layers of gravels definitely determines the age of these gravels as being later than the basalt and the Tertiary drifts and there will therefore be very little extension of the gravels in a westerly direction.

CLAY DEPOSIT IN THE ROMA MINE

A band of white "pug" or clay occurs in the bottom of the mine working. It is generally fairly white in colour and is very plastic when mixed with water. A sample on analysis in the Mines Department Laboratory gave the following results:-

Silica	79.20	per cent
Ferric Oxide	1.14	" "
Alumina	14.26	" "
Titanium oxide	0.60	" "
Lime	NIL	
Magnesia	0.14	" "
Ignition Loss	4.70	" "
	100.04	

The above analysis proves that the material consists not of pure kaolin but of a mixture of approximately 37% of Kaolin and 63% of silica. The latter must be in a very fine state as no grit is apparent.

The high content of ferric oxide (1.14%) and the titanium oxide prohibits the use of the clay for manufacturing white ware. Washing might possibly yield a better product but this could only be determined by trial.

Lone Brother Mine

This mine is situated on the western bank of the Ringarooma River about a mile and a half to the east of the township of Derby. It is located upon portion of the private land charted in the name of Wm. Krushka and now owned by Mr. Lester. The mine is being worked by Messrs. Lester and Edwards in partnership. Access to Derby is gained by a metalled road along the northern andwestern bank of the Ringarooma River.

The surface rises steeply from the banks of the river to heights of 300 feet above the river bed.

A narrow tract of Cambro-Ordovician slates and quartzites outcrops along the river from near the road bridge at Derby to the Lone Brother Mine. To the south and east these rocks junction with intrusive granite. To the north, they are overlain by basalt. In the Lone Brother Mine and also in the Mutual Hill Mine to the south-east Tertiary drifts occur beneath a covering of basalt. These represent the Tertiary lead of the old Main Creek.

The present workings have absorbed and almost obliterated two old workings carried out by Krushka many years ago. Cambro-Ordovician rocks are exposed at various places in the present and old workings at low heights above the river. To the north, granite rises higher than the bottom of the workings. The lowest Tertiary beds exposed in the workings are composed of coarse gravels with rounded pebbles and boulders up to 12 inch in diameter. These are not being worked at present, owing chiefly to the fact that they could not be treated without elevating the broken material. They are also somewhat consolidated and this has been the cause of their not being prospected for tin ore. Though not actually visible in contact with underlying quartzites etc. the coarse gravels undoubtedly represent the bottom layers occurring in the gutter of the Main Creek lead. They should, as is usually the case, contain appreciable tin ore and are well worthy of being prospected.

The material being treated consists of the overlying beds of fine gravels, sands, clays, and drifts, with an overburden of basalt soil and debris. The face has a maximum height of about 30 feet, but this will increase as the workings progress into the hill. Solid basalt overburden should not be met with for a distance of 4 to 7 chains.

The lead appears to have a general trend, to the north west to its junction with the main Ringarooma lead.

The answers to Mr. Edwards queries are contained in the above information. In particular he desired to know if he was actually working the Main Creek lead, or whether the deposits might not have have been formed by the present Ringarooma River.

The mine is being worked by hydraulic sluicing methods. A water supply is obtained from Main Creek through a water right and race of the Briseis Tin and General Mining Company. The mine is worked to such a depth that the material can be treated without elevation.

signed
P.B.NYE
GOVERNMENT GEOLOGIST

Mines Department,
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