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REPORT ON GOLD PROSPECT AT ADAMSFIELD

LOCATION AND ACCESS

The above prospect is situated at the top of the Adams River Falls, about 2½ miles to the west of the township of Adamsfield.

Access is gained by a pack-track 22 to 23 miles long from the township of Fitzgerald. The track is in good order, but is suitable only for foot and horse traffic, and not vehicular traffic. Fitzgerald is connected by road and railway, 54 miles in length, with Hobart.

LEASES

The prospect is embraced in a gold lease 1721/G of 40 acres, granted as a reward claim to A.E. & B.C.G. Rayner, S. Matthews and F.J. Reading.

GEOLOGY

The valley of the Adams River to the east of the Falls is occupied almost entirely by strata of probably Silurian age. These are generally either horizontal or dipping at low angles. The strata consists of friable sandstones, limestones and shales. They extend westwards along the Adams River as far as the junction with the Eve River immediately to the east of the Falls. The sandstones near the Falls as exposed in the bed of Adams River appear to have been slightly altered and are of the nature dark grey, almost quartzitic types. Similar altered sandstones and one patch of limestone occur in the north-west angle between the Adams and Eve Rivers.

The top of the Falls and the cliffs and ridges to the north and south thereof are occupied by hard, white quartzites and siliceous conglomerates. The strikes and dips are extremely variable in the immediate vicinity of the Falls, and those obtainable suggest an intensely folded and probably faulted area. A few fossils are visible in the quartzites and enable the correlation with similar quartzites on Clear Hill, Thumbs, and Sawback Range, which appear to underlie the Silurian sandstones and limestones.

On the eastern slopes of clear Hill and Ragged Mts. to the north and south, respectively, of the Falls, the conglomerates and probably the overlying white quartzites have a uniform dip to the east of 45°.

To the west of the Falls, purple slates and various coloured cherts of the Dundas series of the Cambro-Ordovician system occur.

The relation between the horizontal strata east of the Falls and the quartzites and conglomerates at the top of the Falls is probably a faulted one. The junction of these rocks has a general trend from N.W. to S.E. and this appears to be the direction of the fault. The downthrow is to the east.

ECONOMIC GEOLOGY

The top of the Falls between the main fall and the junction of the Eve and Adam Rivers has a width of 80 to 100 feet. This width is occupied by conglomerates and quartzites. Numerous potholes occur in these slates and range up to 30 feet in depth. During the past 14 months Messrs. Rayner and party have been engaged in draining these potholes with the object of winning any osmiridium contained in them. In order to control the water a channel has been cut through the western side of the Falls, exposing the rocks to depths ranging up to 6 or 7 feet.

The whole of the rocks along this channel have been found to be impregnated with iron pyrite (sulphide of iron). Some indiciation of this was obtainable before the rocks were broken, in the iron staining of some of the quartzites and the presence of some iron pyrite in them.

At the top of the main falls there is a band of 30 feet of fine and medium conglomerate. This is succeeded to the north or north-east by 40 to 60 feet of quartzites with a narrow band of friable sandstone or quartzite in it.

Numerous samples have been assayed for various parts of these rocks, and it is stated that they gave results ranging up to over an ounce, the best assay being from a loose block in one of the potholes.

The pyrite and gold content of the rocks are strongly suggestive of the work of mineralising agencies. This would appear to be related to the fault occurring immediately to the N.E. of the impregnated rocks, and it is presumed that the mineralising solutions ascended along the fault plane and vicinity.

The general geological conditions at the top of the Falls would therefore appear to be favourable for the presence of ore bodies.

The quartzites to the north and south of the Falls do not appear to be impregnated with pyrite. This may be because they were not impregnated, or else all the pyrite has been leached out without leaving any trace.

The association of the pyrite with the top of the Falls might possibly be considered as pointing to a secondary origin for the pyrite. However, the pyrite has the appearance of being primary and the presence of gold seems to prove that the mineralisation is primary.

DEVELOPMENT

The only work performed on the deposit is the channel referred to above and which was cut merely to help the draining of the potholes.

In addition several trenches have been cut to the north-west of the junction of the Adams and Eve Rivers to expose as close as possible the line of the contact (fault plane) described above.

FUTURE DEVELOPMENT

The deposit could be easily exploited from the bottom of the Falls. It is probable that an adit or adits could be started at depths of 130 or 140 feet below the top of the Falls, and that the deposit could be intersected in distances ranging from 50 to 100 feet.

VALUES

Samples submitted by the owners for assay in the past have generally yielded gold, the samples ranging in value up to several pennyweights per ton.

The writer took several samples of representative material from the full width of the formation. These were assayed in the Mines Department Laboratory, Launceston, and gave nil returns for both gold and silver.

The material, as determined by these samples, is therefore valueless.

CONCLUSIONS

The prospect described above appears to occur under favourable geological conditions near a large fault plane. Samples taken by the owners, and assayed in the Mines Department Laboratory, Launceston, gave returns of gold and silver. Seven samples taken by the writer gave nil returns for both gold and silver.

In spite of the favourable geological conditions, there is a possibility that the pyrite might be secondary, in which case the deposit would probably be valueless. The presence of gold in previous samples seemed to indicate the primary origin of the pyrite, but the absence in the present ones seems to indicate a possible secondary origin.

If the deposit is actually gold-bearing, definite evidence cannot be obtained as to the possible location of shoots of payable ore. This could only be determined by actual mining developmental work attendant with the usual prospecting and mining tracks. Such work could be readily carried out from the bottom of the Falls.

GOVERNMENT GEOLOGIST

Mines Department,
Hobart.

March 19th, 1927.