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VICTORIA.

DEPARTMENT OF MINES.

ISSUED BY

JAMES TRAVIS, ACTING SECRETARY FOR MINES, UNDER THE AUTHORITY OF
THE HON. HENRY FOSTER, M.P., MINISTER OF MINES.

REPORT ON LONG TUNNEL MINE AT REEDY CREEK.

(By W. Forbes, ex-Assistant Geological Surveyor.)

I have the honour to report that I have examined the Long Tunnel Company's mine at Reedy Creek as instructed.

The rocks are of Upper Silurian order, and comprise yellowish sandstones and mudstones at the surface; in the tunnel the beds consist of fine-grained grey sandstones with narrow beds of black and bluish coloured slates for 300 feet. From 300 feet to 400 feet the beds consist of grey sandstone with fine slate beds, and are traversed by quartz spurs; the remainder consists of dark-bluish slate.

The strike of the beds in this mine is N. 75° W., and dip from 43° to 50° S.W. The general pitch of the rocks is 18° S.E.

Operations are carried on by means of a tunnel driven into the hill in N. 15° E.; at 654ft. 6in. a reef 3 inches in width dipping 75° S.W. was cut, and a level driven on it in a south-easterly direction; a little gold has been seen in this reef. Thompson's reef worked so profitably some years ago from the top of the hill to 250 feet was intersected below the old workings at 715ft. 6in. by this tunnel. The reef dips 64° S.W. for 25 feet above the level of the tunnel, above that it varies from vertical to a slight south-west dip; the reef averages 9 inches to 2 inches in width. The present company's operations are confined to this reef and the country to the north. An anticlinal fold occurs between these two reefs. At this level Thompson's reef passes through eastern ground consisting of dark-bluish slate, containing pyrites and traversed by quartz spurs or leaders, parallel to one another in a northerly direction across the cleavage planes from the main reef; in width from 1 inch to a mere thread, all of which contain coarse gold. From an examination of many specimens I could not find any gold in the slate; it appears to be contained in the quartz spurs, threads, and the reef; in the slate nodules of fine-grained sandstone occur from $\frac{1}{8}$ inch to 2 inches in diameter. The present holders up to date have crushed 240 tons from this part for a yield of 146oz. 15dwt. 12gr., the results obtained from the reef itself gave 1 $\frac{1}{2}$ oz. to 2oz. 5dwt. per ton. This reef at a higher level yielded up to 15 ounces per ton.

As there is nearly 300 feet of slate from the centre, it is quite possible that it will continue for a similar distance north (80 feet above level, a cross-cut has been driven 25 feet north from the reef and shows no decrease in gold nor width of stone) probably those spurs will continue northward for many feet, and may intersect another reef. The occurrence of auriferous spurs and threads is an important discovery, so far as this district is concerned. From what I can ascertain, attention seems to have been directed to the reefs only. It is very probable that similar occurrences have been overlooked in the earlier days. It is hardly possible to believe that gold exists in these threads until the rock is broken and the quartz face exposed.

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PLAN AND SECTION LONG TUNNEL CO. REEDY CREEK.

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