NOTES ON GOLD OCCURRENCE AT DOCTOR'S ROCKS, SOMERSET

Doctors Rocks is the name given to a small, rocky headland on the north-west coast between Somerset and Wynyard. Seabrook Creek enters Bass Strait about 50 chains to the north-west of the headland.

The rocks in the vicinity of Doctors Rocks are as follows (the information is based partly on the map of the district in Bulletin No. 13, and partly on the writer's observations during the present and former trips along the north-west coast).

(1) Palaeozoic or Proterozoic quartzites and schists. These occur almost continuously along the coast from Burnie to within half a mile of Doctors Rocks. They are the oldest rocks within, and form the bedrock of, the district.

(2) Permo-Carboniferous conglomerates etc. These outcrop along the coast from a point half a mile south-east of Doctors Rocks as far to the north-west as Fossil Bluff. The rock types are conglomerates (of glacial origin), sandstones and mudstones. The dip is to the north-west at angles of 5^{0} to 10^{0}.

(3) Tertiary sediments. These rocks consist of gravels, clays and mudstones with lignite. They do not outcrop to any great extent but underlie a large area of country to the south of Wynyard.

(4) Tertiary basalt. This rock is most prominent one along the north-west coastal districts and gives rise to the rich soil of these districts. It occurs on Table Cape and the country to the south of Wynyard, while a narrow tongue runs out to sea and forms Doctors Rocks.

(5) Recent Alluvium. This forms the alluvial plain to the south and east of Wynyard.

It has been reported that gold can be washed from the beach sand near Doctors Rocks. The land to the south of the road is charted in the name of R. R. Mackenzie (Lot 3219, 495 ac.) but is now owned by E. H. D. Keene, who has a "Permit to Enter" over his own property. A shaft has been recently sunk to determine if possible the existence of a deep lead. This raises the question as to the source of such gold and as to which rocks it might have been shed from. Four sources are possible -

(1) Palaeozoic or Proterozoic quartzites etc. Quartz veins are likely to occur in these rocks and some of the veins might be gold bearing. Derivation from this source would mean that the gold would have to be washed westwards along the coast to Doctors Rocks. If this were the case then gold should be found at other points along the coast towards Burnie.

(2) Permo-Carboniferous conglomerates. These rocks could be the source of the gold but being of glacial origin there would be no concentration of gold in them. However, a small amount of gold throughout them might contribute to the gold on the beach.

(3) Tertiary gravels. These represent the gravels formed in streams which traversed the land before their formation and the outpourings of basaltic lava. They could derive supplies of gold from the above two sources and any other gold-bearing rocks they crossed. Moreover the gold would tend to become concentrated in these gravels. They are, therefore, the most likely source of the gold.

(4) Recent gravels. These would derive their gold content from any of the above sources, particularly the Tertiary gravels.

The view that the gold is derived from the Tertiary gravels is supported by A. M. Reid (see Report on Alluvial Deposits of Seabrook Creek and Cam River, 1927). These gravels underlie the basalt and are only exposed where the present streams have corroded their courses through the basalt.

The occurrence of the gold on the beach near Doctors Rocks which is composed of basalt, suggested that there might be a lead, or at any rate a bed of gravels under the basalt. Unfortunately the exposures on the shore are not good enough to enable an inspection to decide whether Tertiary gravels do occur under the basalt. As far as can be seen on the beach, the basalt appears to overlie the Permo-Carboniferous conglomerates, the basalt occurring as a flow and not as a dyke.

In pursuance of the above, a shaft was sunk into the basalt, on the south side of the road and some 5 or 6 chains from the Rocks. Unfortunately during my visit, work had ceased, and Mr. Keene was absent from his home so that the results obtained are not known. From the appearance of the dump, it seems that the basalt had been passed through and gravelly beds entered. The pebbles suggest the possibility of Tertiary gravels having been met with, but it is by no means impossible that the pebbles were from the Permo-Carboniferous conglomerates. However this point was probably decided by those interested when sinking the shaft. Further the gravels or conglomerates would have been tested for their gold content and the operators would know whether further work was justifiable.

It has been stated that a quartz reef occurs to the south and west of Doctors Rocks. Reefs do not occur in the basalt, Tertiary gravels, or Permo-Carboniferous rocks, and all of these would have to be sunk through and the bedrock of Palaeozoic or Proterozoic rocks entered before any prospects of finding a reef would be possible. This sinking would amount to several hundred feet at least and looking for a reef under such conditions would be most uncertain and altogether unwise. It would be preferable to search where the above rocks are exposed at the surface near Somerset.

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