

REPORT ONALLUVIAL DEPOSITS OF SEABROOK CREEK AND CAMM RIVER

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General Statement:

Many years ago considerable activity was displayed in the search for alluvial gold in the hinterlands of Wynyard and Somerset. All told about 10,000 ounces of gold was obtained by sluicing the beds and banks of streams traversing those areas. Attention in the past was directed particularly to the gravels of the main streams and their important tributaries, because the concentrations were richer there. Of late prospectors have explored the sub-basaltic gravels on the sides of the valleys and have discovered in them gold, osmiridium, platinum and tin ore in small quantities. The discovery is unlikely to prove of any commercial importance, but the presence of these minerals in gravels distributed over such a wide area is of more than passing interest. The nature of the minerals and the gravels and their association with the underlying and overlying rocks lead one in the direction of their source and enable one to determine the nature of the rocks responsible for their formation. In this report an account is given of the evidence collected and the deduction to be made therefrom.

Geologic Relations

The basal rocks of the district are Lower Pre-Cambrian mica schists, and Upper Pre-Cambrian quartz and argillaceous schists, quartzites and slates. Resting on these highly tilted rocks are horizontally disposed mudstone conglomerates, mudstones, and sandstone of Permo-Carboniferous age. These are overlain by 3 to 6 feet of Tertiary gravels (containing gold, osmiridium, platinum and tin ore) which have been preserved from destruction by a blanket of basaltic lava 20 to 100 feet in thickness.

The larger creeks have cut through the Tertiary and PermoCarboniferous formations into the basal schists and have exposed many sections for examination.

The Origin of the Metallic Minerals and their Containing Gravels

In the valley of a small tributary of Seabrook Creek on Lockwood's property a few pits have been sunk through the Tertiary gravels into the underlying Permo-Carboniferous mudstones. Examination of other natural trenches in the neighbourhood shows a similar disposition of formations indicating their continuity underneath the basalt cover. It has been found that the Permo-Carboniferous members are barren and that they are built of materials different to those of the Tertiary formation. It follows that the mineral bearing gravels were derived from other formations. In some parts of Tasmania where the basal members of the Permo-Carboniferous rest on Devonian granite and are largely made up of the waste of the rock they contain a fair proportion of tin ore. Here, however, although made up in part of granite they contain very little tin ore. The bulk of the pebbles in the Permo-carboniferous or (Pre-Cambrian) consists of graphite schists, indurated sandstone, quartz, chert and quartzite. Dish prospects of the upper members reveal pyrite in abundance, but none of the commercial minerals. The Tertiary gravels are composed of larger pebbles of pre-Cambrian quartzite and quartz with also a little indurated sandstone and occasional pebbles of fossiliferous Silurian sandstone Devonian granite and greisen.

The tin ore found in these gravels was derived from a granite formation, probably the extension of the Mt. Housatop belt now covered by basalt and recent deposits. The other minerals (gold, platinum, and osmiridium) have been shed from ultra-basic rocks (serpentine, bronzitites, etc.) dykes of which are known in contiguous areas. The minerals in the gravels and the rock fragments composing the gravels are much older than the Permo-Carboniferous formation which they overlie. It is likely, therefore, that the Permo-Carboniferous rocks in places rest on mineral deposits of the kinds mentioned.

Lockwood's Land

The deposits on this property have been opened in a number of trenches and shallow pits near the banks of a small tributary of Seabrook Creek. Here the gravels are 3 feet thick and contain gold, tin ore, osmiridium and platinum. The gold is in such proportion that operators may make wages by sluicing the grounds, but the other minerals are in very small amounts. The area of exposed wash is very small and it is doubtful whether the sub-basaltic "wash" could be treated at a profit. In any case the basaltic soils are of much greater economic value than the gold in the underlying gravels.

G. Gale & R. Spurr's Prospect, Camm River.

In the bed of Camm River below land owned by A. Bugg a little gold has been obtained in sluicing the river wash, and gold has been found there attached to chert and quartzite of pre-Cambrian age. The chert and quartzite, which are barren, are persistent members of the Upper pre-Cambrian formation exposed in many of the deep natural trenches in the district, and are not there repositories of gold nor are they in any other part known to the writer. The quartzite is flaggy and minutely fissured with infillings of limonite carried from basalt by solutions. In a narrow band of the chert cubical iron pyrites is disseminated. Samples of this material did not contain a trace of gold.

A large body of radiating limonite outcrops along the hill-side above the supposed gold bearing rocks. This so-called gossan is not a lode capping, and is not a carrier of gold. The body is composed of the leaching of iron oxide from the basalt lava and is not in any way related to lode formation.

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