(3.) *Tertiary Volcanic Rocks of the First Period of Vulcanism.*—These rocks, which are of great economic importance in that they constitute the principal auriferous series, consist of lavas, tuffs, and breccias in various stages of alteration and decomposition. By far the greater part of the series is andesitic in character, but rhyolitic rocks are also represented.

As regards distribution, it will here be sufficient to remark that over great stretches of the country forming the main divide, and lying both to the east and west of this physical feature, andesites either flank or overlie to unascertained depths the rocks of the basement series. The rhyolitic tuffs and breccias of this series have but a limited development within the area examined. On the western side of the divide they give rise to the steep country lying at the headwaters of the Umungawha Stream, while on the eastward side of the divide they occur in the valley of the Omoho Creek. In each locality these rocks directly overlie the strata of the coal-bearing series. The sections, where both andesites and rhyolites are present, appear to indicate that of the two the rhyolites are the older.

(4.) *Tertiary Volcanic Rocks of the Second Period of Vulcanism.*—These rocks, which are all andesitic in character, consist of lavas, tuffs, breccias, and agglomerates, and have heretofore been assigned to the Miocene period by the New Zealand Geological Survey. The term "Beeson's Island" group as applied to these rocks is well established, as they are typically represented on the island of this name, which forms the north-western shores of the Coromandel Harbour.

These rocks, as previously indicated, form the coastal belts, and are more or less continuous over the greater portion of the peninsula already examined southward of a line from Cabbage Bay to Port Charles. In turn they have been found resting, necessarily unconformably, on members of each of the rock-groups already described.

The tuffs, breccias, and heavy agglomerates form the great bulk of this series, and these and the associated lava-streams frequently show a rude stratification. From a consideration of the disposition of the beds in certain localities the positions of old centres of eruption are suggested.

Hyalopilitic andesite, in which hornblende and hypersthene are the dominant ferro-magnesian minerals, is the type of rock having the widest range in this series.

(5.) *Intrusive Rocks of Various Periods.*—Dyke rocks have a considerable development in the area under review, and are found intruding all the rock-groups already described.

Both acid and intermediate rocks are represented among the intrusives, but those of the latter class are by far the more abundant and more widely distributed. Various varieties of diorites, porphyrites, and andesites contribute to the intermediate, while rhyolites are the sole representatives of the acidic class.

No separation of these intrusives according to age will here be attempted, but it may, however, be stated that the available evidence suggests that the intrusive rocks of the intermediate class range in age from Palæozoic to Miocene(?).

(6.) *Pleistocene and Recent-Alluvial Deposits.*—No volcanic rocks younger than those of the Beeson's Island group have been detected in that portion of the Coromandel subdivision already examined, and the accumulations referable to this period consist entirely of alluvial deposits.

Owing to the configuration of this portion of the peninsula, its general elevated character, and limited lateral extension, plains of any considerable extent are absent.

Small alluvial flats lie within the lower reaches of the principal stream-valleys, with here and there higher level terraces skirting the lower slopes of the neighbouring hills.

Narrow flats fringing the coast-line in certain localities owe their origin partly to the fan deposits from the numerous high-grade streams, and partly to elevation of the shore-line.

Metalliferous and other Mineral Deposits of Economic Value.

Gold-silver Quartz Veins.—The metalliferous deposits of the area are mainly restricted to gold-silver quartz veins, and these occur both in the stratified rocks of the basement series and in the older group of volcanic rocks. In this connection the rocks of Beeson's Island group, although carrying in certain parts of the peninsula quartz reefs of some importance, are in the area dealt with altogether negligible.

The rocks enclosing the quartz veins are all more or less altered from their original conditions. The alteration of the andesites results in a rock which is designated by the miners "kindly sandstone," and is best described as propylite, the term being used in the restricted sense proposed by Professor Rosenbusch. This is the country rock of the Kapanga, Hauraki, Waikoromiko, and several other groups of mines. The principal rocks of the Palæozoic group enclosing gold-silver quartz veins are those of the Tiki-Tokatea type, which are well represented in the lower levels of the Royal Oak and Hauraki Associated mines of the Tokatea Hill and Saddle. These have been altered by the same agencies which have resulted in the propylitisation of the andesites, and in general assume a lighter colour than the original rocks, and are highly pyritised.

Mapping of the various reefs in this portion of the peninsula reveals a general uniformity of strike, the great majority pursuing courses not far removed from the meridional line. Furthermore, a similar uniformity is apparent in the trend of certain belts of country, which include the centres where payable reefs have been located. In view of the special report to be issued shortly on this area, it is not here necessary to describe in any detail either the quartz veins or the mineral belts.

The veins vary in dimensions from mere thread-like partings to strong, well-defined reefs exceeding 60 ft. in width; but the mining experience of the past has shown that, as far as operations have been extended, the larger veins are not payably auriferous.

Coromandel has been noted for its ore-shoots of the bonanza type, the rich vein-material, locally termed "specimen stone," and valued at "ounce to the pound," having contributed more to the total gold-output than the ore yielding "ounces to the ton." As is the general rule in all veins of