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REPORT ON THE GEOLOGY OF THE CAPE COLVILLE PENINSULA, AUCKLAND.

BY

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Presented to both Houses of the General Assembly by Command of His Excellency.

INTRODUCTION.

THE revival in mining, which within the past two years has taken place at the older established centres of gold-mining on the Cape Colville Peninsula, and the impetus thus given to prospecting, has led to the discovery of gold at many places at which formerly its presence had been but suspected. Further prospecting has also proved the presence of gold at many places not before known to be gold-bearing, or where hitherto the prospects were considered too poor to pay, further and more exhaustive search is being made.

The phenomenal proceeds from a number of mines in the north and south parts of the Peninsula has aided the introduction of foreign capital, which, whether applied to the development of known mines, or to the discovery of new, has led to a general search being made from Cape Colville in the north to Te Aroha in the south, and in many cases has brought the prospector and miner face to face with a variety of conditions with which they were comparatively unacquainted, the nature of the country and the character of the auriferous material not always according with their former experiences.

There has thus been aroused a considerable interest as to the exact nature, position, and extent of the different rock-formations of the Peninsula in which gold-bearing lodes have been or may be found, and at the same time a desire that these should be so studied as to enable the production of a map showing the extent and limits of the different formations, and thus aid the prospector in his work, and be also of value to those engaged in other branches of mining. Aware of these facts, and alive to the importance of such a work, the Hon. the Minister of Mines directed the commencement of a geological survey of the Peninsula, which was accordingly begun in September of the present year (1896-97). Up till the present time (May), the work has been carried on continuously, either on the Great Barrier Island, or on the mainland within the area lying between Cape Colville, the northern extremity of the Peninsula, and the county road between Te Aroha and Katikati, on the shore of Tauranga Harbour, was so far examined that the general sequence of the rock-formations has been determined, and their extent and boundaries ascertained with a fair degree of accuracy. Yet, while this much can be claimed, it has to be admitted that further and most careful work will have to be carried on to determine many things respecting which there is still a doubt.

Hitherto, but small areas of the Peninsula have been geologically explored. At Cabbage Bay, Coromandel, on the Hauraki and Ohinemuri goldfields, and at Te Aroha, partial surveys have been made; but the north and south parts of the east coast, except at Kuaotunu, and the central region south of Coromandel, up to the present time have remained practically unexplored. The sequence of the different rock-formations has till now been unknown, most of the published reports dealing only with restricted areas in the vicinity of where gold was being mined.

Within the past two years, the prospector has penetrated to almost every part of the Peninsula, finding gold more or less at all places. My first duty, therefore, was a hasty survey of the whole of the Peninsula, to determine the sequence of the rock-formations, and, as far as might be, their boundaries. Survey in detail was in no instance undertaken.

PHYSICAL GEOGRAPHY.

Peninsular Auckland, or that part of the provincial district which lies to the northward of a line drawn from Kawhia, on the western coast, to Tauranga on the Bay of Plenty, has extension in