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GEOLOGICAL SURVEY OF NEW ZEALAND:

PRELIMINARY REPORT ON THE TARANAKI OILFIELD.

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Laid on the Table of the House of Representatives by Leave.

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SITUATION AND EXTENT.

The Taranaki Petroleum Field is situated on the West Coast of the North Island, in the neighbourhood of the principal town of the Taranaki Land District—New Plymouth.

How far the petroleum-field extends is not yet known. Its limitations can probably be more or less roughly indicated as a result of the geological operations now in progress in this part of New Zealand, but its boundaries can be defined exactly only by systematic drilling undertaken as a result of that survey. From the known surface-indications it is thought that the oilfield may be found to extend at least as far east as Waitara, and as far south as a line running roughly from four or five miles south of Inglewood, through German Hill, to the coast. Most of this area is included within the survey districts of Waitara and Paritutu, or the area in which a geological survey is now being conducted.

TOPOGRAPHY.

The most striking physical feature in Taranaki is the splendid symmetrical cone of Mount Egmont, the crest of which is perpetually snow-clad. To the west the cone is flanked by a short range of high mammillated hills rising to a height of 4,387 ft., and known as the Pouakai Ranges. To the north and west of these rise to a height of 2,240 ft. the bush-covered hills known as the Patua or Kataki Ranges. North of the ranges the land slopes in general gently to the sea to the northward and westward, and rises towards the eastward perceptibly to near and beyond the Waitara River. The land is rolling or undulating near the sea, but more hilly inland, especially towards the east. The surface forms part of the Wanganui Coastal Plain, more or less shrouded by volcanics, its irregularities being due to dissection by the numerous streams flowing mainly from the cone of Egmont, and draining either directly to the sea or by means of the Waitara.

The coast-line for many miles is flanked by low cliffs, marking the denudation of the plain by the sea. A few miles west of New Plymouth the volcanic hills, both on the mainland and on the islands in the sea—known as the Sugar Loaves—form part of an old dissected volcano, of earlier age than Mount Egmont.

GENERAL GEOLOGY.

As gathered from good surface outcrops in the neighbourhood of the Waitara River and rare exposures elsewhere, and by the records of the numerous boreholes occurring in different parts of the Taranaki Oilfield, we learn that all of the area now being considered is underlain by the same strata —namely, claystones (locally called "papa"), sandstones, fine conglomerates, and marls. These form part of a great series of rocks which extends northwards, southwards, and eastwards, and which, as judged from the section between Waitara and Te Kuiti, consists in descending order of claystones, sandstones, fine conglomerates, marls, limestones, claystones, and sandstones with coal-seams. Pending a more exact classification by the survey now being conducted in the area, this series must merely be classified as Tertiary in age.