

four miles inland, towards the south-east of No. 1 bore, but, not unnaturally, the shareholders cannot afford to provide further funds for an enterprise which, however hopeful, and although very successful recently as far as drilling is concerned, has, from a pecuniary point of view, proved a series of failures.

"The company was formed in Sydney with the expectation that the capital would be more readily obtained there, and therefore the head office is there, together with one-half of the directors, but the Australian shareholders, whilst they hold nearly half the shares and are liable for more than half the uncalled capital, are very few in number. Calls fall heavily on these, as well as on several, at any rate, of the New Zealand shareholders, and the present position may be gathered from a letter just received from the manager:—

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"The site (about four miles inland towards the south-east of No. 1 bore) chosen by me is an excellent one, and in the direction recommended by Mr. Gordon (who has specially inspected the locality). It is unquestionably in the proper direction, and within a mile of a spot where gas is now issuing from the ground. If we now, for want of funds, abandon the undertaking, it is practically certain that all hope of any other attempt to get oil will be at an end—for many years, at all events. It seems clear from the results of the old Petroleum Company's bore, and No. 1 bore and No. 3 bore, that there is oil in large quantities somewhere in the vicinity of New Plymouth. It is ascertained that this oil is of great commercial value, and would, if obtained in quantity, enormously increase the wealth of the colony as a whole. Our present organization has deserved well of the colony, and expended many thousands of pounds and bored many thousands of feet, whilst its recent performances in drilling compare most favourably as respects cost and depth with any drilling operations in the world. The management rests with those whose experience now fits them to conduct operations efficiently . . . . . and we possess plants of the most improved design, and two Canadian drillers, who are probably second to none in the world in experience and knowledge in practical drilling. I therefore venture to urge that the Government should prevent this undertaking failing by giving such moderate assistance as may be necessary to enable us to sink the new bore to such a depth as will be some fair test of the strata below. . . . . —13/3/98."

As a consequence of this communication from Mr. Samuel, I was directed to proceed to New Plymouth, and ascertain what had been done and what the prospects were of the ultimate success of the New Plymouth Petroleum Company's undertakings. I examined the sites of the various bores and the gas and oil exudations at several places, and, so far as I could, determined the nature of the rocks at the surface and those that had been passed through in the different bore-holes that had been made. From the bores more recently made samples of the rocks passed through had been preserved, and these were of considerable importance, as showing the nature of the strata penetrated by the bore-holes and the character of the beds from which oil had been obtained. And whatever assistance lay in his power was afforded me by Mr. Samuel; but, as my investigations did not extend beyond the region covered by volcanic *débris* from Mount Egmont, in order to a right understanding of the conditions under which petroleum occurs in the district, I had to consult Sir James Hector's report, already referred to, and that on the Taranaki District by Mr. James Park, F.G.S.; and was aided by subsequent observations made by myself in the district adjacent to the eastward.

Shortly after the investigations by me were made, the following report on the subject of petroleum at Taranaki was addressed to the Under-Secretary for Mines:—

"I have the honour to report that, as directed, on the 23rd August I proceeded to New Plymouth, and during the week following collected evidence bearing on the past history and the present prospects of boring for petroleum in the Taranaki District.

"Respecting the discovery of, and the earliest efforts to obtain, oil, little or no information could be obtained other than that in the reports by Sir James Hector published in the 'Abstract Report of the Progress of the Geological Survey of New Zealand' during 1866–67. At a later date boring was carried on to greater depths, the maximum depth in one of the two bores situated near the landward end of the Breakwater being 900 ft. From these bores oil was obtained, but apparently not in sufficient quantities to warrant the further prosecution of the works at that place; and I could not learn what was the nature of the strata at 900 ft. from the surface, or whether the oil obtained from that depth originated from that or from a higher level.

"Subsequently the New Plymouth Petroleum Company determined upon a site half a mile more to the eastward, and here two bore-holes were put down to a depth of 2,000 ft., and, as these proceeded, approximately correct records of the strata passed through were kept.

"In No. 3 bore the superficial sands and underlying volcanic agglomerate proved to be 275 ft. thick, below which sandy papa was entered upon and continued to a depth of 810 ft., when a bed of rather coarse quartz-sandstone was encountered. This passed, fine quartz-sand containing oil was met with at 915 ft. This was not an abundant supply, and the bore was continued to greater depths, care being taken to exclude the water and oil of the higher levels from the lower parts of the well as the bore was proceeded with.

"Between 1,900 ft. and 1,996 ft. oil and gas were again struck, and this time in such quantity as seemed to afford hope of the ultimate success of the undertaking. To obtain the oil, pumping had to be resorted to, and then it was found that the supply was intermittent. The failure of continuity of the yield of oil arose from one or other of two causes, viz.: First, material sucked into and around the foot of the pipe, and thereby preventing the access of oil to the well; or second, the drawing away of the looser sands of the porous oil-stratum, and the coming together of impervious strata above and below the oil-bearing bed. It need not be here inquired which of these two suppositions is the correct one. It will suffice to say that an accident happened whereby the derrick was destroyed by fire, and the well has since been closed down, except occasionally when the accumulated gases and some oil are allowed to escape, the latter being collected in tanks prepared for that purpose.