

through a convulsion of Nature, a large portion of the area became dry land and their last remaining legal right (if only a common one) entirely disappeared. They pray for an examination of their claims and

for the satisfaction of such just and equitable rights as your petitioners may be found to possess.

5. At the hearing the petitioners were represented by Mr. Raniera Ellison, of Te Aute; the Napier Harbour Board by Mr. W. T. Prentice, a licensed interpreter employed by the legal firm of Sainsbury, Logan, and Williams; and the Crown by Mr. H. B. Lusk (Crown Solicitor), who had associated with him Mr. Pfeiffer, an officer of the Lands and Survey Department.

6. The Whanganui-o-Rotu appears to represent a phase in the formation of part of the land which constitutes the fertile Hawke's Bay plains of to-day. Its nature, creation, and existence were (prior probably to the advent of man) governed by natural laws, which briefly might be said to have operated somewhat after this fashion:—

7. In the first place, we are told that long ago a huge subsidence occurred of—among other places—the land then lying between the present Mahia Peninsula to Cape Kidnappers shore and cliff-line, and an indefinable line now far out to sea. Following upon this subsidence and by reason of seismic disturbance in the form of a series of distinctly local upward thrusts there was recovered from the sea, little by little, some of the land previously engulfed. It may be that only a very small portion of the submerged area has so far reappeared. In addition to the earthquake factor operating in this work of natural reclamation, the rivers that emptied themselves into Hawke's Bay also assisted.

8. These rivers, or some of them, carried down to the sea a detritus of stones which, from the action of river and sea water forces, became a fine gravel. This fine gravel, on account of its susceptibility to movement from tide and current forces, became distributed as the composition of the beach practically all along the coast-line from the Mahia Peninsula to Cape Kidnappers. Where the water adjacent to the cliff-line was comparatively deep this shingle was thrown up by the forces of the sea against the base of the cliff, but wherever an area of shoal water occurred it was thrown up into the form of a spit or gravel-bar in a position approximating the effect of drift and current forces on a general line of demarcation between shoal and deep water. To the landward side of these bars, or gravel-banks, waters were impounded forming a string of lakes, or lagoons, such as Whakaki (and the other lagoons between Wairoa and Nuhaka), Tangoio, and Te Whanganui-o-Rotu.

9. By the same action gravel-bars formed at the mouths of the rivers along the coast, and for a time would completely block their normal flow into the sea. In the case of the Whakaki and Tangoio Lagoons, as these gravel-banks are raised by the severity of storms to a point considerably above the level of ordinary high-water mark they preclude the regular flow and reflow of the tides over the land between them and the cliff-line.

10. But while they prevent the sea from entering they also prevent the fresh water impounded within from escaping into the sea, with a result that the water-level of the lagoon may (if percolation and evaporation does not relieve the pressure) rise to a point considerably above the level of high-water mark. In fact, the level of fresh water may rise to the point where it commences to run over the gravel-bank. So soon as this occurs the lagoon water rapidly cuts a channel through the soft gravel-bank down to a level approximately that of the sea for the time being. Thus if the scour occurs at low tide a deep channel will be cut, whereas if the overlapping should occur at high tide the initial corrosion would not be so severe.

11. The period for which the channel will remain open depends to a very great extent upon the state of the sea. A long period of calm seas would result in the channel remaining open or partly open for that period, with a result that the salt water of the sea would permeate the fresh water of the lagoon. The relative time taken by a lagoon