

Spence and O'Connor, proposal for construction of a railway and other works to Ngakawau, dated 31st March; replied to by Superintendent on June 8th, "That pending the construction of a railway from Colonial funds, the Provincial Government were not in a position to give a definite answer."

E. J. O'CONNOR,  
Chairman.

### No. 8.

Mr. W. A. MURRAY to the MAYOR of WESTPORT.

10th September.

PLEASE forward replies from captain of "Result," greatest, least, and general depth of Ngakawau Bar; whether Riley has always been able to enter; draught of "Result;" rise of tide at mine.

Mayor of Westport.

WM. ARCH. MURRAY,  
Chairman, Committee Colonial Industries.

Mr. J. W. HUMPHREY to CHAIRMAN, Colonial Industries Committee.

10th September.

CAPTAIN RILEY reports of greatest east Ngakawau bar, 10 feet; general depth 5 to 7 feet. Ordinary rise of tide at mine, 5 feet 6 inches. "Result," loaded, draws 4 feet 6 inches. Depth of water on bar often insufficient for "Result;" at times almost closed.

J. W. HUMPHREY, Mayor.

### No. 9.

MR. STEWART'S REPORT ON PETROLEUM SPRINGS, POVERTY BAY.

Wellington, 15th September, 1873.

SIR,—

I have the honor to report that in May last I visited the petroleum springs of Pakake a Whirikoka, at Poverty Bay, from which the sample of oil analysed by Mr. Skey was obtained, and found it occurring as a coating or scum on the surface of salt water contained in small circular basins about 2 feet in diameter, from the bottom and centre of which basins descended a pipe or tube in a perpendicular direction, as we ascertained by probing with sticks, presumably, in the direction of the subterranean source through which an occasional bubble of inflammable gas made its way to the surface, accompanied by a small quantity of oil.

About a dozen of these springs occur within a radius of about 30 yards on the top of a blind spur, from a hill forming part of a ridge running from the Waipaoa River in a north-east direction. At a lower elevation, running into the two creeks which bound the blind spur, and which join together below it in one stream, we found also several other springs or exudations which gave to the water, for a long distance below, the peculiar bluish scum like that of ferruginous springs, and rendered it quite unfit for use from the strong taste and odour of kerosene communicated to it.

The character of the range in which these occur, appears to consist of soft clayey limestone and papa rock, with sandstones interspersed, and the dip of the strata, so far as can be seen in the neighbourhood, is towards the eastward or coastwise.

From this spot where the springs exist, the oil makes its appearance in exudations at various points, but all at a lower elevation, even down to the very township of Gisborne, about thirty miles distant, where a well, dug alongside of the river for the purpose of furnishing water to the ships' boats entering the river, had to be abandoned, from the occurrence of the oil in the spring.

The soil immediately surrounding these springs is of a peaty bituminous appearance, and, when dry, highly inflammable from its saturation with bituminous matters.

At Waiapu, upon the coast, near to the East Cape, some eighty miles from the site of these springs, other and even apparently more promising springs are found; and the Natives assert, that in the country between these two points other springs exist, which, if true, would point to the existence of a very large area of oil-producing country.

On refining myself a sample of the oil which I procured from the spring, I was particularly struck by the absence of the very light and inflammable oils which I should have expected to find; and if the proportion should not increase when the oil is struck in bulk, the result will be a much safer because less explosive or inflammable oil than that of the States.

As to the quantity in which the oil can be found, nothing can be said prior to boring operations being initiated, further than that the surface indications are much more extensive than those which induced search being made for the mineral in Pennsylvania.

As to the requisites and plant for boring and refining the oil, in addition to the peculiar boring apparatus used and perfected in America, consisting of a system of jointed rods, with wire rope, &c., for putting down the shaft to reach the oil-bearing strata, and pipes to conduct the crude material from thence to the refining house, Gesner's work on Mineral Oils—the only authority, it is believed, here procurable—gives the following particulars:—

- Four stills and condensing worms.
- Two superheaters.
- Two boilers.
- Two washers, with agitators.
- One settling tank.
- Two underground receivers.
- One underground receiver, larger size.
- One-horse power steam-engine, with two steam-pumps.
- Gearing, &c., pipes, cocks, fittings.
- Buildings, and erection of plant.