Reasoning from past experience, it may certainly be assumed that the goldfield is very far from As already related, the rich ore-shoot on the cap of Scotty's reef was not being worked out. discovered until 1862, ten years after the opening of the field. Seven years later the auriferous reefs on the Tokatea Hill were discovered, and after a further period of three years the Green Harp shoot in the Hauraki area. All the above are within a radius of two miles from the firstdiscovered gold. Again, as we have seen, the Hauraki patch, worth over £300,000, lay perdu for more than forty years, though levels had been driven and work carried on within a comparatively short distance from it. short distance from it. In all these cases there was nothing to lead up to the gold—no indicators that could be followed. Hence mining in Coromandel must necessarily be conducted in a more or less haphazard manner, and can never partake of the nature of a commercial business with a regular percentage of profit on the capital employed.

The prospects of obtaining payable returns from mining at great depths do not appear to me to be very bright, since the volcanic auriferous rocks are everywhere underlain by the Palæozoic slaty shales; and while it is true that reefs in the slaty shales in the Tokatea area are undoubtedly auriferous, yet they appear to become impoverished as they descend. In the deepest level worked in these slates, which is yet 650 ft. above sea-level, the reef was valueless. It is probable, therefore, that the gold came not from below through the slates to the surface, but downwards by percolation through fissures from the overlying volcanic rock, and must necessarily be of limited extent in the slates.

It is quite possible that the large low-grade reefs now being worked at Opitonui, some four miles to the north-east of Castle Rock, may be continued along the eastern slope of the main range towards the headwaters of the Waikoromiko Creek, in which case permanent mining-works would result. In any case, the amount of dead-work done during the last three years by British and colonial companies in opening up the reefs throws open a wide field to tributers, and it is probable

that many of these will receive substantial returns for many years to come. The alluvial deposits on the foreshore have recently been exploited with fairly satisfactory results. The obstacle here, however, is that already referred to-viz., the difficulty of primary mechanical separation owing to the non-disintegration of the reef-quartz.

The galena and copper lode in the Karaka Creek would, at the present market values of lead and copper (£14 and £76 per ton respectively), certainly pay to work provided a cheap local method of concentration were adopted. The concentrates could then be shipped to Australia for smelting. At present, however, the rapid fluctuations of the market values of these metals precludes the erection of costly concentrating machinery.

In conclusion, I am of opinion that, though the field will probably never give employment to a great number of men, and though it can hope for nothing from improved metallurgical processes, for it possesses no low-grade auriferous reefs, yet the reefs are by no means worked out, and will afford a livelihood to a limited number of miners for many decades, with always the possibility of that livelihood becoming affluence.

XVII.—BIBLIOGRAPHY.

1. Heaphy: Q.J.G.S., Vol. X. (1854), p. 311, "On the Coromandel Gold-diggings of New Zealand.'

2. Heaphy: Q.J.G.S., Vol. XI. (1855), "Gold-bearing District of Coromandel Harbour, New Zealand.'

3. Hochstetter: New Zealand Government Gazette, 14th July, 1859.

4. Lauder Lindsay: Proc. Geol. Section Brit. Assoc., 1860, "On the Geology of the Goldfields of Auckland.'

5. Hochstetter : "Geology of New Zealand," pp. 14 and 51. Auckland, 1864.

Hoenstetter: "Reise der Novara," Geologischer Thiel, Band I., p. 24. Wien.
Hochstetter: "New Zealand," p. 94. Stuttgart, 1867.
Hector: Progress Report, Geological Survey, 1866-67, p. 32.

9. Hector : Progress Report, Geological Survey, 1868-69, p. viii., " Comparison between Coromandel and Longwood.'

10. Hector: Trans. N.Z. Institute, Vol. II., p. 367, "Mining in New Zealand." 11. Hutton: Geological Reports, 1870–71, p. 6, "Geology of Coromandel."

 Hutton: Geological Reports, 1870-71, p. 6, "Geology of Coromandel."
Hector: Geological Reports, 1870-71, p. 88, "Geology of Cape Colville District."
Davis: Geological Reports, 1870-71, p. 97, "Western Part of Coromandel District."
Skey: Geological Reports, 1871-72, p. 175, "Analysis of Coromandel Coal."
Hector: Progress Report, 1874-76, p. vi., "Coromandel Coal."
Hector: Geological Reports, 1881, p. 36, "Thames and Coromandel."
Hector: Geological Reports, 1882, p. 4, "Goldfields of Cape Colville Peninsula."
Pond: N.Z. Journal of Science, Vol. II., p. 593, "Minerals of Cape Colville Peninsula."
McKay: Geological Reports, 1885, p. 192, "Cabbage Bay and Cape Colville Districts."
Hutton: Trans. Australian Ass. Adv. Sci., Vol. I., p. 245, "On the Rocks of the Hauraki Ifields." Goldfields.'

21. Hutton: "Rocks of New Zealand."

22. Park: "Geology of the Hauraki Goldfields, Auckland," 1897.

23. McKay: "Report on the Geology of the Cape Colville Peninsula, Auckland,-"C-9 of 1897.

Price, 9d.]

Approximate Cost of Paper .-- Preparation, not given ; printing (2,200 copies), £13 4s.

By Authority: JOHN MACKAY, Government Printer, Wellington.-1900.