

1900.
NEW ZEALAND.

GEOLOGY OF THE COROMANDEL GOLDFIELDS.

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Presented to both Houses of the General Assembly by Command of His Excellency.

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I.—INTRODUCTION.

AN accurate knowledge of the geology of a goldfield is of such prime economic importance to those engaged in mining operations on that field that a monograph having for its object the amplification and consolidation of our geological knowledge of the Coromandel Goldfield needs, therefore, but little apology.

Though Coromandel is the oldest goldfield in New Zealand, and though nearly five decades have elapsed since its discovery, we have even now no connected plan of its reefs. It is no uncommon occurrence, as many tributaries can testify, for a shoot of gold with boundless potentialities of wealth to abruptly end in disused workings, the position of which should years before have been delineated on a public plan. Again, owing to the prevalent impression that the reefs of the Hauraki system were auriferous only when they maintained a north-east and south-west strike, levels were driven north-west and south-east, parallel to Legge's or Hauraki No. 2 reef, which, unearthed by the merest accident, after forty years' prospecting in the district, yielded over £300,000 in three years.

With an extended geological knowledge, the many egregious mistakes committed in the past will be avoided to some extent in the future, and thousands of pounds saved to mining investors.

As will be seen from the appended bibliography of the subject, many geological notices have been made of the Coromandel field. These, however, with but one or two exceptions, have been of the most cursory nature. No geological map of the district was published before 1897, in which year Mr. A. McKay, F.G.S., Government Geologist, and Mr. James Park, F.G.S., each published a map of the Hauraki Peninsula, which includes the Coromandel district. The map of the latter was on a scale of two miles, and that of the former four miles, to the inch, manifestly too small to show detail. The only microscopic determinations of rock-sections are some three or four sections described by Captain F. W. Hutton, F.R.S., in papers read before the Australasian Association for the Advancement of Science.

The recent developments in mining have brought to light many facts of geological interest unattainable when the preceding papers were written, so that, in fine, I have reasonable ground to hope that the present monograph and accompanying maps may throw some light on obscure points, and prove of interest and service.

I take this opportunity of thanking Captain Francis Hodge, John Reilly, Esq., B.A., C.E., and various mine-managers, to all of whom I am indebted for data concerning the auriferous reefs. My thanks are also due to Mr. T. Wrigley, my late laboratory assistant, whose rock-analyses have assisted me considerably in my determinations.