

The subsidy of £10,000 granted to the Ross United Gold-mining Company to aid in the further development of the Ross Flat, in the West Coast district, was withdrawn, that company having failed to satisfy the department that its proportion of the cost of the work would be available.

In the South Island several licenses for prospecting outside mining districts have been granted, and one in Stewart Island, while a considerable number of licenses have been issued in various districts in the North Island.

GEOLOGICAL EXPLORATION.

HAURAKI PENINSULA.

During the past season the systematic exploration of the Hauraki Peninsula has been commenced under the direction of Mr. McKay, Government Geologist, and this work has been so far proceeded with that it is possible to indicate the different groups of rock formations in which gold- and silver-bearing lodes have been found, and to determine approximately the areas of these, and their relation to each other. This general information, when placed in the hands of the miner and prospector, will be of great assistance in the future development of this mining district.

It now appears that the vast development of volcanic rocks on the Hauraki Peninsula is of an exceedingly complex character, and consists of four or five distinct groups of igneous rocks, in addition to the fundamental slates over which the volcanic series have been accumulated. It has been a matter of doubt whether gold-bearing lodes exist in the slates of the northern part of the district, and as respects some localities this matter has yet to be determined. At Kuao-tunu the richly auriferous character of the slates has been demonstrated. In the lower levels of the Tokatea Mine the slates have been pierced to a depth of more than 400 ft., and there is promise that the energetic prospecting works now in progress will prove successful. At the Tiki, Manaia, and Tapu Creek gold-bearing lodes are being followed in the slate country.

The older groups of volcanic rocks have their better-known developments at the Thames and in the Success-Tokatea Range, both important centres of gold-production, from which an enhanced output of gold may be expected when the several works now in progress approach completion. The group next succeeding the Thames-Tokatea rocks has been called the Kapanga series. This contains rich mines in the vicinity of Coromandel, and is being extensively prospected over the area between Cabbage Bay and Kennedy Bay, and gives evidence of this proving a rich mining field. The Beeson's Island group is the next younger of the volcanic series. This, though often containing quartz reefs, is less productive of gold, but in this formation is found the rich silver lodes of the Great Barrier Island. Rhyolites, as the youngest group of the volcanic series, have a vast development along the east coast of the peninsula south of Mercury Bay. At a few places these are gold-bearing, and on the banks of the Tairua River, near the Upper Landing, they contain opals of fine quality. These rocks form an important study, and possibly closely related with them are the Waitekauri rocks, than which as gold-producers none on the whole peninsula are more important. The report by Mr. McKay for the present year concerns itself chiefly with the general geology of the peninsula, this being a necessary preliminary to the special examination of mines which it is intended shall commence during the coming season.

MINING MACHINERY.

As in former years, information has been obtained in regard to any new process for the treatment of auriferous and argentiferous ores, and also in regard to new machinery and appliances in connection with mining. By giving the fullest publicity to this question opportunity is afforded those persons who are engaged in mining pursuits of knowing the different patents that have been granted; and, although the machinery or appliance may not come up to the patentee's expectation, the ideas devolved may be the means of improvements being made by some one else who can detect defects in the patents. Plans and specifications of different machines and appliances in connection with mining will be found in the report of the Inspecting Engineer.