

## GREAT BARRIER ISLAND.

In this district mining and prospecting operations have been confined to three or four claims, but so far machinery for the extraction of gold and silver is not yet erected.

The following list shows the whole of the claims registered, and for which titles were in existence, at the end of the year:—

ABSTRACT OF LICENSES FOR SPECIAL CLAIMS issued from the Warden's Office at Thames, and situated in the Great Barrier Island, and registered on or before the 31st March, 1899, in the Books of the Mining Registrar, Thames.

Date of License.	Area.	Locality.	Block.	Survey District.	Name of Claim.	Name of Registered Owner.
30/11/96	A. 100 R. 0 P. 0	Great Barrier	VI.	Fitzroy	Fitzroy	Great Barrier Gold-mining Co. (N.L.).
30/11/96	100 0 0	"	VI.	"	Great Barrier Extended	Great Barrier Gold- and Silver-mining Co. (N.L.).
30/11/96	100 0 0	"	VII.	"	Great Barrier Excelsior	William Ernest Cossar.
28/9/98	100 0 0	"	VI.	"	Mount Argentum	Mount Argentum Gold-mining Co. (N.L.).
10/11/98	40 0 0	"	VI.	"	Okupa	Barrier Reefs Gold-mining Co. (Ltd.).
10/1/99	99 1 22	"	VII.	"	Original Great Barrier	Original Great Barrier Gold-mining Co. (N.L.).

In the Great Barrier Island a considerable amount of prospecting has been carried on in some of the mines, and the character of the quartz disclosed is generally of a favourable nature.

*Barrier Reefs Mine.*—This company are systematically prospecting their property, and doing good, permanent work. A low-level cross-cut has been put in from the side of the hill for a distance of 1,050 ft., and has intersected what is termed the large reef; but as a considerable quantity of water was running from the face when the reef was cut, it was deemed advisable to discontinue driving on it for a time until the water had drained off. The tests taken from the reef did not give a high percentage of the precious metal, but little was done to prove its value. Driving has been done on a reef that was intersected at a distance of 700 ft. from the mouth of the tunnel. The drive west on this reef is in 220 ft. from the cross-cut, and the eastern drive is in 243 ft.; about 60 ft. of further driving east on the reef will connect with a shaft that has been sunk from the side of the hill to a depth of 220 ft., and this will provide adequate ventilation. The reef varies from 1 ft. to 6 ft. in width, and there will be about 350 ft. of backs from the low level. Tests have been made from time to time from this reef, and satisfactory results obtained. The company contemplate erecting a 20-stamp mill, to be fitted up with all modern appliances for the treatment of the ore. The situation of the site for the battery and buildings will be about half a mile from the present low level. Fifteen men were employed in the mine.

*Great Barrier Gold- and Silver-mining Company's Mine.*—This company have given an option over their property to some English investors, who have carried on development and prospecting works. In the upper level a considerable amount of driving has been done on the reef, but the operations now in progress are confined to extending the low-level cross-cut to intersect the large reef, and driving east on Lee's reef. The cross-cut is in 300 ft., the country in the face being of a very hard description. The western drive on Lee's reef is in 170 ft. from the cross-cut, and has been continued to the Barrier Reefs boundary. The reef varies from 1 ft. to 2 ft. in width, the quartz being of a kindly description, and the country generally presenting favourable characteristics. Fourteen men were employed in this mine.

Mr. Albion S. Howe, civil and mining engineer, has furnished the following report on the Great Barrier Island, and the mines and workings:—

"The Great Barrier Island is about sixty miles north-east from Auckland and fourteen miles north from Cape Colville. Its extreme length is about twenty-six and its greatest breadth sixteen miles. The gold- and silver-mines of the Great Barrier are located on the slopes of a hill about two miles from the north shore of Blind Bay. This hill is locally known as the "White Cliffs"; its Maori name is Te Ahumata. The highest point of Te Ahumata is nearly 1,300 ft. above the sea. From that point as a centre, a circle with a radius of 1,000 yards would include all mine-workings in which anything of value has been found. Te Ahumata and the south-east part are nearly separated from the main body of the island by the Kaitoke Swamp to the north and by Whangaparapara Harbour to the westward, there being only a ridge about half a mile wide between Kaitoke Creek and Whangaparapara.

"The surface of the country for some miles around Te Ahumata is thickly covered with volcanic ash and mud, and strewn with rock *débris* from the cliffs above. In the vicinity of Kaitoke Swamp, and from one to four miles away from the cliffs, this tuff is coloured brick-red by iron-oxide. In most places, however, the tuff is an ash-grey to a brown in colour. Owing to this deposit of ash and loose rock, the quartz reefs only outcrop in the neighbourhood of creeks or near the edge of cliffs, and it is usually difficult, and often impossible, to trace the course of a reef on the surface. A number of prospecting cross-cut tunnels were started in this tuff by different companies, but none of them developed anything. Some were driven several hundred feet without getting into solid country. If valuable quartz veins exist in the line of those tunnels, the tunnels may have passed over the top of them.

"Besides being a volcanic centre, Te Ahumata has been a theatre of great hydrothermal action. This is shown by the extensive kaolinization of feldspars, the signs of mud springs, the beds and concretions of iron-pyrites, and the great extent of sinter deposits on the hills. In many places beds of almost pure kaolin can be seen. This is usually white in colour, but some beds are