

## Enclosure 1 in No. 2.

## REPORT OF MR. WARDEN FRASER UPON THE SOUTH HAURAKI GOLD FIELD.

*General Report on the state of the Southern portion of the Hauraki Gold Mining District, Province of Auckland, for the Year ending 31st March, 1874.*

DURING the year which has elapsed since my last report, this field may be said to have been stationary until within the last few weeks, during which period there has been a decided advance. Some rich and unexpected finds have been made during the year, and several claims have greatly increased their yield; but this has been counterbalanced by the fact that as yet nothing of a very valuable character has been discovered in the lower levels of the Caledonian and Tookey mines, on the prospecting of which a large amount of capital has been expended. The United Pumping Association is a union of four of the leading Companies, namely, the Caledonian, Tookey's, Golden Crown, and Imperial Crown, the object being to drain the reefs passing through their claims. In my last report I gave a detailed description of the machinery which this Association has erected on the Imperial Crown claim. Up to the present time the machinery and the sinking of the shaft have cost about £70,000. The Golden Crown Company is no longer a contributor to this shaft, having paid up its proportion of the amount required. The shaft is now down 400 feet, and has been successful in draining the Caledonian and Tookey mines. The prospecting of the low levels has been greatly obstructed by the prevalence of bad air. During the year it has been sunk 50 feet, but at that depth sinking was discontinued, and driving undertaken. One of the primary objects of the shaft was to intersect the Caledonian reef on its underlie, in order to drain the adjoining mines; and although it was for some time understood that the reef was not intersected by the shaft at all, it is now pretty generally conceded that it has been cut through at a point where it was so much split up and reduced in size that it was not at first recognized. It has now been ascertained that it was the intersection of this reef which drained the water out of the adjoining mines. The drives of which I have spoken are three in number. One of these, which was driven in an easterly direction into the hill country, was made of double width, suitable for a main outlet for all such lodes as its continuation might intersect; but after driving for a distance of 100 feet without meeting any important reef, it was discontinued. The other two drives are still progressing. The second drive is in a northerly direction, towards the Albion Company's shaft, and it is now in about 150 feet, or nearly half the distance between the two shafts. In this drive several lodes were intersected, two of which were of good size. One is no doubt the Caledonian reef; but these lodes, although at the point of intersection they are thickly impregnated with antimony, are not apparently of a sufficiently auriferous character to pay for working. The third drive may be called a cross-cut from the first. It is driven in a southerly direction towards the Tookey shaft, and in it one good strong reef, 3 feet thick, and several smaller ones, have been intersected. The large lode appeared to be of a more auriferous character than any previously found at this depth, and a trial crushing taken out of it yielded an average of 9 dwts. 14 gr. to the ton. It has not been further opened up or tested since. During the present year the Company have procured a new set of plunger pumps and gearing, to be inserted at the bottom of the shaft, so as to facilitate further operations. The new plant, which is of great weight and strength, has been manufactured at a local foundry, owned by Messrs. Price Brothers. The manner in which the work has been constructed afforded the highest satisfaction to the Company's engineers. The castings are larger and heavier than any ever before turned out of a New Zealand foundry. The opening up of deeper levels in the Caledonian and Tookey mines has not yet led to any important results. The Tookey shaft was sunk to a depth of 300 feet, at which a drive was put in towards the Caledonian. In this drive a reef was cut, but it has not proved payable so far as it has been tested. The Caledonian shaft has also been continued to a depth of 350 feet, from which level a drive is now progressing to intersect the main reef; but this has not yet been reached. It will doubtless be cut before the end of this month; but of course no opinion can yet be ventured as to the prospects of the new level. Another large reef, known as the No. 2, has been found in this new level, and its course driven on some distance, but a crushing from it did not prove payable. So far, therefore, the efforts to develop payable reefs at great depths have been unsuccessful in regard to this particular reef system; but with the example of the Australian and Californian quartz mines before us, in comparison with which we may be said to be only working on the surface, there is no reason to despair of future success, merely because it has not already been achieved. Men of the greatest practical experience express the utmost confidence in the mineral resources of the district, and are assured that the belt of country in which those deep mines are now being worked will give place to a better class of ground, in which rich deposits will be found when the proper level is reached. The experience of the Victorian quartz-reefing districts strongly supports this assumption.

The operations of the past year have been more especially devoted to working the mines already opened up, than to any exertions regarding the extension of the field. The most important of the strictly prospecting works now carried on, is by a Company which has been formed to work some reefs at the mouth of the Waiomo Creek, eight miles north of Grahamstown. In this locality some very large reefs have been opened. Their existence has been known for many years; and on a former occasion a Company was formed to work one of them, which is nearly 30 feet wide. Within the present year a prospecting party opened a second reef in this locality, and the prospects were sufficient to warrant capitalists in erecting a small crushing plant to test the stone, the intention being, should it meet expectations, to erect powerful crushing machinery, consisting of from 50 to 100 stampers. So far, the returns from the surface of the reef have been payable, and a drive is now entered from the beach to open out the reef at a depth of 120 feet from the surface. Should the stone prove payable at this depth, more extensive operations will be immediately commenced, and steps will be taken towards the erection of the large battery referred to. Another prospecting work of great importance is that of the South British Association. This Company took up a large section of the high land lying between the base of the Karaka Range and the flat in the upper township of Shortland, and put in a tunnel from the Karaka to the Hape Creek. The object was to intersect the lodes, which, from the Una and other mines on the range, strike downwards towards the beach. Several of these lodes have been met with