

This shows a considerable increase upon last year, when the revenue from all sources was £3,627 18s. 11d.

11. The system of conveying gold to Dunedin by Government escort having been discontinued, there are no "escort returns" from which an accurate account of gold exported from the district can be compiled. I have been at some pains to obtain information from private sources, and I think I am within the mark in my estimate when I say that the gold sold in the district during the year was 21,000 ounces.

I have, &c.,

H. W. ROBINSON,

Warden.

The Under Secretary for Gold Fields, Wellington.

## No. 12.

Mr. Warden STRATFORD to the UNDER SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Arrow, 1st April, 1878.

I have the honor to forward herewith the statistical returns of the Wakatipu District, in compliance with your circular, No. 765, of the 14th March, and to add a general report for the year ending the 31st of March, 1878.

*Alluvial Mining*, under the present system of working, is waning fast, and will almost cease to exist in a few years as an employment for individual miners. All the shallow diggings known to exist have been worked out by the Europeans, and in many places re-tried by the Chinese. The gold has been traced in some localities into very deep ground, and it remains for capitalists and companies to bring in water and deep tail-races, to follow the leads of gold. Before leaving this subject, I may add, upon the authority of some of the most experienced miners, that the existence of gold in large quantities on the terraces of the Shotover and its tributaries, on the banks of the Arrow, and terraces of the Cardrona, is an undoubted fact, which will be made use of when railway and other public works are completed.

*Quartz-reefing*.—As has been already reported for two years past, the Macetown reefs have been discovered just in time to prevent an exodus of disheartened miners, and revive the hopes of disappointed prospectors. Out of three distinct lines of reefs there are actually marked off between forty and fifty claims, of these about ten being fairly worked, which have been found to be payable; amongst them all we have three machines erected, the gross number of stampers on the field being twenty-five, giving employment to about fifty men. So many and varied reports have appeared in the Press during the last year about these reefs that a detailed account of their progress may prove interesting at a time when quartz-reefing is engaging so much attention. The lines of reef may be divided into three, say, 1st. The Homeward Bound line; 2nd. The Maryborough line; 3rd. the Advance Peak line. Although the discovery of auriferous quartz reefs is generally said to be of recent date, their existence has been known for some years; what might be termed their discovery should rather mean the date when they were practically tested.

Line No. 1 was opened in September, 1876, by Messrs. Raven and Barclay, who opened the Homeward Bound Claim. The direction of the lode is nearly north-west, underlaying to the south-west at an angle of about one foot in six. The lode varies in width from three to five feet. The quartz runs in bands, two or three of which, with irregular layers of mullock between, fill up the lode or fissure. The gold-bearing bands of stone are usually those which are best defined, and fine in the grain, and are mostly found in the hanging wall; about three-fourths of the width of the lode is usually available for crushing. In opening up this mine 542 tons of quartz have been reduced in a small mill erected purposely to test its value, which yielded 551 oz. 17 dwt. of gold, equal to an average of one oz. nine grains to the ton. The company are now erecting more powerful crushing machinery, also a tramway 1,200 feet long, to bring down the quartz from the mine to the mill. The lode, by means of tunnels and shafts, has been tested to a depth of 350 feet from the crown of the hill, and there is every evidence that it exists many hundred feet more in depth.

On this same line, to the north-west, are the Ladye Fayre, Mackay's, Gladstone, and Premier claims.

*The Ladye Fayre Company* has never touched on a well-defined reef as yet, although large bodies of stone have been met with, carrying rich gold-bearing leaders on the underlay of the reef; it is possible that the real lode has not been touched upon yet, as it evidently dips in strike when it leaves the western boundary of the Homeward Bound. The company is sinking a deep shaft, with the intention of cross-cutting the lode at about 100 feet in depth.

*Mackay's Lease*.—Nothing has been obtained beyond a small gold-bearing leader on the hanging wall of the lode; otherwise the fissure is all filled up with *débris* or mullock from the sides.

*The Gladstone*.—Here the lode appears to rise to the north-west. This company struck it on the surface, and obtained very handsome prospects. The lode is well-defined and carries gold from wall to wall, or, rather, there is a sort of false wall in the centre of the fissure, which is about four feet in width—half on the foot-wall side is quartz, the other half is *débris* almost of the consistency of rock.

*The Premier* have struck the lode at the upper end of their claim, and have traced leaders indicating the reef at a lower level as far as the Gladstone boundary. Gold has been found both in the lode and leaders, but no trial crushing has been made.

*The Defiance Line*.—This is a line of reef running parallel with the Homeward Bound, about two chains to the eastward. This reef only shows in places at the surface; in all cases this line of reef is double—one very regular, the other irregular and uncertain. On this line there are two claims to the eastward of the Premier, called the "Defiance" and "Young Australian." Gold has been struck in both claims, but their value is unsettled as yet. No discoveries of gold have been made south-east from the Homeward Bound.

*The Maryborough Line* was opened in February, 1876, by the Maryborough Company. The reef bears the same direction as the Homeward Bound, and is distant half-a-mile from it south-west, and