

nature of the country, that far richer deposits will yet be discovered nearer to their sources in the Mount Ida Ranges. Meanwhile a population of about 5,000 persons are energetically prospecting the country, and although no special instances of brilliant individual success have yet been reported, the escort returns prove in the most unmistakeable manner that the miners are very profitably engaged.

Area of proclaimed Gold Fields.

90. The proclaimed Gold Fields, as shewn in the map, have been calculated by Mr. W. F. Browne, of the Secretary's Office, to contain about Two-and-a-half million acres, thus distributed:—

Tuapeka Gold Field	...	...	328,560 acres
Mount Bengier Gold Field	...	...	18,816 "
Dunstan Gold Field	...	...	199,680 "
Wakatipu Gold Field	...	...	1,351,680 "
Nokomai Gold Field	...	...	281,600 "
Mount Ida Gold Field	...	...	330,000 "

A considerable proportion of this area is actually auriferous, but any calculation on this head would be purely conjectural.

Workings outside proclaimed Gold Fields.
Fraser's Diggings.

91. Beyond the proclaimed Gold-fields there are numberless workings, all more or less remunerative.

92. One of the least known of these is Fraser's Diggings, at Powder Hill, which (owing perhaps to the peculiar perversity which renders distant objects most attractive) is little thought of, although situated in the immediate vicinity of Dunedin. A handsome nugget, weighing 2 ozs. 10 dwts., was recently brought in from this locality. The present mining population is estimated at about 150. The depth of sinking is from four to ten feet; and the thickness of washdirt from two to eight feet. The prospects obtained are represented as being above the average.

Quartz Reefs.

93. The Otago quartz reefs present appearances singularly diverse from those of Australia, inasmuch as the stone consists rather of recemented fragmentary quartz than of solid rock. Nevertheless, quartz mining may now be ranked amongst the established industries of our Gold-fields, several payable reefs having been discovered. Probably more attention will be paid to this branch of mining in future years.

Shetland Reef.

94. The oldest quartz workings in Otago are those of the Shetland Reef, at Waipori, where two companies are now established. One of these has been some time at work, with a battery of four heads of stamps, the motive power being water, the cheapness of which renders the outlay for machinery less, and the returns more remunerative than would be the case if steam power was required. In a report received from Mr. Warden Worthington, under date 16th May, that gentleman furnishes the following details:—

"The Shetland Reef, or rather that portion of it worked by the Otago Quartz Mining Company, seems to be getting richer the further they drive into it, as will be gathered from the list of returns, as follows, namely:—

1863.	Tons.	Cwt.	Ozs.	Dwts.	Grs.
January 14	24	10	39	7	...
January 31	24	...	38	6	18
February 14	18	...	25	7	15
February 28	18	...	20	15	12
March 14	27	...	36	5	6
March 28	36	...	48	17	12
April 25	32	...	54	4	10
Total ...	179	10	263	4	1

The gold all comes from a drive of 150 feet, which follows the reef the whole way, and consequently the same returns test the auriferous nature of a much larger quantity of stone.

"The Company being fully satisfied that the returns justify them in increasing their machinery, are about to erect twelve heads of stampers and a new water-wheel; but as they have to get them from Melbourne some time must necessarily elapse before they are on the ground. I may mention that the thickness of the reef varies from three and a half to six feet, gradually thickening as it gets deeper."

Thickness of Reef.