

There are also some small claims in the locality of Nokomai, Athol, and Parawa, which provide employment for a few men.

At Waikaia, the Argyle Hydraulic Sluicing Company have adopted a water-power dredge for working their claim; particulars of this appear under the heading of "Gold-dredging." The Winding Creek Claim has been purchased by the Round Hill Gold-mining Company (Limited), who have effected considerable improvements in the water-races and will work the deep ground by elevators, sluicing off the overburden down to drainage level in advance. Nearer the township a comprehensive scheme for the working of Muddy Terraces is also under way. This will necessitate the construction of a large water-race from Dome Creek at an estimated cost of some £12,000. A few miners working on a small scale are scattered throughout the district. Gold-dredging has commanded more attention of late, and the Waikaia district has now become an important centre of dredging operations.

At Round Hill, the claims of the Round Hill Gold-mining Company, the Ourawera Gold-mining Company, and the Smith Gold-mining Company have been worked. Generally speaking, results have been good, the ground of the Round Hill Company and that of the Ourawera Company having yielded gold to the approximate value of £1,000 and £3,000 per acre respectively. The gold on this field and also at Orepuki is very fine and of excellent quality, the value being some £4 per ounce. Operations are carried on by means of hydraulic sluicing and elevating. Obstructions in the form of buried timber and beds of inferior lignite impede the work to some extent. From seventy to eighty persons find employment on this field.

Operations in connection with alluvial mining at and around Orepuki give employment to about a hundred and thirty men, are very varied in their character, and comprise sluicing, underground mining, and beachcombing. There is nothing fresh to report in connection with this part of the southern goldfields; the industry is generally a lucrative one, but, as pointed out in my last report, as the claims become exhausted prospecting further afield will become imperative.

There is a large extent of country between the Waiau River and Preservation Inlet which is practically unknown in regard to its mineral resources, and is well worth attention and systematic prospecting.

DREDGE MINING.

The number of dredges at work shows a small decrease as compared with the preceding year, which is accounted for by claims being worked out or proved to be unprofitable, by dredges being unsuitable for the conditions under which they had to work, and by wreckage.

The principal centres at which the dredging industry is being carried on are Waipori, Miller's Flat, Roxburgh, Alexandra, Cromwell, Waikaka, and Waikaia in the Southern District; and, in the West Coast District, on the Buller and Grey Rivers and their tributaries. These places do not comprise the whole of but only the most extensive dredging-fields in the colony.

In my last report the general conditions under which dredges were working in the several centres were commented upon. Since then there have not been any developments of note nor any alterations in working-conditions which call for special comment with the exception of a new method of conveying power to dredges worked by water-pressure, a description of which appears below.

As regards improvements in the construction, &c., of dredges, it may be remarked that the use of bulkheads in the pontoons for the purpose of dividing them into watertight compartments is becoming more general, and will tend to reduce the liability to sink in the event of accident to the hull. Of late, experiments and additions have been made on some dredges with the object of increasing the efficiency of the gold-saving arrangements.

The steady manner in which dredging is carried on in the Waikaka Valley, and the increase in the number of working-dredges at Waikaia, go to prove the value of the Southland flats as payable dredging-areas. It is also worthy of note that the planting of forest trees on the dredged ground in the Waikaka Valley gives every appearance of proving a successful experiment, and also that so far as one is able to judge at present the dredging of these flats will not be nearly so detrimental from an agricultural or pastoral standpoint as many people imagined, but rather the reverse will hold good in some cases.

It may be interesting to note that as a result of the successful application of dredges for alluvial gold-mining in New Zealand in the first instance, and more recently in several other countries, the method is to be adopted in Tasmania for the recovery of stream-tin from alluvial deposits. The work of designing a number of large and powerful dredges for the purpose has been intrusted to a Dunedin firm.

IMPROVEMENTS IN DREDGES.

Dredging by Water-power.

During the past few years dredging for gold has been satisfactorily carried on in Otago with dredges run by water instead of steam. Where water is available at a sufficient elevation to provide motive power for a dredge, ground that would not pay expenses if the dredge were driven by steam can be made to pay well. Increased attention is now being given to water-power dredges, owing to the fact that a new and simple method of conveying the water on to the dredge has been adopted within the past six months, which method has given every satisfaction. A number of proprietaries whose properties are so situated as to enable water to be brought on to the ground to be worked are now moving in the direction of adapting their dredges to work by water-power and towards discarding the steam plants which necessitate such a large expenditure for coal and upkeep. The new method of conveying