

The Blackwater Mine has produced gold to the value of £109,284, from 54,643 tons, the highest annual production hitherto attained at this mine. Of this amount £24,999 8s. was distributed in dividends, and the total so paid now amounts to £137,495 2s. The year's development has not been altogether satisfactory, as the lode in the lowest levels is smaller and more disturbed than it was above, and the ore reserve in sight must be now considerably less than was the case two years ago.

At the North Blackwater Mine a main shaft is now being sunk to open up the extension of the Blackwater lode at greater depth. This lode is the most regular and persistent yet discovered in the district, being 2,500 ft. in length, and having maintained its character and quality uniformly from the surface down to the present depth of nearly 1,100 ft. The lode as exposed in the mine is interrupted by two very well-defined faults, which show at every level and separate the stoping operations into three main blocks. These faults and also the north and south ends of the reef have a pitch of about 35° to the north, so that it is apparent that in depth the lode will cross the north boundary of the Blackwater Claim into the North Blackwater Mine. This is calculated to occur at a depth of 820 ft. below the collar of the North Blackwater shaft, and from that point every foot sunk will give approximately 2 ft. increased length of lode. The shaft is now being sunk, and is now down 230 ft. It is well timbered, and all provision has been made for ventilation and for rapid handling of material, so that the work should now continue without interruption. The adjoining Blackwater Mine has now produced some £600,000 worth of gold, so that with a prospect of developing a mine of similar value the North Blackwater Company is fully justified in its operations.

At the Blackwater South Mine during the year a crosscut has been driven which has intersected what is known as the Empire lode, at a lower level than that driven by the Blackwater Mines (Limited), which that company prospected when the property was under option to it. In driving south from the crosscut some small bunches of quartz have been met with, but nothing of any value proved, thus verifying the results which led the Blackwater Company to abandon its option.

It is reported that further work will now be done in sinking from Absalom and party's old tunnel south of the Blackwater Mines, but when this was driven, under subsidy from the Department, the prospects were not encouraging; all the information available tended to show that the limit of the lode to the south lies within the Blackwater Company's own boundaries.

At the Millerton Gold-mine the shaft was deepened to No. 3 level, and the lode was intersected by a crosscut and driven on for 60 ft. As was the case at No. 2 level, there was no value in the quartz, and all work has now been stopped for some months. This lode carried gold at two points where it had been intersected and eroded by valleys—viz., the present valley of Snowy Creek and the old valley, now filled with a deposit of alluvium, which was run into by a drive north on the lode. The gold at these two places was probably the result of mechanical enrichment by erosion of the upper portion of the lode, and as soon as this enriched portion was passed through the remainder of the lode was found to be quite unpayable.

At Mount Greenland, near Ross, a Wanganui syndicate has kept two or three men employed, but has practically no further developments of the reef to show. A small battery is being prepared to crush the stone won from development, but the concern is being run in a most unbusinesslike manner, and the future prospects are very doubtful.

## (2.) DREDGE MINING.

### *West Coast of the South Island.*

During the year two new dredges were put into commission, viz., the Murray's Freehold and the Ahaura River, and a third, the Worksope No. 2, it is proposed to start early in 1916.

The Worksope No. 1, having worked out the claim, is now idle. The new dredge to replace the Hessey-Cameron dredge which sank at Capleston is now in commission, and returns from it are satisfactory.

There have been no sensational returns during the year, but all the dredges at work have more than paid their way, and the owners of the Ahaura dredge and the Worksope No. 2 expect good results in 1916.

If the Australian firm which has been prospecting Rimu Flat is successful in raising the required capital, it is reported to be their intention to use the American type of dredge with close-connected buckets of about 12 cubic feet capacity. This type of dredge has not hitherto been employed in New Zealand.

All the dredges in commission have been well kept throughout the year, and safety appliances are duly provided and maintained.

### *Otago and Southland.*

A steady decline continues in this branch of mining in Otago and Southland. Six dredges ceased operations and were dismantled during 1915. The Clutha River has kept at a high level throughout the year, consequently the dredges operating in its gorges were unable to work.

The Pride of the Clutha dredge at Miller's Flat resumed work under new ownership after a period of suspension extending over eleven months.

An innovation in the method for saving fine gold, which is said to give good results, has been adopted on McGeorge's Freehold Nos. 2 and 3 sluice-box dredges at Waikaka. The innovation consists of the installation of a second box directly below the main box, with the space of about 2 ft. separating them. A cut 2½ in. wide is put through the bottom of the upper box over its full width a short distance below the point of discharge of gravel from the buckets. The opening is protected by the angle-iron ripples in the box, but it allows most of the fine drift to pass through to the lower box, which is lined with coconut-matting for saving the fine gold.