

intention of bringing water from the Arahura River. Given such a supply as can be obtained from the above source, and the success of this company would be assured. The Kanieri Lake Hydraulic Goldmining Company have recently leased their claim and water to a party of miners for a term of two years. Although possessed of a magnificent supply of water, this company has had considerable difficulties to contend with in working their claim. They have been sued for damages caused by their tailings accumulating in the bed of the Kanieri River, and they are further threatened with other suits by parties, who allege that their properties are being injuriously affected by the operations of the company. If mining, and especially hydraulic mining, is to be handicapped by ruinous suits, instituted by holders of property who in most cases place a fancy value on their holdings, it would be well that the Government should reconsider the advisability of proclaiming the whole of the rivers in south Westland. The removal of the present hindrances to large hydraulic mining operations on the Coast points to a large extension of our fields of operation, and a proportionately large increase in the output of gold. On the other hand, their non-removal means the withdrawal of both capital and labour, and a rapid decline of the mining industry. This is a matter requiring prompt and serious consideration by the Government. The return of gold from the Kanieri Company's claim is valued at £2,000. This includes the period from the 1st January, 1891, to 31st March, 1892.

The workings on Back Creek are being actively carried on, most of the claims being worked by long tunnels. In many of the claims the returns are said to be exceptionally good, and a great many are finding steady employment at fair wages. The auriferous drifts on this field are very rough and irregular, and it is a most difficult matter at times to distinguish between what is wash-dirt and what is mullock. Immense quantities of boulders, large and small, are met with in the drifts, often requiring the use of dynamite for their removal. Owing to the irregularity of the runs of gold and the depth and magnitude of the auriferous drifts on this field, nothing short of hydraulicking the whole terrace away will enable the miner to get more than half the gold therein contained. Here we have an immense field for hydraulic operations, but we lack the means of utilising it to the best advantage, owing to our inability to bring the water on to the ground in sufficient quantity. If this were done we would have one of the largest and most remunerative goldfields in the colony within three miles of Hokitika. What is known as Craig's Freehold has been and is giving grand returns. This claim is worked on tribute, the owner getting $33\frac{1}{3}$ per cent. of the gross proceeds. I understand he has already netted close on £2,000 for his share in the short time they have been at work. This claim is one of many on the outer edge of the continuation of the Back Creek, Rimu, and Brighton Terraces towards the sea. In some of the claims the wash is cemented, and a small battery has been erected to crush this cement; and from a trial-crushing of 7 tons gold at the rate of $\frac{1}{2}$ oz. to the ton was obtained. Further prospecting along this face will—when the sandstone bottom is reached, where the river and the sea have at one time been operating, both north and south of the mouth of the Hokitika River—very likely disclose auriferous drifts of equal value to those now being worked in Craig's Freehold. The prospecting association at Rimu is doing good work as far as their means will allow. They have assisted in sinking a number of shafts on Back Creek and elsewhere, and they are now about to put down a series of bores on the beach block between Lake Mahinapua and the present sea-beach. There is every likelihood that valuable leads exist in this block. What is known as the Shanghai Lead—an old beach-lead formed by the sea breaking against the old morainic wall that skirts the western shore of the lake—is now from 60 to 80 chains from the present shore-line, where a valuable lead was worked many years ago. Between the points indicated are a series of sand-ridges, evidently the markings of built-up beaches, but now covered with a dense forest. This block the association propose to prospect by an inexpensive method of boring until water-level is reached. The natural inferences to be drawn from the observed facts in this case are that in this mile of built-up beaches we may reasonably expect to find numerous gold-bearing leads equal in value to those already worked.

As showing the variety and value of our mineral deposits, and as pointing to their existence in the back ranges, I have to report the presence of Oriental rubies in the auriferous drifts at Back Creek and Woodstock. The specimens found at Back Creek were submitted to Professor Ulrich who pronounced them true Oriental rubies. The gems are small, full of flaws, and cemented together in masses, set in a light-green, soft matrix, but they appear to be too much fractured and broken to be of much value. Similar specimens were found about seventeen years ago in the gold-workings at Woodstock. Specimens of the rare metals osmium and iridium have also been found by the miners of Back Creek in their sluice-boxes. They were taken to Dunedin by Mr. Goodlet, and were examined and verified by Professor Black.

Dredging.—This branch of the mining industry, introduced to the Coast some three or four years ago, and that promised to revolutionise the workings on our rivers and sea-beaches, has, with the exception of the Kanieri dredge, now at work on the Hokitika River, completely failed to redeem the promises then made. The Kanieri dredge—an ordinary bucket dredge—commenced dredging in November, 1891, and has been running with occasional stoppages ever since. The amount of gold won for the five months ending the 16th April, 1892, has been 282oz. 1dwt. 17gr., value £1,106 6s. 2d. Owing to the heavy nature of the wash in the river-bed, difficulties have been met with in the shape of immense boulders, that necessitated the building of a punt, with gear to lift and remove such boulders as the dredge could not deal with, and also the employment of an experienced diver to work with same. For lifting the ordinary river-drift and shingle this dredge is admirably adapted, as is shown by the steady stream of buckets discharging from 60 to 70 tons of stuff per hour into the boxes; but when dealing with the indurated wash underneath, in which are imbedded boulders weighing up to 3 and 4 tons, the amount brought up is very small in comparison. This tight drift is very rich in gold, and is lying on a soft sandstone bottom dipping at a sharp angle into the bed or centre of the river. What the mean depth or extent of this wash is no one can tell, the dredge having made little more than an opening into it. One thing is clear—no dredge can deal with the work in this river without first removing the large boulders as they show in the face when the dredge is at work; but I believe the diver and punt will answer the purpose.