

to get the maximum of work at the minimum of cost. Mr. E. Brooke Smith, the introducer of the ball dredge, has also on the way a steam-prospecting machine, capable of dealing with lagoons and river-beds. I understand that this machine will be put to work on the Three-mile, also near Okarito. Testing the beaches at the lower levels is of very great interest to any one connected with beach-workings, and Mr. E. Brooke Smith deserves the thanks of the public for introducing, and putting in operation, such an efficient machine.

The disposal of the sand and the best methods of saving the gold are commanding the attention of experts, and already several patents have been taken out for this purpose. Whilst fully recognising the value of the sand-pump or dredge for doing certain kinds of work, I would point out that on most of the beaches large accumulations of wind-blown sand, as well as the regular deposits laid down by the sea—all above water-level—have to be dealt with, and as it would certainly be a waste of power to throw all this dry material down into the water, where the pump is at work, merely to lift it up again, I would suggest that the material above water-level should be lifted by a simple elevator; or, where water with sufficient pressure is available, Perry's patent could be used to great advantage, thereby disposing of a much greater quantity of solid material, with the same expenditure of power, and, consequently, at less cost. Below water-level the dredge proper would then come into use, and deal with the sand at lower levels.

All the best known beaches on the Coast have been taken up or applied for, besides many others whose values have yet to be demonstrated, for dredging purposes, and the present year will prove, or otherwise dispose of, the assertions made about the wealth buried in our beaches. I have implicit faith in the statement that rich deposits of gold-bearing layers of sand will be found at lower levels than have yet been reached, and that many of the well-known beaches will pay for re-working; but this does not warrant an indiscriminate taking up of beaches and river-beds, regardless of their conformation and history; and it will be in the interests of all concerned to await the outcome of the ventures on well-known beaches before entering upon more speculative undertakings. At this initial stage of what may be considered a new departure in mining, care should be taken that capital is expended on undertakings and in a direction that are likely to yield substantial returns out of the gold obtained from the claim.

I have, &c.,

The Under-Secretary, Mines Department, Wellington.

D. MACFARLANE, Warden.

OTAGO AND SOUTHLAND GOLDFIELDS.

No. 13.

Mr. Warden REVELL to the UNDER-SECRETARY of MINES.

SIR,—

Warden's Office, Lawrence, 14th April, 1888.

I have the honour to transmit herewith the statistical returns for the year ending the 31st March, 1888, together with a general report on mining affairs within that portion of the Otago Mining District under my supervision. The general aspect of affairs is much the same as last year. A fair amount of prospecting has been carried on, but no fresh discoveries of any note have been made. The returns show a considerable falling-off in the total revenue as compared with last year, arising principally from the reduction of the fees for miners' rights, water-races, and rents of licensed holdings.

TUAPEKA SUB-DISTRICT.

The works on the Blue Spur claims have not been carried on with the energy and perseverance displayed in former years, the owners having been notified about five months ago that the Blue Spur Gold-mining Company had been floated by Mr. J. C. Brown, M.H.R., in London; but owing to some misunderstanding between the owners and the London syndicate the company was only successfully floated in March last, with a capital of £130,000, the claim-holders to receive two-thirds cash and one-third scrip on the amount for which the claims and races were originally sold by Mr. Brown. Some of the claim-holders have been paid half cash and the balance in twelve months, whilst others have accepted 10 per cent., with a right of purchase by the syndicate within twelve months, the vendors retaining possession with full right to work in the meantime. The syndicate are now making arrangements for working the area, and have appointed Mr. Henry Clayton as mining manager.

The large claims in Munro's Gully continue to be steadily worked with fair returns.

The large number of Chinese in this district are employed mining in various places along the banks and low flats on the Tuapeka River, from the bush to Tuapeka Mouth, and also at Wetherstone's, Gabriel's Gully, Clark's Flat, and the Beaumont. Some of these hold good claims, yielding good returns, whilst others vary from fair to ordinary wages.

The Wetherstone's Gold-mining Company suspended operations in the early part of the year, and the directors are now taking steps to have the company wound-up.

At Waitahuna there is nothing calling for special note. Mining operations have been steadily carried on by the Europeans and Chinese. The Norwegian party, Ferris and party, and Callanan and party, up the Waitahuna Gully, hold the principal claims, and are turning over large quantities of tailings and mullock. The Chinese hold seven extended and ordinary claims on the banks of the Waitahuna River, making fair wages, whilst isolated parties are to be found working in the small gullies and creeks about the district.

At Canada Reef and Table Hill four or five quartz-claims have been taken up since Christmas. Messrs. Gillon and Murphy, who have held a quartz-claim on this reef since October last, put in a tunnel 200ft., and struck the reef 100ft. below the surface; they have also erected a ten-head battery, driven by a turbine-wheel with a direct fall of 100ft. from the end of the race. Crushing