

in full swing, and will probably be increased. The Keep-It-Dark Mine is well opened up, and their cyanide plant is nearly completed, so that regular returns may be looked for. The Big River is on good stone, and good returns may be expected.

In conclusion, I have to thank managers and directors of companies for the information with which they have so kindly supplied me, enabling me to furnish this report.

I have, &c.,

H. A. STRATFORD, Warden.

The Under-Secretary, Mines Department, Wellington.

No. 7.

Mr. Warden STRATFORD to the UNDER-SECRETARY for MINES, Wellington.

SIR,—

Warden's Office, Greymouth, April, 1899.

Herewith I have the honour to forward you my annual report on the Grey portion of my district, and at the same time to forward you the statistical returns.

BARRYTOWN (twenty miles north from Greymouth).

Barrytown Flat contains about 5,000 acres of low-lying swampy ground along the sea-shore. The flat is about one mile wide, and it consists of sea-beach deposits, alternate layers of black and grey sand, and shingle, which carry fine gold for a known depth of 25 ft. The dirt is payable if worked in large quantities, but the gold, being very fine, is hard to save, and a great spread of tables is necessary to trap it.

Barrytown Flat Gold-mining Company (Limited).—This company possess about 200 acres of flat, swampy ground in special claims. The water-supply is brought from Baker's Creek (in a flume carrying thirty-five Government heads of water) for about 110 chains, and from thence by iron pipes for a further distance of 50 chains to the claim, where it delivers under a 600 ft. head. The dirt is lifted by hydraulic elevators, or "blow-ups" as the miners call them, and discharged on to 300 ft. of washing-tables, the tailings delivering into the sea. The claim is worked day and night by means of arc lights; the electric installation is perfect, the dynamo being driven by water-power turbines. The cost of water-races and plant has been close on £15,000, and the company are now about to bring in another water-race from Fagin's Creek, with which to work the northern portion of their ground.

The company commenced work on their claim in July, 1898, but much time was lost in opening out. Up to the 31st March, 1899, about 4½ acres have been worked to a depth of 25 ft., and the following returns of retorted gold have been obtained: 1898—August, 35 oz. 16 dwt. 21 gr.; September, 109 oz. 14 dwt. 12 gr.; October, 99 oz. 1 dwt. 0 gr.; November, 111 oz. 11 dwt. 18 gr.; December, 54 oz. 7 dwt. 18 gr. 1899—January, 64 oz. 4 dwt. 3 gr.; February, 75 oz. 2 dwt. 12 gr.; March, 96 oz. 7 dwt. 12 gr. Total, 646 oz. 6 dwt.; value, about £2,540.

Barrytown Flat No. 2 Company (no Liability).—This company own a 100-acre special claim, about three miles north of No. 1 Company's property. They are bringing in a race from Canoe Creek to carry thirty-five heads, and deliver with a pressure of about 600 ft. at the claim. The country is very steep along the line of race, standing naturally at a slope of 1 to 1. The formation is broken slate-rock, in which a bench 8 ft. wide has been cut, on which the boxing will rest. About four miles of benching has been constructed to date. When completed the flume will be 4 miles 36 chains long, and 630,000 ft. of timber will be used in its construction, all of which will be rafted from Greymouth. From the end of the flume a siphon, 120 chains long, will convey the water to the claim. When completed, this company's race, siphon, tables, and electric-light installation will cost £20,000.

Waiwhero Sluicing Company.—This company was formed for the purpose of bringing in a water-supply of thirty heads from Canoe Creek to work ground situated on or below the terraces, which extend northwards from Canoe Creek. The ground was formerly held in a number of small sluicing or driving claims, but the want of sufficient water for proper working led to their consolidation into the special claims held by the company, and to be worked by the Canoe Creek race supply, which is now being brought in. The auriferous deposits on the terrace consist of ancient sea-beaches elevated about 300 ft. above sea-level. The flat ground along and below the terrace presumably contains much of the gold denuded and washed from the higher deposits, and also the more recent beach leads and scattered gold which appear to exist throughout the whole of the large marine formations known as Barrytown Flat. The company has done a very large quantity of work and has expended between £9,000 and £10,000. The length of Canoe Creek race, which was estimated by the miners in their application for water-rights at four and a half miles, proved on survey to be two miles longer, and to entail much heavier work than anticipated. Its construction continues in progress, from forty to sixty men being employed. Connected with this race a dam has been constructed, capable of stowing three hundred thousand cubic feet of water. The company is at present working a portion of its ground with water gathered into the main race from several small creeks. These give a fairly workable quantity in wet weather, and enable work on a small scale to be carried on; but in dry weather the supply falls below the least quantity which can profitably be employed, when it is used to drive the sawmill cutting timber for race-construction. The present workings consist of sluicing-face, equipped with pipe lines and two giant nozzles, and with tail-races which convey the water and dirt to the washing-tables, 8 ft. wide and fourteen in number. In connection with the washing plant there are amalgamating barrels, driven by a small water-wheel. Since the beginning of the year very little sluicing has been done, owing to continued dry weather. Up to the beginning of February the value of the gold obtained was a little over £800. For night-work, acetylene-gas plant has been installed with good results.