

three sand-vats 20 ft. by 4 ft., two agitators, 12 ft. by 8 ft., two slime-collectors, 12 ft. by 6 ft., two precipitating-boxes, two solution-sumps with pumps and elevator, driven by 13-horse-power Tangye oil-engine. Eight men were employed during the year.

*Waihi Consols.*—This claim was under protection during the first part of the year pending the resumption of boring operations, which was arranged to be done by the Diamond Drilling Company. The boreholes are to be put down a distance of 1,250 ft. for the purpose of locating the reefs which traverse the Waihi Company's property, and from which splendid returns are being obtained. Some four boreholes have previously been commenced; but there was always something breaking, or the hole filling in after a few hundred feet had been drilled. These mishaps prevented the holes from being bored down the depth where it was expected gold-bearing country would be met with; therefore they did not prove what they were intended to do, nor yet give satisfaction to the shareholders. In the month of September the Diamond Drilling Company resumed boring what is termed No. 5 borehole, and this hole reached a depth of 1,225 ft. when the Consols Company stopped it, although it was arranged to bore it to a depth of 1,250 ft.; the reason for doing this was that the cores obtained near the bottom were considered not to be of a favourable description for gold. The shareholders then decided to locate a borehole to the south of the one just finished; and it is intended to put this hole down 1,250 ft. at an angle of 1 in 7, which is considered will be more likely to penetrate the country favourable for gold. From seven to nine men were employed on the boring operations during the latter part of the year.

*Waihi South Company.*—This property adjoins the Waihi Consols ground, and has been closed down for a considerable period, no work having been done on it during the year. The company have decided to prospect the property by boring, and have been awaiting the opportunity of getting the Diamond Drilling Company to do the work. This, I am informed, has been arranged for, and a commencement made to put the hole down to a depth of 1,000 ft.

*Waihi Consolidated Gold-mining Company (Limited).*—In the early part of the year a contract was let to the Diamond Drilling Company, who undertook to put down a borehole on a site selected to a depth of 1,200 ft., but after spending a considerable amount of time and money in trying to drill through the boulder formation (which evidently extends downwards to a great depth in this locality) and meeting with continuous obstacles until a depth of 600 ft. was attained, the drilling company decided to surrender their contract, and made arrangements with the owners of the claim to be allowed to remove their drilling plant. A surface-prospecting drive was then started to the north-east of the main shaft, on a piece of rising ground, which was driven a distance of 132 ft., but the country not being of a favourable description for gold, it was stopped and an application made to the Warden for six months' protection, which was granted, to enable the owners to place the property on the London market and thereby raise sufficient capital to develop the mine. Seven men were employed for a time.

*Pride of Waihi.*—There has been little or no work done on this property during the year. It was fully expected that as soon as the Waihi Extended Company effected communication with the Grand Junction workings driving would be commenced at the 500 ft. level for the purpose of extending a crosscut to tap the water in the Pride of Waihi ground; but as the Waihi Extended Company are at present sinking their shaft, they are unable to allow the commencement of this drive until their work is completed. The company have applied for protection to give time to enable the raising of sufficient capital to erect a plant and sink in their own ground.

*Waihi Beach United Gold-mining Company.*—The principal work carried on in this mine during the year was confined to sinking the shaft, which was done by hand-power until a depth of 100 ft. was attained, when the company decided to erect a 14-horse-power Tangye engine and boiler. These have been placed in position, and will enable the sinking of the shaft to be pushed on more expeditiously. The shaft is 12 ft. by 4 ft., and is to be sunk to a depth of 150 ft. before the first level is opened out, where the reef will be intersected in 130 ft. of driving. The reef is 4 ft. wide at the outcrop on the coast-line, and the quartz treated from here at various times is said to have given good payable values; therefore the shareholders are sanguine the mine will prove, when the ore is operated on, to be a payable concern. An average of six men employed.

*Ohinemuri River Syndicate.*—The result of the work done in 1903 having proved unsatisfactory, the proprietors decided that it was necessary to possess a more effectual method of grinding their ore material, which consists of quartz tailings deposited in the Ohinemuri River. With this object they erected in the early part of the year (1904) a small tube or flint mill. A second-hand rotary roasting-furnace was purchased and four sections of it (of a total length of 13 ft. 6 in.) converted by themselves into a mill, which has proved by subsequent work a most efficient grinding-machine, the product—amounting to 100 tons per week—being so finely ground that from 90 to 95 per cent. would pass through a 200-mesh sieve, the bulk of it practically slimed. A serious difficulty arose in the treatment of this exceedingly fine material in the cyaniding-tanks, perfect agitation being necessary to effect a high extraction of bullion. Several months were spent in experimenting to devise the best method of doing this and finally, after considerable work, trouble, and expense, a system was evolved which the proprietors are satisfied is superior to any other up to the present. The tanks used by the syndicate are the invention of the proprietors, and further patent-rights with the agitation process in connection have been applied for in New Zealand, Australia, United States of America, Mexico, and Transvaal. Two thousand tons of tailings has been treated by the improved process, and the extraction of bullion has been highly satisfactory. It is now proposed to increase the capacity of the present plant on the syndicate's Waihi claims to 50 tons per diem, and to erect another and larger plant capable of dealing with 100 tons on its Paeroa claims. The whole of this work will, it is hoped, be completed and in full work before the end of the year 1905. Ten men were employed during the year.

There are also a number of leases held in the vicinity of Waihi which occupy a very large area of ground on which little or no work is being done.