total average number of stamps running was 294·9 out of 330 stamps. The total average duty per stamp per diem was 5·013 tons. The average value per ton of ore treated amounted to £2 0s. 5½d., and the average cost, including mining, treatment, and general expenses, was 15s. 2¼d. per ton. The Horahora hydro-electric scheme is progressing satisfactorily. The hydraulic plant will consist of six Jens Orten Boving turbines of 1,500-horse power capacity, driven under a head of 24 ft. The electric current, generated at 5,000 volts, will be stepped up to 50,000 volts, at which pressure it will be transmitted to Waikino and Waihi over a line of six wires, forty-eight miles in length. At the mine it is proposed to apply electric power to the new supplementary pumping plant for sinking purposes, the air-compressors, workshops, and subsidiary surface machinery, and, at the start, to one winding-engine, to be probably followed by its application to the winding plants.

The Waihi Grand Junction Gold-mining Company (Limited) increased their gold-yield from £99,839 in 1909, to £132,295 in 1910, as the result of treating 84,226 tons (of 2,000 lb). During the year development on an extensive scale was carried out, no less than 13,092 ft. of levels, crosscuts, shafts, uprises, and winzes having been formed. In January, 1911, I inspected this mine, and found the following developments: At the No. 5 (944 ft.) level some promising ore-bodies had been exposed. On the Martha lode east, at about 1,160 ft. from the north crosscut, a short crosscut towards the Empire lode proved a new vein exceeding 14 ft. in width carrying payable ore. The Mary lode, previously found in the No. 3 (300 ft.) level, has again been proved at No. 5 level by a crosscut about 100 ft. in length driven from the Martha at a point 700 ft. north-east of the main shaft. This lode, 7 ft. in width, has been driven upon for a considerable distance, and shows mineralized but somewhat patchy ore. An extensive block of unworked ore exists between the 944 ft. and 300 ft. levels. Upon the Royal lode, No. 5 level, at about 800 ft. east of the crosscut, a considerable length of payable ore, averaging 15 ft. in width, has been prepared for stoping. On the west of the crosscut, towards the Waihi Company's boundary, stoping is in progress from both Nos. 4 and 5 levels. The average value of the ore treated amounted to £1 11s. 5d., the average cost, including mining, treatment, and general expenses, being only 15s. 3d. per ton. Additions to the mine-equipment and mills included an Ingersoll Rand steam-driven compressor, a Sirocco fan of 40,000 cubic feet capacity, together with several small electrically driven fans and two additional tube mills.

The Waihi Extended Gold-mining Company (Limited): Development during 1910 was confined to opening up the No. 5 (or 960 ft.) level, together with sinking the shaft to the No. 6 (or 1,100 ft.) level. At the No. 5 level a strong body of low-grade quartz was proved by a crosscut.

The Waihi Reefs Consolidated (Limited): A four-compartment winding and pumping shaft has been sunk to a total depth of 736 ft., at a distance of about 30 chains eastward of the Grand Junction Company's nearest underground workings, upon the Martha and branching lodes. This shaft is on the line of the main lodes, if these are continuous upon their average course. At a depth of 700 ft. promising mineralized andesite was entered. It is proposed to continue this shaft until 1,000 ft. has been attained, after which north and south prospecting-crosscuts will be driven in search of the Waihi lodes. The company have put down a suitable plant, consisting of steam-hoist, Cornish ram-pump, air-compressors, &c. The above operations, if successful, will give a considerable impetus to this goldfield by locating the main lodes considerably to the eastward of their present proved position in the principal Waihi mines.

The Romulus Syndicate are engaged testing their property, about half a mile eastward of the Reefs Consolidated shaft, by inclined diamond-drill holes. The country hitherto pierced consists of somewhat loose and decomposed volcanic rock, difficult to penetrate and core. It is therefore doubtful if the depth necessary to test the ground will be attained by diamond-drilling.

The Waihi-Paeroa Extraction Company (Limited) was formed in 1908 for the purpose of extracting gold and silver from the slimes and sand deposited as tailings in the River Ohinemuri by the Waihi and Karangahake Mines. During eighteen months prior to the 31st March, 1910, this company, from their treatment plant established near the Waihi dam, obtained bullion to the value of £14,000 from 32,000 tons of tailings treated, being an extraction of 8s. 7d. per ton. The residue contained bullion averaging in value, if completely extracted, 4s. per ton, the working-cost and renewals amounting to about 5s. per ton. No doubt the high value of the tailings treated must be attributed, to a certain extent, to natural concentration after deposition in the river, also to the fact that in the earlier days of mining the present methods of extraction were not employed, hence the loss of bullion in the tailings. The plant is now in course of removal and re-erection much lower down the river. The capacity of the Union vanners, tube mills, pneumatic tanks, and vacuum filters now being installed is 500 tons per day. It is proposed to elevate the sand by air-lift dredger into barges of 80 tons (of sand) estimated capacity per hour.

Karangahake Goldfield.—The Talisman Consolidated (Limited) has improved its annual bullion-production, the output for 1910 amounting in value to £210,264 from 45,020 tons treated, against £208,886 from 46,456 tons during the previous year, showing thereby an increase in average yield per ton as well as in value. Dividends amounting to £94,374 were declared during 1910. The above returns would have been even more satisfactory had not development been retarded by water troubles in the deeper areas of the mine, also owing to the destruction by fire in September of the Woodstock air-compressors, which caused temporary loss of power. The chief development has been carried out at levels Nos. 12 and 13, the latter being 550 ft. below the drainage level to the Waitawheta Gorge. Winzes sunk 80 ft. below the No. 13 level have proved the Bonanza shoot to extend considerably in length, which shoot has supplied the bulk of the high-grade ore obtained at this mine. At No. 13 level the south drive has been put in 1,530 ft. from the shaft, and while in progress towards the Dubbo shoot a new ore-body, in width from 3 ft. to 9 ft. and of high value, was proved for a length of 300 ft., and