the Woodstock lode at the lowest obtainable level. It is now in 257 ft., and the lode in question should be met with in another 163 ft. of driving. In the Ivanhoe section of the mine the kiln tram-line has been carried along through the gorge on the right-hand bank of the Waitawheta River for a distance of 500 ft. This involved 398 ft. of tunnelling and 102 ft. of scarfing. The northern continuation of the Maria and Woodstock lodes has been intersected, and driving northwards upon both ore-bodies is now in progress. The following is the average number of men employed during the year: Mine, fifty-six contractors, fifty-four wages-men; mill, twenty contractors, four wages-men: total, 134 men. Regarding the difficuty of minimising the dust nuisance so prevalent in all dry-crushing plants, we have succeeded in overcoming it, so far as the battery is concerned, by the application of an exhaust fan, which is connected with the mortar-box screens by means of a series of pipes, and we are arranging for the removal of the dust arising from the stone-breakers by adjusting thereto somewhat similar appliances. From the dust-bins to the percolating-vats the reduced ore is being conveyed automatically by a system of revolving conveyors with a spiral screw inside, and the whole concern is working splendidly.

New Zealand Talisman Mine (Area, 60 acres).—This mine is situated at Karangahake, and adjoins the Crown and Woodstock properties. The land is favourable for carrying on mining operations, the present adit-level being 700 ft. above the level of the Waitawheta Stream. The principal workings are at No. 6, or adit-level, and Nos. 5 and 4, the levels being each 100 ft. apart. A considerable amount of work was done in driving at the different levels and stoping portions of the reef. The mill, which comprised ten stamps and a complete cyanide plant, was not used to any great extent, it being found that the number of percolating-vats was insufficient, and that a great deal of time was lost in treating the crushed quartz by the cyanide process. From April to September, 1896, 285 tons of quartz was crushed, 280 tons being treated by cyanide, for a yield of 1,429 oz. 5 dwt., and 5 tons by amalgamation, for 5 oz. 14 dwt. The whole of the tailings from the 280 tons were, after the cyanide treatment, run over amalgamation-tables, and yielded 55 oz. 18 dwt. of gold. The value of bullion recovered by cyanide was 19s. 10d. per oz., and by amalgamation £1 10s. 4¾d. The average value of the ore before treatment was £5 17s. 6d. per ton. Thirty men were employed at the mine and nineteen at the battery and buildings. On the completion of the treatment of the quartz as above the company decided to erect a more extensive and suitable plant. The following account by Mr. W. A. Mercer gives full particulars of the mine and new works carried on during the year:—

The property of the New Zealand Talisman Gold-mining Company (Limited) is situated at Karangahake, in the Ohinemuri district, and comprises the licensed holdings known as the Talisman and Bonanza respectively, each having an area of 30 acres; also a machine-site, 1 acre in extent, on the right bank of the Waitawheta River, and a special site of the same area at the junction of the Ohinemuri and Waitawheta Rivers. On the taking-over of the property by the English company on the 15th June, 1896, the Talisman and Bonanza Licensed Holdings were converted into a special claim of 60 acres. The capital of the new company is £150,000, in shares of £1 each, the working capital being £25,000. The company constitutes the first subsidiary undertaking of the London and New Zealand Exploration Company (Limited), the general management being in the hands of Messrs. Bewick, Moreing, and Co., mining engineers, of London, represented in the colony by Mr. William A. Mercer, with whom is associated Mr. Alfred H. Curtis, another representative of the firm, these two gentlemen being also the attorneys of the company in New Zealand. Prior to the acquisition of the property by the English company some 280 tons of Talisman ore treated at the Crown Gold-mining Company's battery yielded £2,770; and subsequently 285 tons of ore treated at the company's own ten-stamp mill yielded £5 7s. 6d. per ton. Under the new direction the mine has been systematically and rapidly developed, the principal workings consisting of six adits driven at intervals of about 100 ft. below each other (for the purpose of intersecting the main reef), and of extensive drives along the reef in northerly and southerly directions. The width of the reef has varied in these workings up to as much as 8 ft., the average size being probably from 3½ ft. to 4 ft. The exploratory work has proved the existence of at least two shoots of very rich ore in the main reef, which strikes into the Talisman section of the property from that of the Woodstock Gold-mining Company (Limited). On taking over the property the engineers in New Zealand were confronted with numerous difficulties in the matter of the reconstruction and enlargement of the reduction-works, owing to the want of a battery-site of sufficient area to allow of the whole of the plant being erected under one roof. This difficulty was overcome by the construction of a Howe truss bridge across the Waitawheta River for the purpose of connecting the machine-site proper with the special site. On the former area there is ample accommodation for the erection of crushing appliances, as well as for a small number of cyanide-vats; but the bulk of the cyaniding will be effected on the works at the special site.

The following is an outline of the process adopted for the treatment of the Talisman ore: The ore is conveyed from the mine by aërial tramway, and delivered into the kiln formerly used for drying the ore and now utilised as a storage-hopper. From the kiln the ore passes over a grizzly to a rock-breaker of reciprocatory jaw type, falling thence into a hopper from which it is automatically fed into a revolving ore-drier (a conical cast-iron cylinder 24 ft. in length, 34 in. in diameter at the small end, and 50 in. at the larger, erected with axis horizontal), through which the ore gradually travels towards a storage-hopper lined with sheet iron immediately over the stamper-boxes. The capacity of the drier is from 40 to 50 tons per twenty-four hours, according to the amount of moisture in the ore. The use of this contrivance is a new departure in New Zealand, and is expected to effect a considerable saving in fuel, to obviate loss of cyanide caused by the presence of pieces of charcoal and partially-carbonised wood in ore dried by the kiln process, and to prevent the fusion of fine particles of gold into globules on which cyanide solution cannot effectually act. The pulverising plant consists of ten heads of 850 lb. stamps with single-discharge mortars (these stamps forming part of the mill as originally erected by the old company and ten heads of 1,000 lb. stamps