

on which the future prospects of this mine depend, is driving No. 7 level to the north boundary, with the object of proving and undercutting the upper-level ore-bodies. Timbering is securely carried out, and ventilation is good. Ropes, cages, and safety appliances are in good order. Reports are daily kept.

United Italy.—Work has ceased.

BOATMAN'S.

Welcome.—At the commencement of the year raising was done from No. 5 Welcome; but attention was afterwards directed to Specimen Hill, and the low-level tunnel was repaired for the first 1,600 ft. This tunnel was driven south 937 ft. towards the Welcome to pick up the old company's line of reef.

Just in Time.—A hoisting-engine was installed, the poppet-legs strengthened, and the shaft unwatered. At the 200 ft. level a steam-pump was placed, and the shaft sunk a further depth of 200 ft. Since sinking was completed driving was started to try and intersect the stone worked by the old Imperial and Reform Companies. Before carrying out these works it was necessary to divert the creek's course to prevent flood-water cutting into the tip-head, which is in close proximity to the shaft-timber. There was no crushing done on these properties during the year.

REEFTON.

Golden Fleece Group: Low-level Tunnel.—(13/3/1900): Operations on this property are confined to the low level. The reef struck in April last encouraged development-work to be vigorously pushed forward, with the result that 2,393 ft. of driving, 1,069 ft. of crosscutting, and 350 ft. of rising have been done. In order to develop and mine the stone from the reef referred to, a main shaft 13 ft. 2 in. by 6 ft. 6 in., comprising two winding, one ladder and pipe compartments, has been started from the low level, and raised a vertical height of 310 ft., which, when connected with No. 6 Golden Fleece, will attain a vertical height of 460 ft. At point of intersection a Ledgerwood double-gear drum-engine hoist, actuated by compressed air, will be stationed. For crushing purposes a steam-driven twenty-five-stamp mill is in course of construction. The engine is of the compound undertype pattern, by Robey and Co., Lincoln. Alongside the mill engine will stand a duplex Rand drill-compressor for ten drills, also another one of five-drills capacity, giving the equivalent of fifteen drills for all purposes. Steam will be generated by two Fraser and Chalmers 60 in. by 16 ft. multitubular exterior-fired boilers, and one locomotive-type boiler by Robey and Co. The battery is of the same pattern as the Progress Mines. Concentration will be performed by Wilfley tables, after which the material will be cyanided. The battery is situate about 27 chains from the mouth of tunnel on the opposite side of Murray Creek, connecting which is a tramway crossing a bridge about 66 ft. in height.

Wealth of Nations Group.—(13/3/1900): The principal work in the mine has been confined to opening out the 600 ft. level, sinking the shaft to the 700 ft., and opening out the same level, besides making the necessary winze and rise connections from the 500 ft. level down to the 700 ft. level—in all, 1,450 ft. of raising and 159 ft. winze-sinking; and the incline shaft has been sunk 103 ft. Practically the quartz milled was almost exclusively mined from developments. The work now engaging attention is sinking the shaft to the 800 ft., driving north on stone in the 700 ft., and south on the same level. Quartz milled during the year shows a gold yield of 930 oz. 2 dwt. 3 gr., valued at £3,760 16s. 11d., or 8 dwt. per ton. An experimental cyanide plant on a working-scale has been erected, in which 292 tons of tailings treated yielded 49 oz. 15 dwt. of bullion, valued at £184 5s. 8d. The results of these experiments prove the material to be somewhat refractory, causing a large consumption of cyanide, against a fair gold-extraction, but the gold in solution readily precipitates. The various works in connection with the mine are safe and in good order. Ventilation sufficient, and reports kept up to date.

Progress Mines of New Zealand (Limited).—(16/3/1900): The aggregate driving on line of reef was 2,200 ft., crosscutting 1,049 ft., raising and sinking 996 ft., besides the main shaft was sunk from No. 7 to No. 9 level, a vertical distance of 200 ft., which makes No. 9 a total depth of 1,116 ft. below the brace. Developments were carried on in a general way all over the mine, particularly in the eastern district, where a considerable amount of driving and crosscutting have been done on Nos. 1 and 3 levels, with the object of intersecting the north and south block, which was first discovered in No. 4 level. On this level raising and sinking have proved the stone to be of large dimensions. No. 7 is being extended east by rock-drills in view of striking the stone referred to. Nos. 8 and 9 levels have both been driven extensively, and stoping is proceeding generally from No. 9 up to No. 4 by hand-labour, with the exception of No. 4, where the large ore-body affords facilities to stope with machines. With regard to the hoisting and compressor plant, there were no alterations of importance made, the only addition being a heater for hot-water feed. The quartz output, conveyed by aerial tramway and crushed, was 44,172 tons. The crushing plant was increased by twenty-five stamps of equal capacity to the original forty, and since the last week of February the whole sixty-five-stamp range has been working steadily, extra driving-power being maintained by the adoption of a double nozzle acting on the same 6 ft. diameter Pelton. Practically the old mill has ceased work, and the gross quartz tonnage treated from both mills was 43,432 tons during the year, yielding 19,312 oz. 18 dwt. 1 gr., the cash value of which was £80,295 19s. 5d. During the same period the chlorination-works treated 887 tons of sulphurets, producing 2,579 oz. 11 dwt. 17 gr. of gold, valued at £10,782 6s. 3d. In view of treating the old accumulated tailings, a cyanide plant, comprising six treatment-tanks 25 ft. diameter by 7 ft. in depth, and three sumps 25 ft. diameter by 6 ft. in depth, are being built in wood. The solution to the treatment-tanks will be raised by a 4 in. diameter centrifugal Tangye pump. The sands will be elevated by a "blow-up" into a launder, which will convey them to three Wilfley concentrators, after passing over which they gravitate into the tanks for treatment, and discharge finally into the main tail-race.