

milling only such ore as came from development work. As little or no work has been done outside of known ore-bodies, the amount of dead-work required to develop the present ore reserve is greater in proportion to the tonnage developed than may be reasonably expected in the future. The nature of the ore occurrence will always entail a large amount of development, but with the property properly opened up, as it will be before the new mill is in operation, this need seldom interfere with ore extraction. The new shaft (shaft B) now being sunk has three compartments, two $4\frac{1}{2}$ ft. by 4 ft. for hoisting, the third for ladders and piping. It is timbered in square sets, and will cut the vein on its dip at a depth of about 1,200 ft. Through this shaft it is intended to extract all ore-bodies below 500 ft. in depth, and, as it is already down 625 ft., and progressing at the rate of about 20 ft. to 25 ft. per week, the systematic opening of the mine is assured before the new forty-stamp mill is ready to crush. The following work has been done since February, 1896: Drifting on vein, 1,911 ft.; raised or sunk on vein, 804 ft.; cross-cutting, 1,016 ft.; shaft-sinking (B), 625 ft.; surface tunnel, 200 ft.; reopening old levels and shafts, 1,450 ft.: total, 6,006 ft. Station cut, 26 ft. by 13 ft. by 10 ft. The following surface-work has been done: Road-construction to shaft B, half-mile; water-race construction to new mill, two miles and a half; water-race construction to shaft B, three-quarters of a mile; grading for shaft-house, hoisting engine, &c.; grading for new mill; clearing line of aerial tramway; construction of miners' boarding and living houses; grading for sawmill plant at mine.

Work in the mine has developed a satisfactory showing of ore. The tonnage developed above No. 6 level is 50,000 tons, as against 23,000 tons reported on the 28th September, 1896. The completion of the shaft and opening of the level 100 ft. below No. 6 should add 30,000 tons to this reserve, and will provide over two years' supply at 120 tons per day. All the machinery necessary for the complete equipment of this property has been ordered; some of it has already arrived in New Zealand, and the remainder should reach here shortly. The grading and the foundation walls for the mill are nearly completed. Most of the lumber for the structure is on the ground, and the work of framing and erecting will begin at once. Two miles and a half (including the most difficult section) of the race for the supply of water-power to the mill is practically finished, two miles further has been benched, and there are a hundred and fifty men on the work to push the completion of the total $10\frac{1}{2}$ miles. The heavy grading for the hoisting-works at shaft B is nearly at an end, and the foundations for the new engine and boilers are about to be built in. Nothing but severe weather preventing outdoor work on the water-race should delay starting regular operations beyond the beginning of the coming year.

Wealth of Nations Group.—This group is situated two miles and a half in a southerly direction from the Town of Reefton; it adjoins the Inangahua Tunnel group on the south and the Keep It Dark Mine on the north. The group is composed of the following claims: Southern portions of Gladstone, Beaconsfield, and Undaunted, 130 acres; Energetic, 23 acres 1 rood 38 perches; Wealth of Nations, 63 acres 1 rood 13 perches: total, 216 acres 3 roods 11 perches.

Through the slates which form the country-rock there runs a mineralised belt in which irregularly-shaped bodies of free gold ore occurs. This belt runs about 15° west of north, and has an average dip of 70° to the west. The ore-bodies vary in size up to 180 ft. in length and 20 ft. in width. On the surface there were three parallel ore-bodies in the Wealth of Nations, worked to a depth of 700 ft. through surface tunnels. One of these ore-shoots struck into the Energetic, and formed the ore-body on which that mine worked until 1895, the output being 65,763 tons; value, £131,703. The other ore-bodies were worked to a depth of 450 ft. in the Wealth of Nations, but there appears to be a barren zone about 300 ft. in depth making horizontally along the strike of the ore-belt in which little of value has ever been found. This extended through the Energetic, Wealth of Nations, and in a somewhat lesser degree through the Keep It Dark Mine to the south. Below this zone ore was again encountered on the 200 ft. level, Wealth of Nations, and carried down continuously to the lowest workings. The mine below the battery level has been worked through two underground shafts, ropes being brought 750 ft. through a cross-cut to No. 1 shaft, thence down to the 200 ft. level, and 600 ft. along that level to No. 2 shaft. Power furnished by an over-shot water-wheel. The limited amount of work such a system could perform has directed all efforts towards an installation which would permit the opening-up of the Energetic ground from the lower levels of the Wealth. Connection has been made with the lowest Energetic workings, and an incline-shaft is being sunk to hoist ore and waste to the battery level. Since taken over the following work has been done: Drifting on vein, 1,182 ft.; cross-cutting, 247 ft.; sunk, 499 ft.; old drifts, air-shafts, and winzes reopened and retimbered, 1,840 ft.: total, 3,768 ft. The water-race, furnishing water and power for milling and hoisting, has been enlarged for a distance of four miles. As both the Keep It Dark and Wealth of Nations ore-bodies have been picked up below the barren zone it is reasonable to expect a like result with the Energetic; hence every effort is being made toward pushing development in this direction. All hoisting and milling is done by water-power, and the twenty-stamp mill is in sufficiently good order to treat the ore-bodies now developed. When the Energetic ore-shoot is picked up some remodelling will be necessary.

Inangahua Tunnel Group.—Work has been continued in this group. The tunnel has been advanced at the rate of 146 ft. per month since starting (18th September, 1896), and ore has continued to be developed in the ground towards which the tunnel is being driven. No further attempt has been made to open the old Golden Fleece workings, as it is the intention to exploit this ground from below. The winze being sunk from the lowest workings of the Golden Fleece for the purpose of tracing down the vein to the level of the tunnel 600 ft. below was started on the extreme end of the low-grade body of ore developed in this mine. It is now at a depth of 145 ft., and has carried more continuous ore than could have been expected from its position. It is a promising indication of what should be found below. In the tunnel the last 650 ft. driven has been in likely-looking slate; three stringers of quartz have been cut, two of which are worthy of further investigation. The face of the tunnel is in 3,989 ft., and the point at which the zone carrying the gold-bearing