

but since the completion of the aerial tramway this operation is easily performed. The mine is under the management of Mr. Thomas Crabbe, of Reefton. The present mine adit of No. 1 level is near to and 260 ft. below the Croesus Knob. The sideling into which it is driven slopes steeply down the Ten-mile Creek watershed, and is striated with a series of reefs, running north and south, parallel with the Croesus stone. Seven of these, varying from 2 ft. to 12 ft. in thickness, have been discovered within 400 ft. westerly from the Croesus lode, and at from 40 ft. to 250 ft. less altitude. All are as yet unexplored, but will shortly be cut and tested when lower-level tunnels are driven into the hill by the company. From the present tunnel the stone is sent down a shoot to the mine-bin 70 ft. below, whence it is run on a short tramway to the receiving-bin at the upper terminal, where it is automatically filled into the travelling buckets of the aerial tramway. From the upper terminal the aerial tramway rises for nearly 200 ft. to the crest of the mountain, whence it descends for 2,300 ft. to the machine-site, the average gradient being 1 in 3, and the distance between terminals one mile and a half. The upper-terminal wheel, round which the rope passes, and which has to sustain the 8-ton pull, resulting from the rope and its loads, is 10 ft. in diameter, secured in a strong frame anchored into the ground, and provided with powerful lever and screw brakes. Over it a large shelter-shed is erected. The aerial tramway is on the single-rope system, the travelling buckets being clamped to the rope, which is supported at intervals throughout its circuit on trestles bearing cradle-bars, or tumblers, each of which carries a pair of pulleys. The lower trestles within the forest's limits are of usual timber design, furnished with one tumbler for each rope. On and some distance below the summit, where the strains to be borne are great, specially designed trestles carrying from four to eight tumblers are required, and these are constructed of steel, well secured to the rock foundations.

"Owing to the great cost of carriage, due to all material used in the construction of the upper trestles and terminals having to be carried on human shoulders over a bad track for a climb of 2,500 ft., steel construction was actually cheaper than timber-work. For similar reasons the engineer had to solve difficult problems in designing trestles and terminal machinery of great strength, but all built up of small sections which men could carry up the mountains. The greatest strength with lightness being essential for the tramway steel rope, it was specially manufactured for the company by Messrs. Craddock and Co. The lower terminal is within the company's machine-site on the south branch of the Blackball Creek, situated half a mile above the Roaring Meg Sluicing Company's claim, and connected with it by an extension of the county bridle-track. The quartz brought down by the aerial tramway is automatically discharged into a large bin, from which a shoot leads to the battery-bins. The mine and machine-site bins give ample storage-capacity at both ends of the tramway, which is capable of carrying 30 tons of stone in eight hours, a quantity much in excess of present requirements.

"The battery, as now erected, has ten head of 850 lb. stamps. It is well housed in a building designed to accommodate an additional ten head of stampers, together with all necessary ore-breakers, feeders, concentrators, &c., whenever required. It is estimated that the stone available in mine-level No. 1 will afford more than three years' steady work for the present battery. Ample motive-power and water-supply is obtained from the creek by means of the company's race and pipe-line. This also serves to run the sawmill erected close to the lower terminal, which has already cut the timber used in the works constructed. Timber rights over 200 acres of forest adjacent to the machine-site have been secured by the company, ensuring an abundant supply of timber for mining and mill purposes.

"All the machinery and gearing for the mill and tramway has been made by the Dispatch Foundry Company, Greymouth, from the drawings of Mr. H. W. Young, the company's engineer, who located and designed the whole of the works, which were carried out under his charge. Mr. John McGregor executed the battery-erection, and also supervised all construction-work, while Mr. Raithby, late of Reefton, is installed as battery-manager. Mr. John Fitzgerald, contractor for the execution of the aerial tramway, battery premises, and all other works, has admirably carried out his contract in the face of many difficulties. He and his men have shown great pluck and endurance, the natural difficulties of mountain-work with which they had to contend being multiplied and increased by unusually bad weather."

*Comstock Mine* (Area, 100 acres; owners, Joseph Jay and others).—Work on this section has been confined to surface-prospecting during the year without satisfactory results. Several large outcrops of quartz occur within the claim, but the ore is not of value to warrant further development. The ground will probably be abandoned.

*Taffy Mine* (Area, 100 acres; owner, Taffy Gold-mining Company, Limited).—Work on this section during the year has consisted chiefly of surface-prospecting. Several gold-bearing leaders exist, but the country rock is broken, and short tunnels which have been driven indicate that the shattered condition of the country continues for a distance of at least 100 ft. into the hill. 30 oz. of gold was obtained by hand-crushing, and it is evident that a considerable quantity of payable ore exists, and probably a five-stamp battery will be erected for the purpose of treating the ore. This, however, will depend on the result of present prospecting-work.

#### *Langdon's District.*

*Julian and Victory Mine* (Area, 47 acres and 28 perches).—During the year a mutual agreement between the Julian Gold-mining Company and the Victory Gold-mining Company was arrived at, and an amalgamation of the two properties under the title of the Julian Gold-mining Company was confirmed. Mr. Charles Curtis, late partner in the Victory, is now mine-manager. Since the amalgamation of the properties a prospecting-tunnel on the west of the Victory line of reef has been driven 260 ft., also 7 chains of tramway have been built, and 260 ft. of shoot to connect the Julian reef with the Victory low-level tunnel, this work being necessary to convey the ore across the Victory ground, and to connect the Julian section of the property with the battery incline. Nine men were employed. The two mines crushed for the year 187 tons 10 cwt. of quartz, for a yield of 212 oz. 18 dwt. 7 gr. of gold, valued at £830 7s.