

bridge-approach. Thus a direct line of conveyance was maintained through the old mine to the shoots. Plant and working-places are in good order, and the provisions of the Act are strictly enforced. At the end of September last the company suspended operations, and on the 28th January, 1900, a fire (the result of spontaneous ignition) was discovered in the old mine. Exploring parties having ascertained the extent and locality of the burning, it was ultimately decided to seal down the mine by means of clay-puddled dams.

*Millerton Colliery* (owners, Westport Coal Company, Limited).—(25/9/99): During the year operations at this colliery have been marked by a satisfactory degree of success. As a coal-producer this mine is comparatively in its infancy, yet so complete are the arrangements indispensable to a successful issue that the increase of output against the preceding year—38,148 tons—may be considered highly creditable. Practically the year's output was produced from the dip-workings east of the main haulage-road, of which four-fifths is won mechanically, the undercutting being done by percussive pick-machines actuated by compressed air. Power is generated by two steam-driven Leyner compound air-compressors, the installation being sufficiently productive to likewise drive the underground pumps and haulage machinery. The compressed-air system at this colliery gives satisfaction, and its applicability to mining operations generally is a proven fact. In the world's mining compressed air is a much-abused motive-power, it being little understood; and at the present day, if correctly installed, its beneficial uses and adaptability to general mining can scarcely be estimated. Developments have chiefly been directed towards more creek area, and the permanent heading, which has been vigorously pushed forward, has pierced the coal-seam at a distance of 40 chains westward from the present main haulage. Consequently, further developments in opening out said area will be of an extensive character during the ensuing year. As the permanent plant required to work this large area will be independent from the other sections of the colliery, a suitable site is selected near the mine-mouth, where all foundations are already cut in the solid rock formation. Steam will be supplied from Babcock and Wilcox boilers, and additional Leyner's compound compressors, which are on hand, will shortly be placed in position; also a large Schiele fan will soon be at work at this site, and when operative will ventilate effectively the whole mine. With respect to safety, every care is taken to minimise risks to all workmen, both at underground and surface work. Blasting operations have of late been a subject that has directed the attention of the management with regard to safety, and, in order to secure the most reliable explosives under the permitted list, contracts have been entered into for continuous supplies from the best makers. In the production of the output the quantity of compressed powder used against the coal won was in the ratio of 227·8 lb. of powder against every 1,000 tons of coal, or 1 lb. of powder to 4·5 tons of coal. Reports and other provisions of the Act are strictly kept. No accidents reported. Air-measurement, 16,500 ft. per minute. Four inspections made.

The following report by Mr. Jonathan Dixon, manager at Granity Creek, will be of interest: "The exploitation by the Westport Coal Company (Limited) of the Millerton portion of their extensive coal-mining lease has maintained its standard during the past year. The Millerton Mine is only in an incipient stage, yet the progressive development is of an advanced kind. To those conversant with the time required to equip in detail a modern coal-mine, to deal economically, effectively, and beneficially with the winning of the mineral, likewise in the case of the mine under review, credit will be given for the position at present held in the colony's coal trade by the Millerton Colliery. During the past twelve months of the brief period since the mine became coal-producing operations have been marked by an extended development of the dip areas, wherefrom has been won nearly the whole of said year's output. These dips have a varying grade, but it may be assumed to average 1 in 5 or 6. The coal is hauled by a system of direct haulage from various suitable landings by engines set at the dip-tops. The motive-power is compressed air. The requisite compression of air is generated by Leyner's compound air-compressors suitably placed near mine-entrance. These compressors likewise supply the motive-power for the percussive-pick machines, and similarly the pumps used for mine-drainage. In connection with this mine an extensive portion of the lease is being developed at Mine Creek. The main heading, approximating 50 chains in length, has been driven into said area, and, the coal being of the best quality, a satisfactory yield can be contemplated from this field. This heading branches off the main rope road in the mine, and for some 20 chains has a rising grade of 1 in 2·5; the succeeding 12 chains rises 1 in 5·75, thence dipping towards creek-bed at an average grade of 1 in 6. The traction from this field will be by the endless-rope system, the gravity of the 'full load' being the power used to 'travel' the rope. The speed of ropes, &c., will be controlled by a surging-drum horizontally placed, of requisite size and power to efficiently meet all demands. The installing of these mechanical appliances, together with the necessary detail, is being expedited with all despatch. The surface arrangements necessary to the effective working of this field are being erected. A spacious boiler-house, also air-compressing plant house are erected. The former will contain three Babcock and Wilcox boilers of 86-horse power each, with requisite feed-water heaters, &c., and the air-compressing plant, when installation finally completed, will consist of six compound air-compressors of the type now in use. One boiler is set, another on the ground ready for erection; some of the compressors are likewise in position. A 10 ft. Schich exhaust fan and engine will be set in proximity to fore-mentioned plant, and will be connected with return airway of an area not less than 100 square feet. With this fan in operation the ventilation of the whole mine should be adequately and effectively effected. A large concrete dam is being placed across Mine Creek in a suitable position, and will have a capacity of at least half a million gallons. The water thus stored is for supplying boilers, likewise the cooling-chambers in air-compressors. It will be readily noted that the coal will be won mechanically from this area, as it is principally in the rest of the mine, also that the motive-power will be compressed air. The position of this mine after due development is undoubtedly in the van of the New Zealand coal trade."