

conditions and colliery-equipment is strictly observed, and all material is kept in good order and condition.

East Dip section: Pillar-extraction was successfully carried out to the close of the year, when it was considered advisable in the best interests of the property to suspend operations in this direction in view of protecting the main haulage-road leading to Mine Creek district, as further pillar-working would entail danger to this important road. Meanwhile this district is efficiently sealed off with brick stoppings, fitted with locked man-doors at suitable centres, while a strong concrete dam is built in the drainage-adit to raise the mine-water over the exhausted ground.

Mine Creek section: Since this extensive section of the property was opened in 1900 the principal developments advanced comprise the main south heading, or extension of the main haulage-line, which is driven a distance of 31 chains from the present terminal; the east crosscut, 32 chains; and the west heading, 16 chains. These united drivings have opened out an unbroken face-line, extending over 84 chains of hard and excellent coal. To further effect a more approved and efficient system, and to provide against the possibilities of spontaneous ignition and "creep" during the removal of pillars, the panel system now adopted provides precautions by which the various districts are separated by solid parallel barriers, and can be easily cut off without incurring permanent danger to any other section of the mine. As a means to further insure safety, increased stability, and higher percentage of round coal during total exhaustion, the size of pillars has been further increased (2 yards each way). Referring to my report of last year that tenders had been accepted for the construction of a new haulage-road leading from the big brake to ultimately connect with Mine Creek workings, it may be noted that this work is in active progress. To simplify and hasten completion it is being done in various sections. The rock tunnel, 11 ft. by 7 ft. in the clear, intersecting the hill country reflects credit on workmen and officers alike. Timbering is a special feature. Ventilation is efficiently maintained by a powerful exhaust water-blast, supplemented by a strong jet of compressed air should water become insufficient. To effect natural drainage prior to the extraction of pillars from this section of the mine, a rock adit 6 ft. by 5 ft. is under construction, and when completed will drain the deepest levels of this extensive basin. Drainage is effected at present by a small pump driven by compressed air. Preparatory to removing the hydraulic-brake installation situated at Mine Creek terminal, permanent concrete foundations are being more suitably constructed on the low level. The position selected is calculated to more evenly distribute the strain of the rope over the surging drum. The general ventilation is efficiently maintained, and is strictly kept on the working-face. The timbering of roadways and faces is carefully observed, and judicious care exercised in the various examinations required under the Coal-mines Act. The result of such examination is duly reported. The power-station has been further supplemented by a fourth Babcock and Wilcox boiler. Spinal injuries to a miner named William Danks were the result of the only serious accident reported from this mine. There were six inspections made.

Denniston Collieries (owners, Westport Coal Company; J. Dixon, mining manager).—These collieries have creditably maintained their productive capacity and general working efficiency during the year under review. The output, 251,608 tons, shows an increase of 8,262 tons.

Coalbrookdale Mine (3/11/1903): Reference was made in my report of last year to the manner in which the coal-seam in the West Cascade of working was diminishing in thickness. This thinning continues to extend eastward, but new developments have shown that the upper coal-seam overlaps a considerable area of the disturbed country, and the discovery of a valuable area that will add materially to the life of the mine is fully anticipated. Coal-cutting machinery is now withdrawn from this district, and hand-labour substituted. In winning the Cascade area dipwards towards the outcrop, the coal maintains excellent quality and hardness, with an average thickness of 12 ft. to 18 ft. To meet with the increasing requirements for ventilation, a new return airway, traversing a considerable area of troubled ground, has been driven from the extreme rise direct to the fan, thus the air-travel is shortened materially, and the air-volume increased by 20,000 cubic feet per minute, making a total volume of 50,000 cubic feet.

East Cascade: The extension of this district has always been much hampered by a continued series of minor fault-lines, associated with a troubled and friable roof. Fortunately this difficulty is practically overcome, and with the advanced development now in progress, together with an improved quality of coal, the future prospects of the field are more promising. The increasing demands on the colliery having received full consideration, it was finally decided to extend the main haulage-road dipward to Cascade Creek outcrop. As this work entailed considerable engineering ability in order to accomplish it without affecting the regular haulage, driving was determined and commenced from a given point to the outcrop to finally connect with the present terminal. This drive, now nearing completion, has intersected an important section of valuable coal, and the 90 ft. fault-line met with in the original drainage-adit is proved to split and diminish in magnitude as its course extends north-east.

Munsie's section: So far as the dip heading has developed north-east, a considerable acreage has been opened out, giving employment to a fair number of hand-pick men. Hauling and pumping are effected by compressed-air power. A ventilating-shaft 8 ft. in diameter and 125 ft. deep is newly sunk in a suitable position, and at the time of writing the fan is in full operation.

Ironbridge Mine (4/11/1903): The Dundee dip section of solid working continues promising as operations extend towards Mount William. Faulting was a source of trouble for some time past, but the natural structure of the coal-seam and uniformity of quality has become more decided as operations advanced. This district of working maintains a creditable standard of efficiency in the Denniston field.

Big Pillar district: Extraction of these high pillars has, in a general way, given very gratifying results, both from the percentage of coal won and freedom from serious accidents, conditions which are alike creditable to the officers and to the approved workmen employed, the