

rehouse, with suitable accommodation, and the erection of a Babcock and Wilcox boiler and Leyner air-compressor is now in progress. Drainage adit: The importance of this rock crosscut for the purpose of draining the deep workings of the Mine Creek areas has received careful and prompt attention. Levels were determined, and in September last driving was commenced with hand-drills from the inbye end to junction with the outlet section, the latter being driven with rock-drills actuated by compressed air. Water is supplied under pressure to suppress the dust, the face being a hard, well-defined, grey granite.

There have been no additions to the plant at the Mine Creek power-station. The general ventilation is strictly maintained over the whole system, while the timbering of roads and faces, and the various examinations under the Coal-mines Act are made special features in the safety and economy of working operations. All reports strictly and duly kept. Seven inspections were made, and the old workings in both sections of the mine carefully examined with safety-lamp, no indications of gas or heating being found. The following observations of relative temperatures will be of interest: Surface (in the sun), 68 degrees; east intake (1 chain from day), 54 degrees; east intake (directly at face), 49 degrees; main return to fan, 54 degrees.

*Denniston Collieries* (owners, Westport Coal Company (Limited); J. Dixon, mining-manager).—The gross tonnage raised from these mines for the year 1904 show a decrease of 2,773 tons compared with the previous year, but it is noteworthy that notwithstanding the restricted demands on the colliery, as affecting single and double shifts, the efficient and economical development recently completed in haulage, &c., have enabled the collieries to produce the largest output yet recorded for any yearly period exclusively worked on single shift.

Coalbrookdale Mine (23/12/1904): This mine has steadily maintained its former efficiency, and active operations for the further development of the property have been consistently carried out. Respecting the geological features of the Cascade district westward, the lower section of the coal-seam is found to thin out to an almost unworkable thickness, but a corresponding increase of thickness is maintained in the upper section of the seam. Development is thus economically effected without apparent depreciation, even though the seam is divided by a considerable thickness of intervening strata. The extraction of pillars has been successfully effected in this district.

Cascade dip continues to show favourable promise in thickness and quality of seam as the workings extend dipward, whilst drainage and ventilation are effected through the coal adit driven from Cascade Creek. To meet the growing requirements mechanical haulage was recently installed on a new heading opened eastward, where a hauling-engine actuated by compressed air is permanently placed. Gas was reported in a heading-face over a large fall of top coal.

Cascade East: The solid workings having been extended riseward to the fault-boundaries, preparatory work is in hand for the extraction of pillars. Owing to the friable character of the roof overlying the coal-seam considerable cost in timbering is likely to be incurred, and great care will have to be exercised in the working-places.

Munsie's section: Solid working is about to be suspended in this section, as the trend is to the dip. Hence the remaining portion of the solid ground will be forewon at some subsequent period from future developments of Cascade east. Meanwhile the area now opened will be pillared, towards which preparatory work is well advanced.

Ironbridge Mine: The Dundee dip section of solid working is decidedly the most important district of this property. In the earlier stages of operations, faulting of a reverse character was a source of considerable trouble, but during the current year several extensive rock cross-cuttings for the purpose of winning and ventilation have been completed, and the earning-capacities of the mine considerably enhanced thereby. So much is this the case that the face now opened maintains a maximum standard in quality and thickness of seam. Free drainage and mechanical ventilation are amply provided.

Big Pillar district: The extraction of these pillars continues to give satisfactory results—*i.e.*, if the extra thickness of coal-seam operated upon and the immunity of serious accidents are factors worthy of note, whilst the low percentage of waste may be chiefly attributed to the superior structure of the coal-seam and the favourable character of the immediately overlying strata.

Kiwi district: Recent developments extending further northward have exposed a coal-seam of average quality, while the outcrop pillars in the adjoining section are being successfully extracted. Respecting the working there is little change to report.

New works: With a view to the improvement of present ventilation, and to provide an ample supply of air to meet extended requirements, preparatory work is in progress towards the erection of a 12 ft. diameter double inlet fan of the "Hayes'" type with a guaranteed capacity of 150,000 cubic feet per minute at a 3 in. water-gauge. The driving-power will be effected by a new steam-engine made in the colony, and when operative the fan will control the ventilation in the various districts of the Cascade and Munsie's areas, and lay aside two lesser fans now in use. The surface section of haulage-road recently constructed between the wooden bridge and the brake-head terminal (with a completed length of 120 chains) was opened for haulage traffic in June last with satisfactory results, while the junction of the two subsidiary haulages, which control the output from the separate mines, deliver the coal at the wooden bridge, and from thence it is conveyed over the new route to the brake-head terminal. It is officially stated that in accordance with the results attained, the new haulage is capable of dealing with an output of 1,500 tons per day of eight hours. The coal-storage bins, with a calculated capacity of 2,000 tons, now under construction at the brake-head, will, when completed, be equipped with wagon-loading conveyers, sorting and picking belts, capable of treating and discharging the output into the bins. When these bins are completed they promise to be the most complete and substantial structure of the kind that has yet been erected at any West Coast colliery.