

Cascade dip has fully justified development, as the quality of and thickness seam—determined in the general progress of working—has exceeded any previous anticipations, whilst the preparatory work in grading and timbering the extension of main haulage-road is well advanced, and may be expected operative during the current year, drainage and ventilation being amply provided by adit on Cascade Creek.

Cascade East district of solid working is exhausted, and output wholly maintained by the removal of pillars; but, owing to the considerable thickness of very friable roof, the use of close and costly timbering is necessitated. Extra care is thus entailed to insure the maximum of safety, cost of production taking a secondary place in the working economies.

Munsie's section of solid working dipward is meanwhile abandoned in view of winning the coal-seam to better advantage and economy from the lower levels of the Cascade district. Consequently, the supply of coal won here is exclusively from the removal of pillars, which yield a high-class steaming-fuel.

Ironbridge Mine (20/12/1905): The Dundee dip section of solid working continues to maintain its former reputation as a first-class coal-seam, specially suited for steaming and general commercial purposes, excellence in quality and hardness showing no depreciation. Preparatory work is actively pushed in extending the main haulage, whilst rock-cutting has been a considerable item of cost in effecting uniformity of grade. Free drainage and mechanical ventilation are efficient and standard factors in the working economies of the mine.

Big Pillars includes two separate pillar districts, from which total extraction is maintained in a workmanlike manner, both with respect to economy and absolute immunity of serious accident, items of interest which command attention in the exhausting of these thick-seam areas.

Kiwi district: This newly developed district of solid working, situated between the north branch of Waimangaroa River and the eastern outcrop, gives very favourable promise as the working-face extends northward, the hardness of the coal-seam being a natural feature which commends its use for general purposes. The working-conditions are very satisfactory, while natural ventilation is well maintained through the outcrop-openings, frequently holed through to daylight.

Old shaft workings: After a lengthened period of active and persistent prospecting, by which series of faulted ground have been successfully intersected, the management is confident that the continuation of the Dundee main seam is practically assured, and suggests an extensive area, the opening of which will be easily obtained from Dundee dip, and, according to indications afforded, will materially increase the life of the mine.

Deep Creek area: With the object of providing a more improved system of haulage and affording facilities whereby a large area of standing pillars can be more economically extracted, extension of a new haulage road is making satisfactory progress, but the bridging of the Waimangaroa River and Deep Creek will be works of considerable cost and magnitude. However, according to the prospects anticipated, a valuable yield of coal will be available on completion of these works, which are estimated to extend over eighteen months.

New works: As mentioned in previous report, the new 12 ft. diameter, steam-driven, double-inlet ventilating-fan of the Hayes type is now circulating an average air-current of 100,000 cubic feet per minute at 1 in. water-gauge, the maximum calculated capacity being considerably in excess of the quantity stated. Construction of the new storage-bins with a capacity of 2,000 tons is now nearing completion, together with the travelling picking-belt, viaducts, and tipping-platforms, which will be equipped directly on arrival of the necessary appliances. A more economical and comprehensive steam-generating battery was recently installed at the brake-head, comprising four Babcock and Wilcox boilers (aggregating 496-horse power) calculated to meet all present and anticipated requirements.

Shots fired during the year: Mr. Dixon kindly furnishes the following: According to the official record kept at the respective mines, there were 41,672 shots fired, which, when calculated on the gross tonnage raised, gives an average yield per shot of 6.44 tons; while the ratio of mis-shots was 0.78, or 1 in 360.

Prosecutions were *nil* at Dennistown for the year 1905.

Throughout the whole system the working-conditions have been strictly observed in accordance with the requirements of the Coal-mines Act, while seven inspections were made during the year.

Temperatures in the main return-airways continue to maintain a constant 54°.

*Coal Creek Coal-mine, Buller Road* (George Walker, lessee).—During the first six months of the year coal was supplied to the Rocklands Dredging Company, but this company being now dissolved, and the dredge deeply silted up in the river-bed, the demand for coal ceased, and further mining was consequently abandoned. The rise level also collapsed to the surface by a run of sand during a heavy rainfall.

*White Cliffs Coal-mine, Buller Road* (Job Lines, lessee).—Work at this mine is still continued by one man, the demand being chiefly for dredging requirements on the Buller River, the steaming properties of the coal being fairly suitable for dredge-work. To effect ventilation as the workings proceed, an upper level was recently opened from the outcrop. Timbering is strictly attended to.

*Flaxbush Coal-mine, Three Channel Flat* (De Filippi, owner).—(17/10/1905): Coal is still mined for the Mokoia and Feddersen Dredges. Regarding quality of seam and method of working there is little to note, the opened ground being very securely timbered, while ventilation is well maintained by holings to the outcrop as the face is advanced.

Coal-mining in the Longford and Murchison districts is a matter for future enterprise,