

being of a much harder nature and of better quality; this necessitated the driving of a tunnel on the line of rope road, $6\frac{1}{2}$ chains in length, rising 1 in 2.75. The erection of coal-bins at Stillwater, 76 chains distant, having a storage-capacity of 1,000 tons, is nearing completion. The bins are to be equipped with mechanical appliances, such as elevators, jiggling-screens, &c., capable of dealing with an output of 1,500 tons per day. Commodious carpenters', fitters', and smithy shops have been erected, which are fitted throughout with up-to-date machinery for the necessary repairs usual about a colliery. The whole of the workshop machinery, as well as that of the blacksmith's shop, is actuated by a horizontal steam-engine with $6\frac{1}{2}$ in. cylinder and 9 in. stroke, supplied by steam at 140 lb. pressure from a multi-tubular boiler.

Brunner Mine (owners, Point Elizabeth Railway and Coal Company (Limited); R. Alison, mining manager; James Armstrong, mine-manager).—(18/11/09): The workings in the St. Kilda section of this company's mine have been extended during the year, and, owing to the limited number of working-faces, three shifts of workmen were employed. In the main heading riseward a reverse or overlap fault was encountered, apparently covering a considerable area, which can now be worked in the form of a second or top seam, above portion of the already worked-out seam, thus adding new lease of life to the mine. The winning headings have still some distance to be driven before the boundary is reached. As the coal in the two prospecting drives near the river-bank showed no improvement on being driven on, work there has practically been abandoned. The water-power installed during the year 1908 for driving the ventilating-fan proved to be inadequate, and a 20-horse-power Campbell oil-engine has been since erected for this work, materially improving the ventilation throughout the mine. A vibrating screen, two picking-belts each respectively 40 ft. and 70 ft. long, and one set of bucket elevators for raising the small coal, have been installed. The construction of an unscreened-coal bin of 200 tons capacity, with necessary adjuncts of tippler and travelling belt, is almost completed.

No. 1 Point Elizabeth State Colliery (James Bishop, general mining manager).—The gross tonnage from this colliery for the year 1909 (216,225 tons) shows a decrease of 18,025 tons as compared with the previous year. This decrease is in a large measure due to the cessation of work for three weeks in the latter end of the year, pending the arranging of a new agreement.

No. 1 section (J. Coulthard, mine-manager) (6/12/09): Nos. 2, 3, and 4 west levels are still working in the solid, and show coal of very good quality. *Extended Dip*: As the working-places on the eastern side of this section were cut off by a large fault all mining is practically confined to the west side, where the faces are still in the solid. Locked safety-lamps are used throughout this part of the mine. *East section*: All solid work has been completed in Nos. 3 and 4 levels, the whole of the pillars standing intact. *No. 2 level* is driving forward on the strike of the seam, the main fault which has cut off Nos. 3 and 4 not yet having been met. The system of working in *No. 1 level* was partly longwall, and from Nos. 7 to 4 banks, off *No. 1 level*, all coal is being won by extraction of pillars. 47,000 cubic feet of air circulating in main return.

No. 2 section (J. Herd, mine-manager) (5/12/09): All workings on the west side of main dip are in solid coal, which is of good quality. The double shifting of the *Extended Dip* section has been found necessary, in order that the coal both from solid and pillar workings might be won as rapidly as possible, when the dip will form a sump for the storage of water, and thus enable the extraction of a large area of pillars standing to the rise. All solid workings have now been completed, and the coal won from this area is derived entirely from the extraction of pillars. In Nos. 2, 3, and 4 levels, east of main dip, all solid workings are completed, these levels now standing against the fault. The coal shows evidence of thinning in *No. 1 east level*, top seam, as the workings extend riseward, whilst it is the intention of the management at an early date to work *No. 1 east*, bottom seam, on the longwall advancing system. Total quantity of air circulated, 49,000 cubic feet.

In the immediate future, all output from the dip-workings of both Nos. 1 and 2 sections of this colliery must be obtained from the extraction of pillars. Danger from accident and interruption from water will be reduced the more rapidly the withdrawal of these pillars can be effected.

No. 2 Point Elizabeth State Colliery (James Bishop, mine-manager).—(6/12/09): This new colliery is being developed entirely independent from the *No. 1 State Colliery*, about five miles nearer Grey-mouth, and involves the construction of three miles of railway over very rough country, necessitating the bridging of the Seven-mile Gorge, together with the formation of extensive bin-sites and railway-sidings. To connect the mine with the screens and storage-bins about two miles of rope-haulage road is being constructed, including about 6,000 ft. of tunnelling in four sections. This endless-rope road will be self-acting, the load being controlled by powerful hydraulic brakes. Good progress is being made at the tunnels, of which the first two sections have been started. The coal-mine in connection with these development-works, where two men are employed winning coal for the air-compressors actuating the rock-drills, continues in good order, and is well timbered and ventilated. Other works in progress comprise the clearing for starting the mine-tunnel in coal, cuttings, and trestle-work required for completion of rope-road, and a sawmill has been erected for the supply of timber for all purposes. The storage-bins, having a capacity of 4,000 tons, will shortly be started. The plant is being designed to handle an output of 2,000 tons daily.

ACCIDENTS.

Of the number of accidents reported as coming within section 62 of the Coal-mines Act, 1908, six were fatal and eleven non-fatal. Of the persons killed, three were underground at the working-face, two were run over by trucks in the mine, and the other was killed on railway surface-works by premature explosion. In one accident (fall of roof), one miner was killed, two seriously injured, and three others slightly injured. Two men were slightly burned by explosion of firedamp in Paparoa Colliery.