

Creeks. If sufficient power is available a generating plant driven by water-power would be installed as near the railway-station as possible. This plant could be run continuously so long as water-power was available, and the steam-driven plant run only in cases of emergency.

Reconstruction of Storage-bins.

The storage-bins which were completely destroyed by a landslip in January, 1918, are now rebuilt. In the original building there were two conveyors used for distributing coal in different parts of the bin, and the screens were also erected on the eastern end, which necessitated the working of one of these conveyors whether screened or unscreened coal was required. In reconstructing the bins this matter was carefully considered, and instead of erecting two conveyors only one is now installed, in the centre, this being deemed adequate for loading the bin. The screening plant is also erected at the western end; this obviates the use of the conveyors when making screened coal. The erecting of one conveyor in the centre also enabled the height of the building over the unscreened bin to be reduced by 12 ft., and, although the new building is not so massive in appearance as the original one through this cause, there is no doubt it is much stronger, as it is not so top-heavy.

To prevent a landslip occurring in the same place again a protection wall has been built, and to give additional strength to the new structure several large bolts from beams in the interior of the bin are fastened to a reinforced-concrete wall on the hill.

Explosives.

During the year a great deal of trouble has been encountered with the permitted explosive "viking," and the chief cause of the trouble appears to be due to moisture affecting the explosive, through faulty packing at the works where the same was manufactured. It has been the practice when a new shipment of this explosive arrives to open several of the cases, and it was invariably discovered that the ends of almost every plug showed signs of dampness, the dampness penetrating deeper in some plugs than others. In one 50 lb. case in particular no less than 35 lb. had to be discarded as useless, and it is a common occurrence for the magazine attendant to discard some days from 10 lb. to 15 lb. of this explosive.

Then, again, before it is used in the mine the shot-firers examine each plug before inserting it in the shot-hole, and any ends showing signs of dampness are cut off, otherwise the result would be a defective shot. Although every care has been taken in the use of this explosive the number of defective shots during the year was beyond all reason. For the ends of the plugs cut off by the shot-firers the miners were allowed explosives equivalent for the loss, on a written statement from the shot-firer. An allowance is also made to the miners for the defective shots, when the detonator has exploded and the explosive failed.

During the year a new permitted explosive, "ligdynite," was procured; but owing to an unexploded plug in a shot-hole burning with a moderate flame this explosive has been prohibited from all safety-lamp sections of these collieries, but it is being used in the naked-light mines.

Some time ago arrangements were made to try and procure the permitted explosive A1 monobel through the High Commissioner for New Zealand in London, but a reply was received from Nobel's Explosives Company (Limited) that it was impossible at that time to obtain the necessary quantity of potassium chloride for the manufacture of this explosive. However, as the war is now over there should be no difficulty in obtaining the necessary raw material, and therefore, in order to obtain better results in the future and also for the satisfaction of the men and the management, arrangements should be made to procure the explosive A1 monobel.

General.

Reviewing the work for the year it will be seen that the number of working-days at the Liverpool Colliery are considerably less than those worked at the Point Elizabeth Colliery. This is due to the fact that during the greater part of the year there was only a temporary arrangement to deal with the output, and unless wagons were available daily the mine could not be worked. With the Point Elizabeth Colliery the position was entirely different, for if wagons were not available through shipping being held up there was usually space in the storage-bin to enable the mine to work for sometimes two and three days in succession.

It will be noticed that the output from the Point Elizabeth Colliery is considerably reduced. This is due to the near exhaustion of that colliery, and in the course of a few months it is questionable whether this colliery can be profitably worked.

It is advisable to point out that since the signing of the Armistice no less than eighty-seven men have left the Liverpool Colliery, consequently the output is now reduced to about 500 tons per day.

In conclusion I wish to say that all the officers have performed the duties delegated to them in a most satisfactory manner, and the Consulting Engineer has rendered valuable assistance in the various developments connected with the mine.

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I. A. JAMES, Manager.

The Under-Secretary, Mines Department, Wellington.