15 C—2A

Main and Tail Section: At present four pairs are developing in pick places. During the year these two main south headings were each driven 3 chains through barren ground. High coal was proved and the section opened up with the Korfmann cutter. This high coal, however, only extended for  $2\frac{1}{2}$  chains, when the seam again thinned. The places were persevered with and driven  $3\frac{1}{2}$  chains at right angles to each other through coal varying from 4 ft. to 6 ft. thick. It has been necessary to keep the middle stone for a roof, and it will be difficult to keep these places open long as the stone is 10 ft. thick and will eventually disintegrate with the water and run as a slurry. All places are very wet. Although being continued, the prospects for this area are at present very poor indeed. If coal should be found in this direction, a major job would have to be faced in brushing through the various undulations and thinnings, and in all probability the middle stone would eventually have to be entirely filled out in order to maintain a haulage road and return airway.

Sump Dip: Ten pairs developing with the Jeffrey coal-cutter. This dip has been driven during the year  $8\frac{1}{2}$  chains in a westerly direction parallel to the Main No. 1 Dip and is now  $9\frac{1}{2}$  chains in advance of the latter. This section also has been badly retarded with thinnings and undulations. In the panel the levels on the right have all struck a floor roll which is cutting back towards the dip itself, so that each level has stopped 1 chain shorter than the previous one. All of these places are extremely wet and the ground is very heavy. Two headings have been started in a southerly direction off this section and are in line with, and only 1 chain away from No. 2 Bore. This bore is shown as "no coal," but present coal is of good quality and in the vicinity of 20 ft. thick. These two headings have also been extended on the other side of the section to within 40 yards of the Main No. 1 Dip face and will be connected as soon as No. 1 Dip is dewatered. They will then allow much closer haulage, which will be provided by an extension of the present endless-rope system. These headings should also open up a reasonably sure area of rise coal which lies to the dip of the abandoned South Dip.

Ventilation: During the year a concrete overcast was completed and the ventilation changed from a single circuit to two equal splits. The large amount of blackdamp given off in our dip workings requires a high velocity, and a 45 in. booster fan has been installed in the region of lowest pressure in each split for this purpose. A ventilation survey has been carried out, which proves that the greatest restrictions are still in the main return. Two men have been engaged the whole year straightening, enlarging, and retimbering this airway, but a large amount of work remains before it is in good order. Reinforced-concrete legs with railway rails for bars are being used here and appear to be very successful. The sections will quickly outgrow the effectiveness of booster ventilation, and the question of a larger main fan will soon have to be considered.

Pumping: Preparations have been completed for construction of a larger sump with a capacity of 1,250,000 gallons in what is known as "the old sump section." A level gangway, 4 chains long, has been built and a large concrete well. The former allows a short straight suction into the lowest part of the area, and the wall on which the pump will sit, is equipped with doors, &c., for easy cleaning. All the water from the dip workings will be gathered in this sump and pumped to the main borehole sump, and from there pumped up the borehole as at present. As there is only two and a quarter hours standage in the borehole sump, provision is being made to use the delivery from the new sump as a syphon so that the water from the borehole sump can be brought back into the larger standage area in the event of a long power failure. Although the mine continues to have excessively wet working-places, the total quantity of water remains constant, proving that the water follows the working-faces.