

OTAGO SOUTH.

60. *Wallsend Mine, Lovel's Flat.*—(25/7/94): This is a deep open face of coal with from 8ft. to 10ft. of clay stripping. Quite lately a band of stone and rubbish has made its appearance in the face of coal, about 9ft. down from the top of the seam, which has very much added to the labour in getting out clean coal. This band is several feet thick, and has to be carted away to make room at the working-face. The slope of the stripping and the coal face is in a safe condition.

61. *Elliott Hill Mine, Lovel's Flat.*—(25/7/94): Went through all the workings and found them in good order. There are now three men employed in the mine, and doing some preparatory work with a view of boring for a better class of coal, which Mr. McDougall thinks exists at a much lower level. He started to sink a fair-sized shaft, but, after getting to a depth of about 20ft., found the quantity of water too much to lift by hand appliances.

62. *Benhar Mine, Benhar.*—(24/7/94): A main heading has lately been driven 1½ chains from the old workings into the new lease, on the south-west side of Nelson's property, where there is a decided improvement in the coal in making a good roof. The height of coal being taken out is about 10ft. only, out of a thickness of about 30ft. The extent of new lease is 4 acres. The air in the mine is much better than it was at the time of my previous visit. A new air-shaft is being sunk in the new lease, and is down to a depth of 30ft., leaving about 90ft. to sink to the coal. It is expected to be completed within two months. All the small coal is used at the pottery and brick-works on the ground.

63. *Rigfoot Mine, Benhar.*—(24/7/94): A main level is being driven from the old workings to the south-east, with the view of making an opening to the surface near the railway-siding at Nelson's pottery-shed, where the coal-seam is estimated to be about 60ft. from the surface. An incline plane will be made to the seam, and the coal hoisted to a platform above the level of the railway-trucks. The height of coal now being taken out in the main level is 6½ft., and from 12ft. to 13ft. wide. The coal roof is good, and many feet thick. All the small coal is used in burning bricks at the pit-mouth. The drainage in the mine is not heavy, and the windmill does the pumping very well.

64. *Kaitangata Mine, Kaitangata.*—(20/7/94): Went down the shaft to the 600ft. level, where a drive is driven 190ft. south-east to what is called the main seam, standing at an angle of 47°. The distance from the shaft to the coal, in a straight line, is about 120ft. The thickness of coal here is about 30ft., but south of this a short distance it widens out to nearly 40ft., and then further on it comes in again to about 3ft.; still further south it thins again, and splits up into several seams at a distance of 650ft. from the shaft-tunnel. Beyond this it is not being followed at present. On the same level the seam is being followed to the north, and has been driven along a distance of 1,100ft., where the coal is 15ft. thick, and is still being followed with a fair-sized drive by keeping the foot-wall in sight. From this level, 500ft. on the north side of the shaft, an uprise-tunnel of 1 in 2 has been driven 420ft., where it joins the dip-drive from the incline workings. All this is through solid coal of first-class quality. All the coal hewn in this section of the mine, below the level of the bottom of the incline plane, will be lowered to the shaft, and this will be called the main outlet from this section of the mine. It will also act as the main airway for that part of the mine. From the bottom of the incline plane I followed the level stone drive to where the pillars were being removed back to this drive. The roof was being allowed to settle behind the men, and it was doing so with perfect safety to the workmen.

65. *Castle Hill, Kaitangata.*—(21/7/94): The dip-drive or engine-plane from the surface to the coal is now completed, and a roomy arched brick chamber has been built in the coal seam. From the chamber the coal has been followed southward about 666ft. to date, following the contour of the floor, and keeping roof-strata on the right-hand side in sight all the way. The floor-coal is for the present very troublesome by continually rising throughout the length of the main level, from a few inches to as much as 2ft., which frequently backs the drainage into the working-face; consequently, the rails have to be lifted at short intervals, and the floor dressed down to an even gradient to allow the water to flow to the pump. There are cross-headings put up the seam at every 15 yards. Two of these nearest the engine-plane have reached a downthrow fault at 74 and 77 yards, where the coal is completely cut off, similar to the downthrow faults in the Kaitangata Mine. It is the intention of the manager to at once put in a stone drive on a level from the top of the fault a distance of about 200ft. in a south-east direction, and then sink to the coal, which, when reached, will be a guide in laying out future mining work from the main level in that direction. I think this fault will be found to extend from the south to the north boundary of the company's property. From the chamber a main-level tunnel is being driven north and following the contour of the floor, as was done on the south side. At the time of my visit the tunnel was driven 390ft., where the coal seam had thinned down to 4ft. and 5ft., but of very good quality—probably the best in the mine. This level is to be continued north to the company's boundary if the seam does not get much thinner than it is now, with a view of testing the value of the seam in that direction. Cross-cuts are also to be put in at intervals, heading westward, to see if any other seam exists above the one now opened, which was indicated in the engine-plane when being put down. The big pump is now fixed in position in a large arched brick—four-brick-thick—chamber specially constructed for it. The pulleys to guide the wire rope to the scooping-drum are now being fixed in position, and all the pumping plant is expected to be ready for work in about three weeks from date. Gas is very noticeable in the south and north main headings, but only at the extreme end, where the air-current does not get at it very well. Brattice-cloth is fixed to within 4ft. or so of the working-face. A conspicuous notice is placed in the main level on both sides of the chamber, "Not to take open lights beyond this place." The prospecting-shaft sunk some years ago is now being enlarged for an air-shaft to 9ft., and bricked one brick thick as the enlargement goes on. This work is now completed to a depth of 230ft., which leaves 300ft. yet to be done. The south main heading from the engine-plane will shortly be abreast of and only a short distance on the dip side of the air-shaft. The manager thinks this airway will