

standing ground. An odd set of timber has been put in in places, and others will have to be timbered after a short time, as it shows many partings and smooth faces striking in every direction, showing a possibility of V blocks dropping from the roof when not expected. All those places are promised to be timbered at an early date. The seam of coal stands in this mine as it does in McNulty's (the adjoining mine), and is being opened on the east side of the tunnel, in which direction the seam is supposed to extend for 300ft. before reaching some old workings known to exist in that direction. The length of coal seam in the west side of the tunnel is estimated at 300ft. before reaching a filled-in gully. It is supposed the coal extends to a considerable depth underfoot, but to get coal much below the present floors requires some motive-power to hoist coal and water.

44. *Nulli Secundus Bannockburn Mine.*—(15/3/93): I did not find any one at the mine, but walked round the mine-mouth to see if anything had lately been done at the tip-head. There was no indication of any work having been done since my previous visit.

45. *Kawarau Mine, Bannockburn.*—(15/3/93): The new dip-drive is now down 500ft., and will be continued till a fault or some other obstruction is met with. It is not following quite the direct dip of the coal, but has a gradient of about 1 in 5. The same thickness of coal is at the bottom—namely, bottom seam 8ft. and top seam 7ft., with a 2ft. band between them. The lower seam only is at present being taken out, in which there are now eleven faces opened, and worked by five men, who shift from place to place as it suits their convenience. A quantity of coal, in bags, is stacked in several places in the mine, ready to be delivered on the shortest notice. The mine makes very little water, and that little is drawn up in a tank by a horse. The coal is hauled up in the same way. The airway was followed from the bottom workings to where it passes up into the old workings and air-shaft, and the air was good throughout. The new working-places are being well laid out, and the sides and roof are in good order.

47. *Gibston Mine, Gibston.*—(14/3/93): On examining the lower workings, where there are only two men getting coal, the place was found to be very hot, notwithstanding a good current of air passing through at the time. The heat being caused by the large quantity of slack filled in to the worked-out ground. As there is a very large percentage of fine coal in the hewing, it is filled in behind to save labour, and at the same time to save timber. Water is carried through the workings in pipes, and always ready to put out any fire whenever it shows itself. It is generally known that some part of the mine has been on fire several times, but not lately. There is just now a prospecting-tunnel being put through broken coal in the top level in the hope of finding hard, marketable coal. The timber in the adit, which is of considerable length, is in good order.

48. *Gibston Saddle, Gibston.*—(14/3/93): A considerable quantity of coal is now exposed on the outcrop, which dips very quickly to the west. The line of the seam is nearly north and south. There is a small water-race on top of the Saddle at an elevation of about 160ft. above the floor of the open face of coal now opened, where two or three heads of water are obtained, by which from 14ft. to 16ft. of clay and gravel are sluiced off the outcrop. The covering is a very loose stuff from a high hill on the west side of the seam. The face of coal has a distinctly laminated appearance, the several layers differing a little one from the other in their burning-qualities. Most of the partings between the layers are a few inches thick, of a loose, crumbly character, and no good. The coal is sledged down a very steep hill for a distance of about two miles. An aerial tram could be constructed to the same landing in a distance of about 1 mile 30 chains.

50. *Jones's Roxburgh Mine.*—(12/9/93): This mine presents much the same appearance as it did twelve months ago. The working-face of coal, now being benched in steps, stands 30ft. high, and the length of the coal-face stripped is 90ft. The floor of the seam has not yet been touched, and is believed to be several feet below the standing-water level now being worked on. It is intended at an early date to cut up a new outlet drain at a much lower level than the one now in use, in order to get down to the floor of the coal. The stripping consists of 25ft. of clay and gravel, which is removed by sluicing it into the valley below with eight heads of water, which is conveyed to the spot in a water-race. Where there is such a body of coal, only two months' labour at stripping by sluicing is required once in five or six years, where the output of coal is over a thousand tons per annum. Mr. Jones has been requested to cast down some cracked blocks of surface on the west side of his quarry, because it was not considered safe for men or horses to pass under them after heavy rains. He promised to do so.

51. *Perseverance Mine, Roxburgh.*—(12/9/93): The coal is being mined in the bed of Coal Creek, where the stripping is a very heavy wash containing large stones, and from 10ft. to 12ft. deep. There are 12ft. of coal being hewn out to the level of the drain, but the depth of coal below this is not known. A new drain is now being cut up the flat below the present workings with a view of getting deeper in the coal in the distance of from 4 to 5 chains, which is in the direction of the rise of the seam. When the open drain has reached a face of from 12ft. to 14ft. of solid coal it is intended to mine it out, as it is supposed it will be less costly than the present stripping. The quality of coal is very good, and meets with a ready sale all over the district. Standing on top of the coal in the present workings is a small water-wheel, which pumps the drainage up 12ft. The batter of the stripping is quite safe.

52. *Mrs. McPherson's Mine, Roxburgh.*—(12/9/93): A considerable body of coal has lately been stripped at the northern end of the pit by sluicing operations. The water is plentiful, and flowing in a channel on the west boundary of the pit. The stream is a rapid, and, consequently, can be conveyed to any part of the pit by cutting a very short ditch. The *débris* is sluiced into Coal Creek, distant about 6 chains. The output of coal from this pit is nearly equal to the other two in the same place. A tunnel drain is now being driven from the bed of Coal Creek to the open pit, with a view of striking the floor of the seam, supposed to be 30ft. below the old workings. The length of tunnel required to the nearest part of the old mine is estimated roughly at 350ft. Of this about 30ft. is now driven from the top end of about 3 chains of open cutting in the creek flat. This cutting is paved with flag-stones, and the sides are strongly walled up to the level of the surfaces.