

The present company are in a better position to develop these coal properties than any new proprietary would be (in having their machinery and officials on the ground), but, unless they carry on prospecting operations simultaneously with taking out the coal from the present known area, they will remove all the easily-wrought coal from the side of the lease facing the Grey River, and leave the mine in such a condition that it would be difficult to get any new company to take it up. At the present time there is some inducement in the opening-up of the new area of coal referred to; but should this be worked out, and the extension of the line of thinning met, without steps being taken to prospect and develop further areas in the back portion of the lease, there is every probability of the lease being abandoned and the prospect of its again being taken up considerably lessened, since any new company would then have to open up the mine afresh in the northern portion of the leasehold before they could expect to find that their venture would prove to be remunerative. Further, the time likely to elapse before this could be done would cause a considerable loss in the revenue.

Royalties.—The principal reason the Company and the inhabitants about Brunnerton give for prospecting operations not being carried on is, that after the end of next year the amount of royalty is increased from 6d. to 1s. per ton, and that the Grey Valley Coal Company will be the only one on the Coast which will then be paying that amount. Therefore, they will be debarred from competing successfully with the coal companies in the Westport District, where the royalty is only 6d. Moreover, the coal now being mined is inferior in quality to that found on the eastern side of the Brunner No. 1 fault. That being so, and the Westport coal commanding a readier market for some purposes, the Grey Valley Coal Company is, no doubt, placed in a worse position than other coal proprietors on the West Coast.

Working Coal-pit Heath Mine.—It may be urged that the increased royalty from Coal-pit Heath Mine does not come into force before the year 1909; but the position of this mine is such that it would entail a very large expenditure in prospecting the back portion of the lease before any coal area could be proved, and after that it would require at least one shaft to be sunk to a depth varying from 1,000 to 1,200ft. before the coal could be worked efficiently. The present workings in this mine must necessarily be abandoned. They are cut off, as already explained, from the rest of the leasehold by the Brunner No. 1 fault on the western side, and this has a down-throw at the lowest level face of about 387ft., while the "Kimberley" fault, with a down-throw of 180ft., runs along the southern boundary. These, together with the fact that there has always been a large influx of water to contend with in this fault-locked area, are the reasons why a shaft would be required, and unless the inclination of the dip of the seam greatly varies from what it is in a distance of 23 chains in the Brunner Mine, the depth of the shaft required could not be less than that stated.

Working from the Wallsend Shaft.—In regard to the question of working the low ground from the Wallsend shaft, which is 670ft. deep, a portion of the seam on the south side of the Kimberley fault has been worked from it, but in carrying on the operations in a westerly direction the "Taylorville" fault was met with, which runs north and south, with an estimated down-throw of 250ft. to west. This fault was met at a point 132ft. lower in level than the bottom of the shaft, in working from an inclined plane to the dip, so the coal on the western side of it under the Taylorville Flat would be about 1,050ft. deep. To this would require to be added the dip of the strata, as the workings extended to the low ground in the Taylorville freehold, or the lower portion of the Coal-pit Heath lease. These coal areas could therefore be worked from the Wallsend shaft; but before this could be done it is estimated by the manager, Mr. Bishop, that an expenditure of about £7,600 would have to be made in the erection of pumping machinery, and in the construction of a stone drift to cut the fault. But, in our opinion, it would probably require an expenditure of at least £11,000 before the mines could be efficiently opened out from this shaft. Before any expenditure is made in this direction the coal should be proved at different places on the leaseholds. The whole surface of the back portions of these leaseholds being covered with heavy timber and dense undergrowth, and no outcrops of coal appearing either on the surface or in any of the creek-beds, necessitates this being done by boring, and the actual depth and thickness of the coal would be then determined. The cost of these prospecting operations, including the purchase of a diamond drill, would probably amount to about £5,000.

Wallsend Lease outside the Freehold.—In regard to the coal in the Wallsend lease outside the freehold, there is no doubt of a large fault existing to the south-east of the workings. This, we call the "Dobson Fault." It is apparently a great displacement, since the grit above the coal to be seen in the river at the Brunner Mine can be found on the top of Mount Buckley. This fault trends in a south-westerly direction, with its up-throw to south-east. In confirmation of this view, similar grits to what occur 60ft. to 90ft. above the coal at Coal-pit Heath, are found on the side of the Grey River, near Dobson's Bluff, which would indicate that the coal could be found at a comparatively shallow depth at that point. These grits are found about 650yds. down the river from the Wallsend shaft. Taking the depth of the shaft, 670ft., and the dip of the coal in the direction of this fault, there is a probability of an up-throw displacement of about 800ft., as the grits out-cropping on the edge of the Grey River would seem to indicate that coal at this point is not more than 200ft. in depth on the south-eastern side of this up-throw; and on this basis, should no other fault exist, the coal near Dobson Railway Station should be found at a depth not exceeding 700ft.

GEOLOGY OF THE COALFIELD.

The area of the coalfield, of which the company's property forms a part, is included in a length of twelve miles along the western slopes of the Paparoa and Mount Davy Range on the north side, and the slate ridge of Mount Buckley on the southern side of the Brunner Gorge. The breadth of the coalfield in the part south of Coal Creek, from the outcrops on the range to the sea at Greymouth, is about eight miles, but of this not more than one-third could be worked at a moderate depth from the surface. In the northern part of the field, the coal-measures reach to