

I have carried out the above instructions as fully as possible with the number of men at my disposal. I now report upon the result of the season's work:

COAL DEVELOPMENTS.

Camp Robertson.—On Section 20, Township 5, I opened first on Yakoun bed No. 1, which was discovered by Mr. Robertson. It was 19 feet in thickness, as shown by the columnar sections. This bed on the surface is vertical. I sank a shaft 7 x 7 feet to a depth of 23 feet, and found the bed gradually lightening off in dip. At the foot of the shaft the dip to the east was about five degrees only. I then started a gangway at about 17 feet from the surface, going east. I drove this 26 feet, and at the bottom wall the dip was 60° degrees east, the general strike north and south.

This coal, as we got under cover improved in quality, and is, in my opinion, as fine a coking coal as the Connellsville bed of Pennsylvania.

It was tried by Mr. Robertson for smithing, and he pronounced it equal to Cumberland. About 60 feet east of this shaft (Number 1) I discovered an outcrop of another bed, which overlies No. 1. This I sank upon and found it, at the surface between 13 and 14 feet thick, as you will see on columnar sections. At the foot of this shaft (Number 2) 14 feet in depth, I drove across heading north 9 feet, where I struck the hanging wall, and then drove east along this wall 12 feet, and found the bed increased to 14 feet 8 inches, the upper bench increasing from 3 feet to 5 feet 7 inches. East of this shaft I drove a drift in the same bed, but abandoned it on account of the top, which would have required heavy timbering and caused some delay.

I then followed the line of crop about 40 feet east, and opened a slope on the same bed, and drove it about 12 feet on the dip and 12 feet east on a level. This bed No. 2 is of similar quality to that marked No. 1, but not so free from impurities. Going further east about 120 feet, down the south-east fork of the Yakoun river, which is hereabout 12 feet wide, I started a tunnel, intending to strike bed No. 1 again. After driving 89 feet, not having found coal, I began to think the bed was underneath the tunnel, so came back and sank a proving shaft, marked No. 3 on the plan, and at 4 feet from the surface struck coal. I uncovered the bed and found it to be 7½ feet in thickness, a clean bed of coal from wall to wall. This is somewhat of a freer burner than Nos. 1 and 2, but still a good coking coal. I came to the conclusion that it was another bed overlaying No. 2.

Upon going back to examine the slope before mentioned, I found that about 8 feet above the hanging wall there were strong indications of another bed. Upon investigation I found the crop of bed No. 3 on the top of the slope, and this corresponded with the bed as shown in shaft No. 3.

I then went further up the hill to the east and sank shaft No. 4 to a depth of 13 feet 8 inches and found the same bed again. You will see by reference to plans and cross-sections that on continuing the tunnel about 14 feet I would have cut this bed, but the tunnel is on top of beds Nos. 1 and 2.

At the mouth of the slope the formation shows an anticlinal which evidently throws the coal in again on the south side of Yakoun creek and underlays the property south.

Camp Anthracite.—On Section 17, Township 5, I started this camp on the 23rd of April, After having finished the cabin we commenced work on an outcrop and drove in a tunnel about 40 feet. I found the measures somewhat disturbed, showing that it would be necessary to sink in order to get the bed in good condition. I started a shaft, on the bed, close to the mouth of tunnel and sank it to a depth of 39 feet. The condition of the bed was not altogether satisfactory, but still it was in very fair shape. Samples are in your possession of what was taken from this shaft. On account of not having the appliances at hand to sink deeper, I started the men to drive in on one of the benches cut in the tunnel to the east along the wall. When we had driven 30 feet the seam had increased from 2 feet at the entrance to 10 feet at the face. There is little doubt, in my mind, that if the shaft were sunk to a greater depth, the bed would be found in excellent condition.

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