

Report of the Geological Survey in Kentucky 1861 pages 484-488 by David Dale Owen geologist:
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PULASKI COUNTY.
Coal

This is the largest of the counties traversed by the outcrop base line ; and one half of it is coal measures — divisible into three districts. The first lies between the Cumberland river and the Big South fork, locally known as the " Texas District." The second, and, at present, most important of the three, is circumscribed by the contour lines of a system of ridges filling up the space between Rockcastle river, Cumberland river, **Buck creek**, and **Sinking Valley**. The last mentioned valley, strangely enough, does not appear at all on the map of Kentucky, although it is near twenty miles in length. Its course is nearly due south, to the east of, and parallel with, **Brush fork of Buck creek**, into the latter of which it empties, a few miles above the crossing of the Somerset and salt works road. The third district occupies, a small, irregularly shaped area between Pitman and Buck creeks, and between the Cumberland river and the road leading from Somerset to London. The average thickness of the sub-conglomerate member of the mill stone grit formation, in the second of these districts, is about 200 feet At McKee's mines it reaches -233 feet. Further west.it is 191 feet thick. It contains five beds of coal, two of which are workable, the lower being known as the "McKee vein," and the upper as the "Main vein."

The dip of the rocks continues to be, as in Rockcastle county, to the southeast. • This is shown best by the fact that the top of the limestone is 102. feet above the. river, at -the mouth of Roundstone creek, in Rock castle county; but by the time it goes down to the mouth of the river it is but just above the water level. This portion of the county is, there fore, fortunate in having its coal beds near the river for transportation, and so situated that they can be entered by the miner on all three sides of the area — upon the waters of both rivers, and upon those of Buck creek. This is particularly noticeable in the comparatively small space between the mouths of Buck creek and Rockcastle river, where no less than fourteen streams out -through both beds and afford ample facilities for the- construction of .cheap tramways down to the landings.

The lowest of these five beds, .lying about 27 feet above the top of the limestone, is thin.

The second, in ascending, order, varies in height above the limestone from 80 to. 93 feet, and is irregular in thickness. An opening has been made in it by **Alexander McKee**, at the point of a nose between two branches of main **Big Lick creek**, one and a half miles back from the river, down to which- latter runs an iron railway. It is a double bed, and has a clay parting, which thins as it enters the body of the hill. The bed shows an outcrop of from one and a half to three feet; but at the McKee mines I measured, in the left hand gangway, four feet six inches of coal, with a clay parting of thirty inches. In the right hand gangway a mere .streak of clay separates one foot of an upper bench from three feet nine inches of a lower bench, permitting the miner to take out four feet nine inches of coal. As to the continuance of this thickness of the bed throughout the entire area, I was unable to form an opinion, as it has been thoroughly opened with a

view to transportation only at the Nashville company's mines, above mentioned.

It is to be remarked that this double bed on the Cumberland corresponds, in its height above the limestone, with the two thin beds, one of six and the other of four inches, which occur on the Kentucky river above Proctor, and which are noted in Vol. I, p. 216, of this Survey; and, also, that the "Main coal" of the Cumberland is at the same height above the limestone as the main vein of Proctor.

The third coal bed, which varies in thickness from six to twelve inches, comes in 40 feet above the double bed last described, or 125 feet above the limestone.

The main bed of this region, 25 feet above the last, or 150 feet above the limestone, has been opened in many places, and varies in thickness from 39 to 54 inches. About 50 inches seems to be the usual thickness in the mines examined.

The fifth bed occurs about 15 to 20 feet above the last named, and is found in connection with the iron ore described on p. 235 of Vol. I of the Survey. -

The base of the conglomerate lies 25 feet above this. It measures about 80 feet in thickness, and, for the most part, forms, in this portion of the country, the capping of the ridges; but immediately overlooking the Rockcastle river, it is covered with a sufficient quantity of the shales of the true coal measures to take in a 31 to 4 feet vein of coal.

There are three distinct beds of shale containing iron ore traceable in the hills on the Cumberland river and upon the route of the outcrop base line, which, in this county, skirts the western margin of the coal. The first of these, a gravelly ore, shows itself under the lowest coal, and from 15 to 20 feet above the limestone. The second lies about 10 feet above the McKee vein, or 90 feet above the limestone; on main Big Lick creek, just above Mr. McKee's house, it shows itself in kidney-shaped masses, weighing from 1 to 35 pounds, and embedded in a gray shale stratum 5 feet thick. Two analyses show this to be a thirty per centum ore, containing sufficient calcareous matter to flux itself. The third ore bed lies near the base of the conglomerate, and will probably prove to be the most productive. There are also indications of an earthy iron ore just above the main coal bed; such, for instance, as that over the **Sear's bank in the Pitman Hills**, and the 9 inches band showing itself just above the **Widow Pointer's house**, at the head of No Name branch of Line creek. Below the house a 12 inches coal vein has been opened by **J. Burdine**, which, from its accompanying kidney ore, and from its height above the limestone, I judge to be the equivalent of the third coal bed. The same coal bed has been opened in the ridge dividing the **Clifty's from Whetstone creek**, where it measured 9 to 10 inches.

Indications of the McKee coal bed are found in the northern end of the **Pitman Hills**, in the heads of **Blazed and Long Hollows**, and the streams running into Buck creek.

The probable equivalent of the main bed has been opened in the hills 1 3/8 miles S. of E. from **Collier's Mill, on Pitman's creek**. It lies 152 feet above the limestone, and near the crest of the ridge overlooking Buck creek. When worked, it measured 39 inches,

with a clay parting. The bed will be found to exist and yield well on both sides of the Pitman Hills, furnishing a bountiful supply of fuel to- the thickly populated districts to the west and northwest, which, in feet, must draw their contingent from this region, as no coal of any account can be found west of Pitman's creek, owing to the rapid rise of all the strata northwestward, as seen in the following section, made from the junction of the Cumberland and Laurel rivers to Fishing creek, through the **village of Somerset**:

The sudden increase of dip can be plainly seen on the river, to the south of the county seat; for the whole 150 feet of knobstone, exposed at **Waitsboro**, goes under water, at the mouth of **Pitman's creek**, in a distance of only two miles. In like manner, the lower, portion of the overlying limestone, at Pitman's creek, forms the tops of the high hills between **Somerset and Fishing creek**.

Pulaski county, considering the great extent of its good farming land, based upon the limestone and knobstone formations, and the breadth of its mineral area, and its- valuable forest timber— stands among the very first of the counties of the mountain district. At present, this whole region is nearly inaccessible : as the rivers, which would otherwise be highways for the exportation of its productions, are not, and can not be put, in navigable order, until the huge masses of conglomerate, which lock up the Big South fork and Rockcastle river, are blown away, and something is done to circumvent the dangerous shoals which obstruct the main Cumberland river and retard development of its coal banks.

The **proposed railroad**, to connect Lexington, Frankfort, and Cincinnati with the rich valleys of Eastern Tennessee, if carried through the rolling limestone portion of Pulaski county, could cross with comparatively little difficulty the Cumberland river just below the coal and there, gaining the ridge which runs through the Texas District, could be carried over ft nearly level country to the eastern slopes of the Cumberland mountains overlooking Knoxville. This would, at once, bring the coal into market, and open up the valuable white pine lands which border on Tennessee, and also the red cedar lands to the north of them.

The limestone formation continues to thicken through this county south- westwardly, measuring 250 feet at two points on Buck creek, and '242 feet in the **Long Hollow**. Through it is cut the long, dam-shaped **Sinking Valley**, with side slopes yielding fine crops of blue grass and grain. The upper portion of Buck creek, also, runs in this formation, but passes into the underlying knobstones just above the crossing of the **salt works road Pitman's creek** runs m it to its mouth. These test two streams furnish admirable milling power; and the introduction upon them, within the test few years, of the finer kinds of millstones hag given a wonderful impetus to the farming interests of the neighborhood Now that wheat can be properly ground, and so made profitable at a distance*, the old system of an endless succession of crops has given way to -the more healthful alternation of deep-rooted grasses and grains improving the worn out lands, and increasing their money value; while another and remoter consequence is seen in a more attentive and successful sheep raising.