THE OCCURRENCE OF COAL IN MONROE COUNTY.

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(A Preliminary Report.)

The occurrence of coal in small outcrops has been known for three quarters of a century among a few inhabitants of the southwest part of the county. No reference to the occurrence of coal is mentioned in any of the geological reports, except that T. F. Jackson, in discussing the Pennsylvanian of the Bloomington quadrangle, says: "Carbonaceous layers varying in thickness from a thin streak to a few inches in thickness are found here and there in the sandstone shale part of the formation. None of these layers appear to have a very wide horizontal distribution." In this report Jackson does not definitely locate any of these occurrences within Monroe County, though he may have intended to include such area. About twenty-five years ago Mr. Frank Coleman, living in Indian Creek Township, opened a coal prospect in the southeast cuarter of Section 4. He first opened a drift and took out several tons of coal, which he sold to local blacksmiths. When the roof of the drift caved in during a rainy season, he went back about thirty feet from the mouth of the entry and put down a shaft, entered the coal vein and took out twenty-six bushels of coal from a hole about four feet square. Before he could get the shaft lined the upper part of it caved in and he abandoned the mining project. Coal was also found in the bottom of a well in the southeast quarter of Section 3 on the David Koontz farm.

In the late fall of 1917 Hall and Timberlake of Bloomington leased the Coleman farm and began prospecting for coal. They first opened up near the old drift and exposed a layer of coal about fourteen inches thick, a clay parting of the thickness of one foot, and a lower layer of coal sixteen inches thick.

As the entry was driven back under the hill the clay diminished in thickness and the coal increased in thickness to that extent. They also opened up the old shaft and found a thickness of twenty-six inches of good hard coal. They then drilled a well with a core drill midway between the occurrence on the Coleman place and the one on the Koontz place, and the well record which they kept shows six feet of coal at this point. On the David Koontz place they then sank a shaft to a

See Thirty-ninth Annual Report, Geological Survey of Indiana, 1914, p. 227.

depth of seventeen feet and struck a vein of coal having a thickness of about two feet. In an entry running in the direction of the well above mentioned the coal shows evidence of thickening. The coal at this point underlies seventeen feet of grayish colored sandstone. Underlying the coal is a layer of fire clay.

The deep well above mentioned was drilled at an elevation of about 970 feet above sea level. The strata pierced are as follows:

	Feet.
Soil (top)	6
Ironstone	7
White shale	5
Ironstone	$5\frac{1}{2}$
Blue sandstone	34
Coal	6
Blue shale containing pyrite	$22\frac{1}{2}$
Blue sandstone	17
Ironstone and ore	$27\frac{1}{2}$
Limestone	3
Total	133

Composition of Monroe County Coal.

A sample of the coal taken from the reopened shaft on the Coleman farm was analyzed by Mr. H. M. Burlage of the Chemical Department of Indiana University. The sample was obtained by taking a bushel of the mine-run coal, crushing and quartering down to about one pound of crushed coal, which was turned over to the analyst. The results obtained from the analysis are recorded below:

ANALYSIS OF MONROE COUNTY COAL,

	Per cent.
Volatile matter	42.74
Fixed carbon	52.96
Ash	4.3
Sulphur	2.76
B. T. U	14,599.70

Comparing this analysis with the analyses of 115 samples of Indiana coals, this sample showed the highest amount of fixed carbon; only three samples run higher in volatile matter; only six are lower in ash; and it is the highest in recorded B.T.U.



Fig. 1. View along public road in Section 33, VanBuren Township, showing Mississippian sandstone with shales containing a thin layer of limestone. These rocks lie below the coal-bearing formation of this area,



Fig. 2. Ccal mine on the David Koonz Farm. Property of Hall and Timberlake. Shaft seventeen feet deep. Coal at rear of man on left hand.

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The analysis of another sample taken from the same locality was made by Thomas J. Dee & Co., Chicago, Ill. The results recorded are as follows:

	Per cent.
Hydro carbon	44.90
Fixed carbon	
Ash	3.00
Moisture	8.90
Sulphur	1.56

Coal is now being mined by Hall and Timberlake from the shaft on the David Koontz place. The coal is being used locally for domestic purposes and for blacksmithing.