

Operator: Clinchfield Coal Co.

Farm: Virginia Iron, Coal and Coke Co.

Well No.: 207

Index No.: 20

Location: Wise County

9800' S of 37°00'

4750' W of 82°25'

Elevation: 2099.44'

Total Depth: 6277'

Remarks: Elevation and location of well site with reference to: coal geology along Toms Creek; measured sections Nos. 537, 538, 539; indicate the well located about 50' below the Upper Banner coal, about 100' above the Lower Banner coal and about 300' above the Kennedy coal. Correlations by Marshall Miller, 1970-74, VDMR.

<u>Formation</u>	<u>Top</u>	<u>Bottom</u>	<u>Thickness</u>
Pennsylvanian System			
Post Lee Formation "in at surface"		1047	1047'
		Upper Banner coal horizon at -50'	
		Lower Banner coal 74-76	
		or 123-124	
		Kennedy coal 300-301	
		McClure sand interval 320-350	
		366-410	
		Aily coal? 410-412	
		Raven coal 539-540	
		Jawbone coal 741-742	
Lee Formation	1047	1970	923'
		quartzose sand 1047-1143	96'
		War Creek coal 1553-1555	
		quartzose sand 1907-1970	63'
		total quartzose sand	159'
Pocahontas Formation	1970	2279	309'
		Pocahontas #3 coal 1998-2001	
Mississippian System			
Bluestone Formation	2279	2762	483'
Pride Shale	2603	2762	159'
Princeton Interval	2762		
Stony Gap Sand	3342	3410	68'
Greenbrier Formation	4133	4604	471'
Maccrady	4604		

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Remarks: Well has been sufficiently logged by K. Robinson. Formational boundaries and lithologic descriptions are determined from K. Robinson's geologic log except for the summary and additions below. Geologic summary by Marshall S. Miller; was prepared to: obtain descriptive recognition of Lee quartzose sand members; identify the Pocahontas Formation; recognize all coal intervals.

<u>Depth</u>	<u>Thickness</u>	<u>Description</u>
74- 76	2'	Coal, dull, silty, shaly; also noted by driller
123-124	1'	Coal, dull, shaly, impure
170-172	2'	Coal, shaly, bony, impure
188-190	2'	Coal, good vitreous luster, conchoidal fracture, very pure
300-301	1'	Coal, pure and impure, to dull, shaly
320-410	90'	McClure sand interval
320-350	30'	Sandstone, white to light gray, fine to medium grained, subangular, moderately sorted, micaceous, with abundant carbonaceous material and clay-silt matrix, locally calcareous; 323-330 is missing; 65% quartz, 20% matrix, 15% rock and mineral fragments
350-366	16'	Siltstone, dark gray, argillaceous, locally calcareous, finely micaceous
366-410	44'	Sandstone, white to light gray, fine to coarse grained, subangular to subround, poorly sorted, micaceous, with traces of feldspar, abundant carbonaceous material, and clay-silt matrix; about 70-75% quartz, 15% matrix, 10% rock and mineral fragments, less than 5% feldspar

410-412	2'	Coal, pure to impure, silty and bony in part
539-540	1'	Coal, silty, dull, bony
607-608	1'	Coal, shaly, impure; also noted by driller
639-640	1'	Coal, impure, silty
741-742	1'	Coal, hard, shaly, impure
847-848	1'	Coal, soft, silty, impure to pure, with abundant sulphur
1047-1143	96'	Sandstone, white, quartzose, fine to coarse grained, but mostly medium grained, subangular to subround, moderately-well sorted, rare matrix material, scattered dark, rounded, rock fragments; 90-95% quartz, 5% rock fragments, less than 5% matrix; quartz grains are mostly subrounded, medium grained, many are frosted, and occasionally some rose quartz present
1234-1235	1'	Coal, soft, flaky, pure to impure
1399-1400	1'	Coal, hard, shaly, impure
1410-1412	2'	Coal, pure, good vitreous luster, blocky fracture
1553-1555	2'	Coal, pure and impure, silty and bony in part
1599-1600	1'	Coal, hard, shaly, impure
1731-1734	3'	Coal, high vitreous luster, good conchoidal fracture, appears to be very pure, driller noted coal 1737-1739
1811-1814	3'	Coal, hard, shaly, for most part impure
1907-1911	4'	Sandstone, white, quartzose, medium grained, subrounded, moderately well sorted, rare matrix material, abundant dark rock fragments; 90 to 95% quartz
1911-1970	59'	Sandstone, white, quartzose, fine grained to granular, subangular to subround, poorly sorted, rare matrix material, rare dark rock fragments, conglomeratic quartz fragments present 1911-1923, 1947-1948; 95% quartz, 5% matrix and rock fragments

1998-2001	3'	Coal, pure to impure, hard and shaly in part, yellow sulphur is visible
2128-2129	1'	Coal, hard, shaly, impure
2257-2258	1'	Coal, hard, silty and bony
2279		Siltstone, light greenish-gray, olive, calcareous with reddish spherulitic siderite nodules