

Operator: Clinchfield Coal Corp.

Farm: H. P. Phillips

Well No.: 101

Location: Dickenson County

5450' S of 37°05'

4400' W of 82°20'

Elevation: 1520.5'

Total Depth: 4551'

Remarks: Well has been logged sufficiently by John Wilson, VDMR, 1962.

The summary below was prepared by Marshall S. Miller, 1971, to establish the formational boundaries of the Lee Formation and identify any coal seams which may have been overlooked. All other descriptions are referred to the geological log of Wilson.

<u>Depth</u>	<u>Thickness</u>	<u>Description</u>
176-177	1'	Coal, impure, silty
592-598	6'	Sandstone, white, quartzose, fine to medium grained, occasionally coarse grained, subround to subangular, very little to no matrix material, secondary quartz visible; 95% quartz; 5% matrix and/or rock fragments
598-602	4'	Sandstone, white quartzose, very fine grained, subrounded, well sorted, with scattered dark rock fragments, muscovite; 90% quartz, 5% matrix, 5% rock and mineral fragments
602-614	12'	Sandstone, white, quartzose, fine to medium grained to coarse grained, subround to subangular, grades to a conglomeratic sand by 609', no matrix material over 95% quartz
614-629	15'	Sandstone, white, quartzose, fine to medium grained, subround to subangular, moderately to well sorted, rare matrix material, secondary quartz visible, over 95% quartz

629-648	19'	Sandstone, white, quartzose, fine to coarse grained and conglomeratic, subangular, to subround, poorly sorted, small amount of clay matrix and dark rock fragments, about 90% quartz, 5% matrix, 5% rock fragments
648-658	10'	Sandstone, white, quartzose, medium to coarse grained, subround to subangular, moderately to poorly sorted, scattered dark rock fragments and clay, silica, calcareous matrix material; 90% quartz
658-663	5'	Sandstone, white, quartzose, fine to medium grained, subrounded, moderately sorted, 95% quartz
663-670	7'	Sandstone, white, quartzose, medium to coarse grained, and conglomeratic, subround to subangular, poorly sorted, 95% quartz
670-671	1'	Coal, pure to impure and silty, vitreous luster, blocky fracture
765-766	1'	Coal, vitreous luster, conchoidal fracture
867-868	1'	Coal
1379-1413	34'	Sandstone, white, quartzose, medium to coarse grained, subangular to subround, poorly sorted to moderately sorted, some occasional chert and dark rounded rock fragments present, 90% quartz, 5% matrix, 5% rock fragments
1413-1455	42'	Sandstone, white, quartzose, fine to medium grained, mostly medium grained, occasionally coarse grained, subround to subangular, sorting varies, Poor to well sorted; 95% quartz
1455-1460	5'	Siltstone, dark gray, finely micaceous with quartz pebbles

1460-1470	10'	Sandstone, white, to light gray, fine to medium grained, subangular, poorly sorted, with silt-pebble contamination, scattered muscovite, traces of feldspar, and dark carbonaceous material
1470-1475	5'	Missing
1475-1482	7'	Sandstone, fine to coarse grained, conglomeratic, subangular, poorly sorted, with abundant carbonaceous material, dark argillaceous material, scattered muscovite, feldspar, calcareous cement
1482-1513	31'	Sandstone, light gray, gray, fine to medium grained, interstitially silty, subangular, poorly sorted, micaceous and feldspathic, calcareous cement with occasional stringers of siltstone
1513-1684	171'	Continues as typical Pocahontas lithology. Dark gray micaceous and carbonaceous shales and siltstone; fine grained, low quartz, micaceous, and feldspathic sands; and occasional coal beds
1684		Bluestone lithology recognized by light greenish gray, slightly calcareous shales and siltstone with rounded brown chert? nodules

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Remarks: Elevation and location of well site in relation to coal geology along the McClure River and measured section No. 145, indicate that well spudded in about 60' below the Kennedy coal.

<u>Formation</u>	<u>Top</u>	<u>Bottom</u>	<u>Thickness</u>
<b>Pennsylvanian System</b>			
Post Lee Formation "in at surface"		592'	592'
		Kennedy coal horizon at -60'	
		Aily coal 28-29	
		Raven coal 176-177	
		Jawbone coal 324-328	
		Tiller coal 350-351	
Lee Formation	592	1455	863'
		War Creek coal horizon at 1025'	
		quartzose sand 592-670	78'
		quartzose sand 1379-1455	76'
		total quartzose sand	154'
Pocahontas Formation	1455	1684	229'
		Pocahontas #3? did not appear to be present in cuttings or on drillers log	
		Pocahontas #2 coal 1657-1661	
		Pocahontas #1 coal 1667-1672	
<b>Mississippian System</b>			
Bluestone Formation	1684	2200?	516'
Pride Shale	2071	2200?	129'
Princeton Interval	2200?	2345	145'
Little Stone Gap Member	2345	2431	86'
Stony Gap Sand	2685	2930	245'
Greenbrier Formation	3244	3897	653'
Maccrady	3897		