

**DETAILED RECORDS BASED ON EXAMINATION  
OF SAMPLES**

**Annette Riley No. 7840 Well.**

(001-00003)

Elk District, Barbour County, W. Va.  
By Hope Natural Gas Co., Clarksburg, W. Va.  
Located 0.29 mi. W. of 80° 10' and 0.67 mi. S. of 39° 10'—WC—Philippi  
Quadrangle; 1 mi. E. of Overfield and 4½ mi. N. of Century, on  
small branch of Elk Creek.  
Elevation, 1194' L.  
Permit Bar-3.  
Drilling commenced August 10, 1938; completed January 7, 1939.  
Well was not shot.  
Volume, 184,000 cu. ft. per day; rock pressure not measured.  
Fresh water at 36 and 62'; salt water at 836'.  
13" casing, 14', 10", 225'; 8¼", 1482'; 6½", 2429'; 5-3/16", 3978'; all  
left in. Casing not cemented.  
No coal was encountered.  
Gas well.

This well apparently started in the upper part of the Conemaugh Formation. Samples start at a depth of 1865 feet and continue to the total depth of 4389 feet, with a few interruptions due to the writing on the bags having become illegible. The driller's record is so incomplete that it gives little definite information about the position of key horizons. The top of the Big Lime is probably correctly located at 1475 feet but there should be more than twice as much of it as the 100 feet given in the record. The part of the section represented by samples is presumably all Lower Mississippian and Upper Devonian with the position of the boundary between them uncertain. The sandstone from 1901 to 1930 feet might be the Berea but it is rather doubtful whether the Berea extends this far east.

Top.	Bottom.	Thickness.	
1865	1877	12	Sandstone, gray, very fine with a few coarser grains near bottom; most of it is practically a siltstone; slightly calcareous
1877	1901	24	Siltstone, dark-gray; and silty shale
1901	1930	29	Sandstone, white, mostly coarse and pebbly with some finer at bottom
1930	1941	11	Shale, gray, silty
1941	1983	42	Sandstone, light-gray, mostly fine to very fine but contains some scattered coarse grains; there are streaks of gray shale throughout
1983	2010	27	Shale, gray, with small amount of green; also large amount of gray siltstone and a little white sandstone
2010	2016	6	Shale, red and green
2016	2030	14	Sandstone, light-gray to greenish, very fine; with varying amounts of shale and siltstone
2030	2061	31	Shale and siltstone, gray
2061	2078	17	Siltstone, light-green; with considerable amounts of red, green, and gray shale
2078	2100	22	Siltstone, green; with considerable gray shale
2100	2106	6	Shale, red, gray, and green; and green siltstone
2106	2136	30	No samples
2136	2172	36	Shale, red; with some red and green siltstone (record gives Gordon Stray Sand, 2140 to 2170')
2172	2194	22	Shale, mostly green and gray, some red
2194	2305	111	Shale and siltstone, red; this interval also contains some gray and green shale; depths on several samples are uncertain
2305	2320	15	Samples missing, but included in Gordon Sand according to driller's record
2320	2361	41	Sandstone, light-gray to greenish, mostly fine, but poorly sorted as to grain-size; contains chlorite (driller's record shows "Gordon Sand" from 2290 to 2387')
2361	2384	23	Shale, gray, with small amount of red and green
2384	2389	5	Sandstone, gray, hard, medium-grained, poorly sorted
2389	2402	13	Shale, red
2402	2481	79	Sandstone, light greenish gray, fine to very fine; below 2360' it is practically a siltstone and contains some streaks of shale; samples not complete (show of oil at 2402' and show of gas at 2417')
2481	2877	396	Shale, gray, interbedded with light-green to gray siltstone; a few samples are as much as half siltstone but the average proportion is much less
2877	2888	11	Siltstone, grayish-green
2888	3550	662	Shale, gray, with varying amounts of gray to grayish-green siltstone; in many samples the siltstone contains fossil shells but no definite determination of the limits of the fossil zones was made
3550	3595	45	Siltstone, brown and gray, calcareous, fossiliferous
3595	3668	73	Siltstone, gray, calcareous, fossiliferous; with considerable amount of gray shale
3668	3947	279	Shale, gray with large amount of gray to grayish-green, fossiliferous and slightly calcareous siltstone; many samples are at least half siltstone or very silty shale
3947	3957	10	Siltstone, dark-brown, with some gray, slightly calcareous
3957	4010	53	Shale and siltstone, gray

4010	4026	16	Sandstone, dark-brown, with some gray, very fine, very slightly calcareous (Riley Sand from 4015 to 4048' according to driller's record; gas at 4017')
4026	4119	93	Siltstone, gray; mostly finer and more shaly than the brown sandstone above, but contains only small amount of true clay shale; a few fossil shell fragments
4119	4140	21	Sandstone, brown, very fine, slightly calcareous; very similar in appearance to the "Riley Sand" above, but is broken finer
4140	4328	188	Shale, gray, mostly with a large proportion of gray to grayish-green, slightly calcareous siltstone; in a general way texture is finer and rock more distinctly laminated in the lower part of this interval
4328	4340	12	Sandstone, dark-brown, very fine, slightly calcareous; contains a little mica (Benson Sand; gas at 4335')
4340	4355	15	No sample
4355	4365	10	Sandstone, dark-brown, very fine, apparently about the same as the Benson Sand above
4363	4375	10	Siltstone, gray, with considerable amount of shale
	4389		Total depth

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