

A. T. Prather No. 7844 Well

Murphy District, Ritchie County, W. Va.

By Hope Natural Gas Company, Clarksburg, W. Va.

Located 0.37 mi. W. of 81°00' and 1.0 mi. S. of 39°05' -SE- Harrisville

Quadrangle; 4.7 mi. E. of Smithville.

Elevation, 1063' L.

Permit, Rit-725.

Drilling commenced July 20, 1939; completed, October 5, 1939.

Gas well; open flow, 464,000 cu. ft.

Fresh water at 130'; no salt water recorded; no coal was encountered.

10" casing, 260'; 8 1/2", 1220'; 6-5/8", 1964'; all left in.

According to the structure map¹ of Wood, Ritchie and Pleasants Counties,

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Ray V. Hennen, West Virginia Geological Survey, 1910.

this well starts in the Dunkard Group at about 150 feet above the Washington Coal horizon, but no indication of the presence of that coal is found in the samples or the drillers' record. On the basis of this set of samples and other available information on the stratigraphy of this area it seems impossible to locate the boundaries of the formations above the Greenbrier Limestone. The top of the Mauch Chunk Group can hardly be below 1895 feet depth and may be as high as 1854 feet, which would give the Mauch Chunk a thickness of 141 feet.

Top	Bottom	Thickness	
0	8	8	Clay, brown, sandy
8	16	8	Clay, yellow, calcareous
16	60	44	Clay, red, calcareous; contains many small limestone nodules
60	68	8	Sandstone, green, fine, micaceous, 50%; red clay, 50%
68	84	16	Clay, red, calcareous
84	92	8	Siltstone, green, micaceous
92	100	8	Clay, red, calcareous; contains many small limestone nodules
100	132	32	Siltstone, green, shaly, micaceous, with streaks or nodules of limestone (fresh water, 130')
132	140	8	Clay, gray, with limestone nodules
140	158	18	Siltstone, green, shaly, micaceous, calcareous; about 10% of gray limestone

Top	Bottom	Thickness	
158	182	24	Sandstone, very light grayish-green, medium-grained; finer and more micaceous at top
182	202	20	Siltstone, green, micaceous; some green shale and impure gray limestone
202	208	6	Shale, red, brown, and gray, partly silty
208	216	8	Siltstone, green, shaly, micaceous
216	229	13	Clay and soft shale, red, slightly calcareous
229	240	11	Red rock, soft (no samples, 229 to 310')
240	280	40	Lime, hard
280	310	30	Sand, hard (Waynesburg? Sandstone, 280 to 357')
310	357	47	Sandstone, light-gray, medium-grained, micaceous, slightly calcareous; contains biotite as well as muscovite
357	365	8	Limestone, light-yellowish-gray, very fine textured
365	388	23	Shale and siltstone, grayish-green, micaceous
388	395	7	Clay, gray, with small limestone nodules
395	450	55	Shale, red, very soft, calcareous; contains many small limestone nodules
450	515	65	Shale and siltstone, green, calcareous, micaceous; contains streaks or nodules of impure gray and green limestone
515	529	14	Shale and siltstone, green, like that above, 50%; soft red shale, perhaps cavings, 50%
529	577	48	Shale, red; harder and more distinctly laminated than most of the red clay or shale above
577	600	23	Siltstone, grayish-green, shaly, micaceous
600	622	22	Clay, red and light-gray, calcareous
622	630	8	Siltstone, light-green, micaceous, calcareous
630	638	8	Sandstone, white, medium-grained
638	711	73	Siltstone and shale, grayish-green, micaceous; contains streaks or nodules of limestone, 638 to 662', and small amounts of calcareous material below that; samples from 683 to 697' are about half red shale, perhaps cavings

Top	Bottom	Thickness	
711	718	7	Shale, gray
718	736	18	Limestone, brown and yellow, very clayey
736	828	92	Shale, red and yellow, soft, calcareous; contains many small limestone nodules
828	849	21	Siltstone, green, shaly, micaceous; samples also contain some medium-grained sand indicating one or more sandstone streaks in this interval
849	871	22	Shale, gray, soft, with limestone nodules; also a little black shale
871	884	13	Limestone, gray and yellow, very fine textured, 50%; soft gray shale, 50%
884	891	7	Clay, red and yellow, calcareous
891	914	23	Shale, green, very silty; with about 15% of gray to yellow very fine textured limestone
914	922	8	Sandstone, green, fine, micaceous
922	950	28	Sandstone, nearly white, medium-grained; contains mica, chlorite and kaolin
950	958	8	Clay, gray, calcareous
958	994	36	Clay, red, with many limestone nodules
994	1010	16	Shale, green, very silty
1010	1024	14	Shale and siltstone, green, 50%; red clay and soft shale, 50% (perhaps cavings)
1024	1052	28	Clay, red, gray and yellow, contains many limestone nodules and possibly some distinct beds of limestone
1052	1057	5	Siltstone, green, shaly
1057	1065	8	Shale, red, soft, 60%; green shale and siltstone, 40%
1065	1092	27	Shale, gray and green, very silty; considerable red clay or soft shale, probably cavings
1092	1097	5	Clay, red and gray, with small limestone nodules
1097	1118	21	Shale, dark-gray, silty, with some calcareous fossil fragments
1118	1148	30	Shale and siltstone, green; also some limestone
1148	1156	8	Limestone, gray, 50%; red, gray and green shale, 50%
1156	1190	34	Siltstone, gray, shaly, micaceous
1190	1204	14	Shale, gray

Top	Bottom	Thickness	
1204	1209	5	Siltstone and shale, gray
1209	1301	92	Sandstone, nearly white, medium-grained
1301	1316	15	Sandstone, gray, very fine, shaly, micaceous
1316	1330	14	Shale, gray
1330	1419	89 81	Sandstone, nearly white, medium-grained; contains moderate amounts of mica, chlorite, and kaolin
1419	1433	14	Siltstone, gray, shaly, micaceous
1433	1443	10	No sample; recorded as sand
1443	1480	37	Sandstone, nearly white, medium-grained; a little coal, 1443 to 1440'
1480	1485	5	Shale, dark-gray
1485	1517	32	Sandstone, gray, very fine, shaly, micaceous
1517	1583	66	Sandstone, white to light-gray, medium-grained; contains considerable mica, chlorite and kaolin
1583	1633	50	Shale, black
1633	1702	69	Shale and siltstone, gray
1702	1715	13	Sandstone, nearly white, medium-grained
1715	1723	8	No sample, recorded as slate
1723	1740	17	Shale, dark-gray, silty, micaceous
1740	1748	8	Sandstone, white, medium-grained, nearly all quartz
1748	1764	16	Shale, gray
1764	1806	42	Sandstone, nearly white, medium-grained; contains some mica, chlorite and kaolin
1806	1814	8	Shale, gray, with siderite concretions
1814	1854	40	Sandstone, white, medium-grained
1854	1862	8	Siltstone, dark-gray, shaly
1862	1870	8	Sandstone, gray, very fine
1870	1879	9	Siltstone, dark-gray, shaly
1879	1895	16	Shale, light-gray, silty
1895	1905	10	Shale, gray and green, 40%; light-gray limestone, 40%; white to gray siltstone and very fine sandstone, 20%
1905	1915	10	Shale, red and green, soft, calcareous
1915	1920	5	Shale, grayish-green, partly silty, 70%; brown, fossiliferous limestone, 30%
1920	1925	5	Shale, gray; small amount of green shale and brown limestone

Top	Bottom	Thickness	
1925	1949	24	Limestone, brown, with some white spots
1949	1957	8	Siltstone, white to light-green, 60%; gray and green shale, 20%; brown limestone, 20%
1957	1985	28	Sandstone, white, fine
<u>Greenbrier Limestone, 133 feet</u>			
1985	2030	45	Limestone, light-brown (gray when dry)
2030	2062	32	Limestone, light-brown to light-grayish
2062	2068	6	Sandstone, light grayish yellow, highly calcareous
2068	2093	25	Limestone, very light grayish yellow, very sandy, slightly dolomitic
2093	2118	25	Limestone, light-yellow, very sandy, strongly dolomitic
<u>Poccano Formation, 54+ feet</u>			
2118	2150	12	Sandstone, light-green, very fine, slightly calcareous
2130	2172	42	Shale, gray, silty
	2172		Total depth