

Yawkee-Freeman No. 59 Well

Washington District, Boone County, W. Va.

By South Penn Natural Gas Company.

Located 3.58 mi. west of 81°45' and 3.09 mi. S. of 38°00' -NE- Logan Quadrangle; 0.7 mi. of mouth of Spruce Laurel Fork at Clothier.

Elevation, 848.46' L.

Permit 800-450

Commenced May 14, 1940; completed, July 12, 1940.

Gas well; volume, 200,000 cu. ft.; rock pressure, 230 lbs. in 24 hours.

Shot July 20, 1940 at 2459-2485'.

10" casing, 118'; 8 1/4", 1252'9"; 6-5/8", 1801'; 2" tubing, 2443'

Packer - Spang Conical Sleeve, 2 x 6-5/8 x 16 set at 1815'

Coal was encountered at 53'

Fresh water at 98, 190 and 252'.

According to geologic map well is near 625 foot contour on Campbells Creek - No. 2 Gas Coal. Depths of most of samples are given only to nearest ten feet. The top of the Greenbrier limestone is not regarded as determined with very great certainty, but the thicknesses of the Mauch Chunk and Greenbrier agree fairly well with Yawkey-Freeman No. 56 well, from which the samples were more satisfactory.

Top	Bottom	Thickness	
<u>Pottsville Formation, 1277+ feet</u>			
0	10	10	Sandstone, gray, fine, calcareous
10	20	10	Siltstone, dark-gray, with a little coal
20	30	10	Sandstone, light-brown, fine, calcareous
30	50	20	Shale, dark-gray, silty
50	80	30	Sandstone, light-brown, fine, calcareous (coal at 53 to 55' according to driller's record)
80	90	10	No sample
90	140	50	Shale, gray, silty, (fresh water, 98')
140	250	110	Sandstone, nearly white, medium-grained; contains small amounts of muscovite, chlorite and kaolin (fresh water, 190')
250	270	20	Sandstone, nearly white, medium-grained, 60%; gray silty shale, 40% (fresh water, 252', hole full)

Top	Bottom	Thickness	
270	310	40	Shale, gray, very silty (could just as well be called shaly siltstone)
310	350	40	Sandstone, light-brown to nearly white, calcareous; contains small amounts of muscovite and chlorite
350	360	10	Sandstone, white, medium-grained
360	400	40	Siltstone, gray, shaly, micaceous
400	440	40	Shale, dark-gray; contains siderite concretions
440	450	10	Siltstone, gray, shaly
450	460	10	Sandstone, white, medium-grained, 50%; gray siltstone and shale, 50%
460	500	40	Siltstone, gray, shaly; includes some very fine sandstone
500	630	130	Sandstone, gray, fine to very fine, partly shaly; some thin dark streaks contain much mica and carbonaceous material
630	770	140	Sandstone, light-gray, medium-grained; contains small to moderate amounts of mica, chlorite, siderite, and kaolin
770	800	30	Shale, dark-gray
800	810	10	Siltstone, gray
810	820	10	Sandstone, gray, fine to very fine; small amount of coal
820	830	10	Siltstone, gray, shaly
830	840	10	Sandstone, white to gray very fine
840	870	30	Siltstone, gray; a little coal, 850-860'
870	890	20	Sandstone, nearly white, medium-grained
890	900	10	Siltstone, gray
900	910	10	Shale, gray, silty
910	1190	280	Sandstone, white, medium-grained, nearly all quartz; mostly broken up into individual grains, many of which have crystal faces
1190	1230	40	Sandstone, light-gray, coarse
1230	1240	10	Sandstone, white, medium-grained, nearly all quartz
1240	1260	20	Sandstone, light-gray, coarse
1260	1277	17	Sandstone, white, coarse, nearly all quartz
<u>Mauch Chunk Group, 473 feet</u>			
1277	1280	3	Shale, gray, soft

Top	Bottom	Thickness	
1280	1300	20	Sandstone, white to light-green very fine; also small amounts of light brown limestone and red and green shale
1300	1310	10	Sandstone, as above, 40%; light-brown limestone, 30%; grayish-green shale, 20%; red shale, 10%
1310	1320	10	Limestone, light-brown
1320	1340	20	Sandstone, white to light-green, fine to very fine; also a little red and green shale
1340	1360	20	Siltstone, light-green, calcareous; also some soft green shale and fine white sandstone
1360	1390	30	Sandstone, light-green to light-gray, very fine, slightly calcareous
1390	1470	80	Sandstone, white, fine, nearly all quartz; samples somewhat stained with rust; many small chips in samples appear to show firm cementation with quartz
1470	1510	40	Sandstone, white, medium-grained; nearly all quartz with many grains showing crystal faces; mostly broken up into individual grains
1510	1540	30	Sandstone, white, with brown rust stain, fine; mostly broken up into individual grains
1540	1570	30	Sandstone, white to light-gray, fine, 70%; gray and red shale, 30%
1570	1580	10	Shale, gray, partly silty, 50%; very fine, light-gray sandstone, 50%
1580	1600	20	Shale, gray silty, micaceous, 75%; dark-brown, very silty dolomitic limestone, 25%; some of shale is reddish
1600	1670	70	Limestone, dark-brown, fossiliferous; 20% soft laminated shale which breaks to pieces in water; a little bluish-gray chert, 1650-1670'
1670	1680	10	No sample
1680	1690	10	Limestone, dark-brown, fossiliferous, with shale as in interval 1600 to 1670'
1690	1750	60	Shale, gray, soft, distinctly laminated, 70%; gray and brown limestone, 30%
<u>Greenbrier Limestone, 204 feet</u>			
1750	1770	20	Limestone, brown, fine-textured, 70%; soft gray shale, 30%
1770	1780	10	Limestone, light-brown, fine-granular, 70%; soft gray shale, 30%

Top	Bottom	Thickness	
1780	1790	10	Shale, gray, soft, 80%; light-brown limestone, 20%
1790	1800	10	Limestone, brown 90%; gray shale, 10%
1800	1810	10	Limestone, very light brown
1810	1850	40	Limestone, very light brown or grayish-yellow, somewhat dolomitic; contains small amount of sand
1850	1860	10	Limestone, light-brown, distinctly oolitic
1860	1900	40	Limestone, very light grayish-yellow, dolomitic; texture is a little coarser than in portions of the Greenbrier which are not dolomitic
1900	1920	20	Limestone, light-brown; contains a little sand and a few indistinct oolites
1920	1930	10	Limestone, light-brown, reddish and greenish, dolomitic
1930	1954	24	Limestone, light-brown, oolitic; contains a very little sand (show of gas, 1955')
<u>Maccrady Formation, 46 feet</u>			
1954	2000	46	Siltstone, grayish-red
<u>Pocono Formation, 485 feet</u>			
2000	2050	50	Shale, gray, very silty, 70%; fine to very fine, light-gray sandstone, 30% (show of gas 2019')
2050	2150	100	No samples (reported as slate and shells) gas 2075', 135,000 cu. ft.; show of gas, 2148'
2150	2180	30	Shale, gray, silty; with small amounts of siltstone and very fine sandstone
2180	2190	10	Siltstone, gray
2190	2250	60	Shale, gray; with a little siltstone and very fine sandstone
2250	2350	100	No sample
2350	2370	20	Siltstone, gray
2370	2380	10	No sample
2380	2390	10	Siltstone, gray
2390	2433	43	Shale and siltstone, gray; a little fine sandstone, 2420-2430'
2433	2455	22	Shale, black (Sunbury Shale)
2455	2485	30	Sandstone, nearly white fine- to medium-grained; strong concentration of pyrite at top (Berea Sandstone; show of oil, 2468')

T	Bottom	Thickness	
			<u>Devonian Shales, 25+ feet</u>
435	2495	10	No sample
2495	2510	15	Shale, gray
	2510		Total depth