

Roscoe F. Lockney No. 7847

Sherman District, Calhoun County, W. Va.

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

Located 3.62 mi. W. of 81°00' and 1.32 mi. S. of 38°50' -SS- Arnoldsburg Quadrangle;
1 mi. W. of Sand Ridge and 4 mi. N. E. of Arnoldsburg.

Elevation, 1129' L.

Permit, Cal-516, drilling commenced July 15, 1939; completed August 27, 1939.

Gas well; volume, 370,000 cu. ft.; rock pressure, 460 lbs. in 24 hours.

Shot August 30, 1939, at 2181-2194'.

No fresh water recorded; salt water at 1872'.

10" casing, 244'; 8 1/2", 1138'; 6 5/8", 2064'; 3" tubing, 2232'.

Casing not cemented. No coal was encountered.

The section given below is based on the drillers' record to a depth of 180 feet and on a nearly complete set of samples below that depth. The place chosen as the boundary between the Dunkard Group and the top of the Pennsylvanian agrees with the geologic map of Calhoun County but does not imply any certain correlation based on the record itself.

Top	Bottom	Thickness	
<u>Dunkard Group, 85+ feet</u>			
0	15	15	Surface
15	25	10	Slate
25	35	10	Cave
35	85	50	Rock (Waynesburg Sandstone?)
<u>Pennsylvanian, 1884 feet</u>			
85	95	10	Red mud
95	125	30	Sandstone
125	180	55	Lime
180	210	30	Clay, red, calcareous; contains small limestone nodules
210	215	5	Shale, greenish-gray, silty
215	290	75	Sandstone, white, medium- to coarse-grained
290	300	10	Shale, grayish-green, silty, 50%; coarse white sandstone, 50%
300	324	24	Sandstone, greenish-white; medium-grained

Top	Bottom	Thickness	
324	335	11	Shale, grayish-green, silty, 50%; white sandstone, 50%
335	350	15	Shale, red and green, calcareous
350	363	13	Siltstone, green, shaly, micaceous, calcareous
363	382	19	Shale, red, soft
382	425	43	Shale and siltstone, green
425	455	30	Shale, red, soft, calcareous
455	520	65	Shale, green, partly silty and micaceous; contains some brown limestone nodules
520	530	10	Sandstone, light grayish green, fine, micaceous
530	550	20	Sandstone, white, medium-grained
550	570	20	Clay, red, and yellow
570	590	20	Limestone, light-gray to greenish, 50%; green shale and siltstone, 50%
590	600	10	Clay, red, calcareous
600	610	10	Sandstone, white to light-green, fine
610	640	30	Clay, red, calcareous
640	690	50	Sandstone, green, fine to very fine, calcareous, and micaceous
690	705	15	Clay, red and gray, calcareous
705	745	40	Shale and siltstone, green; considerable amount of limestone, at least part of which occurs as nodules
745	765	20	Clay, gray, with limestone nodules
765	782	17	Sandstone, light-green, very fine, highly calcareous
782	788	6	Shale, red and gray, soft, calcareous
788	815	27	Shale and siltstone, grayish-green
815	850	35	Clay, red, calcareous
850	885	35	Shale and siltstone, green, calcareous, 60%; red clay (perhaps partly cavings), 40%
885	905	20	Sandstone, green, fine, highly calcareous, micaceous
905	925	20	Clay, yellow, red, and gray, 60%; fine white sandstone, 40%
925	945	20	Shale and siltstone, gray
945	955	10	Clay, light-gray, 70%; black shale with trace of coal, 30%
955	967	12	Clay, red
967	978	11	Shale, gray, soft, 50%; fine white sandstone, 50%

Top	Bottom	Thickness	
978	1030	52	Sandstone, white, medium-grained; contains some mica, chlorite and kaolin; partly calcareous
1030	1040	10	Shale, gray, with siderite concretions, 50%; white sandstone 50%
1040	1060	20	Sandstone, nearly white, medium-grained; contains some mica, chlorite, and kaolin
1060	1070	10	No sample; reported as sand
1070	1160	90	Sandstone, white, medium-grained; contains mica, chlorite, and kaolin
1160	1189	29	Shale, gray, with siderite spherulites; small amount of coal 1165 to 1175' (possibly Upper Freeport Coal)
1189	1205	16	Sandstone, nearly white, medium-grained, calcareous
1205	1235	30	Sandstone, white, medium-grained; contains a little mica and kaolin
1235	1247	12	No sample; reported as sand
1247	1257	10	Shale, gray, soft, 60%; white sandstone, 40%
1257	1268	11	Siltstone, gray
1268	1347	79	Sandstone, light-gray, medium-grained; contains some darker streaks with mica, siderite, and carbonaceous matter
1347	1367	20	Shale, dark-gray with considerable amount of coal (coal probably at about 1355 to 1360' but not mentioned in report)
1367	1377	10	Shale, gray, silty
1377	1387	10	Siltstone, light-gray, with siderite spherulites, 70%; dark-gray shale and siltstone with a little coal, 30%
1387	1430	43	Shale and siltstone, dark-gray; a little coal, 1397 to 1408'
1430	1440	10	Shale, black
1440	1460	20	Siltstone, light-gray, micaceous, 60%; black shale, 40%
1460	1510	50	Sandstone, gray, fine to very fine, mostly shaly, 60%; gray to black shale and siltstone, 40%
1510	1580	70	Shale, dark-gray, silty, micaceous; a little light-gray shale, 1560 to 1570'
1580	1600	20	Siltstone, gray, shaly, micaceous
1600	1635	35	Shale, dark-gray, silty
1635	1700	65	Sandstone, very light gray, medium-grained, calcareous

Top	Bottom	Thickness	
1700	1730	30	Siltstone and shale, gray, with siderite concretions; a little black shale near top
1730	1790	60	Sandstone, nearly white, medium- to coarse-grained (gas, 1755')
1790	1820	30	Shale, gray, 60%; lighter gray to greenish siltstone and very fine sandstone
1820	1860	40	Sandstone, white, coarse; a little gray shale, 1840 to 1860' (gas 1842-1860')
1860	1878	18	Sandstone, white, medium-grained, nearly all quartz (water 1872')
1878	1907	29	Sandstone, white, coarse, pebbly; some of this may be conglomerate rather than sandstone, but most of the pebbles are broken
1907	1953	46	Sandstone, white with a little brown stain; fine- to medium-grained
1953	1965	12	No sample; reported as sand
1965	1969	4	Sandstone, white coarse (depth possibly wrong on this sample)
<u>Mauch Chunk Group, 74 feet</u>			
1969	1995	26	Shale, gray to grayish-green, soft; small amount of yellow limestone
1995	2020	25	Limestone, dark-brown to gray, fossiliferous ("Little Lime")
2020	2025	5	Shale, light-green, soft, sandy ("Pencil Cave")
2025	2040	15	Sandstone, white with some brown stain, fine
2040	2043	3	Shale, gray, soft, fossiliferous
<u>Greenbrier Limestone, 168 feet</u>			
2043	2059	16	Limestone, dark-brown, fossiliferous
2059	2100	41	Limestone, light-brown (gray when dry)
2100	2106	6	Limestone dark-brown; a little dark calcareous shale
2106	2115	9	Limestone, light-brown
2115	2122	7	Limestone, light-brown, sandy, with some oolites
2122	2125	3	Limestone, light-gray, very sandy
2125	2134	9	Limestone, light-brown, sandy; contains some oolites and a little green shale
2134	2146	12	Limestone, light-brown

Top Bottom Thickness

2146	2167	21	Limestone, light-brown, sandy
2167	2211	44	Limestone, light grayish yellow, sandy, dolomitic; larger sand grains are rounded and frosted; sand is more abundant and coarser toward bottom

Pocoyo Formation, 25+ feet

2211	2214	3	Shale, gray
2214	2227	13	Shale and siltstone, gray
2227	2236	9	Shale, gray
	2232		Total depth according to drillers' record