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OCT 26 1949

JAS. B. LOVETT NO. 2(8610) WELL.

Freeman's Creek District, Lewis County, W. Va.

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

Located 0.17 Mi. S. of 39° 05' and 0.4 Mi. W. of 80° 30' - S E

Vadis Quadrangle

Elevation 1131' L.

Permit Lew - 57

Drilling commenced Feb. 2, 1942; completed April 27, 1942

√ Shot May 3, 1942 at 6898 - 6997', with 1200# gelatin

Fresh water, none recorded

Salt water, none recorded

Gas Well; Volume 2,041,000 cu. ft. gas in Gantz s.s. Dry in the Oriskany

10" casing 1322'; 7", 6662'; all left in

No coal was encountered

Drilled by Rotary Tools

Section based on samples from 1000' to 6995'; examined by Russell R. Flowers.

Top Bottom Thickness

POTTSVILLE FORMATION, 75, plus, FEET

Top	Bottom	Thickness	Description
1000	1010	10	Clay and clay-shale, olive-gray, some light olive gray to light brownish gray (silty), some dark-gray to black; a moderate amount of sandstone, light brownish gray to greenish-gray, micaceous and chloritic
1010	1075	65	Sandstone, very light to light-gray, fine to very coarse grained; a large amount of light-gray to light greenish gray, somewhat calcareous, fine to very fine grained sandstone; a moderate to large amount of shale, clay-shale, and siltstone, dark-gray to black, some greenish-gray to medium-gray and olive-gray; contains a moderate amount of siderite both as cementing material and concretions. Most of this material may be included pebbles from the erosion of the Mauch Chunk

MAUCH CHUNK, 229 FEET

1075	1080	5	Clay-shale, greenish-gray to medium-gray, grayish-brown to brownish-gray, 50%; some dusky yellowish brown siderite (1075' top of Mauch Chunk - driller's log)
1080	1090	10	No sample
1090	1120	30	Clay-shale, grayish-brown to dusky-brown, some grayish-red; shale and siltstone, greenish-gray and dark greenish-gray (calcareous) to medium dark gray, some dark gray to grayish-black; a large amount of fine- to coarse-grained sandstone (individual grains, probably cavings)
1120	1160	40	Shale and siltstone, greenish-gray to olive-black, some medium dark gray, partly calcareous; some grayish-brown to grayish-red clay-shale
1160	1180	20	Clay-shale and shale, greenish-gray to olive-gray and dark-gray, some grayish-brown to dusky-brown; siltstone to sandstone (fine- to medium-grained), light- to medium-gray to greenish-gray, moderately calcareous
1180	1240	60	Siltstone, shale, and clay-shale, grayish-brown to grayish-red, some brownish-gray, greenish-gray to dark greenish, olive-gray to dark-gray, some grayish-black, calcareous in part
1240	1260	20	Shale and siltstone, greenish-gray to medium-gray, grayish-brown to grayish-red; some light-gray sandstone; small amount of brownish-black limestone
1260	1290	30	Limestone, olive-black to brownish-black, somewhat shaly (brownish-gray) to shale (dark-gray, calcareous) at the bottom; a large amount of grayish-brown to grayish-red shale and some greenish-gray siltstone at the top
1290	1304	14	Shale, medium dark to dark-gray, some greenish-gray, distinctly laminated with highly calcareous, fossiliferous spots and streaks; clay-shale, grayish-red to grayish-brown
1304	1310	6	<u>GREEN BRIER LIMESTONE, 169 FEET</u> Limestone, brownish-gray to brownish-black with light-gray spots (Top of Big Lime 1304' - driller's log)

1310	1350	40	Limestone, olive-gray to brownish-gray with yellowish-gray spots, oolitic at the top, somewhat shaly
1350	1360	10	Limestone, brownish-black with yellowish-gray to light brownish gray spots, shaly
1360	1370	10	Limestone, medium-gray to brownish-gray, very abundant microfossils resembling oolites (ostracods ?), for the most part they are brownish-gray to medium- and dark-gray with a light-gray matrix (very sandy)
1370	1390	20	Limestone, olive-gray to brownish-gray, very sandy ✓ in part, ^d dolomitic in part
1390	1400	10	Clay-shale, grayish-brown and dusky-brown to very dusky red, a moderate amount of grayish-green; some brownish-black dolomite
1400	1410	10	Clay-shale, grayish-brown to very dusky red and greenish-gray, 60%; dolomite, brownish-black, 10%; sandstone light- to medium-gray, very fine to fine grained, ✓ very highly calcareous, ³ 10%
1410	1430	20	Limestone, olive-gray to brownish-gray, dolomitic, very sandy to sandstone (very highly calcareous, light-gray to light brownish gray), the quartz grains are very fine to fine-grained (rounded) with some medium to coarse (well rounded) grains
1430	1450	20	Limestone, olive-gray to brownish-gray with light-gray spots, some brownish-black (shaly), highly dolomitic to dolomite, silty
1450	1460	10	Limestone, brownish-black, very shaly, somewhat dolomitic
1460	1473	13	Dolomite, light olive gray, very silty, with a few medium rounded sand grains, calcareous

LOWER MISSISSIPPIAN AND UPPER DEVONIAN, 4982 Feet

1473	1500	27	Siltstone, light greenish gray to light-gray; contains kaolinitic material, some mica and chlorite, sandy (very fine) in part
1500	1520	20	Siltstone (coarse) to sandstone (very fine), greenish-gray to medium-gray, some dark greenish gray and some light greenish gray, [✓] and <i>kaolinitic, somewhat micaceous</i> and <i>some light greenish gray, and chlorite</i>

~~kaolinitic, somewhat micaceous and chloritic~~

1520	1560	40	Siltstone to sandstone (very fine), medium- to dark-gray, some greenish-gray to olive-black, kaolinitic, micaceous, some carbonaceous material; a moderate ✓ to large amount of interbedded, dark-gray shale
1560	1570	10	Siltstone, medium-gray with dark-gray, somewhat shaly streaks
1570	1620	50	Shale and some siltstone, dark-gray to grayish-black, some olive-black
1620	1630	10	Sandstone (very fine) to siltstone, medium-gray; siltstone and shale, dark-gray to grayish-black
1630	1640	10	Siltstone and shale, medium dark gray to grayish-black
1640	1660	20	Siltstone, medium to medium dark gray, some olive-gray, sandy (very fine); some dark-gray shale
1660	1670	10	Shale, medium dark gray to grayish- and brownish-black; some medium- to dark-gray siltstone
1670	1690	20	Shale, medium dark to dark-gray; siltstone, medium- to dark-gray, some greenish-gray to olive-black; small amount of dark yellowish brown, sideritic shale
1690	1710	20	Siltstone to sandstone (very fine), light-gray to medium dark gray, some brownish-gray; a moderate amount of medium dark to dark-gray shale (with some calcareous fossil fragments), some grayish-black (silty and sandy)
1710	1730	20	Siltstone and shale, medium dark to dark-gray, some light-gray, some brownish-gray (a very large amount of cavings)
1730	1740	10	Shale and some siltstone, medium to dark gray to grayish-black, olive-black (sideritic) to dark yellowish brown (highly sideritic)
1740	1760	20	Siltstone to sandstone (very fine), dark greenish gray to medium dark gray; shale, medium dark to dark-gray, some olive- and grayish-black
1760	1770	10	No sample

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1900	1910	10	Sandstone, light-gray, fine to very fine grained, some

2080	2090	10	Sandstone (very fine) to siltstone, light-gray to greenish-gray; shale, medium dark to dark-gray, some grayish-black, some olive-gray to dark yellowish brown (highly sideritic)
2090	2130	40	Shale, medium dark to dark-gray; a moderate amount of light-gray to greenish-gray, sandy siltstone at the top; some dark greenish gray to olive-gray, sandy siltstone
2130	2160	30	Siltstone and some sandstone (very fine), greenish-gray to medium-gray, (shaly); shale, medium dark to dark-gray; at the bottom, more shale than siltstone and some fine to coarse, brownish-gray sandstone
2160	2190	30	Sandstone, brownish-gray with light-gray, highly calcareous spots, fine to very coarse grained, pebbly
2190	2200	10	Shale and siltstone, dark greenish gray to medium dark and dark-gray; some brownish-gray, fine to coarse sandstone
2200	2230	30	Siltstone, greenish-gray to sandstone, light greenish gray, very fine grained; shale, medium dark to dark-gray, some olive- and greenish-black
2230	2260	30	Sandstone, greenish-gray to light olive gray, very fine grained, silty (with medium- to dark-gray, silty and sandy streaks of shale); some medium dark to dark-gray shale
2260	2270	10	Sandstone, light olive gray and greenish-gray, very fine grained to siltstone, dark greenish gray and olive-gray to medium dark gray; shale, medium dark to dark-gray
2270	2290	20	No sample
2290	2350	60	Siltstone to sandstone (very fine), light and dark greenish gray to medium dark gray; some shale, medium dark to dark-gray with some greenish-black
2350	2470	120	Siltstone, greenish-gray to dark greenish gray; some shale, medium dark to dark-gray, some greenish-black
2470	2500	30	Sandstone, (very fine) to siltstone, some shale, brownish-gray; some shale and siltstone to sandstone (very fine), dark greenish gray to olive-black, some medium dark to dark-gray

2500	2530	30	Siltstone to very fine sandstone, dark greenish gray to to brownish-gray (with light-gray to olive-gray, highly calcareous spots)
2530	2560	30	Sandstone, light-gray to greenish-gray, very fine grained, slightly calcareous
2560	6410	3850	Not described
6410	6425	15	Shale, black, highly carbonaceous
6425	6427	2	Shale, grayish-black (calcareous) to black (highly carbonaceous); a large amount of medium- to dark gray shale (cavings)
6427	6455	28	Limestone, dark-gray to brownish-black, some grayish- ✓ black, very fine textured (Tulley Limestone)
<u>HAMILTON SHALES (INCLUDING MARCELLUS), 187 FEET</u>			
6455	6590	135	Shale, medium- to dark-gray, olive-gray to olive-black, a moderate to large amount of grayish-black to black (highly carbonaceous, calcareous in part); small ✓ amounts of dark-gray to brownish- and grayish-black limestone
6590	6605	15	Shale, grayish-black to black (highly carbonaceous, highly calcareous in part), dark-gray to olive-black (cavings?)
6605	6642	37	Shale, black (highly carbonaceous), some grayish-black, highly calcareous and pyritic in part; some dark-gray to olive-black shale in the upper part
<u>HUNTERSVILLE CHERT, 258 FEET</u>			
6642	6645	3	Limestone, medium- to dark-gray with black, shaly streaks
6645	6665	20	Limestone, medium-gray and brownish-gray to dark-gray and brownish-black, some light-gray, somewhat cherty, shaly in part
6665	6670	5	Limestone (shaly) to shale (highly calcareous), dark-gray to brownish-black, moderately to highly glauconitic, pyritic in part
6670	6700	30	Chert, mottled white to light-gray and dark-gray to brownish-black (very shaly, highly calcareous)

6700	6715	15	Chert, white to light-gray and medium-gray to brownish-gray (with dark-gray to black, highly calcareous, shaly streaks)
6715	6730	15	Chert, mottled white and brownish-black (shaly), moderately to highly dolomitic; some siltstone to sandstone, light-gray, glauconitic
6730	6750	20	Chert, very light to medium-gray, calcareous to a cherty limestone, dark-gray to brownish-black; silty and glauconitic in part
6750	6780	30	Chert (light- to medium-gray) to a siliceous shale, (brownish-black), calcareous, very silty and glauconitic in part
6780	6810	30	Siltstone (dark greenish gray) to siltstone (shaly, olive-gray to olive-black) to shale (very silty, brownish-black), cherty, highly glauconitic; a large amount of dark-gray to olive-black, silicified shale to shaly chert at 6790 to 6795
6810	6820	10	Chert (silty and shaly) to shale (silicified, silty), medium- to dark-gray and brownish-black, calcareous in part
6820	6865	45	Chert, medium- to dark-gray, silty, somewhat dolomitic, shaly in part and some silicified shale, dark-gray and brownish-black, calcareous in part
6865	6875	10	Limestone, olive-gray to brownish-black
6875	6900	25	Limestone, brownish-gray and dark gray to brownish-black (very shaly), cherty, somewhat sandy and silty at the bottom

ORISKANY SANDSTONE, 83 FEET

6900	6983	83	Sandstone, very light to light-gray with some medium-gray streaks (some shaly material), fine- to medium-grained, highly calcareous (Oriskany 6898-6982, driller's log)
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HELDERBERG FORMATION, 12, plus, FEET

6983	6985	2	Siltstone, dark-gray, shaly and sandy, highly calcareous and some white calcite
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6985	6995	10	Siltstone and sandstone (very fine) to limestone (very sandy and silty), dark-gray to brownish-black (shaly) with light-gray, calcareous spots
6997			TOTAL DEPTH