

DEC - 5 1949

United Fuel Gas Co. No. 3(5592) Well.

Elk District, Kanawha County, W. Va.

By United Fuel Gas Co., Box 1273, Charleston, W. Va.

Located 1.15 Mi. S. of 38° 25' and .95 Mi. W. of 81° 25'

ClenCdenin Quadrangle - WC

Elevation 1138.41' L

Permit Kan - 1187

Drilling commenced Feb. 15, 1945; completed July 2, 1945

Well was not shot

Gas Well; Volume, 10,000,000 cu. ft. from the Oriskany

Salt water at 1165'

13" casing, 900' (pulled); 10", 1718'; 8-1/4", 2181'; 6-5/8", 5288';  
2" tubing 5400'

Coal was encountered at 194-195 and 685-690

Section based on samples from 1721 to 5400 feet; examined by Russell R.

Flowers

Top	Bottom	Thickness	
GREENBRIER LIMESTONE, 124 FEET			
1721	1726	5	Limestone, brownish-gray to brownish-black with some white to light-gray spots, somewhat shaly
1726	1736	10	Limestone, light olive gray, with white to light-gray spots; contains some greenish-gray, shaly streaks
1736	1750	14	Limestone, light olive gray to olive-gray, some dark greenish gray (shaly) to olive-black; a large amount of greenish-gray to reddish-gray, soft shale in the lower part (cavings?); the limestone is a little lighter in color at the bottom
1750	1760	10	Limestone, light olive gray, clastic texture, highly oolitic, somewhat sandy and silty
1760	1772	12	Limestone, light-gray to light olive gray, oolitic in part, contains a few fossil fragments
1772	1779	7	Limestone, light olive gray, some olive-gray

1779	1788	9	Limestone, light olive gray to olive-gray, sandy; a large amount of shale cavings
1788	1803	15	Limestone, light olive gray, some dark yellowish brown, oolitic, very highly oolitic in part, somewhat sandy
1803	1814	11	Limestone, pale yellowish brown with very light gray <del>spots</del> spots, somewhat sandy, highly oolitic
1814	1823	9	Limestone, yellowish-gray to very pale orange, some light olive gray, some light greenish gray (shaly), moderately to highly oolitic (Gas at 1814)
1823	1840	17	Limestone, yellowish-gray to very pale orange, oolitic in part, dolomitic, highly dolomitic at the bottom, silty and sandy
1840	1845	5	Dolomite, (calcareous) to limestone (dolomitic), yellowish-gray to very light gray, some light greenish gray (shaly), some coarse quartz grains

POCONO FORMATION, 444 FEET

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1845	1860	15	Sandstone, light greenish gray (with dark greenish gray, shaly streaks), very fine grained, pyritic, somewhat calcareous, some coarse quartz grains at the top
1860	1873	13	Sandstone, light greenish gray (with dark greenish gray, shaly streaks), very fine grained, pyritic, 50%; shale, medium-gray to dark greenish gray, grayish-red to very dusky red, 50%
1873	1886	13	Shale (very silty) to siltstone (sandy, very fine), dark greenish/gray to medium dark gray, some brownish-gray to grayish-red and very dusky red in the lower part, highly micaceous
1886	1921	35	Siltstone and shale, dark greenish gray and medium dark gray to <sup>grayish</sup> greenish-brown and grayish-red, some brownish-gray, sandy and in part, micaceous (a larger part of the siltstone and shale is various shades of red and brown, possibly from too much heat when drying)

1921	1927	6	Sandstone, light-gray, medium-grained, some coarse grains and some fine grains, 80%; shale and siltstone, dark-gray to dark greenish gray, some brownish-gray and grayish red, 20% (depth corrected <del>to</del> from 1927 to 1914)
1914	2112	198	Sandstone, very light gray to light greenish gray, fine-grained, very fine and medium-grained in part, some coarse grains, angular to subangular, contains several medium dark to dark-gray shale partings (Gas at 2056)
2112	2118	6	Sandstone, very light gray to light greenish gray, fine- to medium-grained, 50%, (gas at 2114; shale and some siltstone, medium dark to dark-gray, 50%;
2118	2167	49	Shale, medium dark to dark-gray; siltstone, medium dark gray to dark greenish gray, some brownish-gray (Gas at 2129)
2167	2216	49	Siltstone, light-gray to light olive gray and greenish-gray, some dark greenish gray, to medium dark gray (highly micaceous); shale, medium dark to dark-gray
2216	2247	31	Siltstone, greenish-gray to medium dark gray, some light olive gray in the lower part; shale, medium dark to dark-gray
2247	2270	23	Shale, medium dark to dark-gray, some grayish-black in the lower part; some interbedded siltstone, medium -to dark-gray, some greenish-gray, some brownish-gray
2270	2286	16	Shale, brownish-gray and grayish-black (Sunbury)
2286	2289	3	Sandstone, light-gray, very fine grained, silty with some medium to coarse, rounded grains, pyritic (Berea)
DEVONIAN SHALES, 2971 FEET			
2289	2296	7	Shale, medium- to dark-gray and siltstone, greenish-gray to medium-gray

2296	2343	47	Siltstone, light-gray to greenish-gray and medium-gray, some dark greenish gray, shaly in part; some medium to dark-gray shale
2343	2380	37	No sample
2380	2405	25	Siltstone to sandstone (very fine), dark greenish gray to medium dark gray; a large amount of shale, medium- to dark-gray, some brownish- and olive-black
2405	2450	45	Shale and siltstone, and some sandstone (very fine), medium dark to dark-gray, brownish-gray to brownish-black, olive-gray to dark greenish gray, some olive-black
2450	2474	24	Shale and siltstone, brownish-gray to brownish-black, 60% to 70%; shale and siltstone, medium dark gray to dark-gray, some dark greenish gray, 40% to 30%
2474	2537	63	Siltstone and shale, dark greenish gray to medium dark and dark-gray, a moderate amount of brownish-gray to brownish-black, some olive-black
2537	2638	101	Siltstone and shale, medium- to dark-gray, some greenish-gray to dark greenish gray, sandy in part; some very fine grained, light-gray to greenish-gray sandstone at the bottom
2638	2650	12	No sample
2650	2770	120	Siltstone to sandstone (very fine), greenish-gray to dark greenish gray, medium- to dark-gray; some shale, medium dark to dark-gray
2770	2810	40	Siltstone to sandstone (very fine), greenish-gray to dark greenish gray, medium- to dark-gray, some brownish-gray to brownish-black; some medium- to dark-gray shale
2810	3005	195	Siltstone and some shale, medium- to dark-gray, some greenish-gray in the upper part
3005	3045	40	Siltstone and some shale, medium- to dark-gray, some brownish-gray
3045	3060	15	No samples
3060	3204	144	Siltstone and shale, medium dark to dark-gray, some dark greenish gray to olive-black

3204	3370	166	Siltstone, medium light gray to greenish-gray, micaceous, kaolinitic; considerable interbedded, medium dark to dark-gray, and some grayish- and olive-black shale containing some pyrite spherulites
3370	3450	80	Siltstone, medium-gray to olive-gray and dark greenish gray; some interbedded, medium- to dark-gray and olive-black to grayish-black shale
3450	3518	68	Siltstone, olive-gray to brownish-gray, a large amount of greenish-gray to medium light gray in the lower part; considerable interbedded shale, grayish- and brownish-black, some dark-gray and olive-gray
3518	3587	69	Siltstone, medium light gray to light olive gray and greenish-gray, somewhat dolomitic, calcareous in part; considerable interbedded shale, medium dark to dark-gray, olive-black to grayish-black, some olive-gray
3587	3627	40	Siltstone to sandstone (very fine), light- to medium-gray, some light olive gray to greenish-gray, calcareous in part at the bottom; a moderate to large amount of shale, medium- to dark-gray and olive-black, some grayish-black
3627	3632	5	Sandstone, light-gray to yellowish-gray, very fine grained, calcareous; a very large amount of siltstone and shale, medium- to dark-gray, some greenish-gray to olive- and brownish-black, some grayish-black
3632	3677	45	Siltstone, light- to medium-gray, some greenish-gray to olive-gray; shale, medium to medium dark gray, some olive-gray to olive-black, some dark-gray to grayish-black
3677	3833	156	Siltstone, light- to medium-gray, some light olive gray and greenish-gray; considerable interbedded, medium dark gray to olive- and grayish-black shale
3833	3853	20	Shale, medium dark gray to dark-gray and olive-black, grayish-black to black (highly carbonaceous); a large amount of light- to medium-gray and some brownish-gray siltstone

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|-----------------|-----------------|---------------|--|
| 3853            | 3906            | 53            | Siltstone, light olive gray to medium-gray, some olive-gray to moderate yellowish brown (sideritic) in the lower part; some shale medium dark to dark-gray with some olive-black to grayish-black streaks at the top   |
| 3906            | 3990            | 84            | Siltstone, light olive gray to medium-gray, some greenish-gray and brownish-gray; shale, medium to medium dark gray, some dark-gray to grayish-black <sup>A large amount of dark-gray to grayish-black</sup> at 3930-3942 and at the bottom, some olive-gray to olive-black; trace of pyrite |
| 3990            | 4095            | 105           | Siltstone, light olive gray to olive-gray, and medium dark gray, some greenish-gray; a moderate to large amount of interbedded, medium dark to dark-gray, grayish-black to black (carbonaceous) shale, moderately to highly fossiliferous (plant spores ?), somewhat pyritic                 |
| 4090            | 4108            | 18            | Siltstone, medium light to medium dark gray, some brownish-gray; shale, medium- to dark-gray, some grayish-black to black (carbonaceous) depth corrected from (4095 to 4090)   |
| 4108            | 4158            | 50            | Shale, medium- to dark-gray, grayish-black to black (highly carbonaceous), fossiliferous in part (small disc-like -- plant spores ?), pyritic in part; some siltstone, olive-gray to medium and medium dark gray   |
| 4158            | 4250            | 92            | Shale, medium- to dark-gray, grayish-black to black, some olive-gray to olive-black, pyritic in part; some siltstone, olive-gray to medium dark gray, some olive-black to brownish-black   |
| 4250            | 4300            | 50            | Shale and siltstone, medium to medium dark gray, some brownish-gray; a moderate amount of brownish-black to black (highly carbonaceous) shale with a few scattered fossils (plant spores ?) pyritic in part  |
| 4300            | 4426            | 126           | Shale to siltstone, medium to medium dark gray (with greenish-gray cast); some shale, olive-black to grayish-black and black (highly carbonaceous)   |
| <del>4426</del> | <del>4451</del> | <del>25</del> | <del>Shale and some siltstone, medium-gray to greenish-gray and olive-gray; some olive-black to brownish-black and BLACK SHALE</del>   |

4426	4451	25	Shale and some siltstone, medium-gray to greenish-gray and olive-gray; some olive-black to brownish-black and black shale
4451	4682	231	Siltstone and shale, medium and medium dark gray to dark greenish gray, some olive-black to grayish-black
4682	4725	43	Siltstone and shale, dark greenish gray to medium dark gray, some olive-gray to olive-black, some brownish-black to black
4725	4753	28	Shale and siltstone, medium to medium dark gray, some olive-gray, <del>some</del> to brownish-gray
4753	4794	41	Siltstone and shale, olive-gray to medium dark gray, some dark greenish gray, olive-black and brownish-black to black (carbonaceous)
4794	4875	81	Siltstone and shale, medium and medium dark gray to olive-gray, some dark-gray to olive-black; some grayish-black to black shale at the top and bottom
4875	4975	100	Siltstone <del>is</del> (shaly), medium and medium dark gray to olive-gray; shale, brownish- and olive-black to black (carbonaceous), pyritic, slightly fossiliferous (plant spores ?), mostly brownish-black to black, highly carbonaceous shale in the middle part and the bottom ten feet
4975	4985	10	Shale, olive-black to, brownish-black, very silty, some medium dark gray to olive-gray
4985	5030	45	Siltstone and shale, olive-gray to medium- and dark-gray to olive-black; shale, brownish-black to black (highly carbonaceous), pyritic in part, mostly brownish-black to black shale at 4995 to 5005 and at the bottom
5030	5130	100	Shale and some siltstone, medium- to dark-gray and olive-black, some olive-gray; some grayish-black to black shale
5130	5185	55	Shale, medium- to dark-gray, some dark greenish gray, some brownish- and grayish-black
5185	5195	10	Shale, brownish-black to black, some grayish-black, some brownish-gray, some medium dark gray to dark greenish gray

- 5195 5210 15 Shale, brownish-black, some olive-gray and brownish-gray, some medium to ~~medium~~ medium dark gray; small amount is calcareous
- 5210 5225 15 Shale, brownish-black to black, highly carbonaceous, calcareous in part, slightly pyritic
- 5225 5260 35 Shale, black, very highly carbonaceous, pyritic, highly calcareous in part; small amount of white vein calcite; small amount of brownish-gray shale (a large content of altered biotite)

HUNTERSVILLE CHERT, 126 FEET

- 5260 5266 6 Limestone, brownish-gray to brownish-black with light gray spots and streaks
- 5266 5292 26 Limestone, brownish-gray to brownish-black with light gray spots, cherty to a white and light-gray chert
- 5292 5305 13 Chert, white and light-gray to brownish-gray, some brownish-black (shaly), highly calcareous to a cherty limestone
- 5305 5319 14 Limestone, brownish-gray to brownish-black (very shaly to shaly), very cherty (white to light-gray)
- 5319 5326 7 Chert, white and light-gray to brownish-gray, a moderate amount of brownish-black (shaly), calcareous to a very cherty limestone at the bottom, some fossil fragments
- 5326 5330 4 Limestone, brownish-black with light-gray to brownish-gray spots, very cherty and shaly
- 5330 5340 10 Limestone, light- to medium-gray, very cherty to a calcareous chert, sandy (very fine) and silty, somewhat glauconitic; slightly dolomitic, contains some dark gray, shaly streaks
- 5340 5346 6 Chert, white to light-gray, some light brownish gray, somewhat calcareous
- 5346 5360 14 Chert, light- to medium-gray with some dark-gray, shaly streaks, moderately to highly calcareous, moderately glauconitic; at the bottom some light- to medium-gray, calcareous highly glauconitic sandstone (very fine, silty)

- 5360 5370 10 Sandstone, light- to medium-gray, very fine grained, silty, highly glauconitic and cellophanitic, calcareous, cherty, some dark-gray, shaly streaks
- 5370 5381 11 Sandstone (very fine) to siltstone, light- to medium-gray, some brownish-gray, some dark-gray, shaly streaks, calcareous, somewhat dolomitic, glauconitic, cherty; some dark-gray, very shaly, highly glauconitic, silty sandstone at the bottom
- 5381 5386 5 Siltstone, some sandstone (very fine) medium-gray with dark-gray to grayish-black very highly glauconitic (indices 1.57-1.58) streaks, calcareous, cherty, contains many medium- to coarse, well rounded quartz grains (probably from the erosion of the underlying Oriskany sandstone)

ORISKANY SANDSTONE, 12, plus, FEET

- 5386 5391 5 Sandstone, white to very light gray, fine- to medium-grained, rounded to well rounded, some coarse, well rounded, frosted grains, moderately to highly calcareous (depth corrected from 5391' to 5385' S.L.M.)
- 5385 5392 7 Sandstone, white to very light gray, fine- to medium-grained, subrounded to well rounded, frosted grains, moderately to highly calcareous (GAS at 5392-5400)
- 5400 TOTAL DEPTH