

Y-18-5



G. R. DEAN NO. 1 WELL.

Williamsburg District, Greenbrier County, W. Va.

By The Texas Company

Located 4.0 Mi. S. of 38° 00' and 4.13 Mi. W. of 80° 25'

White Sulphur Springs Quadrangle - N W

Elevation 2575' L

Permit - Greenbrier - 2

Drilling commenced May 27, 1946; completed July 31, 1947

Gas show 103,000 cu. ft. in one hour from (7458-7550 and 7988 -)

Drilled by Rotary

10" casing, 433' (cemented from ^{Top} to bottom)

Section based on samples from 0-710' and 6380-7050; examined by Russell R. Flowers.

Top Bottom Thickness

POCONO FORMATION, 710; plus, Feet.

Top	Bottom	Thickness	Description
0	60	60	Sandstone (very fine, highly argillaceous) to shale (very sandy), yellowish-gray to grayish-orange with light-brown, ferruginous streaks, somewhat micaceous
60	140	80	Sandstone (very fine) to siltstone, medium- to dark-gray, a large amount of dark greenish gray to greenish-black (mostly siltstone) in the bottom 25 to 30 feet, shaly, contains fine- to medium grains (clear quartz); some dark-gray to grayish-black shale in the lower part
140	188	48	Siltstone, grayish-brown to dusky-brown and dark greenish gray to medium dark gray, some dark-gray (shaly) to grayish-black (shale), sandy, contains many medium to coarse grains of glassy quartz
188	214	26	Siltstone, medium- to dark-gray, some olive gray; shale, dark-gray to olive- and grayish-black

214	260	46	Sandstone, very light to light-gray, fine- to medium-grained, some coarse grains, pyritic; a very large amount of siltstone, medium to dark-gray and dark greenish gray, some dark yellowish brown (highly sideritic); a large amount of dark-gray to grayish-black shale
260	280	20	Sandstone, light-gray, fine-grained, pyritic
280	300	20	Siltstone, dark greenish gray to medium-gray, some olive-gray (sideritic) to dusky yellowish brown (highly sideritic); some medium dark gray to grayish-black shale; some very light to light-gray, fine grained sandstone
300	330	30	Siltstone, dark greenish gray to medium dark gray and olive-black; some medium dark gray to grayish-black shale; some dark to dusky yellowish brown, highly sideritic shale and siltstone
330	350	20	Siltstone, dark greenish gray and olive-gray to medium dark gray with dark-gray to grayish-black shale; some light-gray to greenish-gray sandstone at the bottom
350	400	50	Siltstone, medium dark gray, some medium-gray; some dark-gray to grayish-black shale
400	500	100	Siltstone, medium-light to medium dark gray; some dark-gray to grayish-black shale
500	520	20	Shale, dark-gray to grayish-black, silty
520	550	30	Shale, dark-gray to grayish-black to siltstone, medium to medium dark gray
550	580	30	Siltstone, medium light gray, some medium-gray, mostly coarse silt but some very fine to fine-grained sandstone at the bottom; contains dark-gray to grayish-black, shaly streaks
580	640	60	Shale, and some siltstone, medium- to medium dark gray and dark greenish-gray, contains some pyrite and some white, vein calcite
640	660	20	Shale, medium dark to dark-gray, xxxx soft; some medium-gray to dark greenish gray siltstone

660	670	10	Shale and some siltstone, medium dark gray to dark greenish gray
670	680	10	Siltstone, dark greenish gray to medium dark gray, contains some dark-gray shale and a few broken quartz pebbles
680	700	20	Shale, medium-gray to dark greenish gray; some siltstone in the lower part; a few coarse quartz grains
700	710	10	Sandstone, light-gray to greenish-gray, very fine grained, chloritic, some mica and kaolinitic material (Berea ?)
710 811	3790	3080	DEVONIAN SHALES, 5721 (?) FEET Described by James H. C. Martens
3790	6380	2590	Not described
6380	6431	51	Shale, black, highly carbonaceous, most of the shale is slickensided, contains a large number of veins and veinlets of white calcite, somewhat pyritic at the bottom; small amount of highly micaceous shale (probably altered biotite) at the bottom
HUNTERSVILLE CHERT, 107 FEET			
6431	6435	4	Limestone, medium to medium dark gray, very shaly, cherty to a somewhat calcareous, white to medium-gray chert
6435	6460	25	Chert, white to light-gray to medium-gray ("dirty", somewhat shaly) to dark-gray and grayish-black (very shaly to siliceous shale), calcareous in part, slightly pybitic
6460	6465	5	Chert, very light to medium-gray, pyritic in part, somewhat calcareous and dolomitic, silty to a greenish-gray, very highly glauconitic, dolomitic siltstone
6465	6487	22	Siltstone, medium- to dark [✓] gray with light gray (dolomite) specks, contains green (highly glauconitic) streaks, cherty and shaly

- 6487 6505 18 Shale (highly siliceous) to chert, medium dark to dark-gray, some medium-gray (chert, somewhat dolomitic)
- 6505 6530 25 Chert, medium- to dark-gray, some grayish-black (siliceous shale), some light to medium-gray, somewhat calcareous
- 6530 6538 8 Limestone (shaly), medium-gray to a calcareous shale and chert, dark-gray to grayish-black (Huntersville Chert 6431-6538 from driller's log)

ORISKANY SANDSTONE, 25 FEET

- ~~6538~~ ~~6546~~ 1
- 6538 6546 8 Sandstone, light- to medium-gray (with some dark-gray, shaly streaks), fine-grained, some medium to coarse grains, subangular to rounded, mostly quartz with calcareous cement
- 6546 6554 8 Sandstone, light- to medium-gray, fine to very fine grained some coarse to very coarse grains, very highly calcareous, contains some dark-gray to black, shaly material
- 6554 6558 4 Sandstone, very light to light-gray, fine-grained, some medium grains, quartzitic with a parallel or rectangular structure (possibly due to deformation), moderately calcareous
- 6558 6563 5 Sandstone, very light to light-gray, fine to very fine grained, some medium grains, moderately to highly calcareous, contains some dark-gray shale grains

HELDERBERG FORMATION, 372 FEET

- 6563 6568 5 Sandstone, light- to medium-gray with dark-gray to black, shaly streaks, very fine grained, silty, very highly calcareous with some limestone (very sandy)
- 6568 6574 6 Sandstone, medium- to dark-gray with black, carbonaceous, shaly streaks, very fine grained, silty, very highly calcareous with some light-gray, very sandy limestone spots
- 6574 6580 6 Limestone (very sandy and silty) to sandstone (very fine, silty, highly calcareous) medium- to dark-gray with light-gray spots, contains a moderate amount of dark-gray to black shaly material

6580	6600	20	Limestone (silty and sandy) to a siltstone (sandy, highly calcareous), medium- to dark-gray (shaly) to grayish-black (very shaly) with some light-gray spots, fossiliferous
6600	6625	25	Limestone, medium- to dark-gray with black, very shaly streaks and light-gray spots, very sandy (very fine to fine), silty, fossiliferous
6625	6670	45	Limestone (very sandy) to sandstone (very fine to fine-grained, very highly calcareous), medium- to dark-gray with grayish black, shaly streaks
6670	6705	35	Limestone, dark-gray to grayish-black, some light- to medium-gray, very shaly (silicified in part), somewhat cherty
6705	6720	15	Limestone, medium- to dark-gray, some light-gray, very sandy (fine to very fine), very silty, shaly at the bottom, fossiliferous, somewhat cherty
6720	6765	45	Limestone, medium-gray to grayish-black, more grayish-black in the lower part, very shaly to a silicified shale, silty in the upper part, fossiliferous
6765	6775	10	Limestone, medium- to dark-gray, some grayish-black (shaly) at the top, very silty at the top to very sandy (fine to very fine) at the bottom
6775	6780	5	Limestone, grayish-black with light- to medium-gray spots, highly oolitic in part, somewhat shaly, silty
6780	6795	15	Limestone (very sandy, silty) to sandstone (very fine, silty, and highly calcareous), light- to medium-gray
6795	6800	5	Limestone, medium- to dark-gray, some grayish-black and some light-gray, very shaly, silty, somewhat sandy
6800	6850	50	Limestone (very sandy, silty) to sandstone (very fine, silty, highly calcareous), medium- to dark gray, some grayish-black
6850	6860	10	Limestone, dark-gray to grayish-black, some light-gray toward the bottom, very sandy and silty, somewhat shaly, oolitic in part
6860	6885	25	Limestone, grayish-black to black, some light-gray spots, highly oolitic in part, silty and sandy (fine to very fine), somewhat shaly, very shaly at the bottom
6885	6900	15	Limestone (very shaly) to shale (highly calcareous), dark-gray to grayish-black, some light- to medium-gray, silty, somewhat cherty

- 6900 6915 15 Limestone, medium- to dark-gray, some white to light-gray, very silty to sandy (very fine), cherty, some calcareous shale
- 6915 6935 20 Limestone, dark-gray to grayish-black, silty and sandy, very shaly at the bottom

CAYUGAN AND NIAGARAN SERIES, 1054 FEET.

- 6935 7050 115 Limestone, grayish-black to black, very shaly to a calcareous shale, somewhat pyritic; some brownish-black dolomitic limestone to dolomite (shaly); some very fine sandstone at the bottom
- 7050 7090 40 Limestone, dark-gray to black, light- to medium-gray in part, very shaly with some calcareous shale, very silty and sandy, dolomitic in part; some silty sandstone, light-gray, very fine, calcareous
- 7090 7100 10 Limestone, dark-gray to grayish-black, some medium dark to dark-gray (highly dolomitic), very shaly, sandy in part
- 7100 7120 20 Limestone, medium- to dark-gray, grayish-black to black, shaly, very sandy; dolomitic in part at the bottom; some medium-gray anhydrite in the lower part
- 7120 7160 40 Limestone (dolomitic) to dolomite (calcareous), dark-gray to grayish-black, some medium-gray, a moderate to large amount of light- to medium-gray anhydrite, some shale, sandy at the top
- 7160 7250 90 Dolomite, grayish-black to black, some dark-gray, some brownish-black, highly calcareous, shaly, sandy in part; some light- to medium-gray anhydrite
- 7250 7330 80 Dolomite, dark-gray to black, some brownish-black, highly calcareous, shaly, very sandy in part; small amount of light- to medium-gray anhydrite
- 7330 7400 70 Dolomite, grayish-black to black, some brownish-black, highly calcareous, shaly to dolomitic shale, sandy at the bottom, some fossil fragments
- 7400 7455 55 Dolomite, dark-gray to black streaked with dusky-brown (7430-7440 iron oxides ?), calcareous, shaly to dolomitic shale, silty, highly oolitic in the lower part

- 7455 7520 65 Sandstone, white to very light gray, fine to very fine grained, quartzitic, highly calcareous to a sandy limestone (in part), contains some pyrite crystals
- 7520 7530 10 Sandstone, very light to medium-gray, some dark-gray (some carbonaceous material), very fine to fine-grained, some calcareous sandstone to sandy limestone; a large amount of medium- to dark-gray shale, some grayish-black to black
- 7530 7535 5 Shale, dark-gray to grayish-black, somewhat dolomitic; some white sandstone to medium-gray, sandy limestone
- 7535 7545 10 Sandstone (calcareous, silty) to an impure limestone, light- to dark-gray, contains some pyrite oolites; a large amount of dark-gray to grayish-black shale
- 7545 7570 25 Limestone, medium dark gray to grayish-black, shaly, dolomitic, a few pyrite oolites at the top
- 7570 7575 5 Limestone (shaly) and shale, medium-gray to grayish-black, dolomitic; sandstone, white to very light gray, quartzitic, fine to very fine grained (cavings ?)
- 7575 7610 35 Limestone, dark-gray to black, very shaly, silty in part, dolomitic in part
- 7610 7635 25 Limestone, medium dark gray to grayish-black, contains an abundance of microfossils resembling oolites (ostracods), very sandy to a sandstone at the bottom, shaly
- 7635 7645 10 Sandstone, light - to medium-gray, highly calcareous to a sandy limestone, shaly; some dark-gray to black, shaly limestone
- 7645 7665 20 Limestone (sandy) to sandstone, medium dark to dark-gray, some grayish-black, very shaly, silty, fossiliferous
- 7665 7690 25 Limestone, dark-gray to grayish-black, very shaly to a calcareous shale, moderately to highly dolomitic, silty and sandy in part
- 7690 7710 20 Limestone, dark-gray to black with light- to medium-gray spots (an increase of light- to medium-gray at the bottom), very shaly to a calcareous shale, fossiliferous

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| 7710 | 7730 | 20 | Limestone, mottled light- to medium-gray (very highly calcareous) and dark-gray to grayish-black (shaly), very highly fossiliferous, dolomitic in part |
| 7730 | 7740 | 10 | Sandstone, grayish-red to very dusky red, fine-grained with many coarse to very coarse grains, contains hematite and some dolomite cement with green grains of chloritic material (Clinton iron o ore horizon, probably much less than 10'); some sandstone, very light to light-gray, fine-grained with medium to very coarse grains, pyritic in part, silty in part to a medium-gray and dark greenish gray, sandy, dolomitic siltstone |
| 7740 | 7760 | 20 | Sandstone (very fine) to siltstone, medium- to dark-gray, some dark greenish gray, dolomitic; a large amount of dark-gray to grayish-black limestone; small amount of medium-gray to dark greenish gray shale at the bottom |
| 7760 | 7785 | 25 | Shale, greenish-gray, soft to siltstone, dark greenish gray |
| 7785 | 7840 | 55 | Shale, greenish-gray, some medium-gray, soft; a moderate to large amount of dark greenish gray siltstone |
| 7840 | 7925 | 85 | Shale, greenish-gray, some dark greenish gray, a small amount of medium-gray, soft; some siltstone, dark greenish gray |
| 7925 | 7943 | 18 | Siltstone and shale, medium-gray to greenish-gray, some medium dark gray to dark greenish gray |
| 7943 | 7950 | 7 | Sandstone, greenish red to very dusky red, with much hematite |
| 7950 | 7955 | 5 | Siltstone, medium- to dark-gray, sandy; siltstone and shale, medium-gray to greenish-gray and dark greenish gray (cavings ?) |
| 7955 | 7967 | 12 | Sandstone, very dusky red, some grayish-red, with much hematite |
| 7967 | 7989 | 22 | Siltstone, medium-gray to dark greenish gray, some medium dark gray; a large amount of shale, medium to medium dark gray |
| TUSCARORA SANDSTONE, 131 plus, feet. | | | |
| 7989 | 8120 | 131 | Sandstone, very light gray to light greenish gray, some light gray to greenish-gray, very fine grained, silty, quartzitic (much silica cement) |