Latitude

Longitude

Topo Location

7.5' Loc. 0,965 / 1,72W 15' Loc. (calc.) 3.845 / 3.99W

Company _____

Farm _____

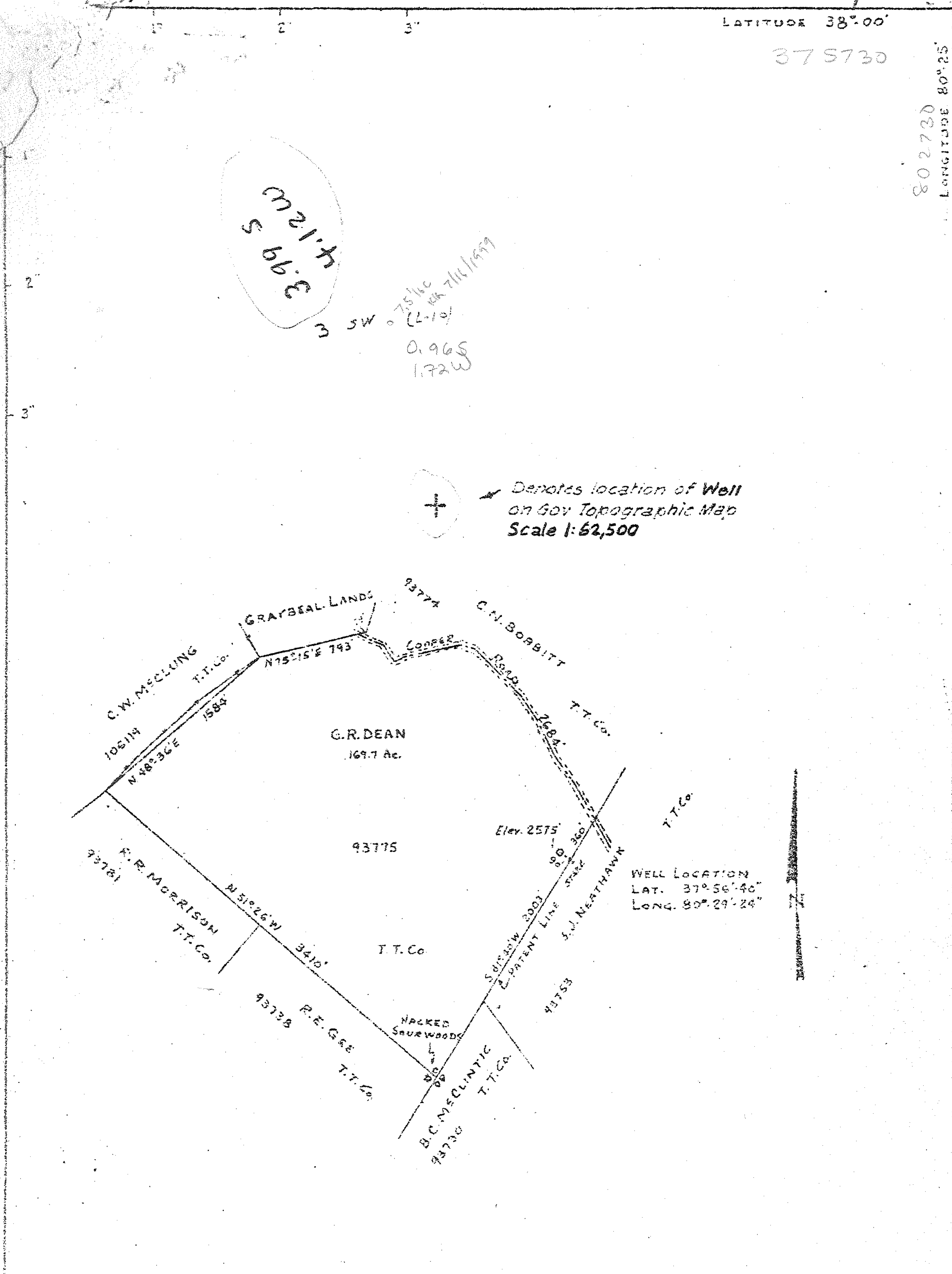
15' Quad (sec.) White Sulphur Springs NW

7.5' Quad Williamsburg

District _____

WELL LOCATION PLAT

County 025 Permit 2



Company THE TEXAS COMPANY
Address BOX 299 SALEM, ILLINOIS
Farm G.R. DEAN (Lusk - Green #2)
Tract ____ Acres 169.7 Lease No. 93775
Well (Farm) No. 1 Serial No. ____
Elevation (spirit Level) 2575'
Quadrangle WHITE SULPHUR SPRINGS, W. VA. Williamsburg 7.5' - NW
County GREENBRIER District WILLIAMSBURG
Engineer A. Glenn Witt
Engineers Registration No. 1417 (Ky)
File No. ____ Drawing No ____
Date 4-22-46 Scale 1:1000

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
CHARLESTON

WELL LOCATION MAP
FILE NO. GREEN-2

plugged 07/31/1947
Redrilled 1953 by Columbian Carbon

Deep Well

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Green 2-R
White Sulphur Spgs. Quad.

Gas

Company	Columbian carbon Company
Address	Box 873, Charleston 23, W. Va.
Farm	V. H. Lusk Acres 175
Location	Brushy Ridge near Williamsburg
Well No.	1 - GW-1175 Elev. 2575'
District	Williamsburg County - Greenbrier
Surface	V. H. Lusk, Shady Springs, W. Va.
Mineral	V.H. Lusk, et al
Volume	133,000
R.P.	2330# 21 days

1953

CASING & TUBING

7" 6405'9" 6405'9"

Note: This well was originally drilled by The Texas Company and was known as the G. R. Dean #1. The following is the Log according to our samples:

Very fine white & yellow sand	0	120
Gray to green Siltstone	120	140
Greey, gray & red Siltstone	140	210
Lt. gray grain sand	210	220
Gray and Green Siltstone	220	250
Fine Lt. Gray Sand	250	270
Gray Shale & Siltstone	270	310
Gray to green Siltstone	310	500
Dark Gray Shale	500	520
Dark Gray Shaly Siltstone	520	560
Gray Silty Shale	560	620
Gray Shale & Siltstone	620	700
Lt. Green Sand	700	710
Gray Shale	710	780
Brown & Gray Siltstone	780	800
Gray Shale and Siltstone	800	850
Lt. green to gray Siltstone	850	870
Gray Shale & Siltstone	870	900
Gray Shale	900	920
Gray and Brown Siltstone	920	950
Gray Siltstone and Shale	950	1290
Dark Gray to green Siltstone	1290	1900
Gray Shale and Siltstone	1900	2350
Dark Gray Shale	2350	2370
Fine Gray Siltstone	2370	2410
Shale and Siltstone	2410	2690
Dark Gray Shale	2690	2800
Gray Shale and lt. green Siltstone	2800	2970
Dark Gray Shale	2970	3020
Dark Gray Shale & Siltstone	3020	3040
Gray and Green Siltstone	3040	3230
Dk. Gray Shale & Siltstone	3230	3370
Gray to dk. gray Siltstone	3370	3400
Shale and Siltstone	3400	4400
Dark Gray Shale	4400	4970
Dark Shale	4970	5104
Dk. Brown to Black Shale	5104	5200
Dk.Brown to Dk.Gray Shale	5200	5290
Slick Black Shale	5290	5315
Brown Shale	5315	5750
Dark Brown Shale	5750	6218
Dk.Brown Shale & Limey Shale	6218	6330
Black & Gray Shale	6330	6370
Mod. Dark Shale	6370	6380
Marcellus Shale	6380	6431
Huntersville Chert	6431	6465
Fine sand to Siltstone-some Chert	6465	6488
Chert and Shale	6488	6538
Oriskany Sand	6538	6574
Lime	6574	6590
Dk.Silty Sand to Siltstone	6590	6600
Dark Lime	6600	6625
Sandy Lime	6625	6670
Chert & Lime	6670	6725
Med. to Dk.Gray Lime	6725	6775
Gray to Black Lime	6775	6790
Limey Sand to Sandy Lime	6790	6795
Dk.Gray to Black Lime	6795	6830
Sandy Lime to Silty Sand	6830	6850
Gray to Black Lime OOlitic in part	6850	6880
White to Dk.Gray Lime	6880	6935
Gray Black to Black Shaly Lime to Shale	6935	6980
Lime and Sand	6980	7050
Dark Gray to Black Lime	7050	7090
Dark Gray to Black Lime	7090	7140
Dark Gray to Black Lime	7140	7380
Dark Gray to Black Lime	7380	7458
Williamsport Sand	7458	7540
McKenzie Shaly - Limestone	7540	7631
Keefer	7631	7668
Rose Hill Limey Shale	7668	7730
Clinton Shale	7730	7750
Shale	7750	7920
Green, Gray Siltstone	7920	7935
Shale	7935	7942
Green Sand	7942	7955
Iron Sand	7955	7963
Shale to Siltstone	7963	7988
Ruscarora Sand	7988	8120
TOTAL DEPTH		8120

Plugged back to ~~8115'~~ — 6815'.

Gas Pays: 6435' and 6740'.

575

7631
2575
5056

8120
6431
1689

7631

8120
2575
5545

Gas 6442-6547

7458
2575
4883

7988
2575
5413

GEOLOG

G. R. DEAN NO. 1 WELL.

Williamsburg District, Greenbrier County, W. Va.
By The Texas Company, Box 2420, Tulsa, Oklahoma.
Drilled under permit Green-4, White Sulphur Springs Quadrangle.
On 170 acres.
Elevation, 2575' L.
Surface and minerals owned by G. R. Dean, Williamsburg, W. Va.
Drilling commenced May 27, 1946; completed July 26, 1947.
10" casing, 433', cemented from top to bottom.
Rotary well.
Dry hole. Record from Smith Aug. 26, 1947.

	Top.	Bottom.
Siltstone, gray, hard	0 -	2250
Siltstone, gray, with shale, dark-gray, hard	2250 -	2950
Shale, dark-gray, hard	2950 -	5100
Marcellus Shale, black, hard	5100 -	6431
Huntersville Cherty Limestone, dark-gray, hard (40 M. gas, 6442-6567', drill-stem test by Howco Feb. '47)	6431 -	6538
Oriskany Sand, white, hard	6538 -	6572
Limestone, gray, hard (no gas, 7053-7206', drill-stem test 7-19-47, open 1 hr.) (101 M. gas (maximum)), 7409', drill-stem test by Howco	6572 -	7458
Williamsport Sand, white-gray, hard	7458 -	7550
McKenzie Shaly Limestone, dark-gray, hard (82 M., 7562', 7-15-47, open 2 hrs. 30 min.)	7550 -	7618
Keefer? Sand, white-gray, hard	7618 -	7668
Rose Hill limy shale, gray-white, hard	7668 -	7728
Clinton Iron Ore, red, hard	7728 -	7737
Siltstone, Keefer?, gray, hard	7737 -	7758
Shale, green, medium-hard	7758 -	7916
Sand, green-white, hard (7916', drill-stem test by Howco 7-2-47, open 1 hr., none to 8120'. No show or odor)	7916 -	8955
Iron sand, red, hard	6955 -	8963
Sand, gray-green, hard	8963 -	7988
Tuscarora Sand, white-gray, hard	7988 -	8120
Total depth		8120

G. R. DEAN NO. 1 WELL.

Greenbrier 2

Williamsburg District, Greenbrier County, W. Va.
By The Texas Company.
Martens' sample record to RCT June 26, 1947.
Martens did not examine samples from 3790 to 7400', or if he did, the record was not turned in.
Located 4.0 mi. S of 38°00' and 4.3 mi. W. [illegible] NW White Sulphur Springs [illegible]

Top.	Bottom.	Thickness.	
0 -	60	60	Sandstone, white to yellow, very fine; also some yellow and brown clay
60 -	120	60	Sandstone, gray, very fine, with some gray to green siltstone
120 -	140	20	Siltstone, gray to grayish-green, shaly; also a little very dark shale and a little sand which is coarser than any above this
140 -	160	20	Siltstone, red, gray, and green, sandy
160 -	210	50	Siltstone, gray and green, sandy
210 -	220	10	Sandstone, light-gray, medium-grained
220 -	250	30	Siltstone, gray and green, with a little dark-gray shale
250 -	270	20	Sandstone, light-gray, fine, with a few coarse grains
270 -	310	40	Siltstone and shale, gray, with some fine white sandstone
310 -	360	50	Siltstone, gray to grayish-green, with some dark-gray shale
360 -	500	140	Siltstone, gray, mostly fine, with small amount of dark-gray shale
500 -	520	20	Shale, dark-gray, silty
520 -	550	30	Siltstone, dark-gray, fine and shaly
550 -	580	30	Siltstone, light-gray, mostly coarser than the siltstone above
580 -	620	40	Shale, gray, silty
620 -	700	80	Shale and siltstone, gray; a few fairly coarse sand grains at 670-680' and 690-700'
700 -	710	10	Sandstone, light-green, very fine
710 -	780	70	Shale, gray, with some gray and grayish-green siltstone
780 -	800	20	Siltstone, brown and gray, with some gray shale
800 -	850	50	Shale, gray, with about an equal amount of gray to grayish-green siltstone
850 -	870	20	Siltstone, gray and light-green
870 -	900	30	Shale and siltstone, gray; a few coarse sand grains at 890-900'
900 -	920	20	Shale, gray, silty
920 -	950	30	Siltstone, gray and grayish-green, coarse and sandy
950 -	1290	340	Shale and siltstone, gray; in most of the samples there is a considerable excess of siltstone over shale
1290 -	1600	310	Siltstone, gray to grayish-green, with some gray shale; several samples contain some dark-gray and dark-brown fine siltstone
1600 -	1800	200	No samples
1800 -	1850	50	Siltstone, gray to grayish-green, with some gray shale
1850 -	1900	50	Siltstone, dark-gray, fine
1900 -	1990	90	Siltstone and shale, gray
1990 -	2030	40	Siltstone and shale, gray, with small amount of white crystalline calcite

(OVER)

Top.	Bottom.	Thickness.	
2030 -	2090	60	Shale and siltstone, gray
2090 -	2210	120	Shale and siltstone, dark-gray to gray; most of the samples in this interval show an increased proportion of dark silty shale and fine siltstone as compared with the interval above
2210 -	2270	60	Shale and siltstone, dark-gray to very dark gray, with some lighter gray siltstone; most of the siltstone is fine and not sharply differentiated from the shale; the rock of the interval is not much different from that of the interval above but the average color is darker
2270 -	2290	20	Shale and siltstone, gray
2290 -	2350	60	Siltstone and shale, gray to dark-gray; fine siltstone is the predominant material
2350 -	2370	20	Shale, dark-gray, with some fine siltstone
2370 -	2410	40	Siltstone, gray, fine; with dark-gray, mostly silty shale
2410 -	2690	270	Shale, dark-gray to very dark gray, and fine lighter gray siltstone
2690 -	2800	110	Shale, dark-gray, with varying amounts of fine gray siltstone
(2800 -	2840	40	Siltstone and shale, gray)
2800 -	2970	170	Siltstone and shale, gray; the siltstone is fine and slightly greenish
2970 -	3010	40	Shale, dark-gray, with small amount of gray to greenish siltstone
3010 -	3020	10	Shale, very dark gray
3020 -	3040	20	Shale and siltstone, gray
3040 -	3080	40	Siltstone, gray, shaly, slightly calcareous
3080 -	3200	120	Siltstone, gray to greenish-gray, mostly fine and shaly; also smaller amounts of gray shale
3200 -	3205	5	No sample
3205 -	3210	5	Siltstone, dark-gray, fine, 60%; gray shale and siltstone, 40%
3210 -	3230	20	Siltstone, gray, fine
3230 -	3250	20	Shale and siltstone, gray
3250 -	3300	50	Siltstone, gray to dark-gray, 80%; gray shale, 20%
3300 -	3370	70	Siltstone and silty shale, dark-gray
3370 -	3400	30	Siltstone, gray to dark-gray, fine and shaly
3400 -	3440	40	Shale and fine siltstone, dark-gray
3440 -	3470	30	Shale and siltstone, gray
3470 -	3580	110	Shale and siltstone, gray to dark-gray; individual samples show considerable variation in color and relative amounts of shale and siltstone
3580 -	3640	60	Shale and siltstone, gray
3640 -	3790	150	Shale, mostly dark-gray, with smaller amounts of gray siltstone
3790 -	7400	3610	(SAMPLES NOT EXAMINED OR NOT REPORTED)
7400 -	7460	60	Limestone, gray to dark-gray, dolomitic, very finely crystalline; also a little gray to black slickensided shale
7460 -	7520	60	Sandstone, white, quartzitic, fine to very fine; also considerable amounts of limestone

(Continued on page 3)

Top.	Bottom.	Thickness.	
7520 -	7530	10	Sandstone, white to gray, very fine; also large amount of gray shale and some limestone
7530 -	7535	5	Shale, gray to dark-gray, calcareous; also a little gray limestone and white sandstone
7535 -	7545	10	Sandstone, white, very fine; a few pyrite oolites in calcareous siltstone and impure limestone; also much dark-gray shale
7545 -	7550	5	Limestone, gray, containing a few pyrite oolites; also much white to gray very fine sandstone
7550 -	7570	20	Limestone, gray to black, shaly, dolomitic
7570 -	7575	5	Shale and limestone, gray; also some white sandstone
7575 -	7610	35	Limestone, gray to dark-gray, partly shaly
7610 -	7635	25	Limestone, gray, sandy, containing abundant micro-fossils resembling oolites (Ostracods?); apparently grades into sandstone toward bottom
7635 -	7645	10	Sandstone, gray, fine, calcareous and dolomitic; also much dark-gray limestone
7645 -	7705	60	Limestone, gray to dark-gray, fossiliferous; partly silty and sandy
7705 -	7730	25	Limestone, brownish-gray with some white, fossiliferous KEEFER SANDSTONE
7730 -	7735	5	Sandstone, red, fine, with hematite cement and green grains of chloritic material (Clinton Iron Ore horizon); also much limestone
7735 -	7760	25	Sandstone, gray, very fine, silty, dolomitic; also much limestone
7760 -	7765	5	Shale, light-green
7765 -	7780	15	Shale and siltstone, green
7780 -	7835	55	Shale, light-gray; also much green shale as above
7835 -	7925	90	Shale and siltstone, green
7925 -	7940	15	Shale and siltstone, gray and green
7940 -	7950	10	Sandstone, red, with much hematite
7950 -	7955	5	Siltstone, gray, sandy
7955 -	7965	10	Sandstone, red, with much hematite
7965 -	7990	25	Siltstone, gray and green, hard; coarser and sandy toward bottom of interval. ALBION SANDSTONE (TUSCARORA OR WHITE MEDINA)
7990 -	8045	55	Sandstone, light-gray and light-green to nearly white, fine to very fine, quartzitic; contains small amount of dolomite
	(8120)		(Reported Total depth)

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 4.3 mi. W. of 80° 25' - NW- White Sulphur Springs Quadrangle.
Elevation, 2575' L.
Permit Gree-2.
Drilling commenced May 27, 1946; completed July 31, 1947.
Gas show, 103,000 cu. ft. in one hour at 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.
Record from Flowers, April 18, 1950.

Top	Bottom	Thickness	
			POCONO FORMATION, 710+ FEET
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	Siltstone, 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 mddium 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

— TUSCARORA — Dep Well

(OVER - Continued on p. 2)

Top	Bottom	Thickness	
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, 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; somesiltstone 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?)
			DEVONIAN SHALES, 5721 (?) FEET
710	3790	3080	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", somewh shaly) to dark-gray and grayish-black (very shaly to siliceous shale), calcareous in part, slightly pyritic
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	8	Sandstone, light- to medium-gray (with some dark-gray, shaly streaks), fine-grained, some medium to coarse grains, subangular to rounded, mostly quartz qith 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

(Continued on p. 3)

Top	Bottom	Thickness	
			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	Siltstone, 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 at 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	6870	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

(Continued on page 4)

(G.R. DEAN NO. 1 WELL (Continued)

Top	Bottom	Thickness	
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, to 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

(Continued on page 5)

G. R. DEAN NO. 1 WELL (Concluded)

Top	Bottom	Thickness	
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
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 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	35	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+ 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)

WR-38
DATE:

API # 47-025-00002-P

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Division, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: Lusk, V.H. Operator Well No.: 1

LOCATION: Elevation: 2,560' Quadrangle: _____
District: _____ County: Greenbrier
Latitude: _____ Feet South of _____ Deg. _____ Min. _____ Sec.
Longitude: _____ Feet West of _____ Deg. _____ Min. _____ Sec.

Well Type: OIL _____ GAS X

Company: Jackson Resources Co.
P O Box 498
Hamlin WV 25523

Coal Operator or Owner _____

Coal Operator or Owner _____

Agent: Dale Coleman

Permit Issued Date: 10/04/01

RECEIVED
Office of Oil & Gas
Permitting
MAY 0 1 2002
WV Department of
Environmental Protection

AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Lincoln ss:

5 gals latex added to plug at 4515'-4300'

Paul Stevens and Joe Pettey being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by the above named well operator, and participated in the work of plugging and filling the above well, and Rick Campbell Oil andGas Inspector representing the Director, say that said work was commenced on the 25th day of March, 2002 and that the well was plugged and filled in the following manner:

TYPE	FROM	TO	PIPE REMOVED	LEFT
Gel Hole	Surface	8120'		
Pull 2-3/8"		6600'	6600'	0
Cement	6600'	6350'		
Pull 7"		4515'	4515'	1991'
Cement	4515'	4300'		10-3/4" - 4383'
Cement	2200'	2000'		
Cement	500'	400'		
Cement	100'	Surface		

5/2/02

Description of monument: Erect monument with API # 47-025-00002-P and that the work of plugging and filling said well was completed on the 6th day of April, 2002

And furthur deponents saith not. Paul Stevens

Joseph C. Pettey

Sworn and subscribe before me this 12th day of April, 19 2002

My commission expires: 10-7-2002

Michael E. Sinney
Notary Public

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
MICHAEL E. SINNEY
LLOYD JACKSON WELL SERV., INC.
308 WALNUT STREET
HAMLIN, WV 25523
My Commission expires 10-7-02

Oil and Gas Inspector: Richard Campbell

MAY 3 - 2002

GAS 0002-P