

# **Pioneer Natural Resources**

**Andrews Co., Tx (NAD-27 TxC)**

**University 7-43 Pad**

**University 7-43 7H**

**OH**

**Design: OH**

## **TRRC Certified Surveys**

**24 January, 2022**

# PIONEER

## NATURAL RESOURCES

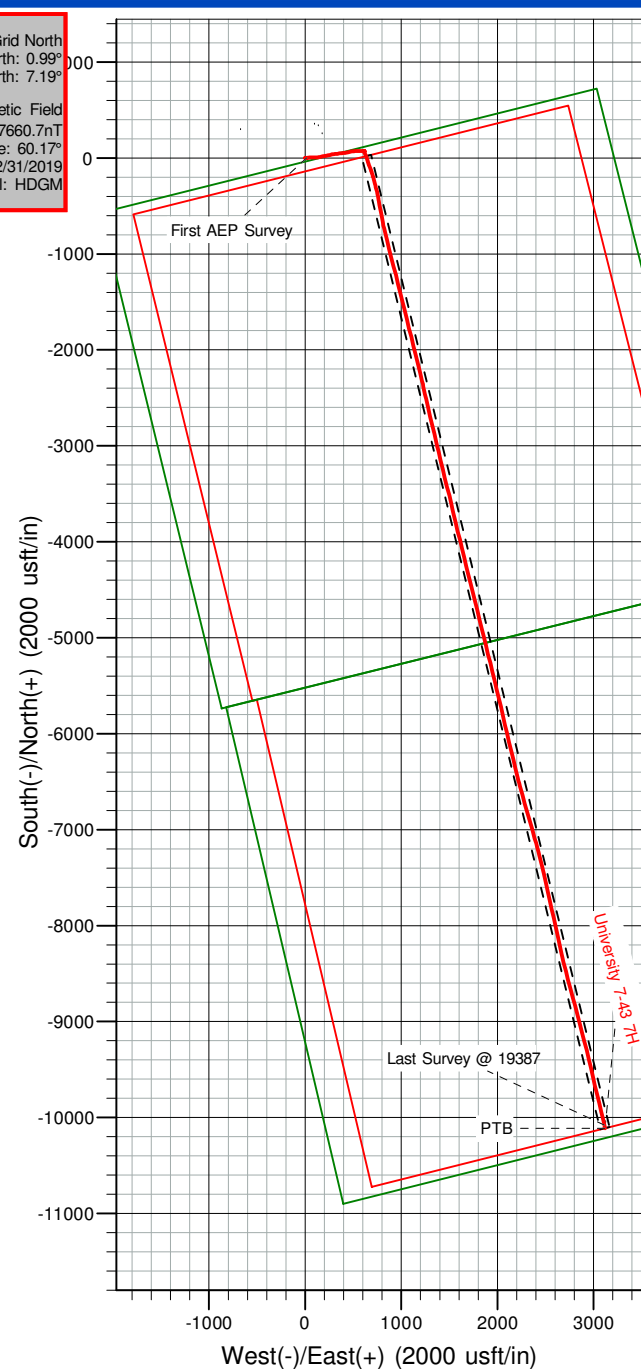
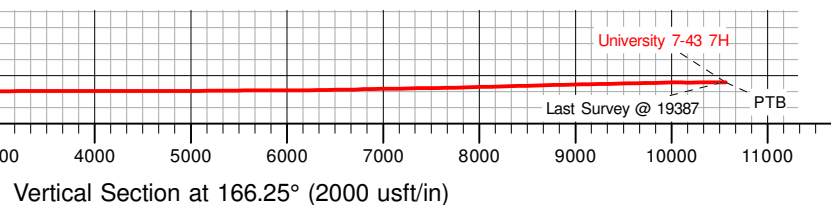
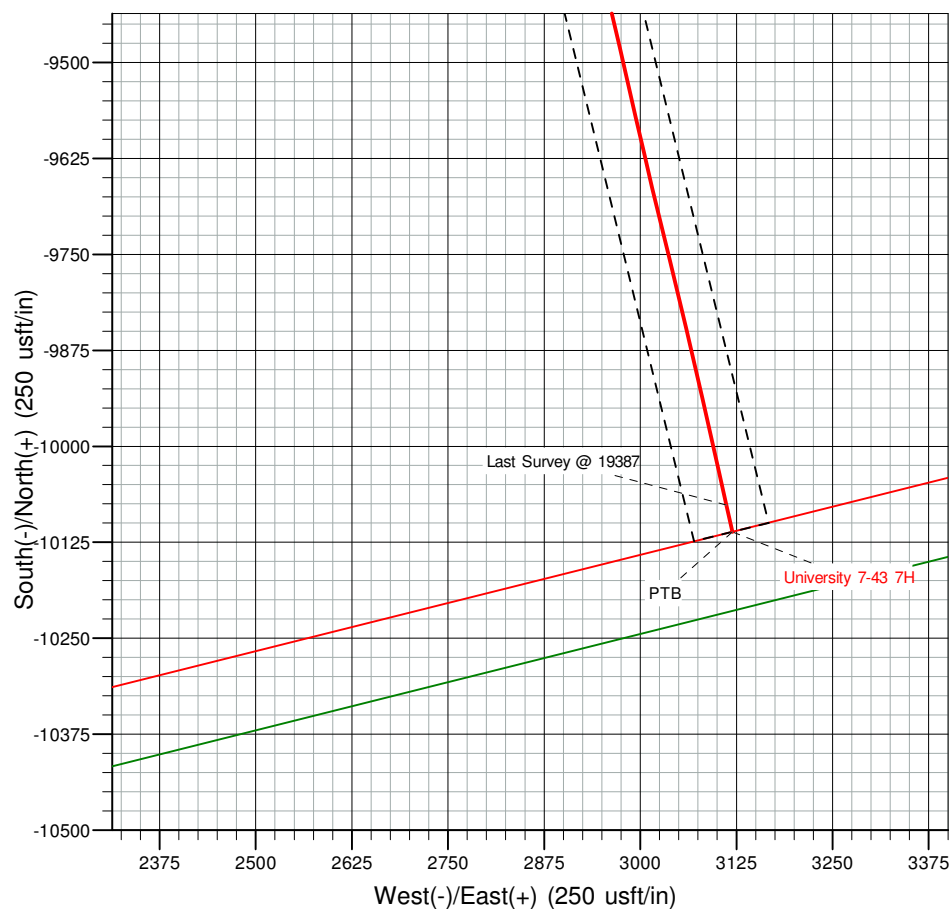
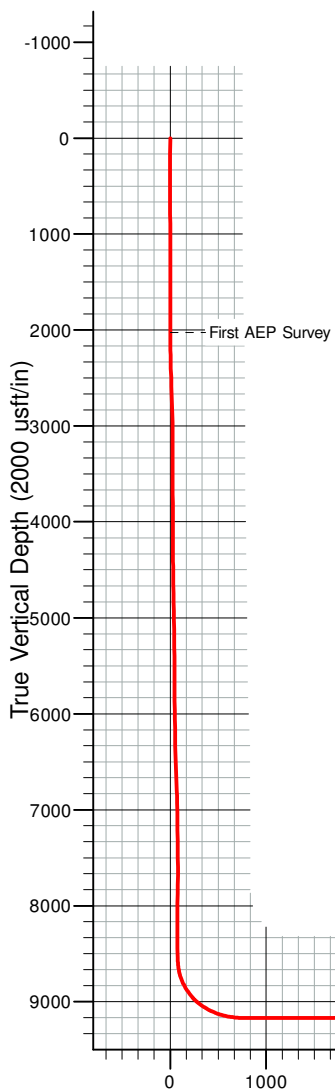
Project: Andrews Co., Tx (NAD-27 TXC)  
 Site: University 7-43 Pad  
 Well: University 7-43 7H  
 Wellbore: OH  
 Design: OH  
 Lat: 32° 21' 8.046 N  
 Long: 102° 15' 29.881 W  
 GL: 2968.0  
 KB: KB = 26.5' @ 2994.5usft



Azimuths to Grid North  
 True North: 0.99°  
 Magnetic North: 7.19°  
 Magnetic Field  
 Strength: 47660.7nT  
 Dip Angle: 60.17°  
 Date: 12/31/2019  
 Model: HDGM

WELL DETAILS: University 7-43 7H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	981946.70	1405443.60	32° 21' 8.046 N	102° 15' 29.881 W



# TRRC Certified Surveys

<b>Company:</b>	Pioneer Natural Resources	<b>Local Co-ordinate Reference:</b>	Well University 7-43 7H
<b>Project:</b>	Andrews Co., Tx (NAD-27 TXC)	<b>TVD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Site:</b>	University 7-43 Pad	<b>MD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Well:</b>	University 7-43 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	FHartmann

<b>Project</b>	Andrews Co., Tx (NAD-27 TXC)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Texas Central 4203		

<b>Site</b>	University 7-43 Pad		
<b>Site Position:</b>		<b>Northing:</b>	981,946.70 usft
<b>From:</b>	Map	<b>Easting:</b>	1,405,443.60 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	32° 21' 8.046 N
		<b>Longitude:</b>	102° 15' 29.881 W
		<b>Grid Convergence:</b>	-0.99 °

Well	University 7-43 7H					
Well Position	+N/-S	0.0 usft	Northing:	981,946.70 usft	Latitude:	32° 21' 8.046 N
	+E/-W	0.0 usft	Easting:	1,405,443.60 usft	Longitude:	102° 15' 29.881 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,968.0 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	12/31/2019	6.20	60.17	47,660.70000000

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	166.25	

<b>Survey Program</b>	<b>Date</b>	1/24/2022			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
26.5	1,929.5	Surface Surveys (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	
2,026.0	19,423.0	MWD Surveys (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

<b>Survey</b>									
<b>MD (usft)</b>	<b>Inc (°)</b>	<b>Azi (azimuth) (°)</b>	<b>TVD (usft)</b>	<b>N/S (usft)</b>	<b>E/W (usft)</b>	<b>Closure Distance (usft)</b>	<b>Closure Azimuth (°)</b>		
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.00	
26.5	0.00	360.00	26.5	0.0	0.0	0.0	0.0	0.00	
160.8	0.40	4.60	160.8	0.5	0.0	0.5	4.60		
245.0	0.30	5.60	245.0	1.0	0.1	1.0	4.82		
330.7	0.50	61.30	330.7	1.4	0.4	1.4	17.37		
416.3	0.30	331.00	416.3	1.8	0.7	1.9	20.34		
510.9	0.40	288.80	510.9	2.1	0.2	2.1	6.01		
604.9	0.40	143.10	604.9	1.9	0.1	1.9	3.14		
700.3	0.60	144.30	700.3	1.3	0.6	1.4	25.47		
794.7	0.60	115.80	794.6	0.6	1.3	1.5	64.44		
888.6	0.30	187.90	888.5	0.2	1.7	1.7	84.14		

# TRRC Certified Surveys

<b>Company:</b>	Pioneer Natural Resources	<b>Local Co-ordinate Reference:</b>	Well University 7-43 7H
<b>Project:</b>	Andrews Co., Tx (NAD-27 TXC)	<b>TVD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Site:</b>	University 7-43 Pad	<b>MD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Well:</b>	University 7-43 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	FHartmann

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
981.9	0.50	182.60	981.8	-0.5	1.7	1.8	105.57	
1,076.4	0.50	192.60	1,076.4	-1.3	1.6	2.0	129.15	
1,170.4	0.20	300.90	1,170.4	-1.6	1.3	2.1	139.90	
1,265.4	0.50	349.80	1,265.4	-1.1	1.1	1.6	134.37	
1,359.5	1.00	50.60	1,359.4	-0.2	1.7	1.7	96.15	
1,453.5	1.20	71.50	1,453.4	0.7	3.3	3.3	78.72	
1,547.1	1.50	86.50	1,547.1	1.0	5.4	5.5	79.16	
1,640.1	1.60	84.00	1,640.0	1.2	7.9	8.0	81.06	
1,733.5	1.80	84.50	1,733.3	1.5	10.7	10.8	81.88	
1,859.5	1.80	89.10	1,859.3	1.7	14.6	14.7	83.20	
1,929.5	1.80	90.00	1,929.2	1.8	16.8	16.9	84.02	
2,026.0	1.30	68.11	2,025.7	2.2	19.4	19.5	83.60	
First AEP Survey								
2,120.0	2.74	84.02	2,119.7	2.8	22.6	22.8	82.93	
2,214.0	4.69	85.86	2,213.5	3.3	28.6	28.8	83.40	
2,309.0	6.58	87.19	2,308.0	3.9	38.0	38.2	84.19	
2,404.0	7.56	88.83	2,402.3	4.3	49.6	49.8	85.10	
2,498.0	7.55	89.97	2,495.5	4.4	62.0	62.2	85.96	
2,592.0	7.09	90.31	2,588.7	4.4	74.0	74.1	86.63	
2,687.0	7.16	90.11	2,683.0	4.3	85.8	85.9	87.12	
2,781.0	7.03	90.17	2,776.2	4.3	97.4	97.5	87.48	
2,875.0	6.70	91.84	2,869.6	4.1	108.6	108.7	87.84	
2,969.0	6.45	86.78	2,962.9	4.2	119.4	119.4	87.98	
3,064.0	6.68	77.58	3,057.3	5.7	130.1	130.2	87.49	
3,158.0	6.23	75.95	3,150.7	8.1	140.4	140.6	86.69	
3,252.0	6.96	75.49	3,244.1	10.8	150.8	151.2	85.91	
3,347.0	7.73	78.28	3,338.3	13.5	162.7	163.2	85.25	
3,441.0	7.25	77.64	3,431.5	16.1	174.6	175.4	84.74	
3,535.0	7.12	79.55	3,524.8	18.4	186.2	187.1	84.36	
3,630.0	7.31	79.50	3,619.0	20.6	197.9	199.0	84.07	
3,724.0	6.74	79.07	3,712.3	22.7	209.2	210.4	83.81	
3,818.0	6.66	80.09	3,805.7	24.7	220.0	221.4	83.60	
3,913.0	6.19	83.71	3,900.1	26.2	230.5	232.0	83.52	
4,007.0	6.79	75.56	3,993.5	28.1	240.9	242.6	83.34	
4,101.0	6.74	74.70	4,086.8	31.0	251.6	253.5	82.98	
4,196.0	6.55	73.47	4,181.2	34.0	262.2	264.4	82.61	
4,290.0	6.68	72.08	4,274.6	37.2	272.5	275.1	82.23	
4,385.0	7.65	79.68	4,368.8	40.0	284.0	286.8	81.98	
4,479.0	8.80	84.59	4,461.9	41.8	297.3	300.3	81.99	
4,574.0	8.51	82.90	4,555.8	43.4	311.5	314.5	82.07	
4,668.0	7.49	85.18	4,648.9	44.8	324.5	327.6	82.15	
4,763.0	7.20	84.34	4,743.1	45.9	336.6	339.7	82.24	
4,857.0	6.45	85.11	4,836.4	46.9	347.8	350.9	82.32	
4,951.0	7.02	82.50	4,929.8	48.1	358.7	361.9	82.36	
5,046.0	7.58	83.26	5,024.0	49.6	370.7	374.0	82.38	

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<b>Well:</b>	University 7-43 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	FHartmann

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
5,140.0	7.10	81.43	5,117.2	51.2	382.6	386.0	82.38	
5,235.0	6.82	82.27	5,211.5	52.8	394.0	397.5	82.36	
5,329.0	6.90	83.67	5,304.8	54.2	405.1	408.7	82.38	
5,424.0	6.77	82.34	5,399.2	55.6	416.4	420.0	82.40	
5,518.0	6.26	84.13	5,492.6	56.8	426.9	430.7	82.42	
5,613.0	7.50	77.21	5,586.9	58.7	438.1	442.1	82.37	
5,707.0	7.33	76.80	5,680.1	61.5	450.0	454.1	82.22	
5,802.0	6.92	77.63	5,774.4	64.1	461.5	465.9	82.10	
5,896.0	6.27	78.90	5,867.7	66.3	472.0	476.6	82.01	
5,990.0	6.96	80.45	5,961.1	68.2	482.7	487.5	81.96	
6,085.0	8.14	82.22	6,055.3	70.1	495.0	499.9	81.94	
6,179.0	7.66	82.74	6,148.4	71.8	507.8	512.9	81.96	
6,274.0	7.06	81.71	6,242.6	73.4	519.9	525.0	81.96	
6,368.0	7.32	86.87	6,335.9	74.6	531.6	536.8	82.02	
6,462.0	7.33	89.74	6,429.1	74.9	543.6	548.7	82.15	
6,556.0	6.94	92.55	6,522.4	74.7	555.2	560.2	82.34	
6,651.0	6.58	92.76	6,616.7	74.2	566.4	571.2	82.54	
6,746.0	6.56	92.56	6,711.1	73.7	577.2	581.9	82.73	
6,840.0	5.69	94.08	6,804.6	73.1	587.3	591.8	82.90	
6,889.0	5.60	93.83	6,853.3	72.8	592.1	596.5	82.99	
6,970.0	5.01	94.67	6,934.0	72.2	599.5	603.9	83.13	
7,064.0	5.15	95.14	7,027.6	71.5	607.8	612.0	83.29	
7,159.0	1.68	98.48	7,122.4	70.9	613.5	617.5	83.41	
7,253.0	1.19	87.96	7,216.4	70.7	615.8	619.8	83.45	
7,348.0	1.09	102.13	7,311.4	70.6	617.7	621.7	83.48	
7,442.0	0.50	128.77	7,405.4	70.1	618.9	622.8	83.53	
7,537.0	0.57	155.11	7,500.4	69.5	619.4	623.3	83.60	
7,631.0	0.80	157.03	7,594.4	68.4	619.8	623.6	83.70	
7,725.0	1.67	305.71	7,688.3	68.6	619.0	622.8	83.67	
7,820.0	1.51	277.38	7,783.3	69.6	616.6	620.5	83.56	
7,914.0	1.60	277.49	7,877.3	69.9	614.1	618.1	83.50	
8,009.0	1.02	340.41	7,972.3	70.9	612.5	616.6	83.40	
8,103.0	0.50	18.66	8,066.2	72.1	612.3	616.6	83.29	
8,198.0	0.52	24.05	8,161.2	72.9	612.6	617.0	83.22	
8,292.0	0.38	152.64	8,255.2	73.0	613.0	617.3	83.21	
8,387.0	0.63	148.70	8,350.2	72.2	613.4	617.6	83.28	
8,481.0	0.84	166.75	8,444.2	71.1	613.8	617.9	83.39	
8,576.0	1.05	200.25	8,539.2	69.6	613.7	617.6	83.53	
8,670.0	6.98	163.06	8,632.9	63.4	615.0	618.3	84.12	
8,717.0	11.59	157.09	8,679.3	56.3	617.7	620.3	84.79	
8,765.0	16.73	152.26	8,725.8	45.7	622.8	624.5	85.80	
8,812.0	21.61	153.55	8,770.2	32.0	629.8	630.6	87.09	
8,859.0	25.89	159.47	8,813.2	14.6	637.3	637.4	88.69	
8,906.0	31.17	163.21	8,854.5	-6.7	644.4	644.4	90.59	

# TRRC Certified Surveys

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<b>Project:</b>	Andrews Co., Tx (NAD-27 TXC)	<b>TVD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Site:</b>	University 7-43 Pad	<b>MD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Well:</b>	University 7-43 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	FHartmann

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
8,953.0	34.59	164.81	8,894.0	-31.2	651.4	652.1	92.74	
9,000.0	38.21	161.95	8,931.8	-57.9	659.4	661.9	95.02	
9,048.0	42.74	159.00	8,968.3	-87.2	669.8	675.5	97.42	
9,095.0	49.25	158.65	9,001.0	-118.7	682.0	692.3	99.88	
9,142.0	54.52	161.59	9,030.0	-153.5	694.6	711.3	102.46	
9,189.0	56.69	164.13	9,056.5	-190.6	706.0	731.3	105.11	
9,236.0	61.15	165.56	9,080.8	-229.4	716.5	752.3	107.75	
9,283.0	66.46	165.32	9,101.5	-270.2	727.1	775.7	110.39	
9,330.0	69.78	166.33	9,119.0	-312.5	737.8	801.2	112.96	
9,377.0	72.59	166.71	9,134.2	-355.8	748.2	828.4	115.43	
9,425.0	76.63	168.09	9,146.9	-400.9	758.2	857.7	117.87	
9,472.0	79.92	169.41	9,156.5	-446.0	767.2	887.5	120.17	
9,519.0	82.76	170.27	9,163.5	-491.8	775.4	918.2	122.38	
9,613.0	89.25	169.31	9,170.1	-584.0	792.0	984.1	126.40	
9,703.0	90.01	168.85	9,170.7	-672.4	809.1	1,052.0	129.73	
9,797.0	89.90	166.01	9,170.7	-764.1	829.5	1,127.8	132.65	
9,892.0	90.15	166.20	9,170.7	-856.3	852.3	1,208.2	135.13	
9,986.0	90.01	166.19	9,170.6	-947.6	874.8	1,289.7	137.29	
10,080.0	90.15	165.32	9,170.4	-1,038.7	897.9	1,373.0	139.16	
10,175.0	90.18	165.97	9,170.2	-1,130.8	921.5	1,458.7	140.82	
10,269.0	90.04	166.16	9,170.0	-1,222.0	944.1	1,544.2	142.31	
10,364.0	90.07	165.92	9,169.9	-1,314.2	967.0	1,631.6	143.65	
10,458.0	90.49	165.79	9,169.4	-1,405.3	990.0	1,719.0	144.84	
10,552.0	90.49	165.94	9,168.6	-1,496.5	1,012.9	1,807.1	145.91	
10,647.0	90.66	165.95	9,167.7	-1,588.6	1,036.0	1,896.6	146.89	
10,742.0	90.57	166.13	9,166.7	-1,680.8	1,058.9	1,986.6	147.79	
10,836.0	90.40	165.83	9,165.9	-1,772.0	1,081.7	2,076.1	148.60	
10,931.0	90.24	166.29	9,165.3	-1,864.2	1,104.6	2,166.9	149.35	
11,026.0	90.04	166.19	9,165.1	-1,956.5	1,127.2	2,258.0	150.05	
11,120.0	89.79	166.20	9,165.2	-2,047.8	1,149.6	2,348.4	150.69	
11,215.0	89.82	166.33	9,165.6	-2,140.1	1,172.2	2,440.0	151.29	
11,310.0	90.18	166.50	9,165.6	-2,232.4	1,194.5	2,531.9	151.85	
11,404.0	90.04	166.13	9,165.4	-2,323.7	1,216.7	2,623.0	152.36	
11,498.0	90.82	168.12	9,164.7	-2,415.4	1,237.7	2,714.0	152.87	
11,593.0	90.01	166.74	9,164.0	-2,508.1	1,258.3	2,806.0	153.36	
11,687.0	90.21	166.83	9,163.8	-2,599.6	1,279.8	2,897.6	153.79	
11,781.0	90.63	167.11	9,163.1	-2,691.2	1,301.0	2,989.2	154.20	
11,876.0	90.18	166.49	9,162.5	-2,783.7	1,322.7	3,081.9	154.58	
11,970.0	90.18	166.38	9,162.2	-2,875.0	1,344.8	3,174.0	154.93	
12,065.0	90.24	166.39	9,161.8	-2,967.4	1,367.1	3,267.1	155.26	
12,159.0	90.60	167.76	9,161.1	-3,059.0	1,388.1	3,359.2	155.59	
12,253.0	91.05	166.82	9,159.8	-3,150.7	1,408.8	3,451.3	155.91	
12,348.0	90.12	166.55	9,158.8	-3,243.1	1,430.7	3,544.7	156.20	
12,442.0	89.26	165.53	9,159.3	-3,334.3	1,453.4	3,637.3	156.45	

# TRRC Certified Surveys

<b>Company:</b>	Pioneer Natural Resources	<b>Local Co-ordinate Reference:</b>	Well University 7-43 7H
<b>Project:</b>	Andrews Co., Tx (NAD-27 TXC)	<b>TVD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Site:</b>	University 7-43 Pad	<b>MD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Well:</b>	University 7-43 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	FHartmann

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
12,537.0	89.28	165.85	9,160.5	-3,426.4	1,476.9	3,731.1	156.68	
12,632.0	89.82	165.50	9,161.3	-3,518.4	1,500.4	3,825.0	156.91	
12,726.0	90.49	167.71	9,161.0	-3,609.9	1,522.1	3,917.6	157.14	
12,821.0	90.12	166.35	9,160.5	-3,702.4	1,543.5	4,011.3	157.37	
12,916.0	89.93	166.35	9,160.5	-3,794.7	1,565.9	4,105.1	157.58	
13,010.0	89.96	166.43	9,160.5	-3,886.1	1,588.0	4,198.0	157.77	
13,105.0	90.21	166.35	9,160.4	-3,978.4	1,610.3	4,292.0	157.96	
13,199.0	88.92	166.14	9,161.1	-4,069.7	1,632.7	4,385.0	158.14	
13,293.0	90.21	166.97	9,161.8	-4,161.2	1,654.5	4,478.0	158.32	
13,388.0	90.04	166.32	9,161.6	-4,253.6	1,676.5	4,572.0	158.49	
13,482.0	89.84	165.63	9,161.7	-4,344.8	1,699.3	4,665.3	158.64	
13,577.0	90.57	165.97	9,161.4	-4,436.9	1,722.6	4,759.5	158.78	
13,671.0	90.43	165.94	9,160.6	-4,528.1	1,745.4	4,852.8	158.92	
13,766.0	89.76	165.80	9,160.4	-4,620.2	1,768.6	4,947.1	159.05	
13,860.0	90.60	166.07	9,160.1	-4,711.4	1,791.4	5,040.5	159.18	
13,954.0	90.80	166.42	9,159.0	-4,802.7	1,813.8	5,133.7	159.31	
14,049.0	90.99	166.80	9,157.5	-4,895.1	1,835.8	5,228.0	159.44	
14,143.0	90.63	166.20	9,156.2	-4,986.5	1,857.7	5,321.3	159.57	
14,238.0	90.63	166.01	9,155.1	-5,078.7	1,880.5	5,415.7	159.68	
14,333.0	90.66	165.86	9,154.0	-5,170.8	1,903.6	5,510.1	159.79	
14,427.0	90.52	166.06	9,153.1	-5,262.0	1,926.4	5,603.6	159.89	
14,522.0	90.07	166.47	9,152.6	-5,354.3	1,949.0	5,698.0	160.00	
14,616.0	90.01	166.28	9,152.5	-5,445.6	1,971.1	5,791.4	160.10	
14,711.0	89.65	166.49	9,152.8	-5,538.0	1,993.5	5,885.8	160.20	
14,805.0	89.45	167.03	9,153.5	-5,629.5	2,015.0	5,979.2	160.31	
14,899.0	90.01	166.79	9,154.0	-5,721.0	2,036.3	6,072.6	160.41	
14,994.0	90.71	166.65	9,153.4	-5,813.5	2,058.1	6,167.0	160.50	
15,088.0	90.40	166.83	9,152.5	-5,905.0	2,079.7	6,260.5	160.60	
15,183.0	90.80	166.85	9,151.5	-5,997.5	2,101.3	6,354.9	160.69	
15,277.0	91.13	166.23	9,149.9	-6,088.9	2,123.2	6,448.4	160.78	
15,371.0	91.22	166.55	9,148.0	-6,180.2	2,145.3	6,542.0	160.86	
15,466.0	91.10	166.27	9,146.0	-6,272.5	2,167.6	6,636.5	160.94	
15,560.0	91.08	166.59	9,144.3	-6,363.9	2,189.7	6,730.1	161.01	
15,655.0	92.11	166.67	9,141.6	-6,456.3	2,211.6	6,824.6	161.09	
15,749.0	90.94	164.70	9,139.1	-6,547.3	2,234.8	6,918.2	161.15	
15,843.0	90.88	164.25	9,137.6	-6,637.9	2,260.0	7,012.1	161.20	
15,938.0	90.74	164.33	9,136.3	-6,729.3	2,285.7	7,106.9	161.24	
16,033.0	91.30	164.27	9,134.6	-6,820.8	2,311.4	7,201.8	161.28	
16,127.0	90.54	164.16	9,133.1	-6,911.2	2,337.0	7,295.6	161.32	
16,221.0	90.77	163.89	9,132.0	-7,001.6	2,362.9	7,389.5	161.35	
16,316.0	90.88	163.92	9,130.6	-7,092.8	2,389.2	7,484.4	161.38	
16,410.0	91.13	165.01	9,129.0	-7,183.4	2,414.4	7,578.3	161.42	
16,505.0	91.33	166.03	9,126.9	-7,275.4	2,438.1	7,673.0	161.47	
16,598.0	91.25	166.23	9,124.8	-7,365.6	2,460.4	7,765.7	161.53	

# TRRC Certified Surveys

<b>Company:</b>	Pioneer Natural Resources	<b>Local Co-ordinate Reference:</b>	Well University 7-43 7H
<b>Project:</b>	Andrews Co., Tx (NAD-27 TXC)	<b>TVD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Site:</b>	University 7-43 Pad	<b>MD Reference:</b>	KB = 26.5' @ 2994.5usft
<b>Well:</b>	University 7-43 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	FHartmann

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
16,693.0	91.53	167.21	9,122.5	-7,458.1	2,482.2	7,860.3	161.59	
16,788.0	91.50	167.40	9,120.0	-7,550.7	2,503.1	7,954.8	161.66	
16,882.0	91.39	167.33	9,117.7	-7,642.4	2,523.6	8,048.3	161.73	
16,977.0	91.47	167.38	9,115.3	-7,735.1	2,544.4	8,142.8	161.79	
17,072.0	91.45	167.16	9,112.9	-7,827.7	2,565.4	8,237.4	161.85	
17,167.0	91.73	167.53	9,110.2	-7,920.4	2,586.2	8,331.9	161.92	
17,261.0	91.61	167.65	9,107.5	-8,012.1	2,606.4	8,425.4	161.98	
17,356.0	91.42	167.37	9,105.0	-8,104.8	2,626.9	8,519.9	162.04	
17,451.0	91.61	167.66	9,102.5	-8,197.6	2,647.4	8,614.5	162.10	
17,545.0	91.78	167.55	9,099.7	-8,289.3	2,667.6	8,708.0	162.16	
17,640.0	91.87	166.47	9,096.7	-8,381.8	2,688.9	8,802.6	162.21	
17,735.0	91.31	165.40	9,094.0	-8,474.0	2,712.0	8,897.4	162.25	
17,829.0	90.80	165.05	9,092.3	-8,564.8	2,736.0	8,991.2	162.28	
17,924.0	91.05	165.14	9,090.8	-8,656.6	2,760.4	9,086.1	162.31	
18,018.0	91.22	165.47	9,088.9	-8,747.5	2,784.3	9,180.0	162.34	
18,113.0	91.00	164.93	9,087.1	-8,839.4	2,808.5	9,274.8	162.37	
18,208.0	91.28	165.08	9,085.2	-8,931.1	2,833.1	9,369.7	162.40	
18,302.0	91.05	165.11	9,083.3	-9,021.9	2,857.3	9,463.6	162.43	
18,397.0	92.06	165.16	9,080.7	-9,113.7	2,881.6	9,558.4	162.45	
18,491.0	91.08	165.19	9,078.1	-9,204.6	2,905.7	9,652.3	162.48	
18,586.0	91.08	165.81	9,076.3	-9,296.5	2,929.5	9,747.1	162.51	
18,680.0	91.25	166.60	9,074.4	-9,387.8	2,951.9	9,840.9	162.54	
18,775.0	90.77	167.04	9,072.7	-9,480.3	2,973.5	9,935.7	162.59	
18,869.0	90.58	167.41	9,071.6	-9,571.9	2,994.3	10,029.3	162.63	
18,963.0	89.09	166.41	9,071.9	-9,663.5	3,015.6	10,123.1	162.67	
19,057.0	90.30	166.22	9,072.4	-9,754.8	3,037.8	10,216.9	162.70	
19,152.0	90.49	167.02	9,071.7	-9,847.2	3,059.8	10,311.7	162.74	
19,246.0	90.52	166.90	9,070.9	-9,938.8	3,081.0	10,405.4	162.78	
19,341.0	90.63	167.46	9,070.0	-10,031.4	3,102.1	10,500.1	162.82	
19,387.0	90.69	167.42	9,069.4	-10,076.3	3,112.1	10,546.0	162.84	
Last Survey @ 19387								
19,423.0	90.69	167.42	9,069.0	-10,111.5	3,119.9	10,581.9	162.85	
PTB								

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,026.0	2,025.7	2.2	19.4	First AEP Survey
19,387.0	9,069.4	-10,076.3	3,112.1	Last Survey @ 19387
19,423.0	9,069.0	-10,111.5	3,119.9	PTB

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_





# ALTITUDE ENERGY PARTNERS LLC. SURVEY DATA CERTIFICATION

ALTITUDE JOB NUMBER				OPERATOR		
WELL NAME				COUNTY & STATE		
API WELL NUMBER					PROPOSED DIRECTION	
Latitude			Longitude			

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH		SURVEY INSTRUMENT TYPE MWD	
				MAGNETIC DECLINATION OR TOTAL GRID		
LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH	TOTAL CORRECTION USED		
				DECLINATION OR GRID		
PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH			

The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by Altitude Energy Partners LLC. I am authorized and qualified to review the data, calculations and this report, and that the report represents a true and correct Directional Survey of this well based on the original data corrected to True North and obtained at the well site. Wellbore coordinates are calculated using Minimum curvature or other method.

PRINT MWD NAME ABOVE

SIGN MWD NAME ABOVE

TODAY'S DATE