



Railroad Commission of Texas
Oil and Gas Division
P.O. Box 12967
Capitol Station
Austin, TX 78711

June 16, 2015


Attn: Pam Johns

RE: Pioneer Natural Resources USA, Inc.
University 2-20 #64H (OH)
Reagan County, Texas
API #: 42-383-39266

Enclosed, please find the original and one copy of the survey performed on the referenced well by LEAM Drilling Systems, LLC. (P-5 No. 491647). Other information required by your office is as follows:

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Randy W. Rakowitz	OH	720' – 18,698'	05/25/2015-06/10/2015	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.


Nora Tucker
Well Planner

Enclosures

LEAM Drilling Systems LLC

Survey Report

Company:	PIONEER NATURAL RESOURCES	Local Co-ordinate Reference:	Well 64H
Project:	Reagan County, Tx	TVD Reference:	GE 2647' + KB 26' @ 2673.00usft (H&P 606)
Site:	University 2-20	MD Reference:	GE 2647' + KB 26' @ 2673.00usft (H&P 606)
Well:	64H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Project	Reagan County, Tx		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University 2-20		
Site Position:		Northing:	589,867.89 usft
From:	Lat/Long	Easting:	1,558,365.85 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	31° 16' 51.111 N
		Longitude:	101° 44' 49.640 W
		Grid Convergence:	-0.73 °

Well	64H		
Well Position	+N-S	0.00 usft	Northing: 590,203.50 usft
	+E-W	0.00 usft	Easting: 1,559,052.77 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	31° 16' 54.519 N
		Longitude:	101° 44' 41.773 W
		Ground Level:	2,647.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	05/06/15	6.50
			Dip Angle (°) 59.75
			Field Strength (nT) 47,913

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)
	0.00	0.00	0.00
			Direction (°) 182.59

Survey Program	Date	06/16/15		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
50.00	611.00	Survey #1 (OH)	VES GyroFlex V2	
720.00	18,617.00	Survey #2 (OH)	MWD+IFR1_A005Ma	OWSG MWD + IFR1
18,698.00	18,698.00	Survey #3 (OH)	Project	Projection

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	0.42	312.34	50.00	0.12	-0.14	-0.12	0.84	0.84	0.00
100.00	0.66	308.95	100.00	0.43	-0.49	-0.41	0.48	0.48	-6.78
200.00	0.41	302.07	199.99	0.98	-1.25	-0.92	0.26	-0.25	-6.88
300.00	0.42	314.20	299.99	1.43	-1.81	-1.34	0.09	0.01	12.13
400.00	0.34	315.90	399.99	1.89	-2.28	-1.79	0.08	-0.08	1.70
500.00	0.44	300.60	499.99	2.30	-2.82	-2.17	0.14	0.10	-15.30
600.00	0.20	219.07	599.98	2.36	-3.26	-2.21	0.46	-0.24	-81.53
611.00	0.22	213.68	610.98	2.33	-3.28	-2.18	0.26	0.18	-49.00

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Well:	64H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
720.00	0.53	183.89	719.98	1.65	-3.43	-1.50	0.33	0.28	-27.33	
811.00	0.18	210.43	810.98	1.11	-3.53	-0.95	0.41	-0.38	29.16	
903.00	0.26	196.37	902.98	0.78	-3.67	-0.62	0.10	0.09	-15.28	
998.00	0.26	197.60	997.98	0.37	-3.79	-0.20	0.01	0.00	1.29	
1,092.00	0.70	258.25	1,091.98	0.05	-4.42	0.15	0.66	0.47	64.52	
1,186.00	1.76	274.59	1,185.95	0.05	-6.42	0.24	1.18	1.13	17.38	
1,280.00	2.64	275.65	1,279.88	0.38	-10.01	0.07	0.94	0.94	1.13	
1,375.00	3.34	277.58	1,374.75	0.96	-14.93	-0.28	0.74	0.74	2.03	
1,469.00	3.25	276.18	1,468.60	1.61	-20.30	-0.69	0.13	-0.10	-1.49	
1,563.00	3.52	272.66	1,562.43	2.03	-25.83	-0.86	0.36	0.29	-3.74	
1,658.00	3.43	273.36	1,657.26	2.33	-31.58	-0.90	0.10	-0.09	0.74	
1,752.00	3.87	266.68	1,751.07	2.31	-37.55	-0.61	0.65	0.47	-7.11	
1,846.00	4.13	268.62	1,844.84	2.05	-44.10	-0.05	0.31	0.28	2.06	
1,940.00	3.25	265.98	1,938.64	1.78	-50.15	0.49	0.95	-0.94	-2.81	
2,035.00	2.90	254.20	2,033.51	0.94	-55.14	1.56	0.76	-0.37	-12.40	
2,129.00	1.93	245.59	2,127.42	-0.37	-58.87	3.03	1.10	-1.03	-9.16	
2,223.00	0.88	233.81	2,221.39	-1.45	-60.90	4.20	1.15	-1.12	-12.53	
2,317.00	0.35	177.74	2,315.39	-2.16	-61.47	4.94	0.79	-0.56	-59.65	
2,411.00	0.35	158.23	2,409.39	-2.71	-61.35	5.48	0.13	0.00	-20.76	
2,506.00	0.62	108.83	2,504.38	-3.15	-60.76	5.89	0.50	0.28	-52.00	
2,600.00	0.35	111.12	2,598.38	-3.42	-60.01	6.12	0.29	-0.29	2.44	
2,694.00	0.62	133.62	2,692.38	-3.87	-59.37	6.55	0.35	0.29	23.94	
2,788.00	0.53	35.88	2,786.37	-3.87	-58.75	6.52	0.92	-0.10	-103.98	
2,882.00	0.79	32.89	2,880.37	-2.97	-58.14	5.60	0.28	0.28	-3.18	
2,977.00	1.06	17.60	2,975.36	-1.59	-57.52	4.18	0.38	0.28	-16.09	
3,072.00	0.62	90.20	3,070.35	-0.75	-56.74	3.31	1.11	-0.46	76.42	
3,166.00	0.88	129.40	3,164.34	-1.21	-55.67	3.72	0.60	0.28	41.70	
3,260.00	1.14	122.02	3,258.32	-2.16	-54.32	4.62	0.31	0.28	-7.85	
3,354.00	1.06	100.04	3,352.31	-2.81	-52.68	5.19	0.45	-0.09	-23.38	
3,448.00	1.23	105.14	3,446.29	-3.23	-50.85	5.52	0.21	0.18	5.43	
3,542.00	0.53	73.68	3,540.28	-3.37	-49.45	5.60	0.88	-0.74	-33.47	
3,636.00	0.53	42.74	3,634.27	-2.93	-48.74	5.13	0.30	0.00	-32.91	
3,731.00	0.18	32.54	3,729.27	-2.48	-48.36	4.66	0.37	-0.37	-10.74	
3,825.00	0.53	85.98	3,823.27	-2.32	-47.85	4.48	0.48	0.37	56.85	
3,919.00	0.53	92.84	3,917.27	-2.31	-46.98	4.43	0.07	0.00	7.30	
4,013.00	0.44	86.86	4,011.26	-2.32	-46.19	4.40	0.11	-0.10	-6.36	
4,107.00	0.44	76.49	4,105.26	-2.21	-45.48	4.26	0.08	0.00	-11.03	
4,202.00	0.44	87.74	4,200.26	-2.11	-44.76	4.13	0.09	0.00	11.84	
4,296.00	0.44	83.87	4,294.25	-2.06	-44.04	4.05	0.03	0.00	-4.12	
4,390.00	0.26	26.68	4,388.25	-1.83	-43.58	3.80	0.39	-0.19	-60.84	
4,484.00	0.18	67.17	4,482.25	-1.58	-43.35	3.54	0.18	-0.09	43.07	
4,579.00	0.35	86.86	4,577.25	-1.51	-42.92	3.45	0.20	0.18	20.73	
4,673.00	0.44	25.16	4,671.25	-1.17	-42.48	3.08	0.44	0.10	-65.64	

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Well:	64H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,767.00	0.26	53.64	4,765.25	-0.71	-42.16	2.62	0.26	-0.19	30.30
4,862.00	0.62	64.89	4,860.25	-0.37	-41.52	2.24	0.39	0.38	11.84
4,956.00	0.53	35.53	4,954.24	0.20	-40.81	1.64	0.32	-0.10	-31.23
5,050.00	0.70	64.53	5,048.24	0.80	-40.04	1.01	0.37	0.18	30.85
5,144.00	0.44	60.49	5,142.23	1.23	-39.20	0.54	0.28	-0.28	-4.30
5,212.00	0.62	66.64	5,210.23	1.50	-38.64	0.24	0.28	0.26	9.04
5,307.00	0.79	59.09	5,305.22	2.04	-37.60	-0.34	0.20	0.18	-7.95
5,401.00	0.79	63.66	5,399.21	2.66	-36.47	-1.01	0.07	0.00	4.86
5,495.00	0.79	61.19	5,493.20	3.26	-35.32	-1.66	0.04	0.00	-2.63
5,590.00	0.79	59.26	5,588.19	3.91	-34.18	-2.37	0.03	0.00	-2.03
5,684.00	0.70	67.00	5,682.19	4.47	-33.10	-2.97	0.14	-0.10	8.23
5,778.00	0.97	68.13	5,776.18	4.99	-31.83	-3.55	0.29	0.29	1.20
5,872.00	0.70	67.52	5,870.17	5.51	-30.56	-4.12	0.29	-0.29	-0.65
5,967.00	0.88	103.03	5,965.16	5.56	-29.31	-4.23	0.54	0.19	37.38
6,061.00	1.49	241.90	6,059.15	4.83	-29.69	-3.48	2.37	0.65	147.73
6,155.00	0.79	232.76	6,153.13	3.86	-31.28	-2.44	0.77	-0.74	-9.72
6,250.00	0.53	219.05	6,248.12	3.12	-32.08	-1.67	0.32	-0.27	-14.43
6,344.00	0.44	163.15	6,342.12	2.44	-32.25	-0.98	0.49	-0.10	-59.47
6,438.00	0.44	140.30	6,436.12	1.81	-31.91	-0.37	0.19	0.00	-24.31
6,532.00	0.44	132.74	6,530.11	1.29	-31.42	0.13	0.06	0.00	-8.04
6,627.00	0.44	121.84	6,625.11	0.85	-30.84	0.54	0.09	0.00	-11.47
6,721.00	0.53	117.09	6,719.11	0.46	-30.15	0.90	0.10	0.10	-5.05
6,815.00	0.97	256.66	6,813.10	0.08	-30.53	1.30	1.51	0.47	148.48
6,909.00	0.53	282.15	6,907.10	-0.01	-31.73	1.45	0.58	-0.47	27.12
7,004.00	0.26	36.41	7,002.09	0.25	-32.04	1.19	0.72	-0.28	120.27
7,098.00	0.18	80.36	7,096.09	0.45	-31.76	0.98	0.19	-0.09	46.76
7,192.00	0.35	81.94	7,190.09	0.52	-31.33	0.90	0.18	0.18	1.68
7,287.00	0.26	97.76	7,285.09	0.53	-30.83	0.87	0.13	-0.09	16.65
7,381.00	0.35	141.35	7,379.09	0.27	-30.44	1.10	0.26	0.10	46.37
7,475.00	0.35	145.75	7,473.09	-0.19	-30.10	1.55	0.03	0.00	4.68
7,570.00	0.53	141.35	7,568.09	-0.77	-29.66	2.11	0.19	0.19	-4.63
7,664.00	0.44	145.92	7,662.08	-1.41	-29.19	2.73	0.10	-0.10	4.86
7,758.00	0.35	150.84	7,756.08	-1.96	-28.85	3.26	0.10	-0.10	5.23
7,852.00	1.67	190.04	7,850.06	-3.56	-28.95	4.86	1.51	1.40	41.70
7,947.00	10.73	204.98	7,944.41	-12.96	-32.93	14.43	9.61	9.54	15.73
8,056.00	21.02	203.75	8,049.11	-40.12	-45.12	42.12	9.44	9.44	-1.13
8,151.00	27.52	203.23	8,135.67	-75.92	-60.66	78.59	6.85	6.84	-0.55
8,245.00	33.59	198.48	8,216.59	-120.59	-77.48	123.97	6.95	6.46	-5.05
8,340.00	42.03	194.61	8,291.59	-176.40	-93.87	180.46	9.22	8.88	-4.07
8,434.00	51.79	190.92	8,355.74	-243.28	-108.84	247.95	10.77	10.38	-3.93
8,528.00	60.67	190.92	8,407.94	-319.93	-123.63	325.19	9.45	9.45	0.00
8,622.00	68.76	191.80	8,448.06	-403.18	-140.38	409.12	8.65	8.61	0.94
8,716.00	77.91	193.21	8,474.99	-491.00	-159.88	497.72	9.84	9.73	1.50

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8,811.00	88.81	193.21	8,485.95	-582.73	-181.41	590.33	11.47	11.47	0.00
8,905.00	90.75	193.21	8,486.31	-674.23	-202.89	682.71	2.06	2.06	0.00
8,999.00	91.19	192.33	8,484.72	-765.89	-223.66	775.22	1.05	0.47	-0.94
9,094.00	91.10	189.69	8,482.82	-859.12	-241.80	869.17	2.78	-0.09	-2.78
9,188.00	91.19	187.93	8,480.95	-951.99	-256.20	962.59	1.87	0.10	-1.87
9,282.00	91.01	190.04	8,479.14	-1,044.81	-270.87	1,055.98	2.25	-0.19	2.24
9,376.00	88.72	189.16	8,479.36	-1,137.49	-286.55	1,149.27	2.61	-2.44	-0.94
9,471.00	88.29	186.18	8,481.84	-1,231.59	-299.22	1,243.86	3.17	-0.45	-3.14
9,565.00	88.50	182.13	8,484.48	-1,325.29	-306.03	1,337.77	4.31	0.22	-4.31
9,659.00	88.46	179.14	8,486.97	-1,419.24	-307.07	1,431.67	3.18	-0.04	-3.18
9,754.00	89.08	180.90	8,489.01	-1,514.22	-307.10	1,526.55	1.96	0.65	1.85
9,848.00	91.19	180.02	8,488.79	-1,608.21	-307.86	1,620.47	2.43	2.24	-0.94
9,942.00	90.57	179.32	8,487.34	-1,702.19	-307.32	1,714.34	0.99	-0.66	-0.74
10,036.00	90.31	178.79	8,486.62	-1,796.18	-305.77	1,808.16	0.63	-0.28	-0.56
10,131.00	90.75	177.91	8,485.74	-1,891.13	-303.03	1,902.89	1.04	0.46	-0.93
10,225.00	91.36	177.91	8,484.01	-1,985.05	-299.60	1,996.56	0.65	0.65	0.00
10,319.00	90.40	178.79	8,482.57	-2,079.00	-296.90	2,090.29	1.39	-1.02	0.94
10,413.00	89.87	180.73	8,482.35	-2,172.99	-296.50	2,184.17	2.14	-0.56	2.06
10,508.00	89.08	178.79	8,483.22	-2,267.98	-296.11	2,279.05	2.20	-0.83	-2.04
10,602.00	91.10	183.89	8,483.07	-2,361.92	-298.30	2,372.99	5.84	2.15	5.43
10,696.00	90.31	184.42	8,481.91	-2,455.67	-305.11	2,466.95	1.01	-0.84	0.56
10,790.00	89.96	184.42	8,481.69	-2,549.39	-312.36	2,560.90	0.37	-0.37	0.00
10,885.00	86.88	183.19	8,484.31	-2,644.13	-318.66	2,655.83	3.49	-3.24	-1.29
10,979.00	88.46	181.43	8,488.13	-2,737.97	-322.44	2,749.74	2.51	1.68	-1.87
11,073.00	88.37	180.90	8,490.73	-2,831.91	-324.35	2,843.68	0.57	-0.10	-0.56
11,168.00	90.84	181.43	8,491.39	-2,926.88	-326.29	2,938.64	2.66	2.60	0.56
11,262.00	92.07	181.43	8,489.00	-3,020.82	-328.63	3,032.59	1.31	1.31	0.00
11,356.00	90.84	178.97	8,486.61	-3,114.78	-328.96	3,126.46	2.93	-1.31	-2.62
11,451.00	91.28	178.97	8,484.86	-3,209.75	-327.25	3,221.26	0.46	0.46	0.00
11,545.00	92.42	178.79	8,481.82	-3,303.68	-325.41	3,315.01	1.23	1.21	-0.19
11,639.00	90.57	179.50	8,479.37	-3,397.63	-324.01	3,408.80	2.11	-1.97	0.76
11,734.00	91.19	178.62	8,477.91	-3,492.61	-322.45	3,503.61	1.13	0.65	-0.93
11,828.00	91.45	179.32	8,475.75	-3,586.57	-320.76	3,597.40	0.79	0.28	0.74
11,922.00	90.22	180.55	8,474.38	-3,680.55	-320.66	3,691.28	1.85	-1.31	1.31
12,016.00	90.66	179.85	8,473.65	-3,774.55	-320.99	3,785.20	0.88	0.47	-0.74
12,111.00	90.31	180.20	8,472.85	-3,869.55	-321.03	3,880.10	0.52	-0.37	0.37
12,205.00	90.31	182.13	8,472.34	-3,963.52	-322.94	3,974.07	2.05	0.00	2.05
12,299.00	90.92	182.66	8,471.33	-4,057.43	-326.87	4,068.06	0.86	0.65	0.56
12,393.00	92.42	183.01	8,468.59	-4,151.28	-331.51	4,162.02	1.64	1.60	0.37
12,488.00	90.84	182.66	8,465.89	-4,246.12	-336.21	4,256.97	1.70	-1.66	-0.37
12,582.00	91.80	182.48	8,463.72	-4,340.00	-340.42	4,350.95	1.04	1.02	-0.19
12,676.00	89.34	182.31	8,462.79	-4,433.90	-344.35	4,444.93	2.62	-2.62	-0.18
12,771.00	87.32	180.73	8,465.56	-4,528.82	-346.87	4,539.87	2.70	-2.13	-1.66
12,865.00	88.20	180.20	8,469.23	-4,622.74	-347.63	4,633.73	1.09	0.94	-0.56

LEAM Drilling Systems LLC

Survey Report

Company:	PIONEER NATURAL RESOURCES	Local Co-ordinate Reference:	Well 64H
Project:	Reagan County, Tx	TVD Reference:	GE 2647' + KB 26' @ 2673.00usft (H&P 606)
Site:	University 2-20	MD Reference:	GE 2647' + KB 26' @ 2673.00usft (H&P 606)
Well:	64H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,959.00	89.78	180.55	8,470.89	-4,716.73	-348.25	4,727.64	1.72	1.68	0.37
13,054.00	89.96	179.14	8,471.10	-4,811.72	-347.99	4,822.53	1.50	0.19	-1.48
13,148.00	88.02	179.67	8,472.76	-4,905.70	-347.01	4,916.37	2.14	-2.06	0.56
13,242.00	89.34	181.96	8,474.93	-4,999.65	-348.35	5,010.29	2.81	1.40	2.44
13,336.00	89.96	181.96	8,475.50	-5,093.60	-351.57	5,104.28	0.66	0.66	0.00
13,430.00	89.69	182.48	8,475.79	-5,187.53	-355.21	5,198.28	0.62	-0.29	0.55
13,525.00	90.40	181.43	8,475.71	-5,282.47	-358.45	5,293.27	1.33	0.75	-1.11
13,619.00	89.69	182.31	8,475.64	-5,376.42	-361.52	5,387.26	1.20	-0.76	0.94
13,713.00	90.84	181.78	8,475.21	-5,470.35	-364.87	5,481.25	1.35	1.22	-0.56
13,808.00	89.78	183.19	8,474.69	-5,565.26	-368.99	5,576.25	1.86	-1.12	1.48
13,902.00	88.46	183.54	8,476.14	-5,659.08	-374.51	5,670.23	1.45	-1.40	0.37
13,996.00	88.11	182.48	8,478.95	-5,752.91	-379.44	5,764.18	1.19	-0.37	-1.13
14,091.00	88.46	181.60	8,481.79	-5,847.81	-382.82	5,859.13	1.00	0.37	-0.93
14,185.00	89.52	181.08	8,483.45	-5,941.77	-385.02	5,953.09	1.26	1.13	-0.55
14,279.00	88.37	180.90	8,485.18	-6,035.73	-386.64	6,047.04	1.24	-1.22	-0.19
14,374.00	89.43	180.73	8,487.00	-6,130.71	-387.99	6,141.98	1.13	1.12	-0.18
14,468.00	90.22	181.25	8,487.29	-6,224.69	-389.62	6,235.94	1.01	0.84	0.55
14,562.00	89.43	180.90	8,487.58	-6,318.67	-391.38	6,329.90	0.92	-0.84	-0.37
14,657.00	89.78	180.55	8,488.23	-6,413.66	-392.58	6,424.85	0.52	0.37	-0.37
14,751.00	88.29	182.31	8,489.82	-6,507.61	-394.93	6,518.81	2.45	-1.59	1.87
14,846.00	87.58	182.84	8,493.24	-6,602.45	-399.19	6,613.75	0.93	-0.75	0.56
14,941.00	88.81	183.36	8,496.23	-6,697.27	-404.33	6,708.70	1.41	1.29	0.55
15,035.00	89.43	182.84	8,497.67	-6,791.12	-409.41	6,802.68	0.86	0.66	-0.55
15,129.00	88.29	183.01	8,499.54	-6,884.97	-414.21	6,896.66	1.23	-1.21	0.18
15,224.00	88.20	183.36	8,502.45	-6,979.78	-419.48	6,991.61	0.38	-0.09	0.37
15,318.00	87.23	180.90	8,506.20	-7,073.63	-422.97	7,085.52	2.81	-1.03	-2.62
15,412.00	87.32	178.79	8,510.67	-7,167.52	-422.72	7,179.30	2.24	0.10	-2.24
15,507.00	86.97	178.09	8,515.40	-7,262.37	-420.14	7,273.94	0.82	-0.37	-0.74
15,601.00	89.34	178.79	8,518.43	-7,356.28	-417.58	7,367.63	2.63	2.52	0.74
15,695.00	89.43	177.39	8,519.44	-7,450.22	-414.45	7,461.34	1.49	0.10	-1.49
15,790.00	89.52	177.91	8,520.31	-7,545.13	-410.55	7,555.98	0.56	0.09	0.55
15,884.00	88.90	177.21	8,521.61	-7,639.04	-406.55	7,649.61	0.99	-0.66	-0.74
15,978.00	90.31	178.62	8,522.25	-7,732.97	-403.13	7,743.29	2.12	1.50	1.50
16,072.00	91.45	178.44	8,520.81	-7,826.93	-400.72	7,837.04	1.23	1.21	-0.19
16,166.00	92.51	180.37	8,517.56	-7,920.86	-399.74	7,930.83	2.34	1.13	2.05
16,261.00	91.98	181.08	8,513.84	-8,015.78	-400.94	8,025.71	0.93	-0.56	0.75
16,355.00	90.84	181.78	8,511.53	-8,109.72	-403.29	8,119.66	1.42	-1.21	0.74
16,450.00	90.66	182.31	8,510.28	-8,204.65	-406.68	8,214.64	0.59	-0.19	0.56
16,544.00	90.66	183.19	8,509.20	-8,298.53	-411.19	8,308.64	0.94	0.00	0.94
16,638.00	91.54	182.31	8,507.40	-8,392.41	-415.70	8,402.62	1.32	0.94	-0.94
16,732.00	92.77	181.43	8,503.86	-8,486.29	-418.76	8,496.54	1.61	1.31	-0.94
16,825.00	88.29	181.43	8,503.00	-8,579.23	-421.08	8,589.49	4.82	-4.82	0.00
16,919.00	87.85	181.78	8,506.17	-8,673.14	-423.71	8,683.43	0.60	-0.47	0.37

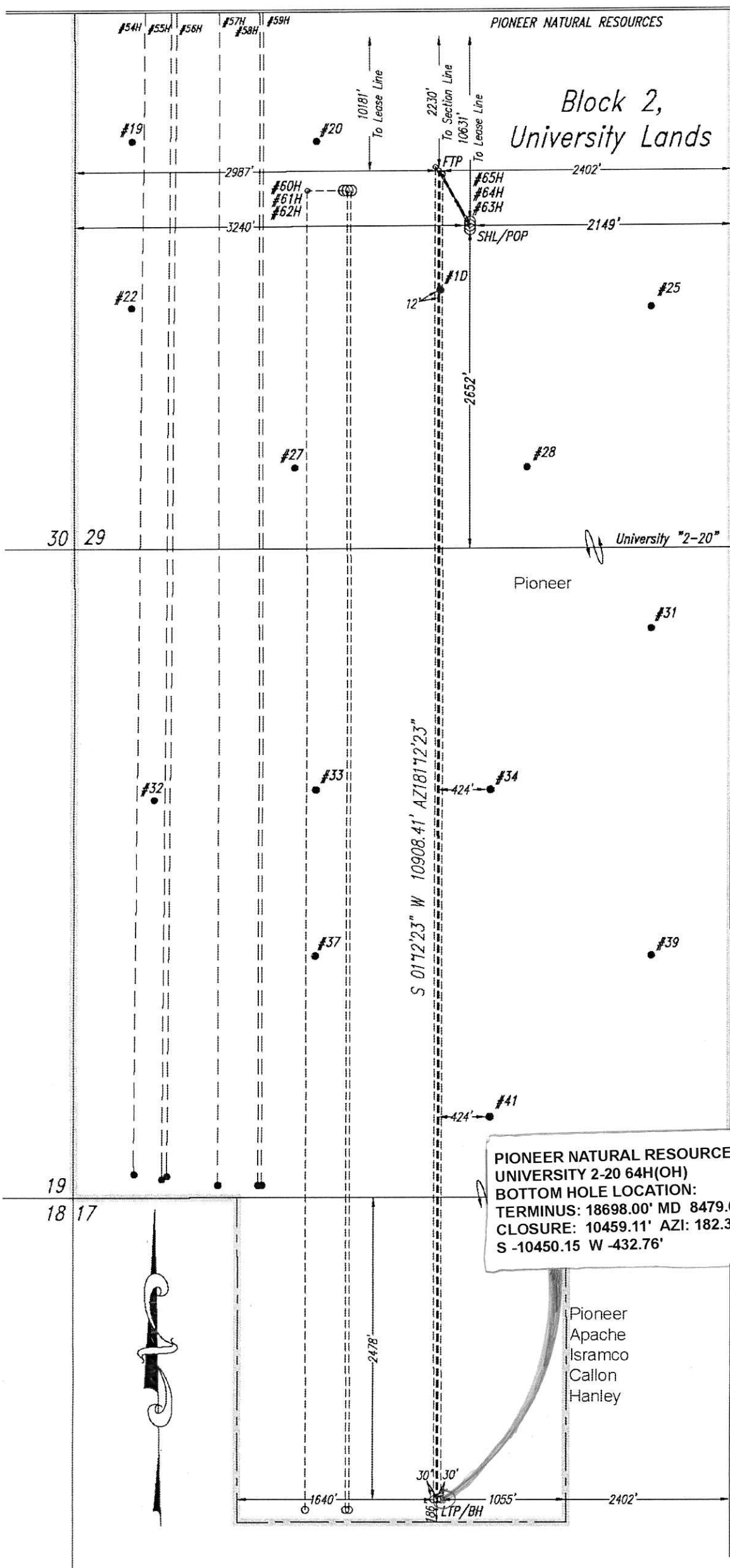
LEAM Drilling Systems LLC

Survey Report

Company:	PIONEER NATURAL RESOURCES	Local Co-ordinate Reference:	Well 64H
Project:	Reagan County, Tx	TVD Reference:	GE 2647' + KB 26' @ 2673.00usft (H&P 606)
Site:	University 2-20	MD Reference:	GE 2647' + KB 26' @ 2673.00usft (H&P 606)
Well:	64H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

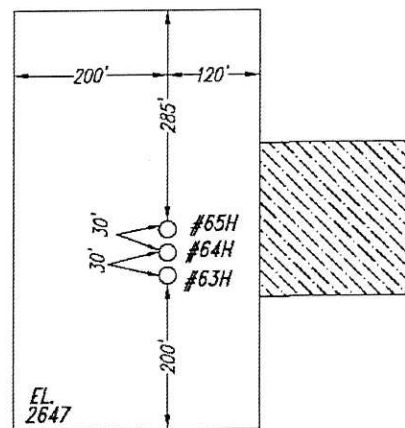
Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,014.00	89.78	181.08	8,508.13	-8,768.08	-426.08	8,778.38	2.16	2.03	-0.74
17,108.00	91.63	182.13	8,506.98	-8,862.04	-428.72	8,872.36	2.26	1.97	1.12
17,202.00	92.33	181.96	8,503.73	-8,955.92	-432.07	8,966.29	0.77	0.74	-0.18
17,297.00	92.33	182.84	8,499.87	-9,050.76	-436.04	9,061.21	0.93	0.00	0.93
17,391.00	89.52	181.60	8,498.35	-9,144.66	-439.68	9,155.19	3.27	-2.99	-1.32
17,486.00	89.96	180.20	8,498.78	-9,239.65	-441.18	9,250.14	1.54	0.46	-1.47
17,580.00	89.87	178.62	8,498.92	-9,333.64	-440.21	9,344.00	1.68	-0.10	-1.68
17,674.00	90.57	181.08	8,498.56	-9,427.63	-439.96	9,437.88	2.72	0.74	2.62
17,768.00	90.75	183.19	8,497.47	-9,521.55	-443.46	9,531.87	2.25	0.19	2.24
17,863.00	91.10	182.48	8,495.94	-9,616.42	-448.16	9,626.85	0.83	0.37	-0.75
17,957.00	91.71	182.13	8,493.64	-9,710.32	-451.94	9,720.82	0.75	0.65	-0.37
18,052.00	89.78	181.78	8,492.40	-9,805.25	-455.18	9,815.80	2.06	-2.03	-0.37
18,146.00	89.87	180.73	8,492.69	-9,899.23	-457.24	9,909.78	1.12	0.10	-1.12
18,240.00	89.87	178.97	8,492.90	-9,993.22	-456.99	10,003.66	1.87	0.00	-1.87
18,335.00	90.48	178.62	8,492.61	-10,088.20	-455.00	10,098.46	0.74	0.64	-0.37
18,429.00	91.10	177.03	8,491.32	-10,182.12	-451.43	10,192.12	1.82	0.66	-1.69
18,523.00	92.42	176.51	8,488.43	-10,275.92	-446.14	10,285.59	1.51	1.40	-0.55
18,617.00	93.30	175.28	8,483.74	-10,369.56	-439.42	10,378.83	1.61	0.94	-1.31
18,698.00	93.30	175.28	8,479.08	-10,450.15	-432.76	10,459.04	0.00	0.00	0.00



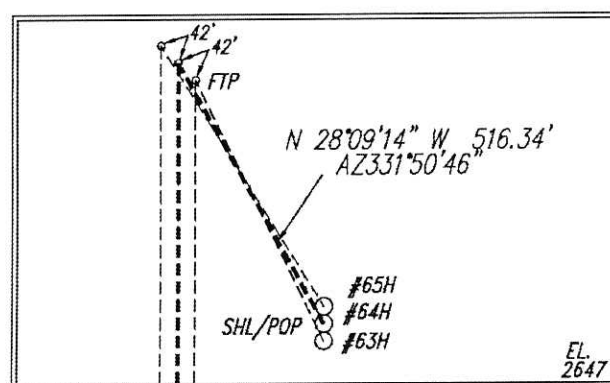
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 Longitude: -101.74556951°

Latitude: 31.28267446°
 Longitude: -101.74454514°



Latitude: 31.28118278°
 Longitude: -101.74558283°

Latitude: 31.28117606°
 Longitude: -101.74455848°



#64H Surface Hole Location/
 Point of Penetration

X: 1559052.77 Latitude: 31.28181093°
 Y: 590203.50 Longitude: -101.74493698°
 2149' FEL & 2652' FSL - Section 29

First Take Point

X: 1558809.14 Latitude: 31.28305401°
 Y: 590658.75 Longitude: -101.74573533°
 2402' FEL & 2230' FNL - Section 29

Last Take Point/Bottom Hole

X: 1558579.45 Latitude: 31.25306283°
 Y: 579752.76 Longitude: -101.74602721°
 2402' FEL & 2478' FNL - Section 29

Note: Survey Reconstruction filed in the Office of Luchini and Mertz Land Surveying Company.
 Note: All bearings and coordinates shown are based on the Texas Coordinate System of 1927, Central Zone.
 Note: The above sketch represents the location as staked on the ground and is for permit purposes only.
 Note: NAD '27 Coordinates & Latitude/Longitude on well location in Sections 17 & 29.
 Note: Well location is approximately 18.5 miles northwest of Big Lake.
 Note: This does not constitute a boundary survey.
 Note: Lease description provided by client.



Jeffrey D. Suiter

October 7, 2014

141007R

Railroad Commission Drawing

University 2-20 #64H

PIONEER NATURAL RESOURCES USA, Inc.
 University "2-20" Lease 2467.3 Acres
 all of Sections 20, 29, 32, W/2 of the NE/4 &
 E/2 of NW/4 of Section 17, Block 2,
 S/2 of Section 16, Block 58,
 University Lands,
 Reagan County, Texas

Scale: 1" = 1000'

