



Pioneer Natural Resources USA, Inc.

**Upton County, Texas
University 3-19 #32H
University 3-19 #32H**

Lateral #1

Design: Lateral #1

Standard Survey Report

14 April, 2014

PIONEER

NATURAL RESOURCES



Company:	Pioneer Natural Resources USA, Inc.	Local Co-ordinate Reference:	Site University 3-19 #32H
Project:	Upton County, Texas	TVD Reference:	RKB @ 2708.0usft
Site:	University 3-19 #32H	MD Reference:	RKB @ 2708.0usft
Well:	University 3-19 #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single User Db

Project	Upton County, Texas		
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 3-19 #32H				
Site Position:		Northing:	585,221.47 usft	Latitude:	31° 16' 3.566 N
From:	Map	Easting:	1,546,142.42 usft	Longitude:	101° 47' 9.794 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.75 °

Well	University 3-19 #32H					
Well Position	+N/-S	0.0 usft	Northing:	585,221.47 usft	Latitude:	31° 16' 3.566 N
	+E/-W	0.0 usft	Easting:	1,546,142.42 usft	Longitude:	101° 47' 9.794 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,682.0 usft

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/26/13	6.38	59.55	48,019

Design	Lateral #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	8,250.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	1.18	

Survey Program	Date	04/14/14			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
239.0	8,250.0	MWD Survey #1 (OH)	MWD	MWD - Standard	
8,250.0	9,990.0	MWD Survey #2 (Lateral #1)	MWD	MWD - Standard	
10,085.0	19,347.0	MWD Survey #3 (Lateral #1)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
239.0	0.20	202.60	239.0	-0.4	-0.2	-0.4	0.08	0.08	0.00	
335.0	0.30	246.60	335.0	-0.6	-0.5	-0.6	0.22	0.10	45.83	
427.0	0.20	258.20	427.0	-0.8	-0.8	-0.8	0.12	-0.11	12.61	
520.0	0.50	273.20	520.0	-0.8	-1.4	-0.8	0.33	0.32	16.13	
612.0	0.70	271.60	612.0	-0.7	-2.4	-0.8	0.22	0.22	-1.74	
704.0	0.90	154.70	704.0	-1.4	-2.6	-1.4	1.49	0.22	-127.07	
797.0	1.60	138.00	797.0	-3.0	-1.4	-3.0	0.84	0.75	-17.96	
889.0	1.80	136.50	888.9	-5.0	0.4	-5.0	0.22	0.22	-1.63	



Company:	Pioneer Natural Resources USA, Inc.	Local Co-ordinate Reference:	Site University 3-19 #32H
Project:	Upton County, Texas	TVD Reference:	RKB @ 2708.0usft
Site:	University 3-19 #32H	MD Reference:	RKB @ 2708.0usft
Well:	University 3-19 #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single 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)	
982.0	2.20	141.50	981.9	-7.5	2.5	-7.4	0.47	0.43	5.38	
1,077.0	2.50	137.00	1,076.8	-10.4	5.1	-10.3	0.37	0.32	-4.74	
1,125.0	2.50	137.20	1,124.7	-11.9	6.5	-11.8	0.02	0.00	0.42	
1,251.0	2.90	133.60	1,250.6	-16.2	10.7	-15.9	0.34	0.32	-2.86	
1,345.0	2.60	127.90	1,344.5	-19.1	14.1	-18.8	0.43	-0.32	-6.06	
1,440.0	2.70	124.70	1,439.4	-21.7	17.6	-21.3	0.19	0.11	-3.37	
1,543.0	2.80	127.20	1,542.3	-24.6	21.6	-24.2	0.15	0.10	2.43	
1,638.0	2.70	127.50	1,637.2	-27.4	25.3	-26.8	0.11	-0.11	0.32	
1,733.0	2.90	125.60	1,732.0	-30.1	29.0	-29.5	0.23	0.21	-2.00	
1,827.0	2.90	127.70	1,825.9	-33.0	32.8	-32.3	0.11	0.00	2.23	
1,922.0	2.80	122.40	1,920.8	-35.7	36.7	-34.9	0.30	-0.11	-5.58	
2,017.0	2.20	130.00	2,015.7	-38.1	40.0	-37.3	0.72	-0.63	8.00	
2,112.0	1.90	124.00	2,110.7	-40.1	42.7	-39.3	0.39	-0.32	-6.32	
2,206.0	1.80	129.30	2,204.6	-42.0	45.2	-41.0	0.21	-0.11	5.64	
2,301.0	1.40	146.60	2,299.6	-43.9	46.9	-42.9	0.66	-0.42	18.21	
2,396.0	1.30	156.80	2,394.5	-45.8	48.0	-44.8	0.27	-0.11	10.74	
2,490.0	1.50	151.80	2,488.5	-47.9	49.0	-46.9	0.25	0.21	-5.32	
2,585.0	1.20	137.20	2,583.5	-49.7	50.3	-48.7	0.48	-0.32	-15.37	
2,680.0	1.70	159.60	2,678.5	-51.8	51.4	-50.7	0.79	0.53	23.58	
2,775.0	1.70	173.60	2,773.4	-54.5	52.1	-53.4	0.44	0.00	14.74	
2,869.0	1.60	169.90	2,867.4	-57.2	52.5	-56.1	0.16	-0.11	-3.94	
2,964.0	1.60	168.00	2,962.3	-59.8	53.0	-58.7	0.06	0.00	-2.00	
3,059.0	1.70	167.70	3,057.3	-62.4	53.6	-61.3	0.11	0.11	-0.32	
3,153.0	1.60	165.30	3,151.3	-65.1	54.2	-63.9	0.13	-0.11	-2.55	
3,248.0	1.50	163.50	3,246.2	-67.6	54.9	-66.4	0.12	-0.11	-1.89	
3,343.0	1.60	160.60	3,341.2	-70.0	55.7	-68.8	0.13	0.11	-3.05	
3,438.0	1.50	166.10	3,436.2	-72.5	56.4	-71.3	0.19	-0.11	5.79	
3,532.0	1.40	140.90	3,530.1	-74.5	57.4	-73.3	0.68	-0.11	-26.81	
3,627.0	1.30	138.20	3,625.1	-76.2	58.9	-75.0	0.12	-0.11	-2.84	
3,722.0	1.60	132.20	3,720.1	-77.9	60.6	-76.7	0.35	0.32	-6.32	
3,816.0	1.80	153.90	3,814.0	-80.1	62.2	-78.8	0.71	0.21	23.09	
3,911.0	1.80	159.40	3,909.0	-82.9	63.4	-81.6	0.18	0.00	5.79	
4,006.0	1.70	160.60	4,003.9	-85.6	64.4	-84.3	0.11	-0.11	1.26	
4,100.0	1.60	161.10	4,097.9	-88.2	65.3	-86.8	0.11	-0.11	0.53	
4,195.0	1.20	155.50	4,192.9	-90.3	66.1	-88.9	0.44	-0.42	-5.89	
4,290.0	1.30	152.00	4,287.9	-92.2	67.0	-90.8	0.13	0.11	-3.68	
4,384.0	1.20	161.80	4,381.8	-94.1	67.8	-92.6	0.25	-0.11	10.43	
4,479.0	1.30	168.10	4,476.8	-96.1	68.4	-94.6	0.18	0.11	6.63	
4,574.0	1.30	167.30	4,571.8	-98.2	68.8	-96.7	0.02	0.00	-0.84	
4,668.0	1.30	166.50	4,665.8	-100.2	69.3	-98.8	0.02	0.00	-0.85	
4,763.0	1.10	151.80	4,760.7	-102.1	70.0	-100.6	0.38	-0.21	-15.47	
4,857.0	0.90	139.90	4,854.7	-103.4	70.9	-102.0	0.31	-0.21	-12.66	
4,952.0	0.90	139.30	4,949.7	-104.6	71.9	-103.1	0.01	0.00	-0.63	



Company:	Pioneer Natural Resources USA, Inc.	Local Co-ordinate Reference:	Site University 3-19 #32H
Project:	Upton County, Texas	TVD Reference:	RKB @ 2708.0usft
Site:	University 3-19 #32H	MD Reference:	RKB @ 2708.0usft
Well:	University 3-19 #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single 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)	
5,047.0	0.70	153.80	5,044.7	-105.7	72.6	-104.2	0.30	-0.21	15.26	
5,141.0	0.20	203.70	5,138.7	-106.3	72.8	-104.8	0.63	-0.53	53.09	
5,236.0	0.20	198.70	5,233.7	-106.6	72.7	-105.1	0.02	0.00	-5.26	
5,331.0	0.10	141.60	5,328.7	-106.9	72.7	-105.3	0.18	-0.11	-60.11	
5,426.0	0.20	225.10	5,423.7	-107.0	72.6	-105.5	0.22	0.11	87.89	
5,522.0	0.04	136.70	5,519.7	-107.2	72.5	-105.7	0.21	-0.17	-92.08	
5,616.0	0.10	26.60	5,613.7	-107.1	72.6	-105.6	0.13	0.06	-117.13	
5,711.0	0.20	32.70	5,708.7	-106.9	72.7	-105.4	0.11	0.11	6.42	
5,806.0	0.30	43.70	5,803.7	-106.6	73.0	-105.1	0.12	0.11	11.58	
5,901.0	0.30	62.30	5,898.7	-106.3	73.3	-104.8	0.10	0.00	19.58	
5,995.0	0.30	49.70	5,992.7	-106.0	73.8	-104.5	0.07	0.00	-13.40	
6,090.0	0.30	7.30	6,087.7	-105.6	74.0	-104.1	0.23	0.00	-44.63	
6,185.0	0.20	10.40	6,182.7	-105.2	74.0	-103.7	0.11	-0.11	3.26	
6,279.0	0.50	28.20	6,276.7	-104.7	74.3	-103.2	0.34	0.32	18.94	
6,374.0	1.20	35.10	6,371.7	-103.5	75.0	-102.0	0.74	0.74	7.26	
6,469.0	1.20	42.10	6,466.7	-102.0	76.3	-100.4	0.15	0.00	7.37	
6,563.0	0.90	61.90	6,560.6	-100.9	77.6	-99.3	0.50	-0.32	21.06	
6,658.0	0.90	72.30	6,655.6	-100.3	78.9	-98.7	0.17	0.00	10.95	
6,753.0	0.80	81.90	6,750.6	-100.0	80.3	-98.3	0.18	-0.11	10.11	
6,847.0	0.50	113.30	6,844.6	-100.1	81.3	-98.4	0.48	-0.32	33.40	
6,942.0	0.50	138.70	6,939.6	-100.5	82.0	-98.8	0.23	0.00	26.74	
7,037.0	0.50	169.90	7,034.6	-101.3	82.3	-99.5	0.28	0.00	32.84	
7,132.0	0.40	180.20	7,129.6	-102.0	82.4	-100.3	0.13	-0.11	10.84	
7,226.0	0.40	179.30	7,223.6	-102.7	82.4	-100.9	0.01	0.00	-0.96	
7,321.0	0.40	143.40	7,318.6	-103.3	82.6	-101.5	0.26	0.00	-37.79	
7,416.0	0.40	127.80	7,413.6	-103.7	83.1	-102.0	0.11	0.00	-16.42	
7,511.0	0.40	101.20	7,508.6	-104.0	83.7	-102.2	0.19	0.00	-28.00	
7,606.0	0.50	84.90	7,603.6	-104.0	84.4	-102.3	0.17	0.11	-17.16	
7,700.0	0.60	72.50	7,697.6	-103.8	85.3	-102.1	0.16	0.11	-13.19	
7,795.0	0.70	68.30	7,792.6	-103.5	86.3	-101.7	0.12	0.11	-4.42	
7,890.0	0.70	57.80	7,887.6	-102.9	87.3	-101.1	0.13	0.00	-11.05	
7,984.0	0.70	57.10	7,981.6	-102.3	88.3	-100.5	0.01	0.00	-0.74	
8,079.0	0.70	56.20	8,076.6	-101.7	89.3	-99.8	0.01	0.00	-0.95	
8,173.0	0.70	60.30	8,170.6	-101.1	90.2	-99.2	0.05	0.00	4.36	
8,250.0	0.70	63.20	8,247.6	-100.6	91.1	-98.7	0.05	0.00	3.77	
Last MWD Survey										
8,312.0	0.40	46.10	8,309.6	-100.3	91.6	-98.4	0.55	-0.48	-27.58	
First MWD Survey (Lateral)										
8,349.0	0.70	38.10	8,346.5	-100.1	91.8	-98.1	0.83	0.81	-21.62	
8,380.0	2.10	8.90	8,377.5	-99.3	92.0	-97.4	4.93	4.52	-94.19	
8,412.0	5.50	3.30	8,409.5	-97.2	92.2	-95.3	10.68	10.63	-17.50	
8,443.0	8.90	358.70	8,440.2	-93.3	92.2	-91.4	11.12	10.97	-14.84	
8,475.0	12.10	356.60	8,471.7	-87.5	92.0	-85.6	10.07	10.00	-6.56	
8,506.0	13.90	357.00	8,501.9	-80.6	91.6	-78.7	5.81	5.81	1.29	



Company:	Pioneer Natural Resources USA, Inc.	Local Co-ordinate Reference:	Site University 3-19 #32H
Project:	Upton County, Texas	TVD Reference:	RKB @ 2708.0usft
Site:	University 3-19 #32H	MD Reference:	RKB @ 2708.0usft
Well:	University 3-19 #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single 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)
	8,538.0	15.70	357.20	8,532.8	-72.4	91.2	-70.5	5.63	5.63	0.63
	8,570.0	17.80	359.90	8,563.5	-63.2	90.9	-61.3	7.00	6.56	8.44
	8,601.0	17.50	5.60	8,593.0	-53.8	91.4	-51.9	5.66	-0.97	18.39
	8,632.0	17.80	4.60	8,622.5	-44.4	92.2	-42.5	1.38	0.97	-3.23
	8,664.0	20.60	2.30	8,652.8	-33.9	92.8	-32.0	9.06	8.75	-7.19
	8,695.0	24.10	357.90	8,681.4	-22.2	92.8	-20.2	12.51	11.29	-14.19
	8,727.0	27.20	355.40	8,710.3	-8.3	92.0	-6.4	10.26	9.69	-7.81
	8,758.0	29.80	354.70	8,737.5	6.4	90.7	8.3	8.46	8.39	-2.26
	8,790.0	32.70	355.00	8,764.9	22.9	89.2	24.8	9.08	9.06	0.94
	8,822.0	35.60	353.80	8,791.3	40.8	87.5	42.6	9.30	9.06	-3.75
	8,853.0	38.00	353.60	8,816.2	59.3	85.4	61.0	7.75	7.74	-0.65
	8,885.0	41.40	354.60	8,840.8	79.6	83.3	81.3	10.81	10.63	3.13
	8,916.0	46.50	355.00	8,863.1	101.0	81.4	102.7	16.48	16.45	1.29
	8,948.0	52.20	355.40	8,883.9	125.2	79.4	126.8	17.84	17.81	1.25
	8,979.0	57.40	355.70	8,901.8	150.4	77.4	152.0	16.79	16.77	0.97
	9,011.0	60.30	356.10	8,918.3	177.8	75.4	179.3	9.13	9.06	1.25
1st	9,042.0	64.00	354.90	8,932.8	205.1	73.3	206.5	12.42	11.94	-3.87
	9,074.0	70.30	356.00	8,945.2	234.5	71.0	235.9	19.94	19.69	3.44
	9,106.0	75.60	357.90	8,954.6	265.0	69.3	266.4	17.51	16.56	5.94
	9,137.0	78.20	358.80	8,961.7	295.2	68.5	296.5	8.85	8.39	2.90
	9,169.0	79.90	359.20	8,967.7	326.6	67.9	327.9	5.45	5.31	1.25
	9,200.0	80.70	359.20	8,973.0	357.1	67.5	358.4	2.58	2.58	0.00
	9,232.0	80.50	359.30	8,978.2	388.7	67.1	390.0	0.70	-0.63	0.31
	9,263.0	80.30	359.40	8,983.4	419.3	66.7	420.5	0.72	-0.65	0.32
	9,327.0	84.70	358.70	8,991.7	482.7	65.7	483.9	6.96	6.88	-1.09
	9,358.0	87.30	358.90	8,993.9	513.6	65.0	514.8	8.41	8.39	0.65
	9,390.0	89.40	359.20	8,994.8	545.6	64.5	546.8	6.63	6.56	0.94
	9,422.0	90.50	359.60	8,994.8	577.6	64.2	578.8	3.66	3.44	1.25
	9,516.0	91.10	359.80	8,993.5	671.6	63.7	672.7	0.67	0.64	0.21
	9,611.0	89.10	358.30	8,993.3	766.6	62.1	767.7	2.63	-2.11	-1.58
	9,706.0	92.50	358.90	8,992.0	861.5	59.8	862.5	3.63	3.58	0.63
	9,801.0	90.80	357.90	8,989.3	956.4	57.1	957.4	2.08	-1.79	-1.05
	9,895.0	90.60	357.80	8,988.1	1,050.3	53.6	1,051.2	0.24	-0.21	-0.11
	9,990.0	88.88	357.50	8,988.6	1,145.3	49.7	1,146.0	1.84	-1.81	-0.32
	10,085.0	87.70	358.50	8,991.4	1,240.2	46.4	1,240.9	1.63	-1.24	1.05
First MWD Survey (ST)										
	10,180.0	86.30	2.70	8,996.4	1,335.0	47.4	1,335.7	4.65	-1.47	4.42
	10,276.0	88.80	1.10	9,000.5	1,430.8	50.6	1,431.6	3.09	2.60	-1.67
	10,370.0	89.10	0.80	9,002.2	1,524.8	52.1	1,525.6	0.45	0.32	-0.32
	10,465.0	90.90	1.80	9,002.2	1,619.8	54.3	1,620.6	2.17	1.89	1.05
	10,560.0	93.70	2.80	8,998.4	1,714.6	58.1	1,715.5	3.13	2.95	1.05
	10,654.0	93.30	1.50	8,992.6	1,808.4	61.6	1,809.3	1.44	-0.43	-1.38
	10,749.0	93.40	0.60	8,987.1	1,903.2	63.3	1,904.1	0.95	0.11	-0.95



Company:	Pioneer Natural Resources USA, Inc.	Local Co-ordinate Reference:	Site University 3-19 #32H
Project:	Upton County, Texas	TVD Reference:	RKB @ 2708.0usft
Site:	University 3-19 #32H	MD Reference:	RKB @ 2708.0usft
Well:	University 3-19 #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single 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)	
10,844.0	91.30	359.60	8,983.2	1,998.1	63.5	1,999.0	2.45	-2.21	-1.05	
10,938.0	89.50	359.00	8,982.5	2,092.1	62.4	2,092.9	2.02	-1.91	-0.64	
11,033.0	89.50	358.80	8,983.4	2,187.1	60.5	2,187.9	0.21	0.00	-0.21	
11,128.0	90.90	359.90	8,983.0	2,282.1	59.5	2,282.8	1.87	1.47	1.16	
11,223.0	87.90	358.80	8,984.0	2,377.0	58.4	2,377.7	3.36	-3.16	-1.16	
11,317.0	92.10	1.30	8,984.0	2,471.0	58.5	2,471.7	5.20	4.47	2.66	
11,412.0	85.80	358.50	8,985.8	2,565.9	58.3	2,566.6	7.26	-6.63	-2.95	
11,507.0	86.00	358.70	8,992.6	2,660.7	56.0	2,661.3	0.30	0.21	0.21	
11,602.0	87.60	358.30	8,997.9	2,755.5	53.5	2,756.0	1.74	1.68	-0.42	
11,697.0	90.20	357.60	8,999.7	2,850.4	50.1	2,850.8	2.83	2.74	-0.74	
11,791.0	91.60	357.90	8,998.2	2,944.3	46.4	2,944.6	1.52	1.49	0.32	
11,886.0	89.20	357.80	8,997.6	3,039.2	42.8	3,039.5	2.53	-2.53	-0.11	
11,981.0	89.50	358.60	8,998.6	3,134.2	39.9	3,134.3	0.90	0.32	0.84	
12,075.0	89.10	359.10	8,999.8	3,228.2	38.0	3,228.3	0.68	-0.43	0.53	
12,170.0	92.60	0.10	8,998.4	3,323.1	37.3	3,323.2	3.83	3.68	1.05	
12,265.0	92.90	359.30	8,993.8	3,418.0	36.8	3,418.1	0.90	0.32	-0.84	
12,359.0	94.60	0.00	8,987.7	3,511.8	36.2	3,511.8	1.96	1.81	0.74	
12,454.0	93.00	0.40	8,981.4	3,606.6	36.6	3,606.6	1.74	-1.68	0.42	
12,549.0	92.70	359.30	8,976.6	3,701.5	36.3	3,701.4	1.20	-0.32	-1.16	
12,644.0	92.40	0.20	8,972.4	3,796.4	35.9	3,796.3	1.00	-0.32	0.95	
12,738.0	91.80	1.10	8,969.0	3,890.3	37.0	3,890.3	1.15	-0.64	0.96	
12,789.7	90.33	1.15	8,968.0	3,942.0	38.0	3,941.9	2.84	-2.84	0.11	
Plan @ 12000.0 (P&A Well #1 P&A#1 OH)										
12,833.0	89.10	1.20	8,968.2	3,985.3	38.9	3,985.2	2.84	-2.84	0.11	
12,928.0	86.90	1.70	8,971.5	4,080.2	41.3	4,080.2	2.37	-2.32	0.53	
13,023.0	87.50	1.90	8,976.2	4,175.0	44.3	4,175.1	0.67	0.63	0.21	
13,117.0	86.50	1.60	8,981.1	4,268.9	47.1	4,268.9	1.11	-1.06	-0.32	
13,212.0	87.60	2.10	8,986.0	4,363.7	50.2	4,363.8	1.27	1.16	0.53	
13,307.0	89.20	2.20	8,988.6	4,458.6	53.8	4,458.7	1.69	1.68	0.11	
13,401.0	91.30	3.00	8,988.2	4,552.5	58.0	4,552.7	2.39	2.23	0.85	
13,496.0	92.20	3.70	8,985.3	4,647.3	63.6	4,647.6	1.20	0.95	0.74	
13,591.0	92.20	3.10	8,981.7	4,742.0	69.2	4,742.4	0.63	0.00	-0.63	
13,685.0	93.10	3.50	8,977.3	4,835.8	74.6	4,836.3	1.05	0.96	0.43	
13,780.0	92.50	2.80	8,972.7	4,930.5	79.8	4,931.1	0.97	-0.63	-0.74	
13,875.0	93.00	2.50	8,968.1	5,025.3	84.2	5,026.0	0.61	0.53	-0.32	
13,970.0	92.70	2.30	8,963.4	5,120.1	88.2	5,120.8	0.38	-0.32	-0.21	
14,064.0	92.30	2.10	8,959.3	5,213.9	91.8	5,214.7	0.48	-0.43	-0.21	
14,159.0	89.90	2.30	8,957.5	5,308.8	95.4	5,309.7	2.54	-2.53	0.21	
14,254.0	88.50	2.70	8,958.8	5,403.7	99.6	5,404.6	1.53	-1.47	0.42	
14,349.0	93.00	4.20	8,957.6	5,498.5	105.3	5,499.5	4.99	4.74	1.58	
14,360.5	92.72	4.14	8,957.0	5,509.9	106.1	5,511.0	2.50	-2.45	-0.53	
x3										
14,443.0	90.70	3.70	8,954.5	5,592.3	111.8	5,593.4	2.50	-2.45	-0.53	
14,538.0	89.50	3.90	8,954.4	5,687.0	118.1	5,688.3	1.28	-1.26	0.21	



Company:	Pioneer Natural Resources USA, Inc.	Local Co-ordinate Reference:	Site University 3-19 #32H
Project:	Upton County, Texas	TVD Reference:	RKB @ 2708.0usft
Site:	University 3-19 #32H	MD Reference:	RKB @ 2708.0usft
Well:	University 3-19 #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single 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)	
14,633.0	88.00	3.00	8,956.4	5,781.8	123.8	5,783.2	1.84	-1.58	-0.95	
14,728.0	90.60	3.70	8,957.6	5,876.7	129.3	5,878.1	2.83	2.74	0.74	
14,822.0	90.40	4.20	8,956.8	5,970.4	135.8	5,972.0	0.57	-0.21	0.53	
14,917.0	89.50	3.70	8,956.9	6,065.2	142.3	6,066.9	1.08	-0.95	-0.53	
15,012.0	90.90	4.20	8,956.5	6,160.0	148.9	6,161.7	1.56	1.47	0.53	
15,106.0	89.10	3.40	8,956.5	6,253.8	155.1	6,255.6	2.10	-1.91	-0.85	
15,201.0	90.50	3.60	8,956.9	6,348.6	160.9	6,350.6	1.49	1.47	0.21	
15,296.0	90.20	3.50	8,956.3	6,443.4	166.8	6,445.5	0.33	-0.32	-0.11	
15,391.0	91.10	4.20	8,955.2	6,538.2	173.2	6,540.4	1.20	0.95	0.74	
15,460.0	91.50	3.60	8,953.6	6,607.0	177.9	6,609.3	1.04	0.58	-0.87	
15,541.1	88.68	2.66	8,953.5	6,688.0	182.3	6,690.4	3.66	-3.47	-1.16	
Plan @ 7540.0 (P&A Well #2 P&A#2 OH)										
15,555.0	88.20	2.50	8,953.9	6,701.9	182.9	6,704.2	3.66	-3.47	-1.16	
15,650.0	88.20	2.10	8,956.9	6,796.7	186.7	6,799.1	0.42	0.00	-0.42	
15,744.0	88.50	1.60	8,959.6	6,890.6	189.8	6,893.1	0.62	0.32	-0.53	
15,839.0	90.60	2.40	8,960.3	6,985.6	193.1	6,988.1	2.37	2.21	0.84	
15,934.0	90.80	1.50	8,959.2	7,080.5	196.3	7,083.1	0.97	0.21	-0.95	
16,028.0	89.50	1.30	8,958.9	7,174.5	198.6	7,177.1	1.40	-1.38	-0.21	
16,123.0	90.80	3.80	8,958.7	7,269.4	202.8	7,272.0	2.97	1.37	2.63	
16,218.0	89.60	3.00	8,958.3	7,364.2	208.5	7,366.9	1.52	-1.26	-0.84	
16,313.0	90.20	1.70	8,958.5	7,459.1	212.4	7,461.9	1.51	0.63	-1.37	
16,407.0	88.80	359.00	8,959.3	7,553.1	212.9	7,555.9	3.24	-1.49	-2.87	
16,502.0	87.30	355.90	8,962.6	7,647.9	208.7	7,650.6	3.62	-1.58	-3.26	
16,597.0	88.00	356.40	8,966.5	7,742.7	202.3	7,745.2	0.91	0.74	0.53	
16,691.0	87.10	355.70	8,970.5	7,836.3	195.9	7,838.7	1.21	-0.96	-0.74	
16,786.0	88.70	357.60	8,974.0	7,931.1	190.3	7,933.3	2.61	1.68	2.00	
16,881.0	90.40	357.00	8,974.7	8,026.0	185.8	8,028.1	1.90	1.79	-0.63	
16,975.0	91.30	357.90	8,973.3	8,119.9	181.7	8,121.9	1.35	0.96	0.96	
17,070.0	91.50	358.30	8,971.0	8,214.8	178.5	8,216.7	0.47	0.21	0.42	
17,164.0	89.80	356.70	8,969.9	8,308.7	174.4	8,310.5	2.48	-1.81	-1.70	
17,259.0	89.70	357.10	8,970.3	8,403.6	169.3	8,405.3	0.43	-0.11	0.42	
17,354.0	90.40	359.10	8,970.3	8,498.5	166.1	8,500.1	2.23	0.74	2.11	
17,449.0	89.30	357.60	8,970.5	8,593.5	163.4	8,595.0	1.96	-1.16	-1.58	
17,543.0	90.30	0.90	8,970.8	8,687.4	162.2	8,688.9	3.67	1.06	3.51	
17,638.0	90.60	0.80	8,970.1	8,782.4	163.6	8,783.9	0.33	0.32	-0.11	
17,732.0	90.80	1.10	8,968.9	8,876.4	165.1	8,877.9	0.38	0.21	0.32	
17,827.0	90.60	1.80	8,967.8	8,971.4	167.5	8,972.9	0.77	-0.21	0.74	
17,922.0	90.60	2.80	8,966.8	9,066.3	171.3	9,067.9	1.05	0.00	1.05	
18,016.0	89.90	2.20	8,966.4	9,160.2	175.4	9,161.9	0.98	-0.74	-0.64	
18,111.0	90.00	2.30	8,966.5	9,255.1	179.2	9,256.9	0.15	0.11	0.11	
18,206.0	91.50	3.60	8,965.2	9,350.0	184.1	9,351.8	2.09	1.58	1.37	
18,301.0	91.50	3.20	8,962.7	9,444.8	189.7	9,446.7	0.42	0.00	-0.42	
18,396.0	90.60	3.70	8,961.0	9,539.6	195.4	9,541.6	1.08	-0.95	0.53	



Company:	Pioneer Natural Resources USA, Inc.	Local Co-ordinate Reference:	Site University 3-19 #32H
Project:	Upton County, Texas	TVD Reference:	RKB @ 2708.0usft
Site:	University 3-19 #32H	MD Reference:	RKB @ 2708.0usft
Well:	University 3-19 #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single 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)	
18,490.0	88.60	1.90	8,961.6	9,633.5	200.0	9,635.6	2.86	-2.13	-1.91	
18,585.0	88.50	1.70	8,964.0	9,728.4	203.0	9,730.5	0.24	-0.11	-0.21	
18,680.0	91.20	4.60	8,964.3	9,823.2	208.2	9,825.4	4.17	2.84	3.05	
18,775.0	90.20	3.10	8,963.1	9,918.0	214.6	9,920.3	1.90	-1.05	-1.58	
18,869.0	90.40	3.00	8,962.6	10,011.9	219.6	10,014.3	0.24	0.21	-0.11	
18,964.0	89.90	3.90	8,962.4	10,106.7	225.3	10,109.2	1.08	-0.53	0.95	
19,059.0	90.00	4.80	8,962.5	10,201.4	232.5	10,204.1	0.95	0.11	0.95	
19,153.0	90.10	5.70	8,962.4	10,295.0	241.1	10,297.8	0.96	0.11	0.96	
last 19,248.0	90.20	6.00	8,962.1	10,389.5	250.8	10,392.5	0.33	0.11	0.32	
19,295.0	89.00	5.10	8,962.5	10,436.3	255.3	10,439.4	3.19	-2.55	-1.91	
Last MWD Survey (ST)										
19,331.6	89.00	5.10	8,963.1	10,472.7	258.6	10,475.8	0.00	0.00	0.00	
BHL#1 (Univ.3-19 #30H)										
19,346.0	89.00	5.10	8,963.4	10,487.1	259.9	10,490.3	0.00	0.00	0.00	
BHL#1 (Univ. 3-19 #32H)										
19,347.0	89.00	5.10	8,963.4	10,488.1	260.0	10,491.2	0.00	0.00	0.00	
Proj. to Bit / TD - BHL#1 (Univ.3-19 #31H)										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
8,250.0	8,247.6	-100.6	91.1	Last MWD Survey	
8,312.0	8,309.6	-100.3	91.6	First MWD Survey (Lateral)	
10,085.0	8,991.4	1,240.2	46.4	First MWD Survey (ST)	
19,295.0	8,962.5	10,436.3	255.3	Last MWD Survey (ST)	
19,347.0	8,963.4	10,488.1	260.0	Proj. to Bit / TD	

Checked By: _____ Approved By: _____ Date: _____