

PIONEER

NATURAL RESOURCES

Meteorite Energy Services Survey Report

04 September, 2019

PIONEER NATURAL RESOURCES

Midland Permian North

Andrews (TX Central Zone 4203)

University 7-43 116H

API: 42-003-48115

Survey: FINAL SURFACE SURVEYS (19MJ-070)

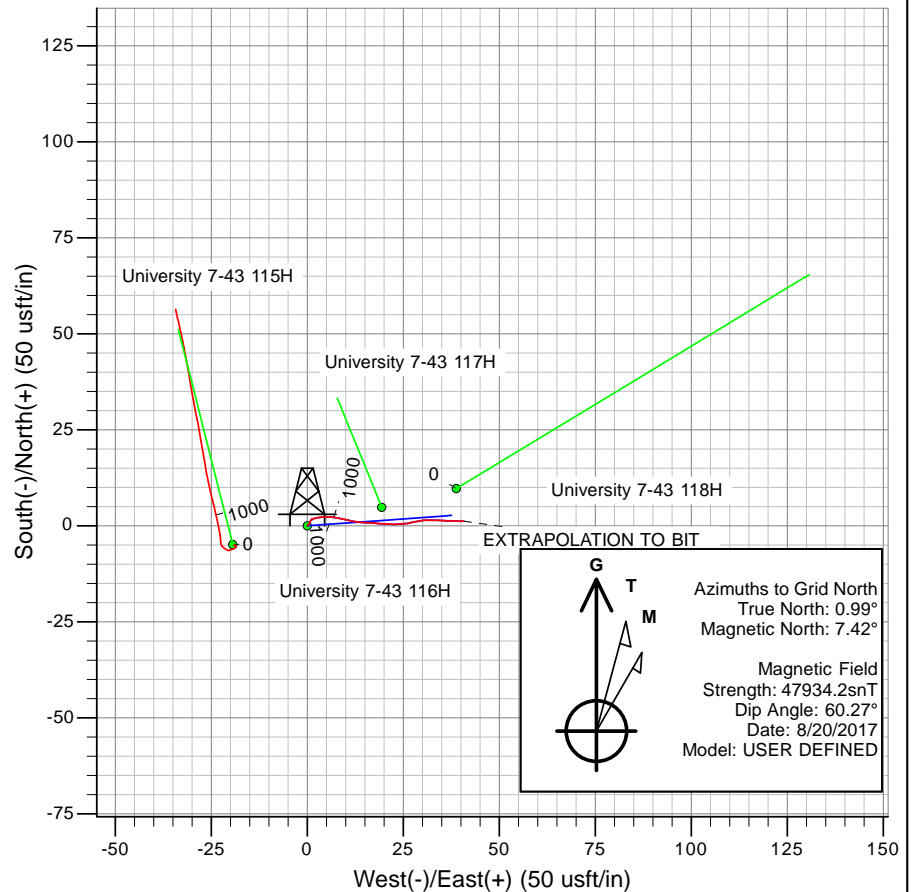
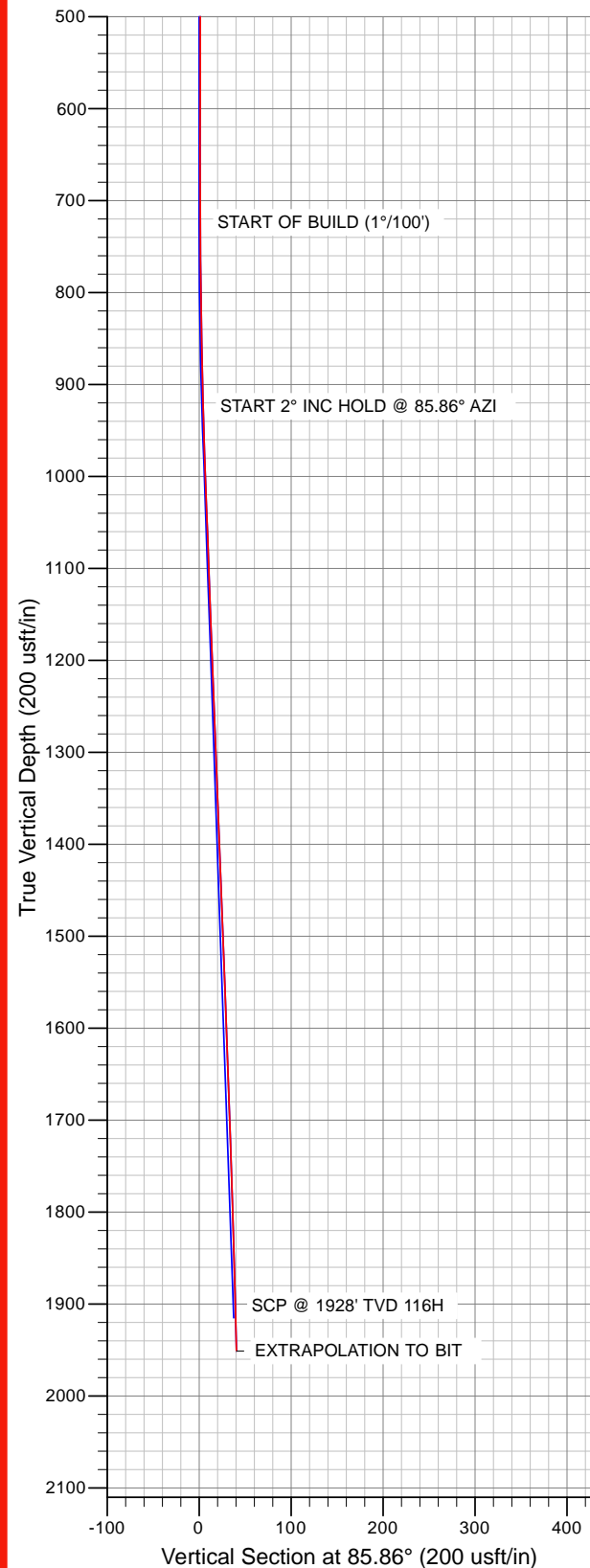


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ANNOTATIONS

TVD MD Inc Azi +N/-S +E/-W VSect Annotation
 1951.29 1952.00 1.50 90.10 1.17 40.80 40.77 EXTRAPOLATION TO BIT



PROJECT DETAILS: Midland Permian North

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Texas Central 4203
 System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well University 7-43 116H, Grid North
 Vertical (TVD) Reference: KB @ GL @ 2970.00usft (BURTON 10)
 Section (VS) Reference: Slot - (0.00N, 0.00E)
 Measured Depth Reference: KB @ GL @ 2970.00usft (BURTON 10)
 Calculation Method: Minimum Curvature

Survey: FINAL SURFACE SURVEYS (19MJ-070) (University 7-43 116H/API: 42-003-48115)

Created By: Meteorite Energy Services Date: 20:41, September 04 2019
 Checked: _____ Date: _____
 Reviewed: _____ Date: _____
 Approved: _____ Date: _____

Company:	PIONEER NATURAL RESOURCES	Local Co-ordinate Reference:	Well University 7-43 116H
Project:	Midland Permian North	TVD Reference:	KB @ GL @ 2970.00usft (BURTON 10)
Site:	Andrews (TX Central Zone 4203)	MD Reference:	KB @ GL @ 2970.00usft (BURTON 10)
Well:	University 7-43 116H	North Reference:	Grid
Wellbore:	API: 42-003-48115	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURFACE SURVEYS (19MJ-070)	Database:	EDM 5000.1 Single User Db

Project	Midland Permian North		
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		Andrews (TX Central Zone 4203)			
Site Position:		Northing:	985,051.60 usft	Latitude:	32.361309
From:	Map	Easting:	1,416,960.50 usft	Longitude:	-102.221190
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.97 °

Well	University 7-43 116H					
Well Position	+N/-S	0.00 usft	Northing:	981,156.40 usft	Latitude:	32.350014
	+E/-W	0.00 usft	Easting:	1,404,412.70 usft	Longitude:	-102.261593
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	2,970.00 usft

Wellbore	API: 42-003-48115				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	8/20/2017	6.43	60.27	47,934

Design	FINAL SURFACE SURVEYS (19MJ-070)			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	85.86

Survey Program	Date	9/4/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
87.00	1,952.00	FINAL SURFACE SURVEYS (19MJ-070) (CLEAR MWD	MWD	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea 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	2,970.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	0.00	0.00	87.00	2,883.00	0.00	0.00	0.00	0.00	0.00	0.00
122.84	0.50	42.30	122.84	2,847.16	0.12	0.11	0.11	1.40	1.40	0.00
157.91	0.30	96.60	157.91	2,812.09	0.22	0.30	0.31	1.16	-0.57	154.83
187.26	0.40	14.00	187.26	2,782.74	0.31	0.40	0.42	1.59	0.34	-281.43
217.09	0.40	52.30	217.09	2,752.91	0.47	0.51	0.54	0.88	0.00	128.39
247.72	0.30	8.70	247.72	2,722.28	0.62	0.60	0.65	0.90	-0.33	-142.34
277.74	0.30	11.20	277.74	2,692.26	0.77	0.63	0.69	0.04	0.00	8.33
322.86	0.40	21.50	322.86	2,647.14	1.04	0.71	0.79	0.26	0.22	22.83
368.04	0.40	32.80	368.03	2,601.97	1.31	0.86	0.95	0.17	0.00	25.01
452.29	0.30	35.10	452.28	2,517.72	1.74	1.14	1.26	0.12	-0.12	2.73
496.27	0.20	35.80	496.26	2,473.74	1.90	1.25	1.39	0.23	-0.23	1.59
540.07	0.20	204.00	540.06	2,429.94	1.89	1.27	1.40	0.91	0.00	384.02

Company:	PIONEER NATURAL RESOURCES	Local Co-ordinate Reference:	Well University 7-43 116H
Project:	Midland Permian North	TVD Reference:	KB @ GL @ 2970.00usft (BURTON 10)
Site:	Andrews (TX Central Zone 4203)	MD Reference:	KB @ GL @ 2970.00usft (BURTON 10)
Well:	University 7-43 116H	North Reference:	Grid
Wellbore:	API: 42-003-48115	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURFACE SURVEYS (19MJ-070)	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
583.37	0.30	191.90	583.36	2,386.64	1.71	1.21	1.33	0.26	0.23	-27.94
626.85	0.10	242.20	626.84	2,343.16	1.58	1.16	1.27	0.57	-0.46	115.69
671.05	0.10	13.60	671.04	2,298.96	1.60	1.13	1.24	0.41	0.00	297.29
714.55	0.10	1.20	714.54	2,255.46	1.68	1.14	1.26	0.05	0.00	-28.51
758.57	0.40	86.80	758.56	2,211.44	1.72	1.29	1.42	0.92	0.68	194.46
804.33	0.70	63.90	804.32	2,165.68	1.86	1.71	1.83	0.80	0.66	-50.04
848.76	1.40	78.90	848.74	2,121.26	2.08	2.48	2.62	1.68	1.58	33.76
894.09	1.50	83.60	894.06	2,075.94	2.25	3.61	3.77	0.34	0.22	10.37
936.31	1.70	88.50	936.26	2,033.74	2.33	4.79	4.95	0.57	0.47	11.61
979.89	1.90	96.80	979.82	1,990.18	2.26	6.15	6.30	0.75	0.46	19.05
1,022.15	2.10	98.40	1,022.05	1,947.95	2.07	7.61	7.74	0.49	0.47	3.79
1,064.36	2.20	102.60	1,064.23	1,905.77	1.78	9.17	9.27	0.44	0.24	9.95
1,107.68	2.30	103.80	1,107.52	1,862.48	1.39	10.83	10.90	0.26	0.23	2.77
1,152.94	2.10	97.00	1,152.75	1,817.25	1.07	12.53	12.58	0.73	-0.44	-15.02
1,196.79	2.10	95.40	1,196.57	1,773.43	0.90	14.13	14.16	0.13	0.00	-3.65
1,241.79	2.20	93.30	1,241.54	1,728.46	0.77	15.81	15.83	0.28	0.22	-4.67
1,281.84	2.20	92.70	1,281.56	1,688.44	0.69	17.35	17.35	0.06	0.00	-1.50
1,325.14	2.30	96.30	1,324.82	1,645.18	0.55	19.04	19.03	0.40	0.23	8.31
1,367.64	2.50	93.10	1,367.29	1,602.71	0.41	20.81	20.79	0.57	0.47	-7.53
1,410.96	2.50	88.70	1,410.56	1,559.44	0.38	22.70	22.67	0.44	0.00	-10.16
1,454.08	2.30	85.20	1,453.65	1,516.35	0.47	24.50	24.47	0.57	-0.46	-8.12
1,497.91	1.90	82.90	1,497.45	1,472.55	0.64	26.10	26.08	0.93	-0.91	-5.25
1,540.16	1.80	72.00	1,539.68	1,430.32	0.93	27.43	27.42	0.86	-0.24	-25.80
1,627.60	2.20	87.30	1,627.06	1,342.94	1.43	30.41	30.43	0.76	0.46	17.50
1,714.52	2.10	92.60	1,713.92	1,256.08	1.44	33.67	33.68	0.26	-0.12	6.10
1,802.52	1.80	94.00	1,801.87	1,168.13	1.27	36.66	36.65	0.35	-0.34	1.59
1,890.20	1.50	90.10	1,889.51	1,080.49	1.17	39.18	39.16	0.37	-0.34	-4.45
EXTRAPOLATION TO BIT										
1,952.00	1.50	90.10	1,951.29	1,018.71	1.17	40.80	40.77	0.00	0.00	0.00

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Interp @ 1928.00 (Unive	0.00	0.00	1,915.00	2.72	37.55	981,159.12	1,404,450.25	32.350024	-102.261472
- hit/miss target									
- Shape									
- survey misses target center by 25.58usft at 1890.20usft MD (1889.51 TVD, 1.17 N, 39.18 E)									
- Point									

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,952.00	1,951.29	1.17	40.80	EXTRAPOLATION TO BIT	

Checked By: _____ Approved By: _____ Date: _____



Survey Certification

I, Bryson Kriz, an authorized employee of Meteorite Energy Services Inc., have verified the MWD surveys performed on 08/29/2019 to 08/31/2019, from 87' to 1952'. The data are true, correct, complete and within the limitations of the tool. This survey was conducted at the request of Pioneer Natural Resources for # 854624 (42-003-48115-0000) drilled in Midland County, Texas.

Sincerely

Meteorite Energy Services Inc.

A handwritten signature in black ink, appearing to read "Bryson A. Kriz", with a large, stylized flourish at the end.

Bryson A. Kriz B.a.GIS | Technical Operations Coordinator

METEORITE Energy Services

6310 S County Road 1273 Midland, Texas 79706 USA

Tel: (403)-667-1848

www.meteoriteenergyservices.com

November 18, 2019

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

Attn: Ms. Pamela Johns

**RE:
Pioneer Natural Resources USA Inc.
University 7-43, Well #116H
Permit No. 854624
UL, Abstract U211
Spraberry (Trend Area)
Andrews County, Texas
API No. 42-003-48115**

Ms. Johns:

Enclosed, please find the original and one copy of the survey performed on the referenced well by Gyrodata, Inc (P-5 No. 339711). Other information required by your office is as follows:

Name & Title Of Surveyor	Drainhole Number	Surveyed Depths	Dates Performed	Type of Survey
Richard Springer Hank Moser Johnathon Davis Surveyors	Original Hole	2032' – 19280'	09/22/19-10/26/19	Magnetic Measurement While Drilling

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 the 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.

Sincerely,



Brittany A. Hebert
Operations

Enclosure

A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

PIONEER NATURAL RESOURCES

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole
Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

Run Date: 22 Sep 2019 to 26 Oct 2019

Surveyor: Richard Springer, Hank Moser, Johnathon Davis

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 32.350014 deg. N Longitude: 102.261593 deg. W

Grid Convergence: -0.99 deg.

Magnetic Declination: 6.16 deg.

Total Correction: 7.15 deg. to Grid North

Proposed Well Direction: 346.11 deg.

Depth Reference: Rotary Table

Air Gap (RKB to Ground / RKB to MSL): 26.00

Ground Elevation (Ground to MSL / MSL to Mudline): 2971.00

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

Pioneer Natural Resources

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole

Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
1917.20	1.50	90.10	-8.3	0.37	1916.51	39.2 88.3	1.17 N 39.18 E

2032.0 FT. TO 19280.0 FT. MAGNETIC MEASUREMENT WHILE DRILLING SURVEY
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO H&P 601
TIE IN PROVIDED BY METEORITE ENERGY SERVICES

2032.00	1.47	103.37	-9.3	0.30	2031.28	42.1 88.9	0.83 N 42.11 E
2095.00	1.24	93.24	-9.9	0.53	2094.26	43.6 89.2	0.60 N 43.58 E
2190.00	1.12	57.94	-9.9	0.76	2189.24	45.4 88.7	1.04 N 45.39 E
2285.00	2.12	6.53	-8.0	1.76	2284.20	46.5 86.0	3.28 N 46.38 E
2379.00	3.45	354.78	-3.5	1.53	2378.09	47.0 80.4	7.82 N 46.32 E
2474.00	4.80	346.78	3.3	1.54	2472.84	47.4 72.2	14.54 N 45.15 E
2569.00	5.34	341.29	11.7	0.76	2567.47	48.4 62.2	22.59 N 42.82 E
2664.00	4.98	341.79	20.2	0.38	2662.09	50.5 52.6	30.70 N 40.12 E
2759.00	5.57	342.51	28.9	0.62	2756.69	54.1 43.8	39.01 N 37.44 E
2854.00	6.82	339.31	39.1	1.36	2851.13	59.4 35.0	48.69 N 34.06 E
2948.00	7.95	335.27	51.0	1.32	2944.35	66.6 26.2	59.81 N 29.37 E
3043.00	9.00	333.59	64.7	1.14	3038.31	76.1 17.8	72.43 N 23.32 E
3138.00	8.63	334.28	79.0	0.41	3132.19	87.2 11.2	85.51 N 16.92 E
3233.00	8.68	336.32	93.0	0.33	3226.11	99.1 6.3	98.50 N 10.95 E
3328.00	9.28	338.48	107.6	0.72	3319.94	112.3 2.7	112.19 N 5.26 E
3423.00	9.57	335.86	123.0	0.55	3413.66	126.5 359.6	126.52 N 0.78 W
3518.00	10.08	333.02	138.9	0.74	3507.27	141.4 356.8	141.14 N 7.78 W
3612.00	10.12	332.37	154.9	0.13	3599.81	156.5 354.4	155.78 N 15.34 W
3707.00	10.35	334.90	171.4	0.53	3693.30	172.4 352.4	170.91 N 22.83 W
3802.00	9.90	333.92	187.7	0.51	3786.82	188.4 350.8	185.97 N 30.04 W
3897.00	10.32	335.73	204.1	0.55	3880.34	204.5 349.5	201.06 N 37.13 W
3992.00	11.19	339.57	221.6	1.19	3973.67	221.8 348.6	217.46 N 43.85 W
4086.00	10.88	341.16	239.5	0.46	4065.94	239.7 348.0	234.40 N 49.90 W
4181.00	10.23	340.04	256.9	0.72	4159.33	256.9 347.5	250.82 N 55.67 W
4276.00	9.51	339.61	273.0	0.76	4252.92	273.1 347.0	266.10 N 61.29 W
4371.00	9.93	341.60	289.0	0.57	4346.56	289.0 346.7	281.23 N 66.60 W

A Gyrodata Directional Survey

Pioneer Natural Resources

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole

Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
4466.00	10.89	343.01	306.1	1.05	4439.99	306.1 346.4	297.59 N 71.81 W
4560.00	10.75	346.10	323.8	0.63	4532.32	323.8 346.3	314.59 N 76.51 W
4655.00	9.81	345.31	340.7	1.00	4625.80	340.7 346.3	331.02 N 80.69 W
4750.00	9.66	343.29	356.8	0.39	4719.43	356.8 346.2	346.48 N 85.04 W
4845.00	10.04	338.01	372.9	1.03	4813.03	372.9 346.0	361.79 N 90.43 W
4940.00	9.82	335.08	389.1	0.58	4906.61	389.1 345.6	376.82 N 96.95 W
5034.00	9.04	336.98	404.2	0.89	4999.34	404.3 345.2	390.88 N 103.21 W
5129.00	9.63	335.08	419.4	0.70	5093.08	419.5 344.9	404.96 N 109.48 W
5224.00	9.97	333.44	435.2	0.46	5186.69	435.4 344.5	419.52 N 116.50 W
5319.00	9.44	332.57	450.8	0.58	5280.33	451.1 344.1	433.79 N 123.77 W
5414.00	10.12	332.43	466.5	0.72	5373.95	466.9 343.7	448.11 N 131.22 W
5509.00	11.13	333.71	483.6	1.09	5467.32	484.2 343.3	463.73 N 139.15 W
5603.00	10.49	333.72	500.8	0.68	5559.65	501.5 343.0	479.53 N 146.95 W
5698.00	9.81	335.01	517.2	0.75	5653.17	518.1 342.7	494.62 N 154.20 W
5792.00	8.57	336.90	532.0	1.36	5745.96	533.0 342.5	508.32 N 160.33 W
5887.00	7.96	336.95	545.4	0.64	5839.97	546.6 342.4	520.89 N 165.68 W
5982.00	7.08	336.50	557.7	0.93	5934.15	559.0 342.2	532.31 N 170.59 W
6077.00	6.50	337.63	568.8	0.63	6028.49	570.2 342.1	542.65 N 174.98 W
6172.00	5.24	340.44	578.4	1.36	6122.99	579.9 342.1	551.71 N 178.47 W
6235.00	4.24	337.77	583.6	1.63	6185.77	585.1 342.0	556.58 N 180.32 W

END 12.25 INCH HOLE SECTION
START 8.75 INCH HOLE SECTION

6363.00	3.05	337.18	591.6	0.93	6313.51	593.2 342.0	564.10 N 183.43 W
6458.00	1.47	348.46	595.4	1.72	6408.43	596.9 342.0	567.62 N 184.65 W
6553.00	0.51	48.11	596.8	1.36	6503.42	598.3 342.0	569.10 N 184.58 W
6647.00	0.74	49.87	597.2	0.25	6597.41	598.7 342.1	569.77 N 183.81 W
6742.00	0.61	161.03	597.0	1.17	6692.41	598.4 342.2	569.69 N 183.17 W
6837.00	1.70	187.47	595.2	1.25	6787.39	596.6 342.1	567.81 N 183.19 W
6932.00	1.31	182.61	592.8	0.43	6882.36	594.3 342.0	565.33 N 183.42 W
7026.00	1.30	180.88	590.8	0.04	6976.33	592.3 342.0	563.19 N 183.49 W

A Gyrodata Directional Survey

Pioneer Natural Resources

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole

Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
7121.00	1.40	164.12	588.6	0.43	7071.31	590.1 341.9	560.99 N 183.19 W
7216.00	1.59	162.77	586.1	0.20	7166.27	587.7 341.9	558.62 N 182.48 W
7311.00	1.72	155.17	583.4	0.27	7261.24	584.9 341.9	556.07 N 181.49 W
7406.00	2.10	141.59	580.4	0.62	7356.18	581.9 342.0	553.41 N 179.81 W
7502.00	1.47	149.55	577.6	0.70	7452.14	579.0 342.1	550.97 N 178.10 W
7597.00	0.78	154.91	575.8	0.73	7547.12	577.2 342.1	549.33 N 177.20 W
7692.00	1.52	146.86	574.0	0.80	7642.10	575.3 342.2	547.69 N 176.24 W
7787.00	1.24	131.85	572.0	0.48	7737.07	573.2 342.2	545.95 N 174.79 W
7882.00	3.27	131.45	568.9	2.14	7831.99	570.0 342.4	543.47 N 171.99 W
7977.00	4.55	136.41	563.4	1.39	7926.77	564.3 342.7	538.95 N 167.36 W
8072.00	1.10	150.15	559.2	3.67	8021.64	560.1 342.9	535.43 N 164.31 W
8168.00	0.91	131.16	557.7	0.40	8117.62	558.5 343.0	534.13 N 163.27 W
8262.00	0.98	141.74	556.4	0.20	8211.61	557.1 343.1	533.00 N 162.21 W
8358.00	1.17	140.29	554.7	0.20	8307.60	555.5 343.1	531.61 N 161.08 W
8453.00	0.38	64.61	553.9	1.20	8402.59	554.6 343.2	530.99 N 160.18 W
8524.00	0.30	20.17	554.1	0.38	8473.59	554.8 343.2	531.27 N 159.90 W

END 8.75 INCH HOLE SECTION
START 8.5 INCH HOLE SECTION

8610.00	3.03	343.89	556.6	3.25	8559.54	557.3 343.3	533.67 N 160.45 W
8705.00	13.40	338.98	570.0	10.93	8653.44	570.8 343.2	546.39 N 165.11 W
8801.00	22.66	339.22	599.5	9.65	8744.63	600.4 343.0	574.12 N 175.68 W
8896.00	28.43	343.03	640.3	6.31	8830.31	641.3 342.9	612.90 N 188.79 W
8991.00	37.29	344.01	691.7	9.34	8910.03	692.8 342.9	662.29 N 203.35 W
9038.00	41.80	342.84	721.6	9.73	8946.26	722.7 343.0	690.96 N 211.89 W
9086.00	46.43	342.10	755.0	9.71	8980.72	756.1 342.9	722.81 N 221.96 W
9181.00	58.35	344.82	830.0	12.75	9038.60	831.2 343.0	794.85 N 243.21 W
9276.00	68.11	346.01	914.7	10.33	9081.33	915.9 343.2	876.84 N 264.50 W
9371.00	80.24	345.34	1005.9	12.79	9107.19	1007.0 343.4	965.23 N 287.09 W
9466.00	88.95	346.60	1100.4	9.26	9116.13	1101.4 343.7	1056.90 N 309.99 W
9561.00	87.48	345.20	1195.4	2.14	9119.09	1196.3 343.8	1148.99 N 333.12 W

A Gyrodata Directional Survey

Pioneer Natural Resources

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole

Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
9655.00	88.53	345.33	1289.3	1.13	9122.36	1290.2 343.9	1239.84 N 357.01 W
9750.00	89.92	345.33	1384.3	1.46	9123.65	1385.2 344.0	1331.73 N 381.07 W
9845.00	90.14	345.36	1479.3	0.23	9123.60	1480.2 344.1	1423.64 N 405.11 W
9940.00	88.64	344.30	1574.2	1.93	9124.61	1575.1 344.2	1515.32 N 429.96 W
10034.00	89.04	345.84	1668.2	1.69	9126.51	1669.1 344.2	1606.12 N 454.18 W
10129.00	88.95	346.30	1763.2	0.49	9128.18	1764.0 344.3	1698.32 N 477.04 W
10224.00	89.07	345.96	1858.2	0.38	9129.82	1859.0 344.4	1790.53 N 499.81 W
10319.00	89.07	346.24	1953.2	0.29	9131.36	1953.9 344.5	1882.74 N 522.63 W
10414.00	90.42	346.72	2048.1	1.51	9131.79	2048.9 344.6	1975.10 N 544.84 W
10509.00	91.70	346.96	2143.1	1.37	9130.03	2143.8 344.7	2067.59 N 566.46 W
10603.00	90.76	346.55	2237.1	1.09	9128.01	2237.7 344.8	2159.07 N 588.00 W
10694.00	90.17	346.00	2328.1	0.89	9127.27	2328.7 344.8	2247.46 N 609.59 W
10786.00	90.17	346.81	2420.1	0.88	9127.00	2420.6 344.9	2336.89 N 631.21 W
10877.00	88.47	347.19	2511.1	1.91	9128.08	2511.6 345.0	2425.54 N 651.68 W
10968.00	87.45	347.28	2602.0	1.13	9131.32	2602.4 345.0	2514.24 N 671.77 W
11059.00	89.21	346.76	2692.9	2.02	9133.97	2693.3 345.1	2602.87 N 692.20 W
11151.00	90.08	346.67	2784.9	0.95	9134.54	2785.3 345.2	2692.41 N 713.34 W
11244.00	89.07	346.69	2877.9	1.09	9135.23	2878.3 345.2	2782.90 N 734.77 W
11336.00	90.03	346.92	2969.9	1.07	9135.95	2970.2 345.3	2872.47 N 755.77 W
11426.00	89.43	346.46	3059.9	0.84	9136.38	3060.2 345.3	2960.05 N 776.49 W
11516.00	90.06	346.84	3149.9	0.82	9136.78	3150.2 345.3	3047.62 N 797.27 W
11611.00	88.39	347.02	3244.9	1.77	9138.06	3245.1 345.4	3140.14 N 818.75 W
11706.00	88.53	347.05	3339.8	0.15	9140.62	3340.1 345.4	3232.69 N 840.05 W
11801.00	92.35	346.64	3434.8	4.04	9139.89	3435.0 345.5	3325.17 N 861.67 W
11896.00	91.36	346.25	3529.7	1.12	9136.81	3529.9 345.5	3417.48 N 883.92 W
11991.00	89.21	346.26	3624.7	2.26	9136.34	3624.9 345.5	3509.75 N 906.50 W
12086.00	89.01	346.58	3719.7	0.40	9137.81	3719.9 345.5	3602.08 N 928.80 W
12181.00	87.54	345.57	3814.7	1.88	9140.67	3814.9 345.6	3694.25 N 951.65 W
12275.00	90.31	345.29	3908.6	2.96	9142.44	3908.8 345.6	3785.20 N 975.29 W
12370.00	89.46	345.00	4003.6	0.95	9142.63	4003.8 345.5	3877.02 N 999.64 W
12465.00	88.61	344.70	4098.6	0.95	9144.23	4098.8 345.5	3968.71 N 1024.47 W
12560.00	87.28	345.05	4193.5	1.45	9147.64	4193.7 345.5	4060.35 N 1049.24 W

A Gyrodata Directional Survey

Pioneer Natural Resources

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole

Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
12655.00	88.05	345.21	4288.4	0.83	9151.51	4288.6 345.5	4152.10 N 1073.60 W
12750.00	89.83	345.99	4383.4	2.05	9153.26	4383.6 345.5	4244.09 N 1097.22 W
12845.00	85.04	345.99	4478.3	5.04	9157.51	4478.5 345.5	4336.15 N 1120.19 W
12940.00	87.00	346.33	4573.0	2.09	9164.11	4573.3 345.5	4428.16 N 1142.86 W
13034.00	88.56	345.43	4666.9	1.92	9167.75	4667.2 345.5	4519.25 N 1165.77 W
13129.00	89.18	344.23	4761.9	1.42	9169.62	4762.2 345.5	4610.92 N 1190.63 W
13221.00	90.42	345.92	4853.9	2.28	9169.94	4854.2 345.5	4699.81 N 1214.32 W
13316.00	90.57	346.47	4948.9	0.60	9169.12	4949.1 345.5	4792.06 N 1236.99 W
13410.00	89.29	346.38	5042.9	1.37	9169.24	5043.1 345.5	4883.43 N 1259.05 W
13505.00	89.38	345.97	5137.9	0.44	9170.34	5138.1 345.6	4975.67 N 1281.75 W
13600.00	90.40	345.87	5232.9	1.08	9170.52	5233.1 345.6	5067.82 N 1304.86 W
13695.00	89.86	346.13	5327.9	0.63	9170.31	5328.1 345.6	5160.00 N 1327.84 W
13790.00	90.14	346.93	5422.9	0.89	9170.31	5423.1 345.6	5252.38 N 1349.97 W
13884.00	89.89	345.83	5516.9	1.20	9170.28	5517.1 345.6	5343.74 N 1372.11 W
13979.00	90.57	345.76	5611.9	0.72	9169.90	5612.1 345.6	5435.83 N 1395.42 W
14074.00	90.68	345.93	5706.9	0.21	9168.86	5707.1 345.6	5527.94 N 1418.65 W
14169.00	90.31	346.01	5801.9	0.40	9168.04	5802.1 345.6	5620.10 N 1441.68 W
14264.00	91.81	346.15	5896.8	1.59	9166.29	5897.0 345.6	5712.30 N 1464.53 W
14359.00	91.22	346.83	5991.8	0.95	9163.77	5992.0 345.6	5804.63 N 1486.71 W
14453.00	91.19	347.21	6085.8	0.41	9161.80	6086.0 345.7	5896.21 N 1507.82 W
14548.00	90.23	347.49	6180.7	1.05	9160.62	6180.9 345.7	5988.90 N 1528.62 W
14643.00	90.62	347.86	6275.7	0.57	9159.92	6275.8 345.7	6081.71 N 1548.90 W
14738.00	90.42	347.06	6370.7	0.87	9159.05	6370.8 345.7	6174.43 N 1569.53 W
14833.00	92.32	347.31	6465.6	2.02	9156.78	6465.7 345.8	6267.04 N 1590.59 W
14928.00	88.25	347.15	6560.6	4.29	9156.31	6560.7 345.8	6359.67 N 1611.59 W
15023.00	88.90	346.39	6655.5	1.05	9158.67	6655.6 345.8	6452.12 N 1633.32 W
15117.00	91.30	346.62	6749.5	2.56	9158.51	6749.6 345.8	6543.51 N 1655.26 W
15211.00	91.36	346.83	6843.5	0.23	9156.33	6843.6 345.8	6634.98 N 1676.83 W
15306.00	91.08	346.48	6938.5	0.47	9154.30	6938.6 345.8	6727.39 N 1698.76 W
15401.00	90.03	345.14	7033.5	1.79	9153.38	7033.5 345.8	6819.48 N 1722.04 W
15496.00	89.32	344.39	7128.4	1.09	9153.92	7128.5 345.8	6911.14 N 1747.01 W
15591.00	91.05	344.60	7223.4	1.83	9153.62	7223.5 345.8	7002.68 N 1772.40 W

A Gyrodata Directional Survey

Pioneer Natural Resources

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole

Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
15686.00	92.69	344.91	7318.3	1.76	9150.52	7318.4 345.8	7094.29 N 1797.37 W
15781.00	90.03	345.09	7413.3	2.81	9148.26	7413.4 345.8	7186.01 N 1821.95 W
15876.00	89.89	345.21	7508.2	0.19	9148.33	7508.4 345.8	7277.84 N 1846.29 W
15970.00	89.63	346.47	7602.2	1.37	9148.72	7602.4 345.8	7368.98 N 1869.29 W
16065.00	90.45	346.75	7697.2	0.91	9148.65	7697.4 345.8	7461.40 N 1891.29 W
16160.00	91.24	346.63	7792.2	0.84	9147.25	7792.3 345.8	7553.84 N 1913.16 W
16255.00	90.11	345.97	7887.2	1.38	9146.13	7887.3 345.8	7646.13 N 1935.65 W
16350.00	89.69	345.81	7982.2	0.47	9146.30	7982.3 345.8	7738.26 N 1958.81 W
16445.00	91.78	346.23	8077.2	2.24	9145.08	8077.3 345.8	7830.43 N 1981.76 W
16540.00	90.62	345.59	8172.2	1.39	9143.09	8172.3 345.8	7922.55 N 2004.88 W
16634.00	89.29	346.06	8266.2	1.50	9143.17	8266.3 345.8	8013.69 N 2027.90 W
16729.00	89.41	345.66	8361.2	0.44	9144.24	8361.3 345.8	8105.80 N 2051.11 W
16824.00	92.66	346.63	8456.1	3.57	9142.53	8456.3 345.8	8198.01 N 2073.85 W
16919.00	91.39	346.07	8551.1	1.46	9139.17	8551.2 345.8	8290.27 N 2096.25 W
17013.00	89.01	345.90	8645.1	2.54	9138.84	8645.2 345.8	8381.46 N 2119.02 W
17108.00	89.29	345.67	8740.0	0.38	9140.25	8740.2 345.8	8473.54 N 2142.34 W
17203.00	90.54	345.85	8835.0	1.33	9140.39	8835.2 345.8	8565.62 N 2165.71 W
17298.00	90.03	346.50	8930.0	0.87	9139.92	8930.2 345.8	8657.87 N 2188.41 W
17393.00	89.86	346.73	9025.0	0.30	9140.01	9025.2 345.8	8750.29 N 2210.40 W
17488.00	90.85	346.89	9120.0	1.06	9139.42	9120.1 345.8	8842.78 N 2232.08 W
17583.00	90.28	345.83	9215.0	1.27	9138.49	9215.1 345.8	8935.09 N 2254.48 W
17678.00	88.81	345.33	9310.0	1.63	9139.24	9310.1 345.8	9027.09 N 2278.14 W
17773.00	89.26	345.12	9405.0	0.52	9140.84	9405.1 345.8	9118.94 N 2302.36 W
17867.00	90.03	345.20	9499.0	0.82	9141.42	9499.1 345.8	9209.80 N 2326.43 W
17962.00	91.53	345.70	9594.0	1.66	9140.13	9594.1 345.8	9301.74 N 2350.30 W
18057.00	89.58	345.96	9688.9	2.07	9139.21	9689.1 345.8	9393.84 N 2373.55 W
18152.00	88.25	345.94	9783.9	1.40	9141.01	9784.0 345.8	9485.98 N 2396.61 W
18247.00	89.26	345.33	9878.9	1.24	9143.07	9879.0 345.8	9577.99 N 2420.17 W
18342.00	90.48	345.50	9973.9	1.30	9143.29	9974.0 345.8	9669.93 N 2444.10 W
18437.00	91.11	345.56	10068.9	0.67	9141.97	10069.0 345.8	9761.90 N 2467.83 W
18532.00	91.67	345.74	10163.8	0.62	9139.67	10164.0 345.8	9853.91 N 2491.37 W
18626.00	90.99	345.25	10257.8	0.89	9137.48	10258.0 345.8	9944.89 N 2514.91 W

A Gyrodata Directional Survey

Pioneer Natural Resources

Lease: University 7-43 Well: #116H, 12.25", 8.75", 8.5" Hole

Location: H&P 601, Andrews, Texas

Job Number: HD0919DPM201

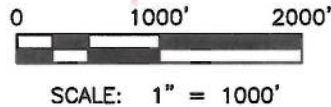
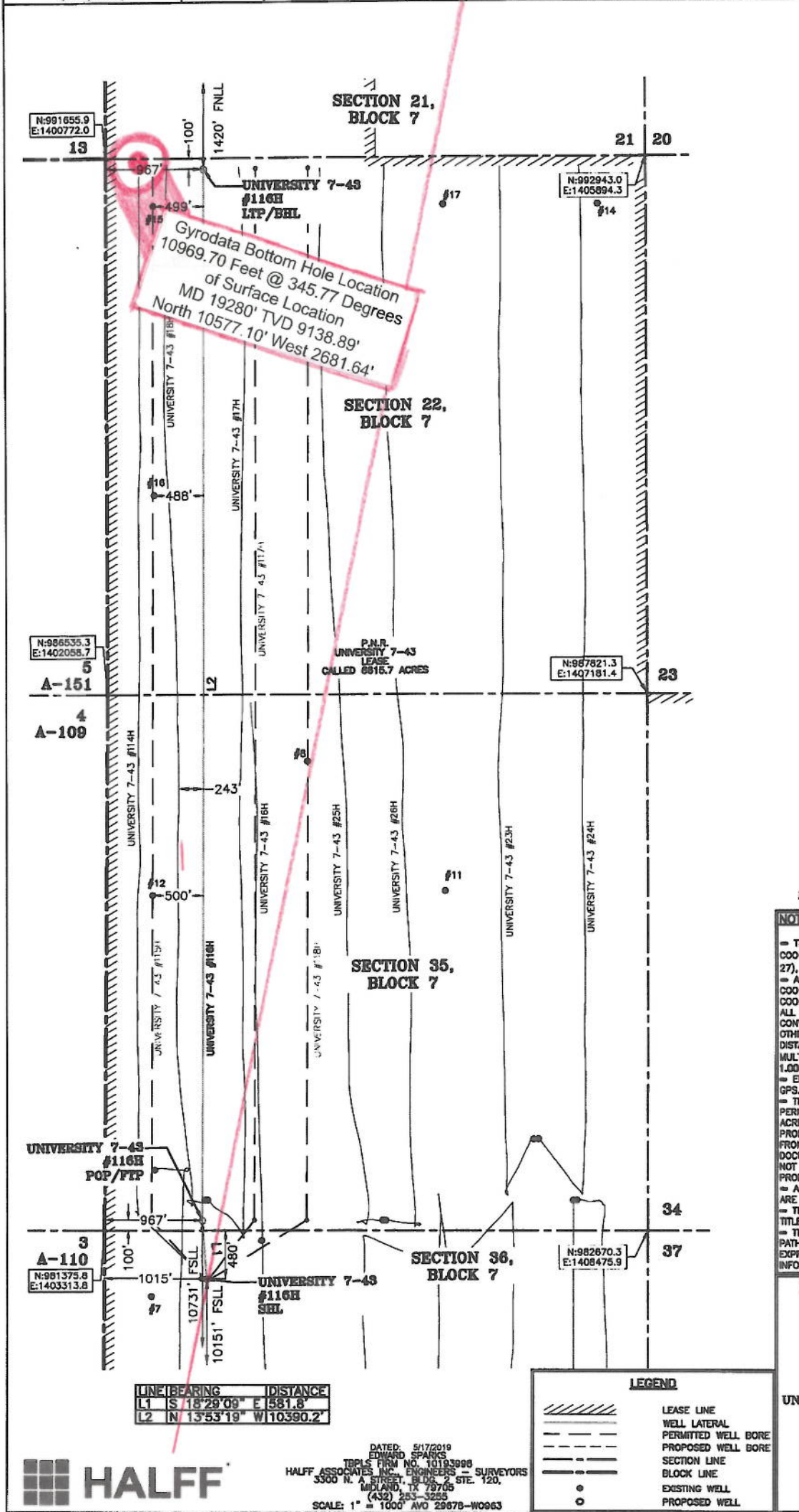
MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
18721.00	91.42	345.68	10352.8	0.64	9135.49	10352.9 345.8	10036.83 N 2538.74 W
18816.00	89.46	345.93	10447.8	2.08	9134.76	10447.9 345.8	10128.92 N 2562.04 W
18911.00	88.61	344.77	10542.8	1.51	9136.36	10542.9 345.8	10220.82 N 2586.06 W
19005.00	88.41	344.74	10636.7	0.22	9138.80	10636.9 345.8	10311.48 N 2610.77 W
19100.00	88.53	344.83	10731.6	0.16	9141.34	10731.8 345.8	10403.12 N 2635.69 W
19195.00	91.36	345.63	10826.6	3.10	9141.43	10826.8 345.8	10494.97 N 2659.91 W
19280.00	92.06	344.73	10911.6	1.34	9138.89	10911.7 345.8	10577.10 N 2681.64 W

PROJECTION TO BIT

19338.00	92.06	344.73	10969.5	0.00	9136.81	10969.7 345.8	10633.02 N 2696.91 W
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Final Station Closure: Distance: 10969.70 ft. Az.: 345.77 deg.

UNIVERSITY 7-43 #116H	NORTHING (NAD27)	EASTING (NAD27)	LATITUDE (NAD 27)	LONGITUDE (NAD27)	SECTION LINE		LEASE LINE	
SURFACE HOLE LOCATION (SHL)	981156.3	1404412.7	32.350014	102.261593	480' N (SEC. 36)	1015' W (SEC. 36)	10151' S (SEC. 43)	1015' W (SEC. 36)
FIRST TAKE POINT (POP/FTP)	981708.2	1404226.2	32.351522	102.262221	100' S (SEC. 35)	967' W (SEC. 35)	10731' S (SEC. 43)	967' W (SEC. 35)
BOTTOM HOLE LOCATION (LTP/BHL)	991794.6	1401734.2	32.379118	102.270863	100' N (SEC. 22)	967' W (SEC. 22)	1420' N (SEC. 22)	967' W (SEC. 22)



NOTE: WELL IS LOCATED APPROXIMATELY 16.8 MILES EAST OF ANDREWS, ANDREWS COUNTY, TEXAS

NOTES:

- THE BASIS OF BEARING OF THE SURVEY IS THE TEXAS COORDINATE SYSTEM, NORTH AMERICAN DATUM 1927 (NAD 27), CENTRAL ZONE (4203).
- ALL TEXAS STATE PLANE COORDINATES AND GEOGRAPHIC COORDINATES SHOWN HEREON ARE NAD 27 GRID COORDINATES AS COMPUTED BY CORPSCON VERSION 6.0.1. ALL GEOGRAPHIC COORDINATES SHOWN HEREON WERE CONVERTED USING CORPSCON VERSION 6.0.1. UNLESS OTHERWISE NOTED, ALL DISTANCES SHOWN HEREON ARE GRID DISTANCES AND THEY CAN BE CONVERTED TO SURFACE WHEN MULTIPLIED WITH A "SURFACE ADJUSTMENT FACTOR" OF 1.000188348, AS CALCULATED BY CORPSCON.
- ELEVATIONS SHOWN HEREON ARE NAVD83 AS DERIVED BY GPS.
- THIS EXHIBIT IS FOR TEXAS RAILROAD COMMISSION WELL PERMITTING PURPOSES ONLY. BOUNDARY LINES AND ACREAGE SHOWN HEREON REFLECT THE SURVEYORS PROFESSIONAL OPINION OF MINERAL RIGHTS AS DETERMINED FROM CLIENT-PROVIDED OIL AND GAS MINERAL LEASE DOCUMENTATION. THE INFORMATION DEPICTED HEREON SHALL NOT BE USED IN THE CONVEYANCE OF FEE TITLE TO REAL PROPERTY.
- ALL MEASUREMENTS TO LEASE, UNIT, AND SURVEY LINES ARE PERPENDICULAR TO SAID LINES.
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
- THE AS-DRILLED DATA USED TO DEPICT THE WELL BORE PATH WAS PROVIDED BY OTHERS. NO WARRANTY IS EITHER EXPRESSED OR IMPLIED AS TO THE ACCURACY OF THE INFORMATION HEREIN.

PIONEER NATURAL RESOURCES USA, Inc.

PERMIT PLAT

UNIVERSITY 7-43 #116H

UNIVERSITY 7-43 LEASE - 6615.7± ACRES

LOCATED IN
SECTION 22, 35, & SECTION 36,
BLOCK 7,
UNIVERSITY LANDS SURVEY,
ANDREWS COUNTY, TEXAS



DATED: 5/17/2019
EDWARD SPARKS
TAPLS FIRM NO. 10193998
HALFF ASSOCIATES INC. ENGINEERS - SURVEYORS
3300 N. A STREET, SUITE 120,
MIDLAND, TX 79705
(432) 253-3255
SCALE: 1" = 1000' AVO 29678-W0063

State of Texas
County of Harris

I, Michael Hurte, certify that; I am employed by Gyrodata Inc.; that I am authorized and qualified to review the Magnetic While Drilling survey from a depth of 2032 feet to a depth of 19280 feet conducted on the day(s) of 09/22/19 through 10/26/19; that this survey was conducted at the request of Pioneer Natural Resources USA Inc. for the University 7-43 #116H Well API No. 42-003-48115 in Andrews County, Texas; that the data is true, correct, complete, and within the limitations of the tool as set forth by Gyrodata Inc.; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Gyrodata Inc.



Michael Hurte
Operations Coordinator