



# Meteorite Energy Services Report

08 October, 2021

## PERMIAN South

Reagan County  
UNIVERSITY 10-17 PAD  
UNIVERSITY 10-17E 5H  
OH

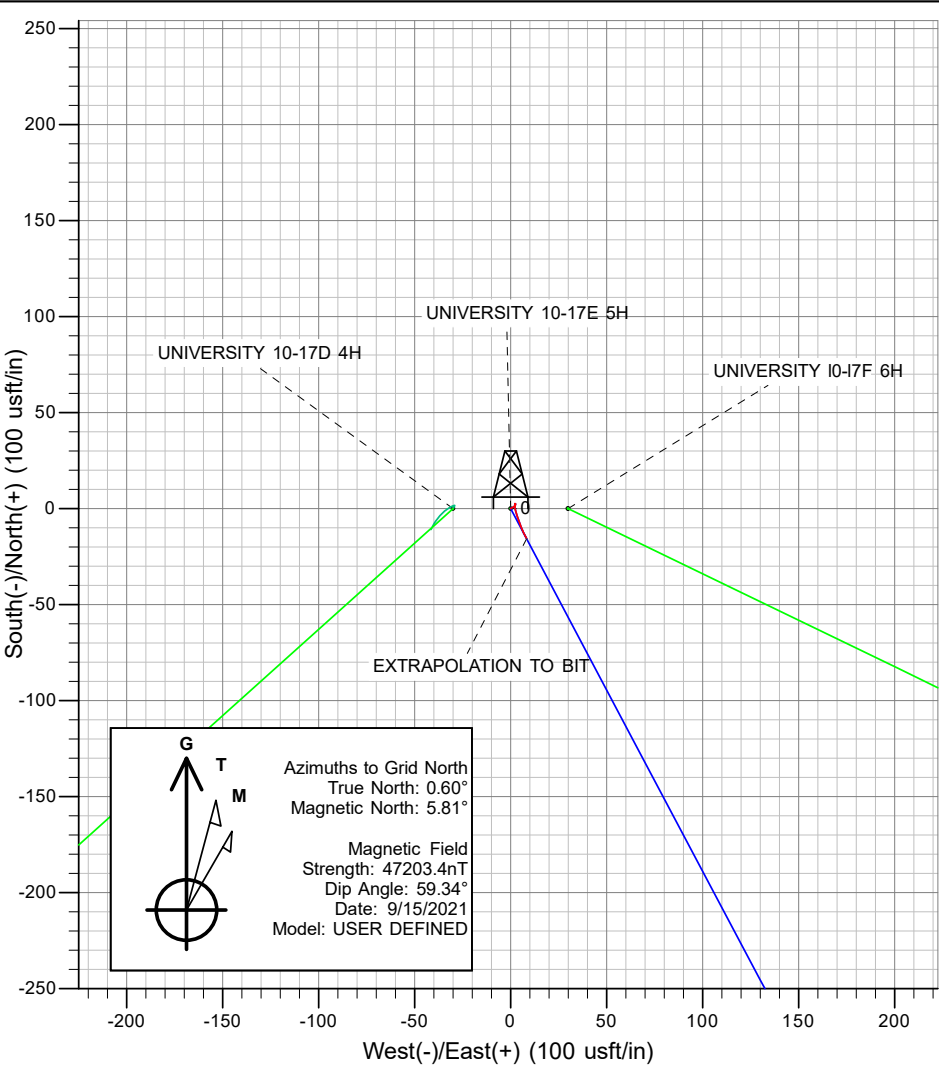
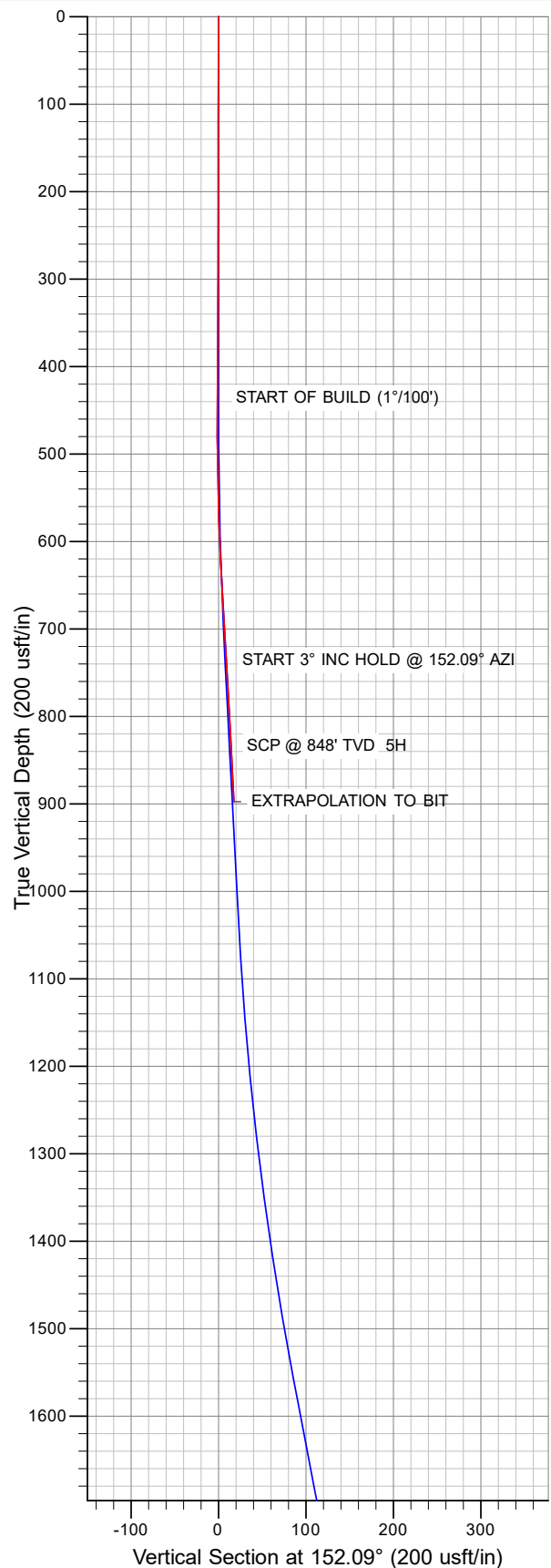
Survey: FINAL SURFACE SURVEYS (21MJ-333)

**PIONEER**  
NATURAL RESOURCES



ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Annotation
898.0	2.90	154.30	897.5	-15.7	8.3	17.7	EXTRAPOLATION TO BIT



PROJECT DETAILS: Reagan County

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 10-17E 5H, Grid North  
 Vertical (TVD) Reference: KB @ GL @ 2572.0usft  
 Section (VS) Reference: Slot - (0.0N, 0.0E)  
 Measured Depth Reference: KB @ GL @ 2572.0usft  
 Calculation Method: Minimum Curvature

Survey: FINAL SURFACE SURVEYS (21MJ-333) (UNIVERSITY 10-17E 5H/OH)

Created By: Meteorite Energy Services Date: 13:11, October 08 2021

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

<b>Company:</b>	PERMIAN South	<b>Local Co-ordinate Reference:</b>	Well UNIVERSITY 10-17E 5H
<b>Project:</b>	Reagan County	<b>TVD Reference:</b>	KB @ GL @ 2572.0usft
<b>Site:</b>	UNIVERSITY 10-17 PAD	<b>MD Reference:</b>	KB @ GL @ 2572.0usft
<b>Well:</b>	UNIVERSITY 10-17E 5H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURFACE SURVEYS (21MJ-333)	<b>Database:</b>	EDM 5000.16 Single User Db

<b>Project</b>	Reagan County		
<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		

Site		UNIVERSITY 10-17 PAD			
Site Position:		Northing:	583,905.00 usft	Latitude:	31° 16' 1.301 N
From:	Map	Easting:	1,638,901.50 usft	Longitude:	101° 29' 20.862 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.60 °

Well		UNIVERSITY 10-17E 5H				
Well Position	+N/-S	0.0 usft	Northing:	583,905.00 usft	Latitude:	31° 16' 1.304 N
	+E/-W	0.0 usft	Easting:	1,638,931.50 usft	Longitude:	101° 29' 20.516 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,572.0 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>
	User Defined	9/15/2021	5.21	59.34	47,203.40000000

Design	FINAL SURFACE SURVEYS (21MJ-333)			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	152.09

<b>Survey Program</b>	<b>Date</b>	10/8/2021			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
123.0	898.0	FINAL SURFACE SURVEYS (21MJ-333) (	MWD+IFR+MS	MWD + IFR + Multi Station	

<b>Survey</b>										
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)
0.0	0.00	0.00	0.0	-2,572.0	0.0	0.0	0.0	0.00	0.00	0.00
123.0	0.60	57.40	123.0	-2,449.0	0.3	0.5	-0.1	0.49	0.49	0.00
211.0	0.80	60.80	211.0	-2,361.0	0.9	1.5	-0.1	0.23	0.23	3.86
297.0	0.70	41.60	297.0	-2,275.0	1.6	2.3	-0.3	0.31	-0.12	-22.33
387.0	0.60	352.70	387.0	-2,185.0	2.5	2.6	-0.9	0.61	-0.11	-54.33
481.0	0.50	227.90	481.0	-2,091.0	2.7	2.3	-1.3	1.04	-0.11	-132.77
575.0	2.20	169.90	574.9	-1,997.1	0.6	2.3	0.5	2.11	1.81	-61.70
670.0	3.50	163.80	669.8	-1,902.2	-4.0	3.4	5.1	1.40	1.37	-6.42
764.0	3.40	156.60	763.7	-1,808.3	-9.3	5.3	10.7	0.47	-0.11	-7.66
828.0	2.90	154.30	827.6	-1,744.4	-12.5	6.8	14.2	0.81	-0.78	-3.59
<b>EXTRAPOLATION TO BIT</b>										
898.0	2.90	154.30	897.5	-1,674.5	-15.7	8.3	17.7	0.00	0.00	0.00

<b>Company:</b>	PERMIAN South	<b>Local Co-ordinate Reference:</b>	Well UNIVERSITY 10-17E 5H
<b>Project:</b>	Reagan County	<b>TVD Reference:</b>	KB @ GL @ 2572.0usft
<b>Site:</b>	UNIVERSITY 10-17 PAD	<b>MD Reference:</b>	KB @ GL @ 2572.0usft
<b>Well:</b>	UNIVERSITY 10-17E 5H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURFACE SURVEYS (21MJ-333)	<b>Database:</b>	EDM 5000.16 Single User Db

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
5H FTP/POP - survey misses target center by 3673.1usft at 898.0usft MD (897.5 TVD, -15.7 N, 8.3 E) - Point	0.00	0.00	4,522.0	-541.8	287.0	583,363.20	1,639,218.50	31° 15' 55.971 N	101° 29' 17.145 W
4H FTP/POP - survey misses target center by 3712.3usft at 898.0usft MD (897.5 TVD, -15.7 N, 8.3 E) - Point	0.00	0.00	4,522.0	-523.6	-612.8	583,381.40	1,638,318.70	31° 15' 56.058 N	101° 29' 27.514 W

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
+N/-S (usft)	+E/-W (usft)			
898.0	897.5	-15.7	8.3	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 University 10-17E 5H, between 9/18/2021 and 9/19/2021, from 100' to 898'.

The data are true, correct, complete and within the limitations of the tool used. This survey was conducted at the request of Pioneer Natural Resources for # 871755 ( 42-383-41037 ) drilled in Reagan county, Texas.

Sincerely  
Meteorite Energy Services Inc.

A handwritten signature in black ink, appearing to be "Bryson A. Kriz". The signature is stylized with a large, sweeping "B" and "K".

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](http://www.meteoriteenergyservices.com)



## Directional Survey Report

Company: **Pioneer Natural Res. USA, Inc**  
 Well: **University 10-17E 5H**  
 County: **Reagan**  
 State: **Texas**  
 Field: **Spraberry (Trend Area)**  
 API: **42-383-41037**  
 Rig: **Ensign 133**  
 Service Co: **Gordon Technologies, LLC**  
 Job #: **GT211325**  
 Survey Calc: **Minimum Curvature**

Well Surface Location  
 Latitude: **31.267029**  
 Longitude: **-101.489032**  
 Reference: **NAD 1927**  
 Y (Northing): **583905**  
 X (Easting): **1638931.50**  
 Field Engr: **Carrey Frith**  
**Drew Atkinson**

Report Date: **Oct 26 2021**  
 Time: **08:10**  
 Mag Reference: **Grid North**  
 Mag Correction: **5.87**  
 Vert Sect. Azi: **1.04**  
 Perm Datum: **Mean Sea Level**  
 Depth Ref: **Rotary Table**  
 RKB Height: **25**  
 GL Elev: **2572**

Survey Tie In	SD 0	Inc 0	Azimuth 0	TVD 0	VS 0	Rectangular Offsets		Course		Temp	Closure		Source
						NS 0	EW 0	Length 0	DLS 0		Distance 0	Azimuth 0	
1	25.00	0.00	0.00	25.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	Svy Imp
2	148.00	0.60	57.40	148.00	0.36	0.35	0.54	123.00	0.49	0.00	0.64	57.40	Svy Imp
3	236.00	0.80	60.80	235.99	0.92	0.89	1.47	88.00	0.23	0.00	1.72	58.61	Svy Imp
4	322.00	0.70	41.60	321.98	1.62	1.58	2.34	86.00	0.31	0.00	2.82	55.96	Svy Imp
5	412.00	0.60	352.70	411.98	2.51	2.46	2.64	90.00	0.61	0.00	3.61	47.08	Svy Imp
6	506.00	0.50	227.90	505.98	2.71	2.67	2.28	94.00	1.04	0.00	3.51	40.45	Svy Imp
7	600.00	2.20	169.90	599.95	0.66	0.62	2.29	94.00	2.11	0.00	2.37	74.83	Svy Imp
8	695.00	3.50	163.80	694.83	-3.90	-3.96	3.42	95.00	1.40	0.00	5.23	139.19	Svy Imp
9	789.00	3.40	156.60	788.66	-9.17	-9.27	5.33	94.00	0.47	0.00	10.69	150.13	Svy Imp
10	853.00	2.90	154.30	852.56	-12.35	-12.47	6.78	64.00	0.81	0.00	14.20	151.46	Svy Imp
11	960.00	1.42	144.44	959.48	-15.83	-15.99	8.73	107.00	1.42	75.20	18.21	151.38	Svy Imp
12	1053.00	2.69	154.66	1052.42	-18.71	-18.90	10.33	93.00	1.42	80.60	21.54	151.34	Svy Imp
13	1144.00	5.65	162.38	1143.17	-24.87	-25.10	12.60	91.00	3.30	87.80	28.09	153.34	Svy Imp
14	1234.00	7.35	165.78	1232.59	-34.62	-34.90	15.36	90.00	1.94	89.60	38.13	156.25	Svy Imp
15	1325.00	7.39	165.82	1322.84	-45.88	-46.22	18.22	91.00	0.05	95.00	49.68	158.48	Svy Imp
16	1416.00	8.58	163.86	1412.96	-58.02	-58.42	21.54	91.00	1.34	95.00	62.26	159.76	Svy Imp
17	1505.00	10.52	161.95	1500.72	-72.03	-72.52	25.90	89.00	2.21	96.80	77.00	160.34	Svy Imp
18	1595.00	10.95	158.93	1589.14	-87.71	-88.30	31.52	90.00	0.79	98.60	93.76	160.35	Svy Imp
19	1686.00	12.20	154.68	1678.29	-104.34	-105.06	38.74	91.00	1.67	102.20	111.98	159.76	Svy Imp
20	1778.00	11.99	156.04	1768.25	-121.71	-122.58	46.78	92.00	0.39	98.60	131.21	159.11	Svy Imp
21	1869.00	11.95	156.15	1857.27	-138.83	-139.84	54.43	91.00	0.05	100.40	150.06	158.73	Svy Imp
22	1962.00	11.93	152.25	1948.26	-155.99	-157.15	62.80	93.00	0.87	96.80	169.23	158.22	Svy Imp
23	2053.00	12.24	149.96	2037.25	-172.49	-173.82	72.00	91.00	0.63	95.00	188.15	157.50	Svy Imp
24	2143.00	12.18	150.63	2125.21	-188.84	-190.35	81.43	90.00	0.17	95.00	207.04	156.84	Svy Imp
25	2235.00	11.98	150.36	2215.17	-205.43	-207.11	90.92	92.00	0.22	96.80	226.19	156.30	Svy Imp
26	2326.00	11.84	150.69	2304.21	-221.61	-223.46	100.16	91.00	0.17	100.40	244.88	155.86	Svy Imp
27	2418.00	11.83	151.16	2394.26	-237.93	-239.96	109.33	92.00	0.11	102.20	263.69	155.51	Svy Imp
28	2509.00	11.79	151.92	2483.33	-254.14	-256.33	118.20	91.00	0.18	104.00	282.27	155.24	Svy Imp
29	2599.00	11.68	152.29	2571.45	-270.17	-272.51	126.77	90.00	0.15	104.00	300.55	155.05	Svy Imp
30	2691.00	11.51	152.48	2661.57	-286.40	-288.90	135.34	92.00	0.19	107.60	319.03	154.90	Svy Imp
31	2781.00	11.38	153.11	2749.78	-302.14	-304.79	143.51	90.00	0.20	109.40	336.89	154.79	Svy Imp
32	2870.00	11.35	153.52	2837.03	-317.66	-320.46	151.39	89.00	0.10	111.20	354.42	154.71	Svy Imp
33	2961.00	11.41	153.72	2926.25	-333.60	-336.54	159.36	91.00	0.08	80.60	372.37	154.66	Svy Imp
34	3052.00	11.51	153.76	3015.43	-349.66	-352.76	167.36	91.00	0.12	86.00	390.45	154.62	Svy Imp
35	3142.00	11.63	154.32	3103.60	-365.75	-368.99	175.27	90.00	0.18	89.60	408.50	154.59	Svy Imp
36	3234.00	11.69	153.91	3193.70	-382.33	-385.72	183.38	92.00	0.11	91.40	427.09	154.57	Svy Imp
37	3324.00	10.65	153.33	3282.00	-397.80	-401.33	191.12	90.00	1.16	96.80	444.52	154.54	Svy Imp
38	3413.00	10.08	151.93	3369.55	-411.88	-415.55	198.48	89.00	0.70	98.60	460.52	154.47	Svy Imp
39	3504.00	10.19	151.39	3459.13	-425.83	-429.64	206.08	91.00	0.16	98.60	476.51	154.38	Svy Imp
40	3595.00	10.12	151.56	3548.70	-439.78	-443.74	213.74	91.00	0.08	100.40	492.53	154.28	Svy Imp
41	3776.00	8.29	148.50	3727.37	-464.63	-468.85	228.13	181.00	1.04	100.40	521.40	154.05	Svy Imp
42	3866.00	7.58	148.98	3816.50	-475.13	-479.47	234.58	90.00	0.79	100.40	533.78	153.93	Svy Imp
43	3957.00	6.98	147.81	3906.77	-484.85	-489.30	240.62	91.00	0.68	100.40	545.26	153.81	Svy Imp
44	4048.00	6.28	146.92	3997.16	-493.60	-498.15	246.29	91.00	0.78	107.60	555.71	153.69	Svy Imp
45	4138.00	5.86	146.51	4086.65	-501.46	-506.11	251.51	90.00	0.47	107.60	565.15	153.57	Svy Imp
46	4230.00	5.56	146.41	4178.20	-508.99	-513.74	256.57	92.00	0.33	104.00	574.24	153.46	Svy Imp
47	4320.00	5.17	144.48	4267.80	-515.84	-520.67	261.33	90.00	0.47	107.60	582.57	153.35	Svy Imp

48	4411.00	5.11	144.80	4358.44	-522.40	-527.32	266.05	91.00	0.08	109.40	590.63	153.23	Svy Imp
49	4501.00	4.82	144.55	4448.10	-528.67	-533.67	270.55	90.00	0.32	107.60	598.34	153.12	Svy Imp
50	4592.00	4.50	143.62	4538.80	-534.58	-539.66	274.89	91.00	0.36	111.20	605.64	153.01	Svy Imp
51	4683.00	4.13	141.98	4629.54	-539.96	-545.11	279.02	91.00	0.43	113.00	612.38	152.89	Svy Imp
52	4775.00	3.76	141.92	4721.32	-544.87	-550.10	282.92	92.00	0.41	113.00	618.59	152.78	Svy Imp
53	4864.00	3.37	142.28	4810.15	-549.17	-554.46	286.32	89.00	0.44	109.40	624.02	152.69	Svy Imp
54	4955.00	2.91	137.69	4901.01	-552.93	-558.28	289.51	91.00	0.57	111.20	628.88	152.59	Svy Imp
55	5046.00	2.64	134.10	4991.91	-556.05	-561.45	292.58	91.00	0.35	111.20	633.11	152.48	Svy Imp
56	5137.00	1.88	127.06	5082.84	-558.36	-563.81	295.27	91.00	0.89	114.80	636.45	152.36	Svy Imp
57	5228.00	1.36	109.30	5173.80	-559.57	-565.07	297.48	91.00	0.79	113.00	638.59	152.24	Svy Imp
58	5319.00	1.13	113.55	5264.78	-560.26	-565.78	299.32	91.00	0.27	113.00	640.08	152.12	Svy Imp
59	5409.00	1.15	108.87	5354.76	-560.87	-566.43	300.99	90.00	0.11	114.80	641.44	152.01	Svy Imp
60	5500.00	0.70	95.91	5445.75	-561.20	-566.78	302.42	91.00	0.54	114.80	642.42	151.92	Svy Imp
61	5590.00	0.63	102.48	5535.74	-561.35	-566.95	303.45	90.00	0.12	116.60	643.05	151.84	Svy Imp
62	5681.00	0.63	92.21	5626.74	-561.46	-567.07	304.44	91.00	0.12	114.80	643.63	151.77	Svy Imp
63	5772.00	0.18	46.08	5717.73	-561.36	-566.99	305.04	91.00	0.58	114.80	643.84	151.72	Svy Imp
64	5863.00	0.16	44.40	5808.73	-561.17	-566.80	305.24	91.00	0.02	114.80	643.77	151.70	Svy Imp
65	5954.00	0.20	71.98	5899.73	-561.02	-566.66	305.48	91.00	0.10	116.60	643.76	151.67	Svy Imp
66	6045.00	0.42	51.30	5990.73	-560.76	-566.40	305.89	91.00	0.27	116.60	643.72	151.63	Svy Imp
67	6134.00	0.52	61.83	6079.73	-560.35	-566.01	306.50	89.00	0.15	116.60	643.67	151.56	Svy Imp
68	6225.00	0.53	61.48	6170.72	-559.94	-565.61	307.24	91.00	0.01	120.20	643.67	151.49	Svy Imp
69	6315.00	0.53	80.17	6260.72	-559.66	-565.34	308.01	90.00	0.19	122.00	643.80	151.42	Svy Imp
70	6406.00	0.49	85.34	6351.72	-559.54	-565.24	308.81	91.00	0.06	122.00	644.09	151.35	Svy Imp
71	6496.00	0.49	76.84	6441.71	-559.41	-565.12	309.57	90.00	0.08	123.80	644.35	151.29	Svy Imp
72	6587.00	0.51	98.87	6532.71	-559.37	-565.09	310.34	91.00	0.21	125.60	644.70	151.22	Svy Imp
73	6676.00	0.50	101.62	6621.71	-559.49	-565.23	311.11	89.00	0.03	127.40	645.19	151.17	Svy Imp
74	6764.00	0.28	93.16	6709.71	-559.57	-565.32	311.70	88.00	0.26	114.80	645.56	151.13	MWD Run 2
75	6853.00	2.71	346.45	6798.67	-557.54	-563.29	311.42	89.00	3.15	122.00	643.65	151.06	MWD Run 2
76	6943.00	13.20	0.44	6887.69	-545.18	-550.91	311.00	90.00	11.77	125.60	632.64	150.55	MWD Run 2
77	7034.00	22.20	353.80	6974.30	-517.67	-523.37	309.22	91.00	10.12	129.20	607.90	149.42	MWD Run 2
78	7124.00	31.37	351.75	7054.56	-477.60	-483.20	304.01	90.00	10.24	132.80	570.88	147.82	MWD Run 2
79	7215.00	35.48	357.43	7130.51	-427.84	-433.34	299.43	91.00	5.67	132.80	526.73	145.36	MWD Run 2
80	7306.00	43.71	1.97	7200.58	-369.93	-375.42	299.33	91.00	9.59	134.60	480.15	141.43	MWD Run 2
81	7398.00	52.58	0.76	7261.91	-301.48	-306.99	300.91	92.00	9.68	136.40	429.87	135.57	MWD Run 2
82	7488.00	64.94	0.60	7308.50	-224.68	-230.20	301.82	90.00	13.73	132.80	379.59	127.33	MWD Run 2
83	7580.00	76.88	0.89	7338.54	-137.90	-143.42	302.96	92.00	12.98	134.60	335.19	115.33	MWD Run 2
84	7671.00	88.43	1.51	7350.16	-47.80	-53.34	304.85	91.00	12.71	138.20	309.48	99.93	MWD Run 2
85	7762.00	90.76	1.22	7350.81	43.19	37.62	307.01	91.00	2.58	138.20	309.31	83.01	MWD Run 2
86	7822.00	91.26	359.89	7349.75	103.18	97.61	307.59	60.00	2.37	134.60	322.71	72.39	MWD Run 3
87	7914.00	90.59	359.81	7348.26	195.14	189.60	307.34	92.00	0.74	140.00	361.12	58.33	MWD Run 3
88	8004.00	90.59	359.54	7347.33	285.11	279.59	306.83	90.00	0.30	143.60	415.11	47.66	MWD Run 3
89	8095.00	90.42	0.11	7346.53	376.09	370.59	306.55	91.00	0.65	145.40	480.94	39.60	MWD Run 3
90	8185.00	90.14	0.26	7346.09	466.08	460.58	306.84	90.00	0.36	145.40	553.43	33.67	MWD Run 3
91	8277.00	90.76	0.88	7345.36	558.07	552.58	307.76	92.00	0.95	149.00	632.50	29.12	MWD Run 3
92	8368.00	90.17	1.17	7344.63	649.07	643.56	309.39	91.00	0.72	149.00	714.06	25.68	MWD Run 3
93	8457.00	89.95	0.75	7344.54	738.07	732.55	310.88	89.00	0.53	150.80	795.78	23.00	MWD Run 3
94	8546.00	90.20	1.06	7344.42	827.07	821.53	312.28	89.00	0.45	147.20	878.88	20.81	MWD Run 3
95	8636.00	89.83	0.70	7344.40	917.07	911.52	313.66	90.00	0.57	152.60	963.98	18.99	MWD Run 3
96	8725.00	89.95	0.77	7344.57	1006.06	1000.52	314.80	89.00	0.15	154.40	1048.87	17.47	MWD Run 3
97	8814.00	89.55	0.47	7344.96	1095.06	1089.51	315.77	89.00	0.56	156.20	1134.35	16.16	MWD Run 3
98	8904.00	89.58	0.62	7345.64	1185.05	1179.50	316.62	90.00	0.17	156.20	1221.26	15.03	MWD Run 3
99	8995.00	89.67	0.90	7346.23	1276.05	1270.49	317.83	91.00	0.32	158.00	1309.64	14.04	MWD Run 3
100	9086.00	89.61	1.13	7346.81	1367.05	1361.48	319.44	91.00	0.27	154.40	1398.45	13.20	MWD Run 3
101	9176.00	89.83	1.44	7347.25	1457.05	1451.45	321.46	90.00	0.42	158.00	1486.62	12.49	MWD Run 3
102	9266.00	89.67	1.48	7347.64	1547.04	1541.42	323.76	90.00	0.19	159.80	1575.06	11.86	MWD Run 3
103	9356.00	90.00	2.06	7347.90	1637.04	1631.38	326.54	90.00	0.74	161.60	1663.74	11.32	MWD Run 3
104	9447.00	89.67	1.78	7348.17	1728.02	1722.33	329.59	91.00	0.48	161.60	1753.58	10.83	MWD Run 3
105	9538.00	89.75	2.00	7348.63	1819.01	1813.28	332.59	91.00	0.26	163.40	1843.53	10.39	MWD Run 3
106	9629.00	89.61	2.54	7349.14	1909.99	1904.20	336.20	91.00	0.61	159.80	1933.65	10.01	MWD Run 3
107	9719.00	90.03	2.41	7349.42	1999.96	1994.12	340.08	90.00	0.49	161.60	2022.91	9.68	MWD Run 3
108	9810.00	89.81	2.05	7349.55	2090.94	2085.05	343.62	91.00	0.47	161.60	2113.17	9.36	MWD Run 3
109	9901.00	89.95	2.49	7349.75	2181.92	2175.98	347.23	91.00	0.51	161.60	2203.51	9.07	MWD Run 3
110	9990.00	89.58	1.81	7350.12	2270.90	2264.91	350.57	89.00	0.87	161.60	2291.88	8.80	MWD Run 3
111	10082.00	89.81	1.52	7350.61	2362.90	2356.87	353.24	92.00	0.39	163.40	2383.20	8.52	MWD Run 3
112	10171.00	89.69	1.05	7351.00	2451.89	2445.85	355.24	89.00	0.54	165.20	2471.51	8.26	MWD Run 3
113	10261.00	89.75	0.96	7351.43	2541.89	2535.83	356.82	90.00	0.13	163.40	2560.81	8.01	MWD Run 3

114	10351.00	89.72	1.03	7351.85	2631.89	2625.82	358.37	90.00	0.08	165.20	2650.16	7.77	MWD Run 3
115	10441.00	89.78	1.14	7352.24	2721.89	2715.80	360.07	90.00	0.14	167.00	2739.57	7.55	MWD Run 3
116	10533.00	89.58	1.14	7352.76	2813.89	2807.78	361.90	92.00	0.21	168.80	2831.01	7.34	MWD Run 3
117	10623.00	89.75	1.75	7353.28	2903.88	2897.75	364.17	90.00	0.70	168.80	2920.55	7.16	MWD Run 3
118	10714.00	90.06	2.04	7353.43	2994.87	2988.70	367.18	91.00	0.47	168.80	3011.17	7.00	MWD Run 3
119	10804.00	89.78	1.67	7353.56	3084.86	3078.65	370.09	90.00	0.51	165.20	3100.82	6.85	MWD Run 3
120	10895.00	90.20	1.76	7353.58	3175.86	3169.61	372.82	91.00	0.47	168.80	3191.46	6.71	MWD Run 3
121	10988.00	89.67	0.73	7353.69	3268.86	3262.59	374.84	93.00	1.25	170.60	3284.05	6.55	MWD Run 3
122	11077.00	89.97	1.21	7353.97	3357.86	3351.58	376.34	89.00	0.64	170.60	3372.64	6.41	MWD Run 3
123	11168.00	89.72	0.86	7354.21	3448.85	3442.56	377.98	91.00	0.48	170.60	3463.25	6.27	MWD Run 3
124	11258.00	89.75	0.49	7354.63	3538.85	3532.55	379.04	90.00	0.41	172.40	3552.83	6.12	MWD Run 3
125	11349.00	89.50	359.87	7355.23	3629.84	3623.55	379.32	91.00	0.74	172.40	3643.35	5.98	MWD Run 3
126	11440.00	89.36	359.25	7356.14	3720.80	3714.54	378.63	91.00	0.69	172.40	3733.79	5.82	MWD Run 3
127	11531.00	89.44	359.57	7357.09	3811.76	3805.53	377.69	91.00	0.36	172.40	3824.23	5.67	MWD Run 3
128	11621.00	89.78	359.92	7357.70	3901.74	3895.53	377.30	90.00	0.54	174.20	3913.76	5.53	MWD Run 3
129	11713.00	89.58	359.88	7358.22	3993.72	3987.53	377.14	92.00	0.22	174.20	4005.32	5.40	MWD Run 3
130	11802.00	89.83	0.72	7358.67	4082.71	4076.53	377.61	89.00	0.99	174.20	4093.98	5.29	MWD Run 3
131	11893.00	90.00	1.00	7358.80	4173.71	4167.51	378.97	91.00	0.36	176.00	4184.71	5.20	MWD Run 3
132	11983.00	89.67	0.84	7359.06	4263.71	4257.50	380.41	90.00	0.41	176.00	4274.46	5.11	MWD Run 3
133	12072.00	89.95	1.50	7359.36	4352.70	4346.48	382.23	89.00	0.81	176.00	4363.26	5.03	MWD Run 3
134	12163.00	89.95	1.79	7359.45	4443.70	4437.45	384.85	91.00	0.31	176.00	4454.10	4.96	MWD Run 3
135	12253.00	90.03	2.29	7359.47	4533.69	4527.39	388.05	90.00	0.56	176.00	4543.99	4.90	MWD Run 3
136	12344.00	90.31	2.84	7359.20	4624.65	4618.30	392.12	91.00	0.68	177.80	4634.91	4.85	MWD Run 3
137	12435.00	89.83	2.41	7359.08	4715.62	4709.20	396.29	91.00	0.71	177.80	4725.84	4.81	MWD Run 3
138	12526.00	90.06	2.34	7359.17	4806.59	4800.12	400.06	91.00	0.26	177.80	4816.76	4.76	MWD Run 3
139	12617.00	90.14	2.22	7359.01	4897.57	4891.05	403.67	91.00	0.16	174.20	4907.68	4.72	MWD Run 3
140	12708.00	89.97	2.21	7358.92	4988.55	4981.98	407.18	91.00	0.19	177.80	4998.59	4.67	MWD Run 3
141	12798.00	89.86	1.63	7359.05	5078.54	5071.93	410.19	90.00	0.66	177.80	5088.49	4.62	MWD Run 3
142	12889.00	89.61	0.44	7359.47	5169.54	5162.91	411.83	91.00	1.34	179.60	5179.31	4.56	MWD Run 3
143	12980.00	90.09	0.40	7359.71	5260.53	5253.91	412.49	91.00	0.52	179.60	5270.08	4.49	MWD Run 3
144	13071.00	89.72	358.75	7359.86	5351.50	5344.90	411.82	91.00	1.86	179.60	5360.75	4.41	MWD Run 3
145	13161.00	90.17	358.76	7359.95	5441.43	5434.88	409.86	90.00	0.50	179.60	5450.32	4.31	MWD Run 3
146	13251.00	89.81	357.96	7359.97	5531.33	5524.85	407.29	90.00	0.97	181.40	5539.84	4.22	MWD Run 3
147	13342.00	90.17	358.46	7359.99	5622.22	5615.80	404.45	91.00	0.68	181.40	5630.35	4.12	MWD Run 3
148	13432.00	90.03	358.35	7359.83	5712.12	5705.77	401.95	90.00	0.20	181.40	5719.91	4.03	MWD Run 3
149	13523.00	90.25	358.62	7359.60	5803.03	5796.73	399.55	91.00	0.38	183.20	5810.49	3.94	MWD Run 3
150	13614.00	89.81	358.33	7359.56	5893.94	5887.70	397.13	91.00	0.59	183.20	5901.08	3.86	MWD Run 3
151	13705.00	89.69	357.94	7359.95	5984.82	5978.65	394.18	91.00	0.44	177.80	5991.63	3.77	MWD Run 3
152	13795.00	89.44	357.33	7360.63	6074.66	6068.57	390.47	90.00	0.73	181.40	6081.12	3.68	MWD Run 3
153	13886.00	89.13	357.74	7361.76	6165.48	6159.48	386.56	91.00	0.56	181.40	6171.60	3.59	MWD Run 3
154	13977.00	90.28	359.35	7362.23	6256.39	6250.45	384.25	91.00	2.17	183.20	6262.25	3.52	MWD Run 3
155	14067.00	89.92	358.95	7362.07	6346.34	6340.44	382.91	90.00	0.60	183.20	6351.99	3.46	MWD Run 3
156	14157.00	89.16	359.57	7362.79	6436.29	6430.42	381.75	90.00	1.09	177.80	6441.75	3.40	MWD Run 3
157	14186.00	89.02	0.73	7363.25	6465.29	6459.42	381.83	29.00	4.03	181.40	6470.70	3.38	MWD Run 3
158	14248.00	88.74	2.60	7364.46	6527.27	6521.38	383.63	62.00	3.04	177.80	6532.65	3.37	MWD Run 3
159	14339.00	89.53	3.40	7365.84	6618.20	6612.24	388.39	91.00	1.23	181.40	6623.64	3.36	MWD Run 3
160	14430.00	88.60	3.79	7367.33	6709.10	6703.05	394.09	91.00	1.10	179.60	6714.63	3.36	MWD Run 3
161	14521.00	89.47	4.55	7368.86	6799.95	6793.80	400.70	91.00	1.27	177.80	6805.60	3.38	MWD Run 3
162	14611.00	89.69	6.12	7369.52	6889.69	6883.40	409.07	90.00	1.77	181.40	6895.55	3.40	MWD Run 3
163	14701.00	89.78	7.46	7369.93	6979.24	6972.77	419.71	90.00	1.49	181.40	6985.39	3.44	MWD Run 3
164	14792.00	90.28	7.46	7369.88	7069.67	7063.00	431.52	91.00	0.55	183.20	7076.17	3.50	MWD Run 3
165	14839.00	90.14	5.89	7369.71	7116.44	7109.68	436.99	47.00	3.34	183.20	7123.09	3.52	MWD Run 3
166	14884.00	89.92	3.79	7369.69	7161.33	7154.51	440.78	45.00	4.70	183.20	7168.08	3.53	MWD Run 3
167	14974.00	89.58	0.42	7370.08	7251.31	7244.44	444.09	90.00	3.76	183.20	7258.04	3.51	MWD Run 3
168	15064.00	89.97	1.17	7370.43	7341.30	7334.43	445.35	90.00	0.94	181.40	7347.94	3.47	MWD Run 3
169	15154.00	90.11	1.31	7370.36	7431.30	7424.41	447.29	90.00	0.22	185.00	7437.87	3.45	MWD Run 3
170	15244.00	90.23	0.34	7370.09	7521.30	7514.40	448.58	90.00	1.09	185.00	7527.77	3.42	MWD Run 3
171	15336.00	89.64	358.85	7370.20	7613.27	7606.39	447.93	92.00	1.74	186.80	7619.57	3.37	MWD Run 3
172	15425.00	89.78	1.07	7370.66	7702.25	7695.38	447.87	89.00	2.49	186.80	7708.41	3.33	MWD Run 3
173	15515.00	89.67	1.26	7371.09	7792.24	7785.36	449.70	90.00	0.25	183.20	7798.34	3.31	MWD Run 3
174	15606.00	90.31	2.28	7371.11	7883.23	7876.32	452.52	91.00	1.32	186.80	7889.31	3.29	MWD Run 3
175	15697.00	90.03	0.38	7370.84	7974.23	7967.29	454.63	91.00	2.11	186.80	7980.25	3.27	MWD Run 3
176	15787.00	90.06	359.64	7370.77	8064.21	8057.29	454.65	90.00	0.83	188.60	8070.11	3.23	MWD Run 3
177	15878.00	90.65	1.23	7370.21	8155.20	8148.28	455.34	91.00	1.86	188.60	8160.99	3.20	MWD Run 3
178	15969.00	89.81	1.03	7369.86	8246.20	8239.26	457.12	91.00	0.95	188.60	8251.93	3.18	MWD Run 3
179	16059.00	90.67	1.64	7369.48	8336.20	8329.24	459.22	90.00	1.18	185.00	8341.89	3.16	MWD Run 3



180	16149.00	90.28	1.54	7368.73	8426.19	8419.20	461.71	90.00	0.45	186.80	8431.85	3.14	MWD Run 3
181	16241.00	90.06	0.67	7368.45	8518.19	8511.18	463.49	92.00	0.97	188.60	8523.79	3.12	MWD Run 3
182	16331.00	89.97	0.05	7368.43	8608.18	8601.18	464.05	90.00	0.70	188.60	8613.69	3.09	MWD Run 3
183	16422.00	89.92	1.40	7368.51	8699.18	8692.17	465.20	91.00	1.49	188.60	8704.61	3.06	MWD Run 3
184	16512.00	89.92	0.95	7368.64	8789.18	8782.15	467.05	90.00	0.51	190.40	8794.56	3.04	MWD Run 3
185	16602.00	89.78	359.99	7368.88	8879.17	8872.14	467.78	90.00	1.08	190.40	8884.47	3.02	MWD Run 3
186	16692.00	89.64	359.67	7369.34	8969.15	8962.14	467.51	90.00	0.38	186.80	8974.33	2.99	MWD Run 3
187	16782.00	89.78	0.46	7369.80	9059.14	9052.14	467.61	90.00	0.89	190.40	9064.21	2.96	MWD Run 3
188	16873.00	89.89	0.47	7370.06	9150.13	9143.14	468.35	91.00	0.12	188.60	9155.12	2.93	MWD Run 3
189	16965.00	90.06	0.23	7370.11	9242.12	9235.14	468.91	92.00	0.32	188.60	9247.03	2.91	MWD Run 3
190	17055.00	90.31	0.44	7369.82	9332.12	9325.13	469.44	90.00	0.36	188.60	9336.94	2.88	MWD Run 3
191	17149.00	89.95	0.24	7369.61	9426.11	9419.13	469.99	94.00	0.44	188.60	9430.85	2.86	MWD Run 3
192	17185.00	89.95	0.24	7369.64	9462.11	9455.13	470.14	36.00	0.01	188.60	9466.81	2.85	PTB

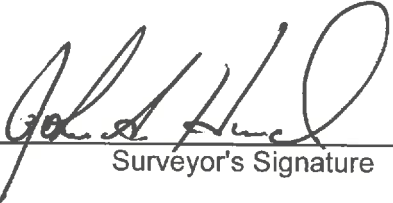


**MWD SURVEY CERTIFICATION**  
**Gordon Technologies, LLC**

State Of Texas

County Of Reagan

I, John A. Huval certify that; I am employed by Gordon Technologies, LLC.;  
that I did on the day(s) of October 18, 2021 through October 26, 2021 conduct  
or supervise the taking of a MWD survey from a depth of 960 feet to a depth of  
17,185 feet; that the data is true, correct, complete and within the limitations of the  
tool set forth by Gordon Technologies, LLC.; that I am authorized and qualified to make this report;  
that this survey was conducted at the request of Pioneer Natural Res. USA, Inc for the  
University 10-17E 5H Well, A.P.I. No. 42-383-41037 in  
Spraberry (Trend Area) Field and that I have reviewed this report and find that  
it conforms to the principles and procedures set forth by Gordon Technologies, LLC.

  
\_\_\_\_\_  
Surveyor's Signature

\_\_\_\_\_  
MWD Coordinator  
Title

UNIVERSITY 10-17E #5H	EASTING (X) (NAD 27)	NORTHING (Y) (NAD 27)	LATITUDE (NAD 27)	LONGITUDE (NAD 27)	SECTION LINE		SECTION LINE		LEASE LINE		LEASE LINE		SECTION
					FOOTAGE	FNL/FSL	FOOTAGE	FEL/FWL	FOOTAGE	FNL/FSL	FOOTAGE	FEL/FWL	
SURFACE HOLE LOCATION (SHL)	1638931.5	583905.0	31.267029	-101.489032	2028'	FNL	1811'	FEL	636'	FSL	1811'	FEL	17
POINT OF PENETRATION/FIRST TAKE POINT (POP/FTP)	1639218.5	583363.2	31.265547	-101.488096	2564'	FNL	1514'	FEL	100'	FSL	1514'	FEL	17
LAST TAKE POINT/BOTTOM HOLE LOCATION (LTP/BHL)	1639399.6	593361.6	31.293041	-101.487848	2106'	FSL	1505'	FEL	3223'	FNL	1113'	FWL	5

BHL= 9,466.81' @  
GRID= 2.85°  
MD= 17,185'

LINE	BEARING	DISTANCE
L1	S 27°54'31" E	613.11'
L2	N 01°02'15" E	10000.00'
TOTAL		10613.11'

SECTION 5, BLOCK 10,  
UNIVERSITY LAND SURVEY

OFFSET OPERATOR  
PIONEER NATURAL RESOURCES

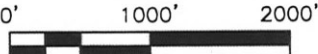
UNIVERSITY 10-5  
320.5± ACRES  
PIONEER NATURAL RESOURCES

UNIVERSITY  
10-17E #5H  
LTP/BHL



I, April Maxey, certify the information  
added to this plat is true and correct  
to the best of my knowledge.  
8.5.2021

April Maxey



SCALE: 1" = 1000'

NOTE: WELL IS LOCATED APPROXIMATELY 5.5 MILES  
NORTHWEST OF BIG LAKE, REAGAN COUNTY, TEXAS



**HALFF**  
3300 NORTH A STREET, BUILDING 2, SUITE 120  
MIDLAND, TX 79705-5471  
TEL (432) 253-3255  
TBPELS SURVEYING FIRM #10193998

DATE: 8/2/2021  
BY: K. NYERKAKEN  
AOC: 39678.676

LEGEND

- SECTION LINE
- BLOCK/TOWNSHIP LINE
- LEASE LINE
- POOLED UNIT
- SUBJECT LATERAL
- AS-DRILLED LATERAL
- PERMITTED LATERAL
- PROPOSED LATERAL
- PROPOSED WELL
- EXISTING WELL

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 1.000207698, AS CALCULATED BY CORPSCON.  
- ALL MEASUREMENTS TO LEASE, UNIT, AND SURVEY LINES  
ARE PERPENDICULAR TO SAID LINES.  
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF  
A TITLE REPORT.  
- THIS PLAT WAS PREPARED FOR PLANNING PURPOSES  
ONLY, AND DOES NOT REPRESENT AN OFFICIAL BOUNDARY  
SURVEY.  
- THIS PLAT IS ACCOMPANIED BY AN EXCEL SPREADSHEET.

PIONEER NATURAL RESOURCES  
USA, INC.

PERMIT PLAT

UNIVERSITY 10-17E #5H

UNIVERSITY 10-5 - 320.5± ACRES  
UNIVERSITY 10-17 PU - 968.5± ACRES  
TOTAL TRACT: 1,289.0± ACRES  
(SURFACE AREA)

LOCATED IN:  
SECTION 5, SECTION 8 & SECTION 17,  
BLOCK 10, UNIVERSITY LAND SURVEY,  
REAGAN COUNTY, TEXAS