

NAD 27, Central Zone 4203  
Surface Hole Location (Sec. 33)  
Latitude: 31.215619° N  
Longitude: 101.502487° W  
X=1634531.51  
Y=565251.81  
Elev.=2668'  
548' FSL & 567' FEL  
Point of Penetration (Sec. 4)  
Latitude: 31.214081° N  
Longitude: 101.503844° W  
X=1634102.21  
Y=564896.83  
15' FNL & 985' FEL  
First Take Point (Sec. 4)  
Latitude: 31.215847° N  
Longitude: 101.503844° W  
X=1634100.48  
Y=564611.85  
100' FNL & 985' FEL  
Last Take Point (Sec. 9)  
Latitude: 31.185251° N  
Longitude: 101.504172° W  
X=1633888.62  
Y=554213.19  
100' FSL & 986' FEL  
Bottom Hole Location (Sec. 9)  
Latitude: 31.185017° N  
Longitude: 101.504175° W  
X=1633886.38  
Y=554128.20  
15' FSL & 986' FEL

Unit	Boundary	Distance
SHL	Out of Unit	
PP	15' FNL & 985' FEL	
PTP	100' FNL & 985' FEL	
LTP	100' FSL & 986' FEL	
BHL	15' FSL & 986' FEL	

NOTE: This Plat does not, in anyway represent a "Boundary Survey", and does not comply with the current T.B.P.L.S. Minimum Standards of Procedures for Boundary Survey. Acreage shown herein were furnished by others. The information contained on this plat is intended for the sole use of PERMIAN RESOURCES, LLC.

NOTE: Bearings and coordinates refer to the Texas Coordinate System of 1927, Central Zone (4203), as observed by GPS observations

I, Damian M. Jagers do hereby certify that the above described well location was surveyed on the ground under my supervision, as shown.

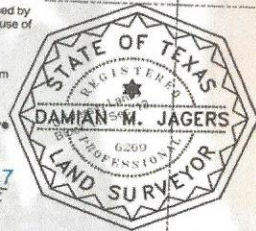
*Damian M. Jagers* 1/18/2017  
Damian M. Jagers  
REGISTERED PROFESSIONAL LAND SURVEYOR  
TEXAS REGISTRATION NO. 6269



Well Name  
UNIVERSITY 11 RE 932HA  
Drilling Field  
LIN (WOLFCAMP) FIELD  
Nearest Town  
2.97 MILES NORTHWEST OF BIG LAKE, TEXAS

383-39829

VES Bottom Hole Location is 0.81' @ 275.43° of Surface Location



824235

VES SURVEY INTERNATIONAL

Tract	Lessor	Called Acreage	% of Total
1	University Lands	320.3760 Acres	9.9656
2	University Lands	641.5000 Acres	19.9544
3	University Lands	641.5000 Acres	19.9544
4	University Lands	641.5000 Acres	19.9544
5	University Lands	641.5000 Acres	19.9544
6	University Lands	328.4500 Acres	10.2168
Total		3214.8250 Acres	100.0000

VES LEGEND	
	Surface Location Highlight
	Bottom Hole Location
	° of SL Direction Line
	North Indicator
	VES Bottom Hole Text Box

VES Bottom Hole Location is 0.81' @ 275.43° of Surface Location

MD / FT	950.00		949.97	TVD / FT
North / FT	South / FT		East / FT	West / FT
0.08				0.80

**VES SURVEY INTERNATIONAL**



Draft Date	12-13-16
Drawn By	D. Jagers
Revised By	
Reviewed By	B. Weisinger

Well Plat For  
Permian Resources, LLC

University 11 RE 932HA  
University Lands Block 11, Section 4  
University Lands Block 11, Section 9  
University Lands Block 11, Section 3  
University Lands Block 11, Section 15  
University Lands Block 11, Section 10  
University Lands Block 11, Section 11  
University Lands Block 11, Section 7  
Reagan County, Texas





Company: PERMIAN RESOURCES  
Lease/Well: UNIVERSITY 11 RE/932HA

Rig Name: INTEGRITY 3  
State/County: TEXAS/REAGAN  
VS-Azi: 0.00 Degrees  
Latitude: 31.21562, Longitude: -101.50249  
Grid North = True North +0.60 degs (NAD 27)  
Grid Correction Applied = +0.60 degs



Depth Reference : GROUND LEVEL

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: e-line gyro-de\_01.ut  
Minimum Curvature Method  
Report Date/Time: 4/6/2017 / 09:37

VES SURVEY INTERNATIONAL  
MIDLAND, TEXAS  
432-563-5444

Surveyor: JAMES NEIL BATES  
University 11 RE 932HA / API 42-383-39829

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
50.00	0.93	61.43	50.00	0.19	0.36	0.19	0.41	61.43	1.86
100.00	0.63	66.79	99.99	0.50	0.97	0.50	1.09	62.79	0.61
150.00	0.14	63.99	149.99	0.63	1.27	0.63	1.42	63.62	0.98
200.00	0.25	72.80	199.99	0.69	1.43	0.69	1.59	64.26	0.23
250.00	0.45	73.32	249.99	0.78	1.72	0.78	1.89	65.69	0.39
300.00	0.36	112.11	299.99	0.77	2.06	0.77	2.20	69.37	0.56
350.00	0.21	207.82	349.99	0.63	2.16	0.63	2.25	73.64	0.87
400.00	0.26	304.54	399.99	0.62	2.03	0.62	2.12	73.05	0.70
450.00	0.30	56.36	449.99	0.75	2.04	0.75	2.18	69.76	0.92
500.00	0.26	145.28	499.99	0.73	2.22	0.73	2.34	71.72	0.78
550.00	0.29	213.02	549.99	0.53	2.21	0.53	2.28	76.46	0.61
600.00	0.27	287.68	599.99	0.46	2.03	0.46	2.08	77.15	0.68
650.00	0.15	14.51	649.99	0.56	1.94	0.56	2.02	73.83	0.60
700.00	0.19	137.34	699.99	0.56	2.01	0.56	2.09	74.39	0.60
750.00	0.41	221.31	749.99	0.37	1.95	0.37	1.98	79.37	0.87
800.00	0.63	262.60	799.98	0.20	1.56	0.20	1.57	82.81	0.85

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
850.00	0.95	276.91	849.98	0.21	0.87	0.21	0.90	76.40	0.74
900.00	1.10	266.07	899.97	0.23	-0.02	0.23	0.23	355.62	0.48
950.00	0.76	248.91	949.97	0.08	-0.80	0.08	0.81	275.43	0.87



I James Neil Bates certify that I am employed by VES Survey International. That I did on the day(s) of 03/30/17 through 03/30/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 950.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Permian Resources, LLC for the University 11 RE Well # #932HA API # 42-383-39829 in Reagan County / Parish Texas; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by VES Survey International.

A handwritten signature in blue ink, appearing to read "James Neil Bates", is written over a horizontal line.

James Neil Bates  
Service Technician  
VES Survey International



# **Permian Resources**

**Reagan County, Texas  
University Lands, Block 10, Sec. 33  
University 11 RE 932HA**

**Wellbore #1**

**Survey: MWD Surveys**

## **QES Survey Report**

**01 May, 2017**



**QES Directional Drilling, LLC**

11390 FM 830

Willis, TX 77318

Phone: (936) 856-4332

Fax: (936) 856-8678



5/1/2017

Railroad Commission of Texas  
Oil and Gas Division  
1701 North Congress Avenue  
Austin, Texas 78711

Attention: Pam Johns

Re: Permian Resources, LLC  
University 11 RE 932HA  
RRC Lease/ID No.  
UL  
Abstract No. U239  
Reagan County, Texas  
API No. 42-383-39829

Enclosed, please find the original and one (1) copy of the survey performed on the referenced well by QES Directional Drilling, LLC (P5#684437). Other information required by your office is as follows:

<b>Name of Surveyor</b>	<b>Drainhole Number</b>	<b>Surveyed Depths</b>	<b>Dates Performed</b>	<b>Type of Survey</b>
Jeff Leschuck	Original Hole	971' – 17833'	04/15/2017-04/30/2017	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.

Sincerely,

Christopher Hughes  
MWD Compliance Manager  
QES Directional Drilling, LLC

Enclosures  
Cc: Permian Resources, LLC

<b>Company:</b>	Permian Resources	<b>Local Co-ordinate Reference:</b>	Well University 11 RE 932HA
<b>Project:</b>	Reagan County, Texas	<b>TVD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Site:</b>	University Lands, Block 10, Sec. 33	<b>MD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Well:</b>	University 11 RE 932HA	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM5002

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

<b>Site</b>	University Lands, Block 10, Sec. 33		
<b>Site Position:</b>		<b>Northing:</b>	565,251.81 usft
<b>From:</b>	Map	<b>Easting:</b>	1,634,571.51 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	31° 12' 56.232 N
		<b>Longitude:</b>	101° 30' 8.493 W
		<b>Grid Convergence:</b>	-0.60 °

<b>Well</b>	University 11 RE 932HA		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 565,251.81 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 1,634,531.51 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft
		<b>Latitude:</b>	31° 12' 56.227 N
		<b>Longitude:</b>	101° 30' 8.954 W
		<b>Ground Level:</b>	2,666.0 usft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2015	3/23/2017	5.92
			<b>Dip Angle (°)</b> 59.45
			<b>Field Strength (nT)</b> 47,567

<b>Design</b>	Wellbore #1		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>
	0.0	0.0	0.0
			<b>Direction (°)</b> 183.32

<b>Survey Program</b>	<b>Date</b>	4/28/2017		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
21.0	971.0	Gyros (Wellbore #1)	Good_gyro	Good Gyro
1,039.0	17,833.0	MWD Surveys (Wellbore #1)	MWD default	MWD - Standard

<b>Survey</b>									
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>
<b>Tie In @ 971.0' MD / TVD</b>									
971.0	0.76	248.91	971.0	0.1	-0.8	0.0	0.00	0.00	0.00
1,039.0	0.90	262.20	1,039.0	-0.2	-1.8	0.3	0.35	0.21	19.54
1,132.0	1.10	265.60	1,131.9	-0.3	-3.4	0.5	0.22	0.22	3.66
1,225.0	2.80	238.80	1,224.9	-1.6	-6.2	1.9	2.03	1.83	-28.82
1,318.0	4.60	231.20	1,317.7	-5.1	-11.1	5.7	2.00	1.94	-8.17
1,412.0	6.50	220.80	1,411.2	-11.5	-17.5	12.5	2.28	2.02	-11.06
1,506.0	7.60	214.00	1,504.5	-20.7	-24.4	22.0	1.47	1.17	-7.23
1,600.0	8.40	214.90	1,597.6	-31.4	-31.8	33.2	0.86	0.85	0.96
1,694.0	9.40	217.60	1,690.5	-43.1	-40.4	45.4	1.15	1.06	2.87

<b>Company:</b>	Permian Resources	<b>Local Co-ordinate Reference:</b>	Well University 11 RE 932HA
<b>Project:</b>	Reagan County, Texas	<b>TVD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Site:</b>	University Lands, Block 10, Sec. 33	<b>MD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Well:</b>	University 11 RE 932HA	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM5002

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)
1,789.0	10.50	214.70	1,784.1	-56.4	-50.1	59.2	1.27	1.16	-3.05
1,881.0	10.60	208.50	1,874.5	-70.7	-58.9	74.0	1.24	0.11	-6.74
1,976.0	9.70	207.50	1,968.0	-85.5	-66.8	89.2	0.97	-0.95	-1.05
2,071.0	10.20	207.00	2,061.6	-100.1	-74.3	104.2	0.53	0.53	-0.53
2,165.0	11.00	208.90	2,154.0	-115.4	-82.4	120.0	0.93	0.85	2.02
2,261.0	10.20	215.20	2,248.4	-130.3	-91.7	135.4	1.47	-0.83	6.56
2,354.0	8.80	212.20	2,340.1	-143.1	-100.3	148.7	1.60	-1.51	-3.23
2,449.0	9.00	216.80	2,433.9	-155.2	-108.6	161.2	0.78	0.21	4.84
2,545.0	9.80	218.90	2,528.6	-167.6	-118.2	174.1	0.91	0.83	2.19
2,639.0	10.60	219.30	2,621.2	-180.5	-128.7	187.6	0.85	0.85	0.43
2,733.0	10.50	216.10	2,713.6	-194.1	-139.2	201.8	0.63	-0.11	-3.40
2,828.0	9.30	212.00	2,807.2	-207.6	-148.4	215.8	1.46	-1.26	-4.32
2,921.0	10.00	212.80	2,898.8	-220.8	-156.8	229.5	0.77	0.75	0.86
3,015.0	10.90	212.30	2,991.3	-235.1	-165.9	244.3	0.96	0.96	-0.53
3,109.0	10.50	212.00	3,083.6	-249.9	-175.2	259.6	0.43	-0.43	-0.32
3,204.0	10.80	213.90	3,177.0	-264.6	-184.8	274.9	0.49	0.32	2.00
3,299.0	9.70	209.10	3,270.5	-279.0	-193.6	289.8	1.47	-1.16	-5.05
3,394.0	9.40	212.20	3,364.2	-292.6	-201.7	303.8	0.63	-0.32	3.26
3,487.0	9.40	217.10	3,455.9	-305.1	-210.3	316.7	0.86	0.00	5.27
3,582.0	9.70	216.90	3,549.6	-317.6	-219.8	329.8	0.32	0.32	-0.21
3,675.0	10.20	216.10	3,641.2	-330.6	-229.3	343.3	0.56	0.54	-0.86
3,771.0	10.90	215.90	3,735.6	-344.8	-239.7	358.1	0.73	0.73	-0.21
3,865.0	10.00	218.00	3,828.0	-358.4	-249.9	372.3	1.04	-0.96	2.23
3,958.0	9.70	218.10	3,919.7	-370.9	-259.7	385.4	0.32	-0.32	0.11
4,052.0	9.80	217.80	4,012.3	-383.5	-269.5	398.5	0.12	0.11	-0.32
4,146.0	10.10	215.70	4,104.9	-396.5	-279.2	412.0	0.50	0.32	-2.23
4,202.0	10.20	215.30	4,160.0	-404.5	-284.9	420.4	0.22	0.18	-0.71
4,279.0	10.20	213.80	4,235.8	-415.8	-292.7	432.0	0.34	0.00	-1.95
4,371.0	9.20	212.50	4,326.5	-428.7	-301.2	445.5	1.11	-1.09	-1.41
4,465.0	10.00	218.20	4,419.2	-441.5	-310.2	458.7	1.32	0.85	6.06
4,560.0	9.90	218.90	4,512.7	-454.3	-320.5	472.1	0.17	-0.11	0.74
4,654.0	9.10	216.10	4,605.4	-466.6	-329.9	485.0	0.98	-0.85	-2.98
4,747.0	10.60	220.40	4,697.1	-479.1	-339.8	498.0	1.80	1.61	4.62
4,842.0	9.40	216.60	4,790.6	-492.0	-350.1	511.4	1.44	-1.26	-4.00
4,936.0	7.90	215.50	4,883.6	-503.4	-358.4	523.3	1.61	-1.60	-1.17
5,032.0	8.20	212.50	4,978.6	-514.5	-365.9	534.9	0.54	0.31	-3.13
5,126.0	7.90	214.50	5,071.7	-525.5	-373.2	546.2	0.44	-0.32	2.13
5,221.0	7.00	215.20	5,165.9	-535.6	-380.2	556.7	0.95	-0.95	0.74
5,315.0	7.50	212.40	5,259.1	-545.5	-386.8	567.0	0.65	0.53	-2.98
5,410.0	6.30	210.40	5,353.4	-555.2	-392.8	577.0	1.29	-1.26	-2.11
5,506.0	6.20	206.90	5,448.9	-564.4	-397.8	586.5	0.41	-0.10	-3.65
5,600.0	5.70	216.40	5,542.4	-572.7	-402.8	595.0	1.17	-0.53	10.11
5,695.0	4.90	212.90	5,637.0	-579.9	-407.9	602.5	0.91	-0.84	-3.68



<b>Company:</b>	Permian Resources	<b>Local Co-ordinate Reference:</b>	Well University 11 RE 932HA
<b>Project:</b>	Reagan County, Texas	<b>TVD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Site:</b>	University Lands, Block 10, Sec. 33	<b>MD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Well:</b>	University 11 RE 932HA	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM5002

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)	
5,790.0	3.90	220.60	5,731.7	-585.7	-412.2	608.6	1.22	-1.05	8.11	
5,885.0	1.90	229.80	5,826.5	-589.2	-415.5	612.3	2.15	-2.11	9.68	
5,979.0	2.30	244.70	5,920.5	-591.0	-418.4	614.3	0.72	0.43	15.85	
6,073.0	1.20	212.40	6,014.4	-592.7	-420.6	616.0	1.53	-1.17	-34.36	
6,169.0	1.70	215.40	6,110.4	-594.7	-422.0	618.1	0.53	0.52	3.13	
6,264.0	1.90	200.20	6,205.4	-597.3	-423.3	620.8	0.54	0.21	-16.00	
6,359.0	0.20	285.80	6,300.3	-598.7	-424.0	622.3	1.99	-1.79	90.11	
6,453.0	0.20	253.70	6,394.3	-598.7	-424.3	622.3	0.12	0.00	-34.15	
6,548.0	0.50	215.20	6,489.3	-599.1	-424.7	622.7	0.38	0.32	-40.53	
6,642.0	1.10	201.30	6,583.3	-600.3	-425.3	623.9	0.67	0.64	-14.79	
6,735.0	1.20	202.50	6,676.3	-602.0	-426.0	625.7	0.11	0.11	1.29	
6,829.0	1.40	190.70	6,770.3	-604.1	-426.6	627.7	0.35	0.21	-12.55	
6,925.0	1.70	188.30	6,866.3	-606.6	-427.0	630.3	0.32	0.31	-2.50	
6,957.0	1.80	192.00	6,898.2	-607.6	-427.2	631.3	0.47	0.31	11.56	
6,989.0	2.00	189.20	6,930.2	-608.6	-427.4	632.3	0.69	0.63	-8.75	
7,020.0	3.80	182.50	6,961.2	-610.2	-427.5	633.9	5.90	5.81	-21.61	
7,052.0	7.60	179.70	6,993.0	-613.4	-427.5	637.1	11.90	11.88	-8.75	
7,083.0	11.20	178.30	7,023.6	-618.4	-427.4	642.1	11.64	11.61	-4.52	
7,115.0	13.40	180.40	7,054.9	-625.2	-427.4	648.9	7.01	6.88	6.56	
7,146.0	16.60	184.40	7,084.8	-633.2	-427.7	657.0	10.84	10.32	12.90	
7,177.0	19.80	189.20	7,114.3	-642.8	-428.9	666.6	11.39	10.32	15.48	
7,209.0	21.70	191.60	7,144.2	-654.0	-431.0	677.9	6.50	5.94	7.50	
7,240.0	24.60	190.70	7,172.7	-665.9	-433.3	689.9	9.42	9.35	-2.90	
7,272.0	27.90	191.60	7,201.4	-679.8	-436.1	703.9	10.39	10.31	2.81	
7,303.0	29.60	193.40	7,228.5	-694.4	-439.3	718.7	6.15	5.48	5.81	
7,334.0	32.40	192.00	7,255.1	-710.0	-442.8	734.4	9.33	9.03	-4.52	
7,366.0	36.20	188.30	7,281.6	-727.7	-446.0	752.3	13.54	11.88	-11.56	
7,398.0	39.80	184.20	7,306.8	-747.3	-448.1	772.0	13.73	11.25	-12.81	
7,429.0	43.20	180.00	7,330.0	-767.8	-448.8	792.5	14.17	10.97	-13.55	
7,460.0	46.60	178.80	7,351.9	-789.7	-448.6	814.3	11.30	10.97	-3.87	
7,491.0	50.40	178.60	7,372.5	-812.9	-448.0	837.5	12.27	12.26	-0.65	
7,523.0	50.50	179.30	7,392.9	-837.5	-447.6	862.1	1.72	0.31	2.19	
7,554.0	52.10	179.50	7,412.2	-861.7	-447.3	886.2	5.19	5.16	0.65	
7,586.0	54.70	181.10	7,431.3	-887.4	-447.5	911.8	9.06	8.13	5.00	
7,618.0	57.10	181.90	7,449.3	-913.9	-448.2	938.3	7.78	7.50	2.50	
7,650.0	62.40	182.30	7,465.4	-941.5	-449.2	966.0	16.60	16.56	1.25	
7,681.0	67.90	181.90	7,478.4	-969.6	-450.2	994.1	17.78	17.74	-1.29	
7,713.0	70.40	181.10	7,489.8	-999.5	-451.0	1,024.0	8.15	7.81	-2.50	
7,745.0	71.50	181.10	7,500.2	-1,029.8	-451.6	1,054.2	3.44	3.44	0.00	
7,777.0	71.40	181.10	7,510.4	-1,060.1	-452.1	1,084.5	0.31	-0.31	0.00	
7,809.0	71.90	179.80	7,520.5	-1,090.5	-452.4	1,114.8	4.16	1.56	-4.06	
7,841.0	72.40	181.60	7,530.3	-1,120.9	-452.8	1,145.3	5.58	1.56	5.63	
7,872.0	74.30	182.10	7,539.2	-1,150.6	-453.7	1,174.9	6.32	6.13	1.61	

<b>Company:</b>	Permian Resources	<b>Local Co-ordinate Reference:</b>	Well University 11 RE 932HA
<b>Project:</b>	Reagan County, Texas	<b>TVD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Site:</b>	University Lands, Block 10, Sec. 33	<b>MD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Well:</b>	University 11 RE 932HA	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM5002

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)
7,904.0	76.20	181.60	7,547.3	-1,181.5	-454.7	1,205.9	6.13	5.94	-1.56
7,935.0	77.00	182.00	7,554.5	-1,211.7	-455.7	1,236.0	2.87	2.58	1.29
7,966.0	78.30	182.60	7,561.1	-1,241.9	-456.9	1,266.3	4.60	4.19	1.94
7,997.0	80.10	181.80	7,566.9	-1,272.4	-458.0	1,296.7	6.34	5.81	-2.58
8,028.0	81.70	179.10	7,571.8	-1,303.0	-458.3	1,327.3	10.03	5.16	-8.71
8,060.0	82.30	178.40	7,576.3	-1,334.6	-457.6	1,358.9	2.86	1.88	-2.19
8,091.0	82.70	178.10	7,580.3	-1,365.4	-456.7	1,389.5	1.61	1.29	-0.97
8,123.0	84.30	178.60	7,584.0	-1,397.1	-455.7	1,421.2	5.24	5.00	1.56
8,154.0	85.70	179.10	7,586.7	-1,428.0	-455.1	1,452.0	4.79	4.52	1.61
8,186.0	88.80	178.60	7,588.2	-1,460.0	-454.5	1,483.8	9.81	9.69	-1.56
8,216.0	91.90	179.00	7,588.0	-1,490.0	-453.9	1,513.7	10.42	10.33	1.33
8,247.0	92.90	179.30	7,586.7	-1,520.9	-453.4	1,544.6	3.37	3.23	0.97
8,341.0	94.00	179.10	7,581.1	-1,614.7	-452.1	1,638.2	1.19	1.17	-0.21
8,436.0	94.60	180.90	7,573.9	-1,709.5	-452.1	1,732.8	1.99	0.63	1.89
8,530.0	93.30	181.80	7,567.5	-1,803.2	-454.3	1,826.5	1.68	-1.38	0.96
8,626.0	93.70	182.10	7,561.6	-1,899.0	-457.6	1,922.3	0.52	0.42	0.31
8,721.0	95.10	182.30	7,554.3	-1,993.6	-461.2	2,017.0	1.49	1.47	0.21
8,816.0	91.90	181.40	7,548.5	-2,088.4	-464.2	2,111.8	3.50	-3.37	-0.95
8,911.0	92.10	181.40	7,545.2	-2,183.3	-466.6	2,206.7	0.21	0.21	0.00
9,007.0	92.50	181.90	7,541.4	-2,279.2	-469.3	2,302.5	0.67	0.42	0.52
9,101.0	92.70	181.40	7,537.1	-2,373.1	-472.0	2,396.4	0.57	0.21	-0.53
9,195.0	95.10	181.40	7,530.7	-2,466.8	-474.3	2,490.1	2.55	2.55	0.00
9,289.0	96.90	181.40	7,520.9	-2,560.3	-476.6	2,583.6	1.91	1.91	0.00
9,385.0	94.80	179.50	7,511.1	-2,655.7	-477.4	2,678.9	2.94	-2.19	-1.98
9,478.0	94.60	179.70	7,503.5	-2,748.4	-476.7	2,771.4	0.30	-0.22	0.22
9,573.0	95.90	179.70	7,494.8	-2,843.0	-476.2	2,865.8	1.37	1.37	0.00
9,666.0	96.90	179.50	7,484.4	-2,935.4	-475.6	2,958.1	1.10	1.08	-0.22
9,761.0	97.40	179.80	7,472.6	-3,029.7	-475.0	3,052.1	0.61	0.53	0.32
9,856.0	97.60	179.70	7,460.2	-3,123.9	-474.6	3,146.1	0.23	0.21	-0.11
9,952.0	97.70	181.40	7,447.4	-3,219.0	-475.5	3,241.2	1.76	0.10	1.77
10,047.0	97.30	181.80	7,435.0	-3,313.2	-478.1	3,335.3	0.59	-0.42	0.42
10,142.0	95.00	180.90	7,424.8	-3,407.6	-480.3	3,429.7	2.60	-2.42	-0.95
10,236.0	95.10	180.00	7,416.6	-3,501.2	-481.1	3,523.2	0.96	0.11	-0.96
10,329.0	96.40	180.00	7,407.2	-3,593.8	-481.1	3,615.6	1.40	1.40	0.00
10,423.0	96.70	181.40	7,396.5	-3,687.1	-482.2	3,708.9	1.51	0.32	1.49
10,517.0	94.70	182.60	7,387.2	-3,780.6	-485.5	3,802.4	2.48	-2.13	1.28
10,612.0	94.80	183.40	7,379.3	-3,875.1	-490.4	3,897.0	0.85	0.11	0.84
10,704.0	93.20	181.90	7,372.9	-3,966.8	-494.7	3,988.8	2.38	-1.74	-1.63
10,799.0	94.60	182.10	7,366.4	-4,061.5	-498.0	4,083.6	1.49	1.47	0.21
10,894.0	91.50	180.40	7,361.4	-4,156.4	-500.1	4,178.4	3.72	-3.26	-1.79
10,988.0	92.20	180.20	7,358.3	-4,250.3	-500.6	4,272.2	0.77	0.74	-0.21
11,082.0	94.60	180.20	7,352.8	-4,344.1	-500.9	4,365.9	2.55	2.55	0.00
11,177.0	92.60	179.80	7,346.8	-4,438.9	-500.9	4,460.5	2.15	-2.11	-0.42
11,271.0	94.80	180.50	7,340.7	-4,532.7	-501.1	4,554.2	2.46	2.34	0.74

<b>Company:</b>	Permian Resources	<b>Local Co-ordinate Reference:</b>	Well University 11 RE 932HA
<b>Project:</b>	Reagan County, Texas	<b>TVD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Site:</b>	University Lands, Block 10, Sec. 33	<b>MD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Well:</b>	University 11 RE 932HA	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM5002

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)	
11,365.0	93.00	181.90	7,334.3	-4,626.5	-503.1	4,647.9	2.42	-1.91	1.49	
11,459.0	90.00	181.60	7,331.9	-4,720.4	-506.0	4,741.8	3.21	-3.19	-0.32	
11,555.0	90.00	181.30	7,331.9	-4,816.4	-508.4	4,837.7	0.31	0.00	-0.31	
11,650.0	90.30	181.10	7,331.6	-4,911.4	-510.4	4,932.7	0.38	0.32	-0.21	
11,744.0	90.70	180.00	7,330.8	-5,005.4	-511.3	5,026.6	1.25	0.43	-1.17	
11,838.0	92.90	180.50	7,327.9	-5,099.3	-511.7	5,120.4	2.40	2.34	0.53	
11,930.0	95.20	181.60	7,321.4	-5,191.0	-513.4	5,212.1	2.77	2.50	1.20	
12,026.0	94.50	181.30	7,313.2	-5,286.7	-515.8	5,307.7	0.79	-0.73	-0.31	
12,120.0	94.60	179.00	7,305.8	-5,380.4	-516.0	5,401.2	2.44	0.11	-2.45	
12,216.0	91.40	180.00	7,300.8	-5,476.2	-515.2	5,496.9	3.49	-3.33	1.04	
12,311.0	91.70	181.30	7,298.2	-5,571.2	-516.3	5,591.7	1.40	0.32	1.37	
12,406.0	91.40	184.40	7,295.6	-5,666.0	-521.0	5,686.7	3.28	-0.32	3.26	
12,500.0	91.50	183.50	7,293.2	-5,759.8	-527.5	5,780.6	0.96	0.11	-0.96	
12,594.0	92.90	183.50	7,289.6	-5,853.5	-533.2	5,874.6	1.49	1.49	0.00	
12,688.0	94.10	183.50	7,283.9	-5,947.2	-538.9	5,968.4	1.28	1.28	0.00	
12,783.0	92.00	181.90	7,278.8	-6,041.9	-543.4	6,063.2	2.78	-2.21	-1.68	
12,878.0	91.70	181.30	7,275.8	-6,136.8	-546.1	6,158.1	0.71	-0.32	-0.63	
12,972.0	91.70	180.20	7,273.0	-6,230.8	-547.3	6,252.0	1.17	0.00	-1.17	
13,067.0	92.90	179.70	7,269.2	-6,325.7	-547.2	6,346.8	1.37	1.26	-0.53	
13,162.0	93.70	178.80	7,263.7	-6,420.5	-546.0	6,441.4	1.27	0.84	-0.95	
13,257.0	90.50	177.20	7,260.2	-6,515.4	-542.6	6,535.9	3.77	-3.37	-1.68	
13,352.0	92.60	180.90	7,257.7	-6,610.3	-541.1	6,630.6	4.48	2.21	3.89	
13,447.0	91.10	182.50	7,254.6	-6,705.2	-543.9	6,725.5	2.31	-1.58	1.68	
13,542.0	90.30	183.00	7,253.4	-6,800.1	-548.4	6,820.5	0.99	-0.84	0.53	
13,637.0	91.90	182.60	7,251.6	-6,895.0	-553.1	6,915.4	1.74	1.68	-0.42	
13,732.0	91.60	182.80	7,248.7	-6,989.8	-557.6	7,010.4	0.38	-0.32	0.21	
13,827.0	90.70	182.50	7,246.8	-7,084.7	-561.9	7,105.4	1.00	-0.95	-0.32	
13,921.0	91.50	182.10	7,245.0	-7,178.6	-565.7	7,199.3	0.95	0.85	-0.43	
14,017.0	89.70	180.90	7,244.0	-7,274.6	-568.2	7,295.3	2.25	-1.88	-1.25	
14,112.0	91.40	181.30	7,243.1	-7,369.5	-570.1	7,390.2	1.84	1.79	0.42	
14,207.0	89.10	180.70	7,242.7	-7,464.5	-571.7	7,485.1	2.50	-2.42	-0.63	
14,301.0	88.70	179.80	7,244.5	-7,558.5	-572.1	7,578.9	1.05	-0.43	-0.96	
14,396.0	89.60	179.00	7,245.9	-7,653.5	-571.1	7,673.7	1.27	0.95	-0.84	
14,491.0	88.10	179.00	7,247.8	-7,748.4	-569.5	7,768.4	1.58	-1.58	0.00	
14,585.0	88.70	178.30	7,250.4	-7,842.4	-567.3	7,862.1	0.98	0.64	-0.74	
14,680.0	87.70	181.40	7,253.4	-7,937.3	-567.0	7,956.8	3.43	-1.05	3.26	
14,774.0	89.10	181.80	7,256.0	-8,031.2	-569.6	8,050.8	1.55	1.49	0.43	
14,869.0	90.80	182.50	7,256.1	-8,126.2	-573.2	8,145.7	1.94	1.79	0.74	
14,964.0	88.60	180.70	7,256.6	-8,221.1	-575.8	8,240.7	2.99	-2.32	-1.89	
15,059.0	89.70	181.80	7,258.0	-8,316.1	-577.9	8,335.6	1.64	1.16	1.16	
15,153.0	87.60	179.70	7,260.2	-8,410.0	-579.2	8,429.5	3.16	-2.23	-2.23	
15,248.0	87.70	181.30	7,264.1	-8,505.0	-580.0	8,524.3	1.69	0.11	1.68	
15,343.0	88.60	182.80	7,267.2	-8,599.8	-583.4	8,619.2	1.84	0.95	1.58	



<b>Company:</b>	Permian Resources	<b>Local Co-ordinate Reference:</b>	Well University 11 RE 932HA
<b>Project:</b>	Reagan County, Texas	<b>TVD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Site:</b>	University Lands, Block 10, Sec. 33	<b>MD Reference:</b>	Well @ 2687.0usft (Unit #407)
<b>Well:</b>	University 11 RE 932HA	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM5002

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)	
15,438.0	90.20	184.90	7,268.2	-8,694.6	-589.8	8,714.2	2.78	1.68	2.21	
15,532.0	88.20	183.90	7,269.5	-8,788.3	-597.0	8,808.1	2.38	-2.13	-1.06	
15,625.0	89.30	184.20	7,271.5	-8,881.1	-603.5	8,901.1	1.23	1.18	0.32	
15,720.0	90.00	183.40	7,272.1	-8,975.9	-609.8	8,996.1	1.12	0.74	-0.84	
15,816.0	90.10	182.10	7,272.0	-9,071.7	-614.4	9,092.1	1.36	0.10	-1.35	
15,911.0	89.60	181.40	7,272.3	-9,166.7	-617.3	9,187.1	0.91	-0.53	-0.74	
16,005.0	90.20	181.30	7,272.4	-9,260.7	-619.5	9,281.0	0.65	0.64	-0.11	
16,101.0	87.80	178.30	7,274.1	-9,356.6	-619.2	9,376.8	4.00	-2.50	-3.13	
16,196.0	88.10	177.40	7,277.5	-9,451.5	-615.7	9,471.3	1.00	0.32	-0.95	
16,291.0	88.70	177.40	7,280.2	-9,546.4	-611.3	9,565.8	0.63	0.63	0.00	
16,386.0	87.00	178.60	7,283.7	-9,641.2	-608.0	9,660.3	2.19	-1.79	1.26	
16,481.0	86.80	179.70	7,288.9	-9,736.1	-606.6	9,754.9	1.18	-0.21	1.16	
16,575.0	87.30	180.00	7,293.7	-9,830.0	-606.4	9,848.6	0.62	0.53	0.32	
16,670.0	89.70	181.80	7,296.2	-9,924.9	-607.9	9,943.5	3.16	2.53	1.89	
16,764.0	90.20	181.80	7,296.3	-10,018.9	-610.8	10,037.4	0.53	0.53	0.00	
16,859.0	89.30	181.40	7,296.7	-10,113.8	-613.5	10,132.4	1.04	-0.95	-0.42	
16,954.0	89.50	179.80	7,297.7	-10,208.8	-614.5	10,227.3	1.70	0.21	-1.68	
17,049.0	88.70	181.90	7,299.2	-10,303.8	-615.9	10,322.2	2.37	-0.84	2.21	
17,144.0	90.10	183.50	7,300.2	-10,398.7	-620.4	10,417.1	2.24	1.47	1.68	
17,238.0	87.20	179.80	7,302.4	-10,492.6	-623.1	10,511.0	5.00	-3.09	-3.94	
17,333.0	87.80	179.10	7,306.5	-10,587.5	-622.2	10,605.7	0.97	0.63	-0.74	
17,428.0	89.50	178.30	7,308.8	-10,682.4	-620.0	10,700.4	1.98	1.79	-0.84	
17,523.0	88.70	179.50	7,310.2	-10,777.4	-618.2	10,795.1	1.52	-0.84	1.26	
17,618.0	88.70	182.80	7,312.4	-10,872.3	-620.1	10,890.0	3.47	0.00	3.47	
17,712.0	89.60	182.80	7,313.8	-10,966.2	-624.7	10,984.0	0.96	0.96	0.00	
17,778.0	90.20	182.80	7,313.9	-11,032.1	-627.9	11,050.0	0.91	0.91	0.00	
<b>TD @ 17833.0' MD / 7313.7' TVD</b>										
17,833.0	90.20	182.80	7,313.7	-11,087.1	-630.6	11,105.0	0.00	0.00	0.00	

Survey Annotations					Range 11105'	Bearing 183.26°
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment		
		+N/-S (usft)	+E/-W (usft)			
971.0	971.0	0.1	-0.8	Tie In @ 971.0' MD / TVD		
17,833.0	7,313.7	-11,087.1	-630.6	TD @ 17833.0' MD / 7313.7' TVD		

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

NAD 27, Central Zone 4203  
 Surface Hole Location (Sec. 33)  
 Latitude: 31.215619° N  
 Longitude: 101.502487° W  
 X=1634531.51  
 Y=565251.81  
 Elev.=2666'  
 548' FSL & 567' FEL

Point of Penetration (Sec. 4)  
 Latitude: 31.214081° N  
 Longitude: 101.503842° W  
 X=1634102.21  
 Y=564696.83  
 15' FNL & 985' FEL

First Take Point (Sec. 4)  
 Latitude: 31.213847° N  
 Longitude: 101.503844° W  
 X=1634100.48  
 Y=564611.85  
 100' FNL & 985' FEL

Last Take Point (Sec. 9)  
 Latitude: 31.185251° N  
 Longitude: 101.504172° W  
 X=1633886.62  
 Y=554213.19  
 100' FSL & 986' FEL

Bottom Hole Location (Sec. 9)  
 Latitude: 31.185017° N  
 Longitude: 101.504175° W  
 X=1633886.88  
 Y=554128.20  
 15' FSL & 986' FEL

Unit Boundary Distance	
SHL	Out Of Unit
PP	15' FNL & 985' FEL
FTP	100' FNL & 985' FEL
LTP	100' FSL & 986' FEL
BHL	15' FSL & 986' FEL

NOTE: This Plat does not, in anyway represent a "Boundary Survey", and does not comply with the current T.B.P.L.S. Minimum Standards of Procedures for Boundary Survey. Acreage shown herein were furnished by others. The information contained on this plat is intended for the sole use of PERMIAN RESOURCES, LLC.

NOTE: Bearings and coordinates refer to the Texas Coordinate System of 1927, Central Zone (4203), as observed by GPS observations

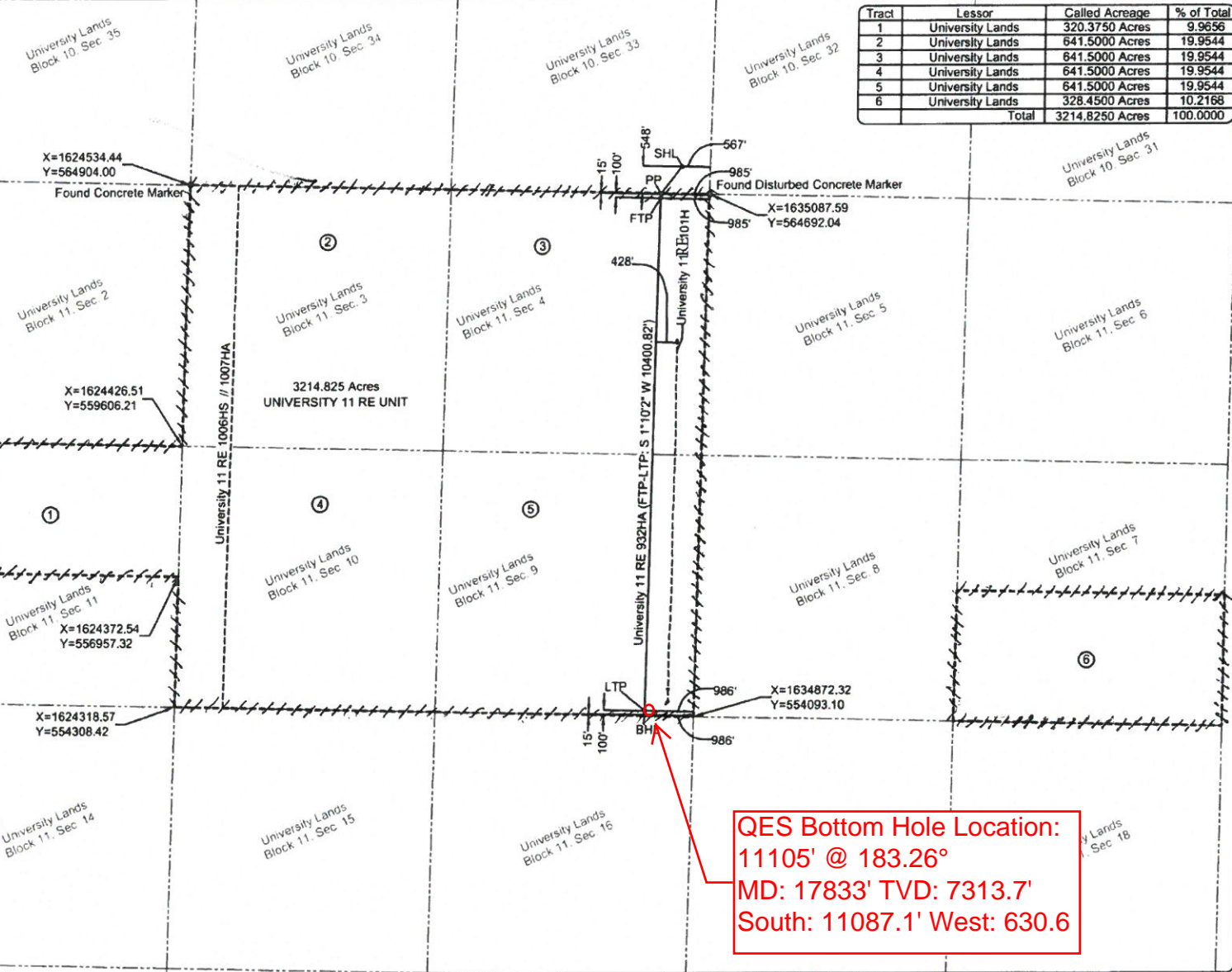
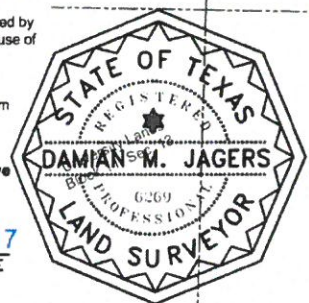
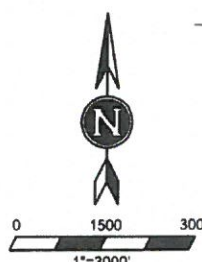
I, Damian M. Jagers do hereby certify that the above described well location was surveyed on the ground under my supervision, as shown.

*Damian M. Jagers* 1/18/2017  
 DATE

Damian M. Jagers  
 REGISTERED PROFESSIONAL LAND SURVEYOR  
 TEXAS REGISTRATION NO. 6269



Well Name  
 UNIVERSITY 11 RE 932HA  
 Drilling Field  
 LIN (WOLFCAMP) FIELD  
 Nearest Town  
 2.97 MILES NORTHWEST OF BIG LAKE, TEXAS



Tract	Lessor	Called Acreage	% of Total
1	University Lands	320.3750 Acres	9.9656
2	University Lands	641.5000 Acres	19.9544
3	University Lands	641.5000 Acres	19.9544
4	University Lands	641.5000 Acres	19.9544
5	University Lands	641.5000 Acres	19.9544
6	University Lands	328.4500 Acres	10.2168
Total		3214.8250 Acres	100.0000



Draft Date	12-13-16
Drawn By	D. Jagers
Revised By	
Reviewed By	B. Weisinger

Well Plat  
 For  
 Permian Resources, LLC

University 11 RE 932HA  
 University Lands Block 11, Section 4  
 University Lands Block 11, Section 9  
 University Lands Block 11, Section 3  
 University Lands Block 11, Section 15  
 University Lands Block 11, Section 10  
 University Lands Block 11, Section 11  
 University Lands Block 11, Section 7  
 Reagan County, Texas

## QES Directional Drilling, LLC

11390 FM 830  
Willis, TX 77318  
Phone: (936) 856-4332  
Fax: (936) 856-8678

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May 1, 2017

Railroad Commission of Texas  
Oil and Gas Division  
1701 North Congress Avenue  
Austin, Texas 78711

I Christopher Hughes, certify that I am employed by QES Directional Drilling, LLC. That I did on the day(s) of 4/15/2017 through 4/30/2017, conduct or supervise the taking of an MWD Survey from a depth of 971' to a depth of 17833'; that the data is true, correct, complete, and within the limitations of the tool as set forth by Quintana Energy Services (QES).

I certify that I am authorized and qualified to make this report; that this survey was conducted at the request of Permian Resources, LLC, for the University 11 RE 932HA, API No. 42-383-39829 in Reagan County, Texas. I certify that I have reviewed this report and find that it conforms to the principles and procedures as set forth by QES Directional Drilling, LLC.

Sincerely,

Christopher Hughes  
MWD Compliance Manager  
QES Directional Drilling, LLC