

**WPXENERGY™**



## **WPX Energy, Permian**

Ward County Texas (NAD27)

UL McNasser Pad

UL McNasser 0201-17 G 7H

OH Wellbore

Design: As Drilled

## **Standard Survey Report**

07 December, 2020



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# Scientific Drilling, Intl

## Survey Report

<b>Company:</b> WPX Energy, Permian	<b>Local Co-ordinate Reference:</b> Well UL McNasser 0201-17 G 7H
<b>Project:</b> Ward County Texas (NAD27)	<b>TVD Reference:</b> Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Site:</b> UL McNasser Pad	<b>MD Reference:</b> Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Well:</b> UL McNasser 0201-17 G 7H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH Wellbore	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Midland

<b>Project</b> Ward County Texas (NAD27), Ward 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> UL McNasser Pad, SH of UL McNasser 0201-17 8H		
<b>Site Position:</b>	<b>Northing:</b> 698,544.78 usft	<b>Latitude:</b> 31.556909
<b>From:</b> Map	<b>Easting:</b> 1,123,820.30 usft	<b>Longitude:</b> -103.146570
<b>Position Uncertainty:</b> 0.00 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> -1.45 °

<b>Well</b> UL McNasser 0201-17 G 7H, Wolfcamp A4			
<b>Well Position</b>	<b>+N/-S</b> 0.00 usft	<b>Northing:</b> 698,553.19 usft	<b>Latitude:</b> 31.556934
	<b>+E/-W</b> 0.00 usft	<b>Easting:</b> 1,123,849.09 usft	<b>Longitude:</b> -103.146479
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b> 2,674.00 usft	<b>Ground Level:</b> 2,646.00 usft

<b>Wellbore</b> OH Wellbore					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	9/18/2020	6.88	59.43	47,308.80000000

<b>Design</b> As Drilled				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.00		
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	163.70

<b>Survey Program</b>		<b>Date</b> 12/7/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
139.00	21,868.00	Survey #1 (OH Wellbore)	MWD+HRGM	OWSG MWD + HRGM

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139.00	0.38	35.31	139.00	0.38	0.27	-0.29	0.27	0.27	0.00
228.00	0.24	53.67	228.00	0.73	0.59	-0.53	0.19	-0.16	20.63
315.00	0.60	36.16	315.00	1.20	1.00	-0.87	0.43	0.41	-20.13
401.00	0.18	345.89	400.99	1.70	1.24	-1.28	0.59	-0.49	-58.45
497.00	0.76	303.38	496.99	2.19	0.67	-1.92	0.67	0.60	-44.28
587.00	1.50	290.36	586.97	2.93	-0.94	-3.08	0.87	0.82	-14.47
675.00	1.39	302.74	674.94	3.91	-2.91	-4.57	0.38	-0.13	14.07
765.00	1.27	233.24	764.92	3.90	-4.63	-5.05	1.69	-0.13	-77.22
855.00	1.95	201.72	854.89	1.88	-6.00	-3.49	1.21	0.76	-35.02



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<b>Site:</b>	UL McNasser Pad	<b>MD Reference:</b>	Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Well:</b>	UL McNasser 0201-17 G 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Midland

### 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)
943.00	2.10	199.98	942.84	-1.02	-7.10	-1.01	0.18	0.17	-1.98
1,031.00	1.88	189.94	1,030.78	-3.96	-7.90	1.58	0.47	-0.25	-11.41
1,121.00	1.63	176.53	1,120.74	-6.69	-8.08	4.15	0.53	-0.28	-14.90
1,211.00	2.05	189.57	1,210.69	-9.56	-8.27	6.85	0.66	0.47	14.49
1,302.00	2.45	207.09	1,301.63	-12.89	-9.43	9.73	0.87	0.44	19.25
1,345.00	2.82	210.37	1,344.58	-14.62	-10.38	11.12	0.93	0.86	7.63
1,481.00	3.32	210.00	1,480.38	-20.92	-14.04	16.14	0.37	0.37	-0.27
1,571.00	3.21	214.75	1,570.24	-25.25	-16.78	19.52	0.32	-0.12	5.28
1,662.00	3.01	210.70	1,661.10	-29.40	-19.45	22.75	0.33	-0.22	-4.45
1,751.00	1.20	186.44	1,750.04	-32.33	-20.75	25.21	2.22	-2.03	-27.26
1,846.00	1.42	183.76	1,845.02	-34.49	-20.94	27.23	0.24	0.23	-2.82
1,940.00	1.34	171.36	1,938.99	-36.74	-20.85	29.41	0.33	-0.09	-13.19
2,034.00	1.78	176.21	2,032.96	-39.29	-20.59	31.93	0.49	0.47	5.16
2,129.00	1.08	185.41	2,127.93	-41.65	-20.57	34.20	0.77	-0.74	9.68
2,223.00	0.30	167.82	2,221.92	-42.77	-20.61	35.27	0.85	-0.83	-18.71
2,318.00	0.31	188.95	2,316.92	-43.27	-20.59	35.75	0.12	0.01	22.24
2,412.00	0.81	189.69	2,410.91	-44.18	-20.74	36.58	0.53	0.53	0.79
2,506.00	0.41	135.31	2,504.91	-45.07	-20.62	37.47	0.70	-0.43	-57.85
2,600.00	0.28	226.65	2,598.91	-45.47	-20.55	37.87	0.53	-0.14	97.17
2,694.00	0.81	169.28	2,692.90	-46.28	-20.59	38.64	0.74	0.56	-61.03
2,788.00	0.51	136.21	2,786.90	-47.23	-20.18	39.67	0.50	-0.32	-35.18
2,882.00	0.71	159.12	2,880.89	-48.08	-19.68	40.62	0.33	0.21	24.37
2,976.00	1.06	179.92	2,974.88	-49.49	-19.47	42.04	0.50	0.37	22.13
3,071.00	2.46	213.35	3,069.83	-52.07	-20.59	44.20	1.77	1.47	35.19
3,165.00	4.54	230.59	3,163.66	-56.12	-24.58	46.97	2.46	2.21	18.34
3,259.00	5.86	233.61	3,257.27	-61.33	-31.32	50.08	1.43	1.40	3.21
3,354.00	5.63	233.89	3,351.79	-66.95	-38.98	53.32	0.24	-0.24	0.29
3,447.00	5.24	233.78	3,444.37	-72.15	-46.10	56.31	0.42	-0.42	-0.12
3,542.00	5.15	240.66	3,538.98	-76.80	-53.31	58.75	0.66	-0.09	7.24
3,636.00	5.19	240.73	3,632.60	-80.95	-60.70	60.66	0.04	0.04	0.07
3,731.00	5.04	238.12	3,727.22	-85.25	-67.99	62.74	0.29	-0.16	-2.75
3,825.00	5.87	227.42	3,820.80	-90.69	-75.04	65.98	1.39	0.88	-11.38
3,920.00	5.09	232.26	3,915.36	-96.55	-81.95	69.67	0.95	-0.82	5.09
4,014.00	5.10	232.43	4,008.99	-101.65	-88.56	72.71	0.02	0.01	0.18
4,108.00	4.42	225.22	4,102.67	-106.75	-94.44	75.96	0.96	-0.72	-7.67
4,203.00	4.09	230.90	4,197.41	-111.47	-99.67	79.01	0.56	-0.35	5.98
4,297.00	3.82	230.84	4,291.18	-115.56	-104.69	81.53	0.29	-0.29	-0.06
4,392.00	3.40	228.09	4,385.99	-119.44	-109.25	83.98	0.48	-0.44	-2.89
4,486.00	3.27	218.52	4,479.84	-123.40	-112.99	86.73	0.61	-0.14	-10.18
4,580.00	1.92	218.43	4,573.74	-126.73	-115.64	89.18	1.44	-1.44	-0.10
4,674.00	0.44	179.93	4,667.71	-128.32	-116.62	90.44	1.70	-1.57	-40.96
4,769.00	0.81	209.64	4,762.71	-129.27	-116.95	91.25	0.51	0.39	31.27
4,863.00	0.83	186.46	4,856.70	-130.53	-117.35	92.34	0.35	0.02	-24.66
4,957.00	0.73	210.12	4,950.69	-131.72	-117.73	93.38	0.36	-0.11	25.17



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<b>Well:</b>	UL McNasser 0201-17 G 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Midland

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)	
5,024.00	0.68	199.83	5,017.69	-132.46	-118.08	94.00	0.20	-0.07	-15.36	
5,145.00	0.54	170.04	5,138.68	-133.70	-118.22	95.15	0.28	-0.12	-24.62	
5,240.00	0.61	173.30	5,233.68	-134.65	-118.09	96.09	0.08	0.07	3.43	
5,334.00	0.51	162.01	5,327.67	-135.54	-117.90	97.00	0.16	-0.11	-12.01	
5,428.00	0.62	176.57	5,421.67	-136.45	-117.74	97.92	0.19	0.12	15.49	
5,522.00	0.77	182.15	5,515.66	-137.58	-117.73	99.01	0.17	0.16	5.94	
5,617.00	0.21	126.67	5,610.66	-138.33	-117.62	99.75	0.71	-0.59	-58.40	
5,711.00	0.42	57.55	5,704.65	-138.24	-117.19	99.80	0.42	0.22	-73.53	
5,806.00	0.55	48.67	5,799.65	-137.76	-116.55	99.51	0.16	0.14	-9.35	
5,900.00	0.51	41.99	5,893.65	-137.15	-115.93	99.10	0.08	-0.04	-7.11	
5,994.00	0.63	31.97	5,987.64	-136.40	-115.38	98.53	0.17	0.13	-10.66	
6,088.00	0.64	11.74	6,081.64	-135.45	-115.00	97.72	0.24	0.01	-21.52	
6,183.00	0.71	10.47	6,176.63	-134.35	-114.79	96.73	0.08	0.07	-1.34	
6,277.00	0.57	11.28	6,270.62	-133.32	-114.59	95.80	0.15	-0.15	0.86	
6,372.00	0.56	17.20	6,365.62	-132.41	-114.36	94.99	0.06	-0.01	6.23	
6,466.00	0.59	358.15	6,459.61	-131.49	-114.24	94.14	0.20	0.03	-20.27	
6,560.00	0.67	7.73	6,553.61	-130.46	-114.18	93.17	0.14	0.09	10.19	
6,654.00	0.52	1.36	6,647.60	-129.49	-114.10	92.26	0.17	-0.16	-6.78	
6,749.00	0.61	0.84	6,742.60	-128.55	-114.08	91.37	0.09	0.09	-0.55	
6,843.00	0.54	355.11	6,836.59	-127.61	-114.11	90.45	0.10	-0.07	-6.10	
6,937.00	0.58	352.88	6,930.59	-126.70	-114.21	89.55	0.05	0.04	-2.37	
7,032.00	0.57	4.20	7,025.59	-125.75	-114.23	88.63	0.12	-0.01	11.92	
7,126.00	0.66	12.33	7,119.58	-124.75	-114.08	87.72	0.13	0.10	8.65	
7,221.00	0.75	5.01	7,214.57	-123.60	-113.91	86.66	0.13	0.09	-7.71	
7,315.00	0.62	350.71	7,308.57	-122.48	-113.94	85.58	0.23	-0.14	-15.21	
7,409.00	0.65	352.76	7,402.56	-121.45	-114.09	84.55	0.04	0.03	2.18	
7,503.00	0.81	351.07	7,496.55	-120.27	-114.26	83.36	0.17	0.17	-1.80	
7,597.00	1.04	351.64	7,590.54	-118.77	-114.48	81.86	0.24	0.24	0.61	
7,692.00	1.39	352.81	7,685.52	-116.77	-114.75	79.87	0.37	0.37	1.23	
7,786.00	1.26	355.68	7,779.49	-114.61	-114.97	77.73	0.16	-0.14	3.05	
7,880.00	1.22	356.49	7,873.47	-112.58	-115.11	75.75	0.05	-0.04	0.86	
7,974.00	1.07	354.04	7,967.45	-110.71	-115.27	73.91	0.17	-0.16	-2.61	
8,069.00	1.00	359.28	8,062.44	-109.00	-115.37	72.24	0.12	-0.07	5.52	
8,164.00	0.87	357.93	8,157.43	-107.45	-115.40	70.74	0.14	-0.14	-1.42	
8,258.00	1.16	354.97	8,251.41	-105.79	-115.51	69.11	0.31	0.31	-3.15	
8,352.00	1.12	345.84	8,345.39	-103.95	-115.82	67.26	0.20	-0.04	-9.71	
8,447.00	0.93	356.68	8,440.38	-102.28	-116.09	65.58	0.28	-0.20	11.41	
8,541.00	0.50	20.81	8,534.37	-101.13	-115.99	64.51	0.55	-0.46	25.67	
8,635.00	0.74	66.75	8,628.36	-100.51	-115.29	64.11	0.57	0.26	48.87	
8,730.00	0.80	79.65	8,723.36	-100.15	-114.07	64.11	0.19	0.06	13.58	
8,824.00	0.98	85.85	8,817.34	-99.97	-112.63	64.34	0.22	0.19	6.60	
8,919.00	1.67	86.85	8,912.32	-99.84	-110.43	64.83	0.73	0.73	1.05	
9,013.00	2.05	94.02	9,006.27	-99.88	-107.39	65.72	0.47	0.40	7.63	



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<b>Well:</b> UL McNasser 0201-17 G 7H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH Wellbore	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Midland

### 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)
9,107.00	3.10	88.00	9,100.17	-99.91	-103.17	66.94	1.15	1.12	-6.40
9,202.00	2.56	109.96	9,195.06	-100.54	-98.61	68.83	1.26	-0.57	23.12
9,296.00	1.24	156.70	9,289.01	-102.19	-96.23	71.08	2.06	-1.40	49.72
9,391.00	1.64	172.20	9,383.98	-104.49	-95.64	73.44	0.58	0.42	16.32
9,485.00	2.24	149.96	9,477.93	-107.41	-94.54	76.56	1.01	0.64	-23.66
9,580.00	1.88	160.95	9,572.87	-110.49	-93.10	79.92	0.56	-0.38	11.57
9,674.00	1.38	151.05	9,666.83	-112.94	-92.05	82.56	0.61	-0.53	-10.53
9,768.00	1.52	150.55	9,760.80	-115.01	-90.89	84.88	0.15	0.15	-0.53
9,862.00	1.85	166.98	9,854.76	-117.58	-89.94	87.61	0.62	0.35	17.48
9,956.00	2.18	179.70	9,948.70	-120.84	-89.58	90.84	0.59	0.35	13.53
10,050.00	1.81	188.91	10,042.64	-124.10	-89.81	93.90	0.52	-0.39	9.80
10,145.00	1.69	171.64	10,137.60	-126.97	-89.83	96.65	0.57	-0.13	-18.18
10,239.00	1.51	169.75	10,231.56	-129.56	-89.41	99.25	0.20	-0.19	-2.01
10,334.00	1.31	155.36	10,326.53	-131.77	-88.74	101.57	0.43	-0.21	-15.15
10,428.00	1.42	138.40	10,420.51	-133.62	-87.52	103.69	0.44	0.12	-18.04
10,521.00	1.64	138.86	10,513.47	-135.49	-85.87	105.94	0.24	0.24	0.49
10,591.00	1.61	139.13	10,583.45	-136.98	-84.57	107.74	0.04	-0.04	0.39
10,686.00	1.02	134.36	10,678.42	-138.58	-83.09	109.69	0.63	-0.62	-5.02
10,781.00	0.90	92.97	10,773.41	-139.21	-81.74	110.68	0.72	-0.13	-43.57
10,876.00	1.65	130.04	10,868.39	-140.13	-79.95	112.06	1.14	0.79	39.02
10,970.00	15.73	169.98	10,961.10	-153.62	-76.68	125.93	15.43	14.98	42.49
11,065.00	27.57	165.82	11,049.25	-187.74	-69.03	160.82	12.56	12.46	-4.38
11,148.59	38.30	168.93	11,119.31	-232.05	-59.29	206.08	12.99	12.84	3.72
<b>Cross Lease Line - 11148.59 MD 11119.31 TVD</b>									
11,160.00	39.77	169.24	11,128.17	-239.11	-57.93	213.24	12.99	12.88	2.71
11,255.00	50.28	165.40	11,195.23	-304.51	-43.00	280.20	11.42	11.06	-4.04
11,287.26	53.05	164.30	11,215.24	-328.93	-36.38	305.50	9.00	8.59	-3.41
<b>100 FNL FTP - 11287.26 MD 11215.24 TVD</b>									
11,350.00	58.47	162.37	11,250.53	-378.59	-21.49	357.34	9.00	8.63	-3.08
11,445.00	65.13	161.82	11,295.40	-458.21	4.25	440.99	7.03	7.01	-0.58
11,540.00	75.90	163.94	11,327.04	-543.69	30.52	530.40	11.53	11.34	2.23
11,590.00	78.93	163.04	11,337.94	-590.47	44.39	579.19	6.31	6.06	-1.80
11,621.00	82.51	162.91	11,342.93	-619.71	53.34	609.78	11.56	11.55	-0.42
11,683.00	85.19	162.34	11,349.58	-678.54	71.75	671.40	4.42	4.32	-0.92
11,776.00	89.06	166.51	11,354.24	-767.98	96.68	764.24	6.11	4.16	4.48
11,869.00	91.61	167.69	11,353.70	-858.62	117.44	857.07	3.02	2.74	1.27
11,961.00	90.20	165.67	11,352.24	-948.12	138.63	948.92	2.68	-1.53	-2.20
12,054.00	89.66	165.31	11,352.36	-1,038.16	161.93	1,041.88	0.70	-0.58	-0.39
12,147.00	93.86	166.14	11,349.50	-1,128.22	184.84	1,134.75	4.60	4.52	0.89
12,240.00	92.12	164.02	11,344.65	-1,217.96	208.76	1,227.59	2.95	-1.87	-2.28
12,333.00	90.07	162.25	11,342.87	-1,306.93	235.73	1,320.56	2.91	-2.20	-1.90
12,426.00	89.36	162.71	11,343.34	-1,395.62	263.73	1,413.54	0.91	-0.76	0.49
12,519.00	90.07	163.89	11,343.80	-1,484.69	290.45	1,506.53	1.48	0.76	1.27
12,612.00	87.18	163.87	11,346.03	-1,574.00	316.26	1,599.50	3.11	-3.11	-0.02



## Scientific Drilling, Intl Survey Report

<b>Company:</b>	WPX Energy, Permian	<b>Local Co-ordinate Reference:</b>	Well UL McNasser 0201-17 G 7H
<b>Project:</b>	Ward County Texas (NAD27)	<b>TVD Reference:</b>	Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Site:</b>	UL McNasser Pad	<b>MD Reference:</b>	Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Well:</b>	UL McNasser 0201-17 G 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Midland

### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,705.00	87.08	162.94	11,350.69	-1,663.01	342.79	1,692.38	1.00	-0.11	-1.00
12,798.00	86.58	162.82	11,355.83	-1,751.75	370.12	1,785.22	0.55	-0.54	-0.13
12,893.00	88.02	161.85	11,360.30	-1,842.17	398.92	1,880.09	1.83	1.52	-1.02
12,988.00	92.08	164.61	11,360.22	-1,933.10	426.32	1,975.06	5.17	4.27	2.91
13,082.00	94.40	165.57	11,354.91	-2,023.79	450.47	2,068.87	2.67	2.47	1.02
13,177.00	91.58	165.46	11,349.95	-2,115.63	474.19	2,163.68	2.97	-2.97	-0.12
13,272.00	89.33	165.99	11,349.20	-2,207.69	497.62	2,258.62	2.43	-2.37	0.56
13,367.00	88.99	165.02	11,350.59	-2,299.65	521.39	2,353.56	1.08	-0.36	-1.02
13,462.00	89.09	164.47	11,352.18	-2,391.29	546.38	2,448.53	0.59	0.11	-0.58
13,557.00	89.13	165.08	11,353.66	-2,482.95	571.33	2,543.50	0.64	0.04	0.64
13,652.00	87.55	164.76	11,356.41	-2,574.63	596.03	2,638.43	1.70	-1.66	-0.34
13,747.00	84.83	163.50	11,362.72	-2,665.80	621.95	2,733.21	3.15	-2.86	-1.33
13,841.00	85.60	162.99	11,370.57	-2,755.50	648.95	2,826.88	0.98	0.82	-0.54
13,936.00	88.76	163.46	11,375.24	-2,846.33	676.33	2,921.75	3.36	3.33	0.49
14,031.00	88.96	161.41	11,377.13	-2,936.88	705.00	3,016.70	2.17	0.21	-2.16
14,125.00	90.27	161.26	11,377.76	-3,025.93	735.08	3,110.62	1.40	1.39	-0.16
14,220.00	87.31	159.12	11,379.77	-3,115.27	767.26	3,205.40	3.84	-3.12	-2.25
14,315.00	90.13	159.60	11,381.89	-3,204.15	800.74	3,300.10	3.01	2.97	0.51
14,410.00	92.86	162.50	11,379.41	-3,293.95	831.57	3,394.94	4.19	2.87	3.05
14,505.00	92.28	163.56	11,375.15	-3,384.72	859.27	3,489.84	1.27	-0.61	1.12
14,599.00	89.93	161.41	11,373.34	-3,474.33	887.55	3,583.79	3.39	-2.50	-2.29
14,694.00	90.30	164.62	11,373.15	-3,565.18	915.30	3,678.77	3.40	0.39	3.38
14,789.00	90.81	164.98	11,372.23	-3,656.85	940.21	3,773.75	0.66	0.54	0.38
14,884.00	92.59	166.52	11,369.41	-3,748.88	963.58	3,868.64	2.48	1.87	1.62
14,979.00	87.65	166.62	11,369.21	-3,841.25	985.64	3,963.49	5.20	-5.20	0.11
15,074.00	87.08	163.42	11,373.58	-3,932.91	1,010.16	4,058.35	3.42	-0.60	-3.37
15,169.00	85.89	163.33	11,379.40	-4,023.77	1,037.29	4,153.17	1.26	-1.25	-0.09
15,264.00	85.70	161.69	11,386.37	-4,114.13	1,065.76	4,247.89	1.73	-0.20	-1.73
15,359.00	92.19	163.61	11,388.12	-4,204.74	1,094.07	4,342.80	7.12	6.83	2.02
15,454.00	87.35	163.04	11,388.50	-4,295.72	1,121.32	4,437.77	5.13	-5.09	-0.60
15,549.00	92.55	163.74	11,388.58	-4,386.72	1,148.47	4,532.74	5.52	5.47	0.74
15,644.00	92.48	165.02	11,384.41	-4,478.12	1,174.02	4,627.64	1.35	-0.07	1.35
15,739.00	91.07	166.44	11,381.47	-4,570.14	1,197.43	4,722.53	2.11	-1.48	1.49
15,833.00	87.82	167.70	11,382.38	-4,661.74	1,218.46	4,816.34	3.71	-3.46	1.34
15,928.00	86.84	166.18	11,386.81	-4,754.18	1,239.90	4,911.08	1.90	-1.03	-1.60
16,023.00	85.06	164.84	11,393.51	-4,845.92	1,263.61	5,005.79	2.34	-1.87	-1.41
16,118.00	84.38	163.41	11,402.26	-4,936.91	1,289.48	5,100.39	1.66	-0.72	-1.51
16,213.00	82.12	161.57	11,413.42	-5,026.87	1,317.86	5,194.70	3.06	-2.38	-1.94
16,308.00	82.97	160.59	11,425.75	-5,115.98	1,348.40	5,288.79	1.36	0.89	-1.03
16,403.00	86.41	159.72	11,434.54	-5,204.94	1,380.51	5,383.19	3.73	3.62	-0.92
16,497.00	87.98	160.72	11,439.14	-5,293.28	1,412.28	5,476.90	1.98	1.67	1.06
16,592.00	93.66	163.77	11,437.78	-5,383.70	1,441.24	5,571.81	6.79	5.98	3.21
16,687.00	90.84	164.40	11,434.05	-5,474.98	1,467.26	5,666.72	3.04	-2.97	0.66



## Scientific Drilling, Intl Survey Report

<b>Company:</b>	WPX Energy, Permian	<b>Local Co-ordinate Reference:</b>	Well UL McNasser 0201-17 G 7H
<b>Project:</b>	Ward County Texas (NAD27)	<b>TVD Reference:</b>	Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Site:</b>	UL McNasser Pad	<b>MD Reference:</b>	Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Well:</b>	UL McNasser 0201-17 G 7H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Midland

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)	
16,782.00	90.60	165.60	11,432.86	-5,566.73	1,491.85	5,761.69	1.29	-0.25	1.26	
16,877.00	88.05	165.15	11,433.98	-5,658.64	1,515.83	5,856.63	2.73	-2.68	-0.47	
16,972.00	89.70	165.92	11,435.84	-5,750.60	1,539.56	5,951.56	1.92	1.74	0.81	
17,066.00	90.30	165.16	11,435.84	-5,841.63	1,563.03	6,045.51	1.03	0.64	-0.81	
17,161.00	91.01	165.39	11,434.76	-5,933.50	1,587.17	6,140.47	0.79	0.75	0.24	
17,256.00	91.31	164.98	11,432.83	-6,025.32	1,611.46	6,235.42	0.53	0.32	-0.43	
17,351.00	88.93	163.33	11,432.63	-6,116.70	1,637.39	6,330.41	3.05	-2.51	-1.74	
17,446.00	88.42	162.09	11,434.83	-6,207.38	1,665.62	6,425.36	1.41	-0.54	-1.31	
17,541.00	87.25	160.97	11,438.42	-6,297.42	1,695.70	6,520.22	1.70	-1.23	-1.18	
17,635.00	86.65	159.66	11,443.42	-6,385.80	1,727.31	6,613.93	1.53	-0.64	-1.39	
17,730.00	91.27	161.71	11,445.15	-6,475.41	1,758.72	6,708.75	5.32	4.86	2.16	
17,825.00	92.08	162.94	11,442.37	-6,565.88	1,787.55	6,803.68	1.55	0.85	1.29	
17,920.00	94.07	162.53	11,437.27	-6,656.47	1,815.70	6,898.52	2.14	2.09	-0.43	
18,015.00	91.21	164.39	11,432.90	-6,747.43	1,842.71	6,993.41	3.59	-3.01	1.96	
18,110.00	90.70	165.04	11,431.31	-6,839.05	1,867.75	7,088.38	0.87	-0.54	0.68	
18,204.00	91.04	166.19	11,429.89	-6,930.10	1,891.10	7,182.31	1.28	0.36	1.22	
18,299.00	89.06	164.97	11,429.80	-7,022.10	1,914.76	7,277.25	2.45	-2.08	-1.28	
18,394.00	91.07	165.14	11,429.70	-7,113.88	1,939.26	7,372.22	2.12	2.12	0.18	
18,489.00	88.89	164.80	11,429.73	-7,205.62	1,963.89	7,467.19	2.32	-2.29	-0.36	
18,584.00	89.43	163.77	11,431.12	-7,297.06	1,989.62	7,562.18	1.22	0.57	-1.08	
18,679.00	88.56	162.87	11,432.79	-7,388.05	2,016.88	7,657.16	1.32	-0.92	-0.95	
18,774.00	88.69	162.81	11,435.07	-7,478.79	2,044.90	7,752.12	0.15	0.14	-0.06	
18,868.00	92.82	164.14	11,433.83	-7,568.88	2,071.63	7,846.09	4.62	4.39	1.41	
18,963.00	91.91	163.64	11,429.91	-7,660.07	2,097.97	7,941.01	1.09	-0.96	-0.53	
19,058.00	92.92	164.06	11,425.91	-7,751.24	2,124.37	8,035.92	1.15	1.06	0.44	
19,153.00	92.08	164.15	11,421.76	-7,842.52	2,150.36	8,130.83	0.89	-0.88	0.09	
19,246.00	89.73	165.11	11,420.29	-7,932.17	2,175.01	8,223.79	2.73	-2.53	1.03	
19,341.00	90.64	166.30	11,419.99	-8,024.23	2,198.46	8,318.73	1.58	0.96	1.25	
19,436.00	90.23	167.33	11,419.27	-8,116.72	2,220.13	8,413.59	1.17	-0.43	1.08	
19,531.00	89.03	168.79	11,419.88	-8,209.66	2,239.79	8,508.31	1.99	-1.26	1.54	
19,626.00	89.77	166.09	11,420.87	-8,302.37	2,260.44	8,603.09	2.95	0.78	-2.84	
19,720.00	90.54	164.24	11,420.62	-8,393.23	2,284.51	8,697.05	2.13	0.82	-1.97	
19,815.00	90.13	161.28	11,420.06	-8,483.95	2,312.66	8,792.03	3.15	-0.43	-3.12	
19,910.00	91.17	161.53	11,418.99	-8,573.99	2,342.95	8,886.95	1.13	1.09	0.26	
20,005.00	91.95	162.05	11,416.40	-8,664.19	2,372.63	8,981.86	0.99	0.82	0.55	
20,100.00	92.18	163.24	11,412.98	-8,754.81	2,400.95	9,076.78	1.28	0.24	1.25	
20,195.00	90.57	164.10	11,410.70	-8,845.95	2,427.65	9,171.75	1.92	-1.69	0.91	
20,290.00	89.06	163.17	11,411.00	-8,937.09	2,454.41	9,266.74	1.87	-1.59	-0.98	
20,385.00	89.70	163.07	11,412.03	-9,027.99	2,482.00	9,361.73	0.68	0.67	-0.11	
20,480.00	89.97	161.79	11,412.31	-9,118.56	2,510.67	9,456.70	1.38	0.28	-1.35	
20,575.00	92.42	162.24	11,410.32	-9,208.89	2,540.00	9,551.64	2.62	2.58	0.47	
20,669.00	92.09	161.77	11,406.63	-9,298.22	2,569.01	9,645.52	0.61	-0.35	-0.50	
20,764.00	93.11	161.85	11,402.32	-9,388.38	2,598.64	9,740.37	1.08	1.07	0.08	



## Scientific Drilling, Intl Survey Report

<b>Company:</b> WPX Energy, Permian	<b>Local Co-ordinate Reference:</b> Well UL McNasser 0201-17 G 7H
<b>Project:</b> Ward County Texas (NAD27)	<b>TVD Reference:</b> Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Site:</b> UL McNasser Pad	<b>MD Reference:</b> Patt 565 2646 GL + 28 KB @ 2674.00usft
<b>Well:</b> UL McNasser 0201-17 G 7H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH Wellbore	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Midland

### 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)
20,859.00	90.27	160.46	11,399.51	-9,478.24	2,629.31	9,835.22	3.33	-2.99	-1.46
20,954.00	90.97	160.29	11,398.49	-9,567.71	2,661.21	9,930.06	0.76	0.74	-0.18
21,049.00	91.47	162.09	11,396.46	-9,657.62	2,691.84	10,024.94	1.97	0.53	1.89
21,144.00	92.41	163.36	11,393.25	-9,748.28	2,720.03	10,119.87	1.66	0.99	1.34
21,239.00	92.32	165.51	11,389.33	-9,839.71	2,745.50	10,214.78	2.26	-0.09	2.26
21,334.00	91.71	165.84	11,385.99	-9,931.70	2,768.99	10,309.66	0.73	-0.64	0.35
21,429.00	89.63	165.51	11,384.88	-10,023.73	2,792.49	10,404.59	2.22	-2.19	-0.35
21,524.00	89.03	163.61	11,385.99	-10,115.29	2,817.78	10,499.57	2.10	-0.63	-2.00
21,619.00	91.27	164.43	11,385.74	-10,206.62	2,843.93	10,594.56	2.51	2.36	0.86
21,713.00	91.52	164.21	11,383.45	-10,297.09	2,869.33	10,688.53	0.35	0.27	-0.23
21,803.16	92.03	164.02	11,380.66	-10,383.77	2,893.99	10,778.64	0.60	0.57	-0.21
<b>100 FSL LTP - 21803.16 MD 11380.66 TVD</b>									
21,805.00	92.04	164.02	11,380.59	-10,385.53	2,894.50	10,780.48	0.60	0.57	-0.21
21,868.00	92.04	164.02	11,378.35	-10,446.06	2,911.83	10,843.44	0.00	0.00	0.00
<b>Actual BH: 36 FSL 2616 FEL - 21868 MD 11378.35 TVD - Y-688107.13 X-1126760.92 - 31.528426° N 103.136288° W</b>									

### Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,148.59	11,119.31	-232.05	-59.29	Cross Lease Line
11,148.59	11,119.31	-232.05	-59.29	11148.59 MD 11119.31 TVD
11,287.26	11,215.24	-328.93	-36.38	100 FNL FTP
11,287.26	11,215.24	-328.93	-36.38	11287.26 MD 11215.24 TVD
21,803.16	11,380.66	-10,383.77	2,893.99	100 FSL LTP
21,803.16	11,380.66	-10,383.77	2,893.99	21803.16 MD 11380.66 TVD
21,868.00	11,378.35	-10,446.06	2,911.83	Actual BH: 36 FSL 2616 FEL
21,868.00	11,378.35	-10,446.06	2,911.83	21868 MD 11378.35 TVD
21,868.00	11,378.35	-10,446.06	2,911.83	Y-688107.13 X-1126760.92
21,868.00	11,378.35	-10,446.06	2,911.83	31.528426° N 103.136288° W

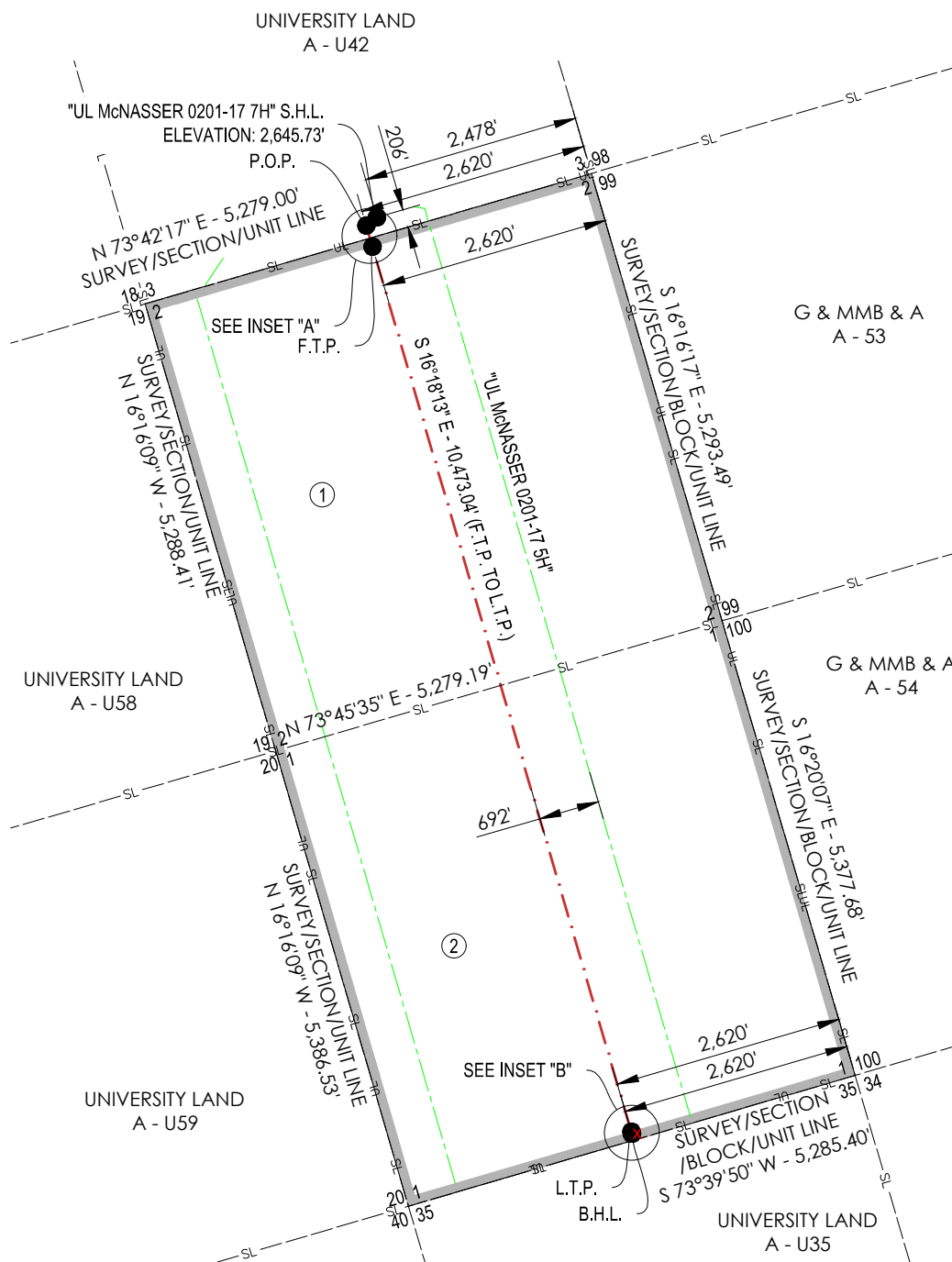
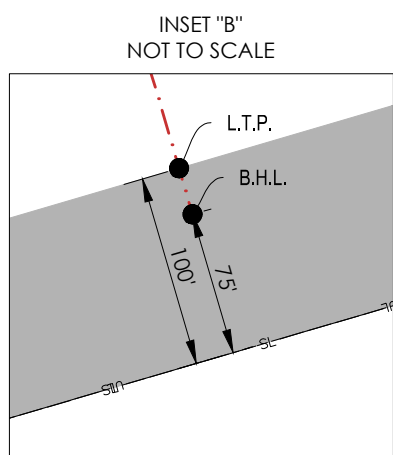
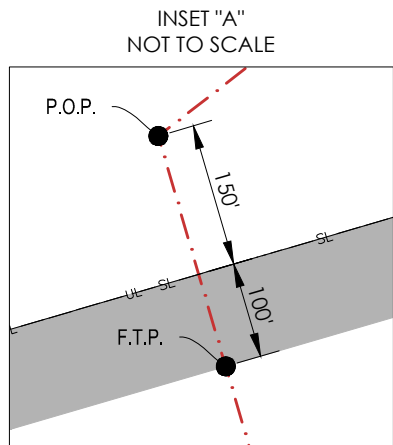
Checked By: _____	Approved By: _____	Date: _____
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**WPX ENERGY PERMAIN, LLC**  
**WARD COUNTY, TEXAS**  
**S.H.L. 206' FSL - 2,478' FEL, SECTION 3, BLOCK 17**

**LEGEND**

- UL — UNIT LINE
- - - SL - SECTION LINE
- - - - - PROPOSED WELL PATH
- - - - - NEAREST PROPOSED WELL PATH
- 100' UNIT OFFSET
- S.H.L. SURFACE HOLE LOCATION
- P.O.P. POINT OF PENETRATION
- F.T.P. FIRST TAKE POINT
- T.P. TURNING POINT
- L.T.P. LAST TAKE POINT
- B.H.L. BOTTOM HOLE LOCATION

GRID NORTH (NAD 83)  
TEXAS - CENTRAL ZONE



- ① SEC. 2 - BLOCK 17  
641.22 ACRES  
UNIVERSITY LAND  
A - U41  
"UL LEASE 111444"
- ② SEC. 1 - BLOCK 17  
652.66 ACRES  
UNIVERSITY LAND  
A - U40  
"UL LEASE 111443"

BHL: 11378.35 TVD 10446.06 S 2911.83 E  
21868 MD 10843.44 ft @ 163.7 Az

OPERATOR: WPX ENERGY PERMAIN, LLC

WELL NAME: UL McNASSER 0201-17 WELL NO: 7H

TOPOGRAPHIC & VEGETATION: FLAT LOCATION WITH LOW LYING BRUSH

GOOD DRILL SITE: YES

REFERENCE STAKES OR ALTERNATE LOCATION  
STAKES SET: NONE

BEST ACCESSIBILITY TO LOCATION: FROM WEST

**DISTANCE & DIRECTION**

FROM HWY JCT OR TOWN: ±1.85 MILES NORTHWEST OF PYOTE, TX  
 FROM THE INTERSECTION OF PYOTE STREET AND 3RD STREET, HEAD WEST ON PYOTE STREET FOR ±3.1 MILES, TURN RIGHT ONTO EXISTING LEASE ROAD FOR ±0.10, TURN RIGHT ONTO EXISTING LEASE ROAD FOR ±0.58, TURN RIGHT ONTO EXISTING ACCESS ROAD AND FOLLOW FOR ±0.58, TURN LEFT ONTO PROPOSED ACCESS ROAD AND CONTINUE TO PAD.

**SURFACE HOLE LOCATION:**

206' FSL & 2,478' FEL (SEC. 3)  
 GROUND ELEVATION: 2,645.73'  
**NAD 27 TEXAS CENTRAL ZONE**  
 NORTHING: 698553.19, EASTING: 1123849.09  
 LATITUDE: N 31.55693394°, LONGITUDE: W 103.14647848°  
**NAD 83 TEXAS CENTRAL ZONE**  
 NORTHING: 10541128.72, EASTING: 1420315.08  
 LATITUDE: N 31.55706664°, LONGITUDE: W 103.14691850°

**POINT OF PENETRATION:**

150' FSL & 2,620' FEL (SEC. 3)  
**NAD 27 TEXAS CENTRAL ZONE**  
 NORTHING: 698459.80, EASTING: 1123728.69  
 LATITUDE: N 31.55666891°, LONGITUDE: W 103.14685733°  
**NAD 83 TEXAS CENTRAL ZONE**  
 NORTHING: 10541035.33, EASTING: 1420194.68  
 LATITUDE: N 31.55680161°, LONGITUDE: W 103.14729736°

**FIRST TAKE POINT:**

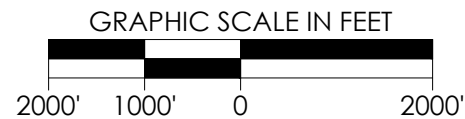
100' FNL & 2,620' FEL (SEC. 2)  
**NAD 27 TEXAS CENTRAL ZONE**  
 NORTHING: 698219.86, EASTING: 1123798.87  
 LATITUDE: N 31.55601433°, LONGITUDE: W 103.14661262°  
**NAD 83 TEXAS CENTRAL ZONE**  
 NORTHING: 10540795.38, EASTING: 1420264.86  
 LATITUDE: N 31.55614705°, LONGITUDE: W 103.14705263°

**LAST TAKE POINT:**

100' FSL & 2,620' FEL (SEC. 1)  
**NAD 27 TEXAS CENTRAL ZONE**  
 NORTHING: 688168.09, EASTING: 1126738.80  
 LATITUDE: N 31.52859234°, LONGITUDE: W 103.13636410°  
**NAD 83 TEXAS CENTRAL ZONE**  
 NORTHING: 10530743.49, EASTING: 1423204.92  
 LATITUDE: N 31.52872569°, LONGITUDE: W 103.13680336°

**BOTTOM HOLE LOCATION:**

75' FSL & 2,620' FEL (SEC. 1)  
**NAD 27 TEXAS CENTRAL ZONE**  
 NORTHING: 688144.09, EASTING: 1126745.82  
 LATITUDE: N 31.52852688°, LONGITUDE: W 103.13633964°  
**NAD 83 TEXAS CENTRAL ZONE**  
 NORTHING: 10530719.49, EASTING: 1423211.94  
 LATITUDE: N 31.52866023°, LONGITUDE: W 103.13677890°



**WELL PATH DATA**

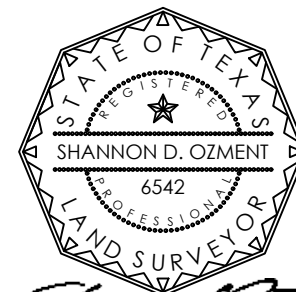
LINE	BEARING	DISTANCE
S.H.L. TO P.O.P.	S 52°12'08" W	152.38'
P.O.P. TO F.T.P.	S 16°18'13" E	250.00'
F.T.P. TO L.T.P.	S 16°18'13" E	10,473.04'
L.T.P. TO B.H.L.	S 16°18'13" E	25.00'

**CALLS FROM SECTION LINE**

S.H.L.	206' FSL, 2,478' FEL (SEC. 3)
P.O.P.	150' FSL, 2,620' FEL (SEC. 3)
F.T.P.	100' FNL, 2,620' FEL (SEC. 2)
L.T.P.	100' FSL, 2,620' FEL (SEC. 1)
B.H.L.	75' FSL, 2,620' FEL (SEC. 1)

**UNIT CORNERS**

LOCATION	NAD27	
	STATE PLANE TEXAS CENTRAL (32039)	GEOGRAPHIC (4267)
NE CORNER SEC. 2-BLK. 17	N = 699050.97 E = 1126285.51	LAT: 31.55847115° LONG: -103.13869926°
SE CORNER SEC. 1-BLK. 17	N = 688809.03 E = 1129281.07	LAT: 31.53052976° LONG: -103.12825896°
SW CORNER SEC. 1-BLK. 17	N = 687322.41 E = 1124209.11	LAT: 31.52609263° LONG: -103.14441197°
NW CORNER SEC. 2-BLK. 17	N = 697569.76 E = 1121218.65	LAT: 31.55404800° LONG: -103.15484062°



CONTACT INFORMATION:  
 Shannon D. Ozment  
 Crafton Tull (10193715)  
 1000 LedgeLawn Dr.  
 Conway, AR 72034

*Shannon D. Ozment*  
6/3/2020

**GENERAL NOTES**

- THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON REASONABLE VISUAL OBSERVATION. LOCATIONS OF UNDERGROUND UTILITIES/ STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREIN. ADDITIONAL BURIED UTILITIES/ STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/ STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, THE OFFICES OF THE VARIOUS UTILITIES SERVICING THIS AREA SHOULD BE CONTACTED FOR THEIR UTILITY LOCATION.
- BASIS OF BEARINGS: TEXAS STATE PLANE GRID, CENTRAL ZONE, NAD83 AS DETERMINED BY GPS OBSERVATION.
- VERTICAL DATUM IS NAVD 88
- AREAS, DISTANCES, AND COORDINATES ARE "GRID" BASED ON U.S. SURVEY FEET.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY.

1000 LedgeLawn Dr  
Conway, Arkansas 72034



501.328.3316 f 501.328.3325 f  
www.craftontull.com

REVISION

**"UL McNASSER 0201-17 7H"**

SECTION 2, BLOCK 17 - 641.22 ACRES  
SECTION 1, BLOCK 17 - 652.66 ACRES  
PROPOSED DRILL SITE  
WARD COUNTY, TEXAS

SCALE: 1" = 2000'  
PLOT DATE: 06-03-2020

CHECKED BY: HFD  
DRAWN BY: L.DOW

APPROVED BY: A.LILEY  
SHEET NO.: 1 OF 1





Scientific Drilling International, Inc.  
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Odessa, Texas 79765  
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www.scientificdrilling.com

State of Texas  
County of Midland

I, Calvin Searcy, certify that; I am employed by Scientific Drilling International; that I did on the day(s) of 09/27/2020 through 12/07/2020 conduct or supervise the taking of a MWD survey from a depth of 139 feet to a depth of 21805 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Scientific Drilling International; that I am authorized and qualified to make this report; that this survey was conducted at the request of WPX Energy 42-475-38149 for the UL McNasser 0201-17 G 7H Well, API# ~~XXXXXXXXXXXX~~ in Ward County, Texas; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Scientific Drilling International.

Calvin Searcy  
Field Technician