

WPX ENERGY

WPX Energy

Eddy County, New Mexico (NAD 83)

East Pecos Federal

22-9H

3001543349

Wellbore #1

NM OIL CONSERVATION

ARTESIA DISTRICT

APR 28 2017

RECEIVED

Design: Surveys

Standard Survey Report

15 February, 2017

MS Energy Services®
WWW.MSENERGYSERVICES.COM

Company:	WPX Energy	Local Co-ordinate Reference:	Well 22-9H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 2904.00usft (Orion Phoenix)
Site:	East Pecos Federal	MD Reference:	WELL @ 2904.00usft (Orion Phoenix)
Well:	22-9H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM Conroe

Project	Eddy County, New Mexico (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Well	22-9H		
Well Position	+N-S	0.00 usft	Northing: 371,711.94 usft
	+E-W	0.00 usft	Easting: 652,033.80 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 1' 17.088 N
		Longitude:	103° 58' 34.150 W
		Ground Level:	2,879.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	1/20/2017	7.24	59.80	47,888

Design	Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.00	0.00	0.00	347.97	

Survey Program	Date 2/15/2017				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
82.00	358.00	MS Gyro (Wellbore #1)	IS-GYRO-WLINE	MEMS RATE GYRO	
424.00	15,590.00	MS MWD (Wellbore #1)	MWD	OWSG MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82.00	0.86	265.55	82.00	-0.05	-0.61	0.08	1.05	1.05	0.00
118.00	0.21	141.78	118.00	-0.12	-0.84	0.06	2.76	-1.81	-343.81
208.00	1.24	176.69	207.99	-1.22	-0.68	-1.05	1.19	1.14	38.79
298.00	2.03	206.53	297.95	-3.62	-1.34	-3.26	1.26	0.88	33.16
358.00	1.63	205.72	357.92	-5.34	-2.18	-4.77	0.67	-0.67	-1.35
Final MS Gyro - 358.00' MD - Tie-in to MS Gyro - 358.00' MD									
424.00	1.10	218.20	423.90	-6.68	-2.98	-5.92	0.92	-0.80	18.91
514.00	1.20	220.50	513.88	-8.08	-4.13	-7.04	0.12	0.11	2.56
604.00	0.70	172.90	603.87	-9.34	-4.67	-8.16	0.99	-0.56	-52.89
694.00	0.70	150.90	693.87	-10.37	-4.34	-9.24	0.30	0.00	-24.44
784.00	0.60	167.90	783.86	-11.31	-3.97	-10.23	0.24	-0.11	18.89
874.00	0.60	149.10	873.86	-12.17	-3.63	-11.15	0.22	0.00	-20.89
964.00	0.90	150.10	963.85	-13.19	-3.04	-12.27	0.33	0.33	1.11
1,054.00	0.40	139.00	1,053.84	-14.04	-2.48	-13.22	0.57	-0.56	-12.33

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Site: East Pecos Federal
Well: 22-9H
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well 22-9H
TVD Reference: WELL @ 2904.00usft (Orion Phoenix)
MD Reference: WELL @ 2904.00usft (Orion Phoenix)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM Conroe

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)
1,145.00	0.40	151.20	1,144.84	-14.56	-2.12	-13.80	0.09	0.00	13.41
1,234.00	0.40	157.10	1,233.84	-15.12	-1.85	-14.40	0.05	0.00	6.63
1,326.00	0.60	156.60	1,325.83	-15.86	-1.53	-15.19	0.22	0.22	-0.54
1,416.00	0.60	163.50	1,415.83	-16.74	-1.21	-16.12	0.08	0.00	7.67
1,511.00	0.60	149.00	1,510.82	-17.64	-0.81	-17.09	0.16	0.00	-15.26
1,607.00	1.00	170.70	1,606.81	-18.90	-0.42	-18.40	0.52	0.42	22.60
1,701.00	0.40	147.50	1,700.81	-19.99	-0.11	-19.52	0.69	-0.64	-24.68
1,795.00	0.80	144.70	1,794.80	-20.80	0.45	-20.44	0.43	0.43	-2.98
1,889.00	0.70	153.50	1,888.79	-21.85	1.08	-21.59	0.16	-0.11	9.36
1,985.00	0.30	195.30	1,984.79	-22.62	1.28	-22.38	0.54	-0.42	43.54
2,079.00	0.50	151.50	2,078.79	-23.21	1.41	-23.00	0.37	0.21	-46.60
2,174.00	1.40	132.60	2,173.77	-24.36	2.46	-24.34	0.99	0.95	-19.89
2,269.00	0.80	98.40	2,268.76	-25.25	3.97	-25.52	0.91	-0.63	-36.00
2,364.00	1.60	100.90	2,363.74	-25.59	5.93	-26.27	0.84	0.84	2.63
2,459.00	1.90	103.10	2,458.69	-26.20	8.76	-27.45	0.32	0.32	2.32
2,554.00	1.60	101.60	2,553.65	-26.82	11.60	-28.65	0.32	-0.32	-1.58
2,744.00	2.80	105.50	2,743.50	-28.60	18.67	-31.86	0.64	0.63	2.05
2,838.00	2.50	108.30	2,837.40	-29.86	22.83	-33.96	0.35	-0.32	2.98
2,919.00	2.10	103.80	2,918.34	-30.76	25.95	-35.50	0.54	-0.49	-5.56
3,014.00	0.50	347.50	3,013.32	-30.77	27.55	-35.84	2.49	-1.68	-122.42
3,109.00	0.30	12.10	3,108.31	-30.13	27.51	-35.20	0.27	-0.21	25.89
3,205.00	0.70	39.70	3,204.31	-29.43	27.94	-34.61	0.47	0.42	28.75
3,300.00	0.90	8.00	3,299.30	-28.24	28.41	-33.55	0.50	0.21	-33.37
3,396.00	0.70	4.80	3,395.29	-26.91	28.57	-32.28	0.21	-0.21	-3.33
3,491.00	0.80	7.20	3,490.28	-25.68	28.70	-31.09	0.11	0.11	2.53
3,587.00	0.50	348.80	3,586.28	-24.60	28.70	-30.04	0.38	-0.31	-19.17
3,682.00	0.50	348.00	3,681.27	-23.79	28.53	-29.21	0.01	0.00	-0.84
3,776.00	0.40	307.50	3,775.27	-23.19	28.19	-28.55	0.35	-0.11	-43.09
3,872.00	0.50	304.50	3,871.27	-22.75	27.58	-28.00	0.11	0.10	-3.13
3,967.00	0.20	335.60	3,966.27	-22.36	27.17	-27.53	0.36	-0.32	32.74
4,062.00	0.40	297.80	4,061.27	-22.06	26.80	-27.16	0.29	0.21	-39.79
4,157.00	0.40	269.00	4,156.26	-21.91	26.18	-26.88	0.21	0.00	-30.32
4,252.00	0.30	305.10	4,251.26	-21.77	25.64	-26.64	0.25	-0.11	38.00
4,348.00	0.20	216.60	4,347.26	-21.76	25.34	-26.56	0.37	-0.10	-92.19
4,443.00	0.20	295.20	4,442.26	-21.82	25.09	-26.57	0.27	0.00	82.74
4,538.00	0.40	200.10	4,537.26	-22.06	24.83	-26.75	0.49	0.21	-100.11
4,633.00	0.40	272.90	4,632.26	-22.36	24.38	-26.95	0.50	0.00	76.63
4,728.00	0.60	253.80	4,727.25	-22.48	23.57	-26.90	0.27	0.21	-20.11
4,823.00	0.50	235.60	4,822.25	-22.85	22.75	-27.09	0.21	-0.11	-19.16
4,918.00	0.60	235.30	4,917.25	-23.37	22.00	-27.44	0.11	0.11	-0.32
5,013.00	0.50	216.20	5,012.24	-23.99	21.35	-27.91	0.22	-0.11	-20.11
5,108.00	0.70	217.20	5,107.24	-24.78	20.75	-28.57	0.21	0.21	1.05
5,202.00	0.70	208.00	5,201.23	-25.75	20.13	-29.38	0.12	0.00	-9.79

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Design:	Surveys	Database:	EDM Conroe

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)
5,297.00	0.80	224.60	5,296.22	-26.73	19.40	-30.19	0.25	0.11	17.47
5,391.00	0.90	215.20	5,390.21	-27.80	18.51	-31.05	0.18	0.11	-10.00
5,486.00	0.80	193.00	5,485.20	-29.06	17.93	-32.16	0.36	-0.11	-23.37
5,582.00	0.80	193.60	5,581.19	-30.36	17.62	-33.37	0.01	0.00	0.63
5,676.00	0.90	192.70	5,675.18	-31.72	17.31	-34.63	0.11	0.11	-0.96
5,770.00	1.00	191.00	5,769.17	-33.25	16.99	-36.06	0.11	0.11	-1.81
5,865.00	0.80	188.00	5,864.16	-34.72	16.74	-37.44	0.22	-0.21	-3.16
5,960.00	4.10	267.60	5,959.07	-35.52	13.25	-37.50	4.25	3.47	83.79
6,055.00	5.90	274.70	6,053.71	-35.26	4.99	-35.53	2.00	1.89	7.47
6,150.00	8.80	274.40	6,147.91	-34.30	-7.12	-32.06	3.05	3.05	-0.32
6,245.00	12.50	272.10	6,241.26	-33.37	-24.65	-27.50	3.92	3.89	-2.42
6,340.00	17.20	269.20	6,333.06	-33.19	-48.98	-22.25	5.01	4.95	-3.05
6,435.00	16.50	268.50	6,423.99	-33.74	-76.51	-17.05	0.77	-0.74	-0.74
6,530.00	14.40	267.10	6,515.55	-34.69	-101.80	-12.71	2.24	-2.21	-1.47
6,625.00	12.60	265.30	6,607.92	-36.13	-123.93	-9.51	1.95	-1.89	-1.89
6,719.00	13.60	266.40	6,699.47	-37.67	-145.18	-6.58	1.10	1.06	1.17
6,814.00	14.90	263.60	6,791.55	-39.73	-168.46	-3.75	1.55	1.37	-2.95
6,909.00	11.80	259.50	6,883.97	-42.86	-190.16	-2.29	3.41	-3.26	-4.32
7,004.00	13.20	268.30	6,976.73	-44.96	-210.55	-0.08	2.48	1.47	9.26
7,099.00	14.00	265.90	7,069.06	-46.10	-232.86	3.45	1.03	0.84	-2.53
7,193.00	14.90	263.90	7,160.09	-48.20	-256.21	6.26	1.09	0.96	-2.13
7,287.00	15.20	263.70	7,250.86	-50.83	-280.48	8.74	0.32	0.32	-0.21
7,382.00	11.50	258.00	7,343.29	-54.17	-302.13	9.99	4.13	-3.89	-6.00
7,477.00	12.40	270.40	7,436.24	-56.07	-321.60	12.19	2.86	0.95	13.05
7,572.00	14.80	268.80	7,528.57	-56.25	-343.93	16.67	2.56	2.53	-1.68
7,667.00	15.70	265.80	7,620.23	-57.45	-368.88	20.70	1.26	0.95	-3.16
7,761.00	15.80	266.30	7,710.70	-59.20	-394.34	24.29	0.18	0.11	0.53
7,856.00	16.20	267.90	7,802.02	-60.52	-420.49	28.45	0.63	0.42	1.68
7,952.00	13.10	266.90	7,894.88	-61.60	-444.74	32.44	3.24	-3.23	-1.04
8,047.00	14.80	267.20	7,987.08	-62.78	-467.61	36.06	1.79	1.79	0.32
8,142.00	16.90	259.60	8,078.47	-65.86	-493.32	38.40	3.10	2.21	-8.00
8,235.00	13.80	258.50	8,168.14	-70.52	-517.49	38.89	3.35	-3.33	-1.18
8,329.00	15.40	257.00	8,259.11	-75.56	-540.63	38.78	1.75	1.70	-1.60
8,424.00	14.20	258.60	8,350.95	-80.70	-564.35	38.70	1.33	-1.26	1.68
8,520.00	14.00	260.40	8,444.06	-84.96	-587.34	39.32	0.50	-0.21	1.88
8,614.00	15.20	263.30	8,535.03	-88.30	-610.79	40.94	1.49	1.28	3.09
8,710.00	15.70	266.60	8,627.56	-90.54	-636.26	44.06	1.05	0.52	3.44
8,804.00	16.60	266.80	8,717.85	-92.04	-662.36	48.03	0.96	0.96	0.21
8,900.00	15.30	265.00	8,810.15	-93.91	-688.67	51.69	1.45	-1.35	-1.88
8,995.00	13.30	258.60	8,902.21	-97.16	-711.87	53.34	2.68	-2.11	-6.74
9,089.00	13.80	255.50	8,993.59	-102.11	-733.33	52.98	0.94	0.53	-3.30
9,184.00	15.20	261.20	9,085.57	-106.85	-756.61	53.19	2.10	1.47	6.00
9,279.00	14.20	264.20	9,177.46	-109.93	-780.51	55.16	1.32	-1.05	3.16

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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)
9,374.00	14.00	262.80	9,269.60	-112.55	-803.50	57.39	0.42	-0.21	-1.47
9,469.00	14.40	259.40	9,361.70	-116.16	-826.51	58.65	0.97	0.42	-3.58
9,562.00	15.70	260.80	9,451.50	-120.30	-850.30	59.56	1.45	1.40	1.51
9,657.00	15.60	260.60	9,542.98	-124.44	-875.59	60.78	0.12	-0.11	-0.21
9,752.00	14.70	261.10	9,634.68	-128.40	-900.10	62.03	0.96	-0.95	0.53
9,848.00	13.40	259.20	9,727.81	-132.36	-923.06	62.93	1.44	-1.35	-1.98
9,943.00	12.30	257.70	9,820.43	-136.58	-943.76	63.12	1.21	-1.16	-1.58
10,038.00	9.50	262.00	9,913.70	-139.83	-961.42	63.62	3.07	-2.95	4.53
10,131.00	6.60	269.80	10,005.78	-140.92	-974.37	65.26	3.33	-3.12	8.39
10,226.00	2.60	282.00	10,100.46	-140.49	-981.94	67.26	4.31	-4.21	12.84
10,320.00	0.20	234.50	10,194.42	-140.14	-984.16	68.06	2.63	-2.55	-50.53
10,416.00	0.20	187.60	10,290.42	-140.40	-984.31	67.83	0.17	0.00	-48.85
10,437.00	0.20	168.90	10,311.42	-140.48	-984.31	67.76	0.31	0.00	-89.05
10,522.00	2.20	20.10	10,396.40	-139.09	-983.72	69.00	2.79	2.35	-175.06
10,617.00	14.40	7.90	10,490.23	-125.62	-981.46	81.69	12.90	12.84	-12.84
10,712.00	24.00	8.60	10,579.85	-94.75	-976.94	110.95	10.11	10.11	0.74
10,728.70	25.69	8.44	10,595.00	-87.81	-975.90	117.52	10.11	10.10	-0.95
Wolfcamp POP - 10728.70' MD									
10,806.00	33.50	7.90	10,662.16	-50.05	-970.50	153.32	10.11	10.11	-0.70
10,900.00	46.70	7.30	10,733.91	9.84	-962.56	210.24	14.05	14.04	-0.64
10,994.00	61.00	5.80	10,789.22	85.06	-954.01	282.03	15.27	15.21	-1.60
11,065.71	67.30	2.29	10,820.48	149.39	-949.51	344.01	9.82	8.78	-4.89
FTP - 11065.71' MD									
11,094.00	69.80	1.00	10,830.82	175.70	-948.76	369.59	9.82	8.85	-4.57
11,139.00	70.40	358.20	10,846.14	218.01	-949.06	411.03	6.00	1.33	-6.22
11,230.00	74.60	356.90	10,873.50	304.70	-952.78	496.59	4.81	4.62	-1.43
11,276.00	76.10	356.80	10,885.14	349.13	-955.22	540.56	3.27	3.26	-0.22
11,321.00	78.10	355.90	10,895.18	392.90	-958.02	583.95	4.85	4.44	-2.00
11,412.00	80.80	357.60	10,911.84	482.21	-963.08	672.35	3.49	2.97	1.87
11,458.00	82.30	359.10	10,918.60	527.69	-964.39	717.10	4.59	3.26	3.26
11,503.00	83.10	359.70	10,924.32	572.32	-964.86	760.85	2.22	1.78	1.33
11,549.00	86.30	0.10	10,928.57	618.12	-964.94	805.66	7.01	6.96	0.87
11,594.00	87.10	0.40	10,931.16	663.04	-964.74	849.56	1.90	1.78	0.67
11,685.00	90.80	2.70	10,932.83	753.97	-962.28	937.98	4.79	4.07	2.53
11,776.00	88.30	2.40	10,933.54	844.87	-958.23	1,026.04	2.77	-2.75	-0.33
11,867.00	90.80	358.00	10,934.26	935.84	-957.91	1,114.94	5.56	2.75	-4.84
11,958.00	89.90	359.60	10,933.70	1,026.82	-959.82	1,204.31	2.02	-0.99	1.76
12,049.00	89.00	359.80	10,934.57	1,117.81	-960.30	1,293.41	1.01	-0.99	0.22
12,140.00	89.30	359.60	10,935.92	1,208.80	-960.77	1,382.50	0.40	0.33	-0.22
12,230.00	89.90	354.40	10,936.55	1,298.64	-965.48	1,471.35	5.82	0.67	-5.78
12,322.00	92.40	352.70	10,934.71	1,390.03	-975.81	1,562.88	3.29	2.72	-1.85
12,412.00	89.90	353.00	10,932.90	1,479.30	-987.01	1,652.53	2.80	-2.78	0.33
12,503.00	90.00	354.80	10,932.98	1,569.79	-996.68	1,743.04	1.98	0.11	1.98
12,595.00	89.20	358.80	10,933.62	1,661.62	-1,001.82	1,833.93	4.43	-0.87	4.35

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Site: East Pecos Federal
Well: 22-9H
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well 22-9H
TVD Reference: WELL @ 2904.00usft (Orion Phoenix)
MD Reference: WELL @ 2904.00usft (Orion Phoenix)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM Conroe

Survey

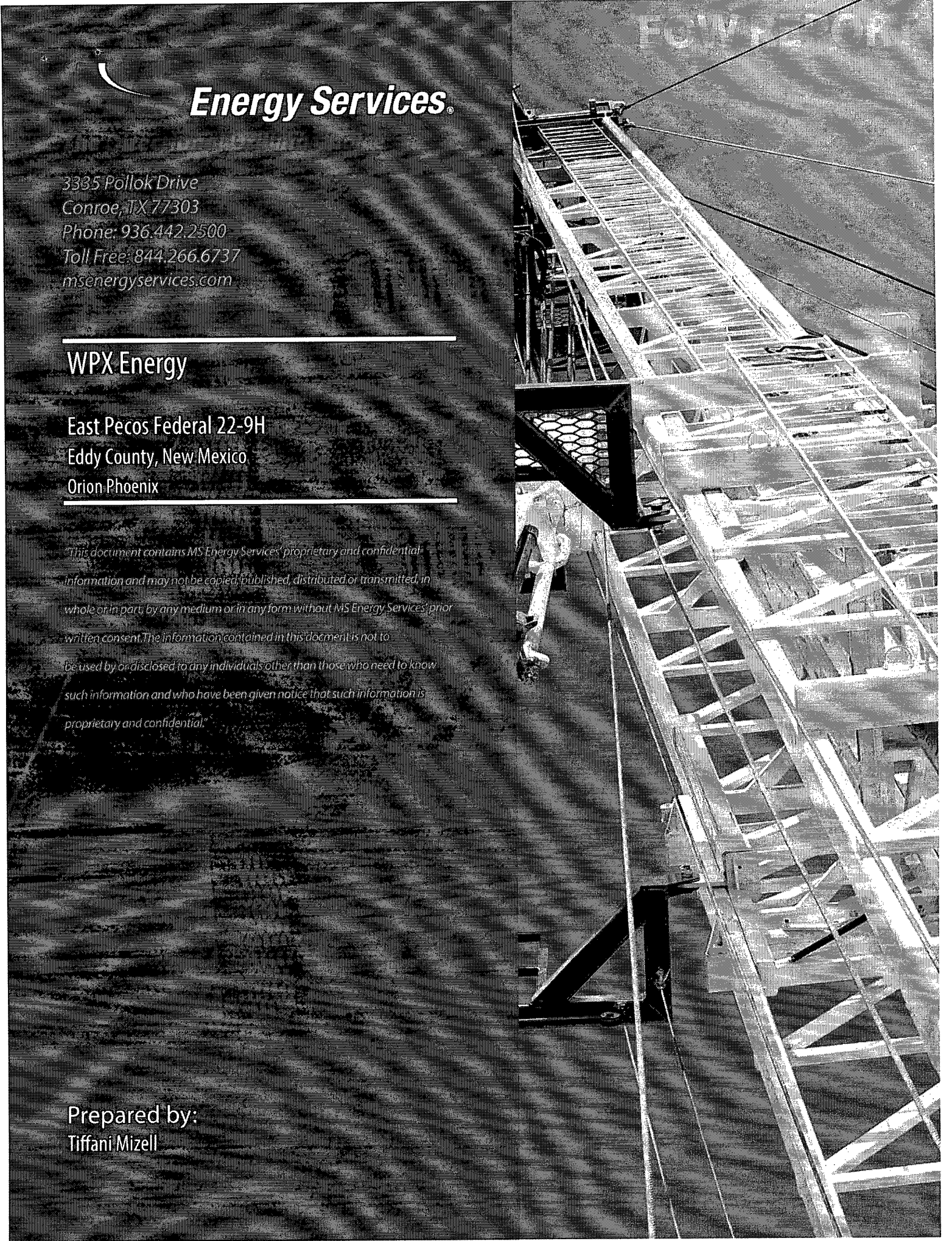
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,686.00	89.30	357.60	10,934.81	1,752.57	-1,004.67	1,923.47	1.32	0.11	-1.32
12,776.00	91.40	359.00	10,934.26	1,842.52	-1,007.34	2,012.01	2.80	2.33	1.56
12,867.00	89.90	0.50	10,933.23	1,933.51	-1,007.74	2,101.08	2.33	-1.65	1.65
12,958.00	90.10	0.30	10,933.23	2,024.50	-1,007.10	2,189.95	0.31	0.22	-0.22
13,049.00	88.90	359.40	10,934.03	2,115.50	-1,007.34	2,278.99	1.65	-1.32	-0.99
13,140.00	88.70	1.90	10,935.93	2,206.46	-1,006.31	2,367.75	2.76	-0.22	2.75
13,231.00	91.60	1.20	10,935.69	2,297.42	-1,003.85	2,456.19	3.28	3.19	-0.77
13,323.00	89.70	0.40	10,934.65	2,389.40	-1,002.57	2,545.88	2.24	-2.07	-0.87
13,414.00	91.70	359.60	10,933.54	2,480.39	-1,002.57	2,634.87	2.37	2.20	-0.88
13,505.00	90.60	0.40	10,931.71	2,571.37	-1,002.56	2,723.85	1.49	-1.21	0.88
13,595.00	91.50	359.00	10,930.06	2,661.35	-1,003.04	2,811.96	1.85	1.00	-1.56
13,686.00	90.60	0.50	10,928.40	2,752.33	-1,003.43	2,901.02	1.92	-0.99	1.65
13,777.00	87.70	355.80	10,929.75	2,843.24	-1,006.37	2,990.55	6.07	-3.19	-5.16
13,868.00	88.80	353.90	10,932.53	2,933.82	-1,014.53	3,080.84	2.41	1.21	-2.09
13,959.00	90.30	357.00	10,933.24	3,024.52	-1,021.75	3,171.05	3.78	1.65	3.41
14,050.00	89.80	358.90	10,933.16	3,115.45	-1,025.00	3,260.67	2.16	-0.55	2.09
14,141.00	91.50	356.70	10,932.13	3,206.37	-1,028.50	3,350.32	3.06	1.87	-2.42
14,232.00	91.50	2.30	10,929.74	3,297.30	-1,029.29	3,439.42	6.15	0.00	6.15
14,278.00	90.80	4.10	10,928.82	3,343.22	-1,026.72	3,483.79	4.20	-1.52	3.91
14,323.00	89.50	4.60	10,928.70	3,388.09	-1,023.31	3,526.96	3.10	-2.89	1.11
14,368.00	90.50	6.00	10,928.70	3,432.89	-1,019.15	3,569.92	3.82	2.22	3.11
14,414.00	89.80	4.90	10,928.58	3,478.68	-1,014.78	3,613.79	2.83	-1.52	-2.39
14,459.00	88.40	3.40	10,929.29	3,523.56	-1,011.53	3,657.00	4.56	-3.11	-3.33
14,505.00	85.70	2.40	10,931.66	3,569.43	-1,009.20	3,701.39	6.26	-5.87	-2.17
14,596.00	88.80	7.70	10,936.03	3,659.93	-1,001.20	3,788.23	6.74	3.41	5.82
14,687.00	92.40	4.70	10,935.07	3,750.37	-991.38	3,874.63	5.15	3.96	-3.30
14,777.00	89.00	2.00	10,933.97	3,840.19	-986.12	3,961.38	4.82	-3.78	-3.00
14,868.00	89.40	359.80	10,935.24	3,931.16	-984.69	4,050.06	2.46	0.44	-2.42
14,959.00	91.20	356.10	10,934.77	4,022.08	-987.94	4,139.66	4.52	1.98	-4.07
15,050.00	88.00	1.70	10,935.40	4,113.02	-989.69	4,228.96	7.09	-3.52	6.15
15,141.00	88.70	5.30	10,938.02	4,203.79	-984.14	4,316.59	4.03	0.77	3.96
15,232.00	90.00	3.40	10,939.06	4,294.52	-977.24	4,403.88	2.53	1.43	-2.09
15,278.00	89.70	1.60	10,939.18	4,340.47	-975.23	4,448.41	3.97	-0.65	-3.91
15,323.00	89.20	2.10	10,939.61	4,385.45	-973.78	4,492.10	1.57	-1.11	1.11
15,414.00	90.10	359.40	10,940.16	4,476.43	-972.59	4,580.83	3.13	0.99	-2.97
15,505.00	87.90	357.70	10,941.75	4,567.38	-974.89	4,670.26	3.06	-2.42	-1.87
15,590.00	87.90	357.70	10,944.87	4,652.25	-978.30	4,753.98	0.00	0.00	0.00

Projection to TD - 15590.00' MD

Company:	WPX Energy	Local Co-ordinate Reference:	Well 22-9H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 2904.00usft (Orion Phoenix)
Site:	East Pecos Federal	MD Reference:	WELL @ 2904.00usft (Orion Phoenix)
Well:	22-9H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM Conroe

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
358.00	357.92	-5.34	-2.18	Final MS Gyro - 358.00' MD
358.00	357.92	-5.34	-2.18	Tie-in to MS Gyro - 358.00' MD
10,728.70	10,595.00	-87.81	-975.90	Wolfcamp POP - 10728.70' MD
11,065.71	10,820.48	149.39	-949.51	FTP - 11065.71' MD
15,590.00	10,944.87	4,652.25	-978.30	Projection to TD - 15590.00' MD



Energy Services.

3335 Pollok Drive
Conroe, TX 77303
Phone: 936.442.2500
Toll Free: 844.266.6737
msenergyservices.com

WPX Energy

East Pecos Federal 22-9H
Eddy County, New Mexico
Orion Phoenix

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Prepared by:
Tiffani Mizell



Azimuths to Grid North
True North: -0.19°
Magnetic North: 7.05°

Magnetic Field
Strength: 47888.0snT
Dip Angle: 59.80°
Date: 1/20/2017
Model: BGGM2016

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
6042.00	0.00	0.00	6042.00	0.00	0.00	0.00	0.00	KOP, 3.00°/100' Build
6541.89	15.00	262.42	6536.20	-8.59	-64.48	5.05	65.05	Begin 15.00° Tangent
9835.20	15.00	262.42	9717.34	-121.06	-909.21	71.15	917.23	Begin 3.00°/100' Drop
10335.08	0.00	0.00	10211.54	-129.65	-973.69	76.20	982.28	Begin Vertical Hold
10570.08	0.00	0.00	10446.54	-129.65	-973.69	76.20	982.28	Begin 12.00°/100' Build
11320.08	90.00	359.37	10924.00	347.79	-978.92	544.24	1459.75	Begin 90.00° Lateral
15794.83	90.00	359.37	10924.00	4822.27	-1027.96	4930.61	5934.49	PBHL

US State Plane 1983
New Mexico Eastern Zone

Created By: HLH
Date: 16:36, February 15 2017
Plan: Design #3

