

Eider Federal #304H

<u>Perfs</u>	<u>7 1/2% Acid (Gal)</u>	<u>Sand (#)</u>	<u>Fluid (Gal)</u>
1	2016	366290	329616
2	1512	366760	639030
3	2016	365180	643104
4	1512	344470	607446
5	3528	363950	720552
6	1176	361320	485772
7	882	363530	401646
8	798	365750	434196
9	756	364910	359478
10	1260	364810	319242
11	672	359460	394968
12	4200	364050	571494
13	1554	141700	240576
14	756	365013	454230
15	546	354080	525630
16	3024	366760	447552
17	2268	366353	484386
18	3024	364960	444948
19	2268	362400	476070
20	6216	369620	531636
21	2268	359100	425166
22	3822	361190	441966
23	3108	361620	508914
24	2310	367810	391776
25	3066	364230	413364
26	3108	354350	460404
27	1512	362920	527478
28	1638	364560	408534
29	1596	364970	517734
30	1764	366840	377916
31	1764	362960	373758
32	1554	364110	390936
33	1932	362840	468216
34	2142	367060	393708
35	2520	234540	529116
36	1512	363210	377958
37	1680	366810	532350
38	1554	367290	496440
39	1554	345010	562716
40	1512	366140	413112
Totals	81900	14,168,926	18,523,134

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PHOENIX
TECHNOLOGY SERVICES

Matador Resources

Lea County, NM (NAD 27)

Uncle Don State 35-22S-35E

1

OH / 64422

Survey: Phoenix MWD Surveys

Standard Survey Report

26 March, 2019





Survey Report



Company: Matador Resources
 Project: Lea County, NM (NAD 27)
 Site: Uncle Don State 35-22S-35E
 Well: 1
 Wellbore: OH / 64422
 Design: Surveys (Patterson 297)

Local Co-ordinate Reference: Well 1
 TVD Reference: RKB @ 3560.50usft (Patterson 297)
 MD Reference: RKB @ 3560.50usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Project	Lea County, NM (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Uncle Don State 35-22S-35E

Site Position: Northing: 489,487.59 usft Latitude: 32° 20' 30.6231 N
 From: Lat/Long Easting: 805,458.58 usft Longitude: 103° 20' 39.4814 W
 Position Uncertainty: 1.00 usft Slot Radius: 13-3/16 " Grid Convergence: 0.53 °

Well 1
 Well Position +N/-S 0.00 usft Northing: 489,487.60 usft Latitude: 32° 20' 30.6233 N
 +E/-W 0.00 usft Easting: 805,458.58 usft Longitude: 103° 20' 39.4814 W
 Position Uncertainty 1.00 usft Wellhead Elevation: usft Ground Level: 3,532.00 usft

Wellbore OH / 64422

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	4/3/2019	6.77	60.06	48,038.53661817

Design Surveys (Patterson 297)

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	0.00

Survey Program Date 3/25/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
101.00	12,100.00	Phoenix MWD Surveys (OH / 64422)	MWD+HRGM	OWSG MWD + HRGM

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
101.00	0.31	255.22	101.00	-0.07	-0.26	-0.07	0.31	0.31	0.00
First Phoenix MWD Survey									
195.00	0.34	261.70	195.00	-0.17	-0.79	-0.17	0.05	0.03	6.89
286.00	0.39	211.98	286.00	-0.48	-1.22	-0.48	0.34	0.05	-54.64
380.00	0.59	196.74	379.99	-1.21	-1.53	-1.21	0.25	0.21	-16.21
471.00	0.54	242.37	470.99	-1.86	-2.04	-1.86	0.48	-0.05	50.14
562.00	0.60	232.12	561.98	-2.35	-2.80	-2.35	0.13	0.07	-11.26
654.00	0.81	232.52	653.98	-3.04	-3.69	-3.04	0.23	0.23	0.43
745.00	1.17	226.79	744.96	-4.07	-4.88	-4.07	0.41	0.40	-6.30
838.00	1.32	220.67	837.94	-5.53	-6.27	-5.53	0.22	0.16	-6.58



Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 1
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 3560.50usft (Patterson 297)
Site:	Uncle Don State 35-22S-35E	MD Reference:	RKB @ 3560.50usft (Patterson 297)
Well:	1	North Reference:	Grid
Wellbore:	OH / 64422	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 297)	Database:	USA Compass

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)
932.00	1.52	205.17	931.91	-7.48	-7.51	-7.48	0.46	0.21	-16.49
1,025.00	2.01	195.78	1,024.87	-10.17	-8.47	-10.17	0.61	0.53	-10.10
1,119.00	2.35	191.76	1,118.80	-13.64	-9.32	-13.64	0.40	0.36	-4.28
1,212.00	2.21	182.35	1,211.73	-17.30	-9.78	-17.30	0.43	-0.15	-10.12
1,306.00	2.17	174.60	1,305.66	-20.88	-9.68	-20.88	0.32	-0.04	-8.24
1,400.00	2.29	164.58	1,399.59	-24.46	-9.02	-24.46	0.43	0.13	-10.66
1,493.00	2.50	153.17	1,492.51	-28.06	-7.61	-28.06	0.56	0.23	-12.27
1,566.11	2.54	147.41	1,565.55	-30.85	-6.02	-30.85	0.35	0.05	-7.87
HL Crossing: 1566' MD									
1,586.00	2.55	145.88	1,585.42	-31.59	-5.53	-31.59	0.35	0.07	-7.71
1,680.00	2.74	136.30	1,679.32	-34.94	-2.81	-34.94	0.51	0.20	-10.19
1,766.00	2.93	131.54	1,765.21	-37.89	0.26	-37.89	0.35	0.22	-5.53
1,888.00	2.99	121.52	1,887.05	-41.62	5.30	-41.62	0.43	0.05	-8.21
1,981.00	2.16	114.63	1,979.96	-43.62	8.97	-43.62	0.95	-0.89	-7.41
2,075.00	1.82	91.44	2,073.90	-44.39	12.07	-44.39	0.92	-0.36	-24.67
2,168.00	1.40	94.02	2,166.86	-44.51	14.68	-44.51	0.46	-0.45	2.77
2,262.00	1.01	68.09	2,260.84	-44.28	16.59	-44.28	0.70	-0.41	-27.59
2,356.00	0.89	73.30	2,354.83	-43.76	18.06	-43.76	0.16	-0.13	5.54
2,449.00	0.55	60.53	2,447.82	-43.33	19.14	-43.33	0.40	-0.37	-13.73
2,543.00	0.59	351.74	2,541.82	-42.63	19.46	-42.63	0.69	0.04	-73.18
2,637.00	0.58	25.09	2,635.82	-41.72	19.60	-41.72	0.36	-0.01	35.48
2,731.00	0.59	65.23	2,729.81	-41.09	20.24	-41.09	0.43	0.01	42.70
2,824.00	0.51	23.76	2,822.81	-40.51	20.84	-40.51	0.43	-0.09	-44.59
2,918.00	0.54	17.20	2,916.80	-39.70	21.14	-39.70	0.07	0.03	-6.98
3,012.00	0.41	51.09	3,010.80	-39.07	21.53	-39.07	0.32	-0.14	36.05
3,105.00	0.48	54.83	3,103.80	-38.64	22.11	-38.64	0.08	0.08	4.02
3,199.00	0.73	43.27	3,197.79	-37.97	22.84	-37.97	0.29	0.27	-12.30
3,293.00	0.52	49.48	3,291.79	-37.26	23.57	-37.26	0.23	-0.22	6.61
3,387.00	1.17	33.97	3,385.78	-36.19	24.44	-36.19	0.73	0.69	-16.50
3,481.00	1.33	31.16	3,479.75	-34.46	25.54	-34.46	0.18	0.17	-2.99
3,575.00	1.38	43.41	3,573.73	-32.70	26.88	-32.70	0.31	0.05	13.03
3,669.00	1.46	38.53	3,667.70	-30.94	28.40	-30.94	0.15	0.09	-5.19
3,687.38	1.50	45.17	3,686.07	-30.59	28.72	-30.59	0.96	0.23	36.14
HL Crossing: 3687' MD									
3,763.00	1.85	67.23	3,761.66	-29.42	30.55	-29.42	0.96	0.46	29.17
3,856.00	1.79	72.11	3,854.61	-28.39	33.31	-28.39	0.18	-0.06	5.25
3,950.00	1.23	52.64	3,948.58	-27.33	35.51	-27.33	0.80	-0.60	-20.71
4,044.00	1.80	16.60	4,042.55	-25.30	36.74	-25.30	1.15	0.61	-38.34
4,138.00	1.37	26.94	4,136.51	-22.88	37.67	-22.88	0.55	-0.46	11.00
4,232.00	1.30	28.37	4,230.49	-20.94	38.68	-20.94	0.08	-0.07	1.52
4,325.00	0.93	20.64	4,323.47	-19.31	39.45	-19.31	0.43	-0.40	-8.31
4,512.00	1.03	36.56	4,510.44	-16.54	40.99	-16.54	0.15	0.05	8.51
4,699.00	0.94	332.23	4,697.42	-13.83	41.27	-13.83	0.56	-0.05	-34.40



Survey Report



Company: Matador Resources
Project: Lea County, NM (NAD 27)
Site: Uncle Don State 35-22S-35E
Well: 1
Wellbore: OH / 64422
Design: Surveys (Patterson 297)

Local Co-ordinate Reference: Well 1
TVD Reference: RKB @ 3560.50usft (Patterson 297)
MD Reference: RKB @ 3560.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

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)
4,793.00	3.81	317.04	4,791.33	-10.86	38.78	-10.86	3.10	3.05	-16.16
4,887.00	4.42	316.74	4,885.09	-5.94	34.17	-5.94	0.65	0.65	-0.32
4,980.00	4.15	319.79	4,977.83	-0.76	29.55	-0.76	0.38	-0.29	3.28
5,074.00	3.60	314.84	5,071.61	3.92	25.26	3.92	0.68	-0.59	-5.27
5,168.00	3.32	318.02	5,165.44	8.02	21.34	8.02	0.36	-0.30	3.38
5,261.00	3.25	319.05	5,258.29	12.01	17.81	12.01	0.10	-0.08	1.11
5,449.00	2.99	309.99	5,446.01	19.19	10.57	19.19	0.30	-0.14	-4.82
5,542.00	2.32	312.30	5,538.91	22.02	7.31	22.02	0.73	-0.72	2.48
5,636.00	2.28	314.05	5,632.84	24.60	4.56	24.60	0.09	-0.04	1.86
5,730.00	1.83	310.26	5,726.77	26.87	2.07	26.87	0.50	-0.48	-4.03
5,824.00	1.84	310.19	5,820.73	28.81	-0.22	28.81	0.01	0.01	-0.07
5,917.00	1.59	307.14	5,913.68	30.55	-2.39	30.55	0.29	-0.27	-3.28
6,011.00	1.57	303.86	6,007.65	32.06	-4.50	32.06	0.10	-0.02	-3.49
6,057.00	1.31	310.22	6,053.63	32.75	-5.43	32.75	0.66	-0.57	13.83
6,189.00	1.39	319.40	6,185.60	34.94	-7.62	34.94	0.17	0.06	6.95
6,282.00	1.35	321.60	6,278.57	36.65	-9.04	36.65	0.07	-0.04	2.37
6,376.00	1.46	320.77	6,372.54	38.45	-10.48	38.45	0.12	0.12	-0.88
6,470.00	1.32	333.26	6,466.52	40.34	-11.72	40.34	0.35	-0.15	13.29
6,563.00	1.43	344.94	6,559.49	42.42	-12.51	42.42	0.32	0.12	12.56
6,657.00	1.45	344.11	6,653.46	44.70	-13.14	44.70	0.03	0.02	-0.88
6,750.00	1.45	349.53	6,746.43	46.99	-13.67	46.99	0.15	0.00	5.83
6,844.00	1.58	346.35	6,840.40	49.41	-14.20	49.41	0.16	0.14	-3.38
6,938.00	1.96	341.57	6,934.35	52.20	-15.01	52.20	0.43	0.40	-5.09
7,032.00	0.94	333.01	7,028.32	54.41	-15.87	54.41	1.11	-1.09	-9.11
7,126.00	0.53	328.12	7,122.31	55.47	-16.45	55.47	0.44	-0.44	-5.20
7,219.00	0.41	340.51	7,215.31	56.15	-16.79	56.15	0.17	-0.13	13.32
7,313.00	0.42	14.82	7,309.31	56.80	-16.81	56.80	0.26	0.01	36.50
7,407.00	0.91	17.46	7,403.30	57.84	-16.50	57.84	0.52	0.52	2.81
7,500.00	1.59	3.56	7,496.28	59.83	-16.20	59.83	0.80	0.73	-14.95
7,594.00	1.35	356.44	7,590.25	62.24	-16.18	62.24	0.32	-0.26	-7.57
7,688.00	1.23	349.24	7,684.22	64.34	-16.44	64.34	0.21	-0.13	-7.66
7,782.00	1.26	347.24	7,778.20	66.34	-16.86	66.34	0.06	0.03	-2.13
7,876.00	1.05	30.80	7,872.18	68.08	-16.65	68.08	0.94	-0.22	46.34
7,969.00	1.48	50.89	7,965.16	69.57	-15.28	69.57	0.66	0.46	21.60
8,063.00	1.72	62.22	8,059.13	71.00	-13.09	71.00	0.42	0.26	12.05
8,157.00	1.89	65.31	8,153.08	72.30	-10.43	72.30	0.21	0.18	3.29
8,251.00	1.97	75.13	8,247.03	73.36	-7.46	73.36	0.36	0.09	10.45
8,345.00	2.56	81.44	8,340.95	74.09	-3.82	74.09	0.68	0.63	6.71
8,439.00	2.81	77.21	8,434.85	74.91	0.50	74.91	0.34	0.27	-4.50
8,533.00	1.20	89.14	8,528.79	75.44	3.73	75.44	1.76	-1.71	12.69
8,627.00	0.55	118.19	8,622.78	75.24	5.11	75.24	0.82	-0.69	30.90
8,720.00	1.60	102.35	8,715.76	74.75	6.77	74.75	1.16	1.13	-17.03
8,814.00	1.68	101.66	8,809.72	74.19	9.41	74.19	0.09	0.09	-0.73
8,907.00	1.84	88.66	8,902.68	73.95	12.23	73.95	0.46	0.17	-13.98



Survey Report



Company: Matador Resources
Project: Lea County, NM (NAD 27)
Site: Uncle Don State 35-22S-35E
Well: 1
Wellbore: OH / 64422
Design: Surveys (Patterson 297)

Local Co-ordinate Reference: Well 1
TVD Reference: RKB @ 3560.50usft (Patterson 297)
MD Reference: RKB @ 3560.50usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

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)
9,001.00	2.05	93.79	8,996.62	73.88	15.42	73.88	0.29	0.22	5.46
9,095.00	1.91	99.93	9,090.57	73.49	18.64	73.49	0.27	-0.15	6.53
9,188.00	1.86	105.28	9,183.52	72.83	21.62	72.83	0.20	-0.05	5.75
9,282.00	2.27	101.27	9,277.46	72.06	24.92	72.06	0.46	0.44	-4.27
9,376.00	2.27	105.63	9,371.38	71.20	28.54	71.20	0.18	0.00	4.64
9,469.00	2.60	92.37	9,464.30	70.62	32.42	70.62	0.70	0.35	-14.26
9,563.00	2.05	136.63	9,558.23	69.30	35.71	69.30	1.94	-0.59	47.09
9,656.00	1.88	144.67	9,651.17	66.85	37.73	66.85	0.35	-0.18	8.65
9,750.00	1.99	128.80	9,745.12	64.57	39.89	64.57	0.58	0.12	-16.88
9,844.00	2.39	107.81	9,839.05	62.95	43.03	62.95	0.95	0.43	-22.33
9,937.00	2.41	99.06	9,931.97	62.05	46.81	62.05	0.39	0.02	-9.41
10,031.00	2.46	103.14	10,025.89	61.28	50.72	61.28	0.19	0.05	4.34
10,125.00	1.65	132.91	10,119.83	59.90	53.68	59.90	1.40	-0.86	31.67
10,219.00	1.04	167.97	10,213.80	58.14	54.85	58.14	1.06	-0.65	37.30
10,312.00	0.55	191.49	10,306.79	56.88	54.94	56.88	0.62	-0.53	25.29
10,406.00	0.84	215.29	10,400.79	55.87	54.45	55.87	0.43	0.31	25.32
10,499.00	0.84	231.73	10,493.78	54.90	53.52	54.90	0.26	0.00	17.68
10,592.00	1.05	238.63	10,586.77	54.03	52.26	54.03	0.26	0.23	7.42
10,686.00	0.92	231.96	10,680.75	53.12	50.93	53.12	0.18	-0.14	-7.10
10,779.00	1.12	199.75	10,773.74	51.80	50.03	51.80	0.64	0.22	-34.63
10,873.00	1.37	176.67	10,867.72	49.81	49.79	49.81	0.59	0.27	-24.55
10,966.00	1.78	174.96	10,960.68	47.27	49.98	47.27	0.44	0.44	-1.84
11,060.00	2.36	177.32	11,054.62	43.88	50.20	43.88	0.62	0.62	2.51
11,153.00	1.59	173.39	11,147.56	40.68	50.44	40.68	0.84	-0.83	-4.23
11,247.00	0.95	156.68	11,241.54	38.67	50.89	38.67	0.78	-0.68	-17.78
11,340.00	0.62	130.34	11,334.53	37.64	51.58	37.64	0.52	-0.35	-28.32
11,434.00	1.50	99.39	11,428.51	37.11	53.18	37.11	1.08	0.94	-32.93
11,528.00	1.38	97.89	11,522.49	36.75	55.52	36.75	0.13	-0.13	-1.60
11,622.00	1.14	97.41	11,616.46	36.48	57.57	36.48	0.26	-0.26	-0.51
11,715.00	1.26	99.96	11,709.44	36.18	59.49	36.18	0.14	0.13	2.74
11,809.00	1.17	89.76	11,803.42	36.01	61.47	36.01	0.25	-0.10	-10.85
11,903.00	1.35	81.50	11,897.40	36.17	63.52	36.17	0.27	0.19	-8.79
11,997.00	1.29	77.17	11,991.37	36.57	65.65	36.57	0.12	-0.06	-4.61
12,035.00	1.19	74.86	12,029.36	36.77	66.45	36.77	0.29	-0.26	-6.08
Final Phoenix MWD Survey									
12,100.00	1.19	74.86	12,094.35	37.12	67.75	37.12	0.00	0.00	0.00
Projection to TD									



Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 1
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 3560.50usft (Patterson 297)
Site:	Uncle Don State 35-22S-35E	MD Reference:	RKB @ 3560.50usft (Patterson 297)
Well:	1	North Reference:	Grid
Wellbore:	OH / 64422	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 297)	Database:	USA Compass

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
101.00	101.00	-0.07	-0.26	First Phoenix MWD Survey
1,566.11	1,565.55	-30.85	-6.02	HL Crossing: 1566' MD
3,687.38	3,686.07	-30.59	28.72	HL Crossing: 3687' MD
12,035.00	12,029.36	36.77	66.45	Final Phoenix MWD Survey
12,100.00	12,094.35	37.12	67.75	Projection to TD

SURVEY DATA CERTIFICATION



PHOENIX
TECHNOLOGY SERVICES

Job #: 64422
 Client: Matador Resources
 County & State: Lea County, New Mexico
 Well: Uncle Don State 35-22S-35E 1
 API No: 30-025-45622
 Proposed Direction: 0.00°

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
0.00 ft	0.00 ft	0.00°	0.00°			Surface
Data Source Company:						

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
8-Mar-19	101 ft	0.31°	255.22°

Last Survey Date	Last Survey Depth	INC	AZM
24-Mar-19	12,035 ft	1.19°	74.86°

Survey Instrument Type
MWD - P360

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
24-Mar-19	12,100 ft	1.19°	74.86°

CORRECTION INFORMATION

Magnetic Declination Used	6.77 degrees
Grid Convergence Used	0.53 degrees

Corrected to True/Grid North
Grid North

Total Correction	6.24 degrees
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TO THE BEST OF MY KNOWLEDGE, I
 CERTIFY THIS SURVEY DATA TO BE TRUE
 AND CORRECT.

Chris Marks

 Signature

3/24/2019

 Date