



PRODIRECTIONAL



Marathon Oil Corporation

Dogie Draw Fed Com 25-34-14 TB #1H
Lea County, NM

April 15, 2019

Job No. LNM1428419

API No. 30-025-45092

HOBBS OCD

DEC 17 2019

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Survey Completion Report



Marathon Oil

Lea County, NM

Dogie Draw Fed Com 25-34-14 TB

No. 1H

OH

Survey: ProDirectional

Survey Report

15 April, 2019



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Dogle Draw Fed Com 25-34-14 TB
Well: No. 1H
Wellbore: OH
Design: MWD-173'-16025', PTB: 16083'

Local Co-ordinate Reference: Well No. 1H
TVD Reference: Well @ 3357.50usft
MD Reference: Well @ 3357.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	412,301.07	815,622.32
173.00	1.00	346.00	172.99	-1.47	1.46	-0.37	1.51	346.00	412,302.53	815,621.95
Pro MWD First Survey: 173' MD										
240.00	1.20	347.40	239.98	-2.72	2.72	-0.66	2.80	346.35	412,303.79	815,621.66
330.00	0.60	342.60	329.97	-4.09	4.09	-1.01	4.21	346.17	412,305.16	815,621.31
420.00	0.10	289.00	419.97	-4.57	4.56	-1.22	4.72	345.01	412,305.63	815,621.10
511.00	0.10	357.90	510.97	-4.68	4.67	-1.30	4.84	344.44	412,305.74	815,621.02
603.00	0.10	166.90	602.97	-4.68	4.67	-1.28	4.84	344.62	412,305.74	815,621.04
694.00	0.20	32.10	693.97	-4.74	4.73	-1.18	4.87	345.96	412,305.80	815,621.14
785.00	0.20	335.90	784.96	-5.01	5.01	-1.16	5.14	346.93	412,306.08	815,621.16
876.00	0.00	90.00	875.96	-5.16	5.15	-1.23	5.29	346.60	412,306.22	815,621.09
968.00	0.20	332.70	967.96	-5.30	5.29	-1.30	5.45	346.19	412,306.36	815,621.02
1,061.00	0.00	45.30	1,060.96	-5.45	5.44	-1.38	5.61	345.81	412,306.51	815,620.94
1,156.00	0.10	200.10	1,155.96	-5.37	5.36	-1.40	5.54	345.32	412,306.43	815,620.92
1,250.00	0.20	285.60	1,249.96	-5.34	5.33	-1.59	5.56	343.38	412,306.40	815,620.73
1,345.00	0.30	212.10	1,344.96	-5.18	5.16	-1.88	5.49	339.97	412,306.23	815,620.44
1,439.00	0.30	260.30	1,438.96	-4.93	4.91	-2.26	5.40	335.33	412,305.98	815,620.06
1,533.00	0.10	321.50	1,532.96	-4.95	4.93	-2.55	5.55	332.68	412,306.00	815,619.77
1,628.00	0.20	212.50	1,627.96	-4.88	4.86	-2.69	5.55	331.03	412,305.93	815,619.63
1,722.00	0.20	215.10	1,721.96	-4.61	4.59	-2.87	5.41	327.94	412,305.66	815,619.45
1,817.00	0.80	166.80	1,816.96	-3.83	3.80	-2.82	4.73	323.49	412,304.87	815,619.50
1,912.00	1.10	159.70	1,911.94	-2.32	2.30	-2.35	3.29	314.45	412,303.37	815,619.97
2,006.00	1.60	155.00	2,005.92	-0.28	0.27	-1.48	1.50	280.25	412,301.34	815,620.84
2,100.00	2.10	163.80	2,099.87	2.57	-2.58	-0.45	2.61	189.81	412,298.49	815,621.87
2,195.00	2.50	164.40	2,194.79	6.25	-6.24	0.60	6.27	174.53	412,294.83	815,622.92
2,289.00	2.90	168.60	2,288.69	10.56	-10.55	1.62	10.67	171.27	412,290.52	815,623.94
2,384.00	2.90	173.80	2,383.57	15.31	-15.29	2.35	15.47	171.25	412,285.78	815,624.67

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Project: Lea County, NM(NAD 83)
Site: Dogie Draw Fed Com 25-34-14 TB
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Wellbore: OH
Design: MWD-173'-16025', PTB: 16083'

Local Co-ordinate Reference: Well No. 1H
TVD Reference: Well @ 3357.50usft
MD Reference: Well @ 3357.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
5,027.00	1.90	132.20	5,025.39	35.56	-35.22	40.94	54.00	130.71	412,265.85	815,663.26
5,122.00	1.80	123.10	5,120.34	37.45	-37.09	43.35	57.05	130.55	412,263.98	815,665.67
5,216.00	0.10	111.40	5,214.32	38.30	-37.93	44.67	58.60	130.34	412,263.14	815,666.99
5,283.00	0.30	146.60	5,281.32	38.47	-38.10	44.82	58.82	130.37	412,262.97	815,667.14
5,399.00	1.00	138.50	5,397.31	39.49	-39.11	45.65	60.11	130.58	412,261.96	815,667.97
5,493.00	1.00	127.20	5,491.30	40.61	-40.22	46.85	61.75	130.64	412,260.85	815,669.17
5,588.00	1.00	128.90	5,586.29	41.64	-41.24	48.16	63.40	130.58	412,259.83	815,670.48
5,682.00	0.80	294.70	5,680.28	41.88	-41.48	48.20	63.59	130.72	412,259.59	815,670.52
5,777.00	0.70	277.50	5,775.27	41.52	-41.13	47.02	62.47	131.18	412,259.94	815,669.34
5,871.00	0.60	289.80	5,869.27	41.27	-40.89	45.99	61.54	131.64	412,260.18	815,668.31
5,965.00	0.60	290.10	5,963.26	40.93	-40.55	45.06	60.62	131.98	412,260.52	815,667.38
6,060.00	0.70	291.00	6,058.26	40.54	-40.17	44.05	59.62	132.36	412,260.90	815,666.37
6,154.00	0.40	294.00	6,152.25	40.19	-39.83	43.22	58.77	132.67	412,261.24	815,665.54
6,248.00	0.60	308.80	6,246.25	39.75	-39.39	42.54	57.97	132.80	412,261.68	815,664.86
6,343.00	0.30	296.10	6,341.25	39.32	-38.97	41.92	57.24	132.91	412,262.10	815,664.24
6,437.00	0.40	296.00	6,435.24	39.06	-38.72	41.41	56.69	133.08	412,262.35	815,663.73
6,532.00	0.40	322.50	6,530.24	38.65	-38.31	40.91	56.05	133.12	412,262.76	815,663.23
6,626.00	0.50	299.30	6,624.24	38.18	-37.85	40.35	55.32	133.17	412,263.22	815,662.67
6,720.00	0.60	319.80	6,718.23	37.60	-37.27	39.68	54.44	133.21	412,263.80	815,662.00
6,815.00	0.60	323.50	6,813.23	36.82	-36.49	39.06	53.45	133.05	412,264.58	815,661.38
6,909.00	0.50	309.80	6,907.22	36.15	-35.83	38.45	52.56	132.98	412,265.24	815,660.77
7,003.00	0.60	312.20	7,001.22	35.56	-35.24	37.77	51.66	133.01	412,265.83	815,660.09
7,098.00	0.50	319.60	7,096.22	34.90	-34.59	37.13	50.75	132.97	412,266.48	815,659.45
7,192.00	0.40	306.40	7,190.21	34.39	-34.08	36.60	50.02	132.96	412,266.99	815,658.92
7,286.00	0.60	321.20	7,284.21	33.81	-33.50	36.03	49.20	132.92	412,267.57	815,658.35
7,381.00	0.50	315.10	7,379.21	33.12	-32.82	35.43	48.30	132.82	412,268.25	815,657.75
7,476.00	0.50	326.80	7,474.20	32.47	-32.18	34.91	47.48	132.67	412,268.89	815,657.23



ProDirectional Survey Report



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10,120.00	1.50	110.40	10,117.91	37.49	-37.25	28.61	46.97	142.47	412,263.82	815,650.93
10,214.00	1.50	97.00	10,211.88	38.08	-37.83	30.98	48.90	140.68	412,263.24	815,653.30
10,309.00	1.40	87.70	10,306.85	38.21	-37.93	33.38	50.53	138.65	412,263.14	815,655.70
10,403.00	1.40	70.30	10,400.82	37.80	-37.50	35.61	51.71	136.48	412,263.57	815,657.93
10,498.00	1.80	48.70	10,495.78	36.44	-36.12	37.82	52.30	133.69	412,264.95	815,660.14
10,592.00	1.20	59.20	10,589.75	34.98	-34.64	39.77	52.75	131.06	412,266.43	815,662.09
10,686.00	0.60	67.20	10,683.74	34.29	-33.95	41.07	53.29	129.58	412,267.12	815,663.39
10,781.00	0.30	68.70	10,778.74	34.01	-33.67	41.76	53.64	128.87	412,267.40	815,664.08
10,874.00	0.20	20.40	10,871.74	33.78	-33.43	42.05	53.71	128.48	412,267.64	815,664.37
10,969.00	0.20	157.30	10,966.74	33.77	-33.42	42.17	53.81	128.40	412,267.65	815,664.49
11,063.00	1.60	174.60	11,060.72	35.23	-34.88	42.35	54.87	129.47	412,266.19	815,664.67
11,158.00	3.00	176.80	11,155.64	39.04	-38.68	42.62	57.56	132.23	412,262.39	815,664.94
11,252.00	3.30	199.80	11,249.50	44.03	-43.69	41.84	60.49	136.24	412,257.38	815,664.16
11,346.00	2.60	214.20	11,343.38	48.33	-47.99	39.72	62.30	140.39	412,253.08	815,662.04
11,441.00	1.70	206.50	11,438.31	51.35	-51.04	37.88	63.56	143.41	412,250.03	815,660.20
11,535.00	1.60	202.20	11,532.27	53.81	-53.50	36.77	64.92	145.50	412,247.57	815,659.09
11,580.00	1.90	200.50	11,577.25	55.08	-54.78	36.27	65.70	146.49	412,246.29	815,658.59
11,653.00	2.00	199.40	11,650.21	57.41	-57.12	35.42	67.21	148.19	412,243.95	815,657.74
11,697.00	2.30	191.90	11,694.18	58.99	-58.70	34.98	68.34	149.21	412,242.37	815,657.30
11,792.00	2.00	191.80	11,789.11	62.48	-62.19	34.25	71.00	151.16	412,238.88	815,656.57
11,885.00	2.00	181.90	11,882.06	65.68	-65.40	33.87	73.65	152.62	412,235.67	815,656.19
11,980.00	9.70	194.30	11,976.49	75.09	-74.83	31.83	81.32	156.96	412,226.24	815,654.15
12,074.00	22.40	180.90	12,066.67	100.77	-100.52	29.58	104.79	163.60	412,200.55	815,651.90
12,168.00	33.30	184.40	12,149.66	144.52	-144.29	27.32	146.86	169.28	412,156.78	815,649.64
12,263.00	41.80	184.60	12,224.91	202.14	-201.96	22.77	203.24	173.57	412,099.11	815,645.09
12,356.00	54.60	182.10	12,286.78	271.17	-271.03	18.88	271.68	176.02	412,030.04	815,641.20
12,451.00	61.30	179.20	12,337.17	351.62	-351.48	18.04	351.95	177.06	411,949.59	815,640.36

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
15,023.00	87.00	178.10	12,424.71	2,912.65	-2,912.20	65.44	2,912.94	178.71	409,388.87	815,687.76
15,118.00	89.50	177.60	12,427.61	3,007.56	-3,007.08	69.00	3,007.87	178.69	409,293.99	815,691.32
15,212.00	89.50	179.80	12,428.44	3,101.54	-3,101.05	71.13	3,101.86	178.69	409,200.02	815,693.45
15,307.00	91.30	180.60	12,427.77	3,196.52	-3,196.04	70.80	3,196.83	178.73	409,105.03	815,693.12
15,402.00	89.90	180.40	12,426.78	3,291.50	-3,291.03	69.97	3,291.77	178.78	409,010.04	815,692.29
15,497.00	89.60	181.10	12,427.19	3,386.48	-3,386.02	68.73	3,386.72	178.84	408,915.05	815,691.05
15,593.00	89.20	181.40	12,428.20	3,482.43	-3,481.99	66.64	3,482.63	178.90	408,819.08	815,688.96
15,687.00	88.30	181.10	12,430.25	3,576.36	-3,575.95	64.59	3,576.53	178.97	408,725.12	815,686.91
15,782.00	88.70	180.20	12,432.73	3,671.31	-3,670.91	63.51	3,671.46	179.01	408,630.16	815,685.83
15,877.00	91.30	180.70	12,432.73	3,766.29	-3,765.90	62.76	3,766.42	179.05	408,535.17	815,685.08
15,972.00	91.70	181.90	12,430.25	3,861.21	-3,860.84	60.61	3,861.31	179.10	408,440.23	815,682.93
16,025.00	91.20	181.60	12,428.91	3,914.15	-3,913.79	58.99	3,914.24	179.14	408,387.28	815,681.31
Last Survey: 16025' MD										
16,083.00	91.20	181.60	12,427.69	3,972.10	-3,971.76	57.37	3,972.17	179.17	408,329.31	815,679.69
PTB: 16083' MD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
173.00	172.99	1.46	-0.37	Pro MWD First Survey: 173' MD
16,025.00	12,428.91	-3,913.79	58.99	Last Survey: 16025' MD
16,083.00	12,427.69	-3,971.76	57.37	PTB: 16083' MD