



Pro Directional

Survey Report

OCT 16 2018



30-015-45346

RECEIVED

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WD #3H
Project:	Eddy County, NM	TVD Reference:	Well @ 3025.00usft (GL: 3000' + KB: 25' (PD594))
Site:	Rick Deckard State 25-28-4 (2-3-6-8-9)	MD Reference:	Well @ 3025.00usft (GL: 3000' + KB: 25' (PD594))
Well:	WD #3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Project	Eddy County, NM		
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	Rick Deckard State 25-28-4 (2-3-6-8-9)				
Site Position:		Northing:	423,513.57 usft	Latitude:	32.164132
From:	Map	Easting:	573,687.59 usft	Longitude:	-104.095203
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well	WD #3H					
Well Position	+N/-S	0.00 usft	Northing:	423,513.54 usft	Latitude:	32.164132
	+E/-W	0.00 usft	Easting:	573,657.55 usft	Longitude:	-104.095300
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,000.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/7/2018	7.22	59.92	47,984.50

Design	Prelim Plan A				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	180.16	

Survey Tool Program	Date	10/12/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,850.00	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1	
1,850.00	5,400.00	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1	
5,400.00	10,000.00	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1	
10,000.00	15,282.42	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1	

Planned 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
[RickDeckard#3H]FTP									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00

Company: Marathon Oil
Project: Eddy County, NM

Site: Rick Deckard State 25-28-4 (2-3-6-8-9)

Well: WD #3H

Wellbore: OH

Design: Prelim Plan A

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well WD #3H

Well @ 3025.00usft (GL: 3000' + KB: 25'
(PD594))

Well @ 3025.00usft (GL: 3000' + KB: 25'
(PD594))

Grid

Minimum Curvature

WellPlanner1

Planned 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)
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	2.00	299.14	1,299.98	0.85	-1.52	-0.85	2.00	2.00	0.00
1,400.00	4.00	299.14	1,399.84	3.40	-6.10	-3.38	2.00	2.00	0.00
1,500.00	6.00	299.14	1,499.45	7.64	-13.71	-7.60	2.00	2.00	0.00
1,600.00	8.00	299.14	1,598.70	13.58	-24.35	-13.51	2.00	2.00	0.00
1,700.00	10.00	299.14	1,697.47	21.19	-38.01	-21.09	2.00	2.00	0.00
1,800.00	12.00	299.14	1,795.62	30.48	-54.68	-30.33	2.00	2.00	0.00
1,900.00	14.00	299.14	1,893.06	41.43	-74.33	-41.23	2.00	2.00	0.00
2,000.00	14.00	299.14	1,990.08	53.21	-95.46	-52.95	0.00	0.00	0.00
2,100.00	14.00	299.14	2,087.11	64.99	-116.59	-64.67	0.00	0.00	0.00
2,200.00	14.00	299.14	2,184.14	76.77	-137.72	-76.39	0.00	0.00	0.00
2,300.00	14.00	299.14	2,281.17	88.55	-158.85	-88.11	0.00	0.00	0.00
2,400.00	14.00	299.14	2,378.20	100.33	-179.98	-99.83	0.00	0.00	0.00
2,500.00	14.00	299.14	2,475.23	112.11	-201.11	-111.55	0.00	0.00	0.00
2,600.00	14.00	299.14	2,572.26	123.89	-222.24	-123.27	0.00	0.00	0.00
2,700.00	14.00	299.14	2,669.29	135.67	-243.37	-134.99	0.00	0.00	0.00
2,800.00	14.00	299.14	2,766.32	147.45	-264.50	-146.71	0.00	0.00	0.00
2,900.00	14.00	299.14	2,863.35	159.23	-285.63	-158.43	0.00	0.00	0.00
3,000.00	14.00	299.14	2,960.38	171.01	-306.76	-170.15	0.00	0.00	0.00
3,100.00	14.00	299.14	3,057.41	182.79	-327.90	-181.87	0.00	0.00	0.00
3,200.00	14.00	299.14	3,154.44	194.57	-349.03	-193.59	0.00	0.00	0.00
3,300.00	14.00	299.14	3,251.47	206.35	-370.16	-205.31	0.00	0.00	0.00
3,400.00	14.00	299.14	3,348.50	218.13	-391.29	-217.03	0.00	0.00	0.00
3,500.00	14.00	299.14	3,445.53	229.91	-412.42	-228.75	0.00	0.00	0.00
3,600.00	14.00	299.14	3,542.56	241.69	-433.55	-240.48	0.00	0.00	0.00
3,700.00	14.00	299.14	3,639.59	253.47	-454.68	-252.20	0.00	0.00	0.00
3,800.00	14.00	299.14	3,736.62	265.25	-475.81	-263.92	0.00	0.00	0.00
3,900.00	14.00	299.14	3,833.65	277.03	-496.94	-275.64	0.00	0.00	0.00
4,000.00	14.00	299.14	3,930.68	288.80	-518.07	-287.36	0.00	0.00	0.00
4,100.00	14.00	299.14	4,027.71	300.58	-539.20	-299.08	0.00	0.00	0.00
4,200.00	14.00	299.14	4,124.74	312.36	-560.33	-310.80	0.00	0.00	0.00
4,300.00	14.00	299.14	4,221.77	324.14	-581.46	-322.52	0.00	0.00	0.00
4,400.00	14.00	299.14	4,318.79	335.92	-602.59	-334.24	0.00	0.00	0.00
4,500.00	14.00	299.14	4,415.82	347.70	-623.72	-345.96	0.00	0.00	0.00
4,600.00	14.00	299.14	4,512.85	359.48	-644.86	-357.68	0.00	0.00	0.00

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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned 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)
4,700.00	14.00	299.14	4,609.88	371.26	-665.99	-369.40	0.00	0.00	0.00
4,800.00	14.00	299.14	4,706.91	383.04	-687.12	-381.12	0.00	0.00	0.00
4,900.00	14.00	299.14	4,803.94	394.82	-708.25	-392.84	0.00	0.00	0.00
5,000.00	14.00	299.14	4,900.97	406.60	-729.38	-404.56	0.00	0.00	0.00
5,100.00	14.00	299.14	4,998.00	418.38	-750.51	-416.28	0.00	0.00	0.00
5,200.00	14.00	299.14	5,095.03	430.16	-771.64	-428.00	0.00	0.00	0.00
5,300.00	14.00	299.14	5,192.06	441.94	-792.77	-439.72	0.00	0.00	0.00
5,400.00	14.00	299.14	5,289.09	453.72	-813.90	-451.44	0.00	0.00	0.00
5,500.00	14.00	299.14	5,386.12	465.50	-835.03	-463.16	0.00	0.00	0.00
5,600.00	14.00	299.14	5,483.15	477.28	-856.16	-474.88	0.00	0.00	0.00
5,700.00	14.00	299.14	5,580.18	489.06	-877.29	-486.61	0.00	0.00	0.00
5,800.00	14.00	299.14	5,677.21	500.84	-898.42	-498.33	0.00	0.00	0.00
5,900.00	14.00	299.14	5,774.24	512.62	-919.55	-510.05	0.00	0.00	0.00
6,000.00	14.00	299.14	5,871.27	524.40	-940.68	-521.77	0.00	0.00	0.00
6,100.00	14.00	299.14	5,968.30	536.18	-961.82	-533.49	0.00	0.00	0.00
6,200.00	14.00	299.14	6,065.33	547.95	-982.95	-545.21	0.00	0.00	0.00
6,300.00	14.00	299.14	6,162.36	559.73	-1,004.08	-556.93	0.00	0.00	0.00
6,400.00	14.00	299.14	6,259.39	571.51	-1,025.21	-568.65	0.00	0.00	0.00
6,500.00	14.00	299.14	6,356.42	583.29	-1,046.34	-580.37	0.00	0.00	0.00
6,600.00	14.00	299.14	6,453.45	595.07	-1,067.47	-592.09	0.00	0.00	0.00
6,700.00	14.00	299.14	6,550.47	606.85	-1,088.60	-603.81	0.00	0.00	0.00
6,800.00	14.00	299.14	6,647.50	618.63	-1,109.73	-615.53	0.00	0.00	0.00
6,900.00	14.00	299.14	6,744.53	630.41	-1,130.86	-627.25	0.00	0.00	0.00
7,000.00	14.00	299.14	6,841.56	642.19	-1,151.99	-638.97	0.00	0.00	0.00
7,100.00	14.00	299.14	6,938.59	653.97	-1,173.12	-650.69	0.00	0.00	0.00
7,200.00	14.00	299.14	7,035.62	665.75	-1,194.25	-662.41	0.00	0.00	0.00
7,300.90	14.00	299.14	7,133.52	677.64	-1,215.57	-674.24	0.00	0.00	0.00
7,400.00	12.02	299.14	7,230.08	688.50	-1,235.06	-685.05	2.00	-2.00	0.00
7,500.00	10.02	299.14	7,328.23	697.80	-1,251.75	-694.30	2.00	-2.00	0.00
7,600.00	8.02	299.14	7,426.99	705.43	-1,265.44	-701.90	2.00	-2.00	0.00
7,700.00	6.02	299.14	7,526.23	711.38	-1,276.11	-707.82	2.00	-2.00	0.00
7,800.00	4.02	299.14	7,625.85	715.64	-1,283.75	-712.05	2.00	-2.00	0.00
7,900.00	2.02	299.14	7,725.70	718.20	-1,288.35	-714.60	2.00	-2.00	0.00
8,000.90	0.00	0.00	7,826.58	719.07	-1,289.90	-715.47	2.00	-2.00	0.00
8,100.00	0.00	0.00	7,925.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
8,200.00	0.00	0.00	8,025.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
8,300.00	0.00	0.00	8,125.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
8,400.00	0.00	0.00	8,225.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
8,500.00	0.00	0.00	8,325.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
8,600.00	0.00	0.00	8,425.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
8,700.00	0.00	0.00	8,525.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
8,800.00	0.00	0.00	8,625.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00

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Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well WD #3H
TVD Reference: Well @ 3025.00usft (GL: 3000' + KB: 25' (PD594))
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Planned 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)
8,900.00	0.00	0.00	8,725.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,000.00	0.00	0.00	8,825.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,100.00	0.00	0.00	8,925.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,200.00	0.00	0.00	9,025.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,300.00	0.00	0.00	9,125.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,400.00	0.00	0.00	9,225.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,500.00	0.00	0.00	9,325.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,600.00	0.00	0.00	9,425.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,700.00	0.00	0.00	9,525.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,800.00	0.00	0.00	9,625.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
9,900.00	0.00	0.00	9,725.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
10,000.00	0.00	0.00	9,825.68	719.07	-1,289.90	-715.47	0.00	0.00	0.00
10,021.32	0.00	0.00	9,847.00	719.07	-1,289.90	-715.47	0.00	0.00	0.00
[RickDeckard#3H]KOP									
10,050.00	2.87	180.16	9,875.67	718.35	-1,289.90	-714.75	10.00	10.00	0.00
10,100.00	7.87	180.16	9,925.43	713.68	-1,289.92	-710.07	10.00	10.00	0.00
10,150.00	12.87	180.16	9,974.60	704.68	-1,289.94	-701.08	10.00	10.00	0.00
10,200.00	17.87	180.16	10,022.80	691.43	-1,289.98	-687.83	10.00	10.00	0.00
10,250.00	22.87	180.16	10,069.66	674.04	-1,290.03	-670.43	10.00	10.00	0.00
10,300.00	27.87	180.16	10,114.82	652.62	-1,290.09	-649.02	10.00	10.00	0.00
10,350.00	32.87	180.16	10,157.95	627.35	-1,290.16	-623.75	10.00	10.00	0.00
10,400.00	37.87	180.16	10,198.71	598.42	-1,290.24	-594.82	10.00	10.00	0.00
10,450.00	42.87	180.16	10,236.79	566.05	-1,290.33	-562.44	10.00	10.00	0.00
10,500.00	47.87	180.16	10,271.91	530.48	-1,290.43	-526.87	10.00	10.00	0.00
10,550.00	52.87	180.16	10,303.79	491.98	-1,290.54	-488.37	10.00	10.00	0.00
10,600.00	57.87	180.16	10,332.20	450.85	-1,290.65	-447.25	10.00	10.00	0.00
10,650.00	62.87	180.16	10,356.91	407.41	-1,290.77	-403.80	10.00	10.00	0.00
10,700.00	67.87	180.16	10,377.74	361.97	-1,290.90	-358.36	10.00	10.00	0.00
10,750.00	72.87	180.16	10,394.54	314.89	-1,291.03	-311.29	10.00	10.00	0.00
10,800.00	77.87	180.16	10,407.16	266.53	-1,291.17	-262.92	10.00	10.00	0.00
10,850.00	82.87	180.16	10,415.52	217.25	-1,291.31	-213.64	10.00	10.00	0.00
10,900.00	87.87	180.16	10,419.56	167.43	-1,291.45	-163.82	10.00	10.00	0.00
10,921.31	90.00	180.16	10,419.96	146.12	-1,291.51	-142.51	10.00	10.00	0.00
11,000.00	90.00	180.16	10,419.96	67.43	-1,291.73	-63.83	0.00	0.00	0.00
11,100.00	90.00	180.16	10,419.96	-32.57	-1,292.01	36.17	0.00	0.00	0.00
11,200.00	90.00	180.16	10,419.96	-132.57	-1,292.29	136.17	0.00	0.00	0.00
11,300.00	90.00	180.16	10,419.96	-232.56	-1,292.57	236.17	0.00	0.00	0.00
11,400.00	90.00	180.16	10,419.96	-332.56	-1,292.85	336.17	0.00	0.00	0.00
11,500.00	90.00	180.16	10,419.96	-432.56	-1,293.13	436.17	0.00	0.00	0.00
11,600.00	90.00	180.16	10,419.96	-532.56	-1,293.41	536.17	0.00	0.00	0.00
11,700.00	90.00	180.16	10,419.97	-632.56	-1,293.69	636.17	0.00	0.00	0.00
11,800.00	90.00	180.16	10,419.97	-732.56	-1,293.97	736.17	0.00	0.00	0.00



Pro Directional Survey Report



Company: Marathon Oil
Project: Eddy County, NM
Site: Rick Deckard State 25-28-4 (2-3-6-8-9)
Well: WD #3H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well WD #3H
TVD Reference: Well @ 3025.00usft (GL: 3000' + KB: 25' (PD594))
MD Reference: Well @ 3025.00usft (GL: 3000' + KB: 25' (PD594))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned 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)
11,900.00	90.00	180.16	10,419.97	-832.56	-1,294.25	836.17	0.00	0.00	0.00
12,000.00	90.00	180.16	10,419.97	-932.56	-1,294.53	936.17	0.00	0.00	0.00
12,100.00	90.00	180.16	10,419.97	-1,032.56	-1,294.81	1,036.17	0.00	0.00	0.00
12,200.00	90.00	180.16	10,419.97	-1,132.56	-1,295.09	1,136.17	0.00	0.00	0.00
12,300.00	90.00	180.16	10,419.97	-1,232.56	-1,295.37	1,236.17	0.00	0.00	0.00
12,400.00	90.00	180.16	10,419.97	-1,332.56	-1,295.65	1,336.17	0.00	0.00	0.00
12,500.00	90.00	180.16	10,419.97	-1,432.56	-1,295.93	1,436.17	0.00	0.00	0.00
12,600.00	90.00	180.16	10,419.97	-1,532.56	-1,296.21	1,536.17	0.00	0.00	0.00
12,700.00	90.00	180.16	10,419.98	-1,632.56	-1,296.49	1,636.17	0.00	0.00	0.00
12,800.00	90.00	180.16	10,419.98	-1,732.56	-1,296.77	1,736.17	0.00	0.00	0.00
12,900.00	90.00	180.16	10,419.98	-1,832.56	-1,297.06	1,836.17	0.00	0.00	0.00
13,000.00	90.00	180.16	10,419.98	-1,932.56	-1,297.34	1,936.17	0.00	0.00	0.00
13,100.00	90.00	180.16	10,419.98	-2,032.56	-1,297.62	2,036.17	0.00	0.00	0.00
13,200.00	90.00	180.16	10,419.98	-2,132.56	-1,297.90	2,136.17	0.00	0.00	0.00
13,300.00	90.00	180.16	10,419.98	-2,232.56	-1,298.18	2,236.17	0.00	0.00	0.00
13,400.00	90.00	180.16	10,419.98	-2,332.56	-1,298.46	2,336.17	0.00	0.00	0.00
13,500.00	90.00	180.16	10,419.98	-2,432.56	-1,298.74	2,436.17	0.00	0.00	0.00
13,600.00	90.00	180.16	10,419.98	-2,532.56	-1,299.02	2,536.17	0.00	0.00	0.00
13,700.00	90.00	180.16	10,419.99	-2,632.56	-1,299.30	2,636.17	0.00	0.00	0.00
13,800.00	90.00	180.16	10,419.99	-2,732.55	-1,299.58	2,736.17	0.00	0.00	0.00
13,900.00	90.00	180.16	10,419.99	-2,832.55	-1,299.86	2,836.17	0.00	0.00	0.00
14,000.00	90.00	180.16	10,419.99	-2,932.55	-1,300.14	2,936.17	0.00	0.00	0.00
14,100.00	90.00	180.16	10,419.99	-3,032.55	-1,300.42	3,036.17	0.00	0.00	0.00
14,200.00	90.00	180.16	10,419.99	-3,132.55	-1,300.70	3,136.17	0.00	0.00	0.00
14,300.00	90.00	180.16	10,419.99	-3,232.55	-1,300.98	3,236.17	0.00	0.00	0.00
14,400.00	90.00	180.16	10,419.99	-3,332.55	-1,301.26	3,336.17	0.00	0.00	0.00
14,500.00	90.00	180.16	10,419.99	-3,432.55	-1,301.54	3,436.17	0.00	0.00	0.00
14,600.00	90.00	180.16	10,419.99	-3,532.55	-1,301.82	3,536.17	0.00	0.00	0.00
14,700.00	90.00	180.16	10,419.99	-3,632.55	-1,302.10	3,636.17	0.00	0.00	0.00
14,800.00	90.00	180.16	10,420.00	-3,732.55	-1,302.38	3,736.17	0.00	0.00	0.00
14,900.00	90.00	180.16	10,420.00	-3,832.55	-1,302.66	3,836.17	0.00	0.00	0.00
15,000.00	90.00	180.16	10,420.00	-3,932.55	-1,302.94	3,936.17	0.00	0.00	0.00
15,100.00	90.00	180.16	10,420.00	-4,032.55	-1,303.22	4,036.17	0.00	0.00	0.00
15,200.00	90.00	180.16	10,420.00	-4,132.55	-1,303.51	4,136.17	0.00	0.00	0.00
15,237.42	90.00	180.16	10,420.00	-4,169.97	-1,303.61	4,173.59	0.00	0.00	0.00
[RickDeckard#3H]LTP/BHL									
15,282.42	90.00	180.16	10,420.00	-4,214.97	-1,303.74	4,218.59	0.00	0.00	0.00



Pro Directional
Survey Report



Company: Marathon Oil
Project: Eddy County, NM

Site: Rick Deckard State 25-28-4 (2-3-6-8-9)

Well: WD #3H

Wellbore: OH

Design: Prelim Plan A

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well WD #3H

Well @ 3025.00usft (GL: 3000' + KB: 25'
(PD594))

Well @ 3025.00usft (GL: 3000' + KB: 25'
(PD594))

Grid

Minimum Curvature

WellPlanner1

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
[RickDeckard#3H]FTP - plan misses target center by 1380.11usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	489.07	-1,290.55	424,002.61	572,367.00	32.165484	-104.099467
[RickDeckard#3H]KOP - plan hits target center - Point	0.00	0.00	9,847.00	719.07	-1,289.90	424,232.61	572,367.65	32.166116	-104.099463
[RickDeckard#3H]LTP/B - plan hits target center - Point	0.00	0.00	10,420.0 0	-4,169.97	-1,303.61	419,343.57	572,353.94	32.152676	-104.099542

Checked By: _____ Approved By: _____ Date: _____

Marathon Oil Corporation

Marathon Oil
Eddy County, NM
Rick Deckard State 25-28-4 (2-3-6-8-8)
WD #3H
Prelim Plan A
GL: 3000' + KB: 25' (PD594)

US State Plane 1927 (Exact solution)
NAD 1983 (NADCON CONUS)
Datum: 1989
New Mexico East 3001
Mean Sea Level

RKB Elevation: Well @ 3025.00usf (GL: 3000' + KB: 25' (PD594))

N-S	E-W	Northing	Easting	Latitude	Longitude	Spot
0.00	0.00	423513.54	573657.55	32.164132	-104.095300	

SECTION DETAILS

Sec	MD	Inc	Azt	TVD	N-S	E-W	Diag	V-Sect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00
3	1900.00	14.00	299.14	1893.06	41.43	-74.33	2.00	-41.23
4	7300.90	14.00	299.14	7133.52	677.64	-1215.57	0.00	-674.24
5	8000.90	0.00	0.00	7826.58	719.07	-1289.90	2.00	-718.47
6	10021.32	0.00	0.00	9847.00	719.07	-1289.90	0.00	-718.47
7	10921.31	90.00	180.16	10419.86	146.12	-1291.51	10.00	-142.51
8	15237.42	90.00	180.16	10420.00	-4169.97	-1303.61	0.00	4173.59
9	15282.42	90.00	180.16	10420.00	-4214.97	-1303.74	0.00	4218.59

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	N-S	E-W	Northing	Easting
[RickDeckard3H]FTP	0.00	489.07	-1290.55	424002.61	572367.00
[RickDeckard3H]KOP	9847.00	719.07	-1289.90	424232.81	572367.85
[RickDeckard3H]JTP/PHL	10420.00	-4169.97	-1303.61	418043.97	572353.94

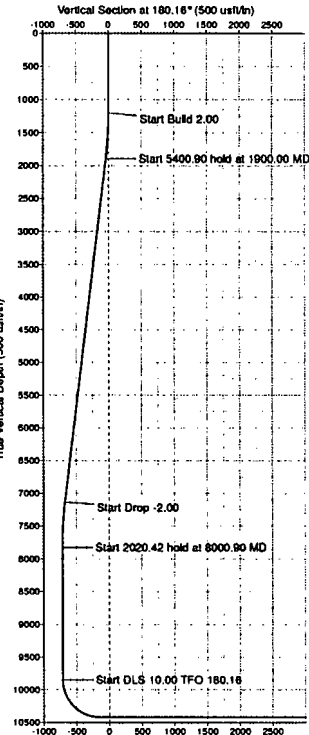


Admits to Grid North
True North: 6.13°
Magnetic North: 7.09°
Magnetic Field
Strength: 31784.5nT
DB Angle: 58.52°
Date: 5/7/2018
Model: HDGM

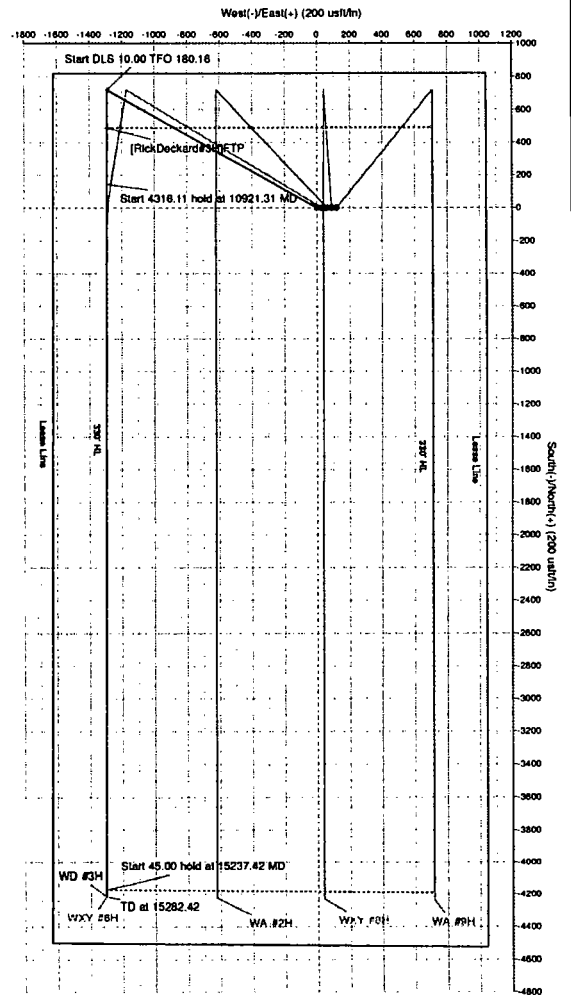
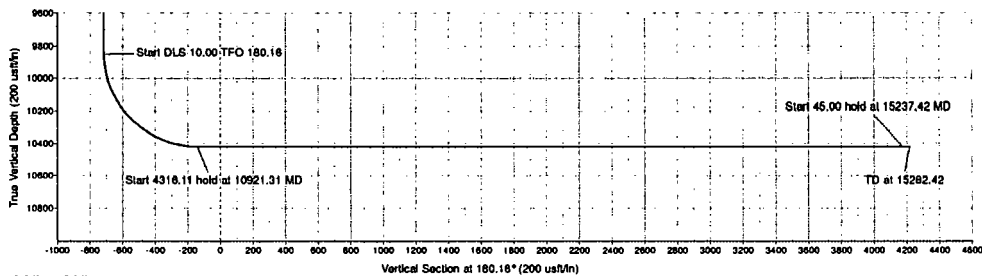
Azimuth Corrections

Total Magnetic Corr. (M to G): 7.09°

Declination (M to T): 7.22° East



Target Line: 10420' TVD @ 0° VS: 90° INC



36" x 48"