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District I
1625 N. French Dr., Hobbs NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 718-9720

District III
1000 Rio Brizos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT
As-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45345	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code 326317	Property Name RICK DECKARD 4 WA STATE	⁶ Well Number 9H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 3000'

¹⁰ Surface Location									
UL or lot no. C	Section 4	Township T25S	Range R28E	Lot Idn	Feet from the 820	North/South line NORTH	Feet from the 1742	East/West line WEST	County EDDY
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. N	Section 4	Township T25S	Range R28E	Lot Idn	Feet from the 286	North/South line SOUTH	Feet from the 2369	East/West line WEST	County EDDY
¹² Dedicated Acres 321.12	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

SECTION 32 A SECTION 33 SECTION 5 SECTION 8 D SECTION 9 SECTION 10	SURFACE HOLE LOCATION 820' FWL 742' FWL SECTION 4 NAD 83, SPCS NM EAST X:614961.77' / Y:423571.74' LAT:32.16425315N / LON:104.09540331W NAD 27, SPCS NM EAST X:573777.51' / Y:423513.60' LAT:32.16413118N / LON:104.09491190W SECTION 4 SECTION 3 KICK OFF POINT 9,113' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X:615525.41' / Y:424291.72' LAT:32.16622887N / LON:104.09357503W NAD 27, SPCS NM EAST X:574341.66' / Y:424233.56' LAT:32.16610688N / LON:104.09308362W FIRST TAKE POINT 9,602' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X:615555.56' / Y:424061.75' LAT:32.16559652N / LON:104.09347922W NAD 27, SPCS NM EAST X:574371.80' / Y:424003.60' LAT:32.16547452N / LON:104.09298786W LAST TAKE POINT 14,303' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X:615575.92' / Y:419380.70' LAT:32.15272861N / LON:104.09344714W NAD 27, SPCS NM EAST X:574392.06' / Y:419322.64' LAT:32.15260644N / LON:104.09295616W BOTTOM HOLE LOCATION 14,348' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X:615576.77' / Y:419336.30' LAT:32.15260654N / LON:104.09344471W NAD 27, SPCS NM EAST X:574392.91' / Y:419279.24' LAT:32.15248438N / LON:104.09295374W CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 613221.63' / Y: 424390.57' B - X: 615881.69' / Y: 424391.91' C - X: 615885.84' / Y: 419047.50' D - X: 613206.84' / Y: 419074.98' CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 572037.93' / Y: 424332.44' B - X: 574697.83' / Y: 424333.75' C - X: 574701.96' / Y: 418889.44' D - X: 572023.03' / Y: 419016.96'	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>Adrian Covarrubias</i> Date: 12/12/2019 Printed Name: Adrian Covarrubias E-mail Address: ¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well surface location shown on this plat was plotted from field notes of the as-staked surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Data used for underground measurements were provided by others for reference only and does not constitute field measurements performed by R-Squared Global. DECEMBER 10, 2019 Date of Survey Signature and Seal of Professional Surveyor: <i>David W. Myers</i> Certificate Number: DAVID W. MYERS 11403
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DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 0.999915284 CONVERGENCE: 0.1265074856; NOTE: ALL DIMENSIONS IN U.S. FEET

1	12/10/2019	DEF
REV.	DATE	BY

SHEET 1 OF 1
JOB No. R3889_008

RUP 1-31-2020



PRODIRECTIONAL

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JAN 09 2020

EMNRD-OCD ARTESIA



Marathon Oil Corporation

**Rick Deckard State 25-28-4 WA No. 9H
Eddy County, NM**

June 20, 2019

**Job# LNM1444119
API# 30-015-45345**

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

June 20, 2019



Marathon Oil
Corporation

Operator Name: Marathon Oil
Well Name: Rick Deckard State 25-28-4 WA No. 9H
County/Parish: Eddy County,
State: NM
Rig Name: Precision 594
Job Number: LNM1444119

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	509' MD – 14,281' MD	14,348' MD	05/16/19 – 05/24/19	MWD

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com

The Standard of Excellence in Directional Supervision



Marathon Oil

**Eddy County, NM
Rick Deckard State 25-28-4 WA
No. 9H
OH**

Survey: ProDirectional

Survey Report

20 June, 2019



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Rick Deckard State 25-28-4 WA
Well: No. 9H
Wellbore: OH
Design: Gyro-MWD91-14281', PTB: 14348'

Local Co-ordinate Reference: Well No. 9H
TVD Reference: Well @ 3025.00usft
MD Reference: Well @ 3025.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

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

Site: Rick Deckard State 25-28-4 WA
Site Position:
From: Map
Position Uncertainty: 0.00 usft
Northing: 419,553.09 usft
Easting: 617,306.90 usft
Slot Radius: 13-3/16 "
Latitude: 32.153192
Longitude: -104.087853
Grid Convergence: 0.13 °

Well: No. 9H, LNM1444019
Well Position **+N/-S** 0.00 usft
+E/-W 0.00 usft
Position Uncertainty 0.00 usft
Northing: 423,571.74 usft
Easting: 614,961.27 usft
Wellhead Elevation: usft
Latitude: 32.164253
Longitude: -104.095403
Ground Level: 3,000.00 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/10/2019	7.12	59.88	47,887.10

Design: Gyro-MWD91-14281', PTB: 14348'
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	179.96



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Rick Deckard State 25-28-4 WA
Well: No. 9H
Wellbore: OH
Design: Gyro-MWD91-14281', PTB: 14348'

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well No. 9H
Well @ 3025.00usft
Well @ 3025.00usft
Grid
Minimum Curvature
WellPlanner1

Survey Program Date 6/20/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
91.00	410.00	Survey #1 (OH)	GYRO-NS-CT	OWSG XYZ Accel with XY Static and Continuous Gyro
509.00	14,348.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HRGM

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	423,571.74	614,961.27
91.00	0.40	254.87	91.00	0.08	-0.08	-0.31	0.32	254.87	423,571.66	614,960.96
181.00	0.60	319.87	181.00	-0.20	0.20	-0.91	0.93	282.07	423,571.94	614,960.36
263.00	0.60	27.87	262.99	-0.90	0.90	-0.99	1.34	312.39	423,572.64	614,960.28
357.00	0.80	284.87	356.99	-1.51	1.51	-1.39	2.05	317.23	423,573.25	614,959.88
410.00	0.90	289.87	409.98	-1.74	1.74	-2.14	2.76	309.13	423,573.48	614,959.13
509.00	1.40	297.20	508.96	-2.56	2.56	-3.95	4.71	302.95	423,574.30	614,957.32
Pro MWD First Survey: 509' MD										
599.00	1.00	339.00	598.94	-3.80	3.80	-5.21	6.45	306.08	423,575.54	614,956.06
690.00	2.60	26.50	689.90	-6.39	6.38	-4.57	7.85	324.39	423,578.12	614,956.70
781.00	2.60	26.70	780.81	-10.08	10.08	-2.72	10.44	344.87	423,581.82	614,958.55
873.00	2.60	29.80	872.71	-13.75	13.75	-0.75	13.77	356.88	423,585.49	614,960.52
965.00	2.90	20.80	964.61	-17.74	17.74	1.11	17.77	3.59	423,589.48	614,962.38
1,065.00	2.20	7.30	1,064.51	-22.00	22.01	2.26	22.12	5.85	423,593.75	614,963.53
1,146.00	1.80	3.60	1,145.46	-24.82	24.82	2.53	24.95	5.83	423,596.56	614,963.80
1,235.00	2.00	10.10	1,234.41	-27.74	27.74	2.89	27.89	5.95	423,599.48	614,964.16
1,324.00	4.00	30.50	1,323.29	-31.94	31.95	4.74	32.30	8.44	423,603.69	614,966.01
1,414.00	6.50	39.40	1,412.90	-38.58	38.59	9.57	39.76	13.93	423,610.33	614,970.84
1,503.00	6.70	35.50	1,501.31	-46.70	46.71	15.78	49.30	18.67	423,618.45	614,977.05
1,592.00	5.70	37.40	1,589.79	-54.43	54.45	21.48	58.53	21.53	423,626.19	614,982.75
1,681.00	5.10	39.10	1,678.40	-61.01	61.03	26.66	66.60	23.60	423,632.77	614,987.93



ProDirectional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 9H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3025.00usft
Site:	Rick Deckard State 25-28-4 WA	MD Reference:	Well @ 3025.00usft
Well:	No. 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD91-14281', PTB: 14348'	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)	
1,770.00	5.10	48.00	1,767.04	-66.72	66.74	32.09	74.06	25.68	423,638.48	614,993.36	
1,860.00	6.60	54.70	1,856.57	-72.38	72.41	39.29	82.38	28.48	423,644.15	615,000.56	
1,949.00	8.50	50.10	1,944.80	-79.55	79.58	48.51	93.20	31.36	423,651.32	615,009.78	
2,038.00	8.90	54.70	2,032.78	-87.74	87.78	59.18	105.87	33.98	423,659.52	615,020.45	
2,128.00	9.40	59.30	2,121.63	-95.51	95.56	71.18	119.15	36.68	423,667.30	615,032.45	
2,217.00	10.10	63.90	2,209.35	-102.64	102.70	84.44	132.95	39.42	423,674.44	615,045.71	
2,306.00	10.90	67.90	2,296.86	-109.23	109.30	99.24	147.63	42.24	423,681.04	615,060.51	
2,395.00	10.60	68.30	2,384.30	-115.41	115.49	114.64	162.73	44.79	423,687.23	615,075.91	
2,434.00	10.40	68.50	2,422.64	-118.03	118.11	121.25	169.27	45.75	423,689.85	615,082.52	
2,583.00	9.10	65.70	2,569.49	-127.79	127.89	144.50	192.97	48.49	423,699.63	615,105.77	
2,672.00	8.70	56.40	2,657.42	-134.40	134.51	156.53	206.38	49.33	423,706.25	615,117.80	
2,761.00	8.60	50.30	2,745.41	-142.37	142.49	167.25	219.72	49.57	423,714.23	615,128.52	
2,851.00	9.60	41.70	2,834.28	-152.26	152.39	177.42	233.88	49.34	423,724.13	615,138.69	
2,940.00	10.30	37.80	2,921.94	-164.09	164.22	187.24	249.05	48.75	423,735.96	615,148.51	
3,029.00	10.10	37.40	3,009.54	-176.57	176.70	196.85	264.53	48.09	423,748.44	615,158.12	
3,118.00	10.30	35.00	3,097.13	-189.28	189.42	206.16	279.96	47.42	423,761.16	615,167.43	
3,208.00	10.40	33.60	3,185.67	-202.63	202.78	215.27	295.73	46.71	423,774.52	615,176.54	
3,297.00	10.40	32.70	3,273.20	-216.07	216.23	224.05	311.37	46.02	423,787.97	615,185.32	
3,386.00	9.90	31.70	3,360.81	-229.34	229.50	232.41	326.63	45.36	423,801.24	615,193.68	
3,476.00	9.70	29.90	3,449.50	-242.49	242.65	240.26	341.47	44.72	423,814.39	615,201.53	
3,565.00	9.90	28.90	3,537.20	-255.68	255.85	247.69	356.11	44.07	423,827.59	615,208.96	
3,655.00	10.00	27.60	3,625.84	-269.37	269.55	255.05	371.09	43.42	423,841.29	615,216.32	
3,744.00	10.20	25.60	3,713.47	-283.32	283.50	262.04	386.05	42.75	423,855.24	615,223.31	
3,834.00	11.20	30.40	3,801.90	-298.04	298.23	269.90	402.23	42.15	423,869.97	615,231.17	
3,923.00	11.40	30.90	3,889.18	-313.04	313.23	278.79	419.33	41.67	423,884.97	615,240.06	
4,012.00	11.00	35.80	3,976.48	-327.47	327.67	288.28	436.43	41.34	423,899.41	615,249.55	
4,101.00	10.70	37.00	4,063.89	-340.94	341.15	298.22	453.12	41.16	423,912.89	615,259.49	

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 9H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3025.00usft
Site:	Rick Deckard State 25-28-4 WA	MD Reference:	Well @ 3025.00usft
Well:	No. 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD91-14281', PTB: 14348'	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)
4,190.00	10.70	36.00	4,151.34	-354.22	354.43	308.05	469.59	40.99	423,926.17	615,269.32
4,280.00	10.90	35.10	4,239.75	-367.93	368.16	317.85	486.38	40.81	423,939.90	615,279.12
4,369.00	11.10	39.50	4,327.12	-381.42	381.65	328.14	503.32	40.69	423,953.39	615,289.41
4,459.00	11.30	41.40	4,415.40	-394.71	394.95	339.48	520.80	40.68	423,966.69	615,300.75
4,548.00	11.30	40.90	4,502.68	-407.84	408.08	350.96	538.24	40.70	423,979.82	615,312.23
4,638.00	10.90	39.70	4,590.99	-421.04	421.29	362.16	555.56	40.68	423,993.03	615,323.43
4,727.00	10.60	38.50	4,678.43	-433.91	434.17	372.63	572.16	40.64	424,005.91	615,333.90
4,816.00	10.40	41.80	4,765.94	-446.30	446.57	383.09	588.37	40.62	424,018.31	615,344.36
4,905.00	10.00	44.80	4,853.54	-457.77	458.04	393.88	604.11	40.69	424,029.78	615,355.15
4,995.00	9.10	42.80	4,942.29	-468.53	468.81	404.23	619.02	40.77	424,040.55	615,365.50
5,083.00	8.70	41.70	5,029.23	-478.59	478.88	413.38	632.62	40.80	424,050.62	615,374.65
5,173.00	8.30	41.10	5,118.24	-488.57	488.86	422.18	645.93	40.81	424,060.60	615,383.45
5,262.00	8.20	39.50	5,206.32	-498.30	498.60	430.44	658.70	40.80	424,070.34	615,391.71
5,352.00	7.90	37.20	5,295.43	-508.17	508.48	438.26	671.29	40.76	424,080.22	615,399.53
5,441.00	7.60	34.40	5,383.62	-517.90	518.21	445.29	683.24	40.67	424,089.95	615,406.56
5,530.00	7.40	31.90	5,471.86	-527.61	527.93	451.64	694.76	40.55	424,099.67	615,412.91
5,620.00	7.30	28.70	5,561.12	-537.54	537.86	457.45	706.09	40.38	424,109.60	615,418.72
5,709.00	6.20	39.00	5,649.50	-546.24	546.56	463.19	716.43	40.28	424,118.30	615,424.46
5,798.00	6.00	45.70	5,738.00	-553.22	553.54	469.54	725.86	40.31	424,125.28	615,430.81
5,888.00	4.50	49.20	5,827.62	-558.80	559.14	475.58	734.04	40.38	424,130.88	615,436.85
5,977.00	3.30	37.90	5,916.42	-563.10	563.44	479.80	740.05	40.42	424,135.18	615,441.07
6,067.00	2.90	31.70	6,006.28	-567.08	567.42	482.59	744.89	40.38	424,139.16	615,443.86
6,156.00	2.90	30.20	6,095.17	-570.94	571.28	484.90	749.33	40.32	424,143.02	615,446.17
6,246.00	2.90	21.80	6,185.05	-575.02	575.36	486.89	753.73	40.24	424,147.10	615,448.16
6,335.00	3.30	36.30	6,273.93	-579.18	579.52	489.24	758.42	40.17	424,151.26	615,450.51
6,425.00	3.20	40.00	6,363.78	-583.19	583.53	492.39	763.52	40.16	424,155.27	615,453.66
6,514.00	2.60	29.80	6,452.67	-586.84	587.18	494.99	767.99	40.13	424,158.92	615,456.26

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 9H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3025.00usft
Site:	Rick Deckard State 25-28-4 WA	MD Reference:	Well @ 3025.00usft
Well:	No. 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD91-14281', PTB: 14348'	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)
6,603.00	2.00	16.80	6,541.60	-590.08	590.42	496.45	771.40	40.06	424,162.16	615,457.72
6,692.00	3.00	16.50	6,630.51	-593.79	594.14	497.56	774.96	39.94	424,165.88	615,458.83
6,782.00	2.70	9.20	6,720.40	-598.14	598.49	498.56	778.95	39.80	424,170.23	615,459.83
6,871.00	3.40	16.50	6,809.27	-602.74	603.09	499.65	783.18	39.64	424,174.83	615,460.92
6,961.00	3.90	26.80	6,899.09	-608.03	608.38	501.79	788.62	39.52	424,180.12	615,463.06
7,050.00	3.60	28.10	6,987.90	-613.20	613.55	504.47	794.31	39.43	424,185.29	615,465.74
7,139.00	3.10	26.80	7,076.75	-617.81	618.16	506.87	799.40	39.35	424,189.90	615,468.14
7,229.00	2.80	25.00	7,166.63	-621.97	622.33	508.89	803.91	39.27	424,194.07	615,470.16
7,318.00	3.20	15.90	7,255.51	-626.33	626.69	510.49	808.29	39.17	424,198.43	615,471.76
7,408.00	3.30	13.80	7,345.36	-631.26	631.62	511.80	812.95	39.02	424,203.36	615,473.07
7,497.00	4.10	19.00	7,434.18	-636.76	637.11	513.45	818.26	38.87	424,208.85	615,474.72
7,587.00	4.20	7.10	7,523.94	-643.07	643.43	514.90	824.09	38.67	424,215.17	615,476.17
7,676.00	5.30	13.10	7,612.64	-650.30	650.66	516.24	830.58	38.43	424,222.40	615,477.51
7,765.00	6.90	31.10	7,701.14	-658.88	659.25	519.93	839.60	38.26	424,230.99	615,481.20
7,854.00	6.10	35.60	7,789.56	-667.30	667.67	525.44	849.63	38.20	424,239.41	615,486.71
7,943.00	5.40	39.10	7,878.12	-674.39	674.77	530.84	858.54	38.19	424,246.51	615,492.11
8,033.00	5.50	44.00	7,967.71	-680.78	681.15	536.50	867.07	38.23	424,252.89	615,497.77
8,122.00	5.10	41.50	8,056.33	-686.81	687.19	542.09	875.26	38.27	424,258.93	615,503.36
8,211.00	4.80	37.30	8,145.00	-692.73	693.11	546.97	882.93	38.28	424,264.85	615,508.24
8,300.00	4.10	30.00	8,233.73	-698.44	698.83	550.81	889.81	38.25	424,270.57	615,512.08
8,390.00	3.70	25.10	8,323.52	-703.86	704.24	553.65	895.82	38.17	424,275.98	615,514.92
8,479.00	3.00	18.10	8,412.37	-708.67	709.06	555.60	900.81	38.08	424,280.80	615,516.87
8,568.00	2.50	32.70	8,501.27	-712.52	712.91	557.37	904.93	38.02	424,284.65	615,518.64
8,658.00	2.40	29.40	8,591.18	-715.81	716.20	559.35	908.74	37.99	424,287.94	615,520.62
8,741.00	2.00	29.50	8,674.12	-718.58	718.97	560.92	911.90	37.96	424,290.71	615,522.19
8,830.00	1.30	41.20	8,763.09	-720.69	721.08	562.35	914.44	37.95	424,292.82	615,523.62
8,920.00	0.80	21.80	8,853.07	-722.04	722.44	563.26	916.06	37.94	424,294.18	615,524.53



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Rick Deckard State 25-28-4 WA
Well: No. 9H
Wellbore: OH
Design: Gyro-MWD91-14281', PTB: 14348'

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well No. 9H
 Well @ 3025.00usft
 Well @ 3025.00usft
 Grid
 Minimum Curvature
 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)	
9,009.00	0.80	339.40	8,942.06	-723.20	723.59	563.27	916.98	37.90	424,295.33	615,524.54	
9,098.00	2.90	163.60	9,031.03	-721.62	722.02	563.68	916.00	37.98	424,293.76	615,524.95	
9,188.00	12.70	168.00	9,120.09	-709.73	710.13	566.39	908.34	38.58	424,281.87	615,527.66	
9,277.00	21.50	166.70	9,205.07	-684.23	684.63	572.19	892.26	39.89	424,256.37	615,533.46	
9,366.00	30.60	165.50	9,284.95	-646.35	646.75	581.63	869.82	41.97	424,218.49	615,542.90	
9,456.00	37.40	172.00	9,359.54	-597.02	597.43	591.19	840.49	44.70	424,169.17	615,552.46	
9,545.00	48.40	180.50	9,424.69	-536.74	537.16	594.67	801.36	47.91	424,108.90	615,555.94	
9,634.00	62.20	180.40	9,475.24	-463.75	464.17	594.10	753.93	52.00	424,035.91	615,555.37	
9,724.00	69.70	178.80	9,511.89	-381.63	382.04	594.71	706.85	57.28	423,953.78	615,555.98	
9,814.00	78.10	178.50	9,536.83	-295.26	295.67	596.75	665.98	63.64	423,867.41	615,558.02	
9,903.00	85.80	180.00	9,549.28	-207.21	207.63	597.89	632.92	70.85	423,779.37	615,559.16	
10,006.00	90.00	180.80	9,553.06	-104.31	104.72	597.17	606.29	80.05	423,676.46	615,558.44	
10,096.00	90.40	180.50	9,552.74	-14.31	14.73	596.15	596.33	88.58	423,586.47	615,557.42	
10,186.00	91.10	180.60	9,551.56	75.67	-75.26	595.29	600.03	97.21	423,496.48	615,556.56	
10,275.00	90.30	180.80	9,550.48	164.66	-164.24	594.20	616.48	105.45	423,407.50	615,555.47	
10,365.00	90.60	180.80	9,549.77	254.65	-254.23	592.94	645.15	113.21	423,317.51	615,554.21	
10,454.00	90.10	181.10	9,549.23	343.63	-343.22	591.47	683.84	120.13	423,228.52	615,552.74	
10,544.00	89.40	181.40	9,549.62	433.61	-433.19	589.50	731.56	126.31	423,138.55	615,550.77	
10,633.00	89.80	181.40	9,550.24	522.58	-522.17	587.33	785.88	131.64	423,049.57	615,548.60	
10,723.00	88.50	179.70	9,551.58	612.56	-612.15	586.47	847.74	136.23	422,959.59	615,547.74	
10,813.00	87.80	177.90	9,554.48	702.49	-702.08	588.35	916.01	140.04	422,869.66	615,549.62	
10,902.00	88.20	177.30	9,557.59	791.36	-790.94	592.07	988.00	143.18	422,780.80	615,553.34	
10,991.00	88.40	177.90	9,560.23	880.24	-879.83	595.80	1,062.58	145.89	422,691.91	615,557.07	
11,081.00	88.50	177.90	9,562.66	970.15	-969.73	599.10	1,139.87	148.29	422,602.01	615,560.37	
11,170.00	89.40	177.90	9,564.29	1,059.08	-1,058.66	602.36	1,218.03	150.36	422,513.08	615,563.63	
11,259.00	91.20	178.50	9,563.83	1,148.03	-1,147.61	605.15	1,297.39	152.20	422,424.13	615,566.42	
11,348.00	91.70	178.60	9,561.57	1,236.97	-1,236.55	607.40	1,377.68	153.84	422,335.19	615,568.67	

Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Rick Deckard State 25-28-4 WA
Well: No. 9H
Wellbore: OH
Design: Gyro-MWD91-14281', PTB: 14348'

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well No. 9H
Well @ 3025.00usft
Well @ 3025.00usft
Grid
Minimum Curvature
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)
11,437.00	92.60	178.60	9,558.24	1,325.88	-1,325.46	609.58	1,458.91	155.30	422,246.28	615,570.85
11,527.00	91.30	179.90	9,555.17	1,415.82	-1,415.40	610.75	1,541.55	156.66	422,156.34	615,572.02
11,616.00	91.30	180.10	9,553.15	1,504.80	-1,504.37	610.75	1,623.62	157.90	422,067.37	615,572.02
11,706.00	89.80	180.30	9,552.29	1,594.79	-1,594.37	610.44	1,707.23	159.05	421,977.37	615,571.71
11,795.00	90.50	180.50	9,552.06	1,683.79	-1,683.36	609.82	1,790.42	160.09	421,888.38	615,571.09
11,884.00	89.40	180.80	9,552.14	1,772.78	-1,772.36	608.81	1,874.00	161.04	421,799.38	615,570.08
11,973.00	88.60	181.30	9,553.69	1,861.75	-1,861.33	607.18	1,957.86	161.93	421,710.41	615,568.45
12,062.00	88.80	181.20	9,555.71	1,950.70	-1,950.28	605.24	2,042.04	162.76	421,621.46	615,566.51
12,151.00	89.50	181.30	9,557.03	2,039.67	-2,039.25	603.30	2,126.62	163.52	421,532.49	615,564.57
12,241.00	89.40	181.00	9,557.89	2,129.65	-2,129.23	601.49	2,212.56	164.23	421,442.51	615,562.76
12,330.00	89.80	181.00	9,558.51	2,218.63	-2,218.21	599.94	2,297.91	164.87	421,353.53	615,561.21
12,419.00	90.00	180.70	9,558.67	2,307.62	-2,307.20	598.62	2,383.59	165.46	421,264.54	615,559.89
12,509.00	89.50	180.10	9,559.06	2,397.61	-2,397.20	597.99	2,470.66	165.99	421,174.54	615,559.26
12,598.00	89.80	179.90	9,559.60	2,486.61	-2,486.20	597.99	2,557.10	166.48	421,085.54	615,559.26
12,687.00	89.70	179.70	9,559.99	2,575.61	-2,575.19	598.30	2,643.78	166.92	420,996.55	615,559.57
12,776.00	89.70	179.30	9,560.46	2,664.61	-2,664.19	599.07	2,730.71	167.33	420,907.55	615,560.34
12,866.00	89.50	179.20	9,561.09	2,754.60	-2,754.18	600.25	2,818.83	167.71	420,817.56	615,561.52
12,955.00	90.80	179.60	9,560.85	2,843.59	-2,843.17	601.18	2,906.04	168.06	420,728.57	615,562.45
13,044.00	91.50	179.90	9,559.07	2,932.57	-2,932.15	601.57	2,993.23	168.41	420,639.59	615,562.84
13,134.00	91.30	180.10	9,556.87	3,022.55	-3,022.13	601.57	3,081.42	168.74	420,549.61	615,562.84
13,223.00	90.80	180.10	9,555.24	3,111.53	-3,111.11	601.42	3,168.71	169.06	420,460.63	615,562.69
13,312.00	89.30	180.50	9,555.16	3,200.53	-3,200.11	600.95	3,256.04	169.36	420,371.63	615,562.22
13,401.00	90.80	180.50	9,555.08	3,289.52	-3,289.10	600.18	3,343.41	169.66	420,282.64	615,561.45
13,490.00	90.80	180.20	9,553.84	3,378.51	-3,378.09	599.63	3,430.90	169.93	420,193.65	615,560.90
13,580.00	90.50	178.90	9,552.82	3,468.50	-3,468.08	600.34	3,519.66	170.18	420,103.66	615,561.61
13,669.00	90.80	179.30	9,551.81	3,557.48	-3,557.06	601.74	3,607.60	170.40	420,014.68	615,563.01
13,758.00	92.10	179.40	9,549.56	3,646.45	-3,646.03	602.75	3,695.51	170.61	419,925.71	615,564.02

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 9H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3025.00usft
Site:	Rick Deckard State 25-28-4 WA	MD Reference:	Well @ 3025.00usft
Well:	No. 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD91-14281', PTB: 14348'	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)
13,847.00	90.40	178.80	9,547.62	3,735.41	-3,734.99	604.14	3,783.54	170.81	419,836.75	615,565.41
13,936.00	90.10	178.60	9,547.23	3,824.39	-3,823.97	606.16	3,871.71	170.99	419,747.77	615,567.43
14,026.00	91.00	178.60	9,546.36	3,914.36	-3,913.94	608.36	3,960.93	171.16	419,657.80	615,569.63
14,115.00	91.80	178.70	9,544.19	4,003.31	-4,002.88	610.46	4,049.16	171.33	419,568.86	615,571.73
14,204.00	93.20	178.60	9,540.31	4,092.20	-4,091.77	612.55	4,137.37	171.49	419,479.97	615,573.82
14,281.00	94.00	178.90	9,535.47	4,169.03	-4,168.60	614.23	4,213.61	171.62	419,403.14	615,575.50
Last Survey: 14281' MD										
14,348.00	94.00	178.90	9,530.80	4,235.85	-4,235.43	615.51	4,279.92	171.73	419,336.31	615,576.78
PTB: 14348' MD										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
509.00	508.96	2.56	-3.95	Pro MWD First Survey: 509' MD
14,281.00	9,535.47	-4,168.60	614.23	Last Survey: 14281' MD
14,348.00	9,530.80	-4,235.43	615.51	PTB: 14348' MD