



Marathon Oil

Marathon Oil

Eddy County, NM
Kyle 34 Federal
No. 3H

30-015-43405

OH

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 06 2018

Design: Gyros/MWD 98.28'-14314' Proj: 14366'

RECEIVED

Standard Survey Report

10 December, 2017



PRODIRECTIONAL

Company: Marathon Oil
Project: Eddy County, NM

Site: Kyle 34 Federal

Well: No. 3H

Wellbore: OH

Design: Gyros/MWD 98.28'-14314' Proj: 14366'

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well No. 3H

Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))

Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))

Grid

Minimum Curvature

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	Kyle 34 Federal		
Site Position:		Northing:	424,546.56 usft
From:	Map	Easting:	579,031.87 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 0.9754 N
		Longitude:	104° 4' 40.5264 W
		Grid Convergence:	0.14 °

Well	No. 3H		
Well Position	+N/-S	0.00 usft	Northing: 424,546.56 usft
	+E/-W	0.00 usft	Easting: 579,031.87 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 10' 0.9754 N
		Longitude:	104° 4' 40.5264 W
		Ground Level:	3,000.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	11/23/2017	7.23
		Dip Angle (°)	59.98
		Field Strength (nT)	48,050.20

Design	Gyros/MWD 98.28'-14314' Proj: 14366'		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
		Direction (°)	359.79

Survey Program	Date 12/10/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
98.28	428.20	Gyros (OH)	GYRO-NS-CT
501.00	14,366.00	ProMWD (OH)	MWD+IFR1
			Description
			OWSG XYZ Accel with XY Static and Continuous Gyro
			OWSG MWD + IFR1

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
0.25	0.00	336.69	0.25	0.00	0.00	0.00	0.00	0.00	0.00
[Kyle34Fed#3H]FTP									
98.28	0.24	336.69	98.28	0.19	-0.08	0.19	0.24	0.24	0.00
191.74	0.96	311.91	191.73	0.89	-0.74	0.89	0.80	0.77	-26.51
283.44	0.94	304.41	283.42	1.83	-1.93	1.84	0.14	-0.02	-8.18
374.28	1.62	290.90	374.24	2.71	-3.75	2.72	0.81	0.75	-14.87
428.20	2.20	278.21	428.13	3.13	-5.48	3.15	1.33	1.08	-23.53

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 3H
Project:	Eddy County, NM	TVD Reference:	Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))
Site:	Kyle 34 Federal	MD Reference:	Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))
Well:	No. 3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyros/MWD 98.28'-14314' Proj: 14366'	Database:	WellPlanner1

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Buidl Rate (°/100usft)	Turn Rate (°/100usft)
501.00	2.40	285.50	500.87	3.74	-8.34	3.77	0.49	0.27	10.01
593.00	2.40	299.30	592.79	5.19	-11.87	5.24	0.63	0.00	15.00
685.00	1.60	310.00	684.73	6.96	-14.54	7.01	0.96	-0.87	11.63
776.00	0.60	305.00	775.72	8.05	-15.90	8.11	1.10	-1.10	-5.49
868.00	1.00	293.70	867.71	8.65	-17.03	8.71	0.47	0.43	-12.28
959.00	1.10	302.10	958.69	9.43	-18.50	9.50	0.20	0.11	9.23
1,051.00	1.30	310.80	1,050.67	10.58	-20.03	10.66	0.29	0.22	9.46
1,145.00	1.20	292.40	1,144.65	11.66	-21.75	11.74	0.44	-0.11	-19.57
1,239.00	1.00	276.20	1,238.63	12.12	-23.48	12.21	0.39	-0.21	-17.23
1,334.00	1.00	272.60	1,333.62	12.25	-25.13	12.34	0.07	0.00	-3.79
1,428.00	0.30	249.90	1,427.61	12.20	-26.18	12.30	0.78	-0.74	-24.15
1,523.00	0.30	159.10	1,522.61	11.88	-26.33	11.98	0.45	0.00	-95.58
1,617.00	0.00	39.40	1,616.61	11.65	-26.24	11.75	0.32	-0.32	0.00
1,712.00	0.00	35.80	1,711.61	11.65	-26.24	11.75	0.00	0.00	0.00
1,806.00	0.30	137.20	1,805.61	11.47	-26.07	11.57	0.32	0.32	0.00
1,901.00	1.60	106.10	1,900.59	10.92	-24.63	11.01	1.42	1.37	-32.74
1,995.00	3.20	106.90	1,994.51	9.79	-20.86	9.87	1.70	1.70	0.85
2,090.00	1.90	106.60	2,089.41	8.57	-16.81	8.64	1.37	-1.37	-0.32
2,185.00	2.50	113.80	2,184.34	7.29	-13.40	7.34	0.69	0.63	7.58
2,279.00	3.20	113.50	2,278.23	5.41	-9.12	5.45	0.74	0.74	-0.32
2,357.00	2.80	111.30	2,356.12	3.85	-5.35	3.87	0.53	-0.51	-2.82
2,459.00	1.90	100.40	2,458.03	2.64	-1.37	2.65	0.98	-0.88	-10.69
2,553.00	1.70	108.60	2,551.99	1.92	1.49	1.91	0.35	-0.21	8.72
2,647.00	1.50	103.90	2,645.95	1.18	4.00	1.16	0.25	-0.21	-5.00
2,742.00	1.30	102.10	2,740.92	0.65	6.26	0.63	0.22	-0.21	-1.89
2,837.00	1.40	98.20	2,835.89	0.26	8.47	0.23	0.14	0.11	-4.11
2,931.00	1.20	96.40	2,929.87	-0.01	10.58	-0.05	0.22	-0.21	-1.91
3,025.00	1.50	100.50	3,023.84	-0.35	12.77	-0.39	0.34	0.32	4.36
3,120.00	1.20	95.20	3,118.82	-0.66	14.98	-0.72	0.34	-0.32	-5.58
3,214.00	1.40	103.40	3,212.79	-1.02	17.08	-1.08	0.29	0.21	8.72
3,309.00	1.30	101.20	3,307.77	-1.50	19.27	-1.57	0.12	-0.11	-2.32
3,403.00	0.40	102.60	3,401.76	-1.77	20.63	-1.85	0.96	-0.96	1.49
3,498.00	1.00	90.70	3,496.75	-1.86	21.78	-1.94	0.65	0.63	-12.53
3,592.00	0.60	101.80	3,590.74	-1.97	23.09	-2.05	0.45	-0.43	11.81
3,687.00	0.80	110.00	3,685.73	-2.30	24.20	-2.38	0.23	0.21	8.63
3,781.00	0.50	94.50	3,779.73	-2.55	25.22	-2.65	0.37	-0.32	-16.49
3,875.00	0.70	89.30	3,873.72	-2.58	26.21	-2.67	0.22	0.21	-5.53
3,970.00	2.20	162.00	3,968.69	-4.31	27.35	-4.41	2.21	1.58	76.53
4,065.00	2.50	165.10	4,063.61	-8.04	28.45	-8.15	0.34	0.32	3.26
4,159.00	2.20	163.80	4,157.53	-11.76	29.48	-11.86	0.32	-0.32	-1.38
4,253.00	2.10	169.00	4,251.47	-15.18	30.31	-15.29	0.23	-0.11	5.53
4,348.00	3.70	180.50	4,346.34	-19.95	30.61	-20.06	1.78	1.68	12.11

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

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)
4,442.00	4.20	181.90	4,440.12	-26.43	30.47	-26.54	0.54	0.53	1.49
4,537.00	5.00	190.00	4,534.81	-33.98	29.64	-34.09	1.08	0.84	8.53
4,632.00	4.90	194.00	4,629.46	-41.99	27.94	-42.10	0.38	-0.11	4.21
4,726.00	5.00	194.90	4,723.11	-49.85	25.91	-49.94	0.13	0.11	0.96
4,821.00	4.80	194.40	4,817.76	-57.70	23.86	-57.79	0.22	-0.21	-0.53
4,915.00	4.60	196.80	4,911.45	-65.12	21.79	-65.20	0.30	-0.21	2.55
5,009.00	4.10	197.60	5,005.18	-71.93	19.69	-72.00	0.54	-0.53	0.85
5,104.00	3.60	195.30	5,099.96	-78.04	17.87	-78.11	0.55	-0.53	-2.42
5,198.00	3.20	194.00	5,193.80	-83.43	16.46	-83.49	0.43	-0.43	-1.38
5,293.00	3.10	187.90	5,288.65	-88.55	15.47	-88.61	0.37	-0.11	-6.42
5,387.00	2.00	208.80	5,382.56	-92.51	14.33	-92.56	1.51	-1.17	22.23
5,481.00	1.90	213.40	5,476.51	-95.24	12.68	-95.29	0.20	-0.11	4.89
5,576.00	2.00	210.60	5,571.45	-97.99	10.97	-98.03	0.15	0.11	-2.95
5,670.00	0.60	298.10	5,665.43	-99.17	9.70	-99.20	2.19	-1.49	93.09
5,765.00	0.50	316.00	5,760.42	-98.63	8.97	-98.67	0.21	-0.11	18.84
5,860.00	0.70	274.30	5,855.42	-98.29	8.10	-98.32	0.49	0.21	-43.89
5,954.00	0.60	251.00	5,949.41	-98.41	7.07	-98.43	0.30	-0.11	-24.79
6,048.00	0.80	251.80	6,043.41	-98.77	5.98	-98.80	0.21	0.21	0.85
6,143.00	0.70	234.90	6,138.40	-99.32	4.87	-99.33	0.25	-0.11	-17.79
6,237.00	0.80	244.20	6,232.39	-99.93	3.81	-99.94	0.17	0.11	9.89
6,332.00	0.60	292.20	6,327.38	-100.03	2.76	-100.04	0.63	-0.21	50.53
6,426.00	1.70	285.20	6,421.36	-99.48	0.95	-99.48	1.18	1.17	-7.45
6,521.00	2.70	296.50	6,516.29	-98.11	-2.41	-98.10	1.14	1.05	11.89
6,615.00	1.70	293.10	6,610.22	-96.58	-5.67	-96.56	1.07	-1.06	-3.62
6,710.00	0.80	261.60	6,705.20	-96.12	-7.62	-96.09	1.16	-0.95	-33.16
6,804.00	0.20	26.60	6,799.20	-96.07	-8.20	-96.04	0.99	-0.64	132.98
6,899.00	0.40	325.40	6,894.20	-95.65	-8.31	-95.62	0.37	0.21	-64.42
6,993.00	1.10	265.50	6,988.19	-95.45	-9.40	-95.42	1.03	0.74	-63.72
7,088.00	1.40	265.50	7,083.17	-95.61	-11.47	-95.57	0.32	0.32	0.00
7,182.00	1.50	249.80	7,177.14	-96.13	-13.77	-96.08	0.43	0.11	-16.70
7,277.00	1.80	240.60	7,272.10	-97.29	-16.23	-97.23	0.42	0.32	-9.68
7,371.00	1.90	241.10	7,366.05	-98.77	-18.88	-98.70	0.11	0.11	0.53
7,466.00	2.10	242.00	7,460.99	-100.35	-21.80	-100.27	0.21	0.21	0.95
7,560.00	1.90	247.20	7,554.93	-101.76	-24.76	-101.67	0.29	-0.21	5.53
7,654.00	1.60	236.60	7,648.89	-103.08	-27.29	-102.98	0.47	-0.32	-11.28
7,749.00	1.30	232.00	7,743.86	-104.48	-29.24	-104.37	0.34	-0.32	-4.84
7,843.00	0.70	99.50	7,837.85	-105.23	-29.52	-105.12	1.96	-0.64	-140.96
7,938.00	0.80	68.70	7,932.84	-105.08	-28.33	-104.98	0.43	0.11	-32.42
8,032.00	0.80	60.40	8,026.83	-104.52	-27.15	-104.42	0.12	0.00	-8.83
8,127.00	0.70	75.80	8,121.83	-104.05	-26.01	-103.96	0.24	-0.11	16.21
8,221.00	0.80	44.30	8,215.82	-103.44	-24.99	-103.35	0.45	0.11	-33.51
8,315.00	0.30	27.00	8,309.81	-102.75	-24.42	-102.66	0.55	-0.53	-18.40

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Site: Kyle 34 Federal
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Wellbore: OH
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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)
8,410.00	0.20	45.20	8,404.81	-102.41	-24.19	-102.32	0.13	-0.11	19.16
8,504.00	0.30	207.80	8,498.81	-102.52	-24.19	-102.43	0.53	0.11	172.98
8,599.00	1.70	184.00	8,593.80	-104.14	-24.40	-104.05	1.51	1.47	-25.05
8,693.00	1.30	178.10	8,687.76	-106.60	-24.47	-106.51	0.46	-0.43	-6.28
8,788.00	0.50	142.80	8,782.75	-108.01	-24.18	-107.92	0.99	-0.84	-37.16
8,882.00	0.30	152.10	8,876.75	-108.55	-23.82	-108.46	0.22	-0.21	9.89
8,977.00	0.50	169.60	8,971.75	-109.18	-23.63	-109.09	0.24	0.21	18.42
9,072.00	0.70	142.90	9,066.74	-110.05	-23.20	-109.96	0.36	0.21	-28.11
9,102.46	0.59	44.58	9,097.20	-110.09	-22.98	-110.00	3.21	-0.37	-322.82
[Kyle34Fed#3H]KOP									
9,103.00	0.60	43.40	9,097.74	-110.08	-22.97	-110.00	3.21	2.29	-217.20
9,135.00	3.70	8.30	9,129.72	-108.94	-22.71	-108.85	10.09	9.69	-109.69
9,166.00	7.10	5.60	9,160.57	-106.04	-22.38	-105.96	11.00	10.97	-8.71
9,198.00	11.40	4.90	9,192.15	-100.92	-21.92	-100.84	13.44	13.44	-2.19
9,229.00	15.60	3.60	9,222.29	-93.70	-21.39	-93.62	13.58	13.55	-4.19
9,261.00	19.00	4.50	9,252.83	-84.21	-20.71	-84.14	10.66	10.63	2.81
9,292.00	21.70	5.80	9,281.90	-73.48	-19.74	-73.41	8.83	8.71	4.19
9,324.00	24.50	8.10	9,311.33	-61.02	-18.20	-60.95	9.19	8.75	7.19
9,355.00	27.20	6.50	9,339.22	-47.62	-16.50	-47.55	8.99	8.71	-5.16
9,387.00	30.10	4.10	9,367.30	-32.34	-15.09	-32.29	9.75	9.06	-7.50
9,418.00	33.00	4.10	9,393.72	-16.16	-13.94	-16.11	9.35	9.35	0.00
9,450.00	35.70	4.10	9,420.14	1.84	-12.64	1.89	8.44	8.44	0.00
9,481.00	39.30	4.90	9,444.73	20.65	-11.16	20.69	11.72	11.61	2.58
9,513.00	43.40	5.20	9,468.74	41.71	-9.30	41.74	12.83	12.81	0.94
9,544.00	47.90	4.80	9,490.41	63.79	-7.37	63.81	14.55	14.52	-1.29
9,628.00	56.80	1.60	9,541.68	130.11	-3.77	130.13	11.01	10.60	-3.81
9,659.00	60.40	2.30	9,557.82	156.55	-2.87	156.56	11.77	11.61	2.26
9,691.00	64.50	2.20	9,572.62	184.90	-1.75	184.90	12.82	12.81	-0.31
9,722.00	67.70	1.60	9,585.18	213.22	-0.82	213.22	10.47	10.32	-1.94
9,754.00	69.90	0.50	9,596.75	243.05	-0.27	243.05	7.59	6.88	-3.44
9,785.00	69.70	0.20	9,607.46	272.14	-0.09	272.14	1.11	-0.65	-0.97
9,817.00	69.70	0.10	9,618.56	302.15	-0.02	302.15	0.29	0.00	-0.31
9,848.00	72.30	359.40	9,628.65	331.46	-0.14	331.46	8.65	8.39	-2.26
9,880.00	76.20	359.20	9,637.33	362.25	-0.52	362.25	12.20	12.19	-0.63
9,911.00	79.00	0.40	9,643.99	392.52	-0.63	392.52	9.79	9.03	3.87
9,943.00	81.10	2.10	9,649.52	424.03	0.06	424.03	8.39	6.56	5.31
9,974.00	80.20	1.20	9,654.56	454.61	0.94	454.60	4.08	-2.90	-2.90
10,006.00	80.80	359.50	9,659.84	486.17	1.14	486.16	5.56	1.88	-5.31
10,037.00	83.70	359.00	9,664.02	516.88	0.73	516.87	9.49	9.35	-1.61
10,069.00	88.20	358.00	9,666.28	548.78	-0.10	548.77	14.40	14.06	-3.13
10,100.00	90.80	358.00	9,666.55	579.75	-1.18	579.75	8.39	8.39	0.00
10,132.00	90.60	357.80	9,666.16	611.73	-2.36	611.73	0.88	-0.63	-0.63

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Project: Eddy County, NM
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Well: No. 3H
Wellbore: OH
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Local Co-ordinate Reference: Well No. 3H
TVD Reference: Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))
MD Reference: Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

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)
10,227.00	90.70	358.40	9,665.08	706.67	-5.51	706.69	0.64	0.11	0.63
10,321.00	90.50	358.20	9,664.09	800.62	-8.29	800.65	0.30	-0.21	-0.21
10,416.00	90.00	358.40	9,663.68	895.58	-11.11	895.62	0.57	-0.53	0.21
10,511.00	88.80	357.90	9,664.67	990.53	-14.18	990.57	1.37	-1.26	-0.53
10,605.00	88.60	358.00	9,666.81	1,084.44	-17.54	1,084.50	0.24	-0.21	0.11
10,700.00	88.90	358.10	9,668.88	1,179.36	-20.77	1,179.43	0.33	0.32	0.11
10,794.00	90.20	0.80	9,669.62	1,273.35	-21.67	1,273.42	3.19	1.38	2.87
10,889.00	90.30	0.90	9,669.20	1,368.33	-20.26	1,368.40	0.15	0.11	0.11
10,984.00	89.30	0.80	9,669.54	1,463.32	-18.86	1,463.38	1.06	-1.05	-0.11
11,078.00	89.70	2.30	9,670.36	1,557.28	-16.31	1,557.33	1.65	0.43	1.60
11,173.00	89.20	2.10	9,671.27	1,652.21	-12.67	1,652.24	0.57	-0.53	-0.21
11,267.00	89.40	2.30	9,672.42	1,746.13	-9.06	1,746.15	0.30	0.21	0.21
11,362.00	91.60	4.20	9,671.59	1,840.96	-3.67	1,840.96	3.06	2.32	2.00
11,456.00	89.70	1.50	9,670.52	1,934.83	1.00	1,934.81	3.51	-2.02	-2.87
11,551.00	96.10	6.00	9,665.71	2,029.43	7.19	2,029.39	8.23	6.74	4.74
11,645.00	92.90	3.80	9,658.34	2,122.78	15.19	2,122.71	4.13	-3.40	-2.34
11,740.00	88.60	2.20	9,657.10	2,217.62	20.16	2,217.53	4.83	-4.53	-1.68
11,835.00	83.20	357.40	9,663.89	2,312.31	19.84	2,312.22	7.60	-5.68	-5.05
11,952.00	84.30	353.40	9,676.63	2,428.21	10.51	2,428.16	3.53	0.94	-3.42
12,047.00	89.60	355.50	9,681.69	2,522.60	1.34	2,522.57	6.00	5.58	2.21
12,141.00	91.40	356.80	9,680.86	2,616.37	-4.97	2,616.37	2.36	1.91	1.38
12,236.00	92.30	358.10	9,677.80	2,711.23	-9.19	2,711.24	1.66	0.95	1.37
12,330.00	93.70	359.40	9,672.88	2,805.07	-11.24	2,805.09	2.03	1.49	1.38
12,425.00	90.70	359.80	9,669.23	2,899.99	-11.90	2,900.01	3.19	-3.16	0.42
12,519.00	89.00	0.20	9,669.48	2,993.98	-11.90	2,994.01	1.86	-1.81	0.43
12,613.00	89.10	0.90	9,671.04	3,087.97	-11.00	3,087.99	0.75	0.11	0.74
12,708.00	87.60	0.20	9,673.77	3,182.92	-10.09	3,182.94	1.74	-1.58	-0.74
12,802.00	89.30	358.90	9,676.31	3,276.88	-10.83	3,276.89	2.28	1.81	-1.38
12,897.00	89.80	359.90	9,677.06	3,371.87	-11.82	3,371.89	1.18	0.53	1.05
12,992.00	89.40	0.20	9,677.72	3,466.86	-11.74	3,466.88	0.53	-0.42	0.32
13,086.00	91.30	359.60	9,677.15	3,560.86	-11.90	3,560.88	2.12	2.02	-0.64
13,181.00	91.40	0.00	9,674.91	3,655.83	-12.23	3,655.85	0.43	0.11	0.42
13,276.00	91.20	0.20	9,672.76	3,750.81	-12.07	3,750.83	0.30	-0.21	0.21
13,370.00	91.00	0.70	9,670.95	3,844.79	-11.33	3,844.80	0.57	-0.21	0.53
13,465.00	91.40	1.30	9,668.96	3,939.75	-9.67	3,939.76	0.76	0.42	0.63
13,559.00	91.50	1.70	9,666.58	4,033.69	-7.21	4,033.69	0.44	0.11	0.43
13,654.00	90.90	2.30	9,664.59	4,128.61	-3.90	4,128.59	0.89	-0.63	0.63
13,748.00	90.10	1.70	9,663.77	4,222.55	-0.62	4,222.52	1.06	-0.85	-0.64
13,843.00	91.10	2.00	9,662.78	4,317.49	2.45	4,317.45	1.10	1.05	0.32
13,937.00	90.00	3.10	9,661.88	4,411.39	6.63	4,411.34	1.65	-1.17	1.17
14,032.00	88.60	3.10	9,663.04	4,506.24	11.77	4,506.17	1.47	-1.47	0.00
14,127.00	85.60	358.20	9,667.85	4,601.07	12.85	4,601.00	6.04	-3.16	-5.16

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 3H
Project:	Eddy County, NM	TVD Reference:	Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))
Site:	Kyle 34 Federal	MD Reference:	Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))
Well:	No. 3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyros/MWD 98.28"-14314' Proj: 14366'	Database:	WellPlanner1

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)
14,221.00	85.80	358.80	9,674.89	4,694.78	10.40	4,694.71	0.67	0.21	0.64
14,314.00	85.80	358.30	9,681.71	4,787.50	8.05	4,787.43	0.54	0.00	-0.54
Last Survey: 14314' MD, 9681.7' TVD									
14,366.00	85.80	358.30	9,685.51	4,839.33	6.51	4,839.28	0.00	0.00	0.00
PTB: 14366' MD, 9685.51' TVD - [Kyle34Fed#3H]BHL									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
14,314.00	9,681.71	4,787.50	8.05	Last Survey: 14314' MD, 9681.7' TVD
14,366.00	9,685.51	4,839.33	6.51	PTB: 14366' MD, 9685.51' TVD

Checked By: _____ Approved By: _____ Date: _____



Marathon Oil
Eddy County, NM
Kyle 34 Federal
No. 3H
Plan #2
GL: 3000' + KB: 25' (H&P480)

US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level

RKB Elevation: Well @ 3025.00usft (GL: 3000' + KB: 25' (H&P480))

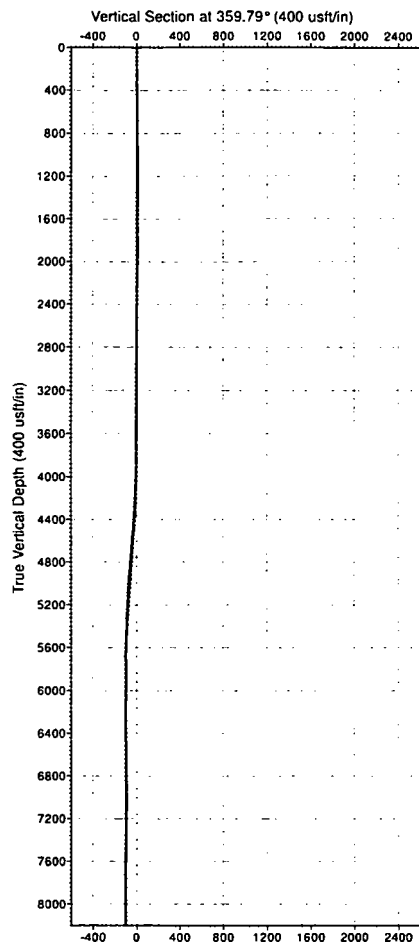
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	424546.56	579031.87	32° 10' 0.9754 N	104° 4' 40.5264 W	

SECTION DETAILS

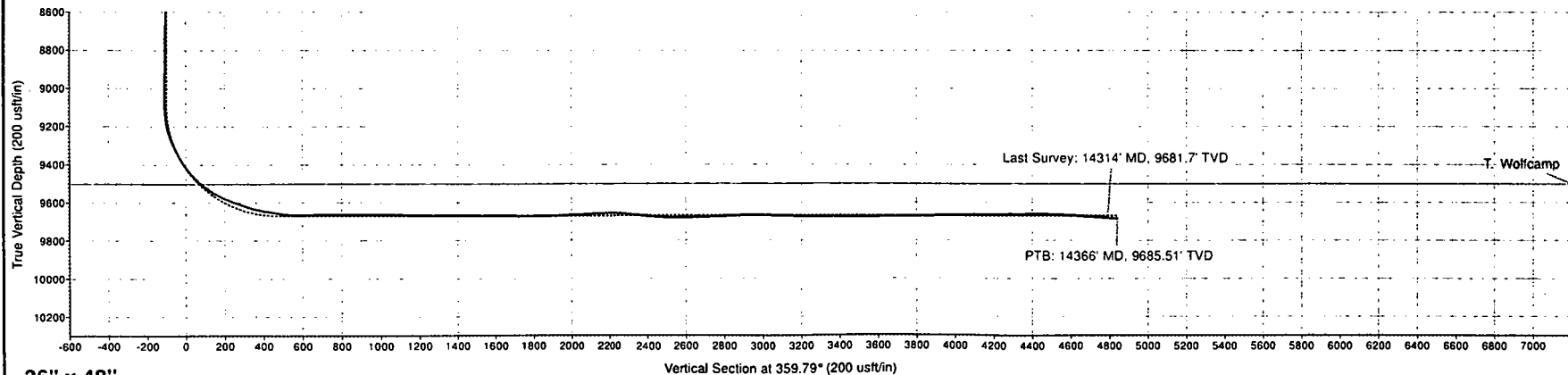
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00
3	4400.00	4.00	180.00	4399.68	-13.96	0.00	1.00	-13.96
4	5433.40	4.00	180.00	5430.55	-86.04	0.00	0.00	-86.04
5	5833.40	0.00	0.00	5830.23	-100.00	0.00	1.00	-100.00
6	9100.21	0.00	0.00	9097.04	-100.00	0.00	0.00	-100.00
7	10000.21	90.00	359.79	9670.00	472.95	-2.07	10.00	472.96
8	14366.39	90.00	359.79	9670.00	4841.11	-17.87	0.00	4841.14

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

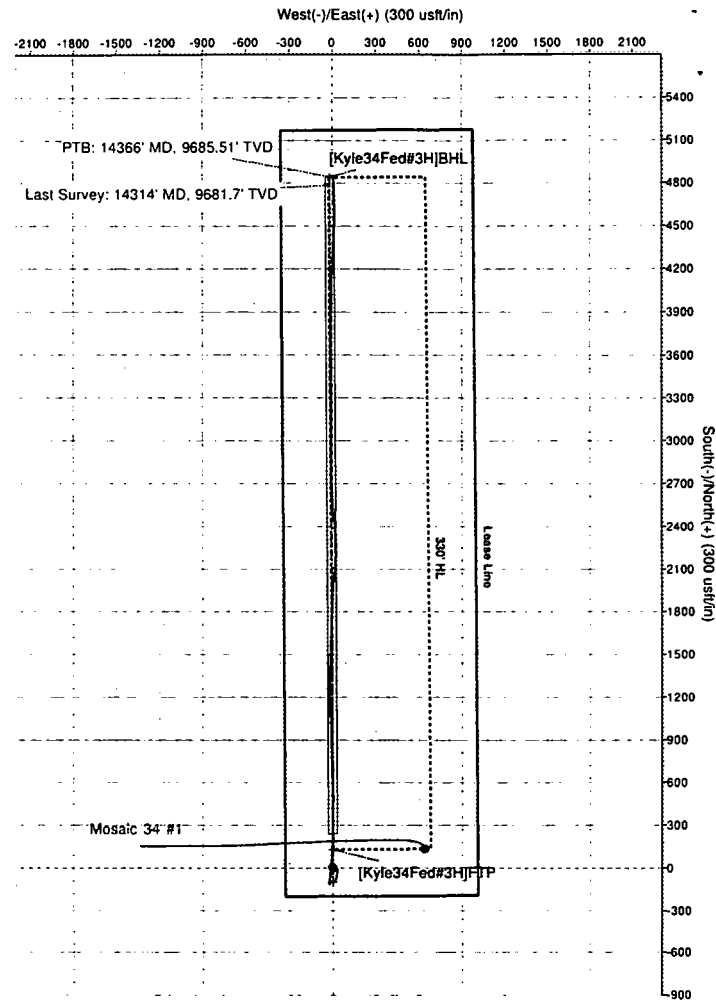
Name	TVD	+N/-S	+E/-W	Northing	Easting
[Kyle34Fed#3H]FTP	0.00	130.31	-0.61	424676.87	579031.26
[Kyle34Fed#3H]KOP	9097.04	-100.00	0.00	424446.56	579031.87
[Kyle34Fed#3H]BHL	9670.00	4841.11	-17.87	429387.57	579014.00



Target Line: 9670' TVD @ 0° VS: 90° INC



36" x 48"



Azimuths to Grid North
True North: -0.14°
Magnetic North: 7.10°
Magnetic Field
Strength: 48050.2nT
Dip Angle: 59.98°
Date: 11/23/2017
Model: HDGM

Azimuth Corrections

Total Magnetic Corr. (M to G): 7.10°

Declination (M to T): 7.23° East