



Marathon Oil
Lea County, NM
Battle 34
SB #15H
Prelim Plan C
GL: 3695' + KB: 25' (H&P594)

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

RKB Elevation: Well @ 3720.00usft (GL: 3695' + KB: 25' (H&P594))

+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	525062.61	739708.64	32.441113	-103.556334	

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	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00
3	1700.00	10.00	311.32	1697.47	28.74	-32.69	2.00	-29.04
4	4504.90	10.00	311.32	4459.75	350.32	-398.49	0.00	-354.00
5	5004.90	0.00	0.00	4957.21	379.06	-431.18	2.00	-383.03
6	10471.68	0.00	0.00	10424.00	379.06	-431.18	0.00	-383.03
7	11368.68	89.70	179.47	10996.95	-190.87	-425.96	10.00	186.92
8	15875.46	89.70	179.47	11020.58	-4697.40	-384.66	0.00	4893.64

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
[Battle34SB#15H]KOP	10424.00	379.06	-431.18	525441.67	739277.46
[Battle34SB#15H]LTP/BHL	11020.58	-4697.40	-384.66	520365.21	739323.98



PRODIRECTIONAL



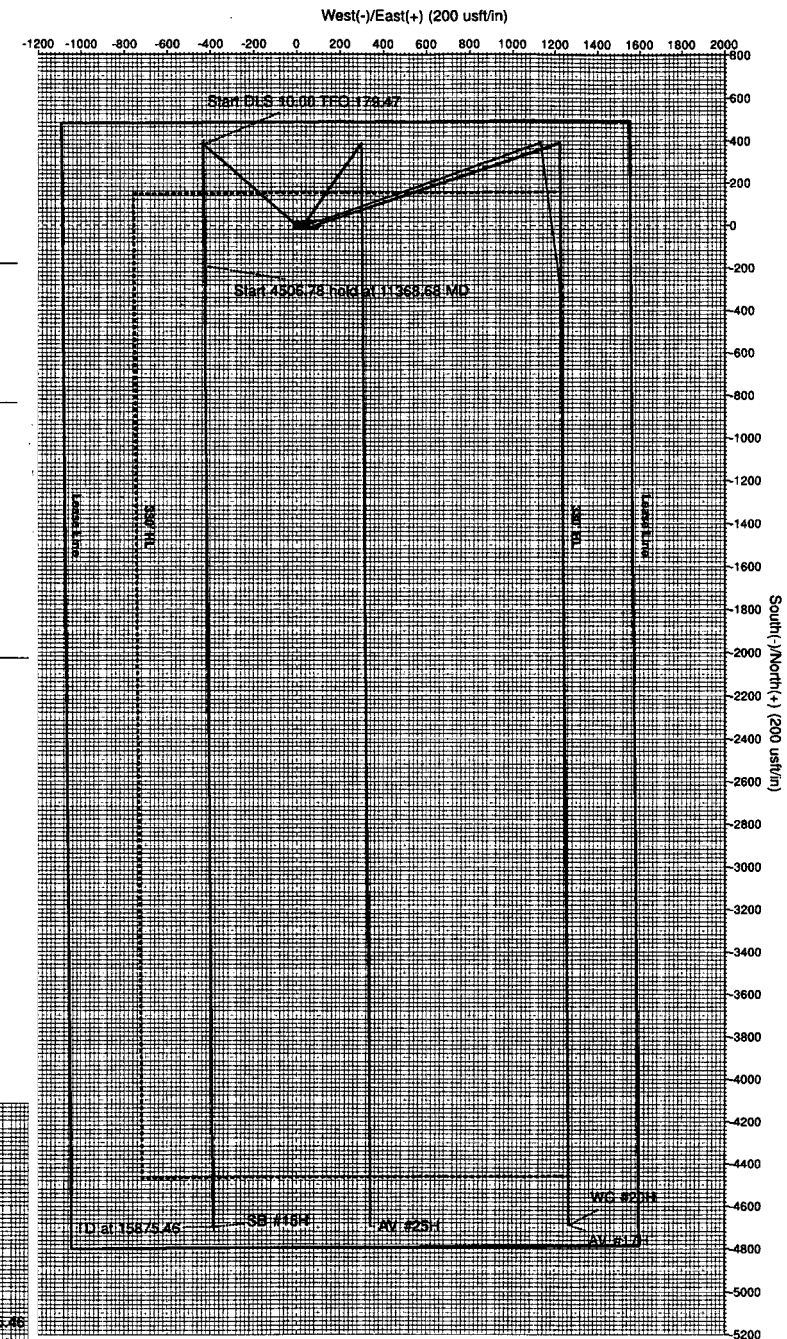
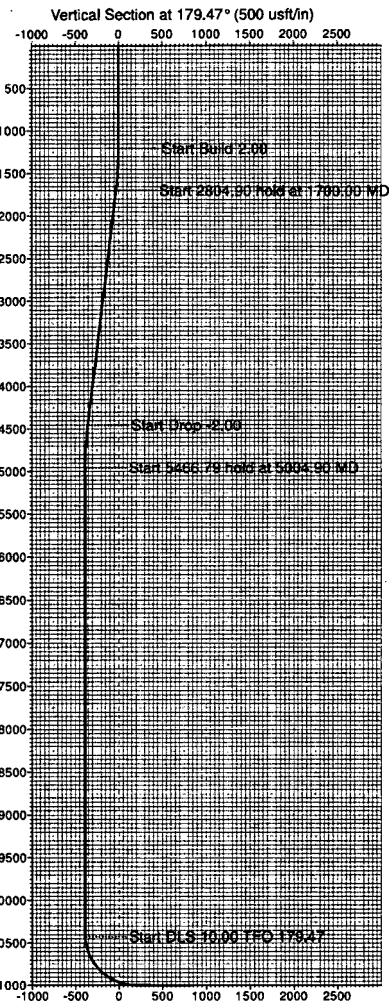
Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.30°

Magnetic Field
Strength: 48128.7nT
Dip Angle: 60.28°
Date: 10/23/2018
Model: HDGM

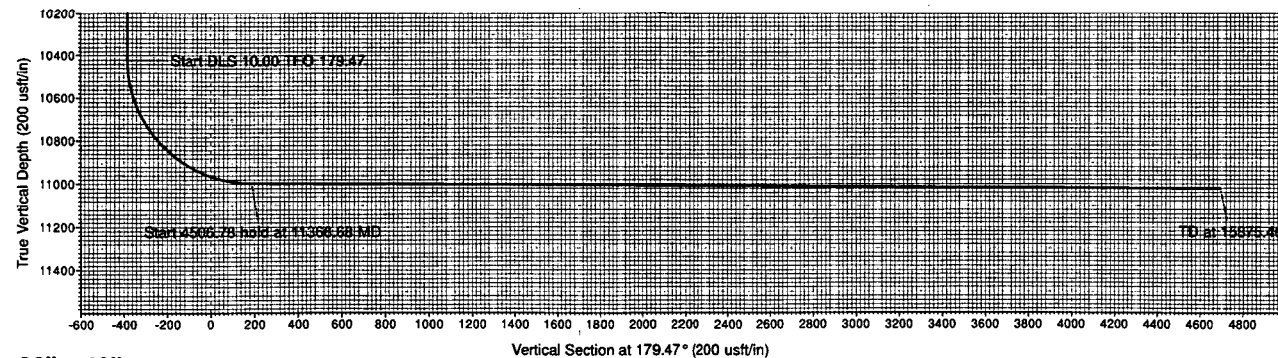
Azimuth Corrections

Total Magnetic Corr. (M to G): 6.30°

Declination (M to T): 6.72° East



Target Line: 10996' TVD @ 0° VS: 89.7° INC



36" x 48"

Company:	Marathon Oil	Local Co-ordinate Reference:	Well SB #15H
Project:	Lea County, NM	TVD Reference:	Well @ 3720.00usft (GL: 3695' + KB: 25' (H&P594))
Site:	Battle 34	MD Reference:	Well @ 3720.00usft (GL: 3695' + KB: 25' (H&P594))
Well:	SB #15H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

Project	Lea 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	Battle 34			
Site Position:		Northing:	525,062.61 usft	Latitude: 32.441113
From: Map		Easting:	739,708.64 usft	Longitude: -103.556334
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.42 °

Well	SB #15H			
Well Position	+N/-S	0.00 usft	Northing: 525,062.61 usft	Latitude: 32.441113
	+E/-W	0.00 usft	Easting: 739,708.64 usft	Longitude: -103.556334
Position Uncertainty		0.00 usft	Wellhead Elevation:	Ground Level: 3,695.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/23/2018	6.72	60.28	48,128.70

Design	Prelim Plan C			
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	179.47

Survey Tool Program	Date 2/12/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	1,850.00	Prelim Plan C (OH)	MWD+IFR1	OWSG MWD + IFR1
1,850.00	5,400.00	Prelim Plan C (OH)	MWD+IFR1	OWSG MWD + IFR1
5,400.00	10,000.00	Prelim Plan C (OH)	MWD+IFR1	OWSG MWD + IFR1
10,000.00	15,875.46	Prelim Plan C (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)	Buid 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
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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00

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Well:	SB #15H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	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)
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	311.32	1,299.98	1.15	-1.31	-1.16	2.00	2.00	0.00
1,400.00	4.00	311.32	1,399.84	4.61	-5.24	-4.66	2.00	2.00	0.00
1,500.00	6.00	311.32	1,499.45	10.36	-11.79	-10.47	2.00	2.00	0.00
1,600.00	8.00	311.32	1,598.70	18.41	-20.94	-18.60	2.00	2.00	0.00
1,700.00	10.00	311.32	1,697.47	28.74	-32.69	-29.04	2.00	2.00	0.00
1,800.00	10.00	311.32	1,795.95	40.20	-45.73	-40.62	0.00	0.00	0.00
1,900.00	10.00	311.32	1,894.43	51.67	-58.77	-52.21	0.00	0.00	0.00
2,000.00	10.00	311.32	1,992.91	63.13	-71.81	-63.79	0.00	0.00	0.00
2,100.00	10.00	311.32	2,091.39	74.60	-84.85	-75.38	0.00	0.00	0.00
2,200.00	10.00	311.32	2,189.87	86.06	-97.90	-86.96	0.00	0.00	0.00
2,300.00	10.00	311.32	2,288.35	97.53	-110.94	-98.55	0.00	0.00	0.00
2,400.00	10.00	311.32	2,386.83	108.99	-123.98	-110.13	0.00	0.00	0.00
2,500.00	10.00	311.32	2,485.31	120.46	-137.02	-121.72	0.00	0.00	0.00
2,600.00	10.00	311.32	2,583.79	131.92	-150.06	-133.31	0.00	0.00	0.00
2,700.00	10.00	311.32	2,682.27	143.39	-163.10	-144.89	0.00	0.00	0.00
2,800.00	10.00	311.32	2,780.75	154.85	-176.15	-156.48	0.00	0.00	0.00
2,900.00	10.00	311.32	2,879.23	166.32	-189.19	-168.06	0.00	0.00	0.00
3,000.00	10.00	311.32	2,977.72	177.78	-202.23	-179.65	0.00	0.00	0.00
3,100.00	10.00	311.32	3,076.20	189.25	-215.27	-191.23	0.00	0.00	0.00
3,200.00	10.00	311.32	3,174.68	200.71	-228.31	-202.82	0.00	0.00	0.00
3,300.00	10.00	311.32	3,273.16	212.18	-241.35	-214.40	0.00	0.00	0.00
3,400.00	10.00	311.32	3,371.64	223.64	-254.40	-225.99	0.00	0.00	0.00
3,500.00	10.00	311.32	3,470.12	235.11	-267.44	-237.57	0.00	0.00	0.00
3,600.00	10.00	311.32	3,568.60	246.58	-280.48	-249.16	0.00	0.00	0.00
3,700.00	10.00	311.32	3,667.08	258.04	-293.52	-260.74	0.00	0.00	0.00
3,800.00	10.00	311.32	3,765.56	269.51	-306.56	-272.33	0.00	0.00	0.00
3,900.00	10.00	311.32	3,864.04	280.97	-319.60	-283.92	0.00	0.00	0.00
4,000.00	10.00	311.32	3,962.52	292.44	-332.65	-295.50	0.00	0.00	0.00
4,100.00	10.00	311.32	4,061.00	303.90	-345.69	-307.09	0.00	0.00	0.00
4,200.00	10.00	311.32	4,159.48	315.37	-358.73	-318.67	0.00	0.00	0.00
4,300.00	10.00	311.32	4,257.97	326.83	-371.77	-330.26	0.00	0.00	0.00
4,400.00	10.00	311.32	4,356.45	338.30	-384.81	-341.84	0.00	0.00	0.00
4,504.90	10.00	311.32	4,459.75	350.32	-398.49	-354.00	0.00	0.00	0.00
4,600.00	8.10	311.32	4,553.66	360.20	-409.73	-363.97	2.00	-2.00	0.00
4,700.00	6.10	311.32	4,652.89	368.36	-419.01	-372.22	2.00	-2.00	0.00

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	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)
4,800.00	4.10	311.32	4,752.49	374.22	-425.68	-378.15	2.00	-2.00	0.00
4,900.00	2.10	311.32	4,852.34	377.79	-429.74	-381.75	2.00	-2.00	0.00
5,004.90	0.00	0.00	4,957.21	379.06	-431.18	-383.03	2.00	-2.00	0.00
5,100.00	0.00	0.00	5,052.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,200.00	0.00	0.00	5,152.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,300.00	0.00	0.00	5,252.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,400.00	0.00	0.00	5,352.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,500.00	0.00	0.00	5,452.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,600.00	0.00	0.00	5,552.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,700.00	0.00	0.00	5,652.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,800.00	0.00	0.00	5,752.32	379.06	-431.18	-383.03	0.00	0.00	0.00
5,900.00	0.00	0.00	5,852.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,000.00	0.00	0.00	5,952.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,100.00	0.00	0.00	6,052.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,200.00	0.00	0.00	6,152.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,300.00	0.00	0.00	6,252.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,400.00	0.00	0.00	6,352.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,500.00	0.00	0.00	6,452.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,600.00	0.00	0.00	6,552.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,700.00	0.00	0.00	6,652.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,800.00	0.00	0.00	6,752.32	379.06	-431.18	-383.03	0.00	0.00	0.00
6,900.00	0.00	0.00	6,852.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,000.00	0.00	0.00	6,952.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,100.00	0.00	0.00	7,052.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,200.00	0.00	0.00	7,152.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,300.00	0.00	0.00	7,252.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,400.00	0.00	0.00	7,352.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,500.00	0.00	0.00	7,452.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,600.00	0.00	0.00	7,552.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,700.00	0.00	0.00	7,652.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,800.00	0.00	0.00	7,752.32	379.06	-431.18	-383.03	0.00	0.00	0.00
7,900.00	0.00	0.00	7,852.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,000.00	0.00	0.00	7,952.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,100.00	0.00	0.00	8,052.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,200.00	0.00	0.00	8,152.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,300.00	0.00	0.00	8,252.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,400.00	0.00	0.00	8,352.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,500.00	0.00	0.00	8,452.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,600.00	0.00	0.00	8,552.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,700.00	0.00	0.00	8,652.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,800.00	0.00	0.00	8,752.32	379.06	-431.18	-383.03	0.00	0.00	0.00
8,900.00	0.00	0.00	8,852.32	379.06	-431.18	-383.03	0.00	0.00	0.00

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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)
9,000.00	0.00	0.00	8,952.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,100.00	0.00	0.00	9,052.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,200.00	0.00	0.00	9,152.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,300.00	0.00	0.00	9,252.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,400.00	0.00	0.00	9,352.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,500.00	0.00	0.00	9,452.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,600.00	0.00	0.00	9,552.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,700.00	0.00	0.00	9,652.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,800.00	0.00	0.00	9,752.32	379.06	-431.18	-383.03	0.00	0.00	0.00
9,900.00	0.00	0.00	9,852.32	379.06	-431.18	-383.03	0.00	0.00	0.00
10,000.00	0.00	0.00	9,952.32	379.06	-431.18	-383.03	0.00	0.00	0.00
10,100.00	0.00	0.00	10,052.32	379.06	-431.18	-383.03	0.00	0.00	0.00
10,200.00	0.00	0.00	10,152.32	379.06	-431.18	-383.03	0.00	0.00	0.00
10,300.00	0.00	0.00	10,252.32	379.06	-431.18	-383.03	0.00	0.00	0.00
10,400.00	0.00	0.00	10,352.32	379.06	-431.18	-383.03	0.00	0.00	0.00
10,471.68	0.00	0.00	10,424.00	379.06	-431.18	-383.03	0.00	0.00	0.00
[Battle34SB#15H]KOP									
10,500.00	2.83	179.47	10,452.31	378.36	-431.17	-382.33	10.00	10.00	0.00
10,550.00	7.83	179.47	10,502.07	373.72	-431.13	-377.69	10.00	10.00	0.00
10,600.00	12.83	179.47	10,551.25	364.75	-431.05	-368.72	10.00	10.00	0.00
10,650.00	17.83	179.47	10,599.45	351.54	-430.93	-355.51	10.00	10.00	0.00
10,700.00	22.83	179.47	10,646.32	334.17	-430.77	-338.14	10.00	10.00	0.00
10,750.00	27.83	179.47	10,691.50	312.78	-430.57	-316.75	10.00	10.00	0.00
10,800.00	32.83	179.47	10,734.64	287.54	-430.34	-291.51	10.00	10.00	0.00
10,850.00	37.83	179.47	10,775.42	258.64	-430.08	-262.60	10.00	10.00	0.00
10,900.00	42.83	179.47	10,813.52	226.29	-429.78	-230.25	10.00	10.00	0.00
10,950.00	47.83	179.47	10,848.66	190.74	-429.45	-194.71	10.00	10.00	0.00
11,000.00	52.83	179.47	10,880.57	152.27	-429.10	-156.23	10.00	10.00	0.00
11,050.00	57.83	179.47	10,909.00	111.16	-428.73	-115.12	10.00	10.00	0.00
11,100.00	62.83	179.47	10,933.74	67.73	-428.33	-71.69	10.00	10.00	0.00
11,150.00	67.83	179.47	10,954.61	22.31	-427.91	-26.27	10.00	10.00	0.00
11,200.00	72.83	179.47	10,971.43	-24.76	-427.48	20.80	10.00	10.00	0.00
11,250.00	77.83	179.47	10,984.09	-73.11	-427.04	69.16	10.00	10.00	0.00
11,300.00	82.83	179.47	10,992.48	-122.38	-426.58	118.43	10.00	10.00	0.00
11,350.00	87.83	179.47	10,996.55	-172.20	-426.13	168.25	10.00	10.00	0.00
11,368.68	89.70	179.47	10,996.95	-190.87	-425.96	186.92	10.00	10.00	0.00
11,400.00	89.70	179.47	10,997.11	-222.19	-425.67	218.24	0.00	0.00	0.00
11,500.00	89.70	179.47	10,997.64	-322.18	-424.75	318.24	0.00	0.00	0.00
11,600.00	89.70	179.47	10,998.16	-422.18	-423.84	418.24	0.00	0.00	0.00
11,700.00	89.70	179.47	10,998.69	-522.17	-422.92	518.24	0.00	0.00	0.00
11,800.00	89.70	179.47	10,999.21	-622.17	-422.00	618.24	0.00	0.00	0.00
11,900.00	89.70	179.47	10,999.74	-722.16	-421.09	718.24	0.00	0.00	0.00

Company:	Marathon Oil	Local Co-ordinate Reference:	Well SB #15H
Project:	Lea County, NM	TVD Reference:	Well @ 3720.00usft (GL: 3695' + KB: 25' (H&P594))
Site:	Battle 34	MD Reference:	Well @ 3720.00usft (GL: 3695' + KB: 25' (H&P594))
Well:	SB #15H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	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)
12,000.00	89.70	179.47	11,000.26	-822.16	-420.17	818.23	0.00	0.00	0.00
12,100.00	89.70	179.47	11,000.78	-922.15	-419.26	918.23	0.00	0.00	0.00
12,200.00	89.70	179.47	11,001.31	-1,022.15	-418.34	1,018.23	0.00	0.00	0.00
12,300.00	89.70	179.47	11,001.83	-1,122.14	-417.42	1,118.23	0.00	0.00	0.00
12,400.00	89.70	179.47	11,002.36	-1,222.13	-416.51	1,218.23	0.00	0.00	0.00
12,500.00	89.70	179.47	11,002.88	-1,322.13	-415.59	1,318.23	0.00	0.00	0.00
12,600.00	89.70	179.47	11,003.41	-1,422.12	-414.67	1,418.23	0.00	0.00	0.00
12,700.00	89.70	179.47	11,003.93	-1,522.12	-413.76	1,518.23	0.00	0.00	0.00
12,800.00	89.70	179.47	11,004.45	-1,622.11	-412.84	1,618.22	0.00	0.00	0.00
12,900.00	89.70	179.47	11,004.98	-1,722.11	-411.93	1,718.22	0.00	0.00	0.00
13,000.00	89.70	179.47	11,005.50	-1,822.10	-411.01	1,818.22	0.00	0.00	0.00
13,100.00	89.70	179.47	11,006.03	-1,922.10	-410.09	1,918.22	0.00	0.00	0.00
13,200.00	89.70	179.47	11,006.55	-2,022.09	-409.18	2,018.22	0.00	0.00	0.00
13,300.00	89.70	179.47	11,007.08	-2,122.08	-408.26	2,118.22	0.00	0.00	0.00
13,400.00	89.70	179.47	11,007.60	-2,222.08	-407.34	2,218.22	0.00	0.00	0.00
13,500.00	89.70	179.47	11,008.13	-2,322.07	-406.43	2,318.21	0.00	0.00	0.00
13,600.00	89.70	179.47	11,008.65	-2,422.07	-405.51	2,418.21	0.00	0.00	0.00
13,700.00	89.70	179.47	11,009.17	-2,522.06	-404.59	2,518.21	0.00	0.00	0.00
13,800.00	89.70	179.47	11,009.70	-2,622.06	-403.68	2,618.21	0.00	0.00	0.00
13,900.00	89.70	179.47	11,010.22	-2,722.05	-402.76	2,718.21	0.00	0.00	0.00
14,000.00	89.70	179.47	11,010.75	-2,822.05	-401.85	2,818.21	0.00	0.00	0.00
14,100.00	89.70	179.47	11,011.27	-2,922.04	-400.93	2,918.21	0.00	0.00	0.00
14,200.00	89.70	179.47	11,011.80	-3,022.03	-400.01	3,018.20	0.00	0.00	0.00
14,300.00	89.70	179.47	11,012.32	-3,122.03	-399.10	3,118.20	0.00	0.00	0.00
14,400.00	89.70	179.47	11,012.84	-3,222.02	-398.18	3,218.20	0.00	0.00	0.00
14,500.00	89.70	179.47	11,013.37	-3,322.02	-397.26	3,318.20	0.00	0.00	0.00
14,600.00	89.70	179.47	11,013.89	-3,422.01	-396.35	3,418.20	0.00	0.00	0.00
14,700.00	89.70	179.47	11,014.42	-3,522.01	-395.43	3,518.20	0.00	0.00	0.00
14,800.00	89.70	179.47	11,014.94	-3,622.00	-394.51	3,618.20	0.00	0.00	0.00
14,900.00	89.70	179.47	11,015.47	-3,722.00	-393.60	3,718.20	0.00	0.00	0.00
15,000.00	89.70	179.47	11,015.99	-3,821.99	-392.68	3,818.19	0.00	0.00	0.00
15,100.00	89.70	179.47	11,016.51	-3,921.98	-391.77	3,918.19	0.00	0.00	0.00
15,200.00	89.70	179.47	11,017.04	-4,021.98	-390.85	4,018.19	0.00	0.00	0.00
15,300.00	89.70	179.47	11,017.56	-4,121.97	-389.93	4,118.19	0.00	0.00	0.00
15,400.00	89.70	179.47	11,018.09	-4,221.97	-389.02	4,218.19	0.00	0.00	0.00
15,500.00	89.70	179.47	11,018.61	-4,321.96	-388.10	4,318.19	0.00	0.00	0.00
15,600.00	89.70	179.47	11,019.14	-4,421.96	-387.18	4,418.19	0.00	0.00	0.00
15,700.00	89.70	179.47	11,019.66	-4,521.95	-386.27	4,518.18	0.00	0.00	0.00
15,800.00	89.70	179.47	11,020.18	-4,621.95	-385.35	4,618.18	0.00	0.00	0.00
15,875.46	89.70	179.47	11,020.58	-4,697.40	-384.66	4,693.64	0.00	0.00	0.00

[Battle34SB#15H]LTP/BHL

Company:	Marathon Oil	Local Co-ordinate Reference:	Well SB #15H
Project:	Lea County, NM	TVD Reference:	Well @ 3720.00usft (GL: 3695' + KB: 25' (H&P594))
Site:	Battle 34	MD Reference:	Well @ 3720.00usft (GL: 3695' + KB: 25' (H&P594))
Well:	SB #15H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
[Battle34SB#15H]KOP	0.00	0.00	10,424.0 0	379.06	-431.18	525,441.67	739,277.46	32.442164	-103.557723
- plan hits target center									
- Point									
[Battle34SB#15H]LTP/BI	0.00	0.00	11,020.58	-4,697.40	-384.66	520,365.21	739,323.98	32.428209	-103.557691
- plan hits target center									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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