

Company:	Marathon Oil	Local Co-ordinate Reference:	Well AV #17H
Project:	Lea County, NM	TVD Reference:	Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))
Site:	Battle 34	MD Reference:	Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))
Well:	AV #17H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	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	AV #17H					
Well Position	+N/-S	0.00 usft	Northing:	525,065.53 usft	Latitude:	32.441120
	+E/-W	0.00 usft	Easting:	739,768.57 usft	Longitude:	-103.556140
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,696.00 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 B			
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	179.49

Survey Tool Program	Date 11/12/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	1,850.00	Prelim Plan B (OH)	MWD+IFR1	OWSG MWD + IFR1
1,850.00	5,400.00	Prelim Plan B (OH)	MWD+IFR1	OWSG MWD + IFR1
5,400.00	10,000.00	Prelim Plan B (OH)	MWD+IFR1	OWSG MWD + IFR1
10,000.00	14,540.76	Prelim Plan B (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
[Battle34AV#17H]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

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Site:	Battle 34	MD Reference:	Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))
Well:	AV #17H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	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)	
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	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	2.00	67.64	1,599.98	0.66	1.61	-0.65	2.00	2.00	0.00	
1,700.00	4.00	67.64	1,699.84	2.65	6.45	-2.60	2.00	2.00	0.00	
1,800.00	6.00	67.64	1,799.45	5.97	14.51	-5.84	2.00	2.00	0.00	
1,900.00	8.00	67.64	1,898.70	10.61	25.78	-10.38	2.00	2.00	0.00	
2,000.00	10.00	67.64	1,997.47	16.56	40.25	-16.20	2.00	2.00	0.00	
2,100.00	10.00	67.64	2,095.95	23.16	56.31	-22.66	0.00	0.00	0.00	
2,200.00	10.00	67.64	2,194.43	29.77	72.37	-29.12	0.00	0.00	0.00	
2,300.00	10.00	67.64	2,292.91	36.37	88.43	-35.58	0.00	0.00	0.00	
2,400.00	10.00	67.64	2,391.39	42.98	104.49	-42.05	0.00	0.00	0.00	
2,500.00	10.00	67.64	2,489.87	49.58	120.55	-48.51	0.00	0.00	0.00	
2,600.00	10.00	67.64	2,588.35	56.19	136.61	-54.97	0.00	0.00	0.00	
2,700.00	10.00	67.64	2,686.83	62.79	152.67	-61.43	0.00	0.00	0.00	
2,800.00	10.00	67.64	2,785.31	69.40	168.73	-67.90	0.00	0.00	0.00	
2,900.00	10.00	67.64	2,883.79	76.01	184.79	-74.36	0.00	0.00	0.00	
3,000.00	10.00	67.64	2,982.27	82.61	200.84	-80.82	0.00	0.00	0.00	
3,100.00	10.00	67.64	3,080.75	89.22	216.90	-87.28	0.00	0.00	0.00	
3,200.00	10.00	67.64	3,179.23	95.82	232.96	-93.75	0.00	0.00	0.00	
3,300.00	10.00	67.64	3,277.72	102.43	249.02	-100.21	0.00	0.00	0.00	
3,400.00	10.00	67.64	3,376.20	109.03	265.08	-106.67	0.00	0.00	0.00	
3,500.00	10.00	67.64	3,474.68	115.64	281.14	-113.13	0.00	0.00	0.00	
3,600.00	10.00	67.64	3,573.16	122.24	297.20	-119.59	0.00	0.00	0.00	
3,700.00	10.00	67.64	3,671.64	128.85	313.26	-126.06	0.00	0.00	0.00	
3,800.00	10.00	67.64	3,770.12	135.46	329.32	-132.52	0.00	0.00	0.00	
3,900.00	10.00	67.64	3,868.60	142.06	345.38	-138.98	0.00	0.00	0.00	
4,000.00	10.00	67.64	3,967.08	148.67	361.44	-145.44	0.00	0.00	0.00	
4,100.00	10.00	67.64	4,065.56	155.27	377.50	-151.91	0.00	0.00	0.00	
4,200.00	10.00	67.64	4,164.04	161.88	393.56	-158.37	0.00	0.00	0.00	
4,300.00	10.00	67.64	4,262.52	168.48	409.62	-164.83	0.00	0.00	0.00	
4,400.00	10.00	67.64	4,361.00	175.09	425.68	-171.29	0.00	0.00	0.00	
4,500.00	10.00	67.64	4,459.48	181.69	441.74	-177.76	0.00	0.00	0.00	
4,600.00	10.00	67.64	4,557.97	188.30	457.79	-184.22	0.00	0.00	0.00	

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Well:	AV #17H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	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	10.00	67.64	4,656.45	194.91	473.85	-190.68	0.00	0.00	0.00
4,800.00	10.00	67.64	4,754.93	201.51	489.91	-197.14	0.00	0.00	0.00
4,900.00	10.00	67.64	4,853.41	208.12	505.97	-203.61	0.00	0.00	0.00
5,000.00	10.00	67.64	4,951.89	214.72	522.03	-210.07	0.00	0.00	0.00
5,100.00	10.00	67.64	5,050.37	221.33	538.09	-216.53	0.00	0.00	0.00
5,200.00	10.00	67.64	5,148.85	227.93	554.15	-222.99	0.00	0.00	0.00
5,300.00	10.00	67.64	5,247.33	234.54	570.21	-229.45	0.00	0.00	0.00
5,400.00	10.00	67.64	5,345.81	241.14	586.27	-235.92	0.00	0.00	0.00
5,500.00	10.00	67.64	5,444.29	247.75	602.33	-242.38	0.00	0.00	0.00
5,600.00	10.00	67.64	5,542.77	254.36	618.39	-248.84	0.00	0.00	0.00
5,700.00	10.00	67.64	5,641.25	260.96	634.45	-255.30	0.00	0.00	0.00
5,800.00	10.00	67.64	5,739.73	267.57	650.51	-261.77	0.00	0.00	0.00
5,900.00	10.00	67.64	5,838.22	274.17	666.57	-268.23	0.00	0.00	0.00
6,000.00	10.00	67.64	5,936.70	280.78	682.63	-274.69	0.00	0.00	0.00
6,100.00	10.00	67.64	6,035.18	287.38	698.69	-281.15	0.00	0.00	0.00
6,200.00	10.00	67.64	6,133.66	293.99	714.74	-287.62	0.00	0.00	0.00
6,300.00	10.00	67.64	6,232.14	300.59	730.80	-294.08	0.00	0.00	0.00
6,400.00	10.00	67.64	6,330.62	307.20	746.86	-300.54	0.00	0.00	0.00
6,500.00	10.00	67.64	6,429.10	313.81	762.92	-307.00	0.00	0.00	0.00
6,600.00	10.00	67.64	6,527.58	320.41	778.98	-313.46	0.00	0.00	0.00
6,700.00	10.00	67.64	6,626.06	327.02	795.04	-319.93	0.00	0.00	0.00
6,800.00	10.00	67.64	6,724.54	333.62	811.10	-326.39	0.00	0.00	0.00
6,900.00	10.00	67.64	6,823.02	340.23	827.16	-332.85	0.00	0.00	0.00
7,000.00	10.00	67.64	6,921.50	346.83	843.22	-339.31	0.00	0.00	0.00
7,100.00	10.00	67.64	7,019.99	353.44	859.28	-345.78	0.00	0.00	0.00
7,200.00	10.00	67.64	7,118.47	360.04	875.34	-352.24	0.00	0.00	0.00
7,300.00	10.00	67.64	7,216.95	366.65	891.40	-358.70	0.00	0.00	0.00
7,400.00	10.00	67.64	7,315.43	373.26	907.46	-365.16	0.00	0.00	0.00
7,500.00	10.00	67.64	7,413.91	379.86	923.52	-371.63	0.00	0.00	0.00
7,600.00	10.00	67.64	7,512.39	386.47	939.58	-378.09	0.00	0.00	0.00
7,700.00	10.00	67.64	7,610.87	393.07	955.64	-384.55	0.00	0.00	0.00
7,800.00	10.00	67.64	7,709.35	399.68	971.69	-391.01	0.00	0.00	0.00
7,900.00	10.00	67.64	7,807.83	406.28	987.75	-397.48	0.00	0.00	0.00
8,000.00	10.00	67.64	7,906.31	412.89	1,003.81	-403.94	0.00	0.00	0.00
8,099.23	10.00	67.64	8,004.04	419.44	1,019.75	-410.35	0.00	0.00	0.00
8,200.00	7.98	67.64	8,103.56	425.44	1,034.31	-416.21	2.00	-2.00	0.00
8,300.00	5.98	67.64	8,202.81	430.06	1,045.56	-420.74	2.00	-2.00	0.00
8,400.00	3.98	67.64	8,302.43	433.37	1,053.60	-423.97	2.00	-2.00	0.00
8,500.00	1.98	67.64	8,402.29	435.35	1,058.41	-425.91	2.00	-2.00	0.00
8,599.23	0.00	0.00	8,501.50	436.00	1,060.00	-426.55	2.00	-2.00	0.00
8,700.00	0.00	0.00	8,602.27	436.00	1,060.00	-426.55	0.00	0.00	0.00
8,800.00	0.00	0.00	8,702.27	436.00	1,060.00	-426.55	0.00	0.00	0.00

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Well:	AV #17H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	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)
8,900.00	0.00	0.00	8,802.27	436.00	1,060.00	-426.55	0.00	0.00	0.00
9,000.00	0.00	0.00	8,902.27	436.00	1,060.00	-426.55	0.00	0.00	0.00
9,078.73	0.00	0.00	8,981.00	436.00	1,060.00	-426.55	0.00	0.00	0.00
[Battle34AV#17H]KOP									
9,100.00	2.13	171.25	9,002.27	435.61	1,060.06	-426.16	10.00	10.00	0.00
9,150.00	7.13	171.25	9,052.09	431.62	1,060.67	-422.17	10.00	10.00	0.00
9,200.00	12.13	171.25	9,101.37	423.36	1,061.95	-413.89	10.00	10.00	0.00
9,250.00	17.13	171.25	9,149.73	410.89	1,063.87	-401.40	10.00	10.00	0.00
9,300.00	22.13	171.25	9,196.81	394.29	1,066.42	-384.79	10.00	10.00	0.00
9,350.00	27.13	171.25	9,242.25	373.71	1,069.59	-364.17	10.00	10.00	0.00
9,400.00	32.13	171.25	9,285.70	349.29	1,073.35	-339.72	10.00	10.00	0.00
9,450.00	37.13	171.25	9,326.83	321.21	1,077.67	-311.61	10.00	10.00	0.00
9,500.00	42.13	171.25	9,365.33	289.70	1,082.52	-280.06	10.00	10.00	0.00
9,550.00	47.13	171.25	9,400.90	255.00	1,087.86	-245.31	10.00	10.00	0.00
9,600.00	52.13	171.25	9,433.28	217.36	1,093.65	-207.62	10.00	10.00	0.00
9,650.00	57.13	171.25	9,462.21	177.08	1,099.85	-167.28	10.00	10.00	0.00
9,700.00	62.13	171.25	9,487.49	134.46	1,106.41	-124.61	10.00	10.00	0.00
9,750.00	67.13	171.25	9,508.91	89.82	1,113.28	-79.91	10.00	10.00	0.00
9,800.00	72.13	171.25	9,526.31	43.51	1,120.41	-33.54	10.00	10.00	0.00
9,850.00	77.13	171.25	9,539.56	-4.13	1,127.74	14.16	10.00	10.00	0.00
9,900.00	82.13	171.25	9,548.56	-52.72	1,135.22	62.82	10.00	10.00	0.00
9,950.00	87.13	171.25	9,553.24	-101.91	1,142.79	112.07	10.00	10.00	0.00
9,975.73	89.70	171.25	9,553.95	-127.32	1,146.70	137.53	10.00	10.00	0.00
10,000.00	89.70	171.98	9,554.08	-151.33	1,150.24	161.57	3.00	0.00	3.00
10,100.00	89.70	174.98	9,554.60	-250.67	1,161.60	261.00	3.00	0.00	3.00
10,200.00	89.70	177.98	9,555.12	-350.47	1,167.74	360.85	3.00	0.00	3.00
10,250.52	89.70	179.49	9,555.38	-400.98	1,168.86	411.37	3.00	0.00	3.00
10,300.00	89.70	179.49	9,555.64	-450.46	1,169.29	460.85	0.00	0.00	0.00
10,400.00	89.70	179.49	9,556.16	-550.45	1,170.18	560.84	0.00	0.00	0.00
10,500.00	89.70	179.49	9,556.68	-650.45	1,171.06	660.84	0.00	0.00	0.00
10,600.00	89.70	179.49	9,557.20	-750.44	1,171.94	760.84	0.00	0.00	0.00
10,700.00	89.70	179.49	9,557.71	-850.43	1,172.83	860.84	0.00	0.00	0.00
10,800.00	89.70	179.49	9,558.23	-950.43	1,173.71	960.84	0.00	0.00	0.00
10,900.00	89.70	179.49	9,558.75	-1,050.42	1,174.59	1,060.84	0.00	0.00	0.00
11,000.00	89.70	179.49	9,559.27	-1,150.42	1,175.48	1,160.84	0.00	0.00	0.00
11,100.00	89.70	179.49	9,559.79	-1,250.41	1,176.36	1,260.83	0.00	0.00	0.00
11,200.00	89.70	179.49	9,560.31	-1,350.41	1,177.25	1,360.83	0.00	0.00	0.00
11,300.00	89.70	179.49	9,560.82	-1,450.40	1,178.13	1,460.83	0.00	0.00	0.00
11,400.00	89.70	179.49	9,561.34	-1,550.40	1,179.01	1,560.83	0.00	0.00	0.00
11,500.00	89.70	179.49	9,561.86	-1,650.39	1,179.90	1,660.83	0.00	0.00	0.00
11,600.00	89.70	179.49	9,562.38	-1,750.39	1,180.78	1,760.83	0.00	0.00	0.00
11,700.00	89.70	179.49	9,562.90	-1,850.38	1,181.66	1,860.83	0.00	0.00	0.00

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Project:	Lea County, NM	TVD Reference:	Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))
Site:	Battle 34	MD Reference:	Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))
Well:	AV #17H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	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)	
11,800.00	89.70	179.49	9,563.42	-1,950.38	1,182.55	1,960.83	0.00	0.00	0.00	
11,900.00	89.70	179.49	9,563.94	-2,050.37	1,183.43	2,060.82	0.00	0.00	0.00	
12,000.00	89.70	179.49	9,564.45	-2,150.37	1,184.31	2,160.82	0.00	0.00	0.00	
12,100.00	89.70	179.49	9,564.97	-2,250.36	1,185.20	2,260.82	0.00	0.00	0.00	
12,200.00	89.70	179.49	9,565.49	-2,350.36	1,186.08	2,360.82	0.00	0.00	0.00	
12,300.00	89.70	179.49	9,566.01	-2,450.35	1,186.96	2,460.82	0.00	0.00	0.00	
12,400.00	89.70	179.49	9,566.53	-2,550.35	1,187.85	2,560.82	0.00	0.00	0.00	
12,500.00	89.70	179.49	9,567.05	-2,650.34	1,188.73	2,660.82	0.00	0.00	0.00	
12,600.00	89.70	179.49	9,567.56	-2,750.33	1,189.61	2,760.81	0.00	0.00	0.00	
12,700.00	89.70	179.49	9,568.08	-2,850.33	1,190.50	2,860.81	0.00	0.00	0.00	
12,800.00	89.70	179.49	9,568.60	-2,950.32	1,191.38	2,960.81	0.00	0.00	0.00	
12,900.00	89.70	179.49	9,569.12	-3,050.32	1,192.27	3,060.81	0.00	0.00	0.00	
13,000.00	89.70	179.49	9,569.64	-3,150.31	1,193.15	3,160.81	0.00	0.00	0.00	
13,100.00	89.70	179.49	9,570.16	-3,250.31	1,194.03	3,260.81	0.00	0.00	0.00	
13,200.00	89.70	179.49	9,570.67	-3,350.30	1,194.92	3,360.81	0.00	0.00	0.00	
13,300.00	89.70	179.49	9,571.19	-3,450.30	1,195.80	3,460.81	0.00	0.00	0.00	
13,400.00	89.70	179.49	9,571.71	-3,550.29	1,196.68	3,560.80	0.00	0.00	0.00	
13,500.00	89.70	179.49	9,572.23	-3,650.29	1,197.57	3,660.80	0.00	0.00	0.00	
13,600.00	89.70	179.49	9,572.75	-3,750.28	1,198.45	3,760.80	0.00	0.00	0.00	
13,700.00	89.70	179.49	9,573.27	-3,850.28	1,199.33	3,860.80	0.00	0.00	0.00	
13,800.00	89.70	179.49	9,573.78	-3,950.27	1,200.22	3,960.80	0.00	0.00	0.00	
13,900.00	89.70	179.49	9,574.30	-4,050.27	1,201.10	4,060.80	0.00	0.00	0.00	
14,000.00	89.70	179.49	9,574.82	-4,150.26	1,201.98	4,160.80	0.00	0.00	0.00	
14,100.00	89.70	179.49	9,575.34	-4,250.26	1,202.87	4,260.79	0.00	0.00	0.00	
14,200.00	89.70	179.49	9,575.86	-4,350.25	1,203.75	4,360.79	0.00	0.00	0.00	
14,300.00	89.70	179.49	9,576.38	-4,450.25	1,204.63	4,460.79	0.00	0.00	0.00	
14,400.00	89.70	179.49	9,576.90	-4,550.24	1,205.52	4,560.79	0.00	0.00	0.00	
14,500.00	89.70	179.49	9,577.41	-4,650.24	1,206.40	4,660.79	0.00	0.00	0.00	
14,541.76	89.70	179.49	9,577.63	-4,691.99	1,206.77	4,702.55	0.00	0.00	0.00	

[Battle34AV#17H]LTP/BHL

Company:	Marathon Oil	Local Co-ordinate Reference:	Well AV #17H
Project:	Lea County, NM	TVD Reference:	Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))
Site:	Battle 34	MD Reference:	Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))
Well:	AV #17H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	Database:	WellPlanner1

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
[Battle34AV#17H]FTP - plan misses target center by 1224.12usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.01	0.00	386.03	1,161.66	525,451.56	740,930.23	32.442158	-103.552365	
[Battle34AV#17H]KOP - plan hits target center - Point	0.00	0.00	8,981.00	436.00	1,060.00	525,501.53	740,828.57	32.442297	-103.552694	
[Battle34AV#17H]LTP/BI - plan hits target center - Point	0.00	0.00	9,577.63	-4,691.99	1,206.77	520,373.54	740,975.34	32.428199	-103.552340	

Checked By: _____ Approved By: _____ Date: _____



Marathon Oil
Lea County,
Battle 34
AV #17H
Prelim Plan B
GL: 3696' + KB: 26.5' (H&P480)

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

RKB Elevation: Well @ 3722.50usft (GL: 3696' + KB: 26.5' (H&P480))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	525065.53	739768.57	32.441120	-103.556139	

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	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00
3	2000.00	10.00	87.64	1997.47	16.56	40.25	2.00	-16.20
4	8099.23	10.00	87.64	8004.04	419.44	1019.75	0.00	-410.35
5	8599.23	0.00	0.00	8501.50	436.00	1060.00	2.00	-426.55
6	9078.73	0.00	0.00	8981.00	436.00	1060.00	0.00	-426.55
7	9975.73	89.70	171.25	9553.95	-127.32	1146.70	10.00	137.53
8	10250.52	89.70	179.49	9555.38	-400.98	1168.86	3.00	411.37
9	14541.76	89.70	179.49	9577.63	-4691.99	1206.77	0.00	4702.55

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[Battle34AV#17H]FTP	0.00	386.03	1161.66	525451.56	740930.23
[Battle34AV#17H]KOP	8981.00	436.00	1060.00	525501.53	740828.57
[Battle34AV#17H]LTP/BHL	9577.63	-4691.99	1206.77	520373.54	740975.34

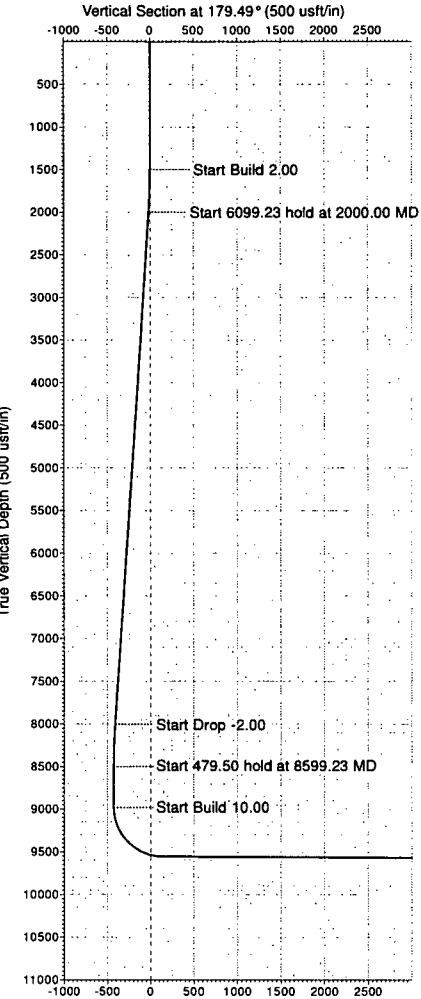


Azimuths to Grid North
 True North: -0.42°
 Magnetic North: 6.30°
 Magnetic Field
 Strength: 48128.7nT
 Dip Angle: 60.28°
 Date: 10/23/2018
 Model: HDGM

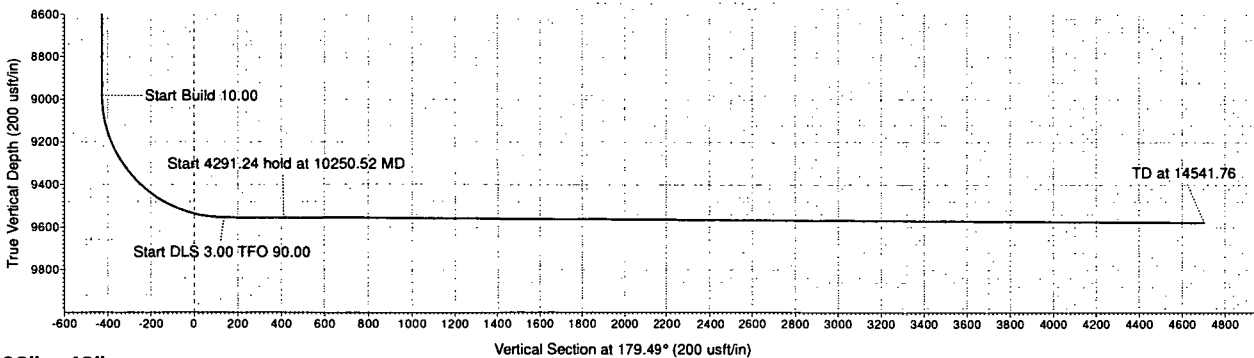
Azimuth Corrections

Total Magnetic Corr. (M to G): 6.30°

Declination (M to T): 6.72° East



Target Line: 9553' TVD @ 0' VS: 89.7° INC



36" x 48"

