

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WD ST #8H
Project:	Eddy County, NM	TVD Reference:	Well @ 2957.00usft (GL: 2932' + KB: 25' (PD101))
Site:	Southern Comfort 36 (4-7-8)	MD Reference:	Well @ 2957.00usft (GL: 2932' + KB: 25' (PD101))
Well:	WD ST #8H	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		Southern Comfort 36 (4-7-8)				
Site Position:		Northing:	424,665.45 usft	Latitude:	32.167176	
From:	Map	Easting:	591,581.64 usft	Longitude:	-104.037366	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.16 °

Well		WD ST #8H				
Well Position	+N/-S	0.00 usft	Northing:	424,665.35 usft	Latitude:	32.167176
	+E/-W	0.00 usft	Easting:	591,611.61 usft	Longitude:	-104.037269
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,932.00 usft

Wellbore					
OH					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	7/1/2019	7.00	59.88	47,875.60

Design					Prelim Plan A				
Audit Notes:									
Version:		Phase:		PLAN		Tie On Depth:		0.00	
Vertical Section:		Depth From (TVD)		+N/-S		+E/-W		Direction	
		(usft)		(usft)		(usft)		(°)	
		0.00		0.00		0.00		0.12	

Survey Tool Program		Date	7/2/2019	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	5,000.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM
5,000.00	10,000.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM
10,000.00	18,036.91	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM

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
[SouthCom#8H]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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00

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Wellbore:	OH	Survey/Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	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	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	117.24	1,599.98	-0.80	1.55	-0.80	2.00	2.00	0.00
1,700.00	4.00	117.24	1,699.84	-3.19	6.20	-3.18	2.00	2.00	0.00
1,800.00	6.00	117.24	1,799.45	-7.18	13.95	-7.15	2.00	2.00	0.00
1,900.00	8.00	117.24	1,898.70	-12.76	24.79	-12.71	2.00	2.00	0.00
2,000.00	10.00	117.24	1,997.47	-19.92	38.70	-19.84	2.00	2.00	0.00
2,100.00	10.00	117.24	2,095.95	-27.87	54.14	-27.75	0.00	0.00	0.00
2,200.00	10.00	117.24	2,194.43	-35.81	69.58	-35.67	0.00	0.00	0.00
2,300.00	10.00	117.24	2,292.91	-43.76	85.02	-43.58	0.00	0.00	0.00
2,400.00	10.00	117.24	2,391.39	-51.71	100.46	-51.50	0.00	0.00	0.00
2,500.00	10.00	117.24	2,489.87	-59.65	115.90	-59.41	0.00	0.00	0.00
2,600.00	10.00	117.24	2,588.35	-67.60	131.33	-67.33	0.00	0.00	0.00
2,700.00	10.00	117.24	2,686.83	-75.55	146.77	-75.24	0.00	0.00	0.00
2,800.00	10.00	117.24	2,785.31	-83.50	162.21	-83.16	0.00	0.00	0.00
2,900.00	10.00	117.24	2,883.79	-91.44	177.65	-91.07	0.00	0.00	0.00
3,000.00	10.00	117.24	2,982.27	-99.39	193.09	-98.98	0.00	0.00	0.00
3,100.00	10.00	117.24	3,080.75	-107.34	208.53	-106.90	0.00	0.00	0.00
3,200.00	10.00	117.24	3,179.23	-115.28	223.97	-114.81	0.00	0.00	0.00
3,300.00	10.00	117.24	3,277.72	-123.23	239.41	-122.73	0.00	0.00	0.00
3,400.00	10.00	117.24	3,376.20	-131.18	254.85	-130.64	0.00	0.00	0.00
3,500.00	10.00	117.24	3,474.68	-139.12	270.29	-138.56	0.00	0.00	0.00
3,600.00	10.00	117.24	3,573.16	-147.07	285.73	-146.47	0.00	0.00	0.00
3,700.00	10.00	117.24	3,671.64	-155.02	301.17	-154.39	0.00	0.00	0.00
3,800.00	10.00	117.24	3,770.12	-162.97	316.61	-162.30	0.00	0.00	0.00
3,900.00	10.00	117.24	3,868.60	-170.91	332.05	-170.22	0.00	0.00	0.00
4,000.00	10.00	117.24	3,967.08	-178.86	347.49	-178.13	0.00	0.00	0.00
4,015.25	10.00	117.24	3,982.10	-180.07	349.84	-179.34	0.00	0.00	0.00
4,100.00	8.30	117.24	4,065.77	-186.24	361.83	-185.48	2.00	-2.00	0.00
4,200.00	6.30	117.24	4,164.95	-192.06	373.13	-191.28	2.00	-2.00	0.00
4,300.00	4.30	117.24	4,264.52	-196.29	381.35	-195.49	2.00	-2.00	0.00
4,400.00	2.30	117.24	4,364.35	-198.93	386.48	-198.12	2.00	-2.00	0.00
4,500.00	0.30	117.24	4,464.31	-199.97	388.50	-199.16	2.00	-2.00	0.00
4,515.25	0.00	0.00	4,479.56	-199.99	388.54	-199.18	2.00	-2.00	0.00

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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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)
4,600.00	0.00	0.00	4,564.31	-199.99	388.54	-199.18	0.00	0.00	0.00
4,700.00	0.00	0.00	4,664.31	-199.99	388.54	-199.18	0.00	0.00	0.00
4,800.00	0.00	0.00	4,764.31	-199.99	388.54	-199.18	0.00	0.00	0.00
4,900.00	0.00	0.00	4,864.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,000.00	0.00	0.00	4,964.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,100.00	0.00	0.00	5,064.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,200.00	0.00	0.00	5,164.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,300.00	0.00	0.00	5,264.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,400.00	0.00	0.00	5,364.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,500.00	0.00	0.00	5,464.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,600.00	0.00	0.00	5,564.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,700.00	0.00	0.00	5,664.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,800.00	0.00	0.00	5,764.31	-199.99	388.54	-199.18	0.00	0.00	0.00
5,900.00	0.00	0.00	5,864.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,000.00	0.00	0.00	5,964.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,100.00	0.00	0.00	6,064.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,200.00	0.00	0.00	6,164.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,300.00	0.00	0.00	6,264.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,400.00	0.00	0.00	6,364.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,500.00	0.00	0.00	6,464.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,600.00	0.00	0.00	6,564.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,700.00	0.00	0.00	6,664.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,800.00	0.00	0.00	6,764.31	-199.99	388.54	-199.18	0.00	0.00	0.00
6,900.00	0.00	0.00	6,864.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,000.00	0.00	0.00	6,964.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,100.00	0.00	0.00	7,064.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,200.00	0.00	0.00	7,164.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,300.00	0.00	0.00	7,264.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,400.00	0.00	0.00	7,364.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,500.00	0.00	0.00	7,464.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,600.00	0.00	0.00	7,564.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,700.00	0.00	0.00	7,664.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,800.00	0.00	0.00	7,764.31	-199.99	388.54	-199.18	0.00	0.00	0.00
7,900.00	0.00	0.00	7,864.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,000.00	0.00	0.00	7,964.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,100.00	0.00	0.00	8,064.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,200.00	0.00	0.00	8,164.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,300.00	0.00	0.00	8,264.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,400.00	0.00	0.00	8,364.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,500.00	0.00	0.00	8,464.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,600.00	0.00	0.00	8,564.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,700.00	0.00	0.00	8,664.31	-199.99	388.54	-199.18	0.00	0.00	0.00

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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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)
8,800.00	0.00	0.00	8,764.31	-199.99	388.54	-199.18	0.00	0.00	0.00
8,900.00	0.00	0.00	8,864.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,000.00	0.00	0.00	8,964.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,100.00	0.00	0.00	9,064.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,200.00	0.00	0.00	9,164.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,300.00	0.00	0.00	9,264.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,400.00	0.00	0.00	9,364.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,500.00	0.00	0.00	9,464.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,600.00	0.00	0.00	9,564.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,700.00	0.00	0.00	9,664.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,800.00	0.00	0.00	9,764.31	-199.99	388.54	-199.18	0.00	0.00	0.00
9,900.00	0.00	0.00	9,864.31	-199.99	388.54	-199.18	0.00	0.00	0.00
10,000.00	0.00	0.00	9,964.31	-199.99	388.54	-199.18	0.00	0.00	0.00
10,100.00	0.00	0.00	10,064.31	-199.99	388.54	-199.18	0.00	0.00	0.00
10,138.69	0.00	0.00	10,103.00	-199.99	388.54	-199.18	0.00	0.00	0.00
[SouthComf#8H]KOP									
10,150.00	1.13	0.12	10,114.31	-199.88	388.54	-199.06	10.00	10.00	0.00
10,200.00	6.13	0.12	10,164.20	-196.71	388.55	-195.90	10.00	10.00	0.00
10,250.00	11.13	0.12	10,213.62	-189.21	388.56	-188.40	10.00	10.00	0.00
10,300.00	16.13	0.12	10,262.19	-177.43	388.59	-176.62	10.00	10.00	0.00
10,350.00	21.13	0.12	10,309.56	-161.46	388.62	-160.65	10.00	10.00	0.00
10,400.00	26.13	0.12	10,355.35	-141.43	388.66	-140.61	10.00	10.00	0.00
10,450.00	31.13	0.12	10,399.22	-117.47	388.71	-116.66	10.00	10.00	0.00
10,500.00	36.13	0.12	10,440.84	-89.79	388.77	-88.98	10.00	10.00	0.00
10,550.00	41.13	0.12	10,479.89	-58.59	388.84	-57.77	10.00	10.00	0.00
10,600.00	46.13	0.12	10,516.06	-24.10	388.91	-23.28	10.00	10.00	0.00
10,650.00	51.13	0.12	10,549.10	13.42	388.99	14.23	10.00	10.00	0.00
10,700.00	56.13	0.12	10,578.74	53.66	389.07	54.48	10.00	10.00	0.00
10,750.00	61.13	0.12	10,604.76	96.34	389.16	97.16	10.00	10.00	0.00
10,800.00	66.13	0.12	10,626.96	141.13	389.25	141.94	10.00	10.00	0.00
10,850.00	71.13	0.12	10,645.17	187.67	389.35	188.49	10.00	10.00	0.00
10,900.00	76.13	0.12	10,659.26	235.63	389.45	236.45	10.00	10.00	0.00
10,950.00	81.13	0.12	10,669.11	284.64	389.56	285.45	10.00	10.00	0.00
11,000.00	86.13	0.12	10,674.65	334.31	389.66	335.13	10.00	10.00	0.00
11,038.68	90.00	0.12	10,675.96	372.96	389.74	373.78	10.00	10.00	0.00
11,100.00	90.00	0.12	10,675.96	434.28	389.87	435.10	0.00	0.00	0.00
11,200.00	90.00	0.12	10,675.96	534.28	390.08	535.10	0.00	0.00	0.00
11,300.00	90.00	0.12	10,675.96	634.28	390.29	635.10	0.00	0.00	0.00
11,400.00	90.00	0.12	10,675.96	734.28	390.50	735.10	0.00	0.00	0.00
11,500.00	90.00	0.12	10,675.96	834.28	390.71	835.10	0.00	0.00	0.00
11,600.00	90.00	0.12	10,675.96	934.28	390.92	935.10	0.00	0.00	0.00
11,700.00	90.00	0.12	10,675.96	1,034.28	391.13	1,035.10	0.00	0.00	0.00

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Site:	Southern Comfort 36 (4-7-8)	MD Reference:	Well @ 2957.00usft (GL: 2932' + KB: 25' (PD101))
Well:	WD ST #8H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey

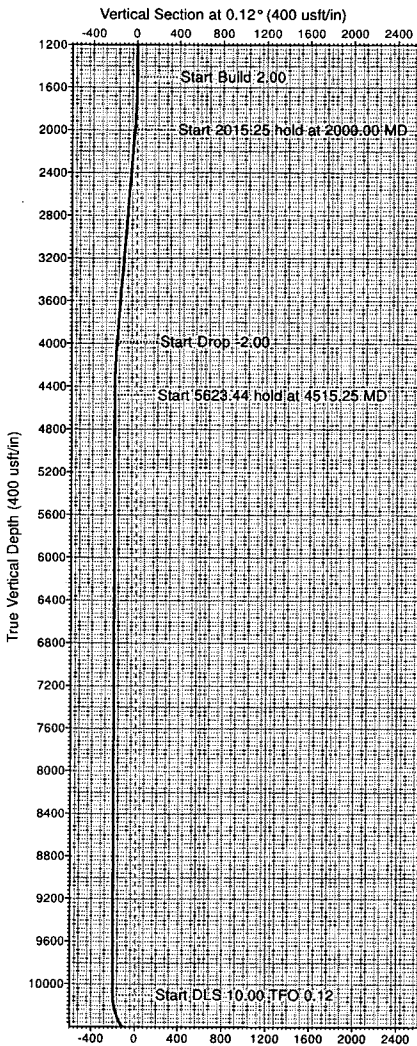
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,800.00	90.00	0.12	10,675.96	1,134.28	391.34	1,135.10	0.00	0.00	0.00
11,900.00	90.00	0.12	10,675.96	1,234.28	391.55	1,235.10	0.00	0.00	0.00
12,000.00	90.00	0.12	10,675.96	1,334.28	391.76	1,335.10	0.00	0.00	0.00
12,100.00	90.00	0.12	10,675.96	1,434.28	391.97	1,435.10	0.00	0.00	0.00
12,200.00	90.00	0.12	10,675.97	1,534.28	392.17	1,535.10	0.00	0.00	0.00
12,300.00	90.00	0.12	10,675.97	1,634.28	392.38	1,635.10	0.00	0.00	0.00
12,400.00	90.00	0.12	10,675.97	1,734.28	392.59	1,735.10	0.00	0.00	0.00
12,500.00	90.00	0.12	10,675.97	1,834.28	392.80	1,835.10	0.00	0.00	0.00
12,600.00	90.00	0.12	10,675.97	1,934.28	393.01	1,935.10	0.00	0.00	0.00
12,700.00	90.00	0.12	10,675.97	2,034.28	393.22	2,035.10	0.00	0.00	0.00
12,800.00	90.00	0.12	10,675.97	2,134.28	393.43	2,135.10	0.00	0.00	0.00
12,900.00	90.00	0.12	10,675.97	2,234.28	393.64	2,235.10	0.00	0.00	0.00
13,000.00	90.00	0.12	10,675.97	2,334.28	393.85	2,335.10	0.00	0.00	0.00
13,100.00	90.00	0.12	10,675.97	2,434.28	394.06	2,435.10	0.00	0.00	0.00
13,200.00	90.00	0.12	10,675.97	2,534.28	394.27	2,535.10	0.00	0.00	0.00
13,300.00	90.00	0.12	10,675.97	2,634.28	394.48	2,635.10	0.00	0.00	0.00
13,400.00	90.00	0.12	10,675.97	2,734.28	394.69	2,735.10	0.00	0.00	0.00
13,500.00	90.00	0.12	10,675.97	2,834.28	394.90	2,835.10	0.00	0.00	0.00
13,600.00	90.00	0.12	10,675.97	2,934.28	395.11	2,935.10	0.00	0.00	0.00
13,700.00	90.00	0.12	10,675.97	3,034.28	395.32	3,035.10	0.00	0.00	0.00
13,800.00	90.00	0.12	10,675.97	3,134.28	395.53	3,135.10	0.00	0.00	0.00
13,900.00	90.00	0.12	10,675.98	3,234.27	395.74	3,235.10	0.00	0.00	0.00
14,000.00	90.00	0.12	10,675.98	3,334.27	395.95	3,335.10	0.00	0.00	0.00
14,100.00	90.00	0.12	10,675.98	3,434.27	396.16	3,435.10	0.00	0.00	0.00
14,200.00	90.00	0.12	10,675.98	3,534.27	396.37	3,535.10	0.00	0.00	0.00
14,300.00	90.00	0.12	10,675.98	3,634.27	396.58	3,635.10	0.00	0.00	0.00
14,400.00	90.00	0.12	10,675.98	3,734.27	396.79	3,735.10	0.00	0.00	0.00
14,500.00	90.00	0.12	10,675.98	3,834.27	397.00	3,835.10	0.00	0.00	0.00
14,600.00	90.00	0.12	10,675.98	3,934.27	397.20	3,935.10	0.00	0.00	0.00
14,700.00	90.00	0.12	10,675.98	4,034.27	397.41	4,035.10	0.00	0.00	0.00
14,800.00	90.00	0.12	10,675.98	4,134.27	397.62	4,135.10	0.00	0.00	0.00
14,900.00	90.00	0.12	10,675.98	4,234.27	397.83	4,235.10	0.00	0.00	0.00
15,000.00	90.00	0.12	10,675.98	4,334.27	398.04	4,335.10	0.00	0.00	0.00
15,100.00	90.00	0.12	10,675.98	4,434.27	398.25	4,435.10	0.00	0.00	0.00
15,200.00	90.00	0.12	10,675.98	4,534.27	398.46	4,535.10	0.00	0.00	0.00
15,300.00	90.00	0.12	10,675.98	4,634.27	398.67	4,635.10	0.00	0.00	0.00
15,400.00	90.00	0.12	10,675.98	4,734.27	398.88	4,735.10	0.00	0.00	0.00
15,500.00	90.00	0.12	10,675.98	4,834.27	399.09	4,835.10	0.00	0.00	0.00
15,600.00	90.00	0.12	10,675.99	4,934.27	399.30	4,935.10	0.00	0.00	0.00
15,700.00	90.00	0.12	10,675.99	5,034.27	399.51	5,035.10	0.00	0.00	0.00
15,800.00	90.00	0.12	10,675.99	5,134.27	399.72	5,135.10	0.00	0.00	0.00
15,900.00	90.00	0.12	10,675.99	5,234.27	399.93	5,235.10	0.00	0.00	0.00

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WD ST #8H
Project:	Eddy County, NM	TVD Reference:	Well @ 2957.00usft (GL: 2932' + KB: 25' (PD101))
Site:	Southern Comfort 36 (4-7-8)	MD Reference:	Well @ 2957.00usft (GL: 2932' + KB: 25' (PD101))
Well:	WD ST #8H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	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)
16,000.00	90.00	0.12	10,675.99	5,334.27	400.14	5,335.10	0.00	0.00	0.00
16,100.00	90.00	0.12	10,675.99	5,434.27	400.35	5,435.10	0.00	0.00	0.00
16,200.00	90.00	0.12	10,675.99	5,534.27	400.56	5,535.10	0.00	0.00	0.00
16,300.00	90.00	0.12	10,675.99	5,634.27	400.77	5,635.10	0.00	0.00	0.00
16,400.00	90.00	0.12	10,675.99	5,734.27	400.98	5,735.10	0.00	0.00	0.00
16,500.00	90.00	0.12	10,675.99	5,834.27	401.19	5,835.10	0.00	0.00	0.00
16,600.00	90.00	0.12	10,675.99	5,934.27	401.40	5,935.10	0.00	0.00	0.00
16,700.00	90.00	0.12	10,675.99	6,034.27	401.61	6,035.10	0.00	0.00	0.00
16,800.00	90.00	0.12	10,675.99	6,134.27	401.82	6,135.10	0.00	0.00	0.00
16,900.00	90.00	0.12	10,675.99	6,234.27	402.03	6,235.10	0.00	0.00	0.00
17,000.00	90.00	0.12	10,675.99	6,334.27	402.23	6,335.10	0.00	0.00	0.00
17,100.00	90.00	0.12	10,675.99	6,434.27	402.44	6,435.10	0.00	0.00	0.00
17,200.00	90.00	0.12	10,676.00	6,534.27	402.65	6,535.10	0.00	0.00	0.00
17,300.00	90.00	0.12	10,676.00	6,634.27	402.86	6,635.10	0.00	0.00	0.00
17,400.00	90.00	0.12	10,676.00	6,734.27	403.07	6,735.10	0.00	0.00	0.00
17,500.00	90.00	0.12	10,676.00	6,834.27	403.28	6,835.10	0.00	0.00	0.00
17,600.00	90.00	0.12	10,676.00	6,934.27	403.49	6,935.10	0.00	0.00	0.00
17,700.00	90.00	0.12	10,676.00	7,034.27	403.70	7,035.10	0.00	0.00	0.00
17,800.00	90.00	0.12	10,676.00	7,134.27	403.91	7,135.10	0.00	0.00	0.00
17,900.00	90.00	0.12	10,676.00	7,234.27	404.12	7,235.10	0.00	0.00	0.00
18,000.00	90.00	0.12	10,676.00	7,334.27	404.33	7,335.10	0.00	0.00	0.00
18,037.91	90.00	0.12	10,676.00	7,372.18	404.41	7,373.01	0.00	0.00	0.00
[SouthComf#8H]LTP/BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
[SouthComf#8H]FTP	0.00	0.00	0.00	30.00	387.79	424,695.35	591,999.40	32.167255	-104.036016
- hit/miss target									
- plan misses target center by 388.95usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
[SouthComf#8H]KOP	0.00	0.00	10,103.00	-199.99	388.54	424,465.36	592,000.15	32.166623	-104.036015
- plan hits target center									
- Point									
[SouthComf#8H]LTP/BH	0.00	0.00	10,676.00	7,372.18	404.41	432,037.53	592,016.02	32.187439	-104.035897
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



Marathon Oil
Eddy County, NM
Southern Comfort 36 (4-7-8)
WD ST #8H
Prelim Plan A
GL: 2932' + KB: 25' (PD101)

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

RKB Elevation: Well @ 2957.00usft (GL: 2932' + KB: 25' (PD101))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	424665.35	591611.61	32.167176	-104.037269	

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	117.24	1997.47	-19.92	38.70	2.00	-19.84
4	4015.25	10.00	117.24	3982.10	-180.07	349.84	0.00	-179.34
5	4515.25	0.00	0.00	4479.56	-199.99	388.54	2.00	-199.18
6	10138.69	0.00	0.00	10103.00	-199.99	388.54	0.00	-199.18
7	11038.68	90.00	0.12	10675.96	372.96	389.74	10.00	373.78
8	18037.91	90.00	0.12	10676.00	7372.18	404.41	0.00	7373.01

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[SouthCom#8H]FTP	0.00	30.00	387.79	424695.35	591999.40
[SouthCom#8H]KOP	10103.00	-199.99	388.54	424465.36	592000.15
[SouthCom#8H]LTP/BHL	10676.00	7372.18	404.41	432037.53	592016.02



Azimuths to Grid North
True North: -0.16°
Magnetic North: 6.84°
Magnetic Field
Strength: 47875.6nT
Dip Angle: 59.88°
Date: 7/1/2019
Model: HDGM

Azimuth Corrections

Total Magnetic Corr. (M to G): 6.84°

Declination (M to T): 7.00° East

Target Line: 10676' TVD @ 0° VS, 90° INC

