

Company:	Marathon Oil	Local Co-ordinate Reference:	Well SB ST #7H
Project:	Eddy County, NM	TVD Reference:	Well @ 2958.00usft (GL: 2933' + KB: 25' (PD101))
Site:	Southern Comfort 36 (4-7-8)	MD Reference:	Well @ 2958.00usft (GL: 2933' + KB: 25' (PD101))
Well:	SB ST #7H	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	SB ST #7H				
Well Position	+N/-S	0.00 usft	Northing:	424,665.35 usft	Latitude: 32.167175
	+E/-W	0.00 usft	Easting:	591,641.58 usft	Longitude: -104.037173
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level: 2,933.00 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) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	0.14	

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	16,028.28	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	
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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	

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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)
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	101.09	1,299.98	-0.34	1.71	-0.33	2.00	2.00	0.00
1,400.00	4.00	101.09	1,399.84	-1.34	6.85	-1.33	2.00	2.00	0.00
1,500.00	6.00	101.09	1,499.45	-3.02	15.40	-2.98	2.00	2.00	0.00
1,600.00	8.00	101.09	1,598.70	-5.36	27.36	-5.29	2.00	2.00	0.00
1,700.00	10.00	101.09	1,697.47	-8.37	42.71	-8.26	2.00	2.00	0.00
1,800.00	10.00	101.09	1,795.95	-11.71	59.75	-11.56	0.00	0.00	0.00
1,900.00	10.00	101.09	1,894.43	-15.05	76.79	-14.86	0.00	0.00	0.00
2,000.00	10.00	101.09	1,992.91	-18.38	93.83	-18.15	0.00	0.00	0.00
2,100.00	10.00	101.09	2,091.39	-21.72	110.87	-21.45	0.00	0.00	0.00
2,200.00	10.00	101.09	2,189.87	-25.06	127.91	-24.75	0.00	0.00	0.00
2,300.00	10.00	101.09	2,288.35	-28.40	144.96	-28.05	0.00	0.00	0.00
2,400.00	10.00	101.09	2,386.83	-31.74	162.00	-31.34	0.00	0.00	0.00
2,500.00	10.00	101.09	2,485.31	-35.08	179.04	-34.64	0.00	0.00	0.00
2,600.00	10.00	101.09	2,583.79	-38.42	196.08	-37.94	0.00	0.00	0.00
2,700.00	10.00	101.09	2,682.27	-41.76	213.12	-41.23	0.00	0.00	0.00
2,800.00	10.00	101.09	2,780.75	-45.09	230.16	-44.53	0.00	0.00	0.00
2,900.00	10.00	101.09	2,879.23	-48.43	247.20	-47.83	0.00	0.00	0.00
3,000.00	10.00	101.09	2,977.72	-51.77	264.24	-51.13	0.00	0.00	0.00
3,100.00	10.00	101.09	3,076.20	-55.11	281.28	-54.42	0.00	0.00	0.00
3,200.00	10.00	101.09	3,174.68	-58.45	298.32	-57.72	0.00	0.00	0.00
3,300.00	10.00	101.09	3,273.16	-61.79	315.36	-61.02	0.00	0.00	0.00
3,400.00	10.00	101.09	3,371.64	-65.13	332.40	-64.31	0.00	0.00	0.00
3,500.00	10.00	101.09	3,470.12	-68.47	349.45	-67.61	0.00	0.00	0.00
3,600.00	10.00	101.09	3,568.60	-71.80	366.49	-70.91	0.00	0.00	0.00
3,700.00	10.00	101.09	3,667.08	-75.14	383.53	-74.21	0.00	0.00	0.00
3,800.00	10.00	101.09	3,765.56	-78.48	400.57	-77.50	0.00	0.00	0.00
3,900.00	10.00	101.09	3,864.04	-81.82	417.61	-80.80	0.00	0.00	0.00
4,000.00	10.00	101.09	3,962.52	-85.16	434.65	-84.10	0.00	0.00	0.00
4,100.00	10.00	101.09	4,061.00	-88.50	451.69	-87.39	0.00	0.00	0.00
4,200.00	10.00	101.09	4,159.48	-91.84	468.73	-90.69	0.00	0.00	0.00
4,300.00	10.00	101.09	4,257.97	-95.17	485.77	-93.99	0.00	0.00	0.00
4,400.00	10.00	101.09	4,356.45	-98.51	502.81	-97.28	0.00	0.00	0.00
4,500.00	10.00	101.09	4,454.93	-101.85	519.85	-100.58	0.00	0.00	0.00
4,600.00	10.00	101.09	4,553.41	-105.19	536.89	-103.88	0.00	0.00	0.00
4,700.00	10.00	101.09	4,651.89	-108.53	553.94	-107.18	0.00	0.00	0.00
4,800.00	10.00	101.09	4,750.37	-111.87	570.98	-110.47	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)
4,900.00	10.00	101.09	4,848.85	-115.21	588.02	-113.77	0.00	0.00	0.00
5,000.00	10.00	101.09	4,947.33	-118.55	605.06	-117.07	0.00	0.00	0.00
5,100.00	10.00	101.09	5,045.81	-121.88	622.10	-120.36	0.00	0.00	0.00
5,200.00	10.00	101.09	5,144.29	-125.22	639.14	-123.66	0.00	0.00	0.00
5,300.00	10.00	101.09	5,242.77	-128.56	656.18	-126.96	0.00	0.00	0.00
5,400.00	10.00	101.09	5,341.25	-131.90	673.22	-130.26	0.00	0.00	0.00
5,500.00	10.00	101.09	5,439.73	-135.24	690.26	-133.55	0.00	0.00	0.00
5,600.00	10.00	101.09	5,538.22	-138.58	707.30	-136.85	0.00	0.00	0.00
5,700.00	10.00	101.09	5,636.70	-141.92	724.34	-140.15	0.00	0.00	0.00
5,800.00	10.00	101.09	5,735.18	-145.26	741.38	-143.44	0.00	0.00	0.00
5,900.00	10.00	101.09	5,833.66	-148.59	758.43	-146.74	0.00	0.00	0.00
6,000.00	10.00	101.09	5,932.14	-151.93	775.47	-150.04	0.00	0.00	0.00
6,100.00	10.00	101.09	6,030.62	-155.27	792.51	-153.33	0.00	0.00	0.00
6,200.00	10.00	101.09	6,129.10	-158.61	809.55	-156.63	0.00	0.00	0.00
6,300.00	10.00	101.09	6,227.58	-161.95	826.59	-159.93	0.00	0.00	0.00
6,400.00	10.00	101.09	6,326.06	-165.29	843.63	-163.23	0.00	0.00	0.00
6,500.00	10.00	101.09	6,424.54	-168.63	860.67	-166.52	0.00	0.00	0.00
6,600.00	10.00	101.09	6,523.02	-171.97	877.71	-169.82	0.00	0.00	0.00
6,700.00	10.00	101.09	6,621.50	-175.30	894.75	-173.12	0.00	0.00	0.00
6,800.00	10.00	101.09	6,719.99	-178.64	911.79	-176.41	0.00	0.00	0.00
6,900.00	10.00	101.09	6,818.47	-181.98	928.83	-179.71	0.00	0.00	0.00
7,000.00	10.00	101.09	6,916.95	-185.32	945.87	-183.01	0.00	0.00	0.00
7,100.00	10.00	101.09	7,015.43	-188.66	962.92	-186.31	0.00	0.00	0.00
7,117.16	10.00	101.09	7,032.33	-189.23	965.84	-186.87	0.00	0.00	0.00
7,200.00	8.34	101.09	7,114.10	-191.77	978.80	-189.38	2.00	-2.00	0.00
7,300.00	6.34	101.09	7,213.28	-194.23	991.34	-191.81	2.00	-2.00	0.00
7,400.00	4.34	101.09	7,312.84	-196.02	1,000.48	-193.57	2.00	-2.00	0.00
7,500.00	2.34	101.09	7,412.66	-197.14	1,006.20	-194.68	2.00	-2.00	0.00
7,600.00	0.34	101.09	7,512.63	-197.59	1,008.50	-195.13	2.00	-2.00	0.00
7,617.16	0.00	0.00	7,529.79	-197.60	1,008.55	-195.14	2.00	-2.00	0.00
7,700.00	0.00	0.00	7,612.63	-197.60	1,008.55	-195.14	0.00	0.00	0.00
7,800.00	0.00	0.00	7,712.63	-197.60	1,008.55	-195.14	0.00	0.00	0.00
7,901.37	0.00	0.00	7,814.00	-197.60	1,008.55	-195.14	0.00	0.00	0.00
[SouthCom#7H]FTP									
7,950.00	4.86	0.14	7,862.57	-195.54	1,008.56	-193.07	10.00	10.00	0.00
8,000.00	9.86	0.14	7,912.15	-189.13	1,008.57	-186.67	10.00	10.00	0.00
8,050.00	14.86	0.14	7,960.97	-178.43	1,008.60	-175.96	10.00	10.00	0.00
8,100.00	19.86	0.14	8,008.68	-163.51	1,008.63	-161.05	10.00	10.00	0.00
8,150.00	24.86	0.14	8,054.90	-144.50	1,008.68	-142.03	10.00	10.00	0.00
8,200.00	29.86	0.14	8,099.29	-121.52	1,008.74	-119.06	10.00	10.00	0.00
8,250.00	34.86	0.14	8,141.51	-94.77	1,008.80	-92.30	10.00	10.00	0.00
8,300.00	39.86	0.14	8,181.24	-64.43	1,008.88	-61.97	10.00	10.00	0.00

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Well:	SB ST #7H	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)
8,350.00	44.86	0.14	8,218.17	-30.75	1,008.96	-28.29	10.00	10.00	0.00
8,400.00	49.86	0.14	8,252.03	6.02	1,009.05	8.49	10.00	10.00	0.00
8,450.00	54.86	0.14	8,282.55	45.60	1,009.15	48.07	10.00	10.00	0.00
8,500.00	59.86	0.14	8,309.51	87.69	1,009.25	90.16	10.00	10.00	0.00
8,550.00	64.86	0.14	8,332.70	131.98	1,009.36	134.44	10.00	10.00	0.00
8,600.00	69.86	0.14	8,351.93	178.11	1,009.47	180.57	10.00	10.00	0.00
8,650.00	74.86	0.14	8,367.08	225.74	1,009.59	228.21	10.00	10.00	0.00
8,700.00	79.86	0.14	8,378.01	274.52	1,009.71	276.98	10.00	10.00	0.00
8,750.00	84.86	0.14	8,384.66	324.06	1,009.83	326.52	10.00	10.00	0.00
8,801.36	90.00	0.14	8,386.96	375.35	1,009.96	377.82	10.00	10.00	0.00
8,900.00	90.00	0.14	8,386.96	473.99	1,010.20	476.45	0.00	0.00	0.00
9,000.00	90.00	0.14	8,386.96	573.99	1,010.44	576.45	0.00	0.00	0.00
9,100.00	90.00	0.14	8,386.96	673.99	1,010.69	676.45	0.00	0.00	0.00
9,200.00	90.00	0.14	8,386.96	773.99	1,010.93	776.45	0.00	0.00	0.00
9,300.00	90.00	0.14	8,386.96	873.99	1,011.18	876.45	0.00	0.00	0.00
9,400.00	90.00	0.14	8,386.96	973.99	1,011.42	976.45	0.00	0.00	0.00
9,500.00	90.00	0.14	8,386.96	1,073.99	1,011.67	1,076.45	0.00	0.00	0.00
9,600.00	90.00	0.14	8,386.96	1,173.99	1,011.91	1,176.45	0.00	0.00	0.00
9,700.00	90.00	0.14	8,386.96	1,273.99	1,012.16	1,276.45	0.00	0.00	0.00
9,800.00	90.00	0.14	8,386.96	1,373.99	1,012.40	1,376.45	0.00	0.00	0.00
9,900.00	90.00	0.14	8,386.96	1,473.98	1,012.65	1,476.45	0.00	0.00	0.00
10,000.00	90.00	0.14	8,386.96	1,573.98	1,012.90	1,576.45	0.00	0.00	0.00
10,100.00	90.00	0.14	8,386.97	1,673.98	1,013.14	1,676.45	0.00	0.00	0.00
10,200.00	90.00	0.14	8,386.97	1,773.98	1,013.39	1,776.45	0.00	0.00	0.00
10,300.00	90.00	0.14	8,386.97	1,873.98	1,013.63	1,876.45	0.00	0.00	0.00
10,400.00	90.00	0.14	8,386.97	1,973.98	1,013.88	1,976.45	0.00	0.00	0.00
10,500.00	90.00	0.14	8,386.97	2,073.98	1,014.12	2,076.45	0.00	0.00	0.00
10,600.00	90.00	0.14	8,386.97	2,173.98	1,014.37	2,176.45	0.00	0.00	0.00
10,700.00	90.00	0.14	8,386.97	2,273.98	1,014.61	2,276.45	0.00	0.00	0.00
10,800.00	90.00	0.14	8,386.97	2,373.98	1,014.86	2,376.45	0.00	0.00	0.00
10,900.00	90.00	0.14	8,386.97	2,473.98	1,015.10	2,476.45	0.00	0.00	0.00
11,000.00	90.00	0.14	8,386.97	2,573.98	1,015.35	2,576.45	0.00	0.00	0.00
11,100.00	90.00	0.14	8,386.97	2,673.98	1,015.59	2,676.45	0.00	0.00	0.00
11,200.00	90.00	0.14	8,386.97	2,773.98	1,015.84	2,776.45	0.00	0.00	0.00
11,300.00	90.00	0.14	8,386.97	2,873.98	1,016.08	2,876.45	0.00	0.00	0.00
11,400.00	90.00	0.14	8,386.97	2,973.98	1,016.33	2,976.45	0.00	0.00	0.00
11,500.00	90.00	0.14	8,386.97	3,073.98	1,016.57	3,076.45	0.00	0.00	0.00
11,600.00	90.00	0.14	8,386.97	3,173.98	1,016.82	3,176.45	0.00	0.00	0.00
11,700.00	90.00	0.14	8,386.97	3,273.98	1,017.06	3,276.45	0.00	0.00	0.00
11,800.00	90.00	0.14	8,386.98	3,373.98	1,017.31	3,376.45	0.00	0.00	0.00
11,900.00	90.00	0.14	8,386.98	3,473.98	1,017.55	3,476.45	0.00	0.00	0.00
12,000.00	90.00	0.14	8,386.98	3,573.98	1,017.80	3,576.45	0.00	0.00	0.00

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Well:	SB ST #7H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

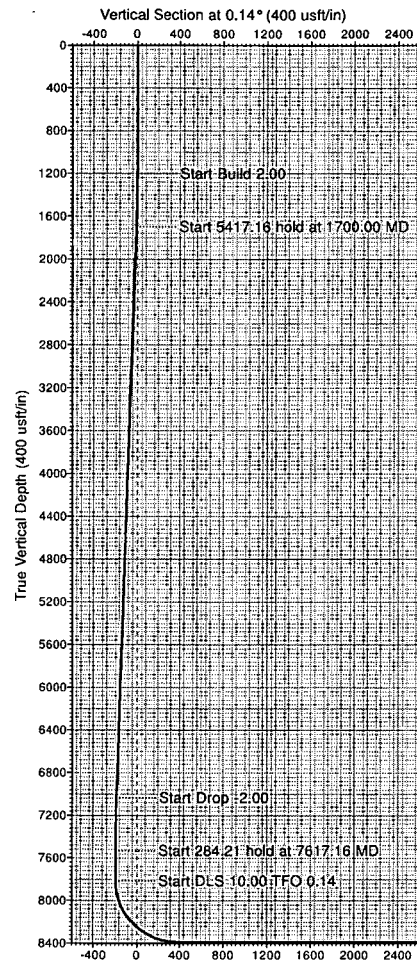
Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,100.00	90.00	0.14	8,386.98	3,673.98	1,018.05	3,676.45	0.00	0.00	0.00	
12,200.00	90.00	0.14	8,386.98	3,773.98	1,018.29	3,776.45	0.00	0.00	0.00	
12,300.00	90.00	0.14	8,386.98	3,873.98	1,018.54	3,876.45	0.00	0.00	0.00	
12,400.00	90.00	0.14	8,386.98	3,973.98	1,018.78	3,976.45	0.00	0.00	0.00	
12,500.00	90.00	0.14	8,386.98	4,073.98	1,019.03	4,076.45	0.00	0.00	0.00	
12,600.00	90.00	0.14	8,386.98	4,173.98	1,019.27	4,176.45	0.00	0.00	0.00	
12,700.00	90.00	0.14	8,386.98	4,273.98	1,019.52	4,276.45	0.00	0.00	0.00	
12,800.00	90.00	0.14	8,386.98	4,373.98	1,019.76	4,376.45	0.00	0.00	0.00	
12,900.00	90.00	0.14	8,386.98	4,473.98	1,020.01	4,476.45	0.00	0.00	0.00	
13,000.00	90.00	0.14	8,386.98	4,573.98	1,020.25	4,576.45	0.00	0.00	0.00	
13,100.00	90.00	0.14	8,386.98	4,673.98	1,020.50	4,676.45	0.00	0.00	0.00	
13,200.00	90.00	0.14	8,386.98	4,773.97	1,020.74	4,776.45	0.00	0.00	0.00	
13,300.00	90.00	0.14	8,386.98	4,873.97	1,020.99	4,876.45	0.00	0.00	0.00	
13,400.00	90.00	0.14	8,386.98	4,973.97	1,021.23	4,976.45	0.00	0.00	0.00	
13,500.00	90.00	0.14	8,386.99	5,073.97	1,021.48	5,076.45	0.00	0.00	0.00	
13,600.00	90.00	0.14	8,386.99	5,173.97	1,021.72	5,176.45	0.00	0.00	0.00	
13,700.00	90.00	0.14	8,386.99	5,273.97	1,021.97	5,276.45	0.00	0.00	0.00	
13,800.00	90.00	0.14	8,386.99	5,373.97	1,022.21	5,376.45	0.00	0.00	0.00	
13,900.00	90.00	0.14	8,386.99	5,473.97	1,022.46	5,476.45	0.00	0.00	0.00	
14,000.00	90.00	0.14	8,386.99	5,573.97	1,022.71	5,576.45	0.00	0.00	0.00	
14,100.00	90.00	0.14	8,386.99	5,673.97	1,022.95	5,676.45	0.00	0.00	0.00	
14,200.00	90.00	0.14	8,386.99	5,773.97	1,023.20	5,776.45	0.00	0.00	0.00	
14,300.00	90.00	0.14	8,386.99	5,873.97	1,023.44	5,876.45	0.00	0.00	0.00	
14,400.00	90.00	0.14	8,386.99	5,973.97	1,023.69	5,976.45	0.00	0.00	0.00	
14,500.00	90.00	0.14	8,386.99	6,073.97	1,023.93	6,076.45	0.00	0.00	0.00	
14,600.00	90.00	0.14	8,386.99	6,173.97	1,024.18	6,176.45	0.00	0.00	0.00	
14,700.00	90.00	0.14	8,386.99	6,273.97	1,024.42	6,276.45	0.00	0.00	0.00	
14,800.00	90.00	0.14	8,386.99	6,373.97	1,024.67	6,376.45	0.00	0.00	0.00	
14,900.00	90.00	0.14	8,386.99	6,473.97	1,024.91	6,476.45	0.00	0.00	0.00	
15,000.00	90.00	0.14	8,386.99	6,573.97	1,025.16	6,576.45	0.00	0.00	0.00	
15,100.00	90.00	0.14	8,386.99	6,673.97	1,025.40	6,676.45	0.00	0.00	0.00	
15,200.00	90.00	0.14	8,387.00	6,773.97	1,025.65	6,776.45	0.00	0.00	0.00	
15,300.00	90.00	0.14	8,387.00	6,873.97	1,025.89	6,876.45	0.00	0.00	0.00	
15,400.00	90.00	0.14	8,387.00	6,973.97	1,026.14	6,976.45	0.00	0.00	0.00	
15,500.00	90.00	0.14	8,387.00	7,073.97	1,026.38	7,076.45	0.00	0.00	0.00	
15,600.00	90.00	0.14	8,387.00	7,173.97	1,026.63	7,176.45	0.00	0.00	0.00	
15,700.00	90.00	0.14	8,387.00	7,273.97	1,026.87	7,276.45	0.00	0.00	0.00	
15,800.00	90.00	0.14	8,387.00	7,373.97	1,027.12	7,376.45	0.00	0.00	0.00	
15,900.00	90.00	0.14	8,387.00	7,473.97	1,027.37	7,476.45	0.00	0.00	0.00	
16,000.00	90.00	0.14	8,387.00	7,573.97	1,027.61	7,576.45	0.00	0.00	0.00	
16,028.28	90.00	0.14	8,387.00	7,602.25	1,027.68	7,604.74	0.00	0.00	0.00	

[SouthCom#7H]LTP/BHL

Company:	Marathon Oil	Local Co-ordinate Reference:	Well SB ST #7H
Project:	Eddy County, NM	TVD Reference:	Well @ 2958.00usft (GL: 2933' + KB: 25' (PD101))
Site:	Southern Comfort 36 (4-7-8)	MD Reference:	Well @ 2958.00usft (GL: 2933' + KB: 25' (PD101))
Well:	SB ST #7H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	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									
[SouthComf##7H]FTP	0.00	0.00	7,814.00	-197.60	1,008.55	424,467.75	592,650.13	32.166625	-104.033915
- plan hits target center									
- Point									
[SouthComf##7H]LTP/BH	0.00	0.00	8,387.00	7,602.25	1,027.68	432,267.60	592,669.26	32.188066	-104.033783
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



Marathon Oil Corporation

Marathon Oil
Eddy County, NM
Southern Comfort 36 (4-7-8)
SB ST #7H
Prelim Plan A
GL: 2933' + 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 @ 2958.00usft (GL: 2933' + KB: 25' (PD101))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	424665.35	591641.58	32.167175	-104.037172	

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	101.09	1697.47	-8.37	42.71	2.00	-8.26
4	7117.16	10.00	101.09	7032.33	-189.23	965.84	0.00	-188.87
5	7617.16	0.00	0.00	7529.79	-197.60	1008.55	2.00	-195.14
6	7901.37	0.00	0.00	7814.00	-197.60	1008.55	0.00	-195.14
7	8801.36	90.00	0.14	8386.96	375.35	1009.96	10.00	377.82
8	16028.28	90.00	0.14	8387.00	7602.25	1027.68	0.00	7604.74

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[SouthCom#7H]FTP	7814.00	-197.60	1008.55	424467.75	592650.13
[SouthCom#7H]LTP/BHL	8387.00	7602.25	1027.68	432267.60	592669.26



PRODIRECTIONAL



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: 8387' TVD @ 0° VS, 90° INC

