

Company:	Marathon Oil	Local Co-ordinate Reference:	Well SB ST #4H
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:	SB ST #4H	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
From:	Map	Easting:	591,581.64 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.167176
		Longitude:	-104.037366
		Grid Convergence:	0.16 °

Well	SB ST #4H		
Well Position	+N/-S	0.00 usft	Northing: 424,665.45 usft
	+E/-W	0.00 usft	Easting: 591,581.64 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32.167176
		Longitude:	-104.037366
		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	359.88

Survey Tool Program	Date	7/2/2019		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
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	15,971.77	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM

Planned Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/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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Well:	SB ST #4H	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)	
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	231.85	1,299.98	-1.08	-1.37	-1.08	2.00	2.00	0.00	
1,400.00	4.00	231.85	1,399.84	-4.31	-5.49	-4.30	2.00	2.00	0.00	
1,500.00	6.00	231.85	1,499.45	-9.70	-12.34	-9.67	2.00	2.00	0.00	
1,600.00	8.00	231.85	1,598.70	-17.22	-21.92	-17.18	2.00	2.00	0.00	
1,700.00	10.00	231.85	1,697.47	-26.89	-34.22	-26.82	2.00	2.00	0.00	
1,800.00	10.00	231.85	1,795.95	-37.62	-47.88	-37.52	0.00	0.00	0.00	
1,900.00	10.00	231.85	1,894.43	-48.34	-61.53	-48.21	0.00	0.00	0.00	
2,000.00	10.00	231.85	1,992.91	-59.07	-75.19	-58.91	0.00	0.00	0.00	
2,100.00	10.00	231.85	2,091.39	-69.80	-88.84	-69.61	0.00	0.00	0.00	
2,200.00	10.00	231.85	2,189.87	-80.53	-102.50	-80.31	0.00	0.00	0.00	
2,300.00	10.00	231.85	2,288.35	-91.25	-116.15	-91.01	0.00	0.00	0.00	
2,400.00	10.00	231.85	2,386.83	-101.98	-129.81	-101.71	0.00	0.00	0.00	
2,500.00	10.00	231.85	2,485.31	-112.71	-143.46	-112.41	0.00	0.00	0.00	
2,600.00	10.00	231.85	2,583.79	-123.44	-157.12	-123.11	0.00	0.00	0.00	
2,700.00	10.00	231.85	2,682.27	-134.17	-170.77	-133.81	0.00	0.00	0.00	
2,800.00	10.00	231.85	2,780.75	-144.89	-184.43	-144.51	0.00	0.00	0.00	
2,900.00	10.00	231.85	2,879.23	-155.62	-198.08	-155.21	0.00	0.00	0.00	
3,000.00	10.00	231.85	2,977.72	-166.35	-211.73	-165.91	0.00	0.00	0.00	
3,087.09	10.00	231.85	3,063.48	-175.69	-223.63	-175.22	0.00	0.00	0.00	
3,100.00	9.74	231.85	3,076.20	-177.06	-225.37	-176.59	2.00	-2.00	0.00	
3,200.00	7.74	231.85	3,175.03	-186.45	-237.32	-185.95	2.00	-2.00	0.00	
3,300.00	5.74	231.85	3,274.34	-193.70	-246.55	-193.18	2.00	-2.00	0.00	
3,400.00	3.74	231.85	3,373.99	-198.81	-253.05	-198.28	2.00	-2.00	0.00	
3,500.00	1.74	231.85	3,473.87	-201.76	-256.81	-201.22	2.00	-2.00	0.00	
3,587.09	0.00	0.00	3,560.95	-202.58	-257.85	-202.04	2.00	-2.00	0.00	
3,600.00	0.00	0.00	3,573.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,673.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,773.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,873.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
4,000.00	0.00	0.00	3,973.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,073.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,173.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,273.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,373.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,473.86	-202.58	-257.85	-202.04	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,573.86	-202.58	-257.85	-202.04	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)
4,700.00	0.00	0.00	4,673.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
4,800.00	0.00	0.00	4,773.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
4,900.00	0.00	0.00	4,873.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,000.00	0.00	0.00	4,973.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,100.00	0.00	0.00	5,073.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,200.00	0.00	0.00	5,173.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,300.00	0.00	0.00	5,273.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,400.00	0.00	0.00	5,373.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,500.00	0.00	0.00	5,473.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,600.00	0.00	0.00	5,573.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,700.00	0.00	0.00	5,673.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,800.00	0.00	0.00	5,773.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
5,900.00	0.00	0.00	5,873.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,000.00	0.00	0.00	5,973.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,100.00	0.00	0.00	6,073.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,200.00	0.00	0.00	6,173.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,300.00	0.00	0.00	6,273.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,400.00	0.00	0.00	6,373.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,500.00	0.00	0.00	6,473.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,600.00	0.00	0.00	6,573.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,700.00	0.00	0.00	6,673.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,800.00	0.00	0.00	6,773.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
6,900.00	0.00	0.00	6,873.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,000.00	0.00	0.00	6,973.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,100.00	0.00	0.00	7,073.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,200.00	0.00	0.00	7,173.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,300.00	0.00	0.00	7,273.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,400.00	0.00	0.00	7,373.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,500.00	0.00	0.00	7,473.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,600.00	0.00	0.00	7,573.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,700.00	0.00	0.00	7,673.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,800.00	0.00	0.00	7,773.86	-202.58	-257.85	-202.04	0.00	0.00	0.00
7,840.14	0.00	0.00	7,814.00	-202.58	-257.85	-202.04	0.00	0.00	0.00
[SouthCom#4H]FTP									
7,850.00	0.99	359.88	7,823.86	-202.50	-257.85	-201.95	10.00	10.00	0.00
7,900.00	5.99	359.88	7,873.75	-199.46	-257.86	-198.92	10.00	10.00	0.00
7,950.00	10.99	359.88	7,923.19	-192.08	-257.87	-191.54	10.00	10.00	0.00
8,000.00	15.99	359.88	7,971.79	-180.42	-257.89	-179.88	10.00	10.00	0.00
8,050.00	20.99	359.88	8,019.20	-164.58	-257.93	-164.03	10.00	10.00	0.00
8,100.00	25.99	359.88	8,065.04	-144.66	-257.97	-144.12	10.00	10.00	0.00
8,150.00	30.99	359.88	8,108.97	-120.82	-258.01	-120.28	10.00	10.00	0.00
8,200.00	35.99	359.88	8,150.66	-93.24	-258.07	-92.70	10.00	10.00	0.00

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Well:	SB ST #4H	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)
8,250.00	40.99	359.88	8,189.79	-62.13	-258.13	-61.59	10.00	10.00	0.00
8,300.00	45.99	359.88	8,226.05	-27.73	-258.20	-27.19	10.00	10.00	0.00
8,350.00	50.99	359.88	8,259.18	9.69	-258.28	10.23	10.00	10.00	0.00
8,400.00	55.99	359.88	8,288.92	49.87	-258.36	50.41	10.00	10.00	0.00
8,450.00	60.99	359.88	8,315.05	92.48	-258.44	93.02	10.00	10.00	0.00
8,500.00	65.99	359.88	8,337.37	137.20	-258.53	137.75	10.00	10.00	0.00
8,550.00	70.99	359.88	8,355.70	183.71	-258.63	184.25	10.00	10.00	0.00
8,600.00	75.99	359.88	8,369.90	231.63	-258.73	232.17	10.00	10.00	0.00
8,650.00	80.99	359.88	8,379.88	280.61	-258.82	281.15	10.00	10.00	0.00
8,700.00	85.99	359.88	8,385.55	330.27	-258.92	330.81	10.00	10.00	0.00
8,740.14	90.00	359.88	8,386.96	370.37	-259.00	370.91	10.00	10.00	0.00
8,800.00	90.00	359.88	8,386.96	430.23	-259.13	430.78	0.00	0.00	0.00
8,900.00	90.00	359.88	8,386.96	530.23	-259.33	530.78	0.00	0.00	0.00
9,000.00	90.00	359.88	8,386.96	630.23	-259.53	630.78	0.00	0.00	0.00
9,100.00	90.00	359.88	8,386.96	730.23	-259.73	730.78	0.00	0.00	0.00
9,200.00	90.00	359.88	8,386.96	830.23	-259.93	830.78	0.00	0.00	0.00
9,300.00	90.00	359.88	8,386.96	930.23	-260.13	930.78	0.00	0.00	0.00
9,400.00	90.00	359.88	8,386.96	1,030.23	-260.33	1,030.78	0.00	0.00	0.00
9,500.00	90.00	359.88	8,386.96	1,130.23	-260.54	1,130.78	0.00	0.00	0.00
9,600.00	90.00	359.88	8,386.96	1,230.23	-260.74	1,230.78	0.00	0.00	0.00
9,700.00	90.00	359.88	8,386.96	1,330.23	-260.94	1,330.78	0.00	0.00	0.00
9,800.00	90.00	359.88	8,386.96	1,430.23	-261.14	1,430.78	0.00	0.00	0.00
9,900.00	90.00	359.88	8,386.96	1,530.23	-261.34	1,530.78	0.00	0.00	0.00
10,000.00	90.00	359.88	8,386.97	1,630.23	-261.54	1,630.78	0.00	0.00	0.00
10,100.00	90.00	359.88	8,386.97	1,730.23	-261.75	1,730.78	0.00	0.00	0.00
10,200.00	90.00	359.88	8,386.97	1,830.23	-261.95	1,830.78	0.00	0.00	0.00
10,300.00	90.00	359.88	8,386.97	1,930.23	-262.15	1,930.78	0.00	0.00	0.00
10,400.00	90.00	359.88	8,386.97	2,030.23	-262.35	2,030.78	0.00	0.00	0.00
10,500.00	90.00	359.88	8,386.97	2,130.23	-262.55	2,130.78	0.00	0.00	0.00
10,600.00	90.00	359.88	8,386.97	2,230.23	-262.75	2,230.78	0.00	0.00	0.00
10,700.00	90.00	359.88	8,386.97	2,330.23	-262.95	2,330.78	0.00	0.00	0.00
10,800.00	90.00	359.88	8,386.97	2,430.23	-263.16	2,430.78	0.00	0.00	0.00
10,900.00	90.00	359.88	8,386.97	2,530.23	-263.36	2,530.78	0.00	0.00	0.00
11,000.00	90.00	359.88	8,386.97	2,630.23	-263.56	2,630.78	0.00	0.00	0.00
11,100.00	90.00	359.88	8,386.97	2,730.23	-263.76	2,730.78	0.00	0.00	0.00
11,200.00	90.00	359.88	8,386.97	2,830.23	-263.96	2,830.78	0.00	0.00	0.00
11,300.00	90.00	359.88	8,386.97	2,930.23	-264.16	2,930.78	0.00	0.00	0.00
11,400.00	90.00	359.88	8,386.97	3,030.23	-264.37	3,030.78	0.00	0.00	0.00
11,500.00	90.00	359.88	8,386.97	3,130.23	-264.57	3,130.78	0.00	0.00	0.00
11,600.00	90.00	359.88	8,386.97	3,230.23	-264.77	3,230.78	0.00	0.00	0.00
11,700.00	90.00	359.88	8,386.98	3,330.23	-264.97	3,330.78	0.00	0.00	0.00
11,800.00	90.00	359.88	8,386.98	3,430.23	-265.17	3,430.78	0.00	0.00	0.00

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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:	SB ST #4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

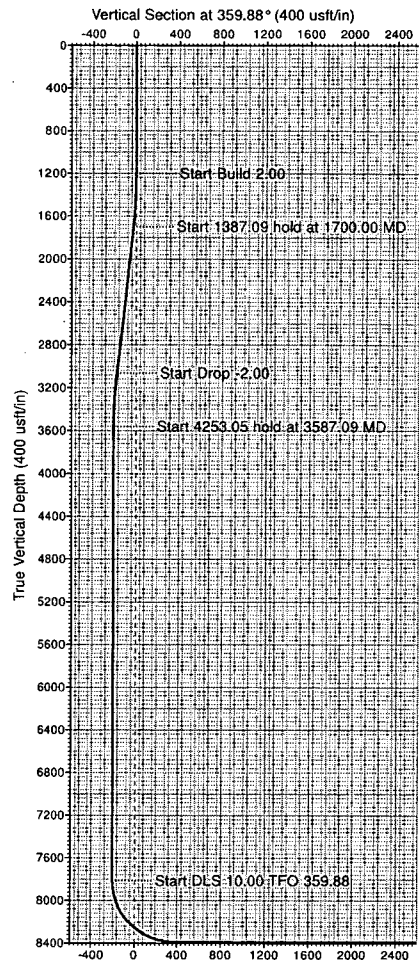
Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,900.00	90.00	359.88	8,386.98	3,530.23	-265.37	3,530.78	0.00	0.00	0.00	
12,000.00	90.00	359.88	8,386.98	3,630.23	-265.57	3,630.78	0.00	0.00	0.00	
12,100.00	90.00	359.88	8,386.98	3,730.23	-265.78	3,730.78	0.00	0.00	0.00	
12,200.00	90.00	359.88	8,386.98	3,830.23	-265.98	3,830.78	0.00	0.00	0.00	
12,300.00	90.00	359.88	8,386.98	3,930.23	-266.18	3,930.78	0.00	0.00	0.00	
12,400.00	90.00	359.88	8,386.98	4,030.23	-266.38	4,030.78	0.00	0.00	0.00	
12,500.00	90.00	359.88	8,386.98	4,130.23	-266.58	4,130.78	0.00	0.00	0.00	
12,600.00	90.00	359.88	8,386.98	4,230.23	-266.78	4,230.78	0.00	0.00	0.00	
12,700.00	90.00	359.88	8,386.98	4,330.23	-266.99	4,330.78	0.00	0.00	0.00	
12,800.00	90.00	359.88	8,386.98	4,430.23	-267.19	4,430.78	0.00	0.00	0.00	
12,900.00	90.00	359.88	8,386.98	4,530.23	-267.39	4,530.78	0.00	0.00	0.00	
13,000.00	90.00	359.88	8,386.98	4,630.23	-267.59	4,630.78	0.00	0.00	0.00	
13,100.00	90.00	359.88	8,386.98	4,730.23	-267.79	4,730.78	0.00	0.00	0.00	
13,200.00	90.00	359.88	8,386.98	4,830.23	-267.99	4,830.78	0.00	0.00	0.00	
13,300.00	90.00	359.88	8,386.98	4,930.23	-268.20	4,930.78	0.00	0.00	0.00	
13,400.00	90.00	359.88	8,386.99	5,030.23	-268.40	5,030.78	0.00	0.00	0.00	
13,500.00	90.00	359.88	8,386.99	5,130.22	-268.60	5,130.78	0.00	0.00	0.00	
13,600.00	90.00	359.88	8,386.99	5,230.22	-268.80	5,230.78	0.00	0.00	0.00	
13,700.00	90.00	359.88	8,386.99	5,330.22	-269.00	5,330.78	0.00	0.00	0.00	
13,800.00	90.00	359.88	8,386.99	5,430.22	-269.20	5,430.78	0.00	0.00	0.00	
13,900.00	90.00	359.88	8,386.99	5,530.22	-269.40	5,530.78	0.00	0.00	0.00	
14,000.00	90.00	359.88	8,386.99	5,630.22	-269.61	5,630.78	0.00	0.00	0.00	
14,100.00	90.00	359.88	8,386.99	5,730.22	-269.81	5,730.78	0.00	0.00	0.00	
14,200.00	90.00	359.88	8,386.99	5,830.22	-270.01	5,830.78	0.00	0.00	0.00	
14,300.00	90.00	359.88	8,386.99	5,930.22	-270.21	5,930.78	0.00	0.00	0.00	
14,400.00	90.00	359.88	8,386.99	6,030.22	-270.41	6,030.78	0.00	0.00	0.00	
14,500.00	90.00	359.88	8,386.99	6,130.22	-270.61	6,130.78	0.00	0.00	0.00	
14,600.00	90.00	359.88	8,386.99	6,230.22	-270.82	6,230.78	0.00	0.00	0.00	
14,700.00	90.00	359.88	8,386.99	6,330.22	-271.02	6,330.78	0.00	0.00	0.00	
14,800.00	90.00	359.88	8,386.99	6,430.22	-271.22	6,430.78	0.00	0.00	0.00	
14,900.00	90.00	359.88	8,386.99	6,530.22	-271.42	6,530.78	0.00	0.00	0.00	
15,000.00	90.00	359.88	8,386.99	6,630.22	-271.62	6,630.78	0.00	0.00	0.00	
15,100.00	90.00	359.88	8,387.00	6,730.22	-271.82	6,730.78	0.00	0.00	0.00	
15,200.00	90.00	359.88	8,387.00	6,830.22	-272.02	6,830.78	0.00	0.00	0.00	
15,300.00	90.00	359.88	8,387.00	6,930.22	-272.23	6,930.78	0.00	0.00	0.00	
15,400.00	90.00	359.88	8,387.00	7,030.22	-272.43	7,030.78	0.00	0.00	0.00	
15,500.00	90.00	359.88	8,387.00	7,130.22	-272.63	7,130.78	0.00	0.00	0.00	
15,600.00	90.00	359.88	8,387.00	7,230.22	-272.83	7,230.78	0.00	0.00	0.00	
15,700.00	90.00	359.88	8,387.00	7,330.22	-273.03	7,330.78	0.00	0.00	0.00	
15,800.00	90.00	359.88	8,387.00	7,430.22	-273.23	7,430.78	0.00	0.00	0.00	
15,900.00	90.00	359.88	8,387.00	7,530.22	-273.44	7,530.78	0.00	0.00	0.00	
15,971.77	90.00	359.88	8,387.00	7,601.99	-273.58	7,602.55	0.00	0.00	0.00	

Company:	Marathon Oil	Local Co-ordinate Reference:	Well SB ST #4H
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:	SB ST #4H	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)
[SouthComf#4H]LTP/BHL									

Design Targets									
Target Name - hit/miss: target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
[SouthComf#4H]FTP - plan hits target center - Point	0.00	0.00	7,814.00	-202.58	-257.85	424,462.87	591,323.79	32.166621	-104.038201
[SouthComf#4H]LTP/BH - plan hits target center - Point	0.00	0.00	8,387.00	7,601.99	-273.58	432,267.44	591,308.06	32.188076	-104.038183

Checked By: _____	Approved By: _____	Date: _____
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Marathon Oil Corporation

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



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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	424665.45	591581.64	32.167176	-104.037366	

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	231.85	1697.47	-26.89	-34.22	2.00	-26.82
4	3087.09	10.00	231.85	3063.48	-175.69	-223.63	0.00	-175.22
5	3587.09	0.00	0.00	3560.95	-202.58	-257.85	2.00	-202.04
6	7840.14	0.00	0.00	7814.00	-202.58	-257.85	0.00	-202.04
7	8740.14	90.00	359.88	8386.96	370.37	-259.00	10.00	370.91
8	15971.77	90.00	359.88	8387.00	7601.99	-273.58	0.00	7602.55

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[SouthCom#4H]FTP	7814.00	-202.58	-257.85	424462.87	591323.79
[SouthCom#4H]LTP/BHL	8387.00	7601.99	-273.58	432267.44	591308.06



PRODIRECTIONAL

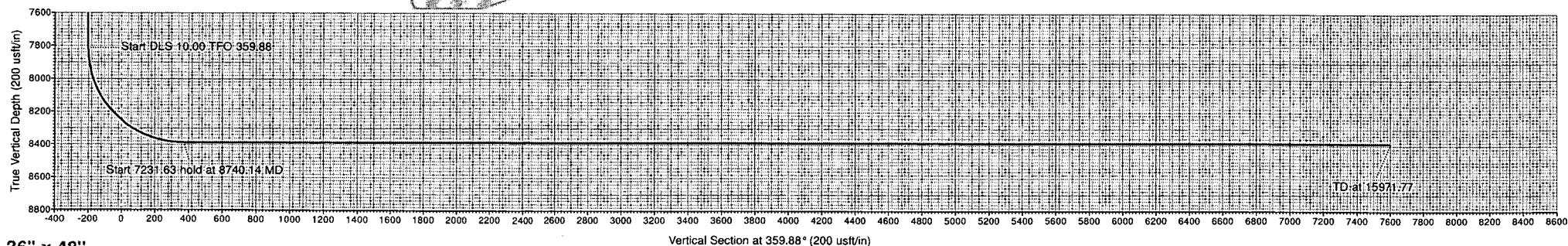
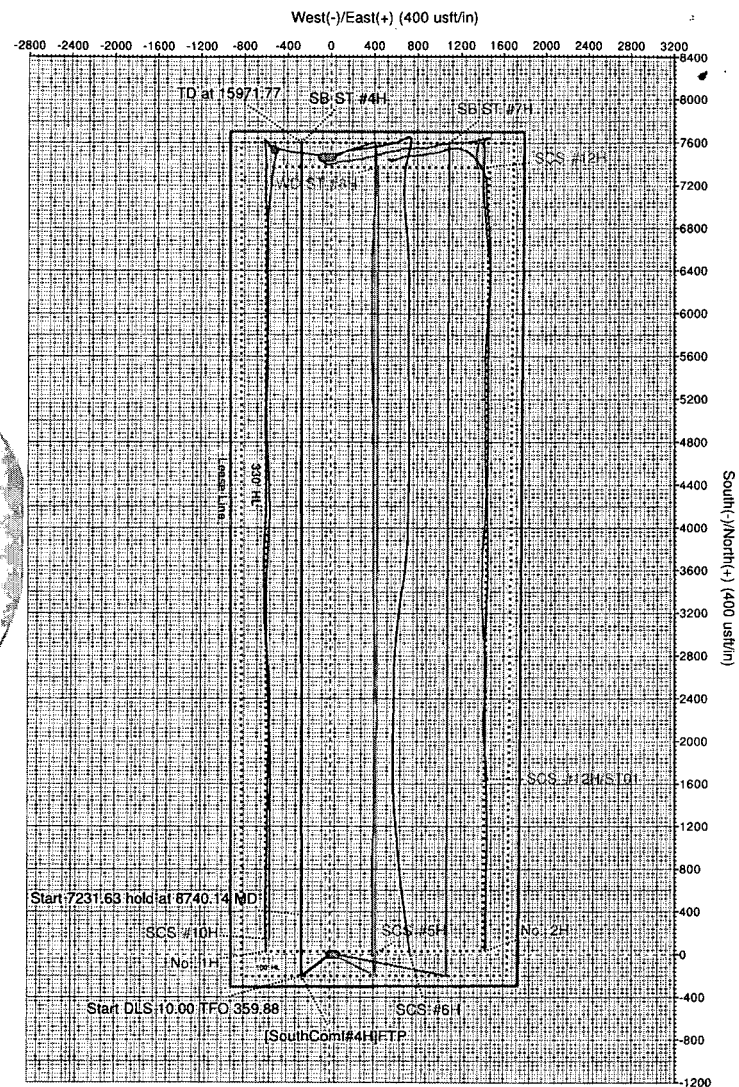
Azimuths to Grid North
 True North: -0.16°
 Magnetic North: 6.84°
 Magnetic Field
 Strength: 47875.6nT
 Dip Angle: 59.88°
 Date: 7/1/2019
 Model: HDGM

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



36" x 48"

Vertical Section at 359.88° (200 usft/in)