

Marathon Oil Permian, LLC

Eddy County, NM (NAD27)

Southern Comfort State 24-28-25

WD #10H

30-015-44834

OH

Plan: Plan #1

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 26 2018

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Standard Planning Report

26 March, 2018



Scientific Drilling

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Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well WD #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Site:	Southern Comfort State 24-28-25	North Reference:	Grid
Well:	WD #10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Eddy County, NM (NAD27)		
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		Using geodetic scale factor

Site	Southern Comfort State 24-28-25		
Site Position:		Northing:	432,128.89 usft
From:	Map	Easting:	591,559.01 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 15.695 N
		Longitude:	104° 2' 14.542 W
		Grid Convergence:	0.16 °

Well	WD #10H		
Well Position	+N-S	0.00 usft	Northing: 432,128.89 usft
	+E-W	-30.00 usft	Easting: 591,529.01 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 11' 15.696 N
		Longitude:	104° 2' 14.891 W
		Ground Level:	2,919.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	3/26/2018	(°)
			7.15
			Dip Angle
			(°)
			59.97
			Field Strength
			(nT)
			48,017

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(bearing)
			179.85

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	8.00	280.00	3,398.70	4.84	-27.46	2.00	2.00	0.00	280.00	
7,025.00	8.00	280.00	6,988.42	92.45	-524.29	0.00	0.00	0.00	0.00	
7,425.00	0.00	0.00	7,387.13	97.29	-551.75	2.00	-2.00	0.00	180.00	
10,027.92	0.00	0.00	9,990.04	97.29	-551.75	0.00	0.00	0.00	0.00	
10,927.92	90.00	179.85	10,563.00	-475.67	-550.27	10.00	10.00	0.00	179.85	
17,885.05	90.00	179.85	10,563.00	-7,432.77	-532.24	0.00	0.00	0.00	0.00	BHL[SCS\WD#10H]
17,930.05	90.00	179.85	10,563.00	-7,477.77	-532.13	0.00	0.00	0.00	0.00	

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Well:	WD #10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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
539.00	0.00	0.00	539.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
1,180.00	0.00	0.00	1,180.00	0.00	0.00	0.00	0.00	0.00	0.00
Castile									
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	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,532.00	0.00	0.00	2,532.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,663.00	0.00	0.00	2,663.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar									
2,690.00	0.00	0.00	2,690.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 2.0° / 10									
3,100.00	2.00	280.00	3,099.98	0.30	-1.72	-0.31	2.00	2.00	0.00
3,200.00	4.00	280.00	3,199.84	1.21	-6.87	-1.23	2.00	2.00	0.00
3,300.00	6.00	280.00	3,299.45	2.73	-15.46	-2.77	2.00	2.00	0.00
3,400.00	8.00	280.00	3,398.70	4.84	-27.46	-4.91	2.00	2.00	0.00
EOB - HOLD									
3,500.00	8.00	280.00	3,497.73	7.26	-41.16	-7.37	0.00	0.00	0.00
3,570.96	8.00	280.00	3,568.00	8.97	-50.89	-9.11	0.00	0.00	0.00
Cherry Canyon									
3,600.00	8.00	280.00	3,596.76	9.67	-54.87	-9.82	0.00	0.00	0.00
3,700.00	8.00	280.00	3,695.78	12.09	-68.57	-12.27	0.00	0.00	0.00
3,800.00	8.00	280.00	3,794.81	14.51	-82.28	-14.72	0.00	0.00	0.00

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Site:	Southern Comfort State 24-28-25	North Reference:	Grid
Well:	WD #10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,900.00	8.00	280.00	3,893.84	16.92	-95.99	-17.18	0.00	0.00	0.00
4,000.00	8.00	280.00	3,992.86	19.34	-109.69	-19.63	0.00	0.00	0.00
4,100.00	8.00	280.00	4,091.89	21.76	-123.40	-22.08	0.00	0.00	0.00
4,200.00	8.00	280.00	4,190.92	24.18	-137.10	-24.53	0.00	0.00	0.00
4,300.00	8.00	280.00	4,289.94	26.59	-150.81	-26.99	0.00	0.00	0.00
4,400.00	8.00	280.00	4,388.97	29.01	-164.52	-29.44	0.00	0.00	0.00
4,500.00	8.00	280.00	4,488.00	31.43	-178.22	-31.89	0.00	0.00	0.00
4,600.00	8.00	280.00	4,587.02	33.84	-191.93	-34.34	0.00	0.00	0.00
4,700.00	8.00	280.00	4,686.05	36.26	-205.63	-36.80	0.00	0.00	0.00
4,800.00	8.00	280.00	4,785.08	38.68	-219.34	-39.25	0.00	0.00	0.00
4,817.09	8.00	280.00	4,802.00	39.09	-221.68	-39.67	0.00	0.00	0.00
Brushy Canyon									
4,900.00	8.00	280.00	4,884.10	41.09	-233.04	-41.70	0.00	0.00	0.00
5,000.00	8.00	280.00	4,983.13	43.51	-246.75	-44.15	0.00	0.00	0.00
5,100.00	8.00	280.00	5,082.16	45.93	-260.46	-46.61	0.00	0.00	0.00
5,200.00	8.00	280.00	5,181.18	48.34	-274.16	-49.06	0.00	0.00	0.00
5,300.00	8.00	280.00	5,280.21	50.76	-287.87	-51.51	0.00	0.00	0.00
5,400.00	8.00	280.00	5,379.24	53.18	-301.57	-53.96	0.00	0.00	0.00
5,500.00	8.00	280.00	5,478.26	55.59	-315.28	-56.42	0.00	0.00	0.00
5,600.00	8.00	280.00	5,577.29	58.01	-328.99	-58.87	0.00	0.00	0.00
5,700.00	8.00	280.00	5,676.32	60.43	-342.69	-61.32	0.00	0.00	0.00
5,800.00	8.00	280.00	5,775.35	62.84	-356.40	-63.78	0.00	0.00	0.00
5,900.00	8.00	280.00	5,874.37	65.26	-370.10	-66.23	0.00	0.00	0.00
6,000.00	8.00	280.00	5,973.40	67.68	-383.81	-68.68	0.00	0.00	0.00
6,100.00	8.00	280.00	6,072.43	70.09	-397.52	-71.13	0.00	0.00	0.00
6,200.00	8.00	280.00	6,171.45	72.51	-411.22	-73.59	0.00	0.00	0.00
6,300.00	8.00	280.00	6,270.48	74.93	-424.93	-76.04	0.00	0.00	0.00
6,400.00	8.00	280.00	6,369.51	77.34	-438.63	-78.49	0.00	0.00	0.00
6,403.53	8.00	280.00	6,373.00	77.43	-439.12	-78.58	0.00	0.00	0.00
Bone Spring									
6,500.00	8.00	280.00	6,468.53	79.76	-452.34	-80.94	0.00	0.00	0.00
6,600.00	8.00	280.00	6,567.56	82.18	-466.04	-83.40	0.00	0.00	0.00
6,700.00	8.00	280.00	6,666.59	84.59	-479.75	-85.85	0.00	0.00	0.00
6,800.00	8.00	280.00	6,765.61	87.01	-493.46	-88.30	0.00	0.00	0.00
6,900.00	8.00	280.00	6,864.64	89.43	-507.16	-90.75	0.00	0.00	0.00
7,000.00	8.00	280.00	6,963.67	91.84	-520.87	-93.21	0.00	0.00	0.00
7,025.00	8.00	280.00	6,988.42	92.45	-524.29	-93.82	0.00	0.00	0.00
DROP 2.0° / 100									
7,100.00	6.50	280.00	7,062.82	94.09	-533.62	-95.49	2.00	-2.00	0.00
7,200.00	4.50	280.00	7,162.36	95.76	-543.05	-97.18	2.00	-2.00	0.00
7,300.00	2.50	280.00	7,262.16	96.82	-549.07	-98.25	2.00	-2.00	0.00
7,357.87	1.34	280.00	7,320.00	97.15	-550.98	-98.59	2.00	-2.00	0.00
1st Bone Spring Sand									
7,400.00	0.50	280.00	7,362.13	97.27	-551.64	-98.71	2.00	-2.00	0.00
7,425.00	0.00	0.00	7,387.13	97.29	-551.75	-98.73	2.00	-2.00	0.00
EOD - HOLD									
7,500.00	0.00	0.00	7,462.13	97.29	-551.75	-98.73	0.00	0.00	0.00
7,600.00	0.00	0.00	7,562.13	97.29	-551.75	-98.73	0.00	0.00	0.00
7,700.00	0.00	0.00	7,662.13	97.29	-551.75	-98.73	0.00	0.00	0.00
7,800.00	0.00	0.00	7,762.13	97.29	-551.75	-98.73	0.00	0.00	0.00
7,900.00	0.00	0.00	7,862.13	97.29	-551.75	-98.73	0.00	0.00	0.00
8,000.00	0.00	0.00	7,962.13	97.29	-551.75	-98.73	0.00	0.00	0.00
8,100.00	0.00	0.00	8,062.13	97.29	-551.75	-98.73	0.00	0.00	0.00
8,172.88	0.00	0.00	8,135.00	97.29	-551.75	-98.73	0.00	0.00	0.00

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Wellbore:	OH		
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2nd Bone Spring Sand										
8,200.00	0.00	0.00	8,162.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,262.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,362.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,462.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,562.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,662.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,762.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,862.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,962.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,062.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,162.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,277.88	0.00	0.00	9,240.00	97.29	-551.75	-98.73	0.00	0.00	0.00	
3rd Bone Spring Sand										
9,300.00	0.00	0.00	9,262.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,362.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,462.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,562.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,644.88	0.00	0.00	9,607.00	97.29	-551.75	-98.73	0.00	0.00	0.00	
Wolfcamp										
9,700.00	0.00	0.00	9,662.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,799.88	0.00	0.00	9,762.00	97.29	-551.75	-98.73	0.00	0.00	0.00	
Wolfcamp A										
9,800.00	0.00	0.00	9,762.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,862.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,962.13	97.29	-551.75	-98.73	0.00	0.00	0.00	
10,006.88	0.00	0.00	9,969.00	97.29	-551.75	-98.73	0.00	0.00	0.00	
Wolfcamp B										
10,027.92	0.00	0.00	9,990.04	97.29	-551.75	-98.73	0.00	0.00	0.00	
Curve KOP - Build 10.0° / 100										
10,050.00	2.21	179.85	10,012.12	96.86	-551.75	-98.31	10.00	10.00	0.00	
10,100.00	7.21	179.85	10,061.94	92.76	-551.74	-94.20	10.00	10.00	0.00	
10,150.00	12.21	179.85	10,111.20	84.33	-551.72	-85.78	10.00	10.00	0.00	
10,200.00	17.21	179.85	10,159.55	71.64	-551.68	-73.08	10.00	10.00	0.00	
10,232.17	20.43	179.85	10,190.00	61.26	-551.66	-62.71	10.00	10.00	0.00	
Wolfcamp C										
10,250.00	22.21	179.85	10,206.61	54.78	-551.64	-56.23	10.00	10.00	0.00	
10,300.00	27.21	179.85	10,252.01	33.89	-551.59	-35.34	10.00	10.00	0.00	
10,350.00	32.21	179.85	10,295.43	9.12	-551.52	-10.56	10.00	10.00	0.00	
10,374.66	34.67	179.85	10,316.00	-4.47	-551.49	3.02	10.00	10.00	0.00	
Wolfcamp C2										
10,400.00	37.21	179.85	10,336.52	-19.34	-551.45	17.90	10.00	10.00	0.00	
10,450.00	42.21	179.85	10,374.97	-51.27	-551.37	49.83	10.00	10.00	0.00	
10,500.00	47.21	179.85	10,410.49	-86.44	-551.27	84.99	10.00	10.00	0.00	
10,550.00	52.21	179.85	10,442.82	-124.56	-551.18	123.12	10.00	10.00	0.00	
10,592.46	56.45	179.85	10,467.57	-159.05	-551.09	157.60	10.00	10.00	0.00	
FTP[SCSIWD#10H]										
10,600.00	57.21	179.85	10,471.70	-165.36	-551.07	163.92	10.00	10.00	0.00	
10,650.00	62.21	179.85	10,496.91	-208.52	-550.96	207.08	10.00	10.00	0.00	
10,700.00	67.21	179.85	10,518.26	-253.71	-550.84	252.27	10.00	10.00	0.00	
10,750.00	72.21	179.85	10,535.60	-300.60	-550.72	299.15	10.00	10.00	0.00	
10,800.00	77.21	179.85	10,548.78	-348.81	-550.60	347.37	10.00	10.00	0.00	
10,850.00	82.21	179.85	10,557.71	-397.99	-550.47	396.55	10.00	10.00	0.00	

Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well WD #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Site:	Southern Comfort State 24-28-25	North Reference:	Grid
Well:	WD #10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,900.00	87.21	179.85	10,562.32	-447.76	-550.34	446.32	10.00	10.00	0.00	
10,927.92	90.00	179.85	10,563.00	-475.67	-550.27	474.23	10.00	10.00	0.00	
EOC - HOLD										
11,000.00	90.00	179.85	10,563.00	-547.75	-550.08	546.31	0.00	0.00	0.00	
11,100.00	90.00	179.85	10,563.00	-647.75	-549.82	646.31	0.00	0.00	0.00	
11,200.00	90.00	179.85	10,563.00	-747.75	-549.56	746.31	0.00	0.00	0.00	
11,300.00	90.00	179.85	10,563.00	-847.75	-549.30	846.31	0.00	0.00	0.00	
11,400.00	90.00	179.85	10,563.00	-947.75	-549.04	946.31	0.00	0.00	0.00	
11,500.00	90.00	179.85	10,563.00	-1,047.75	-548.78	1,046.31	0.00	0.00	0.00	
11,600.00	90.00	179.85	10,563.00	-1,147.75	-548.53	1,146.31	0.00	0.00	0.00	
11,700.00	90.00	179.85	10,563.00	-1,247.75	-548.27	1,246.31	0.00	0.00	0.00	
11,800.00	90.00	179.85	10,563.00	-1,347.75	-548.01	1,346.31	0.00	0.00	0.00	
11,900.00	90.00	179.85	10,563.00	-1,447.75	-547.75	1,446.31	0.00	0.00	0.00	
12,000.00	90.00	179.85	10,563.00	-1,547.75	-547.49	1,546.31	0.00	0.00	0.00	
12,100.00	90.00	179.85	10,563.00	-1,647.75	-547.23	1,646.31	0.00	0.00	0.00	
12,200.00	90.00	179.85	10,563.00	-1,747.75	-546.97	1,746.31	0.00	0.00	0.00	
12,300.00	90.00	179.85	10,563.00	-1,847.75	-546.71	1,846.31	0.00	0.00	0.00	
12,400.00	90.00	179.85	10,563.00	-1,947.75	-546.45	1,946.31	0.00	0.00	0.00	
12,500.00	90.00	179.85	10,563.00	-2,047.74	-546.19	2,046.31	0.00	0.00	0.00	
12,600.00	90.00	179.85	10,563.00	-2,147.74	-545.93	2,146.31	0.00	0.00	0.00	
12,700.00	90.00	179.85	10,563.00	-2,247.74	-545.68	2,246.31	0.00	0.00	0.00	
12,800.00	90.00	179.85	10,563.00	-2,347.74	-545.42	2,346.31	0.00	0.00	0.00	
12,900.00	90.00	179.85	10,563.00	-2,447.74	-545.16	2,446.31	0.00	0.00	0.00	
13,000.00	90.00	179.85	10,563.00	-2,547.74	-544.90	2,546.31	0.00	0.00	0.00	
13,100.00	90.00	179.85	10,563.00	-2,647.74	-544.64	2,646.31	0.00	0.00	0.00	
13,200.00	90.00	179.85	10,563.00	-2,747.74	-544.38	2,746.31	0.00	0.00	0.00	
13,300.00	90.00	179.85	10,563.00	-2,847.74	-544.12	2,846.31	0.00	0.00	0.00	
13,400.00	90.00	179.85	10,563.00	-2,947.74	-543.86	2,946.31	0.00	0.00	0.00	
13,500.00	90.00	179.85	10,563.00	-3,047.74	-543.60	3,046.31	0.00	0.00	0.00	
13,600.00	90.00	179.85	10,563.00	-3,147.74	-543.34	3,146.31	0.00	0.00	0.00	
13,700.00	90.00	179.85	10,563.00	-3,247.74	-543.09	3,246.31	0.00	0.00	0.00	
13,800.00	90.00	179.85	10,563.00	-3,347.74	-542.83	3,346.31	0.00	0.00	0.00	
13,900.00	90.00	179.85	10,563.00	-3,447.74	-542.57	3,446.31	0.00	0.00	0.00	
14,000.00	90.00	179.85	10,563.00	-3,547.74	-542.31	3,546.31	0.00	0.00	0.00	
14,100.00	90.00	179.85	10,563.00	-3,647.74	-542.05	3,646.31	0.00	0.00	0.00	
14,200.00	90.00	179.85	10,563.00	-3,747.74	-541.79	3,746.31	0.00	0.00	0.00	
14,300.00	90.00	179.85	10,563.00	-3,847.74	-541.53	3,846.31	0.00	0.00	0.00	
14,400.00	90.00	179.85	10,563.00	-3,947.74	-541.27	3,946.31	0.00	0.00	0.00	
14,500.00	90.00	179.85	10,563.00	-4,047.74	-541.01	4,046.31	0.00	0.00	0.00	
14,600.00	90.00	179.85	10,563.00	-4,147.74	-540.75	4,146.31	0.00	0.00	0.00	
14,700.00	90.00	179.85	10,563.00	-4,247.74	-540.49	4,246.31	0.00	0.00	0.00	
14,800.00	90.00	179.85	10,563.00	-4,347.74	-540.24	4,346.31	0.00	0.00	0.00	
14,900.00	90.00	179.85	10,563.00	-4,447.74	-539.98	4,446.31	0.00	0.00	0.00	
15,000.00	90.00	179.85	10,563.00	-4,547.74	-539.72	4,546.31	0.00	0.00	0.00	
15,100.00	90.00	179.85	10,563.00	-4,647.74	-539.46	4,646.31	0.00	0.00	0.00	
15,200.00	90.00	179.85	10,563.00	-4,747.74	-539.20	4,746.31	0.00	0.00	0.00	
15,300.00	90.00	179.85	10,563.00	-4,847.74	-538.94	4,846.31	0.00	0.00	0.00	
15,400.00	90.00	179.85	10,563.00	-4,947.74	-538.68	4,946.31	0.00	0.00	0.00	
15,500.00	90.00	179.85	10,563.00	-5,047.73	-538.42	5,046.31	0.00	0.00	0.00	
15,600.00	90.00	179.85	10,563.00	-5,147.73	-538.16	5,146.31	0.00	0.00	0.00	
15,700.00	90.00	179.85	10,563.00	-5,247.73	-537.90	5,246.31	0.00	0.00	0.00	
15,800.00	90.00	179.85	10,563.00	-5,347.73	-537.64	5,346.31	0.00	0.00	0.00	
15,900.00	90.00	179.85	10,563.00	-5,447.73	-537.39	5,446.31	0.00	0.00	0.00	

Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well WD #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Site:	Southern Comfort State 24-28-25	North Reference:	Grid
Well:	WD #10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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	179.85	10,563.00	-5,547.73	-537.13	5,546.31	0.00	0.00	0.00
16,100.00	90.00	179.85	10,563.00	-5,647.73	-536.87	5,646.31	0.00	0.00	0.00
16,200.00	90.00	179.85	10,563.00	-5,747.73	-536.61	5,746.31	0.00	0.00	0.00
16,300.00	90.00	179.85	10,563.00	-5,847.73	-536.35	5,846.31	0.00	0.00	0.00
16,400.00	90.00	179.85	10,563.00	-5,947.73	-536.09	5,946.31	0.00	0.00	0.00
16,500.00	90.00	179.85	10,563.00	-6,047.73	-535.83	6,046.31	0.00	0.00	0.00
16,600.00	90.00	179.85	10,563.00	-6,147.73	-535.57	6,146.31	0.00	0.00	0.00
16,700.00	90.00	179.85	10,563.00	-6,247.73	-535.31	6,246.31	0.00	0.00	0.00
16,800.00	90.00	179.85	10,563.00	-6,347.73	-535.05	6,346.31	0.00	0.00	0.00
16,900.00	90.00	179.85	10,563.00	-6,447.73	-534.80	6,446.31	0.00	0.00	0.00
17,000.00	90.00	179.85	10,563.00	-6,547.73	-534.54	6,546.31	0.00	0.00	0.00
17,100.00	90.00	179.85	10,563.00	-6,647.73	-534.28	6,646.31	0.00	0.00	0.00
17,200.00	90.00	179.85	10,563.00	-6,747.73	-534.02	6,746.31	0.00	0.00	0.00
17,300.00	90.00	179.85	10,563.00	-6,847.73	-533.76	6,846.31	0.00	0.00	0.00
17,400.00	90.00	179.85	10,563.00	-6,947.73	-533.50	6,946.31	0.00	0.00	0.00
17,500.00	90.00	179.85	10,563.00	-7,047.73	-533.24	7,046.31	0.00	0.00	0.00
17,600.00	90.00	179.85	10,563.00	-7,147.73	-532.98	7,146.31	0.00	0.00	0.00
17,700.00	90.00	179.85	10,563.00	-7,247.73	-532.72	7,246.31	0.00	0.00	0.00
17,800.00	90.00	179.85	10,563.00	-7,347.73	-532.46	7,346.31	0.00	0.00	0.00
17,885.05	90.00	179.85	10,563.00	-7,432.77	-532.24	7,431.36	0.00	0.00	0.00
TD at 17885.05 - BHL[SCSWD#10H]									
17,900.00	90.00	179.85	10,563.00	-7,447.73	-532.20	7,446.31	0.00	0.00	0.00
17,930.05	90.00	179.85	10,563.00	-7,477.77	-532.13	7,476.36	0.00	0.00	0.00
TD + 45' VS									

Design Targets

Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL[SCSWD#10H]	-	-90.00	179.85	10,563.00	-7,432.77	-532.24	424,696.72	590,996.81	32° 10' 2.159 N	104° 2' 21.320 W
- plan hits target center										
- Rectangle (sides W50.00 H30.00 D6,900.00)										
FTP[SCSWD#10H]	-	0.00	0.00	10,563.00	-91.50	-551.62	432,037.40	590,977.43	32° 11' 14.805 N	104° 2' 21.312 W
- plan misses target center by 116.92usft at 10592.46usft MD (10467.57 TVD, -159.05 N, -551.09 E)										
- Point										

Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well WD #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 2945.50usft (H&P 498)
Site:	Southern Comfort State 24-28-25	North Reference:	Grid
Well:	WD #10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)
539.00	539.00	Salado			
1,180.00	1,180.00	Castile			
2,532.00	2,532.00	Base of Salt			
2,663.00	2,663.00	Lamar			
2,690.00	2,690.00	Bell Canyon			
3,570.96	3,568.00	Cherry Canyon			
4,817.09	4,802.00	Brushy Canyon			
6,403.53	6,373.00	Bone Spring			
7,357.87	7,320.00	1st Bone Spring Sand			
8,172.88	8,135.00	2nd Bone Spring Sand			
9,277.88	9,240.00	3rd Bone Spring Sand			
9,644.88	9,607.00	Wolfcamp			
9,799.88	9,762.00	Wolfcamp A			
10,006.88	9,969.00	Wolfcamp B			
10,232.17	10,190.00	Wolfcamp C			
10,374.66	10,316.00	Wolfcamp C2			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
3,000.00	3,000.00	0.00	0.00	KOP - Build 2.0° / 10
3,400.00	3,398.70	4.84	-27.46	EOB - HOLD
7,025.00	6,988.42	92.45	-524.29	DROP 2.0° / 1 00
7,425.00	7,387.13	97.29	-551.75	EOD - HOLD
10,027.92	9,990.04	97.29	-551.75	Curve KOP - Build 10.0° / 100
10,927.92	10,563.00	-475.67	-550.27	EOC - HOLD
17,885.05	10,563.00	-7,432.77	-532.24	TD at 17885.05
17,930.05	10,563.00	-7,477.77	-532.13	TD + 45' VS