

Marathon Oil Permian, LLC

**Eddy County, NM (NAD27)
Gravel Grinder Fee 23-28-18
WXY #10H**

OH

Plan: Plan #1

Standard Planning Report

08 January, 2018

**NM OIL CONSERVATION
ARTESIA DISTRICT**

JAN 16 2018

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Scientific Drilling

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Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well WXY #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Site:	Gravel Grinder Fee 23-28-18	North Reference:	Grid
Well:	WXY #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	Gravel Grinder Fee 23-28-18				
Site Position:		Northing:	472,497.59 usft	Latitude:	32° 17' 55.858 N
From:	Map	Easting:	562,658.22 usft	Longitude:	104° 7' 49.967 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.11 °

Well	WXY #10H					
Well Position	+N-S	0.00 usft	Northing:	472,497.59 usft	Latitude:	32° 17' 55.857 N
	+E-W	59.98 usft	Easting:	562,718.19 usft	Longitude:	104° 7' 49.268 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,078.00 usft

Wellbore:	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	1/8/2018	7.32	60.08	48,046

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction
	(usft)	(usft)	(usft)	(bearing)
	0.00	0.00	0.00	11.25

Plan Sections:										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (1/100usft)	Bulk Rate (1/100usft)	Turn Rate (1/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	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	
2,399.50	7.99	108.00	2,398.21	-8.59	26.45	2.00	2.00	0.00	108.00	
8,838.55	7.99	108.00	8,774.75	-285.17	877.67	0.00	0.00	0.00	0.00	
9,759.75	89.60	359.58	9,367.69	283.82	951.95	10.00	8.86	-11.77	-108.30	
14,101.08	89.60	359.58	9,398.00	4,624.93	920.38	0.00	0.00	0.00	0.00	BHL[GGF/WXY#10H]

Planning Report

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Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Site:	Gravel Grinder Fee 23-28-18	North Reference:	Grid
Well:	WXY #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
Rustler									
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
425.00	0.00	0.00	425.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
806.00	0.00	0.00	806.00	0.00	0.00	0.00	0.00	0.00	0.00
Castile									
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	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
KOP - Build 2.0° / 100									
2,100.00	2.00	108.00	2,099.98	-0.54	1.66	-0.21	2.00	2.00	0.00
2,180.12	3.60	108.00	2,180.00	-1.75	5.38	-0.66	2.00	2.00	0.00
Base of Salt									
2,200.00	4.00	108.00	2,199.84	-2.16	6.64	-0.82	2.00	2.00	0.00
2,300.00	6.00	108.00	2,299.45	-4.85	14.93	-1.84	2.00	2.00	0.00
2,399.50	7.99	108.00	2,398.21	-8.59	26.45	-3.27	2.00	2.00	0.00
EOB - HOLD									
2,407.37	7.99	108.00	2,406.00	-8.93	27.49	-3.40	0.00	0.00	0.00
Lamar									
2,438.67	7.99	108.00	2,437.00	-10.28	31.63	-3.91	0.00	0.00	0.00
Bell Canyon									
2,500.00	7.99	108.00	2,497.73	-12.91	39.74	-4.91	0.00	0.00	0.00
2,600.00	7.99	108.00	2,596.76	-17.21	52.95	-6.54	0.00	0.00	0.00
2,700.00	7.99	108.00	2,695.79	-21.50	66.17	-8.17	0.00	0.00	0.00
2,800.00	7.99	108.00	2,794.82	-25.80	79.39	-9.81	0.00	0.00	0.00
2,900.00	7.99	108.00	2,893.85	-30.09	92.61	-11.44	0.00	0.00	0.00
3,000.00	7.99	108.00	2,992.88	-34.39	105.83	-13.07	0.00	0.00	0.00
3,100.00	7.99	108.00	3,091.91	-38.68	119.05	-14.71	0.00	0.00	0.00
3,170.78	7.99	108.00	3,162.00	-41.72	128.41	-15.86	0.00	0.00	0.00
Cherry Canyon									
3,200.00	7.99	108.00	3,190.94	-42.98	132.27	-16.34	0.00	0.00	0.00
3,300.00	7.99	108.00	3,289.96	-47.27	145.49	-17.97	0.00	0.00	0.00
3,400.00	7.99	108.00	3,388.99	-51.57	158.71	-19.60	0.00	0.00	0.00
3,500.00	7.99	108.00	3,488.02	-55.86	171.93	-21.24	0.00	0.00	0.00
3,600.00	7.99	108.00	3,587.05	-60.16	185.15	-22.87	0.00	0.00	0.00
3,700.00	7.99	108.00	3,686.08	-64.45	198.37	-24.50	0.00	0.00	0.00

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Well:	WXY #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)
3,800.00	7.99	108.00	3,785.11	-68.75	211.59	-26.14	0.00	0.00	0.00
3,900.00	7.99	108.00	3,884.14	-73.05	224.81	-27.77	0.00	0.00	0.00
4,000.00	7.99	108.00	3,983.17	-77.34	238.03	-29.40	0.00	0.00	0.00
4,100.00	7.99	108.00	4,082.20	-81.64	251.25	-31.03	0.00	0.00	0.00
4,200.00	7.99	108.00	4,181.23	-85.93	264.47	-32.67	0.00	0.00	0.00
4,300.00	7.99	108.00	4,280.26	-90.23	277.69	-34.30	0.00	0.00	0.00
4,400.00	7.99	108.00	4,379.29	-94.52	290.91	-35.93	0.00	0.00	0.00
4,408.80	7.99	108.00	4,388.00	-94.90	292.07	-36.08	0.00	0.00	0.00
Brushy Canyon									
4,500.00	7.99	108.00	4,478.32	-98.82	304.13	-37.57	0.00	0.00	0.00
4,600.00	7.99	108.00	4,577.34	-103.11	317.35	-39.20	0.00	0.00	0.00
4,700.00	7.99	108.00	4,676.37	-107.41	330.57	-40.83	0.00	0.00	0.00
4,800.00	7.99	108.00	4,775.40	-111.70	343.79	-42.46	0.00	0.00	0.00
4,900.00	7.99	108.00	4,874.43	-116.00	357.01	-44.10	0.00	0.00	0.00
5,000.00	7.99	108.00	4,973.46	-120.29	370.23	-45.73	0.00	0.00	0.00
5,100.00	7.99	108.00	5,072.49	-124.59	383.45	-47.36	0.00	0.00	0.00
5,200.00	7.99	108.00	5,171.52	-128.89	396.67	-49.00	0.00	0.00	0.00
5,300.00	7.99	108.00	5,270.55	-133.18	409.89	-50.63	0.00	0.00	0.00
5,400.00	7.99	108.00	5,369.58	-137.48	423.11	-52.26	0.00	0.00	0.00
5,500.00	7.99	108.00	5,468.61	-141.77	436.33	-53.89	0.00	0.00	0.00
5,600.00	7.99	108.00	5,567.64	-146.07	449.55	-55.53	0.00	0.00	0.00
5,700.00	7.99	108.00	5,666.67	-150.36	462.77	-57.16	0.00	0.00	0.00
5,800.00	7.99	108.00	5,765.70	-154.66	475.99	-58.79	0.00	0.00	0.00
5,900.00	7.99	108.00	5,864.72	-158.95	489.21	-60.43	0.00	0.00	0.00
5,938.65	7.99	108.00	5,903.00	-160.61	494.31	-61.06	0.00	0.00	0.00
Bone Spring									
6,000.00	7.99	108.00	5,963.75	-163.25	502.42	-62.06	0.00	0.00	0.00
6,100.00	7.99	108.00	6,062.78	-167.54	515.64	-63.69	0.00	0.00	0.00
6,200.00	7.99	108.00	6,161.81	-171.84	528.86	-65.32	0.00	0.00	0.00
6,300.00	7.99	108.00	6,260.84	-176.13	542.08	-66.96	0.00	0.00	0.00
6,400.00	7.99	108.00	6,359.87	-180.43	555.30	-68.59	0.00	0.00	0.00
6,500.00	7.99	108.00	6,458.90	-184.72	568.52	-70.22	0.00	0.00	0.00
6,600.00	7.99	108.00	6,557.93	-189.02	581.74	-71.86	0.00	0.00	0.00
6,700.00	7.99	108.00	6,656.96	-193.32	594.96	-73.49	0.00	0.00	0.00
6,800.00	7.99	108.00	6,755.99	-197.61	608.18	-75.12	0.00	0.00	0.00
6,880.80	7.99	108.00	6,836.00	-201.08	618.86	-76.44	0.00	0.00	0.00
1st Bone Spring Sand									
6,900.00	7.99	108.00	6,855.02	-201.91	621.40	-76.75	0.00	0.00	0.00
7,000.00	7.99	108.00	6,954.05	-206.20	634.62	-78.39	0.00	0.00	0.00
7,100.00	7.99	108.00	7,053.08	-210.50	647.84	-80.02	0.00	0.00	0.00
7,200.00	7.99	108.00	7,152.10	-214.79	661.06	-81.65	0.00	0.00	0.00
7,300.00	7.99	108.00	7,251.13	-219.09	674.28	-83.29	0.00	0.00	0.00
7,400.00	7.99	108.00	7,350.16	-223.38	687.50	-84.92	0.00	0.00	0.00
7,500.00	7.99	108.00	7,449.19	-227.68	700.72	-86.55	0.00	0.00	0.00
7,600.00	7.99	108.00	7,548.22	-231.97	713.94	-88.18	0.00	0.00	0.00
7,659.35	7.99	108.00	7,607.00	-234.52	721.79	-89.15	0.00	0.00	0.00
2nd Bone Spring Sand									
7,700.00	7.99	108.00	7,647.25	-236.27	727.16	-89.82	0.00	0.00	0.00
7,800.00	7.99	108.00	7,746.28	-240.56	740.38	-91.45	0.00	0.00	0.00
7,900.00	7.99	108.00	7,845.31	-244.86	753.60	-93.08	0.00	0.00	0.00
8,000.00	7.99	108.00	7,944.34	-249.15	766.82	-94.72	0.00	0.00	0.00
8,100.00	7.99	108.00	8,043.37	-253.45	780.04	-96.35	0.00	0.00	0.00
8,200.00	7.99	108.00	8,142.40	-257.75	793.26	-97.98	0.00	0.00	0.00

Planning Report

Database:	Midland District	Local Coordinate Reference:	Well WXY #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Site:	Gravel Grinder Fee 23-28-18	North Reference:	Grid
Well:	WXY #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)	Dobleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,300.00	7.99	108.00	8,241.43	-262.04	806.48	-99.61	0.00	0.00	0.00
8,400.00	7.99	108.00	8,340.46	-266.34	819.70	-101.25	0.00	0.00	0.00
8,500.00	7.99	108.00	8,439.49	-270.63	832.92	-102.88	0.00	0.00	0.00
8,600.00	7.99	108.00	8,538.51	-274.93	846.14	-104.51	0.00	0.00	0.00
8,700.00	7.99	108.00	8,637.54	-279.22	859.36	-106.15	0.00	0.00	0.00
8,800.00	7.99	108.00	8,736.57	-283.52	872.58	-107.78	0.00	0.00	0.00
8,838.55	7.99	108.00	8,774.75	-285.17	877.67	-108.41	0.00	0.00	0.00
Curve KOP - Build 10.0° / 100									
8,850.00	7.71	99.87	8,786.09	-285.55	879.19	-108.48	10.00	-2.47	-71.03
8,900.00	8.40	63.91	8,835.63	-284.52	885.77	-106.18	10.00	1.38	-71.91
8,950.00	11.46	40.57	8,884.89	-279.14	892.29	-99.63	10.00	6.13	-46.69
8,981.89	14.01	31.79	8,916.00	-273.45	896.38	-93.25	10.00	7.97	-27.53
3rd Bone Spring Sand									
9,000.00	15.55	28.10	8,933.51	-269.44	898.68	-88.88	10.00	8.55	-20.34
9,050.00	20.06	20.92	8,981.11	-255.51	904.90	-74.00	10.00	9.00	-14.37
9,100.00	24.74	16.32	9,027.33	-237.45	910.91	-55.12	10.00	9.37	-9.19
9,150.00	29.53	13.13	9,071.81	-215.40	916.65	-32.36	10.00	9.57	-6.39
9,200.00	34.37	10.76	9,114.23	-189.52	922.09	-5.92	10.00	9.68	-4.74
9,250.00	39.24	8.91	9,154.25	-160.01	927.17	24.01	10.00	9.75	-3.69
9,300.00	44.14	7.41	9,191.58	-127.10	931.87	57.21	10.00	9.80	-2.99
9,350.00	49.06	6.16	9,225.92	-91.03	936.15	93.41	10.00	9.83	-2.51
9,383.29	52.34	5.43	9,247.00	-65.41	938.74	119.05	10.00	9.85	-2.21
Wolfcamp									
9,400.00	53.99	5.08	9,257.02	-52.09	939.97	132.35	10.00	9.86	-2.06
9,437.36	57.68	4.36	9,278.00	-21.28	942.51	163.06	10.00	9.87	-1.93
Wolfcamp X Sand									
9,450.00	58.93	4.13	9,284.64	-10.56	943.31	173.73	10.00	9.88	-1.82
9,497.13	63.59	3.32	9,307.30	30.67	945.99	214.69	10.00	9.89	-1.72
FTP[GGF/WXY#10H]									
9,500.00	63.87	3.27	9,308.57	33.23	946.13	217.24	10.00	9.89	-1.64
9,550.00	68.82	2.49	9,328.63	78.96	948.43	262.53	10.00	9.90	-1.57
9,600.00	73.77	1.75	9,344.66	126.27	950.17	309.27	10.00	9.90	-1.47
9,608.60	74.62	1.63	9,347.00	134.54	950.42	317.43	10.00	9.91	-1.43
Wolfcamp Y Sand									
9,650.00	78.72	1.05	9,356.54	174.81	951.36	357.11	10.00	9.91	-1.39
9,700.00	83.68	0.38	9,364.19	224.20	951.97	405.67	10.00	9.91	-1.35
9,750.00	88.63	359.71	9,367.54	274.07	952.01	454.59	10.00	9.91	-1.33
9,759.75	89.60	359.58	9,367.69	283.82	951.95	464.14	10.00	9.91	-1.32
EOC - HOLD									
9,800.00	89.60	359.58	9,367.97	324.07	951.66	503.55	0.00	0.00	0.00
9,900.00	89.60	359.58	9,368.67	424.06	950.93	601.49	0.00	0.00	0.00
10,000.00	89.60	359.58	9,369.37	524.05	950.20	699.42	0.00	0.00	0.00
10,100.00	89.60	359.58	9,370.07	624.05	949.47	797.35	0.00	0.00	0.00
10,200.00	89.60	359.58	9,370.77	724.04	948.75	895.28	0.00	0.00	0.00
10,300.00	89.60	359.58	9,371.46	824.04	948.02	993.21	0.00	0.00	0.00
10,400.00	89.60	359.58	9,372.16	924.03	947.29	1,091.14	0.00	0.00	0.00
10,500.00	89.60	359.58	9,372.86	1,024.03	946.57	1,189.07	0.00	0.00	0.00
10,600.00	89.60	359.58	9,373.56	1,124.02	945.84	1,287.00	0.00	0.00	0.00
10,700.00	89.60	359.58	9,374.26	1,224.02	945.11	1,384.93	0.00	0.00	0.00
10,800.00	89.60	359.58	9,374.95	1,324.01	944.38	1,482.86	0.00	0.00	0.00
10,900.00	89.60	359.58	9,375.65	1,424.01	943.66	1,580.79	0.00	0.00	0.00
11,000.00	89.60	359.58	9,376.35	1,524.00	942.93	1,678.72	0.00	0.00	0.00
11,100.00	89.60	359.58	9,377.05	1,624.00	942.20	1,776.65	0.00	0.00	0.00

Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well WXY #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Site:	Gravel Grinder Fee 23-28-18	North Reference:	Grid
Well:	WXY #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)
11,200.00	89.60	359.58	9,377.75	1,723.99	941.48	1,874.58	0.00	0.00	0.00
11,300.00	89.60	359.58	9,378.45	1,823.99	940.75	1,972.51	0.00	0.00	0.00
11,400.00	89.60	359.58	9,379.14	1,923.98	940.02	2,070.44	0.00	0.00	0.00
11,500.00	89.60	359.58	9,379.84	2,023.98	939.29	2,168.37	0.00	0.00	0.00
11,600.00	89.60	359.58	9,380.54	2,123.97	938.57	2,266.30	0.00	0.00	0.00
11,700.00	89.60	359.58	9,381.24	2,223.97	937.84	2,364.23	0.00	0.00	0.00
11,800.00	89.60	359.58	9,381.94	2,323.96	937.11	2,462.16	0.00	0.00	0.00
11,900.00	89.60	359.58	9,382.63	2,423.96	936.39	2,560.09	0.00	0.00	0.00
12,000.00	89.60	359.58	9,383.33	2,523.95	935.66	2,658.02	0.00	0.00	0.00
12,100.00	89.60	359.58	9,384.03	2,623.95	934.93	2,755.95	0.00	0.00	0.00
12,200.00	89.60	359.58	9,384.73	2,723.94	934.20	2,853.88	0.00	0.00	0.00
12,300.00	89.60	359.58	9,385.43	2,823.94	933.48	2,951.81	0.00	0.00	0.00
12,400.00	89.60	359.58	9,386.12	2,923.93	932.75	3,049.74	0.00	0.00	0.00
12,500.00	89.60	359.58	9,386.82	3,023.93	932.02	3,147.67	0.00	0.00	0.00
12,600.00	89.60	359.58	9,387.52	3,123.92	931.30	3,245.60	0.00	0.00	0.00
12,700.00	89.60	359.58	9,388.22	3,223.92	930.57	3,343.53	0.00	0.00	0.00
12,800.00	89.60	359.58	9,388.92	3,323.91	929.84	3,441.47	0.00	0.00	0.00
12,900.00	89.60	359.58	9,389.62	3,423.91	929.11	3,539.40	0.00	0.00	0.00
13,000.00	89.60	359.58	9,390.31	3,523.90	928.39	3,637.33	0.00	0.00	0.00
13,100.00	89.60	359.58	9,391.01	3,623.90	927.66	3,735.26	0.00	0.00	0.00
13,200.00	89.60	359.58	9,391.71	3,723.89	926.93	3,833.19	0.00	0.00	0.00
13,300.00	89.60	359.58	9,392.41	3,823.89	926.20	3,931.12	0.00	0.00	0.00
13,400.00	89.60	359.58	9,393.11	3,923.88	925.48	4,029.05	0.00	0.00	0.00
13,500.00	89.60	359.58	9,393.80	4,023.88	924.75	4,126.98	0.00	0.00	0.00
13,600.00	89.60	359.58	9,394.50	4,123.87	924.02	4,224.91	0.00	0.00	0.00
13,700.00	89.60	359.58	9,395.20	4,223.87	923.30	4,322.84	0.00	0.00	0.00
13,800.00	89.60	359.58	9,395.90	4,323.86	922.57	4,420.77	0.00	0.00	0.00
13,900.00	89.60	359.58	9,396.60	4,423.86	921.84	4,518.70	0.00	0.00	0.00
14,000.00	89.60	359.58	9,397.29	4,523.85	921.11	4,616.63	0.00	0.00	0.00
14,101.08	89.60	359.58	9,398.00	4,624.93	920.38	4,715.62	0.00	0.00	0.00
TD at 14101.08 - BHL[GGF/WXY#10H]									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL[GGF/WXY#10H] - hits target - Shape - Point	0.00	0.00	9,398.00	4,624.93	920.38	477,122.12	563,638.49	32° 18' 41.605 N	104° 7' 38.442 W
FTP[GGF/WXY#10H] - plan misses target center by 103.97usft at 9497.13usft MD (9307.30 TVD, 30.67 N, 945.99 E) - Point	0.00	0.00	9,398.00	-19.44	954.45	472,478.15	563,672.56	32° 17' 55.647 N	104° 7' 38.149 W

Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well WXY #10H
Company:	Marathon Oil Permian, LLC	TVD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Project:	Eddy County, NM (NAD27)	MD Reference:	KB = 26.5' @ 3104.50usft (H&P 441)
Site:	Gravel Grinder Fee 23-28-18	North Reference:	Grid
Well:	WXY #10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
0.00	0.00	Rustler				
425.00	425.00	Salado				
806.00	806.00	Castile				
2,180.12	2,180.00	Base of Salt				
2,407.37	2,406.00	Lamar				
2,438.67	2,437.00	Bell Canyon				
3,170.78	3,162.00	Cherry Canyon				
4,408.80	4,388.00	Brushy Canyon				
5,938.65	5,903.00	Bone Spring				
6,880.80	6,836.00	1st Bone Spring Sand				
7,659.35	7,607.00	2nd Bone Spring Sand				
8,981.89	8,916.00	3rd Bone Spring Sand				
9,383.29	9,247.00	Wolfcamp				
9,437.36	9,278.00	Wolfcamp X Sand				
9,608.60	9,347.00	Wolfcamp Y Sand				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		N-S (usft)	E-W (usft)		
2,000.00	2,000.00	0.00	0.00	KOP - Build 2.0° / 100	
2,399.50	2,398.21	-8.59	26.45	EOB - HOLD	
8,838.55	8,774.75	-285.17	877.67	Curve KOP - Build 10.0° / 100	
9,759.75	9,367.69	283.82	951.95	EOC - HOLD	
14,101.08	9,398.00	4,624.93	920.38	TD at 14101.08	