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Marathon Oil Permian, LLC

Eddy County, NM (NAD27)

Mariner Fee 23-28-20

WXY #11H

OH

Survey: SDI Survey #1

Standard Survey Report

14 May, 2018



Scientific Drilling

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Scientific Drilling, Intl
Survey Report



Company:	Marathon Oil Permian, LLC	Local Co-ordinate Reference:	Well WXY #11H
Project:	Eddy County, NM (NAD27)	TVD Reference:	KB = 26.5' @ 3101.50usft (H&P 498)
Site:	Mariner Fee 23-28-20	MD Reference:	KB = 26.5' @ 3101.50usft (H&P 498)
Well:	WXY #11H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

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		Mariner Fee 23-28-20			
Site Position:		Northing:	467,045.08 usft	Latitude:	32° 17' 1.795 N
From:	Map	Easting:	567,982.27 usft	Longitude:	104° 6' 48.067 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.12 °

Well	WXY #11H					
Well Position	+N/-S	0.00 usft	Northing:	467,045.09 usft	Latitude:	32° 17' 1.795 N
	+E/-W	0.00 usft	Easting:	567,982.27 usft	Longitude:	104° 6' 48.067 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,075.00 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/3/2017	7.32	60.07	48,066

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)	
	0.00	0.00	0.00	359.88	

Survey Program	Date 5/14/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.00	14,178.00	SDI Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM	

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	
200.00	0.71	4.21	199.99	1.24	0.09	1.24	0.36	0.36	0.00	
337.00	2.25	350.50	336.95	4.73	-0.29	4.74	1.15	1.12	-10.01	
432.00	2.32	347.89	431.87	8.45	-1.00	8.46	0.13	0.07	-2.75	
610.00	4.17	349.69	609.58	18.34	-2.92	18.35	1.04	1.04	1.01	
702.00	3.95	351.07	701.35	24.77	-4.01	24.77	0.26	-0.24	1.50	
794.00	1.93	331.22	793.22	29.26	-5.24	29.27	2.43	-2.20	-21.58	
886.00	1.67	332.33	885.18	31.80	-6.61	31.81	0.29	-0.28	1.21	
978.00	1.37	326.85	977.14	33.91	-7.84	33.92	0.36	-0.33	-5.96	
1,070.00	1.72	332.84	1,069.11	36.06	-9.07	36.08	0.42	0.38	6.51	

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

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)
1,165.00	1.35	306.38	1,164.08	37.99	-10.62	38.01	0.83	-0.39	-27.85
1,259.00	0.67	215.89	1,258.07	38.20	-11.83	38.23	1.61	-0.72	-96.27
1,354.00	0.98	235.60	1,353.06	37.29	-12.83	37.32	0.44	0.33	20.75
1,449.00	1.25	240.36	1,448.04	36.32	-14.40	36.35	0.30	0.28	5.01
1,543.00	1.32	242.96	1,542.02	35.32	-16.26	35.36	0.10	0.07	2.77
1,638.00	1.39	237.17	1,636.99	34.20	-18.20	34.24	0.16	0.07	-6.09
1,732.00	0.91	188.79	1,730.97	32.84	-19.27	32.88	1.11	-0.51	-51.47
1,827.00	1.24	133.32	1,825.96	31.39	-18.64	31.43	1.10	0.35	-58.39
1,921.00	1.40	140.29	1,919.93	29.81	-17.17	29.85	0.24	0.17	7.41
2,016.00	1.88	134.74	2,014.89	27.82	-15.32	27.85	0.53	0.51	-5.84
2,110.00	2.09	132.58	2,108.84	25.58	-12.96	25.60	0.24	0.22	-2.30
2,204.00	1.91	130.82	2,202.78	23.39	-10.51	23.42	0.20	-0.19	-1.87
2,298.00	1.25	151.31	2,296.74	21.47	-8.83	21.49	0.91	-0.70	21.80
2,339.00	0.81	223.22	2,337.74	20.87	-8.82	20.88	3.08	-1.07	175.39
2,487.00	1.06	246.77	2,485.72	19.56	-10.79	19.59	0.31	0.17	15.91
2,581.00	0.69	238.67	2,579.71	18.93	-12.07	18.95	0.41	-0.39	-8.62
2,675.00	0.69	232.25	2,673.70	18.29	-13.01	18.31	0.08	0.00	-6.83
2,770.00	0.53	249.68	2,768.70	17.78	-13.87	17.81	0.26	-0.17	18.35
2,864.00	0.31	257.35	2,862.69	17.58	-14.53	17.61	0.24	-0.23	8.16
2,958.00	0.61	262.40	2,956.69	17.45	-15.27	17.49	0.32	0.32	5.37
3,052.00	2.14	204.16	3,050.66	15.79	-16.48	15.82	2.01	1.63	-61.96
3,147.00	4.72	213.93	3,145.49	10.92	-19.39	10.97	2.77	2.72	10.28
3,241.00	7.36	222.21	3,238.96	3.25	-25.60	3.31	2.95	2.81	8.81
3,335.00	8.35	230.99	3,332.08	-5.50	-34.95	-5.43	1.65	1.05	9.34
3,430.00	9.74	237.18	3,425.90	-14.20	-47.06	-14.10	1.78	1.46	6.52
3,523.00	9.54	236.21	3,517.58	-22.75	-60.08	-22.62	0.28	-0.22	-1.04
3,618.00	11.83	247.79	3,610.94	-30.81	-75.64	-30.65	3.29	2.41	12.19
3,712.00	12.05	244.56	3,702.91	-38.67	-93.42	-38.47	0.75	0.23	-3.44
3,807.00	13.15	259.38	3,795.64	-44.92	-113.00	-44.68	3.58	1.16	15.60
3,901.00	12.42	257.49	3,887.31	-49.08	-133.38	-48.80	0.89	-0.78	-2.01
3,996.00	11.78	254.78	3,980.20	-53.84	-152.71	-53.52	0.90	-0.67	-2.85
4,090.00	12.54	261.98	4,072.10	-57.78	-172.08	-57.42	1.80	0.81	7.66
4,185.00	13.03	262.78	4,164.74	-60.57	-192.91	-60.16	0.55	0.52	0.84
4,279.00	12.83	260.78	4,256.36	-63.57	-213.73	-63.12	0.52	-0.21	-2.13
4,374.00	12.74	259.88	4,349.00	-67.10	-234.45	-66.61	0.23	-0.09	-0.95
4,468.00	12.17	257.16	4,440.79	-71.13	-254.32	-70.59	0.87	-0.61	-2.89
4,562.00	11.55	255.65	4,532.79	-75.66	-273.09	-75.09	0.74	-0.66	-1.61
4,657.00	11.38	269.72	4,625.91	-78.06	-291.68	-77.45	2.94	-0.18	14.81
4,751.00	10.41	268.47	4,718.21	-78.34	-309.45	-77.69	1.06	-1.03	-1.33
4,846.00	9.52	265.74	4,811.78	-79.15	-325.86	-78.47	1.06	-0.94	-2.87
4,940.00	8.80	263.21	4,904.58	-80.58	-340.75	-79.86	0.88	-0.77	-2.69
5,035.00	8.27	260.69	4,998.53	-82.54	-354.71	-81.80	0.68	-0.56	-2.65
5,129.00	9.47	258.61	5,091.40	-85.16	-368.96	-84.39	1.32	1.28	-2.21
5,223.00	10.04	257.67	5,184.04	-88.44	-384.55	-87.63	0.63	0.61	-1.00

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Survey										
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5,318.00	9.15	255.91	5,277.71	-92.05	-399.97	-91.21	0.99	-0.94	-1.85	
5,412.00	8.78	254.49	5,370.56	-95.78	-414.13	-94.92	0.46	-0.39	-1.51	
5,506.00	8.49	272.79	5,463.52	-97.36	-427.97	-96.47	2.93	-0.31	19.47	
5,600.00	7.97	271.50	5,556.55	-96.86	-441.42	-95.93	0.59	-0.55	-1.37	
5,694.00	8.85	264.81	5,649.54	-97.34	-455.14	-96.39	1.40	0.94	-7.12	
5,789.00	9.64	257.54	5,743.31	-99.72	-470.18	-98.73	1.48	0.83	-7.65	
5,883.00	9.35	255.82	5,836.02	-103.29	-485.27	-102.27	0.43	-0.31	-1.83	
5,977.00	9.41	269.65	5,928.77	-105.20	-500.36	-104.16	2.39	0.06	14.71	
6,071.00	9.64	275.32	6,021.48	-104.52	-515.88	-103.44	1.03	0.24	6.03	
6,166.00	8.59	275.96	6,115.28	-103.05	-530.86	-101.93	1.11	-1.11	0.67	
6,261.00	9.31	272.09	6,209.12	-102.03	-545.59	-100.89	0.99	0.76	-4.07	
6,355.00	7.84	271.91	6,302.07	-101.54	-559.60	-100.37	1.56	-1.56	-0.19	
6,450.00	9.65	260.45	6,395.97	-102.64	-573.93	-101.44	2.64	1.91	-12.06	
6,544.00	9.02	253.85	6,488.73	-106.00	-588.78	-104.77	1.32	-0.67	-7.02	
6,638.00	7.46	245.15	6,581.76	-110.62	-601.39	-109.36	2.12	-1.66	-9.26	
6,733.00	7.21	242.11	6,675.98	-116.00	-612.26	-114.71	0.49	-0.26	-3.20	
6,827.00	9.34	250.86	6,769.00	-121.26	-624.68	-119.95	2.63	2.27	9.31	
6,921.00	11.30	256.97	6,861.48	-125.83	-640.86	-124.49	2.39	2.09	6.50	
7,016.00	11.16	268.95	6,954.67	-128.10	-659.12	-126.72	2.46	-0.15	12.61	
7,110.00	10.35	270.35	7,047.02	-128.22	-676.66	-126.80	0.91	-0.86	1.49	
7,205.00	8.88	267.39	7,140.68	-128.50	-692.52	-127.05	1.63	-1.55	-3.12	
7,299.00	7.67	264.14	7,233.70	-129.47	-706.01	-127.99	1.38	-1.29	-3.46	
7,393.00	6.89	261.72	7,326.94	-130.92	-717.83	-129.42	0.89	-0.83	-2.57	
7,488.00	6.28	262.51	7,421.32	-132.42	-728.62	-130.89	0.65	-0.64	0.83	
7,582.00	5.39	260.11	7,514.83	-133.85	-738.07	-132.30	0.98	-0.95	-2.55	
7,677.00	4.91	264.85	7,609.45	-134.98	-746.51	-133.42	0.67	-0.51	4.99	
7,771.00	4.30	262.10	7,703.14	-135.83	-754.01	-134.25	0.69	-0.65	-2.93	
7,865.00	3.93	257.59	7,796.90	-137.00	-760.65	-135.41	0.52	-0.39	-4.80	
7,960.00	3.62	260.63	7,891.69	-138.19	-766.79	-136.58	0.39	-0.33	3.20	
8,054.00	2.68	262.86	7,985.55	-138.95	-771.89	-137.33	1.01	-1.00	2.37	
8,148.00	1.21	277.90	8,079.49	-139.08	-775.06	-137.46	1.64	-1.56	16.00	
8,243.00	1.19	281.47	8,174.47	-138.75	-777.02	-137.12	0.08	-0.02	3.76	
8,337.00	1.06	243.22	8,268.46	-138.95	-778.75	-137.32	0.79	-0.14	-40.69	
8,432.00	1.65	212.80	8,363.43	-140.49	-780.28	-138.86	0.96	0.62	-32.02	
8,526.00	1.42	232.02	8,457.40	-142.35	-781.93	-140.71	0.60	-0.24	20.45	
8,621.00	1.18	238.95	8,552.37	-143.58	-783.69	-141.93	0.30	-0.25	7.29	
8,715.00	0.81	213.86	8,646.36	-144.63	-784.89	-142.98	0.60	-0.39	-26.69	
8,808.00	0.49	197.63	8,739.35	-145.55	-785.38	-143.91	0.39	-0.34	-17.45	
8,902.00	4.67	338.26	8,833.26	-142.38	-786.92	-140.73	5.38	4.45	149.61	
8,997.00	14.42	351.84	8,926.84	-127.04	-790.04	-125.38	10.46	10.26	14.29	
9,091.00	24.72	351.35	9,015.29	-95.94	-794.67	-94.27	10.96	10.96	-0.52	
9,186.00	36.92	352.20	9,096.72	-47.85	-801.56	-46.17	12.85	12.84	0.89	
9,281.00	45.95	1.67	9,167.94	14.74	-804.44	16.42	11.55	9.51	9.97	

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Survey

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9,375.00	52.35	3.21	9,229.39	85.73	-801.37	87.41	6.92	6.81	1.64
9,470.00	60.07	4.59	9,282.19	164.44	-795.96	166.11	8.22	8.13	1.45
9,472.84	60.23	4.62	9,283.60	166.90	-795.76	168.56	5.80	5.72	1.14
FTP[MF/WXY#11H]									
9,564.00	65.45	5.61	9,325.20	247.65	-788.52	249.30	5.80	5.72	1.08
9,659.00	66.20	4.10	9,364.10	334.00	-781.19	335.64	1.65	0.79	-1.59
9,753.00	76.28	3.56	9,394.30	422.70	-775.26	424.32	10.74	10.72	-0.57
9,795.00	82.39	2.44	9,402.07	463.89	-773.11	465.51	14.78	14.55	-2.67
9,890.00	89.73	1.52	9,408.59	558.55	-769.84	560.16	7.79	7.73	-0.97
9,952.00	90.17	1.68	9,408.64	620.52	-768.11	622.13	0.76	0.71	0.26
10,046.00	89.56	0.87	9,408.87	714.50	-766.01	716.10	1.08	-0.65	-0.86
10,140.00	90.07	1.49	9,409.17	808.48	-764.08	810.08	0.85	0.54	0.66
10,235.00	90.87	1.42	9,408.39	903.44	-761.67	905.04	0.85	0.84	-0.07
10,329.00	90.64	1.29	9,407.15	997.41	-759.44	999.00	0.28	-0.24	-0.14
10,424.00	91.21	1.40	9,405.62	1,092.37	-757.21	1,093.95	0.61	0.60	0.12
10,518.00	90.54	358.52	9,404.18	1,186.35	-757.28	1,187.93	3.15	-0.71	-3.06
10,613.00	89.90	358.12	9,403.82	1,281.31	-760.07	1,282.89	0.79	-0.67	-0.42
10,707.00	90.84	358.03	9,403.21	1,375.25	-763.22	1,376.84	1.00	1.00	-0.10
10,802.00	87.01	357.28	9,404.99	1,470.13	-767.11	1,471.74	4.11	-4.03	-0.79
10,896.00	87.28	357.29	9,409.67	1,563.91	-771.55	1,565.53	0.29	0.29	0.01
10,990.00	90.34	358.99	9,411.63	1,657.83	-774.60	1,659.45	3.72	3.26	1.81
11,085.00	90.60	358.35	9,410.85	1,752.80	-776.81	1,754.42	0.73	0.27	-0.67
11,179.00	90.30	358.10	9,410.11	1,846.75	-779.72	1,848.38	0.42	-0.32	-0.27
11,274.00	89.97	357.85	9,409.88	1,941.69	-783.08	1,943.33	0.44	-0.35	-0.26
11,368.00	90.17	357.83	9,409.77	2,035.62	-786.62	2,037.27	0.21	0.21	-0.02
11,463.00	87.75	359.28	9,411.49	2,130.57	-789.02	2,132.22	2.97	-2.55	1.53
11,557.00	92.05	0.53	9,411.66	2,224.54	-789.17	2,226.19	4.76	4.57	1.33
11,651.00	91.51	3.68	9,408.74	2,318.42	-785.72	2,320.06	3.40	-0.57	3.35
11,745.00	87.75	4.88	9,409.34	2,412.14	-778.71	2,413.77	4.20	-4.00	1.28
11,839.00	90.98	8.49	9,410.39	2,505.47	-767.77	2,507.07	5.15	3.44	3.84
11,934.00	90.71	11.90	9,408.98	2,598.94	-750.96	2,600.51	3.60	-0.28	3.59
12,028.00	92.32	14.79	9,406.50	2,690.36	-729.27	2,691.88	3.52	1.71	3.07
12,122.00	87.92	12.79	9,406.30	2,781.62	-706.87	2,783.10	5.14	-4.68	-2.13
12,216.00	86.57	12.09	9,410.82	2,873.31	-686.65	2,874.74	1.62	-1.44	-0.74
12,310.00	90.40	10.47	9,413.31	2,965.44	-668.27	2,966.83	4.42	4.07	-1.72
12,404.00	90.94	8.70	9,412.21	3,058.12	-652.62	3,059.48	1.97	0.57	-1.88
12,499.00	87.78	7.50	9,413.27	3,152.15	-639.24	3,153.48	3.56	-3.33	-1.26
12,594.00	89.80	4.48	9,415.27	3,246.60	-629.33	3,247.91	3.82	2.13	-3.18
12,688.00	89.63	2.48	9,415.74	3,340.42	-623.62	3,341.71	2.14	-0.18	-2.13
12,782.00	91.34	2.18	9,414.95	3,434.33	-619.80	3,435.62	1.85	1.82	-0.32
12,877.00	90.13	1.20	9,413.73	3,529.28	-617.00	3,530.56	1.64	-1.27	-1.03
12,973.00	90.84	1.87	9,412.91	3,625.24	-614.43	3,626.52	1.02	0.74	0.70
13,066.00	85.96	358.01	9,415.51	3,718.16	-614.52	3,719.44	6.69	-5.25	-4.15
13,161.00	87.04	357.02	9,421.31	3,812.89	-618.63	3,814.18	1.54	1.14	-1.04

Company:	Marathon Oil Permian, LLC	Local Co-ordinate Reference:	Well WXY #11H
Project:	Eddy County, NM (NAD27)	TVD Reference:	KB = 26.5' @ 3101.50usft (H&P 498)
Site:	Mariner Fee 23-28-20	MD Reference:	KB = 26.5' @ 3101.50usft (H&P 498)
Well:	WXY #11H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

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)
13,255.00	88.02	356.93	9,425.36	3,906.67	-623.59	3,907.97	1.05	1.04	-0.10
13,350.00	87.91	357.21	9,428.74	4,001.49	-628.44	4,002.79	0.32	-0.12	0.29
13,444.00	90.13	358.66	9,430.34	4,095.40	-631.83	4,096.72	2.82	2.36	1.54
13,538.00	89.33	358.08	9,430.79	4,189.36	-634.50	4,190.68	1.05	-0.85	-0.62
13,632.00	89.70	356.64	9,431.58	4,283.26	-638.83	4,284.59	1.58	0.39	-1.53
13,727.00	91.11	358.90	9,430.91	4,378.17	-642.53	4,379.51	2.80	1.48	2.38
13,821.00	90.54	358.26	9,429.56	4,472.13	-644.86	4,473.48	0.91	-0.61	-0.68
13,917.00	89.70	357.68	9,429.36	4,568.07	-648.26	4,569.42	1.06	-0.88	-0.60
14,011.00	89.56	356.75	9,429.96	4,661.96	-652.83	4,663.32	1.00	-0.15	-0.99
14,105.00	89.29	357.60	9,430.91	4,755.84	-657.46	4,757.21	0.95	-0.29	0.90
14,119.00	88.82	357.05	9,431.14	4,769.82	-658.11	4,771.19	5.17	-3.36	-3.93
FINAL MWD Survey (14119.00' MD) - BHL[MF/WXY#11H] - Prop.BHL[MF/WXY#11H]									
14,178.00	88.82	357.05	9,432.35	4,828.73	-661.15	4,830.10	0.00	0.00	0.00
FINAL Proj. to Bit (14178.00' MD)									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
14,119.00	9,431.14	4,769.82	-658.11	FINAL MWD Survey (14119.00' MD)
14,178.00	9,432.35	4,828.73	-661.15	FINAL Proj. to Bit (14178.00' MD)

Checked By: _____	Approved By: _____	Date: _____
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EDDY COUNTY, NM (NAD27)
MARINER FEE 23-28-20
WXY #11H

FINAL AS-DRILLED
H&P 498

WELL DETAILS:

Ground Level: 3075.00
+N/-S +E/-W
0.00 0.00
Northing Easting
467045.09 567982.27
Latitude Longitude
32° 17' 1.795 N 104° 6' 48.067 W

SECTION DETAILS

MD	INC	AZI	TVD	+N/-S	+E/-W	DLEG	TFACE	VSECT	TARGET
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3003.00	0.00	0.00	3003.00	0.00	0.00	0.00	0.00	0.00	
3503.00	10.00	240.00	3497.47	-7.55	-42.25	2.00	250.00	-7.57	
7475.00	10.00	240.00	7412.03	-127.52	-72.63	0.00	0.00	-125.99	
7975.00	0.00	0.00	7909.54	-121.75	-765.49	2.00	180.00	-133.17	
2909.50	0.00	0.00	2944.06	-134.45	-703.49	0.00	0.00	-133.77	
9309.50	90.00	0.00	9417.00	437.93	-745.45	10.00	0.00	439.58	
1084.50	90.00	0.00	9417.00	2212.98	-755.49	0.00	0.00	2214.58	
1204.50	90.00	12.30	9417.00	2369.48	-715.41	2.50	60.00	2390.97	
1214.50	90.00	12.00	9417.00	2355.20	-682.22	0.00	0.00	2357.63	
1269.50	90.00	35.55	9417.00	3217.50	-615.16	2.50	-90.00	3215.32	
1109.44	90.00	35.55	9417.00	4784.84	-637.21	0.00	0.00	4785.04	
1421.44	90.00	35.55	9417.00	4524.54	-537.31	0.00	0.00	4530.96	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
BHLMF/WXY#11H	9417.00	4783.12	-771.44	471827.80	567210.50
FTP(MF/WXY#11H)	9417.00	94.92	-761.90	467140.00	567220.44
Prop.BHLMF/WXY#11H	9417.00	4784.64	-637.21	471829.32	567345.11

DRILLING TARGET: 9417' TVD @ 0VS // 90.0° INC.

TARGET WINDOW 10' UP // 10' DOWN / 30' LEFT / 30' RIGHT

SITE DETAILS: MARINER FEE 23-28-20
SITE CENTRE NORTHING: 467045.09
EASTING: 567982.27

POSITIONAL UNCERTAINTY: 0.00
CONVERGENCE: 0.12
LOCAL NORTH: GRID

PROJECT DETAILS: EDDY COUNTY, NM (NAD27)
GEODETIC SYSTEM: US STATE PLANE 1927 (EXACT SOLUTION)
DATUM: NAD 1927 (NADCON CONUS)
ELLIPSOID: CLARK 1866
ZONE NAME: NEW MEXICO EAST 5001

SYSTEM DATUM: MEAN SEA LEVEL

FORMATION TOP DETAILS

TVD PATH	DEPTH	FORMATION
153.50	153.50	SALADO
263.50	263.50	CASTLE
2341.50	2341.50	BASE OF SALT
2504.50	2504.50	LENAP
2530.50	2530.50	BELL CANYON
3299.50	3299.50	CHEERY CANYON
4502.50	4502.50	BRUSHY CANYON
6062.50	6062.50	BOKE SPRING
6646.50	7023.50	1ST BONE SPRING SAND
7777.50	7777.50	2ND BONE SPRING SAND
8975.50	9042.14	3RD BONE SPRING SAND
9315.50	9425.71	WOLFCAMP

MAP SYSTEM: US STATE PLANE 1927 (EXACT SOLUTION)
DATUM: NAD 1927 (NADCON CONUS)
ELLIPSOID: CLARK 1866
ZONE NAME: NEW MEXICO EAST 5001

LOCAL ORIGIN: WELL WXY #11H, GRID NORTH

LATITUDE: 32° 17' 1.795 N
LONGITUDE: 104° 6' 48.067 W

GRID EAST: 567982.27

GRID NORTH: 467045.09

SCALE FACTOR: 1.000

GEOMAGNETIC MODEL: HDGM

SAMPLE DATE: 03-ANDY-17

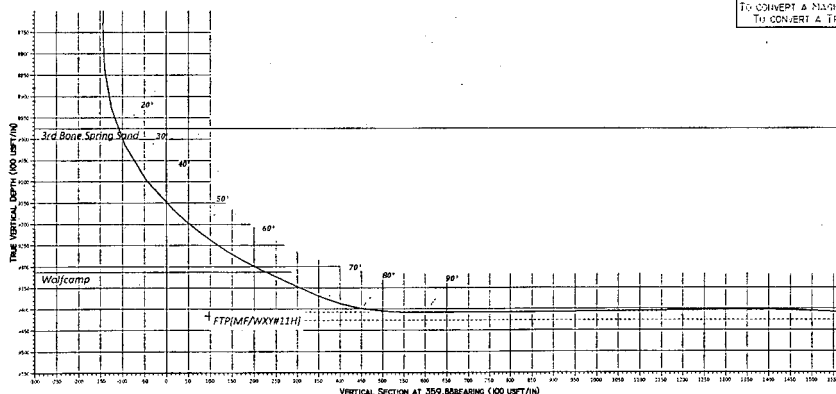
MAGNETIC DECLINATION: 7.32°

DIP ANGLE FROM HORIZONTAL: 60.07°

MAGNETIC FIELD STRENGTH: 48060

TO CONVERT A MAGNETIC DIRECTION TO A GRID DIRECTION, ADD 7.32°
TO CONVERT A MAGNETIC DIRECTION TO A TRUE DIRECTION, ADD 7.32° EAST
TO CONVERT A TRUE DIRECTION TO A GRID DIRECTION, SUBTRACT 0.12°

CASING DETAILS
No casing data is available



Prop.BHLMF/WXY#11H

FINAL MWD Survey (14119.00' MD)

FINAL Proj. to Bit (14178.00' MD)

FTP(MF/WXY#11H)
VERTICAL SECTION AT 359.88 BEARING (100 USFT/IN)



Azimuths to Grid North
True North: -0.12°
Magnetic North: 7.20°

Magnetic Field
Strength: 48065.8nT
Dip Angle: 60.07°
Date: 11/3/2017
Model: HDGM

