

Company: Marathon Oil
Project: Lea County, NM
Site: Flowmaster 15 (2-14-15)
Well: WXY FEE #2H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well WXY FEE #2H
TVD Reference: Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
MD Reference: Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

HOBBS OCD
MAY 10 2019
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Project	Lea County, NM	System Datum:	Mean Sea Level
Map System:	US State Plane 1927 (Exact solution)		
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Flowmaster 15 (2-14-15)				
Site Position:		Northing:	441,863.15 usft	Latitude:	32.211781
From:	Map	Easting:	770,170.21 usft	Longitude:	-103.459803
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.47 °

Well	WXY FEE #2H					
Well Position	+N/-S	0.00 usft	Northing:	441,863.15 usft	Latitude:	32.211781
	+E/-W	0.00 usft	Easting:	770,170.21 usft	Longitude:	-103.459803
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,519.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/7/2019	6.63	59.87	47,904.70

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	359.57	

Survey Tool Program	Date	5/7/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,800.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM	
1,800.00	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	17,331.56	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

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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)
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
1,200.00	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	2.00	218.59	1,899.98	-1.36	-1.09	-1.36	2.00	2.00	0.00
2,000.00	4.00	218.59	1,999.84	-5.45	-4.35	-5.42	2.00	2.00	0.00
2,100.00	6.00	218.59	2,099.45	-12.27	-9.79	-12.19	2.00	2.00	0.00
2,200.00	8.00	218.59	2,198.70	-21.79	-17.39	-21.66	2.00	2.00	0.00
2,300.00	10.00	218.59	2,297.47	-34.02	-27.14	-33.82	2.00	2.00	0.00
2,400.00	10.00	218.59	2,395.95	-47.59	-37.98	-47.31	0.00	0.00	0.00
2,500.00	10.00	218.59	2,494.43	-61.17	-48.81	-60.80	0.00	0.00	0.00
2,600.00	10.00	218.59	2,592.91	-74.74	-59.64	-74.29	0.00	0.00	0.00
2,700.00	10.00	218.59	2,691.39	-88.31	-70.47	-87.78	0.00	0.00	0.00
2,800.00	10.00	218.59	2,789.87	-101.89	-81.30	-101.27	0.00	0.00	0.00
2,900.00	10.00	218.59	2,888.35	-115.46	-92.13	-114.77	0.00	0.00	0.00
3,000.00	10.00	218.59	2,986.83	-129.03	-102.96	-128.26	0.00	0.00	0.00
3,100.00	10.00	218.59	3,085.31	-142.61	-113.79	-141.75	0.00	0.00	0.00
3,200.00	10.00	218.59	3,183.79	-156.18	-124.62	-155.24	0.00	0.00	0.00
3,300.00	10.00	218.59	3,282.27	-169.76	-135.45	-168.73	0.00	0.00	0.00
3,400.00	10.00	218.59	3,380.75	-183.33	-146.28	-182.23	0.00	0.00	0.00
3,500.00	10.00	218.59	3,479.23	-196.90	-157.11	-195.72	0.00	0.00	0.00
3,600.00	10.00	218.59	3,577.72	-210.48	-167.94	-209.21	0.00	0.00	0.00
3,700.00	10.00	218.59	3,676.20	-224.05	-178.77	-222.70	0.00	0.00	0.00
3,800.00	10.00	218.59	3,774.68	-237.62	-189.60	-236.19	0.00	0.00	0.00
3,900.00	10.00	218.59	3,873.16	-251.20	-200.43	-249.68	0.00	0.00	0.00
4,000.00	10.00	218.59	3,971.64	-264.77	-211.26	-263.18	0.00	0.00	0.00
4,100.00	10.00	218.59	4,070.12	-278.34	-222.09	-276.67	0.00	0.00	0.00
4,200.00	10.00	218.59	4,168.60	-291.92	-232.92	-290.16	0.00	0.00	0.00
4,300.00	10.00	218.59	4,267.08	-305.49	-243.75	-303.65	0.00	0.00	0.00
4,400.00	10.00	218.59	4,365.56	-319.06	-254.58	-317.14	0.00	0.00	0.00
4,500.00	10.00	218.59	4,464.04	-332.64	-265.41	-330.64	0.00	0.00	0.00
4,600.00	10.00	218.59	4,562.52	-346.21	-276.24	-344.13	0.00	0.00	0.00
4,700.00	10.00	218.59	4,661.00	-359.78	-287.07	-357.62	0.00	0.00	0.00



Pro Directional Survey Report



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4,800.00	10.00	218.59	4,759.48	-373.36	-297.90	-371.11	0.00	0.00	0.00
4,900.00	10.00	218.59	4,857.97	-386.93	-308.73	-384.60	0.00	0.00	0.00
5,000.00	10.00	218.59	4,956.45	-400.50	-319.56	-398.10	0.00	0.00	0.00
5,100.00	10.00	218.59	5,054.93	-414.08	-330.40	-411.59	0.00	0.00	0.00
5,200.00	10.00	218.59	5,153.41	-427.65	-341.23	-425.08	0.00	0.00	0.00
5,300.00	10.00	218.59	5,251.89	-441.23	-352.06	-438.57	0.00	0.00	0.00
5,400.00	10.00	218.59	5,350.37	-454.80	-362.89	-452.06	0.00	0.00	0.00
5,435.08	10.00	218.59	5,384.91	-459.56	-366.69	-456.79	0.00	0.00	0.00
5,500.00	8.70	218.59	5,448.97	-467.81	-373.26	-464.99	2.00	-2.00	0.00
5,600.00	6.70	218.59	5,548.07	-478.28	-381.62	-475.40	2.00	-2.00	0.00
5,700.00	4.70	218.59	5,647.57	-486.05	-387.82	-483.12	2.00	-2.00	0.00
5,800.00	2.70	218.59	5,747.35	-491.09	-391.84	-488.14	2.00	-2.00	0.00
5,900.00	0.70	218.59	5,847.30	-493.41	-393.70	-490.44	2.00	-2.00	0.00
5,935.08	0.00	0.00	5,882.38	-493.58	-393.83	-490.61	2.00	-2.00	0.00
6,000.00	0.00	0.00	5,947.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,100.00	0.00	0.00	6,047.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,200.00	0.00	0.00	6,147.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,300.00	0.00	0.00	6,247.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,400.00	0.00	0.00	6,347.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,500.00	0.00	0.00	6,447.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,600.00	0.00	0.00	6,547.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,700.00	0.00	0.00	6,647.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,800.00	0.00	0.00	6,747.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
6,900.00	0.00	0.00	6,847.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,000.00	0.00	0.00	6,947.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,100.00	0.00	0.00	7,047.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,200.00	0.00	0.00	7,147.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,300.00	0.00	0.00	7,247.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,400.00	0.00	0.00	7,347.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,500.00	0.00	0.00	7,447.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,600.00	0.00	0.00	7,547.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,700.00	0.00	0.00	7,647.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,800.00	0.00	0.00	7,747.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
7,900.00	0.00	0.00	7,847.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,000.00	0.00	0.00	7,947.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,100.00	0.00	0.00	8,047.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,200.00	0.00	0.00	8,147.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,300.00	0.00	0.00	8,247.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,400.00	0.00	0.00	8,347.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,500.00	0.00	0.00	8,447.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,600.00	0.00	0.00	8,547.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,700.00	0.00	0.00	8,647.30	-493.58	-393.83	-490.61	0.00	0.00	0.00

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Planned Survey

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8,800.00	0.00	0.00	8,747.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
8,900.00	0.00	0.00	8,847.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,000.00	0.00	0.00	8,947.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,100.00	0.00	0.00	9,047.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,200.00	0.00	0.00	9,147.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,300.00	0.00	0.00	9,247.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,400.00	0.00	0.00	9,347.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,500.00	0.00	0.00	9,447.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,600.00	0.00	0.00	9,547.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,700.00	0.00	0.00	9,647.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,800.00	0.00	0.00	9,747.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
9,900.00	0.00	0.00	9,847.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,000.00	0.00	0.00	9,947.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,100.00	0.00	0.00	10,047.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,200.00	0.00	0.00	10,147.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,300.00	0.00	0.00	10,247.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,400.00	0.00	0.00	10,347.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,500.00	0.00	0.00	10,447.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,600.00	0.00	0.00	10,547.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,700.00	0.00	0.00	10,647.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,800.00	0.00	0.00	10,747.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
10,900.00	0.00	0.00	10,847.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,000.00	0.00	0.00	10,947.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,100.00	0.00	0.00	11,047.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,200.00	0.00	0.00	11,147.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,300.00	0.00	0.00	11,247.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,400.00	0.00	0.00	11,347.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,500.00	0.00	0.00	11,447.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,600.00	0.00	0.00	11,547.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,700.00	0.00	0.00	11,647.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,800.00	0.00	0.00	11,747.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,900.00	0.00	0.00	11,847.30	-493.58	-393.83	-490.61	0.00	0.00	0.00
11,931.20	0.00	0.00	11,878.50	-493.58	-393.83	-490.61	0.00	0.00	0.00
[FlowmasterWXY#2H]FTP									
11,950.00	2.26	359.57	11,897.30	-493.21	-393.83	-490.24	12.00	12.00	0.00
11,975.00	5.26	359.57	11,922.24	-491.57	-393.85	-488.60	12.00	12.00	0.00
12,000.00	8.26	359.57	11,947.06	-488.63	-393.87	-485.66	12.00	12.00	0.00
12,025.00	11.26	359.57	11,971.70	-484.40	-393.90	-481.43	12.00	12.00	0.00
12,050.00	14.26	359.57	11,996.08	-478.88	-393.94	-475.91	12.00	12.00	0.00
12,075.00	17.26	359.57	12,020.14	-472.09	-393.99	-469.12	12.00	12.00	0.00
12,100.00	20.26	359.57	12,043.81	-464.05	-394.05	-461.08	12.00	12.00	0.00
12,125.00	23.26	359.57	12,067.02	-454.79	-394.12	-451.82	12.00	12.00	0.00

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Project: Lea County, NM
Site: Flowmaster 15 (2-14-15)
Well: WXY FEE #2H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well WXY FEE #2H
TVD Reference: Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
MD Reference: Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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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)
12,150.00	26.26	359.57	12,089.72	-444.32	-394.20	-441.35	12.00	12.00	0.00
12,175.00	29.26	359.57	12,111.85	-432.68	-394.29	-429.71	12.00	12.00	0.00
12,200.00	32.26	359.57	12,133.33	-419.89	-394.38	-416.92	12.00	12.00	0.00
12,225.00	35.26	359.57	12,154.11	-406.01	-394.49	-403.03	12.00	12.00	0.00
12,250.00	38.26	359.57	12,174.14	-391.05	-394.60	-388.07	12.00	12.00	0.00
12,275.00	41.26	359.57	12,193.35	-375.06	-394.72	-372.09	12.00	12.00	0.00
12,300.00	44.26	359.57	12,211.71	-358.09	-394.85	-355.12	12.00	12.00	0.00
12,325.00	47.26	359.57	12,229.15	-340.18	-394.98	-337.21	12.00	12.00	0.00
12,350.00	50.26	359.57	12,245.63	-321.39	-395.12	-318.42	12.00	12.00	0.00
12,375.00	53.26	359.57	12,261.10	-301.76	-395.27	-298.78	12.00	12.00	0.00
12,400.00	56.26	359.57	12,275.53	-281.34	-395.42	-278.37	12.00	12.00	0.00
12,425.00	59.26	359.57	12,288.86	-260.20	-395.58	-257.23	12.00	12.00	0.00
12,450.00	62.26	359.57	12,301.07	-238.39	-395.75	-235.41	12.00	12.00	0.00
12,475.00	65.26	359.57	12,312.13	-215.97	-395.92	-212.99	12.00	12.00	0.00
12,500.00	68.26	359.57	12,321.99	-193.00	-396.09	-190.03	12.00	12.00	0.00
12,525.00	71.26	359.57	12,330.64	-169.55	-396.26	-166.57	12.00	12.00	0.00
12,550.00	74.26	359.57	12,338.05	-145.68	-396.44	-142.70	12.00	12.00	0.00
12,575.00	77.26	359.57	12,344.20	-121.45	-396.63	-118.47	12.00	12.00	0.00
12,600.00	80.26	359.57	12,349.08	-96.93	-396.81	-93.95	12.00	12.00	0.00
12,625.00	83.26	359.57	12,352.66	-72.20	-397.00	-69.21	12.00	12.00	0.00
12,650.00	86.26	359.57	12,354.95	-47.30	-397.18	-44.32	12.00	12.00	0.00
12,675.00	89.26	359.57	12,355.92	-22.33	-397.37	-19.34	12.00	12.00	0.00
12,681.19	90.00	359.57	12,355.97	-16.13	-397.42	-13.15	12.00	12.00	0.00
12,700.00	90.00	359.57	12,355.97	2.67	-397.56	5.66	0.00	0.00	0.00
12,800.00	90.00	359.57	12,355.97	102.67	-398.31	105.66	0.00	0.00	0.00
12,900.00	90.00	359.57	12,355.97	202.67	-399.06	205.66	0.00	0.00	0.00
13,000.00	90.00	359.57	12,355.97	302.66	-399.81	305.66	0.00	0.00	0.00
13,100.00	90.00	359.57	12,355.97	402.66	-400.56	405.66	0.00	0.00	0.00
13,200.00	90.00	359.57	12,355.97	502.66	-401.31	505.66	0.00	0.00	0.00
13,300.00	90.00	359.57	12,355.97	602.66	-402.06	605.66	0.00	0.00	0.00
13,400.00	90.00	359.57	12,355.97	702.65	-402.82	705.66	0.00	0.00	0.00
13,500.00	90.00	359.57	12,355.97	802.65	-403.57	805.66	0.00	0.00	0.00
13,600.00	90.00	359.57	12,355.97	902.65	-404.32	905.66	0.00	0.00	0.00
13,700.00	90.00	359.57	12,355.97	1,002.64	-405.07	1,005.66	0.00	0.00	0.00
13,800.00	90.00	359.57	12,355.97	1,102.64	-405.82	1,105.66	0.00	0.00	0.00
13,900.00	90.00	359.57	12,355.97	1,202.64	-406.57	1,205.66	0.00	0.00	0.00
14,000.00	90.00	359.57	12,355.98	1,302.64	-407.32	1,305.66	0.00	0.00	0.00
14,100.00	90.00	359.57	12,355.98	1,402.63	-408.07	1,405.66	0.00	0.00	0.00
14,200.00	90.00	359.57	12,355.98	1,502.63	-408.83	1,505.66	0.00	0.00	0.00
14,300.00	90.00	359.57	12,355.98	1,602.63	-409.58	1,605.66	0.00	0.00	0.00
14,400.00	90.00	359.57	12,355.98	1,702.62	-410.33	1,705.66	0.00	0.00	0.00
14,500.00	90.00	359.57	12,355.98	1,802.62	-411.08	1,805.66	0.00	0.00	0.00

Company: Marathon Oil
Project: Lea County, NM
Site: Flowmaster 15 (2-14-15)
Well: WXY FEE #2H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well WXY FEE #2H
TVD Reference: Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
MD Reference: Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

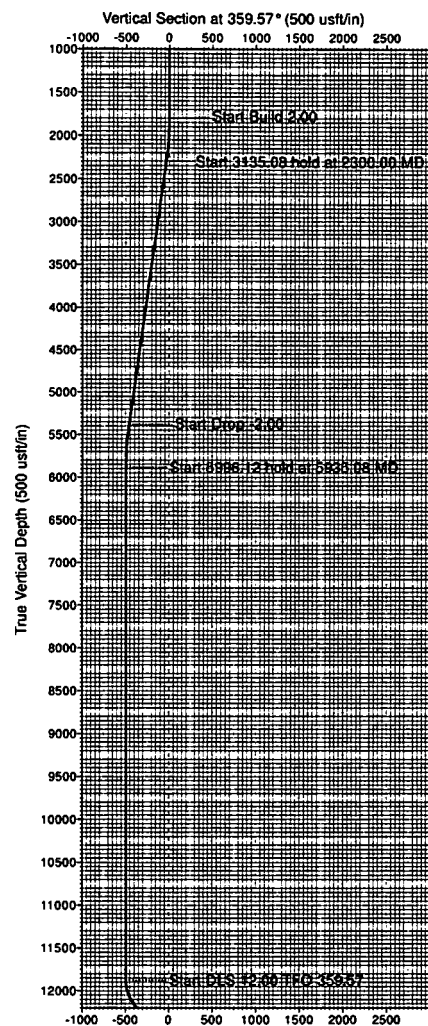
Planned Survey

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)
14,600.00	90.00	359.57	12,355.98	1,902.62	-411.83	1,905.66	0.00	0.00	0.00
14,700.00	90.00	359.57	12,355.98	2,002.62	-412.58	2,005.66	0.00	0.00	0.00
14,800.00	90.00	359.57	12,355.98	2,102.61	-413.33	2,105.66	0.00	0.00	0.00
14,900.00	90.00	359.57	12,355.98	2,202.61	-414.08	2,205.66	0.00	0.00	0.00
15,000.00	90.00	359.57	12,355.98	2,302.61	-414.83	2,305.66	0.00	0.00	0.00
15,100.00	90.00	359.57	12,355.98	2,402.61	-415.59	2,405.66	0.00	0.00	0.00
15,200.00	90.00	359.57	12,355.98	2,502.60	-416.34	2,505.66	0.00	0.00	0.00
15,300.00	90.00	359.57	12,355.99	2,602.60	-417.09	2,605.66	0.00	0.00	0.00
15,400.00	90.00	359.57	12,355.99	2,702.60	-417.84	2,705.66	0.00	0.00	0.00
15,500.00	90.00	359.57	12,355.99	2,802.59	-418.59	2,805.66	0.00	0.00	0.00
15,600.00	90.00	359.57	12,355.99	2,902.59	-419.34	2,905.66	0.00	0.00	0.00
15,700.00	90.00	359.57	12,355.99	3,002.59	-420.09	3,005.66	0.00	0.00	0.00
15,800.00	90.00	359.57	12,355.99	3,102.59	-420.84	3,105.66	0.00	0.00	0.00
15,900.00	90.00	359.57	12,355.99	3,202.58	-421.59	3,205.66	0.00	0.00	0.00
16,000.00	90.00	359.57	12,355.99	3,302.58	-422.35	3,305.66	0.00	0.00	0.00
16,100.00	90.00	359.57	12,355.99	3,402.58	-423.10	3,405.66	0.00	0.00	0.00
16,200.00	90.00	359.57	12,355.99	3,502.57	-423.85	3,505.66	0.00	0.00	0.00
16,300.00	90.00	359.57	12,355.99	3,602.57	-424.60	3,605.66	0.00	0.00	0.00
16,400.00	90.00	359.57	12,355.99	3,702.57	-425.35	3,705.66	0.00	0.00	0.00
16,500.00	90.00	359.57	12,355.99	3,802.57	-426.10	3,805.66	0.00	0.00	0.00
16,600.00	90.00	359.57	12,356.00	3,902.56	-426.85	3,905.66	0.00	0.00	0.00
16,700.00	90.00	359.57	12,356.00	4,002.56	-427.60	4,005.66	0.00	0.00	0.00
16,800.00	90.00	359.57	12,356.00	4,102.56	-428.36	4,105.66	0.00	0.00	0.00
16,900.00	90.00	359.57	12,356.00	4,202.55	-429.11	4,205.66	0.00	0.00	0.00
17,000.00	90.00	359.57	12,356.00	4,302.55	-429.86	4,305.66	0.00	0.00	0.00
17,100.00	90.00	359.57	12,356.00	4,402.55	-430.61	4,405.66	0.00	0.00	0.00
17,200.00	90.00	359.57	12,356.00	4,502.55	-431.36	4,505.66	0.00	0.00	0.00
17,286.56	90.00	359.57	12,356.00	4,589.10	-432.01	4,592.21	0.00	0.00	0.00
[FlowmasterWXY#2H]LTP/BHL									
17,300.00	90.00	359.57	12,356.00	4,602.54	-432.11	4,605.66	0.00	0.00	0.00
17,331.56	90.00	359.57	12,356.00	4,634.10	-432.35	4,637.21	0.00	0.00	0.00

Company:	Marathon Oil	Local Co-ordinate Reference:	Well WXY FEE #2H
Project:	Lea County, NM	TVD Reference:	Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
Site:	Flowmaster 15 (2-14-15)	MD Reference:	Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))
Well:	WXY FEE #2H	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									
[FlowmasterWXY#2H]F1	0.00	0.00	11,878.50	-493.58	-393.83	441,369.57	769,776.38	32.210433	-103.461089
- plan hits target center									
- Point									
[FlowmasterWXY#2H]LT	0.00	0.00	12,356.00	4,589.10	-432.01	446,452.25	769,738.20	32.224405	-103.461079
- plan hits target center									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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Marathon Oil
Lea County, NM
Flowmaster 15 (2-14-15)
WXY FEE #2H
Prelim Plan A
GL: 3519' + KB: 27' (PD582)

US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level

RKB Elevation: Well @ 3546.00usft (GL: 3519' + KB: 27' (PD582))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	441863.15	770170.21	32.211781	-103.459803	

SECTION DETAILS

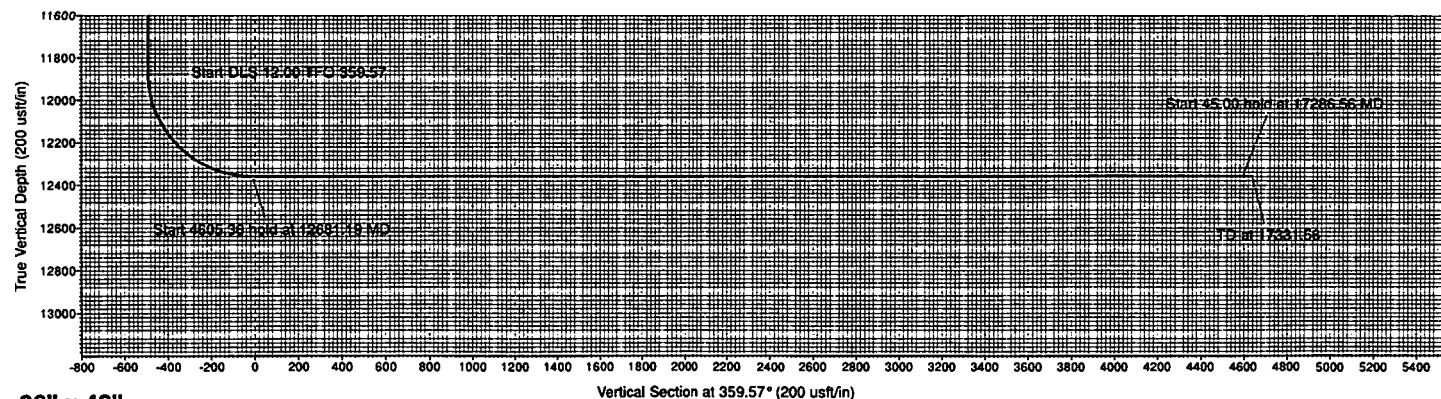
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00
3	2300.00	10.00	218.59	2297.47	-34.02	-27.14	2.00	-33.82
4	5435.08	10.00	218.59	5384.91	-459.56	-366.69	0.00	-456.79
5	5935.08	0.00	0.00	5882.38	-493.58	-393.83	2.00	-490.61
6	11931.20	0.00	0.00	11878.50	-493.58	-393.83	0.00	-490.61
7	12681.19	90.00	359.57	12355.96	-16.13	-397.42	12.00	-13.15
8	17286.56	90.00	359.57	12356.00	4589.10	-432.01	0.00	4592.21
9	17331.56	90.00	359.57	12356.00	4634.10	-432.35	0.00	4637.21

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

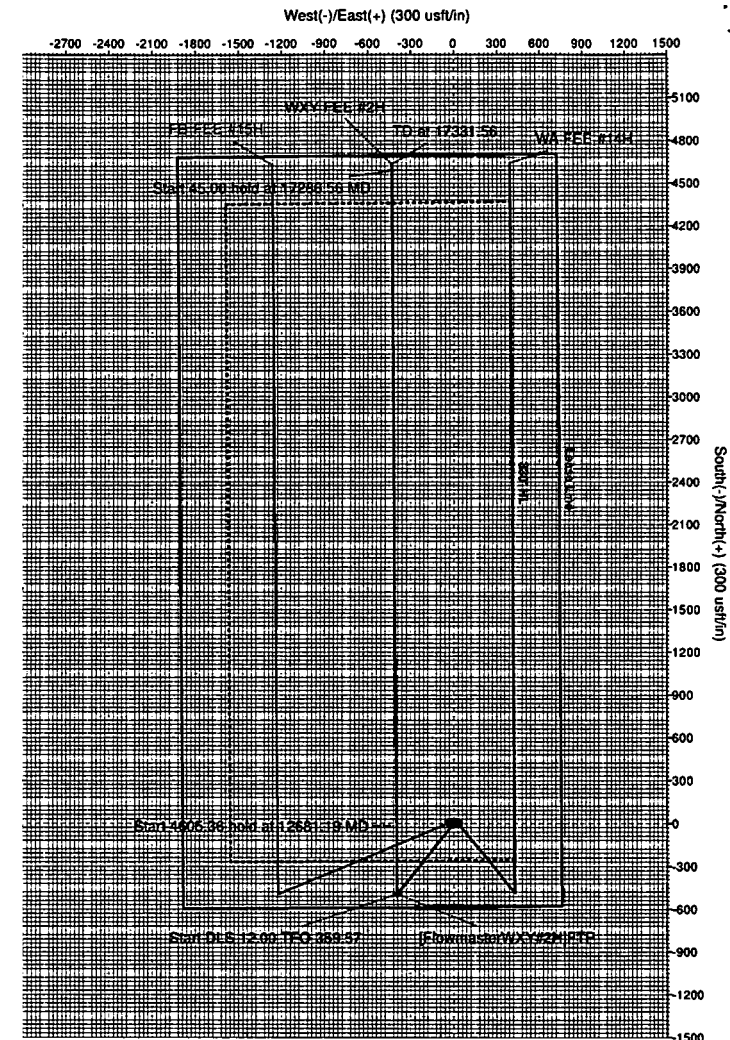
Name	TVD	+N/-S	+E/-W	Northing	Easting
[FlowmasterWXY#2H]FTP	11878.50	-493.58	-393.83	441369.57	769776.38
[FlowmasterWXY#2H]LTP/BHL	12356.00	4589.10	-432.01	446452.25	769738.20



Target Line: 12356' TVD @ 0° VS :: 90° INC



36" x 48"



Azimuths to Grid North
True North: -0.47°
Magnetic North: 6.17°

Magnetic Field
Strength: 47804.7nT
Dip Angle: 59.87°
Date: 5/7/2019
Model: HD04

Azimuth Corrections

Total Magnetic Corr. (M to G): 6.17°

Declination (M to T): 6.63° East