

Company:	Marathon Oil	Local Co-ordinate Reference:	Well TB #9H
Project:	Eddy County, NM	TVD Reference:	RECEIVED Well @ 3091.50 usft (GL: 3065' + KB: 26.5' (H&P423))
Site:	Mariner Fee 23-28-19	MD Reference:	Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
Well:	TB #9H	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		Mariner Fee 23-28-19			
Site Position:		Northing:	472,817.80 usft	Latitude:	32.299718
From:	Map	Easting:	564,941.79 usft	Longitude:	-104.123154
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.11 °

Well	TB #9H					
Well Position	+N/-S	0.00 usft	Northing:	472,817.80 usft	Latitude:	32.299717
	+E/-W	0.00 usft	Easting:	565,041.78 usft	Longitude:	-104.122830
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,065.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/13/2018	7.32	60.08	48,036.10

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	179.88

Survey Tool Program		Date	2/13/2018	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	14,440.26	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1

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
[MarinerTB#9H]FTP: 992' VS									
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
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00

Company:	Marathon Oil	Local Co-ordinate Reference:	Well TB #9H
Project:	Eddy County, NM	TYD Reference:	Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
Site:	Mariner Fee 23-28-19	MD Reference:	Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
Well:	TB #9H	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)
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	1.00	110.09	1,299.99	-0.30	0.82	0.30	1.00	1.00	0.00
1,400.00	2.00	110.09	1,399.96	-1.20	3.28	1.21	1.00	1.00	0.00
1,500.00	3.00	110.09	1,499.86	-2.70	7.37	2.71	1.00	1.00	0.00
1,600.00	4.00	110.09	1,599.68	-4.79	13.11	4.82	1.00	1.00	0.00
1,700.00	5.00	110.09	1,699.37	-7.49	20.48	7.53	1.00	1.00	0.00
1,800.00	6.00	110.09	1,798.90	-10.78	29.48	10.84	1.00	1.00	0.00
1,900.00	7.00	110.09	1,898.26	-14.67	40.11	14.76	1.00	1.00	0.00
2,000.00	8.00	110.09	1,997.40	-19.16	52.37	19.27	1.00	1.00	0.00
2,100.00	9.00	110.09	2,096.30	-24.23	66.25	24.37	1.00	1.00	0.00
2,200.00	10.00	110.09	2,194.93	-29.90	81.75	30.07	1.00	1.00	0.00
2,300.00	11.00	110.09	2,293.26	-36.16	98.86	36.37	1.00	1.00	0.00
2,400.00	12.00	110.09	2,391.25	-43.01	117.58	43.26	1.00	1.00	0.00
2,500.00	13.00	110.09	2,488.87	-50.45	137.91	50.74	1.00	1.00	0.00
2,600.00	14.00	110.09	2,586.11	-58.47	159.83	58.80	1.00	1.00	0.00
2,700.00	14.00	110.09	2,683.14	-66.78	182.55	67.16	0.00	0.00	0.00
2,800.00	14.00	110.09	2,780.17	-75.09	205.27	75.52	0.00	0.00	0.00
2,900.00	14.00	110.09	2,877.20	-83.40	227.99	83.88	0.00	0.00	0.00
3,000.00	14.00	110.09	2,974.23	-91.71	250.71	92.24	0.00	0.00	0.00
3,100.00	14.00	110.09	3,071.26	-100.02	273.43	100.60	0.00	0.00	0.00
3,200.00	14.00	110.09	3,168.29	-108.33	296.15	108.95	0.00	0.00	0.00
3,300.00	14.00	110.09	3,265.32	-116.65	318.87	117.31	0.00	0.00	0.00
3,400.00	14.00	110.09	3,362.35	-124.96	341.59	125.67	0.00	0.00	0.00
3,500.00	14.00	110.09	3,459.38	-133.27	364.31	134.03	0.00	0.00	0.00
3,600.00	14.00	110.09	3,556.41	-141.58	387.03	142.39	0.00	0.00	0.00
3,700.00	14.00	110.09	3,653.44	-149.89	409.75	150.75	0.00	0.00	0.00
3,800.00	14.00	110.09	3,750.47	-158.20	432.47	159.11	0.00	0.00	0.00
3,900.00	14.00	110.09	3,847.49	-166.51	455.19	167.46	0.00	0.00	0.00
4,000.00	14.00	110.09	3,944.52	-174.82	477.91	175.82	0.00	0.00	0.00
4,100.00	14.00	110.09	4,041.55	-183.13	500.63	184.18	0.00	0.00	0.00
4,200.00	14.00	110.09	4,138.58	-191.44	523.35	192.54	0.00	0.00	0.00
4,300.00	14.00	110.09	4,235.61	-199.76	546.07	200.90	0.00	0.00	0.00
4,400.00	14.00	110.09	4,332.64	-208.07	568.79	209.26	0.00	0.00	0.00
4,500.00	14.00	110.09	4,429.67	-216.38	591.51	217.62	0.00	0.00	0.00
4,600.00	14.00	110.09	4,526.70	-224.69	614.23	225.98	0.00	0.00	0.00
4,700.00	14.00	110.09	4,623.73	-233.00	636.95	234.33	0.00	0.00	0.00
4,800.00	14.00	110.09	4,720.76	-241.31	659.67	242.69	0.00	0.00	0.00
4,900.00	14.00	110.09	4,817.79	-249.62	682.39	251.05	0.00	0.00	0.00

Company: Marathon Oil
Project: Eddy County, NM
Site: Mariner Fee 23-28-19
Well: TB #9H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well TB #9H
TVD Reference: Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
MD Reference: Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
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)
5,000.00	14.00	110.09	4,914.82	-257.93	705.11	259.41	0.00	0.00	0.00
5,100.00	14.00	110.09	5,011.85	-266.24	727.83	267.77	0.00	0.00	0.00
5,200.00	14.00	110.09	5,108.88	-274.56	750.55	276.13	0.00	0.00	0.00
5,300.00	14.00	110.09	5,205.91	-282.87	773.27	284.49	0.00	0.00	0.00
5,400.00	14.00	110.09	5,302.94	-291.18	795.99	292.84	0.00	0.00	0.00
5,500.00	14.00	110.09	5,399.97	-299.49	818.71	301.20	0.00	0.00	0.00
5,600.00	14.00	110.09	5,497.00	-307.80	841.43	309.56	0.00	0.00	0.00
5,700.00	14.00	110.09	5,594.03	-316.11	864.15	317.92	0.00	0.00	0.00
5,800.00	14.00	110.09	5,691.06	-324.42	886.87	326.28	0.00	0.00	0.00
5,900.00	14.00	110.09	5,788.09	-332.73	909.59	334.64	0.00	0.00	0.00
6,000.00	14.00	110.09	5,885.12	-341.04	932.31	343.00	0.00	0.00	0.00
6,100.00	14.00	110.09	5,982.15	-349.35	955.03	351.35	0.00	0.00	0.00
6,200.00	14.00	110.09	6,079.18	-357.67	977.75	359.71	0.00	0.00	0.00
6,300.00	14.00	110.09	6,176.20	-365.98	1,000.47	368.07	0.00	0.00	0.00
6,400.00	14.00	110.09	6,273.23	-374.29	1,023.19	376.43	0.00	0.00	0.00
6,500.00	14.00	110.09	6,370.26	-382.60	1,045.91	384.79	0.00	0.00	0.00
6,600.00	14.00	110.09	6,467.29	-390.91	1,068.63	393.15	0.00	0.00	0.00
6,700.00	14.00	110.09	6,564.32	-399.22	1,091.35	401.51	0.00	0.00	0.00
6,800.00	14.00	110.09	6,661.35	-407.53	1,114.07	409.86	0.00	0.00	0.00
6,900.00	14.00	110.09	6,758.38	-415.84	1,136.79	418.22	0.00	0.00	0.00
7,000.00	14.00	110.09	6,855.41	-424.15	1,159.51	426.58	0.00	0.00	0.00
7,052.55	14.00	110.09	6,906.40	-428.52	1,171.44	430.97	0.00	0.00	0.00
7,100.00	13.29	110.09	6,952.51	-432.37	1,181.96	434.84	1.50	-1.50	0.00
7,200.00	11.79	110.09	7,050.12	-439.82	1,202.34	442.34	1.50	-1.50	0.00
7,300.00	10.29	110.09	7,148.27	-446.40	1,220.32	448.96	1.50	-1.50	0.00
7,400.00	8.79	110.09	7,246.89	-452.09	1,235.89	454.68	1.50	-1.50	0.00
7,500.00	7.29	110.09	7,345.90	-456.90	1,249.02	459.51	1.50	-1.50	0.00
7,600.00	5.79	110.09	7,445.25	-460.81	1,259.71	463.45	1.50	-1.50	0.00
7,700.00	4.29	110.09	7,544.86	-463.83	1,267.96	466.48	1.50	-1.50	0.00
7,800.00	2.79	110.09	7,644.66	-465.95	1,273.75	468.61	1.50	-1.50	0.00
7,900.00	1.29	110.09	7,744.60	-467.17	1,277.09	469.84	1.50	-1.50	0.00
7,985.88	0.00	0.00	7,830.47	-467.50	1,278.00	470.18	1.50	-1.50	0.00
8,000.00	0.00	0.00	7,844.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,100.00	0.00	0.00	7,944.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,200.00	0.00	0.00	8,044.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,300.00	0.00	0.00	8,144.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,400.00	0.00	0.00	8,244.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,500.00	0.00	0.00	8,344.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,600.00	0.00	0.00	8,444.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,700.00	0.00	0.00	8,544.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,800.00	0.00	0.00	8,644.59	-467.50	1,278.00	470.18	0.00	0.00	0.00
8,887.91	0.00	0.00	8,732.50	-467.50	1,278.00	470.18	0.00	0.00	0.00

Company:	Marathon Oil	Local Co-ordinate Reference:	Well TB #9H
Project:	Eddy County, NM	TVD Reference:	Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
Site:	Mariner Fee 23-28-19	MD Reference:	Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
Well:	TB #9H	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)
[MarinerTB#9H]KOP									
8,900.00	1.33	179.88	8,744.59	-467.64	1,278.00	470.32	11.00	11.00	0.00
8,950.00	6.83	179.88	8,794.44	-471.20	1,278.01	473.87	11.00	11.00	0.00
9,000.00	12.33	179.88	8,843.73	-479.51	1,278.02	482.19	11.00	11.00	0.00
9,050.00	17.83	179.88	8,891.99	-492.52	1,278.05	495.19	11.00	11.00	0.00
9,100.00	23.33	179.88	8,938.78	-510.09	1,278.09	512.76	11.00	11.00	0.00
9,150.00	28.83	179.88	8,983.67	-532.06	1,278.13	534.74	11.00	11.00	0.00
9,200.00	34.33	179.88	9,026.25	-558.23	1,278.19	560.91	11.00	11.00	0.00
9,250.00	39.83	179.88	9,066.12	-588.37	1,278.25	591.04	11.00	11.00	0.00
9,300.00	45.33	179.88	9,102.93	-622.19	1,278.32	624.86	11.00	11.00	0.00
9,350.00	50.83	179.88	9,136.32	-659.38	1,278.39	662.05	11.00	11.00	0.00
9,400.00	56.33	179.88	9,165.99	-699.59	1,278.48	702.27	11.00	11.00	0.00
9,450.00	61.83	179.88	9,191.67	-742.47	1,278.56	745.15	11.00	11.00	0.00
9,500.00	67.33	179.88	9,213.13	-787.61	1,278.66	790.29	11.00	11.00	0.00
9,550.00	72.83	179.88	9,230.16	-834.60	1,278.75	837.28	11.00	11.00	0.00
9,600.00	78.33	179.88	9,242.60	-883.01	1,278.85	885.69	11.00	11.00	0.00
9,650.00	83.83	179.88	9,250.35	-932.39	1,278.95	935.06	11.00	11.00	0.00
9,700.00	89.33	179.88	9,253.34	-982.28	1,279.06	984.96	11.00	11.00	0.00
9,707.01	90.10	179.88	9,253.37	-989.29	1,279.07	991.97	11.00	11.00	0.00
9,800.00	90.10	179.88	9,253.21	-1,082.28	1,279.26	1,084.96	0.00	0.00	0.00
9,900.00	90.10	179.88	9,253.03	-1,182.28	1,279.47	1,184.96	0.00	0.00	0.00
10,000.00	90.10	179.88	9,252.85	-1,282.28	1,279.67	1,284.96	0.00	0.00	0.00
10,100.00	90.10	179.88	9,252.68	-1,382.28	1,279.88	1,384.95	0.00	0.00	0.00
10,200.00	90.10	179.88	9,252.50	-1,482.28	1,280.08	1,484.95	0.00	0.00	0.00
10,300.00	90.10	179.88	9,252.32	-1,582.28	1,280.29	1,584.95	0.00	0.00	0.00
10,400.00	90.10	179.88	9,252.15	-1,682.28	1,280.49	1,684.95	0.00	0.00	0.00
10,500.00	90.10	179.88	9,251.97	-1,782.28	1,280.70	1,784.95	0.00	0.00	0.00
10,600.00	90.10	179.88	9,251.79	-1,882.28	1,280.90	1,884.95	0.00	0.00	0.00
10,700.00	90.10	179.88	9,251.62	-1,982.28	1,281.11	1,984.95	0.00	0.00	0.00
10,800.00	90.10	179.88	9,251.44	-2,082.27	1,281.31	2,084.95	0.00	0.00	0.00
10,900.00	90.10	179.88	9,251.26	-2,182.27	1,281.52	2,184.95	0.00	0.00	0.00
11,000.00	90.10	179.88	9,251.09	-2,282.27	1,281.72	2,284.95	0.00	0.00	0.00
11,100.00	90.10	179.88	9,250.91	-2,382.27	1,281.93	2,384.95	0.00	0.00	0.00
11,200.00	90.10	179.88	9,250.73	-2,482.27	1,282.13	2,484.95	0.00	0.00	0.00
11,300.00	90.10	179.88	9,250.56	-2,582.27	1,282.34	2,584.95	0.00	0.00	0.00
11,400.00	90.10	179.88	9,250.38	-2,682.27	1,282.54	2,684.95	0.00	0.00	0.00
11,500.00	90.10	179.88	9,250.20	-2,782.27	1,282.75	2,784.95	0.00	0.00	0.00
11,600.00	90.10	179.88	9,250.03	-2,882.27	1,282.95	2,884.95	0.00	0.00	0.00
11,700.00	90.10	179.88	9,249.85	-2,982.27	1,283.16	2,984.95	0.00	0.00	0.00
11,800.00	90.10	179.88	9,249.67	-3,082.27	1,283.36	3,084.95	0.00	0.00	0.00
11,900.00	90.10	179.88	9,249.50	-3,182.27	1,283.57	3,184.95	0.00	0.00	0.00
12,000.00	90.10	179.88	9,249.32	-3,282.27	1,283.77	3,284.95	0.00	0.00	0.00

Company:	Marathon Oil	Local Co-ordinate Reference:	Well TB #9H
Project:	Eddy County, NM	TVD Reference:	Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
Site:	Mariner Fee 23-28-19	MD Reference:	Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
Well:	TB #9H	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)	
12,100.00	90.10	179.88	9,249.14	-3,382.27	1,283.98	3,384.95	0.00	0.00	0.00	
12,200.00	90.10	179.88	9,248.97	-3,482.27	1,284.18	3,484.95	0.00	0.00	0.00	
12,300.00	90.10	179.88	9,248.79	-3,582.27	1,284.38	3,584.95	0.00	0.00	0.00	
12,400.00	90.10	179.88	9,248.61	-3,682.27	1,284.59	3,684.95	0.00	0.00	0.00	
12,500.00	90.10	179.88	9,248.44	-3,782.27	1,284.79	3,784.95	0.00	0.00	0.00	
12,600.00	90.10	179.88	9,248.26	-3,882.27	1,285.00	3,884.95	0.00	0.00	0.00	
12,700.00	90.10	179.88	9,248.08	-3,982.27	1,285.20	3,984.95	0.00	0.00	0.00	
12,800.00	90.10	179.88	9,247.91	-4,082.27	1,285.41	4,084.95	0.00	0.00	0.00	
12,900.00	90.10	179.88	9,247.73	-4,182.27	1,285.61	4,184.95	0.00	0.00	0.00	
13,000.00	90.10	179.88	9,247.55	-4,282.27	1,285.82	4,284.95	0.00	0.00	0.00	
13,100.00	90.10	179.88	9,247.38	-4,382.27	1,286.02	4,384.95	0.00	0.00	0.00	
13,200.00	90.10	179.88	9,247.20	-4,482.27	1,286.23	4,484.95	0.00	0.00	0.00	
13,300.00	90.10	179.88	9,247.02	-4,582.27	1,286.43	4,584.95	0.00	0.00	0.00	
13,400.00	90.10	179.88	9,246.85	-4,682.27	1,286.64	4,684.95	0.00	0.00	0.00	
13,500.00	90.10	179.88	9,246.67	-4,782.26	1,286.84	4,784.95	0.00	0.00	0.00	
13,600.00	90.10	179.88	9,246.49	-4,882.26	1,287.05	4,884.95	0.00	0.00	0.00	
13,700.00	90.10	179.88	9,246.32	-4,982.26	1,287.25	4,984.95	0.00	0.00	0.00	
13,800.00	90.10	179.88	9,246.14	-5,082.26	1,287.46	5,084.95	0.00	0.00	0.00	
13,900.00	90.10	179.88	9,245.96	-5,182.26	1,287.66	5,184.95	0.00	0.00	0.00	
14,000.00	90.10	179.88	9,245.79	-5,282.26	1,287.87	5,284.95	0.00	0.00	0.00	
14,100.00	90.10	179.88	9,245.61	-5,382.26	1,288.07	5,384.95	0.00	0.00	0.00	
14,200.00	90.10	179.88	9,245.44	-5,482.26	1,288.28	5,484.95	0.00	0.00	0.00	
14,300.00	90.10	179.88	9,245.26	-5,582.26	1,288.48	5,584.95	0.00	0.00	0.00	
14,395.26	90.10	179.88	9,245.09	-5,677.52	1,288.68	5,680.21	0.00	0.00	0.00	
[MarinerTB#9H]LTP/BHL: 5680' VS										
14,400.00	90.10	179.88	9,245.08	-5,682.26	1,288.69	5,684.95	0.00	0.00	0.00	
14,440.26	90.10	179.88	9,245.01	-5,722.52	1,288.77	5,725.21	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
[MarinerTB#9H]FTP: 99; - plan misses target center by 1617.07usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-989.30	1,279.14	471,828.50	566,320.92	32.296991	-104.118697	
[MarinerTB#9H]KOP - plan hits target center - Point	0.00	0.00	8,732.50	-467.50	1,278.00	472,350.30	566,319.78	32.298425	-104.118697	
[MarinerTB#9H]LTP/BHL - plan hits target center - Point	0.00	0.00	9,245.09	-5,677.52	1,288.68	467,140.28	566,330.46	32.284103	-104.118696	



Pro Directional
Survey Report



Company: Marathon Oil
Project: Eddy County, NM
Site: Mariner Fee 23-28-19
Well: TB #9H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well TB #9H
TVD Reference: Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
MD Reference: Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Checked By: _____ Approved By: _____ Date: _____



Marathon Oil
Eddy County, NM
Mariner Fee 23-28-19
TB #9H
Prelim Plan A
GL: 3065' + KB: 26.5' (H&P423)

US State Plane 1927 (Exact solution)
NAD 1983 (NAD 83) CONUS
New Mexico East 3001
Mariner 568 Level

RKB Elevation: Well @ 3091.50usft (GL: 3065' + KB: 26.5' (H&P423))

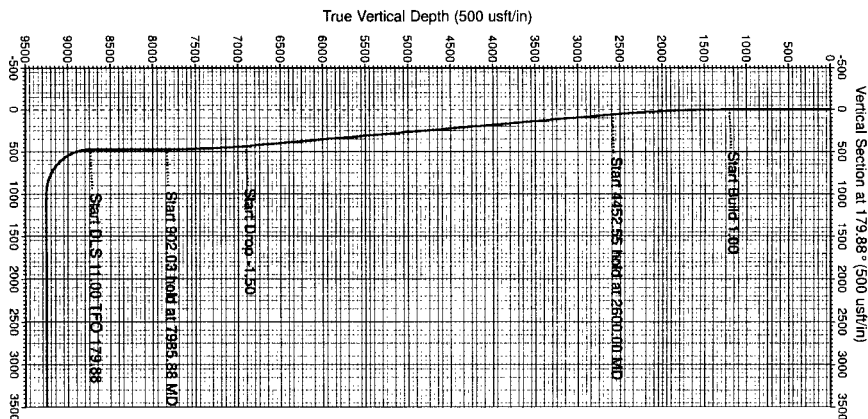
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Spot
0.00	0.00	472817.80	565041.78	32.299717	-104.128330	

SECTION DETAILS

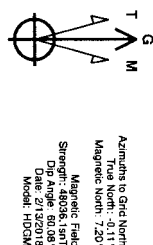
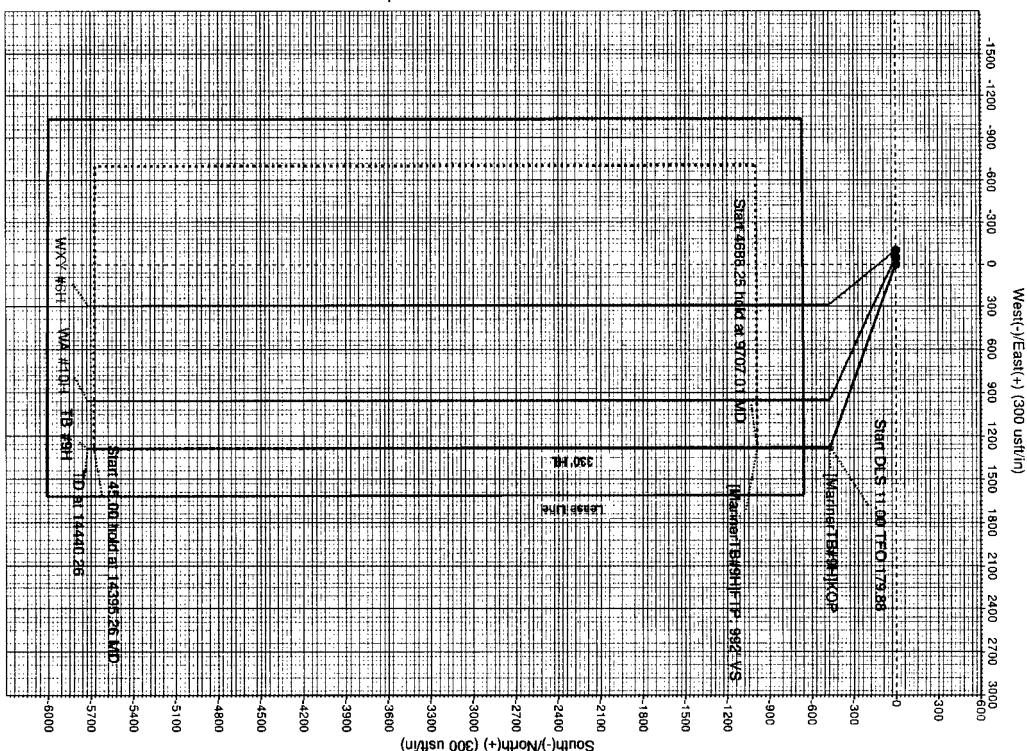
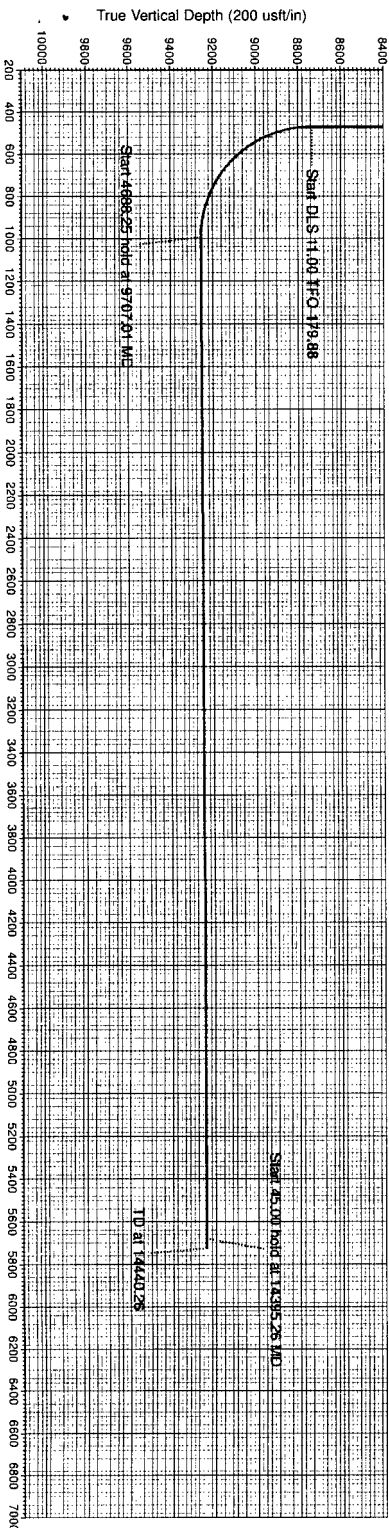
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	Vsct
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1200.00	0.00	0.00	1200.00	-58.47	159.83	0.00	58.80
3	2800.00	14.00	110.09	2586.11	-428.52	1171.44	0.00	430.97
4	7052.55	14.00	110.09	6908.40	-467.50	1278.00	1.50	470.18
5	7985.88	0.00	0.00	7930.47	-467.50	1278.00	0.00	470.18
6	8887.91	0.00	0.00	8732.50	-467.50	1278.00	0.00	470.18
7	9707.01	90.10	179.88	9233.37	-589.29	1278.00	0.00	589.97
8	14395.28	90.10	179.88	9245.09	-5722.52	1288.77	0.00	5725.21
9	14440.28	90.10	179.88	9245.01	-5722.52	1288.77	0.00	5725.21

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
MarinerTB#9H-FP: 992 VS	0.00	-989.30	1273.14	471828.50	566320.92
MarinerTB#9H-KOP	8732.50	-467.50	1273.00	472350.30	566319.78
MarinerTB#9H-LTP/BL: 5690 VS	9245.09	-567.52	1288.68	467140.28	566330.46



Target Line: 925' TVD @ 0 VS: 90.1° INC



Azimuth Corrections

Total Magnetic Corr. (M to G): 7.20°
Declination (M to T): 7.32° East