



Pro Directional
Survey Report

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 12 2017



Company: Marathon Oil
Project: Eddy County, NM

Site: Fiddle Fee 24-28-23 (3-4-7-8)

Well: WD #3H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well WD #3H
RECEIVED
Well @ 3023.00usft (GL: 2996' KB: 27'
(Precision582))
Well @ 3023.00usft (GL: 2996' KB: 27'
(Precision582))
Grid
Minimum Curvature
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	Fiddle Fee 24-28-23 (3-4-7-8)		
Site Position:	Northing:	438,692.25 usft	Latitude: 32.205799
From: Map	Easting:	582,820.53 usft	Longitude: -104.065567
Position Uncertainty:	Slot Radius:	13-3/16 "	Grid Convergence: 0.14 °

Well	WD #3H		
Well Position	+N/-S	0.00 usft	Northing: 438,692.25 usft
	+E/-W	0.00 usft	Easting: 582,820.53 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
			Ground Level: 2,996.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	6/8/2018	(°) 7.18
			Dip Angle (°) 59.98
			Field Strength (nT) 47,991.60

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)
	0.00	0.00	0.00
			Direction (°) 90.61

Survey Tool Program	Date 6/11/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
0.00	1,850.00	Prelim Plan A (OH)	MWD+IFR1
1,850.00	5,400.00	Prelim Plan A (OH)	MWD+IFR1
5,400.00	1,000.00	Prelim Plan A (OH)	MWD+IFR1
1,000.00	15,084.32	Prelim Plan A (OH)	MWD+IFR1
			Description
			OWSG MWD + IFR1
			OWSG MWD + IFR1
			OWSG 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
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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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)
600.00	1.00	90.00	599.99	0.00	0.87	0.87	1.00	1.00	0.00
700.00	2.00	90.00	699.96	0.00	3.49	3.49	1.00	1.00	0.00
800.00	2.00	90.00	799.90	0.00	6.98	6.98	0.00	0.00	0.00
900.00	2.00	90.00	899.84	0.00	10.47	10.47	0.00	0.00	0.00
1,000.00	2.00	90.00	999.78	0.00	13.96	13.96	0.00	0.00	0.00
1,100.00	2.00	90.00	1,099.72	0.00	17.45	17.45	0.00	0.00	0.00
1,200.00	2.00	90.00	1,199.65	0.00	20.94	20.94	0.00	0.00	0.00
1,300.00	2.00	90.00	1,299.59	0.00	24.43	24.43	0.00	0.00	0.00
1,400.00	2.00	90.00	1,399.53	0.00	27.92	27.92	0.00	0.00	0.00
1,500.53	2.00	90.00	1,500.00	0.00	31.43	31.43	0.00	0.00	0.00
1,600.00	0.44	7.69	1,599.45	0.38	33.22	33.21	2.00	-1.57	-82.75
1,700.00	2.08	294.74	1,699.43	1.52	31.61	31.60	2.00	1.65	-72.94
1,800.00	4.06	288.80	1,799.28	3.42	26.61	26.57	2.00	1.98	-5.94
1,847.12	5.00	287.64	1,846.25	4.58	23.07	23.02	2.00	1.99	-2.47
1,900.00	5.00	287.64	1,898.93	5.98	18.68	18.62	0.00	0.00	0.00
2,000.00	5.00	287.64	1,998.55	8.62	10.38	10.29	0.00	0.00	0.00
2,100.00	5.00	287.64	2,098.17	11.26	2.07	1.95	0.00	0.00	0.00
2,200.00	5.00	287.64	2,197.79	13.90	-6.23	-6.38	0.00	0.00	0.00
2,300.00	5.00	287.64	2,297.41	16.54	-14.54	-14.71	0.00	0.00	0.00
2,400.00	5.00	287.64	2,397.03	19.18	-22.84	-23.04	0.00	0.00	0.00
2,500.00	5.00	287.64	2,496.65	21.82	-31.15	-31.38	0.00	0.00	0.00
2,600.00	5.00	287.64	2,596.27	24.46	-39.45	-39.71	0.00	0.00	0.00
2,700.00	5.00	287.64	2,695.88	27.10	-47.76	-48.04	0.00	0.00	0.00
2,800.00	5.00	287.64	2,795.50	29.74	-56.06	-56.37	0.00	0.00	0.00
2,900.00	5.00	287.64	2,895.12	32.38	-64.37	-64.71	0.00	0.00	0.00
3,000.00	5.00	287.64	2,994.74	35.02	-72.67	-73.04	0.00	0.00	0.00
3,100.00	5.00	287.64	3,094.36	37.66	-80.98	-81.37	0.00	0.00	0.00
3,200.00	5.00	287.64	3,193.98	40.30	-89.28	-89.70	0.00	0.00	0.00
3,300.00	5.00	287.64	3,293.60	42.95	-97.59	-98.04	0.00	0.00	0.00
3,400.00	5.00	287.64	3,393.22	45.59	-105.89	-106.37	0.00	0.00	0.00
3,500.00	5.00	287.64	3,492.84	48.23	-114.20	-114.70	0.00	0.00	0.00
3,600.00	5.00	287.64	3,592.46	50.87	-122.50	-123.04	0.00	0.00	0.00
3,700.00	5.00	287.64	3,692.08	53.51	-130.81	-131.37	0.00	0.00	0.00
3,800.00	5.00	287.64	3,791.70	56.15	-139.11	-139.70	0.00	0.00	0.00
3,900.00	5.00	287.64	3,891.32	58.79	-147.42	-148.03	0.00	0.00	0.00
4,000.00	5.00	287.64	3,990.94	61.43	-155.72	-156.37	0.00	0.00	0.00
4,100.00	5.00	287.64	4,090.56	64.07	-164.02	-164.70	0.00	0.00	0.00
4,200.00	5.00	287.64	4,190.18	66.71	-172.33	-173.03	0.00	0.00	0.00
4,300.00	5.00	287.64	4,289.80	69.35	-180.63	-181.36	0.00	0.00	0.00
4,400.00	5.00	287.64	4,389.42	71.99	-188.94	-189.70	0.00	0.00	0.00
4,500.00	5.00	287.64	4,489.04	74.63	-197.24	-198.03	0.00	0.00	0.00
4,600.00	5.00	287.64	4,588.66	77.27	-205.55	-206.36	0.00	0.00	0.00

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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)
4,700.00	5.00	287.64	4,688.28	79.91	-213.85	-214.69	0.00	0.00	0.00
4,805.47	5.00	287.64	4,793.35	82.70	-222.61	-223.48	0.00	0.00	0.00
4,900.00	3.11	287.64	4,887.63	84.72	-228.98	-229.87	2.00	-2.00	0.00
5,000.00	1.11	287.64	4,987.56	85.84	-232.49	-233.39	2.00	-2.00	0.00
5,055.44	0.00	0.00	5,043.00	86.00	-233.00	-233.90	2.00	-2.00	0.00
5,100.00	0.00	0.00	5,087.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,200.00	0.00	0.00	5,187.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,300.00	0.00	0.00	5,287.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,400.00	0.00	0.00	5,387.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,500.00	0.00	0.00	5,487.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,600.00	0.00	0.00	5,587.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,700.00	0.00	0.00	5,687.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,800.00	0.00	0.00	5,787.56	86.00	-233.00	-233.90	0.00	0.00	0.00
5,900.00	0.00	0.00	5,887.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,000.00	0.00	0.00	5,987.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,100.00	0.00	0.00	6,087.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,200.00	0.00	0.00	6,187.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,300.00	0.00	0.00	6,287.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,400.00	0.00	0.00	6,387.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,500.00	0.00	0.00	6,487.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,600.00	0.00	0.00	6,587.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,700.00	0.00	0.00	6,687.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,800.00	0.00	0.00	6,787.56	86.00	-233.00	-233.90	0.00	0.00	0.00
6,900.00	0.00	0.00	6,887.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,000.00	0.00	0.00	6,987.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,100.00	0.00	0.00	7,087.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,200.00	0.00	0.00	7,187.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,300.00	0.00	0.00	7,287.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,400.00	0.00	0.00	7,387.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,500.00	0.00	0.00	7,487.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,600.00	0.00	0.00	7,587.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,700.00	0.00	0.00	7,687.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,800.00	0.00	0.00	7,787.56	86.00	-233.00	-233.90	0.00	0.00	0.00
7,900.00	0.00	0.00	7,887.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,000.00	0.00	0.00	7,987.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,100.00	0.00	0.00	8,087.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,200.00	0.00	0.00	8,187.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,300.00	0.00	0.00	8,287.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,400.00	0.00	0.00	8,387.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,500.00	0.00	0.00	8,487.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,600.00	0.00	0.00	8,587.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,700.00	0.00	0.00	8,687.56	86.00	-233.00	-233.90	0.00	0.00	0.00

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Planned Survey

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8,800.00	0.00	0.00	8,787.56	86.00	-233.00	-233.90	0.00	0.00	0.00
8,900.00	0.00	0.00	8,887.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,000.00	0.00	0.00	8,987.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,100.00	0.00	0.00	9,087.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,200.00	0.00	0.00	9,187.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,300.00	0.00	0.00	9,287.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,400.00	0.00	0.00	9,387.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,500.00	0.00	0.00	9,487.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,600.00	0.00	0.00	9,587.56	86.00	-233.00	-233.90	0.00	0.00	0.00
9,670.44	0.00	0.00	9,658.00	86.00	-233.00	-233.90	0.00	0.00	0.00
9,700.00	2.96	90.61	9,687.54	85.99	-232.24	-233.14	10.00	10.00	0.00
9,750.00	7.96	90.61	9,737.30	85.94	-227.49	-228.39	10.00	10.00	0.00
9,800.00	12.96	90.61	9,786.46	85.84	-218.42	-219.32	10.00	10.00	0.00
9,850.00	17.96	90.61	9,834.63	85.70	-205.10	-206.00	10.00	10.00	0.00
9,900.00	22.96	90.61	9,881.47	85.51	-187.63	-188.53	10.00	10.00	0.00
9,950.00	27.96	90.61	9,926.60	85.28	-166.15	-167.04	10.00	10.00	0.00
10,000.00	32.96	90.61	9,969.68	85.01	-140.81	-141.71	10.00	10.00	0.00
10,050.00	37.96	90.61	10,010.40	84.70	-111.82	-112.71	10.00	10.00	0.00
10,100.00	42.96	90.61	10,048.43	84.36	-79.39	-80.28	10.00	10.00	0.00
10,150.00	47.96	90.61	10,083.49	83.98	-43.77	-44.66	10.00	10.00	0.00
10,167.01	49.66	90.61	10,094.69	83.84	-30.97	-31.86	10.00	10.00	0.00
[FiddleFee#3H]FTP									
10,200.00	52.96	90.61	10,115.32	83.56	-5.22	-6.11	10.00	10.00	0.00
10,250.00	57.96	90.61	10,143.66	83.12	35.95	35.06	10.00	10.00	0.00
10,300.00	62.96	90.61	10,168.31	82.66	79.43	78.54	10.00	10.00	0.00
10,350.00	67.96	90.61	10,189.07	82.17	124.89	124.01	10.00	10.00	0.00
10,400.00	72.96	90.61	10,205.79	81.67	171.99	171.12	10.00	10.00	0.00
10,450.00	77.96	90.61	10,218.35	81.15	220.37	219.50	10.00	10.00	0.00
10,500.00	82.96	90.61	10,226.63	80.62	269.66	268.79	10.00	10.00	0.00
10,550.00	87.96	90.61	10,230.59	80.09	319.49	318.62	10.00	10.00	0.00
10,558.44	88.80	90.61	10,230.83	80.00	327.92	327.05	10.00	10.00	0.00
10,600.00	88.80	90.61	10,231.70	79.56	369.47	368.60	0.00	0.00	0.00
10,700.00	88.80	90.61	10,233.80	78.49	469.44	468.58	0.00	0.00	0.00
10,800.00	88.80	90.61	10,235.89	77.42	569.42	568.56	0.00	0.00	0.00
10,900.00	88.80	90.61	10,237.99	76.35	669.39	668.54	0.00	0.00	0.00
11,000.00	88.80	90.61	10,240.08	75.28	769.36	768.52	0.00	0.00	0.00
11,100.00	88.80	90.61	10,242.18	74.21	869.33	868.49	0.00	0.00	0.00
11,200.00	88.80	90.61	10,244.27	73.14	969.31	968.47	0.00	0.00	0.00
11,300.00	88.80	90.61	10,246.36	72.07	1,069.28	1,068.45	0.00	0.00	0.00
11,400.00	88.80	90.61	10,248.46	71.00	1,169.25	1,168.43	0.00	0.00	0.00
11,500.00	88.80	90.61	10,250.55	69.93	1,269.22	1,268.41	0.00	0.00	0.00
11,600.00	88.80	90.61	10,252.65	68.86	1,369.20	1,368.39	0.00	0.00	0.00

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Wellbore: OH

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(Precision582))

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Grid

Minimum Curvature

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)
11,700.00	88.80	90.61	10,254.74	67.79	1,469.17	1,468.36	0.00	0.00	0.00
11,800.00	88.80	90.61	10,256.84	66.72	1,569.14	1,568.34	0.00	0.00	0.00
11,900.00	88.80	90.61	10,258.93	65.65	1,669.11	1,668.32	0.00	0.00	0.00
12,000.00	88.80	90.61	10,261.03	64.58	1,769.09	1,768.30	0.00	0.00	0.00
12,100.00	88.80	90.61	10,263.12	63.51	1,869.06	1,868.28	0.00	0.00	0.00
12,200.00	88.80	90.61	10,265.22	62.44	1,969.03	1,968.25	0.00	0.00	0.00
12,300.00	88.80	90.61	10,267.31	61.38	2,069.00	2,068.23	0.00	0.00	0.00
12,400.00	88.80	90.61	10,269.41	60.31	2,168.97	2,168.21	0.00	0.00	0.00
12,500.00	88.80	90.61	10,271.50	59.24	2,268.95	2,268.19	0.00	0.00	0.00
12,600.00	88.80	90.61	10,273.59	58.17	2,368.92	2,368.17	0.00	0.00	0.00
12,700.00	88.80	90.61	10,275.69	57.10	2,468.89	2,468.14	0.00	0.00	0.00
12,800.00	88.80	90.61	10,277.78	56.03	2,568.86	2,568.12	0.00	0.00	0.00
12,900.00	88.80	90.61	10,279.88	54.96	2,668.84	2,668.10	0.00	0.00	0.00
13,000.00	88.80	90.61	10,281.97	53.89	2,768.81	2,768.08	0.00	0.00	0.00
13,100.00	88.80	90.61	10,284.07	52.82	2,868.78	2,868.06	0.00	0.00	0.00
13,200.00	88.80	90.61	10,286.16	51.75	2,968.75	2,968.03	0.00	0.00	0.00
13,300.00	88.80	90.61	10,288.26	50.68	3,068.73	3,068.01	0.00	0.00	0.00
13,400.00	88.80	90.61	10,290.35	49.61	3,168.70	3,167.99	0.00	0.00	0.00
13,500.00	88.80	90.61	10,292.45	48.54	3,268.67	3,267.97	0.00	0.00	0.00
13,600.00	88.80	90.61	10,294.54	47.47	3,368.64	3,367.95	0.00	0.00	0.00
13,700.00	88.80	90.61	10,296.63	46.40	3,468.62	3,467.92	0.00	0.00	0.00
13,800.00	88.80	90.61	10,298.73	45.33	3,568.59	3,567.90	0.00	0.00	0.00
13,900.00	88.80	90.61	10,300.82	44.27	3,668.56	3,667.88	0.00	0.00	0.00
14,000.00	88.80	90.61	10,302.92	43.20	3,768.53	3,767.86	0.00	0.00	0.00
14,100.00	88.80	90.61	10,305.01	42.13	3,868.50	3,867.84	0.00	0.00	0.00
14,200.00	88.80	90.61	10,307.11	41.06	3,968.48	3,967.81	0.00	0.00	0.00
14,300.00	88.80	90.61	10,309.20	39.99	4,068.45	4,067.79	0.00	0.00	0.00
14,400.00	88.80	90.61	10,311.30	38.92	4,168.42	4,167.77	0.00	0.00	0.00
14,500.00	88.80	90.61	10,313.39	37.85	4,268.39	4,267.75	0.00	0.00	0.00
14,600.00	88.80	90.61	10,315.49	36.78	4,368.37	4,367.73	0.00	0.00	0.00
14,700.00	88.80	90.61	10,317.58	35.71	4,468.34	4,467.71	0.00	0.00	0.00
14,800.00	88.80	90.61	10,319.67	34.64	4,568.31	4,567.68	0.00	0.00	0.00
14,900.00	88.80	90.61	10,321.77	33.57	4,668.28	4,667.66	0.00	0.00	0.00
15,000.00	88.80	90.61	10,323.86	32.50	4,768.26	4,767.64	0.00	0.00	0.00
15,084.32	88.80	90.61	10,325.63	31.60	4,852.55	4,851.94	0.00	0.00	0.00
[FiddleFee#3H]LTP/BHL									



Pro Directional
Survey Report



Company: Marathon Oil
Project: Eddy County, NM

Site: Fiddle Fee 24-28-23 (3-4-7-8)

Well: WD #3H

Wellbore: OH

Design: Prelim Plan A

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well WD #3H

Well @ 3023.00usft (GL: 2996' KB: 27'
(Precision582))

Well @ 3023.00usft (GL: 2996' KB: 27'
(Precision582))

Grid

Minimum Curvature

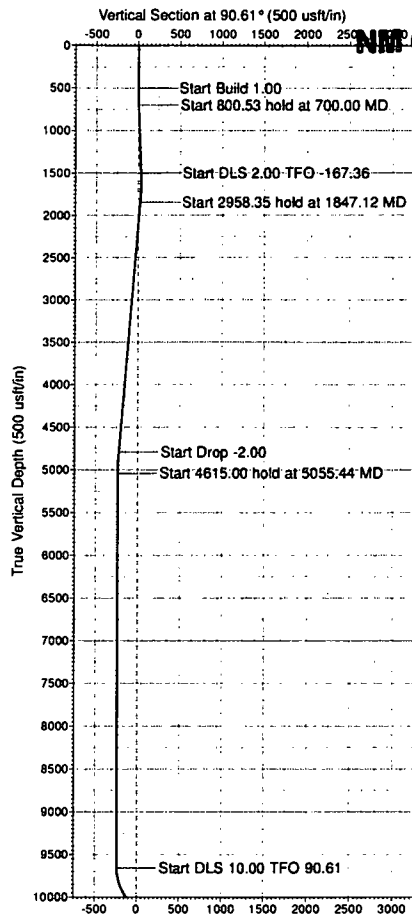
WellPlanner1

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
[FiddleFee#3H]FTP	0.00	0.00	10,000.0 0	82.83	47.21	438,775.08	582,867.74	32.206026	-104.065413
- plan misses target center by 122.79usft at 10163.47usft MD (10092.40 TVD, 83.87 N, -33.66 E)									
- Point									
[FiddleFee#3H]LTP/BHL	0.00	0.00	10,325.6 3	31.60	4,852.55	438,723.85	587,673.08	32.205851	-104.049878
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



NIP OIL CONSERVATION ARTESIA DISTRICT

JUN 12 2017

RECEIVED

Marathon Oil
Eddy County, NM
Fiddle Fee 24-28-23 (3-4-7-8)
WD #3H
Prelim Plan A
GL: 2996' KB: 27' (Precision582)

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

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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
3	700.00	2.00	90.00	699.98	0.00	3.49	1.00	3.49
4	1500.53	2.00	90.00	1500.00	0.00	31.43	0.00	31.43
5	1847.12	5.00	287.64	1846.25	4.58	23.07	2.00	23.02
6	4805.47	5.00	287.64	4793.35	82.70	-222.61	0.00	-223.48
7	5055.44	0.00	0.00	5043.00	86.00	-233.00	2.00	-233.90
8	9670.44	0.00	0.00	9658.00	86.00	-233.00	0.00	-233.90
9	10558.44	88.80	90.61	10230.83	80.00	327.92	10.00	327.05
10	15084.32	88.80	90.61	10325.63	31.60	4852.55	0.00	4851.94

RKB Elevation: Well @ 3023.00usft (GL: 2996' KB: 27' (Precision582))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	438692.25	582820.53	32.205799	-104.065566	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[FiddleFee#3H]FTP	10000.00	82.83	47.21	438775.08	582867.74
[FiddleFee#3H]LTP/BHL	10325.63	31.60	4852.55	438723.85	587673.08



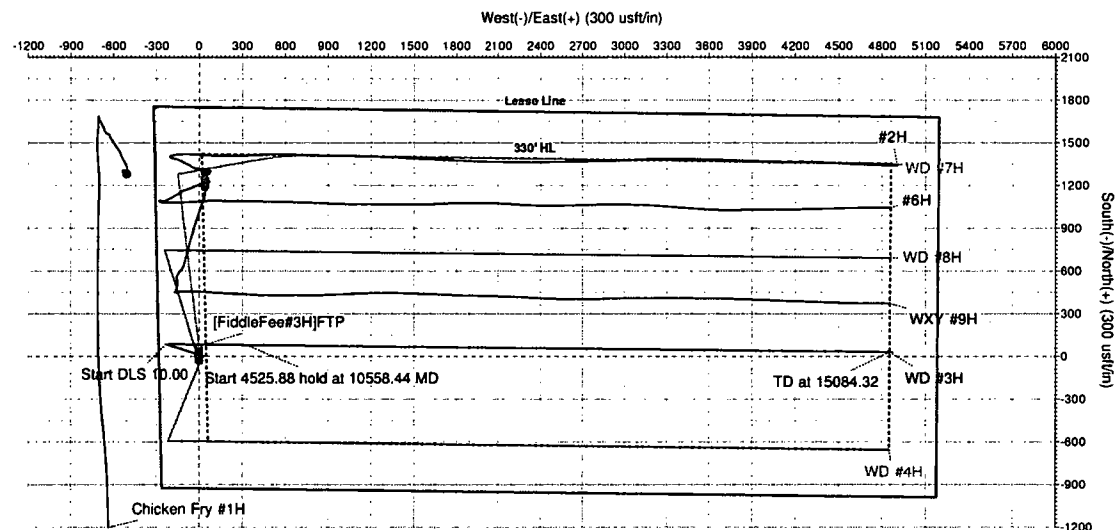
Azimuths to Grid North
True North: -0.14°
Magnetic North: 7.04°

Magnetic Field
Strength: 47991.6nT
Dip Angle: 59.98°
Date: 6/8/2018
Model: HDGM

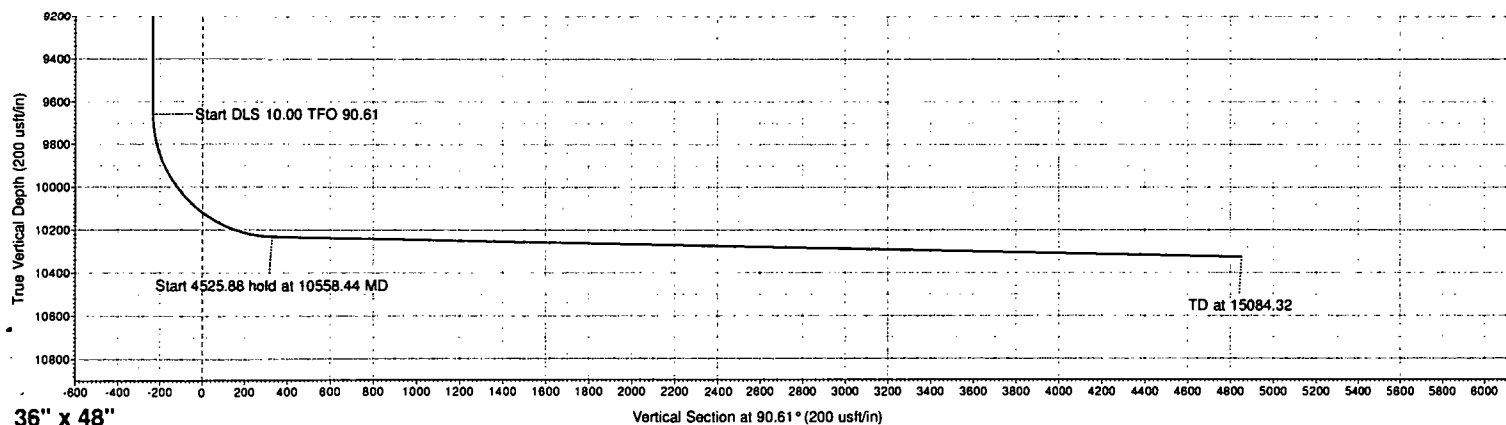
Azimuth Corrections

Total Magnetic Corr. (M to G): 7.04°

Declination (M to T): 7.18° East



Target Line: 10224' TVD @ 0° VS: 88.8° INC



**Marathon Oil
Corporation**

