



Pro Directional
Survey Report



Company: Marathon Oil
Project: Eddy County, NM

NM OIL CONSERVATION
ARTESIA DISTRICT

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

Well: WD #4H

Wellbore: OH

Design: Prelim Plan A

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well WD #4H

Well @ 3022.00usft (GL: 2995' + KB: 27'
(Prec582))

Well @ 3022.00usft (GL: 2995' + KB: 27'
(Prec582))

Grid

Minimum Curvature

WellPlanner1

Project Eddy County, NM

Map System: US State Plane 1927 (Exact solution)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: New Mexico East 3001

System Datum:

Mean Sea Level

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

Site Position:	Northings:	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 #4H

Well Position	+N/-S	0.00 usft	Northings:	438,662.25 usft	Latitude:	32.205716
	+E/-W	0.00 usft	Easting:	582,820.53 usft	Longitude:	-104.065567
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,995.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/8/2018	7.18	59.98	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)	Direction (°)
	0.00	0.00	0.00	90.70

Survey Tool Program Date 6/11/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	1,850.00	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1
1,850.00	5,400.00	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1
5,400.00	10,000.00	Prelim Plan A (OH)	MWD+IFR1	OWSG MWD + IFR1
10,000.00	15,300.23	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
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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Well @ 3022.00usft (GL: 2995' + KB: 27'
(Prec582))

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Grid

Minimum Curvature

WellPlanner1

Planned Survey

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600.00	1.00	180.00	599.99	-0.87	0.00	0.01	1.00	1.00	0.00
700.00	2.00	180.00	699.96	-3.49	0.00	0.04	1.00	1.00	0.00
800.00	2.00	180.00	799.90	-6.98	0.00	0.09	0.00	0.00	0.00
900.00	2.00	180.00	899.84	-10.47	0.00	0.13	0.00	0.00	0.00
1,000.00	2.00	180.00	999.78	-13.96	0.00	0.17	0.00	0.00	0.00
1,100.00	2.00	180.00	1,099.72	-17.45	0.00	0.21	0.00	0.00	0.00
1,200.35	2.00	180.00	1,200.00	-20.95	0.00	0.26	0.00	0.00	0.00
1,300.00	3.88	193.70	1,299.52	-25.97	-0.80	-0.48	2.00	1.89	13.75
1,400.00	5.84	198.38	1,399.16	-34.08	-3.20	-2.79	2.00	1.96	4.68
1,500.00	7.82	200.70	1,498.44	-45.28	-7.22	-6.66	2.00	1.98	2.32
1,607.70	9.96	202.17	1,604.84	-60.77	-13.32	-12.58	2.00	1.99	1.37
1,700.00	9.96	202.17	1,695.75	-75.56	-19.35	-18.43	0.00	0.00	0.00
1,800.00	9.96	202.17	1,794.24	-91.58	-25.88	-24.76	0.00	0.00	0.00
1,900.00	9.96	202.17	1,892.73	-107.60	-32.41	-31.09	0.00	0.00	0.00
2,000.00	9.96	202.17	1,991.22	-123.63	-38.94	-37.43	0.00	0.00	0.00
2,100.00	9.96	202.17	2,089.71	-139.65	-45.47	-43.76	0.00	0.00	0.00
2,200.00	9.96	202.17	2,188.21	-155.68	-52.00	-50.10	0.00	0.00	0.00
2,300.00	9.96	202.17	2,286.70	-171.70	-58.53	-56.43	0.00	0.00	0.00
2,400.00	9.96	202.17	2,385.19	-187.73	-65.06	-62.77	0.00	0.00	0.00
2,500.00	9.96	202.17	2,483.68	-203.75	-71.59	-69.10	0.00	0.00	0.00
2,600.00	9.96	202.17	2,582.17	-219.77	-78.12	-75.43	0.00	0.00	0.00
2,700.00	9.96	202.17	2,680.66	-235.80	-84.66	-81.77	0.00	0.00	0.00
2,800.00	9.96	202.17	2,779.15	-251.82	-91.19	-88.10	0.00	0.00	0.00
2,900.00	9.96	202.17	2,877.65	-267.85	-97.72	-94.44	0.00	0.00	0.00
3,000.00	9.96	202.17	2,976.14	-283.87	-104.25	-100.77	0.00	0.00	0.00
3,100.00	9.96	202.17	3,074.63	-299.90	-110.78	-107.10	0.00	0.00	0.00
3,200.00	9.96	202.17	3,173.12	-315.92	-117.31	-113.44	0.00	0.00	0.00
3,300.00	9.96	202.17	3,271.61	-331.95	-123.84	-119.77	0.00	0.00	0.00
3,400.00	9.96	202.17	3,370.10	-347.97	-130.37	-126.11	0.00	0.00	0.00
3,500.00	9.96	202.17	3,468.59	-363.99	-136.90	-132.44	0.00	0.00	0.00
3,600.00	9.96	202.17	3,567.09	-380.02	-143.43	-138.78	0.00	0.00	0.00
3,700.00	9.96	202.17	3,665.58	-396.04	-149.96	-145.11	0.00	0.00	0.00
3,800.00	9.96	202.17	3,764.07	-412.07	-156.49	-151.44	0.00	0.00	0.00
3,900.00	9.96	202.17	3,862.56	-428.09	-163.02	-157.78	0.00	0.00	0.00
4,000.00	9.96	202.17	3,961.05	-444.12	-169.55	-164.11	0.00	0.00	0.00
4,100.00	9.96	202.17	4,059.54	-460.14	-176.08	-170.45	0.00	0.00	0.00
4,200.00	9.96	202.17	4,158.04	-476.16	-182.61	-176.78	0.00	0.00	0.00
4,300.00	9.96	202.17	4,256.53	-492.19	-189.14	-183.12	0.00	0.00	0.00
4,400.00	9.96	202.17	4,355.02	-508.21	-195.67	-189.45	0.00	0.00	0.00
4,492.15	9.96	202.17	4,445.78	-522.98	-201.69	-195.29	0.00	0.00	0.00
4,500.00	9.81	202.17	4,453.51	-524.23	-202.20	-195.78	2.00	-2.00	0.00
4,600.00	7.81	202.17	4,552.33	-538.41	-207.98	-201.38	2.00	-2.00	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	5.81	202.17	4,651.62	-549.38	-212.45	-205.72	2.00	-2.00	0.00
4,800.00	3.81	202.17	4,751.26	-557.14	-215.61	-208.79	2.00	-2.00	0.00
4,900.00	1.81	202.17	4,851.14	-561.68	-217.46	-210.58	2.00	-2.00	0.00
4,990.38	0.00	0.01	4,941.50	-563.00	-218.00	-211.11	2.00	-2.00	0.00
5,000.00	0.00	0.00	4,951.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,100.00	0.00	0.00	5,051.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,200.00	0.00	0.00	5,151.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,300.00	0.00	0.00	5,251.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,400.00	0.00	0.00	5,351.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,500.00	0.00	0.00	5,451.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,600.00	0.00	0.00	5,551.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,700.00	0.00	0.00	5,651.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,800.00	0.00	0.00	5,751.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
5,900.00	0.00	0.00	5,851.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,000.00	0.00	0.00	5,951.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,100.00	0.00	0.00	6,051.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,200.00	0.00	0.00	6,151.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,300.00	0.00	0.00	6,251.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,400.00	0.00	0.00	6,351.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,500.00	0.00	0.00	6,451.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,600.00	0.00	0.00	6,551.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,700.00	0.00	0.00	6,651.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,800.00	0.00	0.00	6,751.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
6,900.00	0.00	0.00	6,851.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,000.00	0.00	0.00	6,951.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,100.00	0.00	0.00	7,051.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,200.00	0.00	0.00	7,151.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,300.00	0.00	0.00	7,251.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,400.00	0.00	0.00	7,351.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,500.00	0.00	0.00	7,451.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,600.00	0.00	0.00	7,551.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,700.00	0.00	0.00	7,651.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,800.00	0.00	0.00	7,751.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
7,900.00	0.00	0.00	7,851.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,000.00	0.00	0.00	7,951.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,100.00	0.00	0.00	8,051.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,200.00	0.00	0.00	8,151.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,300.00	0.00	0.00	8,251.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,400.00	0.00	0.00	8,351.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,500.00	0.00	0.00	8,451.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,600.00	0.00	0.00	8,551.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,700.00	0.00	0.00	8,651.12	-563.00	-218.00	-211.11	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)
8,800.00	0.00	0.00	8,751.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
8,900.00	0.00	0.00	8,851.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,000.00	0.00	0.00	8,951.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,100.00	0.00	0.00	9,051.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,200.00	0.00	0.00	9,151.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,300.00	0.00	0.00	9,251.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,400.00	0.00	0.00	9,351.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,500.00	0.00	0.00	9,451.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,600.00	0.00	0.00	9,551.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,700.00	0.00	0.00	9,651.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,800.00	0.00	0.00	9,751.12	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,906.38	0.00	0.01	9,857.50	-563.00	-218.00	-211.11	0.00	0.00	0.00
9,950.00	4.36	90.70	9,901.08	-563.02	-216.34	-209.45	10.00	10.00	0.00
10,000.00	9.36	90.70	9,950.70	-563.09	-210.37	-203.47	10.00	10.00	0.00
10,050.00	14.36	90.70	9,999.62	-563.22	-200.10	-193.20	10.00	10.00	0.00
10,100.00	19.36	90.70	10,047.46	-563.40	-185.60	-178.70	10.00	10.00	0.00
10,150.00	24.36	90.70	10,093.85	-563.63	-166.99	-160.09	10.00	10.00	0.00
10,168.73	26.23	90.70	10,110.78	-563.72	-158.98	-152.09	10.00	10.00	0.00
[FiddleFee#4H]FTP									
10,200.00	29.36	90.70	10,138.44	-563.90	-144.40	-137.50	10.00	10.00	0.00
10,250.00	34.36	90.70	10,180.89	-564.23	-118.02	-111.12	10.00	10.00	0.00
10,300.00	39.36	90.70	10,220.88	-564.59	-88.04	-81.13	10.00	10.00	0.00
10,350.00	44.36	90.70	10,258.11	-565.00	-54.68	-47.78	10.00	10.00	0.00
10,400.00	49.36	90.70	10,292.28	-565.45	-18.21	-11.30	10.00	10.00	0.00
10,450.00	54.36	90.70	10,323.15	-565.93	21.10	28.01	10.00	10.00	0.00
10,500.00	59.36	90.70	10,350.48	-566.44	62.95	69.87	10.00	10.00	0.00
10,550.00	64.36	90.70	10,374.05	-566.98	107.02	113.94	10.00	10.00	0.00
10,600.00	69.36	90.70	10,393.69	-567.55	152.98	159.91	10.00	10.00	0.00
10,650.00	74.36	90.70	10,409.25	-568.13	200.48	207.41	10.00	10.00	0.00
10,700.00	79.36	90.70	10,420.61	-568.73	249.15	256.08	10.00	10.00	0.00
10,750.00	84.36	90.70	10,427.69	-569.33	298.63	305.56	10.00	10.00	0.00
10,794.38	88.80	90.70	10,430.33	-569.88	342.92	349.85	10.00	10.00	0.00
10,800.00	88.80	90.70	10,430.45	-569.94	348.54	355.47	0.00	0.00	0.00
10,900.00	88.80	90.70	10,432.54	-571.17	448.51	455.45	0.00	0.00	0.00
11,000.00	88.80	90.70	10,434.64	-572.40	548.48	555.43	0.00	0.00	0.00
11,100.00	88.80	90.70	10,436.73	-573.62	648.45	655.41	0.00	0.00	0.00
11,200.00	88.80	90.70	10,438.83	-574.85	748.42	755.38	0.00	0.00	0.00
11,300.00	88.80	90.70	10,440.92	-576.07	848.39	855.36	0.00	0.00	0.00
11,400.00	88.80	90.70	10,443.01	-577.30	948.36	955.34	0.00	0.00	0.00
11,500.00	88.80	90.70	10,445.11	-578.52	1,048.33	1,055.32	0.00	0.00	0.00
11,600.00	88.80	90.70	10,447.20	-579.75	1,148.30	1,155.30	0.00	0.00	0.00
11,700.00	88.80	90.70	10,449.30	-580.97	1,248.27	1,255.27	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)
11,800.00	88.80	90.70	10,451.39	-582.20	1,348.24	1,355.25	0.00	0.00	0.00
11,900.00	88.80	90.70	10,453.49	-583.42	1,448.21	1,455.23	0.00	0.00	0.00
12,000.00	88.80	90.70	10,455.58	-584.65	1,548.18	1,555.21	0.00	0.00	0.00
12,100.00	88.80	90.70	10,457.67	-585.87	1,648.15	1,655.19	0.00	0.00	0.00
12,200.00	88.80	90.70	10,459.77	-587.10	1,748.12	1,755.17	0.00	0.00	0.00
12,300.00	88.80	90.70	10,461.86	-588.33	1,848.09	1,855.14	0.00	0.00	0.00
12,400.00	88.80	90.70	10,463.96	-589.55	1,948.06	1,955.12	0.00	0.00	0.00
12,500.00	88.80	90.70	10,466.05	-590.78	2,048.03	2,055.10	0.00	0.00	0.00
12,600.00	88.80	90.70	10,468.14	-592.00	2,148.01	2,155.08	0.00	0.00	0.00
12,700.00	88.80	90.70	10,470.24	-593.23	2,247.98	2,255.06	0.00	0.00	0.00
12,800.00	88.80	90.70	10,472.33	-594.45	2,347.95	2,355.03	0.00	0.00	0.00
12,900.00	88.80	90.70	10,474.43	-595.68	2,447.92	2,455.01	0.00	0.00	0.00
13,000.00	88.80	90.70	10,476.52	-596.90	2,547.89	2,554.99	0.00	0.00	0.00
13,100.00	88.80	90.70	10,478.61	-598.13	2,647.86	2,654.97	0.00	0.00	0.00
13,200.00	88.80	90.70	10,480.71	-599.35	2,747.83	2,754.95	0.00	0.00	0.00
13,300.00	88.80	90.70	10,482.80	-600.58	2,847.80	2,854.92	0.00	0.00	0.00
13,400.00	88.80	90.70	10,484.90	-601.80	2,947.77	2,954.90	0.00	0.00	0.00
13,500.00	88.80	90.70	10,486.99	-603.03	3,047.74	3,054.88	0.00	0.00	0.00
13,600.00	88.80	90.70	10,489.09	-604.26	3,147.71	3,154.86	0.00	0.00	0.00
13,700.00	88.80	90.70	10,491.18	-605.48	3,247.68	3,254.84	0.00	0.00	0.00
13,800.00	88.80	90.70	10,493.27	-606.71	3,347.65	3,354.81	0.00	0.00	0.00
13,900.00	88.80	90.70	10,495.37	-607.93	3,447.62	3,454.79	0.00	0.00	0.00
14,000.00	88.80	90.70	10,497.46	-609.16	3,547.59	3,554.77	0.00	0.00	0.00
14,100.00	88.80	90.70	10,499.56	-610.38	3,647.56	3,654.75	0.00	0.00	0.00
14,200.00	88.80	90.70	10,501.65	-611.61	3,747.53	3,754.73	0.00	0.00	0.00
14,300.00	88.80	90.70	10,503.74	-612.83	3,847.50	3,854.70	0.00	0.00	0.00
14,400.00	88.80	90.70	10,505.84	-614.06	3,947.48	3,954.68	0.00	0.00	0.00
14,500.00	88.80	90.70	10,507.93	-615.28	4,047.45	4,054.66	0.00	0.00	0.00
14,600.00	88.80	90.70	10,510.03	-616.51	4,147.42	4,154.64	0.00	0.00	0.00
14,700.00	88.80	90.70	10,512.12	-617.73	4,247.39	4,254.62	0.00	0.00	0.00
14,800.00	88.80	90.70	10,514.21	-618.96	4,347.36	4,354.60	0.00	0.00	0.00
14,900.00	88.80	90.70	10,516.31	-620.19	4,447.33	4,454.57	0.00	0.00	0.00
15,000.00	88.80	90.70	10,518.40	-621.41	4,547.30	4,554.55	0.00	0.00	0.00
15,100.00	88.80	90.70	10,520.50	-622.64	4,647.27	4,654.53	0.00	0.00	0.00
15,200.00	88.80	90.70	10,522.59	-623.86	4,747.24	4,754.51	0.00	0.00	0.00
15,300.23	88.80	90.70	10,524.69	-625.09	4,847.44	4,854.72	0.00	0.00	0.00

[FiddleFee#4H]LTP/BHL

Company: Marathon Oil
Project: Eddy County, NM
Site: Fiddle Fee 24-28-23 (3-4-7-8)
Well: WD #4H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well WD #4H
TVD Reference: Well @ 3022.00usft (GL: 2995' + KB: 27' (Prec582))
MD Reference: Well @ 3022.00usft (GL: 2995' + KB: 27' (Prec582))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: 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#4H]FTP	0.00	0.00	9,999.00	-566.35	61.69	438,095.90	582,882.22	32.204159	-104.065372
- plan misses target center by 247.36usft at 10161.98usft MD (10104.71 TVD, -563.69 N, -161.93 E)									
- Point									
[FiddleFee#4H]LTP/BHL	0.00	0.00	10,524.6 9	-625.09	4,847.44	438,037.16	587,667.97	32.203964	-104.049900
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____

Marathon Oil
Eddy County, NM
Fiddle Fee 24-28-23 (3-4-7-8)
WD #4H
Prelim Plan A
GL: 2995' + KB: 27' (Prec582)

US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1886
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	180.00	699.96	-3.49	0.00	1.00	0.04
4	1200.35	2.00	180.00	1200.00	-20.95	0.00	0.00	0.26
5	1607.70	9.96	202.17	1604.84	-60.77	-13.32	2.00	-12.58
6	4492.15	9.96	202.17	4445.78	-522.98	-201.69	0.00	-195.29
7	4990.38	0.00	0.00	4941.50	-563.00	-218.00	2.00	-211.11
8	9906.38	0.00	0.00	9857.50	-563.00	-218.00	0.00	-211.11
9	10794.38	88.80	90.70	10430.33	-569.88	342.92	10.00	349.85
10	15300.23	88.80	90.70	10524.69	-625.09	4847.44	0.00	4854.71

RKB Elevation: Well @ 3022.00usft (GL: 2995' + KB: 27' (Prec582))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.00	0.00	438662.25	582820.53	32.205716	-104.065567	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[FiddleFee#4H]FTP	9999.00	-566.35	61.69	438095.90	582882.22
[FiddleFee#4H]LTP/BHL	10524.69	-625.09	4847.44	438037.18	587667.97



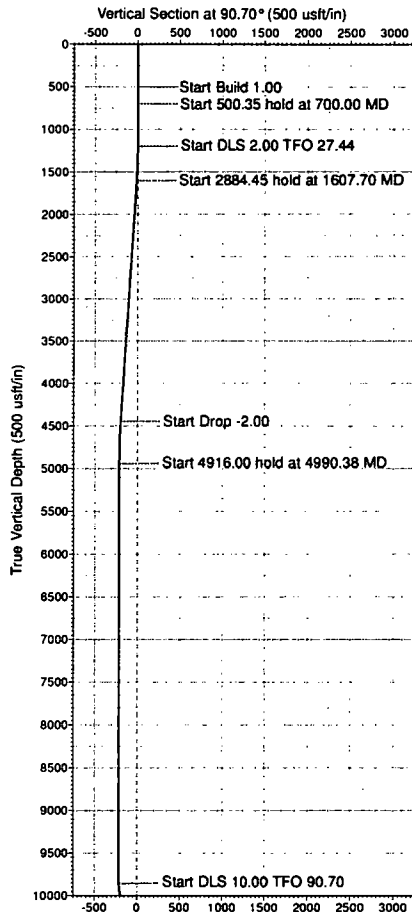
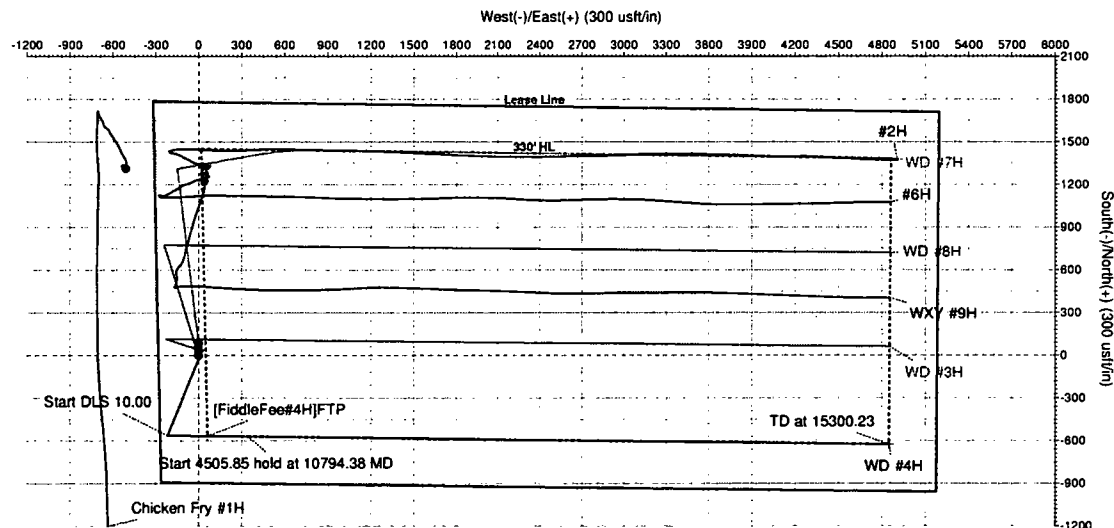
Azimuths to Grid North
True North: 0.14°
Magnetic North: 7.04°

Magnetic Field
Strength: 47991.8nT
Dip Angle: 59.98°
Date: 8/6/2018
Model: HDGM

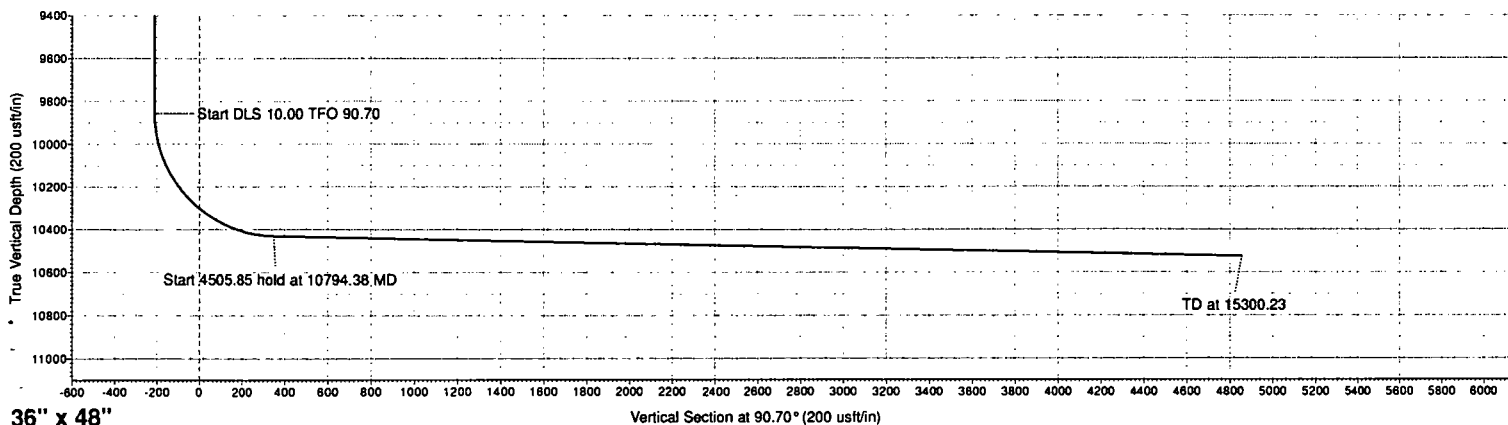
Azimuth Corrections

Total Magnetic Corr. (M to G): 7.04°

Declination (M to T): 7.18° East



Target Line: 10423' TVD @ 0° VS: 88.8° INC



Marathon Oil
Corporation



36" x 48"