

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

****EMNRD-OCD ARTESIA** Form C-104
Revised August 1, 2011
RECEIVED: 3/17/2020

Submit one copy to appropriate District Office

☐ AMENDED REPORT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Marathon Oil Permian LLC 5555 San Felipe St., Houston, TX 77056		² OGRID Number 372098
		³ Reason for Filing Code/ Effective Date RT
⁴ API Number 30 - 015-44690	⁵ Pool Name PURPLE SAGE; WOLFCAMP (GAS)	⁶ Pool Code 98220
⁷ Property Code 324948	⁸ Property Name CATAPULT 1 WXY FEE	⁹ Well Number 10H

II. ¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
O	36	22S	26E		337	SOUTH	1357	EAST	EDDY

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	1	23S	26E		286	SOUTH	341	EAST	EDDY
¹² Lse Code P	¹³ Producing Method Code P	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

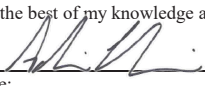
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
16587	ORYX ENERGY CO	O
327139	SENDERO MIDSTREAM	G

IV. Well Completion Data

²¹ Spud Date 11/26/2018	²² Ready Date 1/23/2020	²³ TD 13944' / 8834'	²⁴ PBTB 13889' / 8833'	²⁵ Perforations 9303' - 13826'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17 1/2"	13 3/8", 54.5#, J55, STC	446'	475		
12 1/4"	9 5/8", 36#, J55, LTC	1939'	710		
8 3/4"	7", 29#, P110, Roughneck	9207'	800		
6 1/8"	4 1/2", 13.5#, P110, Roughneck Tubing: 2-7/8"	8322' - 13934' Tubing: 8252'	555		

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: 		OIL CONSERVATION DIVISION Approved by: **DENIED**
Printed name: Adrian Covarrubias		Title:
Title: Regulatory Professional		Approval Date:
E-mail Address: acovarrubias@marathonoil.com		**In the well files, if you will see, there is an approved C-104 NW Completion received 3/4/2020. Cannot submit a C-104 RT after Completion. AB
Date: 2/5/2020	Phone: 713-296-3368	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT
As-Drilled

WELL LOCATION AND ACREAGE DEDICATION AS-DRILLED PLAT

¹ API Number 30-015-44690	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code 324948	Property Name CATAPULT 1 WXY FEE	⁶ Well Number 10H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 3217'

¹⁰ Surface Location

UL or lot no. O	Section 36	Township T22S	Range R26E	Lot Idn	Feet from the 337	North/South line SOUTH	Feet from the 1357	East/West line EAST	County EDDY
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. P	Section 1	Township T23S	Range R26E	Lot Idn	Feet from the 286	North/South line SOUTH	Feet from the 341	East/West line EAST	County EDDY
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¹² Dedicated Acres 320.36	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>Adrian Covarrubias</i> Date: 2/7/2020 Printed Name: Adrian Covarrubias E-mail Address:	
¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well surface location shown on this plat was plotted from field notes of the as-staked surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Data used for underground measurements were provided by others for reference only and does not constitute field measurements performed by R-Squared Global. FEBRUARY 06, 2020 Date of Survey: <i>Lloyd P. Short</i> Signature and Seal of Professional Surveyor: <i>Lloyd P. Short</i> Certificate Number: LLOYD P. SHORT 21653			

SECTION 35 SECTION 36 T-22-S SECTION 31

SECTION 2 SECTION 1 T-23-S SECTION 6

SURFACE HOLE LOCATION
337' FSL 1357' FEL SECTION 36
NAD 83, SPCS NM EAST
X:569525.11' / Y:488179.22'
LAT:32.34204299N / LON:104.24206160W
NAD 27, SPCS NM EAST
X:528343.43' / Y:488120.19'
LAT:32.34192481N / LON:104.24155917W

KICK OFF POINT
8,398' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X:570415.27' / Y:488083.02'
LAT:32.34177643N / LON:104.23917954W
NAD 27, SPCS NM EAST
X:529233.58' / Y:488023.99'
LAT:32.34165821N / LON:104.23867720W

FIRST TAKE POINT
9,260' MEASURED DEPTH IN DEPTH
NAD 83, SPCS NM EAST
X:570529.21' / Y:487513.13'
LAT:32.34020961N / LON:104.23881223W
NAD 27, SPCS NM EAST
X:529347.51' / Y:487454.11'
LAT:32.34009137N / LON:104.23830995W

LAST TAKE POINT
13,900' MEASURED DEPTH IN DEPTH
NAD 83, SPCS NM EAST
X:570529.90' / Y:482879.31'
LAT:32.32747187N / LON:104.23879088W
NAD 27, SPCS NM EAST
X:529358.10' / Y:482820.41'
LAT:32.32735356N / LON:104.23828895W

BOTTOM HOLE LOCATION
13,944' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X:570542.37' / Y:482835.10'
LAT:32.32735035N / LON:104.23878300W
NAD 27, SPCS NM EAST
X:529360.57' / Y:482776.21'
LAT:32.3273205N / LON:104.23828108W

CORNER COORDINATES
NAD 83, SPCS NM EAST
A - X: 568227.81' / Y: 487840.96'
B - X: 570881.56' / Y: 487843.47'
C - X: 570883.00' / Y: 482551.56'
D - X: 568203.23' / Y: 482533.94'

CORNER COORDINATES
NAD 27, SPCS NM EAST
A - X: 527046.14' / Y: 487781.95'
B - X: 529699.85' / Y: 487784.43'
C - X: 529701.19' / Y: 482492.66'
D - X: 527021.46' / Y: 482475.08'

KICK OFF POINT
SHL
337'
240'
330'

FIRST TAKE
CROSSING 1
MEASURED DEPTH =9,669'
NEAREST
MEASURED DEPTH =10,110'
CROSSING 2
MEASURED DEPTH =10,500'
CROSSING 3
MEASURED DEPTH =11,040'
CROSSING 4
MEASURED DEPTH =12,285'
FARTHEST
MEASURED DEPTH =13,317'

LAST TAKE POINT

BOTTOM HOLE LOCATION

286'
330'

1357'
466'

352'

313'

362'

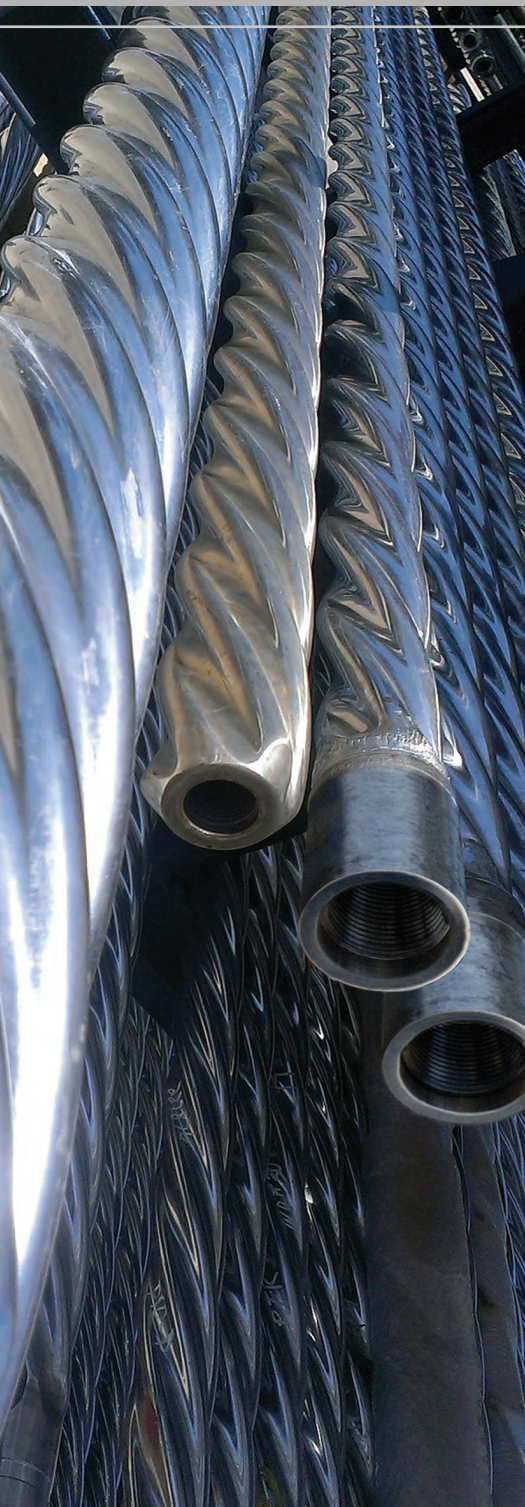
343'
341'

R-26-E
R-27-E

DISTANCES/AREAS RELATIVE TO NAD83
COMBINED SCALE FACTOR: 0.99976038 CONVERGENCE: 0.05095500';
NOTE: ALL DIMENSIONS IN U.S. FEET

1	02/05/2020	DEF
REV.	DATE	BY

SHEET 1 OF 1
R3798_001



Marathon Oil Corporation

Catapult Fee 23-26-1 WXY No. 10H
Eddy County, NM

February 11, 2019

Job# LNM1418118
API# 30-015-44690

Survey Completion Report



Survey Certification Letter

February 11, 2019



Operator Name: Marathon Oil
Well Name: Catapult Fee 23-26-1 WXY No. 10H
County/Parish: Eddy County,
State: NM
Rig Name: Precision 594
Job Number: LNM1418118

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	505' MD – 13,889' MD	13,944' MD	12/04/18 – 01/13/19	MWD

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266
prodirectional.com



Marathon Oil

Marathon Oil

Eddy County, NM

Catapult Fee 23-26-1 WXY

No. 10H

OH

Survey: ProDirectional

Survey Report

11 February, 2019



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 10H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3242.00usft
Site:	Catapult Fee 23-26-1 WXY	MD Reference:	Well @ 3242.00usft
Well:	No. 10H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD148'-13889', Proj. 13944'	Database:	WellPlanner1

Project	Eddy County, NM(NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Catapult Fee 23-26-1 WXY		
Site Position:		Northing:	488,179.22 usft
From:	Map	Easting:	569,435.11 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.342043
		Longitude:	-104.242353
		Grid Convergence:	0.05 °

Well		No. 10H				
Well Position	+N/-S	0.00 usft	Northing:	488,179.22 usft	Latitude:	32.342043
	+E/-W	0.00 usft	Easting:	569,525.11 usft	Longitude:	-104.242062
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,217.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/1/2018	7.30	60.03	47,944.90

Design		Gyro-MWD148'-13889', Proj. 13944'		
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 (°)
	0.00	0.00	0.00	179.99

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 10H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3242.00usft
Site:	Catapult Fee 23-26-1 WXY	MD Reference:	Well @ 3242.00usft
Well:	No. 10H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD148'-13889', Proj. 13944'	Database:	WellPlanner1

Survey Program		Date 2/11/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
148.00	460.00	Survey #1 (OH)	GYRO-NS-CT	OWSG XYZ Accel with XY Static and Continuous Gyro
505.00	13,944.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HRGM

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	488,179.22	569,525.11	
148.00	0.70	71.10	148.00	-0.29	0.29	0.86	0.90	71.10	488,179.51	569,525.97	
237.00	0.40	30.10	236.99	-0.74	0.74	1.53	1.69	64.19	488,179.96	569,526.64	
328.00	0.20	314.10	327.99	-1.12	1.12	1.57	1.93	54.44	488,180.34	569,526.68	
460.00	0.40	316.10	459.99	-1.62	1.62	1.09	1.95	33.91	488,180.84	569,526.20	
505.00	0.50	317.60	504.99	-1.87	1.87	0.84	2.06	24.26	488,181.09	569,525.95	
Pro MWD First Survey: 505' MD											
596.00	0.60	316.00	595.98	-2.51	2.51	0.25	2.52	5.59	488,181.73	569,525.36	
687.00	0.50	292.80	686.98	-3.01	3.01	-0.45	3.04	351.46	488,182.23	569,524.66	
778.00	0.50	281.60	777.98	-3.24	3.24	-1.21	3.46	339.58	488,182.46	569,523.90	
869.00	0.50	224.50	868.97	-3.04	3.04	-1.87	3.57	328.33	488,182.26	569,523.24	
961.00	1.50	156.60	960.96	-1.65	1.64	-1.68	2.35	314.45	488,180.86	569,523.43	
1,052.00	3.00	143.20	1,051.89	1.36	-1.36	0.22	1.37	170.66	488,177.86	569,525.33	
1,141.00	2.70	113.40	1,140.78	4.05	-4.05	3.54	5.38	138.85	488,175.17	569,528.65	
1,230.00	1.50	102.90	1,229.72	5.15	-5.15	6.60	8.37	127.93	488,174.07	569,531.71	
1,319.00	1.20	126.00	1,318.70	5.95	-5.95	8.49	10.37	125.03	488,173.27	569,533.60	
1,409.00	1.20	158.00	1,408.68	7.38	-7.38	9.61	12.11	127.54	488,171.84	569,534.72	
1,498.00	0.70	151.30	1,497.67	8.72	-8.72	10.22	13.43	130.49	488,170.50	569,535.33	
1,587.00	0.60	77.80	1,586.66	9.10	-9.10	10.93	14.22	129.77	488,170.12	569,536.04	
1,677.00	0.60	73.30	1,676.66	8.87	-8.87	11.85	14.80	126.81	488,170.35	569,536.96	
1,766.00	0.50	77.50	1,765.65	8.65	-8.65	12.67	15.34	124.31	488,170.57	569,537.78	

Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Catapult Fee 23-26-1 WXY
Well: No. 10H
Wellbore: OH
Design: Gyro-MWD148'-13889', Proj. 13944'

Local Co-ordinate Reference:
TVD Reference: Well @ 3242.00usft
MD Reference: Well @ 3242.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
1,855.00	0.40	77.20	1,854.65	8.50	-8.49	13.35	15.83	122.46	488,170.73	569,538.46	
1,900.00	0.30	72.50	1,899.65	8.43	-8.42	13.62	16.01	121.74	488,170.80	569,538.73	
2,037.00	0.30	137.40	2,036.65	8.58	-8.58	14.20	16.59	121.14	488,170.64	569,539.31	
2,126.00	2.60	85.70	2,125.61	8.60	-8.60	16.37	18.50	117.71	488,170.62	569,541.48	
2,215.00	5.70	82.00	2,214.37	7.84	-7.83	22.77	24.08	108.99	488,171.39	569,547.88	
2,305.00	7.60	83.30	2,303.76	6.52	-6.52	33.10	33.74	101.14	488,172.70	569,558.21	
2,394.00	9.40	88.20	2,391.78	5.61	-5.60	46.21	46.55	96.91	488,173.62	569,571.32	
2,484.00	10.90	94.20	2,480.37	6.01	-5.99	62.05	62.34	95.52	488,173.23	569,587.16	
2,573.00	11.10	95.80	2,567.74	7.49	-7.48	78.96	79.32	95.41	488,171.74	569,604.07	
2,662.00	11.90	94.20	2,654.95	9.03	-9.01	96.64	97.06	95.33	488,170.21	569,621.75	
2,752.00	13.50	92.70	2,742.75	10.21	-10.19	116.39	116.83	95.00	488,169.03	569,641.50	
2,842.00	13.70	92.60	2,830.22	11.19	-11.17	137.53	137.98	94.64	488,168.05	569,662.64	
2,931.00	13.50	92.20	2,916.73	12.07	-12.04	158.44	158.89	94.35	488,167.18	569,683.55	
3,020.00	13.20	90.80	3,003.32	12.62	-12.58	178.98	179.42	94.02	488,166.64	569,704.09	
3,109.00	12.30	89.50	3,090.13	12.68	-12.64	198.62	199.02	93.64	488,166.58	569,723.73	
3,199.00	12.70	94.30	3,178.00	13.34	-13.30	218.07	218.48	93.49	488,165.92	569,743.18	
3,288.00	13.50	97.90	3,264.68	15.51	-15.46	238.12	238.62	93.72	488,163.76	569,763.23	
3,378.00	13.50	98.20	3,352.19	18.45	-18.41	258.92	259.57	94.07	488,160.81	569,784.03	
3,467.00	13.20	97.80	3,438.79	21.32	-21.27	279.27	280.08	94.35	488,157.95	569,804.38	
3,556.00	13.00	98.50	3,525.47	24.18	-24.13	299.24	300.21	94.61	488,155.09	569,824.35	
3,646.00	12.80	98.80	3,613.20	27.20	-27.15	319.10	320.25	94.86	488,152.07	569,844.21	
3,735.00	12.40	99.20	3,700.06	30.24	-30.18	338.28	339.62	95.10	488,149.04	569,863.39	
3,824.00	11.50	97.60	3,787.13	32.95	-32.88	356.50	358.02	95.27	488,146.34	569,881.61	
3,914.00	11.10	97.50	3,875.38	35.27	-35.20	373.99	375.64	95.38	488,144.02	569,899.10	
4,003.00	10.60	96.10	3,962.79	37.26	-37.19	390.62	392.39	95.44	488,142.03	569,915.73	
4,092.00	9.90	95.40	4,050.37	38.85	-38.78	406.38	408.22	95.45	488,140.44	569,931.49	
4,182.00	9.40	95.00	4,139.10	40.22	-40.15	421.40	423.31	95.44	488,139.07	569,946.51	

Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Catapult Fee 23-26-1 WXY
Well: No. 10H
Wellbore: OH
Design: Gyro-MWD148'-13889', Proj. 13944'

Local Co-ordinate Reference:
TVD Reference: Well @ 3242.00usft
MD Reference: Well @ 3242.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
4,271.00	10.00	92.80	4,226.82	41.24	-41.16	436.36	438.30	95.39	488,138.06	569,961.47	
4,360.00	10.30	93.20	4,314.43	42.06	-41.98	452.02	453.97	95.31	488,137.24	569,977.13	
4,450.00	9.80	92.10	4,403.05	42.79	-42.71	467.71	469.66	95.22	488,136.51	569,992.82	
4,540.00	10.10	96.70	4,491.70	44.00	-43.91	483.20	485.19	95.19	488,135.31	570,008.31	
4,629.00	11.30	101.00	4,579.15	46.57	-46.49	499.51	501.67	95.32	488,132.73	570,024.62	
4,718.00	11.00	100.20	4,666.47	49.74	-49.65	516.43	518.81	95.49	488,129.57	570,041.54	
4,808.00	10.40	99.50	4,754.91	52.61	-52.51	532.89	535.47	95.63	488,126.71	570,058.00	
4,897.00	10.20	99.30	4,842.47	55.21	-55.11	548.59	551.35	95.74	488,124.11	570,073.70	
4,987.00	9.80	98.00	4,931.10	57.57	-57.47	564.04	566.96	95.82	488,121.75	570,089.15	
5,076.00	9.80	98.80	5,018.81	59.78	-59.68	579.03	582.09	95.88	488,119.54	570,104.14	
5,165.00	9.30	101.20	5,106.57	62.34	-62.24	593.57	596.82	95.99	488,116.98	570,118.68	
5,254.00	9.20	101.20	5,194.41	65.12	-65.02	607.60	611.07	96.11	488,114.20	570,132.71	
5,343.00	8.80	102.10	5,282.32	67.93	-67.82	621.24	624.93	96.23	488,111.40	570,146.35	
5,433.00	8.20	103.80	5,371.33	70.91	-70.80	634.20	638.14	96.37	488,108.42	570,159.31	
5,522.00	7.30	93.80	5,459.52	72.80	-72.69	646.01	650.08	96.42	488,106.53	570,171.12	
5,611.00	6.70	87.20	5,547.86	72.92	-72.81	656.83	660.86	96.33	488,106.41	570,181.94	
5,700.00	6.20	87.80	5,636.29	72.49	-72.37	666.82	670.74	96.19	488,106.85	570,191.93	
5,790.00	5.40	93.80	5,725.83	72.58	-72.46	675.90	679.78	96.12	488,106.76	570,201.01	
5,879.00	5.80	90.90	5,814.41	72.93	-72.81	684.58	688.44	96.07	488,106.41	570,209.69	
5,969.00	6.90	91.10	5,903.85	73.11	-72.99	694.53	698.36	96.00	488,106.23	570,219.64	
6,058.00	6.40	94.30	5,992.26	73.59	-73.46	704.82	708.64	95.95	488,105.76	570,229.93	
6,148.00	7.40	91.10	6,081.60	74.07	-73.95	715.62	719.43	95.90	488,105.27	570,240.73	
6,237.00	8.70	89.30	6,169.72	74.10	-73.98	728.08	731.83	95.80	488,105.24	570,253.19	
6,326.00	8.20	92.80	6,257.76	74.33	-74.21	741.15	744.86	95.72	488,105.01	570,266.26	
6,415.00	8.10	94.00	6,345.86	75.08	-74.95	753.75	757.46	95.68	488,104.27	570,278.86	
6,504.00	7.30	94.90	6,434.06	76.01	-75.87	765.64	769.39	95.66	488,103.35	570,290.75	
6,594.00	5.80	98.90	6,523.47	77.20	-77.07	775.83	779.64	95.67	488,102.15	570,300.94	

Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Catapult Fee 23-26-1 WXY
Well: No. 10H
Wellbore: OH
Design: Gyro-MWD148'-13889', Proj. 13944'

Local Co-ordinate Reference:
TVD Reference: Well @ 3242.00usft
MD Reference: Well @ 3242.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
6,683.00	6.70	88.00	6,611.94	77.72	-77.58	785.46	789.28	95.64	488,101.64	570,310.57	
6,773.00	6.60	89.20	6,701.34	77.46	-77.32	795.88	799.62	95.55	488,101.90	570,320.99	
6,861.00	6.70	94.40	6,788.74	77.79	-77.65	806.05	809.78	95.50	488,101.57	570,331.16	
6,951.00	7.20	96.20	6,878.08	78.80	-78.66	816.89	820.67	95.50	488,100.56	570,342.00	
7,040.00	6.70	97.50	6,966.43	80.08	-79.94	827.59	831.44	95.52	488,099.28	570,352.70	
7,129.00	5.40	98.80	7,054.93	81.40	-81.26	836.87	840.81	95.55	488,097.96	570,361.98	
7,218.00	4.60	100.00	7,143.59	82.67	-82.52	844.53	848.55	95.58	488,096.70	570,369.64	
7,308.00	4.10	100.10	7,233.33	83.86	-83.71	851.25	855.35	95.62	488,095.51	570,376.36	
7,397.00	3.30	99.50	7,322.15	84.84	-84.69	856.91	861.08	95.64	488,094.53	570,382.02	
7,486.00	2.20	107.80	7,411.04	85.79	-85.63	861.06	865.31	95.68	488,093.59	570,386.17	
7,576.00	1.70	104.60	7,500.99	86.65	-86.50	864.00	868.32	95.72	488,092.72	570,389.11	
7,665.00	1.90	85.00	7,589.95	86.85	-86.70	866.74	871.07	95.71	488,092.52	570,391.85	
7,755.00	1.70	92.00	7,679.90	86.77	-86.62	869.56	873.87	95.69	488,092.60	570,394.67	
7,844.00	1.90	95.30	7,768.86	86.95	-86.80	872.35	876.66	95.68	488,092.42	570,397.46	
7,934.00	2.50	95.80	7,858.79	87.29	-87.14	875.79	880.12	95.68	488,092.08	570,400.90	
8,023.00	2.70	112.20	7,947.70	88.28	-88.13	879.66	884.07	95.72	488,091.09	570,404.77	
8,113.00	3.00	117.60	8,037.59	90.17	-90.02	883.71	888.29	95.82	488,089.20	570,408.82	
8,202.00	1.10	139.10	8,126.53	91.90	-91.74	886.34	891.07	95.91	488,087.48	570,411.45	
8,291.00	1.10	136.20	8,215.51	93.16	-93.01	887.49	892.35	95.98	488,086.21	570,412.60	
8,378.00	1.90	136.70	8,302.48	94.81	-94.66	889.05	894.08	96.08	488,084.56	570,414.16	
8,468.00	9.00	145.20	8,392.02	101.69	-101.53	894.10	899.85	96.48	488,077.69	570,419.21	
8,557.00	19.00	161.50	8,478.30	121.20	-121.05	902.70	910.78	97.64	488,058.17	570,427.81	
8,646.00	28.60	165.70	8,559.64	155.67	-155.51	912.58	925.73	99.67	488,023.71	570,437.69	
8,735.00	41.40	165.20	8,632.39	204.97	-204.81	925.41	947.80	102.48	487,974.41	570,450.52	
8,825.00	51.50	168.40	8,694.33	268.42	-268.25	940.13	977.66	105.93	487,910.97	570,465.24	
8,914.00	59.10	167.70	8,744.96	339.95	-339.78	955.29	1,013.92	109.58	487,839.44	570,480.40	
9,003.00	67.10	167.30	8,785.19	417.37	-417.20	972.47	1,058.18	113.22	487,762.02	570,497.58	

Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Catapult Fee 23-26-1 WXY
Well: No. 10H
Wellbore: OH
Design: Gyro-MWD148'-13889', Proj. 13944'

Local Co-ordinate Reference:
TVD Reference: Well @ 3242.00usft
MD Reference: Well @ 3242.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
9,092.00	76.60	171.70	8,812.90	500.43	-500.25	987.77	1,107.22	116.86	487,678.97	570,512.88
9,168.00	84.10	174.70	8,825.63	574.77	-574.59	996.61	1,150.39	119.97	487,604.63	570,521.72
9,259.00	89.30	175.90	8,830.87	665.28	-665.10	1,004.05	1,204.36	123.52	487,514.12	570,529.16
9,355.00	92.70	176.60	8,829.19	761.05	-760.87	1,010.33	1,264.79	126.98	487,418.35	570,535.44
9,448.00	93.10	177.20	8,824.49	853.79	-853.61	1,015.35	1,326.50	130.05	487,325.61	570,540.46
9,543.00	92.70	177.10	8,819.68	948.55	-948.37	1,020.07	1,392.82	132.91	487,230.85	570,545.18
9,637.00	92.60	176.90	8,815.33	1,042.32	-1,042.14	1,024.98	1,461.73	135.48	487,137.08	570,550.09
9,731.00	93.10	177.10	8,810.66	1,136.08	-1,135.90	1,029.90	1,533.28	137.80	487,043.32	570,555.01
9,827.00	90.60	177.10	8,807.56	1,231.90	-1,231.72	1,034.75	1,608.68	139.97	486,947.50	570,559.86
9,921.00	90.50	176.20	8,806.66	1,325.73	-1,325.55	1,040.24	1,684.99	141.88	486,853.67	570,565.35
10,016.00	91.80	180.20	8,804.75	1,420.65	-1,420.47	1,043.23	1,762.40	143.71	486,758.75	570,568.34
10,110.00	91.80	179.30	8,801.80	1,514.60	-1,514.42	1,043.64	1,839.20	145.43	486,664.80	570,568.75
10,204.00	91.50	183.60	8,799.09	1,608.51	-1,608.33	1,041.26	1,915.97	147.08	486,570.89	570,566.37
10,299.00	91.10	182.90	8,796.94	1,703.33	-1,703.15	1,035.88	1,993.43	148.69	486,476.07	570,560.99
10,393.00	90.00	182.20	8,796.03	1,797.23	-1,797.05	1,031.69	2,072.14	150.14	486,382.17	570,556.80
10,487.00	87.60	182.90	8,798.00	1,891.11	-1,890.93	1,027.51	2,152.07	151.48	486,288.29	570,552.62
10,581.00	90.40	182.70	8,799.64	1,984.97	-1,984.79	1,022.92	2,232.88	152.73	486,194.43	570,548.03
10,676.00	88.70	181.20	8,800.39	2,079.91	-2,079.73	1,019.69	2,316.25	153.88	486,099.49	570,544.80
10,770.00	91.90	179.90	8,799.90	2,173.89	-2,173.71	1,018.79	2,400.61	154.89	486,005.51	570,543.90
10,864.00	90.90	178.40	8,797.60	2,267.84	-2,267.67	1,020.18	2,486.58	155.78	485,911.55	570,545.29
10,959.00	90.00	177.70	8,796.85	2,362.78	-2,362.61	1,023.41	2,574.74	156.58	485,816.61	570,548.52
11,054.00	89.50	177.20	8,797.27	2,457.69	-2,457.51	1,027.64	2,663.72	157.31	485,721.71	570,552.75
11,148.00	91.30	181.20	8,796.61	2,551.66	-2,551.48	1,028.95	2,751.14	158.04	485,627.74	570,554.06
11,242.00	85.90	180.30	8,798.91	2,645.58	-2,645.40	1,027.72	2,838.02	158.77	485,533.82	570,552.83
11,337.00	84.80	179.30	8,806.61	2,740.27	-2,740.09	1,028.05	2,926.60	159.43	485,439.13	570,553.16
11,431.00	88.40	180.00	8,812.18	2,834.08	-2,833.90	1,028.62	3,014.81	160.05	485,345.32	570,553.73
11,526.00	86.90	179.10	8,816.08	2,929.00	-2,928.82	1,029.37	3,104.45	160.64	485,250.40	570,554.48

Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Catapult Fee 23-26-1 WXY
Well: No. 10H
Wellbore: OH
Design: Gyro-MWD148'-13889', Proj. 13944'

Local Co-ordinate Reference:
TVD Reference: Well @ 3242.00usft
MD Reference: Well @ 3242.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
11,621.00	86.70	178.20	8,821.38	3,023.82	-3,023.64	1,031.60	3,194.78	161.16	485,155.58	570,556.71	
11,715.00	85.40	177.10	8,827.86	3,117.52	-3,117.34	1,035.45	3,284.81	161.63	485,061.88	570,560.56	
11,810.00	91.40	178.60	8,830.51	3,212.37	-3,212.19	1,039.01	3,376.05	162.08	484,967.03	570,564.12	
11,904.00	90.60	180.50	8,828.87	3,306.35	-3,306.17	1,039.75	3,465.80	162.54	484,873.05	570,564.86	
11,998.00	91.20	181.50	8,827.39	3,400.32	-3,400.14	1,038.11	3,555.08	163.02	484,779.08	570,563.22	
12,092.00	87.90	181.20	8,828.13	3,494.28	-3,494.10	1,035.89	3,644.42	163.49	484,685.12	570,561.00	
12,186.00	88.90	183.30	8,830.75	3,588.16	-3,587.98	1,032.20	3,733.50	163.95	484,591.24	570,557.31	
12,281.00	91.50	182.30	8,830.42	3,683.04	-3,682.86	1,027.56	3,823.52	164.41	484,496.36	570,552.67	
12,375.00	94.00	182.60	8,825.91	3,776.83	-3,776.65	1,023.55	3,912.90	164.84	484,402.57	570,548.66	
12,470.00	91.60	181.90	8,821.27	3,871.64	-3,871.46	1,019.82	4,003.53	165.24	484,307.76	570,544.93	
12,564.00	90.30	181.40	8,819.71	3,965.58	-3,965.41	1,017.12	4,093.77	165.61	484,213.81	570,542.23	
12,658.00	88.20	181.40	8,820.94	4,059.54	-4,059.37	1,014.82	4,184.29	165.96	484,119.85	570,539.93	
12,752.00	88.30	181.80	8,823.81	4,153.46	-4,153.28	1,012.20	4,274.85	166.30	484,025.94	570,537.31	
12,846.00	87.80	182.00	8,827.01	4,247.35	-4,247.18	1,009.08	4,365.41	166.63	483,932.04	570,534.19	
12,940.00	87.20	181.90	8,831.11	4,341.21	-4,341.03	1,005.89	4,456.05	166.95	483,838.19	570,531.00	
13,034.00	87.60	180.90	8,835.38	4,435.08	-4,434.91	1,003.59	4,547.04	167.25	483,744.31	570,528.70	
13,128.00	90.70	183.30	8,836.77	4,528.99	-4,528.82	1,000.15	4,637.94	167.55	483,650.40	570,525.26	
13,222.00	90.50	181.60	8,835.79	4,622.90	-4,622.72	996.13	4,728.83	167.84	483,556.50	570,521.24	
13,317.00	89.10	178.70	8,836.12	4,717.88	-4,717.71	995.88	4,821.68	168.08	483,461.51	570,520.99	
13,411.00	91.00	180.10	8,836.04	4,811.87	-4,811.70	996.87	4,913.87	168.30	483,367.52	570,521.98	
13,507.00	90.90	179.20	8,834.45	4,907.85	-4,907.68	997.45	5,008.02	168.51	483,271.54	570,522.56	
13,601.00	91.20	178.20	8,832.72	5,001.81	-5,001.64	999.59	5,100.55	168.70	483,177.58	570,524.70	
13,695.00	90.90	177.40	8,831.00	5,095.73	-5,095.55	1,003.19	5,193.37	168.86	483,083.67	570,528.30	
13,790.00	88.90	176.40	8,831.17	5,190.58	-5,190.41	1,008.33	5,287.44	169.01	482,988.81	570,533.44	
13,889.00	88.70	176.80	8,833.24	5,289.39	-5,289.21	1,014.20	5,385.57	169.15	482,890.01	570,539.31	
Last Survey: 13889' MD											

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 10H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3242.00usft
Site:	Catapult Fee 23-26-1 WXY	MD Reference:	Well @ 3242.00usft
Well:	No. 10H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD148'-13889', Proj. 13944'	Database:	WellPlanner1

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
13,944.00	88.70	176.80	8,834.49	5,344.29	-5,344.11	1,017.27	5,440.07	169.22	482,835.11	570,542.38
PTB: 13944' MD										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
505.00	504.99	1.87	0.84	Pro MWD First Survey: 505' MD
13,889.00	8,833.24	-5,289.21	1,014.20	Last Survey: 13889' MD
13,944.00	8,834.49	-5,344.11	1,017.27	PTB: 13944' MD