

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

Form C-104
Revised August 1, 2011

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

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Marathon Oil Permian LLC 990 Town & Country Blvd. Houston, TX 77024		² OGRID Number 372098
		³ Reason for Filing Code/ Effective Date NW
⁴ API Number 30 - 025-46130	⁵ Pool Name Hardin Tank; Wolfcamp	⁶ Pool Code 96658
⁷ Property Code 325752	⁸ Property Name Mammoth 1 WA Federal Com	⁹ Well Number 2H

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
N	1	26S	34E		448	SOUTH	1479	WEST	LEA

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
D	36	25S	34E		102	NORTH	347	WEST	LEA
¹² Lse Code F	¹³ Producing Method Code F	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

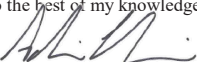
III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
371960	Lucid Energy Delaware, LLC 201 S Fourth Street P.O. Box 158, Artesia, NM 88210	G
307204	Oryx Midstream Services, LLC 4000 N Big Spring St. Suite 300, Midland, TX 79705	O
371643	Solaris Water Midstream, LLC 97 Tradewinds Blvd, Suite B, Midland, TX 79706	W

IV. Well Completion Data

²¹ Spud Date 10/18/2019	²² Ready Date 8/29/2022	²³ TD 22995'	²⁴ PBDT 22969'	²⁵ Perforations 12898' - 22900'	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	1184'	1155		
9-7/8"	7-5/8", 29.7#, P110, BTC	12278'	2260		
6-3/4"	5-1/2", 23#, P110, TLW	22975'	1790		

V. Well Test Data

³¹ Date New Oil 8/29/2022	³² Gas Delivery Date 8/29/2022	³³ Test Date 9/1/2022	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure	³⁶ Csg. Pressure 2783
³⁷ Choke Size 36/64	³⁸ Oil 1826	³⁹ Water 5060	⁴⁰ Gas 5284		⁴¹ Test Method Flowing
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		
Printed name: Adrian Covarrubias			Approved by: PATRICIA MARTINEZ		
Title: Regulatory Compliance Representative			Title: PETROLEUM SPECIALIST		
E-mail Address: acovarrubias@marathonoil.com			Approval Date: 2/28/2023		
Date: 9/22/2022		Phone: 713-296-3368			

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: (575) 748-1283 Fax: (575) 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

Revised August 1, 2011
 Submit one copy to appropriate
 District Office

☐ AMENDED REPORT
As-Drilled

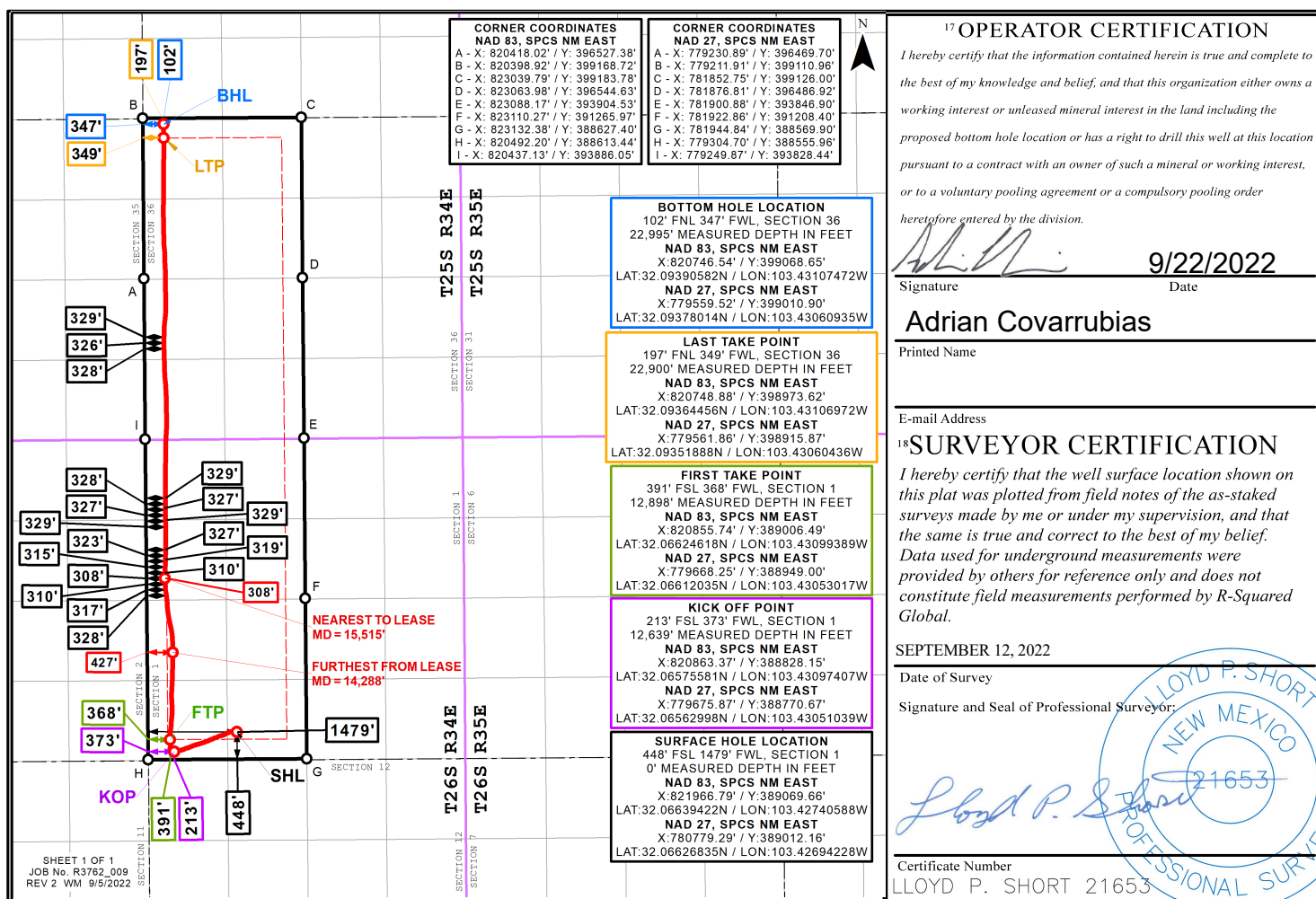
WELL LOCATION AND ACREAGE DEDICATION AS-DRILLED PLAT

¹ API Number 30-025-46130	² Pool Code 96658	³ Pool Name HARDIN TANK; WOLFCAMP
⁴ Property Code 325752	Property Name MAMMOTH 1 WA FEDERAL COM	
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC.	⁶ Well Number 2H
		⁹ Elevation 3281'

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
N	1	26S	34E		448	SOUTH	1479	WEST	LEA
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	36	25S	34E		102	NORTH	347	WEST	LEA
¹² Dedicated Acres 640.0	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

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.





Marathon Oil Corporation

Mammoth 1 WA Fed Com No. 2H(ST01)
Lea County, NM

February 12, 2020

Job No. LNM1545919
API No. 30-025-46130

Survey Completion Report



Survey Certification Letter

February 12, 2020



Operator Name: Marathon Oil
Well Name: Mammoth 1 WA Fed Com No. 2H
County/Parish: Lea County,
State: NM
Rig Name: Precision 594
Job Number: LNM1545919

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:

Surveyor	Surveyed Depths	Projection to Bit	Dates Performed	Type of Survey
ProDirectional	13,050' MD – 22,930' MD	22,995' MD	01/18/20 – 01/30/20	MWD

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

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



Marathon Oil

Lea County, NM

Mammoth 1 WA Fed Com

No. 2H

ST01

Survey: ProDirectional

Survey Report

12 February, 2020





ProDirectional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 2H
Project:	Lea County, NM(NAD 83)	TVD Reference:	Well @ 3306.00usft
Site:	Mammoth 1 WA Fed Com	MD Reference:	Well @ 3306.00usft
Well:	No. 2H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	MWD-13050-22930', PTB: 22995'	Database:	WellPlanner1

Project	Lea 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	Mammoth 1 WA Fed Com		
Site Position:		Northing:	389,069.66 usft
From:	Map	Easting:	821,966.79 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 59.019 N
		Longitude:	103° 25' 38.661 W
		Grid Convergence:	0.48 °

Well		No. 2H, LNM1545919				
Well Position	+N/-S	0.00 usft	Northing:	389,069.66 usft	Latitude:	32° 3' 59.019 N
	+E/-W	0.00 usft	Easting:	821,966.79 usft	Longitude:	103° 25' 38.661 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,281.00 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/1/2019	6.53	59.68	47,667.00

Design	MWD-13050-22930', PTB: 22995'			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 12,934.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.50



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey Program **Date** 2/12/2020

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	1,144.00	Survey #1 (OH)	GYRO-NS-CT	OWSG XYZ Accel with XY Static and Continuous Gyro
1,250.00	12,934.00	Survey #2 (OH)	MWD+IFR1	OWSG MWD + IFR1
13,050.00	22,995.00	Survey #1 (ST01)	MWD+IFR1	OWSG MWD + IFR1

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	389,069.66	821,966.79
100.00	0.90	282.37	100.00	0.17	0.17	-0.77	0.79	282.37	389,069.83	821,966.02
186.00	0.69	261.90	185.99	0.26	0.24	-1.94	1.95	277.05	389,069.90	821,964.85
274.00	0.72	260.52	273.98	0.10	0.07	-3.01	3.01	271.41	389,069.73	821,963.78
368.00	0.42	240.25	367.98	-0.16	-0.19	-3.89	3.90	267.15	389,069.47	821,962.90
462.00	0.25	163.17	461.98	-0.53	-0.56	-4.13	4.17	262.26	389,069.10	821,962.66
557.00	0.25	125.27	556.97	-0.85	-0.88	-3.90	4.00	257.30	389,068.78	821,962.89
651.00	0.22	69.79	650.97	-0.90	-0.94	-3.56	3.69	255.30	389,068.72	821,963.23
745.00	0.30	56.95	744.97	-0.71	-0.74	-3.19	3.27	256.96	389,068.92	821,963.60
839.00	0.42	28.86	838.97	-0.28	-0.30	-2.82	2.83	263.86	389,069.36	821,963.97
933.00	0.44	42.54	932.97	0.29	0.26	-2.41	2.42	276.28	389,069.92	821,964.38
1,028.00	0.48	35.48	1,027.97	0.87	0.86	-1.93	2.11	293.97	389,070.52	821,964.86
1,122.00	0.21	345.29	1,121.96	1.36	1.34	-1.74	2.20	307.64	389,071.00	821,965.05
1,144.00	0.41	152.60	1,143.96	1.33	1.31	-1.72	2.16	307.41	389,070.97	821,965.07
1,250.00	0.10	207.00	1,249.96	0.91	0.89	-1.59	1.82	299.44	389,070.55	821,965.20
1,340.00	0.10	154.20	1,339.96	0.77	0.75	-1.59	1.76	295.42	389,070.41	821,965.20
1,430.00	0.10	167.50	1,429.96	0.62	0.61	-1.54	1.65	291.56	389,070.27	821,965.25
1,519.00	0.10	211.20	1,518.96	0.48	0.46	-1.56	1.63	286.59	389,070.12	821,965.23
1,609.00	0.10	218.80	1,608.96	0.35	0.34	-1.65	1.68	281.52	389,070.00	821,965.14
1,699.00	0.00	295.50	1,698.96	0.29	0.27	-1.70	1.72	279.19	389,069.93	821,965.09



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)	
1,788.00	0.10	182.80	1,787.96	0.21	0.20	-1.70	1.71	276.61	389,069.86	821,965.09	
1,878.00	0.20	187.30	1,877.96	-0.02	-0.04	-1.73	1.73	268.77	389,069.62	821,965.06	
1,967.00	0.10	166.70	1,966.96	-0.25	-0.27	-1.73	1.75	261.23	389,069.39	821,965.06	
2,057.00	0.10	107.60	2,056.96	-0.35	-0.37	-1.63	1.68	257.36	389,069.29	821,965.16	
2,146.00	0.60	291.90	2,145.96	-0.20	-0.22	-1.99	2.00	263.80	389,069.44	821,964.80	
2,235.00	1.80	276.20	2,234.94	0.14	0.11	-3.82	3.82	271.63	389,069.77	821,962.97	
2,325.00	2.80	274.20	2,324.86	0.49	0.42	-7.41	7.42	273.26	389,070.08	821,959.38	
2,414.00	2.80	273.00	2,413.76	0.80	0.69	-11.75	11.77	273.38	389,070.35	821,955.04	
2,504.00	3.10	275.80	2,503.64	1.20	1.06	-16.37	16.40	273.69	389,070.72	821,950.42	
2,593.00	3.40	277.30	2,592.50	1.82	1.63	-21.38	21.44	274.37	389,071.29	821,945.41	
2,682.00	3.40	280.40	2,681.34	2.68	2.45	-26.59	26.71	275.26	389,072.11	821,940.20	
2,772.00	3.40	282.00	2,771.18	3.76	3.48	-31.83	32.02	276.24	389,073.14	821,934.96	
2,861.00	3.80	278.30	2,860.01	4.78	4.46	-37.33	37.59	276.81	389,074.12	821,929.46	
2,950.00	4.20	274.70	2,948.79	5.53	5.15	-43.50	43.80	276.75	389,074.81	821,923.29	
3,040.00	4.20	275.40	3,038.55	6.17	5.73	-50.06	50.39	276.53	389,075.39	821,916.73	
3,129.00	4.30	273.70	3,127.30	6.75	6.25	-56.64	56.98	276.30	389,075.91	821,910.15	
3,218.00	4.40	272.70	3,216.05	7.18	6.63	-63.37	63.72	275.97	389,076.29	821,903.42	
3,307.00	4.30	274.00	3,304.79	7.63	7.02	-70.11	70.46	275.72	389,076.68	821,896.68	
3,396.00	3.70	269.90	3,393.57	7.92	7.25	-76.31	76.66	275.43	389,076.91	821,890.48	
3,485.00	3.80	261.30	3,482.38	7.51	6.80	-82.10	82.38	274.73	389,076.46	821,884.69	
3,575.00	3.60	265.70	3,572.20	6.90	6.14	-87.87	88.08	273.99	389,075.80	821,878.92	
3,664.00	3.40	267.00	3,661.03	6.60	5.79	-93.29	93.47	273.55	389,075.45	821,873.50	
3,753.00	4.00	255.70	3,749.84	5.75	4.88	-98.93	99.05	272.83	389,074.54	821,867.86	
3,843.00	4.80	251.10	3,839.58	3.81	2.89	-105.54	105.58	271.57	389,072.55	821,861.25	
3,932.00	4.70	249.40	3,928.27	1.38	0.40	-112.47	112.47	270.20	389,070.06	821,854.32	
4,022.00	3.90	251.00	4,018.02	-0.86	-1.89	-118.82	118.83	269.09	389,067.77	821,847.97	
4,111.00	3.70	253.10	4,106.82	-2.63	-3.71	-124.43	124.48	268.29	389,065.95	821,842.36	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)	
4,200.00	5.20	251.60	4,195.55	-4.68	-5.82	-131.00	131.13	267.45	389,063.84	821,835.79	
4,290.00	6.10	250.20	4,285.11	-7.51	-8.73	-139.37	139.64	266.42	389,060.93	821,827.42	
4,379.00	5.80	249.70	4,373.63	-10.60	-11.89	-148.04	148.52	265.41	389,057.77	821,818.75	
4,468.00	5.70	249.50	4,462.19	-13.63	-15.00	-156.40	157.11	264.52	389,054.66	821,810.39	
4,558.00	5.00	248.60	4,551.79	-16.56	-18.00	-164.23	165.22	263.75	389,051.66	821,802.56	
4,647.00	4.90	241.20	4,640.46	-19.75	-21.24	-171.18	172.49	262.93	389,048.42	821,795.61	
4,736.00	5.60	241.40	4,729.09	-23.60	-25.15	-178.32	180.08	261.97	389,044.51	821,788.47	
4,825.00	5.50	240.30	4,817.67	-27.72	-29.34	-185.84	188.14	261.03	389,040.32	821,780.95	
4,915.00	4.80	240.00	4,907.31	-31.68	-33.36	-192.84	195.71	260.18	389,036.30	821,773.95	
5,004.00	4.30	237.90	4,996.03	-35.26	-37.00	-198.90	202.31	259.46	389,032.66	821,767.89	
5,094.00	3.90	240.00	5,085.80	-38.54	-40.32	-204.40	208.34	258.84	389,029.34	821,762.39	
5,183.00	4.00	243.10	5,174.59	-41.41	-43.24	-209.79	214.20	258.35	389,026.42	821,757.00	
5,272.00	3.70	242.30	5,263.39	-44.10	-45.98	-215.11	219.96	257.93	389,023.68	821,751.68	
5,361.00	3.90	247.20	5,352.19	-46.56	-48.49	-220.44	225.71	257.59	389,021.17	821,746.35	
5,451.00	4.30	252.00	5,441.96	-48.74	-50.72	-226.47	232.08	257.38	389,018.94	821,740.32	
5,540.00	5.10	253.90	5,530.66	-50.81	-52.84	-233.44	239.35	257.24	389,016.82	821,733.35	
5,630.00	6.50	253.40	5,620.20	-53.29	-55.41	-242.17	248.43	257.11	389,014.25	821,724.62	
5,719.00	8.30	254.00	5,708.45	-56.41	-58.62	-253.17	259.87	256.96	389,011.04	821,713.62	
5,808.00	9.50	251.90	5,796.38	-60.35	-62.67	-266.33	273.60	256.76	389,006.99	821,700.46	
5,898.00	10.40	252.10	5,885.02	-65.02	-67.48	-281.12	289.10	256.50	389,002.18	821,685.67	
5,987.00	10.80	251.10	5,972.51	-70.05	-72.65	-296.65	305.42	256.24	388,997.01	821,670.14	
6,077.00	11.10	250.80	6,060.87	-75.49	-78.23	-312.81	322.44	255.96	388,991.43	821,653.98	
6,166.00	11.60	248.60	6,148.13	-81.43	-84.31	-329.23	339.86	255.64	388,985.35	821,637.56	
6,255.00	11.30	247.90	6,235.35	-87.83	-90.85	-345.64	357.38	255.27	388,978.81	821,621.15	
6,344.00	11.00	249.10	6,322.67	-94.00	-97.16	-361.65	374.48	254.96	388,972.50	821,605.14	
6,434.00	11.10	248.90	6,411.01	-100.05	-103.35	-377.76	391.64	254.70	388,966.31	821,589.03	
6,523.00	11.40	248.10	6,498.30	-106.27	-109.71	-393.91	408.90	254.44	388,959.95	821,572.88	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
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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)	
6,612.00	11.70	247.40	6,585.49	-112.87	-116.46	-410.40	426.61	254.16	388,953.20	821,556.39	
6,701.00	11.90	247.20	6,672.61	-119.75	-123.48	-427.19	444.68	253.88	388,946.18	821,539.60	
6,791.00	12.30	246.20	6,760.61	-127.06	-130.95	-444.52	463.41	253.59	388,938.71	821,522.27	
6,880.00	12.70	245.50	6,847.50	-134.79	-138.83	-462.10	482.50	253.28	388,930.83	821,504.69	
6,970.00	12.40	249.00	6,935.35	-142.20	-146.40	-480.12	501.94	253.04	388,923.26	821,486.67	
7,059.00	12.10	251.60	7,022.33	-148.41	-152.76	-497.89	520.80	252.94	388,916.90	821,468.90	
7,148.00	11.90	250.50	7,109.38	-154.27	-158.77	-515.39	539.29	252.88	388,910.89	821,451.40	
7,237.00	12.20	250.10	7,196.42	-160.38	-165.04	-532.89	557.86	252.79	388,904.62	821,433.90	
7,327.00	12.20	249.00	7,284.39	-166.87	-171.68	-550.70	576.85	252.69	388,897.98	821,416.09	
7,416.00	11.50	250.10	7,371.49	-173.11	-178.07	-567.83	595.09	252.59	388,891.59	821,398.96	
7,506.00	11.20	250.00	7,459.73	-179.01	-184.11	-584.48	612.79	252.52	388,885.55	821,382.31	
7,595.00	10.10	252.90	7,547.20	-184.12	-189.37	-600.06	629.23	252.49	388,880.29	821,366.73	
7,685.00	9.70	255.30	7,635.86	-188.24	-193.61	-614.93	644.69	252.52	388,876.05	821,351.86	
7,774.00	9.50	255.50	7,723.61	-191.85	-197.35	-629.30	659.52	252.59	388,872.31	821,337.49	
7,863.00	9.70	255.30	7,811.37	-195.47	-201.09	-643.66	674.34	252.65	388,868.57	821,323.13	
7,952.00	9.40	255.20	7,899.13	-199.10	-204.85	-657.94	689.09	252.71	388,864.81	821,308.85	
8,041.00	8.90	255.80	7,987.00	-202.53	-208.40	-671.64	703.23	252.76	388,861.26	821,295.15	
8,131.00	8.40	255.40	8,075.98	-205.78	-211.76	-684.75	716.75	252.82	388,857.90	821,282.04	
8,220.00	8.20	253.40	8,164.04	-209.12	-215.21	-697.12	729.59	252.84	388,854.45	821,269.67	
8,309.00	8.20	250.50	8,252.13	-212.95	-219.15	-709.19	742.28	252.83	388,850.51	821,257.60	
8,398.00	7.70	249.70	8,340.28	-217.04	-223.33	-720.77	754.57	252.78	388,846.33	821,246.02	
8,488.00	8.20	250.30	8,429.41	-221.19	-227.59	-732.46	767.01	252.74	388,842.07	821,234.33	
8,577.00	8.70	249.20	8,517.45	-225.61	-232.12	-744.73	780.07	252.69	388,837.54	821,222.06	
8,666.00	8.70	248.60	8,605.42	-230.35	-236.97	-757.29	793.50	252.62	388,832.69	821,209.50	
8,755.00	8.30	247.50	8,693.45	-235.16	-241.88	-769.49	806.61	252.55	388,827.78	821,197.30	
8,845.00	8.20	247.70	8,782.51	-239.97	-246.80	-781.43	819.48	252.47	388,822.86	821,185.36	
8,934.00	8.90	250.10	8,870.52	-244.62	-251.55	-793.78	832.68	252.42	388,818.11	821,173.01	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)	
9,023.00	9.10	251.40	8,958.43	-249.09	-256.14	-806.92	846.60	252.39	388,813.52	821,159.87	
9,113.00	8.90	250.20	9,047.32	-253.60	-260.77	-820.22	860.67	252.36	388,808.89	821,146.57	
9,202.00	8.70	250.00	9,135.27	-258.12	-265.40	-833.02	874.28	252.33	388,804.26	821,133.77	
9,291.00	8.00	248.70	9,223.33	-262.57	-269.96	-845.12	887.19	252.28	388,799.70	821,121.67	
9,381.00	8.20	248.30	9,312.43	-267.12	-274.60	-856.91	899.84	252.23	388,795.06	821,109.88	
9,470.00	8.20	250.10	9,400.52	-271.52	-279.11	-868.78	912.51	252.19	388,790.55	821,098.01	
9,560.00	7.60	250.40	9,489.67	-275.60	-283.29	-880.42	924.88	252.16	388,786.37	821,086.37	
9,649.00	7.30	251.00	9,577.92	-279.32	-287.11	-891.31	936.41	252.15	388,782.55	821,075.48	
9,739.00	6.50	249.90	9,667.26	-282.84	-290.72	-901.50	947.22	252.13	388,778.94	821,065.29	
9,828.00	6.40	251.70	9,755.70	-286.05	-294.01	-910.94	957.21	252.11	388,775.65	821,055.85	
9,914.00	8.60	252.10	9,840.96	-289.44	-297.49	-921.61	968.44	252.11	388,772.17	821,045.18	
10,004.00	8.70	256.50	9,929.94	-292.98	-301.15	-934.64	981.95	252.14	388,768.51	821,032.15	
10,093.00	8.00	256.60	10,017.99	-295.88	-304.15	-947.21	994.84	252.20	388,765.51	821,019.58	
10,183.00	7.40	256.20	10,107.18	-298.61	-306.99	-958.93	1,006.87	252.25	388,762.67	821,007.86	
10,273.00	6.70	257.20	10,196.50	-301.06	-309.53	-969.68	1,017.88	252.30	388,760.13	820,997.11	
10,362.00	6.30	258.20	10,284.93	-303.12	-311.68	-979.52	1,027.91	252.35	388,757.98	820,987.27	
10,451.00	6.90	255.80	10,373.34	-305.35	-313.99	-989.48	1,038.11	252.39	388,755.67	820,977.31	
10,540.00	6.90	258.00	10,461.69	-307.68	-316.42	-999.89	1,048.76	252.44	388,753.24	820,966.90	
10,630.00	5.40	262.80	10,551.17	-309.25	-318.07	-1,009.38	1,058.31	252.51	388,751.59	820,957.41	
10,719.00	5.50	257.60	10,639.77	-310.62	-319.51	-1,017.70	1,066.68	252.57	388,750.15	820,949.09	
10,808.00	4.40	258.00	10,728.44	-312.18	-321.14	-1,025.21	1,074.33	252.61	388,748.52	820,941.58	
10,898.00	3.30	262.20	10,818.23	-313.20	-322.21	-1,031.15	1,080.32	252.65	388,747.45	820,935.64	
10,987.00	3.40	266.80	10,907.08	-313.65	-322.70	-1,036.33	1,085.41	252.70	388,746.96	820,930.46	
11,076.00	4.00	269.30	10,995.90	-313.78	-322.89	-1,042.06	1,090.94	252.78	388,746.77	820,924.73	
11,166.00	4.10	273.20	11,085.67	-313.58	-322.74	-1,048.42	1,096.97	252.89	388,746.92	820,918.37	
11,255.00	3.90	272.30	11,174.45	-313.23	-322.45	-1,054.62	1,102.81	253.00	388,747.21	820,912.17	
11,345.00	3.30	271.90	11,264.28	-312.97	-322.24	-1,060.26	1,108.15	253.09	388,747.42	820,906.53	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)	
11,434.00	2.90	278.50	11,353.15	-312.51	-321.82	-1,065.05	1,112.61	253.19	388,747.84	820,901.74	
11,523.00	2.70	279.20	11,442.04	-311.81	-321.15	-1,069.35	1,116.53	253.28	388,748.51	820,897.44	
11,613.00	2.30	271.50	11,531.95	-311.39	-320.77	-1,073.24	1,120.15	253.36	388,748.89	820,893.55	
11,702.00	2.10	264.00	11,620.89	-311.48	-320.89	-1,076.65	1,123.45	253.40	388,748.77	820,890.14	
11,792.00	2.60	251.30	11,710.81	-312.28	-321.72	-1,080.22	1,127.11	253.42	388,747.94	820,886.57	
11,881.00	3.50	233.50	11,799.69	-314.50	-323.98	-1,084.32	1,131.69	253.36	388,745.68	820,882.47	
11,970.00	2.70	232.70	11,888.56	-317.36	-326.87	-1,088.17	1,136.20	253.28	388,742.79	820,878.62	
12,060.00	2.30	234.60	11,978.47	-319.66	-329.20	-1,091.33	1,139.90	253.21	388,740.46	820,875.46	
12,149.00	1.70	333.70	12,067.44	-319.49	-329.05	-1,093.37	1,141.81	253.25	388,740.61	820,873.42	
12,229.00	1.30	228.10	12,147.42	-319.02	-328.59	-1,094.57	1,142.83	253.29	388,741.07	820,872.22	
12,297.00	1.30	211.00	12,215.40	-320.19	-329.77	-1,095.54	1,144.10	253.25	388,739.89	820,871.25	
12,369.00	2.30	315.40	12,287.38	-319.85	-329.44	-1,096.98	1,145.38	253.28	388,740.22	820,869.81	
12,464.00	18.90	353.00	12,380.48	-303.07	-312.68	-1,100.22	1,143.79	254.13	388,756.98	820,866.57	
12,558.00	23.90	358.00	12,467.98	-268.88	-278.52	-1,102.74	1,137.37	255.83	388,791.14	820,864.05	
12,653.00	30.50	359.70	12,552.42	-225.49	-235.13	-1,103.54	1,128.31	257.97	388,834.53	820,863.25	
12,747.00	41.10	353.30	12,628.58	-170.74	-180.41	-1,107.28	1,121.88	260.75	388,889.25	820,859.51	
12,841.00	52.50	357.70	12,692.84	-102.52	-112.23	-1,112.40	1,118.05	264.24	388,957.43	820,854.39	
12,934.00	67.10	4.90	12,739.54	-22.49	-32.18	-1,110.21	1,110.67	268.34	389,037.48	820,856.58	
13,050.00	69.90	6.40	12,782.05	84.80	75.21	-1,099.57	1,102.14	273.91	389,144.87	820,867.22	
Pro MWD First ST01 Survey: 13050' MD											
13,145.00	85.50	5.60	12,802.23	176.74	167.24	-1,089.92	1,102.67	278.72	389,236.90	820,876.87	
13,248.00	90.80	3.30	12,805.55	279.26	269.83	-1,081.93	1,115.07	284.00	389,339.49	820,884.86	
13,343.00	92.00	0.70	12,803.23	374.13	364.74	-1,078.62	1,138.62	288.68	389,434.40	820,888.17	
13,438.00	90.10	353.10	12,801.49	468.95	459.51	-1,083.75	1,177.14	292.98	389,529.17	820,883.04	
13,532.00	91.50	1.60	12,800.17	562.78	553.31	-1,088.10	1,220.70	296.95	389,622.97	820,878.69	
13,626.00	90.80	1.20	12,798.29	656.71	647.26	-1,085.80	1,264.08	300.80	389,716.92	820,880.99	
13,720.00	90.40	3.00	12,797.30	750.60	741.19	-1,082.36	1,311.81	304.40	389,810.85	820,884.43	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)	
13,814.00	89.10	3.00	12,797.71	844.43	835.06	-1,077.44	1,363.15	307.78	389,904.72	820,889.35	
13,909.00	90.10	2.40	12,798.38	939.27	929.95	-1,072.96	1,419.88	310.92	389,999.61	820,893.83	
14,003.00	92.20	1.40	12,796.49	1,033.17	1,023.87	-1,069.85	1,480.84	313.74	390,093.53	820,896.94	
14,098.00	92.50	0.40	12,792.59	1,128.06	1,118.78	-1,068.36	1,546.95	316.32	390,188.44	820,898.43	
14,192.00	92.30	1.20	12,788.66	1,221.95	1,212.68	-1,067.04	1,615.30	318.66	390,282.34	820,899.75	
14,288.00	90.90	0.30	12,785.98	1,317.89	1,308.64	-1,065.79	1,687.73	320.84	390,378.30	820,901.00	
14,382.00	89.90	358.80	12,785.32	1,411.88	1,402.63	-1,066.53	1,762.06	322.75	390,472.29	820,900.26	
14,475.00	89.30	355.40	12,785.97	1,504.78	1,495.49	-1,071.23	1,839.57	324.39	390,565.15	820,895.56	
14,571.00	91.90	354.80	12,784.96	1,600.49	1,591.13	-1,079.43	1,922.72	325.85	390,660.79	820,887.36	
14,665.00	90.70	349.20	12,782.83	1,693.62	1,684.15	-1,092.50	2,007.47	327.03	390,753.81	820,874.29	
14,761.00	90.40	346.80	12,781.91	1,787.68	1,778.04	-1,112.46	2,097.38	327.97	390,847.70	820,854.33	
14,855.00	92.60	349.10	12,779.45	1,879.73	1,869.92	-1,132.08	2,185.91	328.81	390,939.58	820,834.71	
14,950.00	93.50	353.00	12,774.39	1,973.55	1,963.62	-1,146.83	2,273.99	329.71	391,033.28	820,819.96	
15,044.00	92.50	354.10	12,769.47	2,066.91	2,056.89	-1,157.38	2,360.15	330.63	391,126.55	820,809.41	
15,138.00	92.20	356.10	12,765.62	2,160.55	2,150.46	-1,165.40	2,445.95	331.55	391,220.12	820,801.39	
15,232.00	87.60	352.50	12,765.78	2,254.12	2,243.96	-1,174.73	2,532.85	332.37	391,313.62	820,792.06	
15,327.00	91.50	353.40	12,766.53	2,348.48	2,338.22	-1,186.39	2,621.98	333.10	391,407.88	820,780.40	
15,421.00	89.90	356.80	12,765.38	2,442.18	2,431.85	-1,194.42	2,709.34	333.84	391,501.51	820,772.37	
15,515.00	90.40	359.70	12,765.13	2,536.15	2,525.80	-1,197.29	2,795.20	334.64	391,595.46	820,769.50	
15,609.00	92.00	1.10	12,763.16	2,630.11	2,619.77	-1,196.63	2,880.12	335.45	391,689.43	820,770.16	
15,703.00	92.00	3.70	12,759.88	2,723.92	2,713.62	-1,192.70	2,964.16	336.27	391,783.28	820,774.09	
15,798.00	89.10	0.50	12,758.97	2,818.80	2,808.53	-1,189.22	3,049.93	337.05	391,878.19	820,777.57	
15,893.00	89.00	2.70	12,760.55	2,913.72	2,903.47	-1,186.57	3,136.57	337.77	391,973.13	820,780.22	
15,987.00	88.40	1.10	12,762.68	3,007.61	2,997.39	-1,183.45	3,222.56	338.45	392,067.05	820,783.34	
16,081.00	89.90	0.80	12,764.07	3,101.56	3,091.37	-1,181.89	3,309.59	339.08	392,161.03	820,784.90	
16,176.00	89.70	359.50	12,764.40	3,196.55	3,186.36	-1,181.64	3,398.41	339.65	392,256.02	820,785.15	
16,270.00	89.50	357.90	12,765.06	3,290.54	3,280.33	-1,183.77	3,487.39	340.16	392,349.99	820,783.02	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)	
16,364.00	91.60	359.80	12,764.16	3,384.52	3,374.30	-1,185.66	3,576.55	340.64	392,443.96	820,781.13	
16,459.00	89.80	358.60	12,763.00	3,479.51	3,469.28	-1,186.99	3,666.72	341.11	392,538.94	820,779.80	
16,553.00	88.40	358.10	12,764.47	3,573.47	3,563.23	-1,189.69	3,756.59	341.54	392,632.89	820,777.10	
16,648.00	88.90	0.60	12,766.71	3,668.44	3,658.19	-1,190.77	3,847.11	341.97	392,727.85	820,776.02	
16,741.00	89.90	359.70	12,767.69	3,761.43	3,751.18	-1,190.53	3,935.57	342.39	392,820.84	820,776.26	
16,836.00	92.70	0.90	12,765.53	3,856.38	3,846.14	-1,190.03	4,026.04	342.81	392,915.80	820,776.76	
16,930.00	90.60	0.30	12,762.82	3,950.32	3,940.09	-1,189.05	4,115.60	343.21	393,009.75	820,777.74	
17,024.00	89.40	359.00	12,762.82	4,044.31	4,034.09	-1,189.62	4,205.84	343.57	393,103.75	820,777.17	
17,118.00	88.40	359.80	12,764.63	4,138.29	4,128.06	-1,190.61	4,296.33	343.91	393,197.72	820,776.18	
17,214.00	90.00	1.80	12,765.97	4,234.25	4,224.04	-1,189.27	4,388.26	344.28	393,293.70	820,777.52	
17,309.00	90.80	0.70	12,765.31	4,329.20	4,319.01	-1,187.19	4,479.20	344.63	393,388.67	820,779.60	
17,404.00	90.80	0.60	12,763.98	4,424.18	4,413.99	-1,186.12	4,570.58	344.96	393,483.65	820,780.67	
17,498.00	91.60	0.40	12,762.01	4,518.14	4,507.97	-1,185.30	4,661.19	345.27	393,577.63	820,781.49	
17,592.00	91.80	1.00	12,759.22	4,612.08	4,601.92	-1,184.15	4,751.83	345.57	393,671.58	820,782.64	
17,687.00	88.30	1.10	12,759.14	4,707.03	4,696.89	-1,182.41	4,843.43	345.87	393,766.55	820,784.38	
17,783.00	87.80	0.80	12,762.41	4,802.94	4,792.82	-1,180.82	4,936.14	346.16	393,862.48	820,785.97	
17,876.00	89.10	2.80	12,764.92	4,895.83	4,885.73	-1,177.90	5,025.72	346.45	393,955.39	820,788.89	
17,969.00	90.70	4.10	12,765.08	4,988.60	4,978.56	-1,172.30	5,114.72	346.75	394,048.22	820,794.49	
18,065.00	90.10	1.50	12,764.41	5,084.43	5,074.43	-1,167.61	5,207.03	347.04	394,144.09	820,799.18	
18,160.00	89.30	358.20	12,764.91	5,179.41	5,169.42	-1,167.86	5,299.70	347.27	394,239.08	820,798.93	
18,254.00	90.30	358.40	12,765.24	5,273.39	5,263.37	-1,170.65	5,391.99	347.46	394,333.03	820,796.14	
18,349.00	90.40	358.90	12,764.66	5,368.38	5,358.35	-1,172.89	5,485.21	347.65	394,428.01	820,793.90	
18,443.00	91.30	0.30	12,763.27	5,462.36	5,452.33	-1,173.54	5,577.19	347.85	394,521.99	820,793.25	
18,536.00	89.80	356.10	12,762.37	5,555.31	5,545.26	-1,176.46	5,668.68	348.02	394,614.92	820,790.33	
18,632.00	90.60	358.40	12,762.04	5,651.23	5,641.14	-1,181.07	5,763.45	348.17	394,710.80	820,785.72	
18,727.00	90.20	353.40	12,761.37	5,746.01	5,735.86	-1,187.86	5,857.57	348.30	394,805.52	820,778.93	
18,822.00	91.70	355.40	12,759.80	5,840.61	5,830.39	-1,197.13	5,952.02	348.40	394,900.05	820,769.66	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)	
18,917.00	92.80	357.30	12,756.07	5,935.39	5,925.12	-1,203.17	6,046.04	348.52	394,994.78	820,763.62	
19,011.00	92.80	359.90	12,751.48	6,029.26	6,018.97	-1,205.46	6,138.50	348.67	395,088.63	820,761.33	
19,107.00	88.90	358.50	12,750.05	6,125.23	6,114.93	-1,206.80	6,232.87	348.84	395,184.59	820,759.99	
19,201.00	89.00	358.80	12,751.77	6,219.20	6,208.89	-1,209.02	6,325.50	348.98	395,278.55	820,757.77	
19,296.00	87.70	357.60	12,754.51	6,314.13	6,303.80	-1,212.00	6,419.25	349.12	395,373.46	820,754.79	
19,391.00	89.60	359.00	12,756.75	6,409.08	6,398.72	-1,214.82	6,513.02	349.25	395,468.38	820,751.97	
19,487.00	93.60	3.80	12,754.07	6,504.94	6,494.61	-1,212.48	6,606.82	349.43	395,564.27	820,754.31	
19,582.00	91.30	0.20	12,750.00	6,599.74	6,589.44	-1,209.17	6,699.46	349.60	395,659.10	820,757.62	
19,675.00	91.00	2.10	12,748.14	6,692.68	6,682.40	-1,207.30	6,790.58	349.76	395,752.06	820,759.49	
19,770.00	91.40	6.90	12,746.15	6,787.27	6,777.06	-1,199.85	6,882.45	349.96	395,846.72	820,766.94	
19,864.00	90.90	5.60	12,744.26	6,880.60	6,870.48	-1,189.62	6,972.71	350.18	395,940.14	820,777.17	
19,959.00	88.60	1.80	12,744.68	6,975.32	6,965.25	-1,183.49	7,065.09	350.36	396,034.91	820,783.30	
20,052.00	90.80	359.50	12,745.16	7,068.29	7,058.24	-1,182.44	7,156.59	350.49	396,127.90	820,784.35	
20,147.00	92.60	358.70	12,742.34	7,163.24	7,153.18	-1,183.93	7,250.49	350.60	396,222.84	820,782.86	
20,241.00	92.20	358.60	12,738.41	7,257.14	7,247.07	-1,186.14	7,343.50	350.70	396,316.73	820,780.65	
20,336.00	91.80	359.80	12,735.09	7,352.08	7,342.00	-1,187.47	7,437.41	350.81	396,411.66	820,779.32	
20,430.00	90.40	0.10	12,733.29	7,446.06	7,435.98	-1,187.55	7,530.21	350.93	396,505.64	820,779.24	
20,524.00	87.70	357.90	12,734.85	7,540.03	7,529.94	-1,189.19	7,623.26	351.03	396,599.60	820,777.60	
20,618.00	89.50	358.40	12,737.14	7,633.97	7,623.86	-1,192.22	7,716.51	351.11	396,693.52	820,774.57	
20,713.00	89.60	357.10	12,737.89	7,728.92	7,718.78	-1,195.95	7,810.88	351.19	396,788.44	820,770.84	
20,808.00	89.00	357.60	12,739.05	7,823.85	7,813.67	-1,200.34	7,905.33	351.27	396,883.33	820,766.45	
20,903.00	90.30	356.40	12,739.63	7,918.75	7,908.53	-1,205.32	7,999.86	351.33	396,978.19	820,761.47	
20,998.00	88.30	356.60	12,740.79	8,013.61	8,003.34	-1,211.11	8,094.46	351.39	397,073.00	820,755.68	
21,094.00	92.60	358.20	12,740.04	8,109.52	8,099.22	-1,215.47	8,189.91	351.47	397,168.88	820,751.32	
21,189.00	94.30	358.60	12,734.32	8,204.32	8,194.00	-1,218.12	8,284.05	351.54	397,263.66	820,748.67	
21,283.00	93.70	359.70	12,727.76	8,298.09	8,287.76	-1,219.51	8,377.01	351.63	397,357.42	820,747.28	
21,376.00	91.10	359.20	12,723.87	8,391.00	8,380.67	-1,220.40	8,469.06	351.71	397,450.33	820,746.39	



ProDirectional Survey Report



Company: Marathon Oil
Project: Lea County, NM(NAD 83)
Site: Mammoth 1 WA Fed Com
Well: No. 2H
Wellbore: ST01
Design: MWD-13050-22930', PTB: 22995'

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3306.00usft
MD Reference: Well @ 3306.00usft
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)
21,471.00	91.10	359.30	12,722.04	8,485.98	8,475.64	-1,221.64	8,563.23	351.80	397,545.30	820,745.15
21,565.00	91.90	359.70	12,719.58	8,579.95	8,569.61	-1,222.46	8,656.36	351.88	397,639.27	820,744.33
21,660.00	89.90	0.40	12,718.09	8,674.93	8,664.59	-1,222.38	8,750.39	351.97	397,734.25	820,744.41
21,754.00	87.90	0.50	12,719.90	8,768.89	8,758.56	-1,221.64	8,843.35	352.06	397,828.22	820,745.15
21,848.00	89.70	0.40	12,721.86	8,862.85	8,852.54	-1,220.90	8,936.33	352.15	397,922.20	820,745.89
21,944.00	89.50	359.80	12,722.53	8,958.85	8,948.53	-1,220.74	9,031.41	352.23	398,018.19	820,746.05
22,038.00	91.30	0.40	12,721.88	9,052.83	9,042.53	-1,220.57	9,124.53	352.31	398,112.19	820,746.22
22,133.00	90.20	0.70	12,720.64	9,147.81	9,137.51	-1,219.66	9,218.55	352.40	398,207.17	820,747.13
22,226.00	90.00	0.50	12,720.47	9,240.79	9,230.51	-1,218.69	9,310.61	352.48	398,300.17	820,748.10
22,321.00	91.10	0.60	12,719.56	9,335.77	9,325.50	-1,217.77	9,404.67	352.56	398,395.16	820,749.02
22,416.00	91.60	1.00	12,717.32	9,430.72	9,420.46	-1,216.45	9,498.68	352.64	398,490.12	820,750.34
22,510.00	88.70	0.40	12,717.08	9,524.69	9,514.44	-1,215.30	9,591.75	352.72	398,584.10	820,751.49
22,604.00	87.80	0.20	12,719.95	9,618.63	9,608.40	-1,214.81	9,684.89	352.79	398,678.06	820,751.98
22,698.00	90.20	359.20	12,721.59	9,712.61	9,702.37	-1,215.30	9,778.19	352.86	398,772.03	820,751.49
22,793.00	91.70	359.00	12,720.01	9,807.59	9,797.35	-1,216.79	9,872.62	352.92	398,867.01	820,750.00
22,887.00	93.30	359.30	12,715.91	9,901.50	9,891.24	-1,218.19	9,965.98	352.98	398,960.90	820,748.60
22,930.00	93.90	358.80	12,713.21	9,944.41	9,934.15	-1,218.90	10,008.65	353.00	399,003.81	820,747.89
Last Survey: 22930' MD										
22,995.00	93.90	358.80	12,708.79	10,009.25	9,998.99	-1,220.25	10,073.17	353.04	399,068.65	820,746.53
PTB: 22995' MD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
13,050.00	12,782.05	75.21	-1,099.57	Pro MWD First ST01 Survey: 13050' MD
22,930.00	12,713.21	9,934.15	-1,218.90	Last Survey: 22930' MD
22,995.00	12,708.79	9,998.99	-1,220.25	PTB: 22995' MD

Submit a Copy To Appropriate District Office
 District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-025-46130
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Mammoth 1 WA Fed Com
8. Well Number 2H
9. OGRID Number 372098
10. Pool name or Wildcat Hardin Tank; Wolfcamp
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3281' GR

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator Marathon Oil Permian LLC	
3. Address of Operator 990 Town & Country Blvd. Houston, TX 77024	
4. Well Location Unit Letter <u>N</u> : <u>448</u> feet from the <u>South</u> line and <u>1479</u> feet from the <u>West</u> line Section <u>1</u> Township <u>26S</u> Range <u>34E</u> NMPM County <u>Lea</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3281' GR	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: Completions ☒	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

7/4/2022 - Start Frac prep operations

7/8/2022 - MIRU.

7/9/2022 - Pressure test production casing to 12980 psi for 30 min, held, good test.

7/13/2022 - Start frac stages 1-41 with 2 short per foot for a total of 984 shots, 0.41-in. in size using 25,263,149 lbs of proppant. Stimulated with 399 bbls of 15% HCl acid and using 19,750,164 gal of brackish water. Total perf interval from 12898' to 22900'.

7/26/2022 - Finish frac last stage.

8/29/2022 - Well ready to produce. Opene well commence flowback. Turn to production.

Marathon Oil Permian LLC would like to request a tubing exception for this well.

Spud Date:

10/18/2019

Rig Release Date:

2/3/2020

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

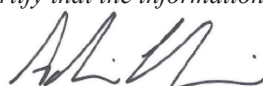
SIGNATURE Adrian Covarrubias TITLE Regulatory Compliance Representative DATE 9/22/2022

Type or print name Adrian Covarrubias E-mail address: acovarrubias@marathonoil.com PHONE: 713-296-3368

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505		State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505			Form C-105 Revised April 3, 2017					
WELL COMPLETION OR RECOMPLETION REPORT AND LOG								1. WELL API NO. 30-025-46130		
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)								5. Lease Name or Unit Agreement Name Mammoth 1 WA Federal Com		
								6. Well Number: 2H		
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER										
8. Name of Operator Marathon Oil Permian LLC							9. OGRID 372098			
10. Address of Operator 990 Town & Country Blvd. Houston, TX 77024							11. Pool name or Wildcat Hardin Tank; Wolfcamp			
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	N	1	26S	34E		448	S	1479	W	LEA
BH:	D	36	25S	34E		102	N	347	W	LEA
13. Date Spudded 10/18/2019	14. Date T.D. Reached 1/30/2020		15. Date Rig Released 2/3/2020		16. Date Completed (Ready to Produce) 8/29/2022			17. Elevations (DF and RKB, RT, GR, etc.) 3281 GR		
18. Total Measured Depth of Well 22995'			19. Plug Back Measured Depth 22969'		20. Was Directional Survey Made? Yes			21. Type Electric and Other Logs Run GR		
22. Producing Interval(s), of this completion - Top, Bottom, Name 12,898' - 22,900'; Wolfcamp										
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13-3/8"		54.5#, J55, STC		1184'		17-1/2"		1155		
7-5/8"		29.7#, P110, BTC		12278'		9-7/8"		2260		
5-1/2"		23#, P110, TLW		22975'		6-3/4"		1790		
24. LINER RECORD										
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN		25. TUBING RECORD		SIZE		DEPTH SET
26. Perforation record (interval, size, and number) 12,898' - 22,900'; 0.41"; 984 shots						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						12,898' - 22,900'		25,263,149 lbs proppant		
						12,898' - 22,900'		12,569 gal 15% HCl Acid		
						12,898' - 22,900'		19,750,164 gal brackish water		
28. PRODUCTION										
Date First Production 8/29/2022		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Producing				
Date of Test 9/1/2022	Hours Tested 24	Choke Size 36/64	Prod'n For Test Period	Oil - Bbl 1826	Gas - MCF 5284	Water - Bbl. 5060	Gas - Oil Ratio			
Flow Tubing Press.	Casing Pressure 2783	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Sold							30. Test Witnessed By			
31. List Attachments										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.							33. Rig Release Date:			
34. If an on-site burial was used at the well, report the exact location of the on-site burial:										
			Latitude			Longitude			NAD83	
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature			Printed Name			Title			Date	
			Adrian Covarrubias			Regulatory Compliance Rep			9/22/2022	
E-mail Address acovarrubias@marathonoil.com										

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon 5438'	T. Ojo Alamo	T. Penn A"
T. Salt	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt 5128'	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House	T. Leadville
T. Queen	T. Silurian	T. Menefee	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout	T. Elbert
T. San Andres	T. Simpson	T. Mancos	T. McCracken
T. Glorieta	T. McKee	T. Gallup	T. Ignacio Otzte
T. Paddock	T. Ellenburger	Base Greenhorn	T. Granite
T. Blinebry	T. Gr. Wash	T. Dakota	
T. Tubb	T. Delaware Sand	T. Morrison	
T. Drinkard	T. Bone Springs 9386'	T. Todilto	
T. Abo	T. Castile 3633'	T. Entrada	
T. Wolfcamp 12637'	T. Lamar 5407'	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

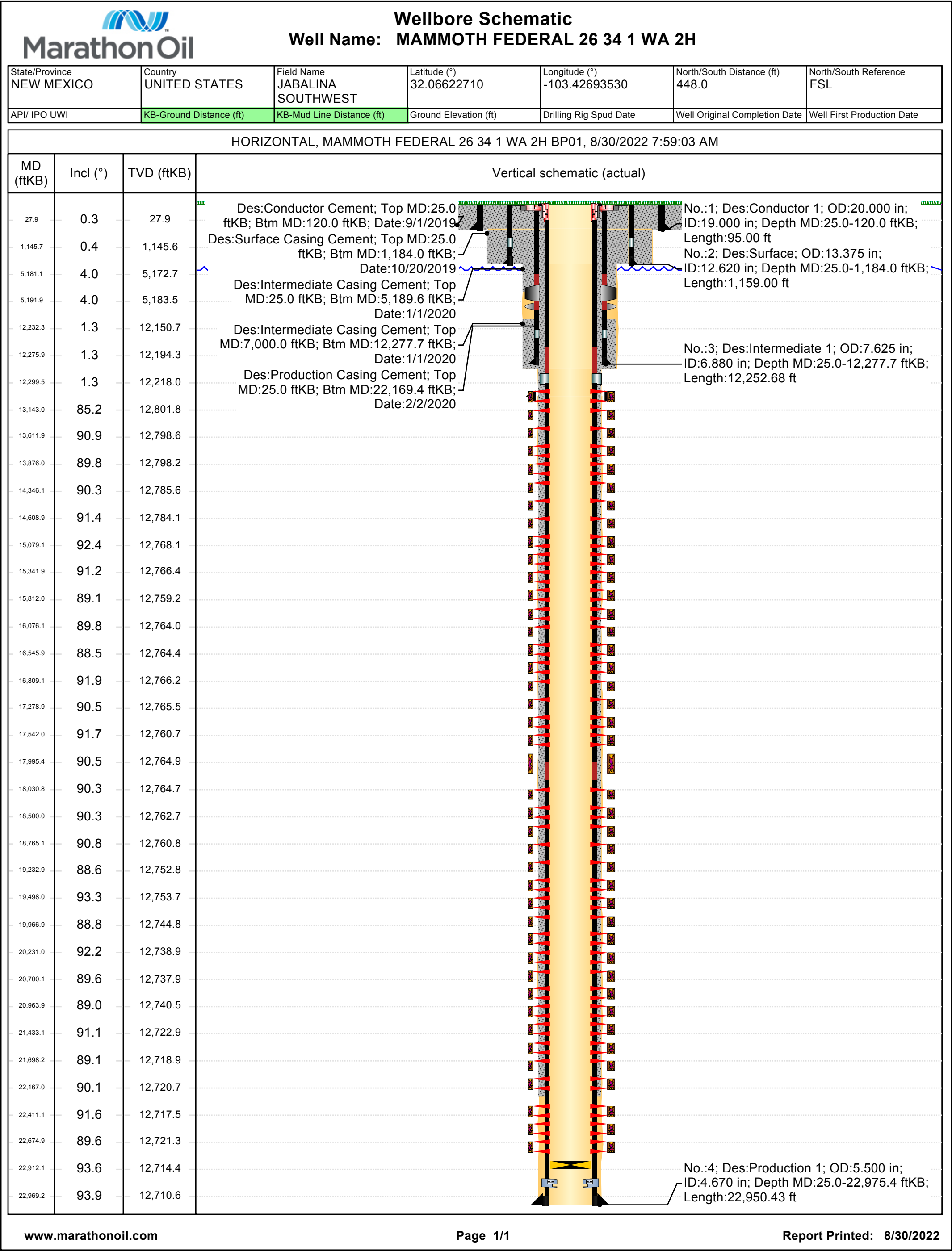
No. 1, from.....to.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology



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Page 1/1

Report Printed: 8/30/2022

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:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

ACKNOWLEDGMENTS

Action 191611

ACKNOWLEDGMENTS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 191611
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
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State of New Mexico
Energy, Minerals and Natural Resources
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1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 191611

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 191611
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 Completion Report within 10 days to NMOCD after BLM approval.	2/28/2023