

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 ResourcesForm C-104
Revised August 1, 2011Oil 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 / 10/17/2021
⁴ API Number 30 - 015-45894	⁵ Pool Name PURPLE SAGE; WOLFCAMP (GAS)	⁶ Pool Code 98220
⁷ Property Code 325396	⁸ Property Name BLUE STEEL 21 WXY FEE	⁹ Well Number 8H

II. ¹⁰ Surface Location

UI or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
D	28	23S	29E		270	NORTH	1255	WEST	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
C	16	23S	29E		301	NORTH	2299	WEST	EDDY
¹² Lse Code	¹³ Producing Method Code	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				
P	F								

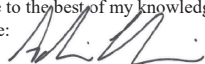
III. Oil and Gas Transporters

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

IV. Well Completion Data

²¹ Spud Date	²² Ready Date	²³ TD	²⁴ PBTB	²⁵ Perforations	²⁶ DHC, MC
8/23/2019	10/11/2021	20202' / 10042'	20143' / 10039'	10,183' - 20,133'	
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17 1/2"	13 3/8", 54.5#, J55, STC	364'	490		
12 1/4"	9 5/8", 40#, J55, LTC	2983'	1075		
8 3/4"	5 1/2", 20#, P110, Roughneck	20187'	4425		

V. Well Test Data

³¹ Date New Oil 10/18/2021	³² Gas Delivery Date 10/17/2021	³³ Test Date 10/20/2021	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure 0	³⁶ Csg. Pressure 1204
³⁷ Choke Size 18/64	³⁸ Oil 178	³⁹ Water 3146	⁴⁰ Gas 294		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		
			Approved by: <i>PATRICIA MARTINEZ</i>		
			Title: <i>PETROLEUM SPECIALIST</i>		
			Approval Date: <i>2/4/2022</i>		
Printed name: Adrian Covarrubias					
Title: Regulatory Professional					
E-mail Address: acovarrubias@marathonoil.com					
Date: 10/21/2021		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: (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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION AS-DRILLED PLAT

¹ API Number 30-015-45894	² Pool Code 98220	³ Pool Name Purple Sage (Wolfcamp)
⁴ Property Code 325396	Property Name Blue Steel 21 WXY Fee	
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁶ Well Number 8H ⁹ Elevation 3000'

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
D	28	23S	29E		270	NORTH	1255	WEST	EDDY

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
C	16	23S	29E		301	NORTH	2299	WEST	EDDY

¹² Dedicated Acres 640.0	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.

CORNER COORDINATES NAD 83, SPCS NM EAST
A - X: 644867.18' / Y: 477568.44'
B - X: 647506.95' / Y: 477578.03'
C - X: 647475.03' / Y: 466934.71'
D - X: 644816.72' / Y: 466932.98'

CORNER COORDINATES NAD 27, SPCS NM EAST
A - X: 603684.20' / Y: 477508.77'
B - X: 606323.97' / Y: 477518.36'
C - X: 606291.75' / Y: 466875.28'
D - X: 603633.45' / Y: 466873.55'

BOTTOM HOLE LOCATION
301' FNL 2299' FWL, SECTION 16
20202' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 647164.43' / Y: 477275.46'
LAT: 32.31163822N / LON: 103.99078019W
NAD 27, SPCS NM EAST
X: 605981.44' / Y: 477215.79'
LAT: 32.31151634N / LON: 103.99028789W

LAST TAKE POINT
330' FNL 2301' FWL, SECTION 16
20173' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 647166.23' / Y: 477246.79'
LAT: 32.31155940N / LON: 103.99077465W
NAD 27, SPCS NM EAST
X: 605983.24' / Y: 477187.12'
LAT: 32.31143752N / LON: 103.99028236W

FIRST TAKE POINT
330' FSL 2304' FWL, SECTION 21
10175' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 647120.86' / Y: 467264.79'
LAT: 32.28412103N / LON: 103.99102466W
NAD 27, SPCS NM EAST
X: 605937.58' / Y: 467205.36'
LAT: 32.28399891N / LON: 103.99053343W

KICK OFF POINT
65' FSL 2281' FWL, SECTION 21
9637' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 647098.44' / Y: 466999.15'
LAT: 32.28399102N / LON: 103.99109995W
NAD 27, SPCS NM EAST
X: 605915.16' / Y: 466939.72'
LAT: 32.28326890N / LON: 103.99060874W

SURFACE HOLE LOCATION
270' FNL 1255' FWL, SECTION 28
0' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 646073.65' / Y: 466663.81'
LAT: 32.28247817N / LON: 103.99441946W
NAD 27, SPCS NM EAST
X: 604890.36' / Y: 466604.39'
LAT: 32.28235605N / LON: 103.99392820W

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
hereby entered by the division.

4/3/2020
Signature Date
Adrian Covarrubias
Printed Name
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.
MARCH 5, 2020
Date of Survey
Signature and Seal of Professional Surveyor:

Certificate Number
LLOYD P. SHORT 21653

Distances/areas relative to NAD 83 Combined Scale Factor: 0.999922 Convergence Angle: 0.18084607°



Marathon Oil Corporation

Blue Steel 21 WXY Fee No. 8H
Eddy County, NM

November 21, 2019

Job# LNM1525419
API# 30-015-45894

Survey Completion Report



Survey Certification Letter

November 22, 2019



Operator Name: Marathon Oil
Well Name: Blue Steel 21 WXY Fee No. 8H
County/Parish: Eddy County,
State: NM
Rig Name: Precision 582
Job Number: LNM1525419

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	411' MD – 20,146' MD	20,202' MD	10/10/19 – 11/01/19	MWD

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

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



Marathon Oil

**Eddy County, NM
Blue Steel 21 WXY Fee
No. 8H
OH**

Survey: ProDirectional

Survey Report

22 November, 2019





ProDirectional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 8H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3027.00usft
Site:	Blue Steel 21 WXY Fee	MD Reference:	Well @ 3027.00usft
Well:	No. 8H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD-162'-20146', PTB: 20202'	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	Blue Steel 21 WXY Fee		
Site Position:		Northing:	466,663.81 usft
From:	Map	Easting:	646,073.65 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.2824782
		Longitude:	-103.9944195
		Grid Convergence:	0.18 °

Well		No. 8H, LNM1525419				
Well Position	+N/-S	0.00 usft	Northing:	466,663.81 usft	Latitude:	32.2824782
	+E/-W	0.00 usft	Easting:	646,073.65 usft	Longitude:	-103.9944195
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,000.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/1/2019	7.02	60.02	47,900.80

Design	MWD-162'-20146', PTB: 20202'			
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	0.17



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey Program **Date** 11/22/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
162.00	375.00	Survey #1 (OH)	MWD+IFR1	OWSG MWD + IFR1
411.00	20,202.00	Survey #2 (OH)	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	466,663.81	646,073.65
162.00	1.20	232.00	161.99	-1.05	-1.04	-1.34	1.70	232.00	466,662.77	646,072.31
259.00	1.00	213.00	258.97	-2.39	-2.38	-2.60	3.52	227.51	466,661.43	646,071.05
351.00	1.20	218.00	350.95	-3.82	-3.81	-3.63	5.26	223.59	466,660.00	646,070.02
375.00	1.20	218.00	374.95	-4.22	-4.21	-3.94	5.76	223.10	466,659.60	646,069.71
411.00	1.50	214.80	410.94	-4.91	-4.89	-4.44	6.61	222.22	466,658.92	646,069.21
Pro MWD First Survey: 411' MD										
502.00	1.30	171.10	501.91	-6.90	-6.89	-4.96	8.49	215.74	466,656.92	646,068.69
592.00	1.90	134.50	591.88	-8.96	-8.94	-3.74	9.69	202.67	466,654.87	646,069.91
685.00	1.50	123.90	684.84	-10.71	-10.70	-1.63	10.83	188.64	466,653.11	646,072.02
779.00	0.80	122.80	778.82	-11.75	-11.75	-0.05	11.75	180.26	466,652.06	646,073.60
871.00	0.80	151.30	870.81	-12.65	-12.66	0.79	12.68	176.41	466,651.15	646,074.44
965.00	0.80	129.00	964.80	-13.64	-13.65	1.62	13.74	173.23	466,650.16	646,075.27
1,057.00	0.80	77.30	1,056.79	-13.90	-13.91	2.74	14.18	168.84	466,649.90	646,076.39
1,147.00	0.80	49.40	1,146.79	-13.35	-13.36	3.83	13.90	163.99	466,650.45	646,077.48
1,236.00	1.60	56.20	1,235.77	-12.25	-12.27	5.34	13.38	156.48	466,651.54	646,078.99
1,326.00	1.40	55.30	1,325.73	-10.92	-10.94	7.29	13.15	146.33	466,652.87	646,080.94
1,416.00	1.60	58.70	1,415.70	-9.63	-9.66	9.26	13.39	136.20	466,654.15	646,082.91
1,505.00	2.90	56.60	1,504.63	-7.74	-7.78	12.21	14.47	122.50	466,656.03	646,085.86
1,595.00	5.20	59.60	1,594.40	-4.41	-4.46	17.63	18.18	104.20	466,659.35	646,091.28
1,684.00	8.00	60.40	1,682.80	0.72	0.64	26.49	26.50	88.61	466,664.45	646,100.14



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
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)	
1,774.00	8.50	61.90	1,771.87	6.98	6.87	37.80	38.42	79.70	466,670.68	646,111.45	
1,863.00	9.90	63.90	1,859.73	13.48	13.33	50.48	52.21	75.21	466,677.14	646,124.13	
1,953.00	9.40	64.00	1,948.45	20.15	19.96	64.03	67.07	72.69	466,683.77	646,137.68	
2,043.00	9.10	66.10	2,037.28	26.29	26.06	77.14	81.43	71.33	466,689.87	646,150.79	
2,132.00	8.90	65.20	2,125.19	32.07	31.80	89.83	95.29	70.50	466,695.61	646,163.48	
2,222.00	9.20	69.80	2,214.07	37.51	37.21	102.90	109.42	70.12	466,701.02	646,176.55	
2,311.00	11.70	78.20	2,301.59	41.86	41.51	118.41	125.48	70.68	466,705.32	646,192.06	
2,401.00	11.70	79.30	2,389.72	45.47	45.07	136.31	143.57	71.70	466,708.88	646,209.96	
2,491.00	11.40	82.60	2,477.90	48.37	47.91	154.10	161.38	72.73	466,711.72	646,227.75	
2,580.00	11.70	86.70	2,565.10	50.07	49.56	171.83	178.84	73.91	466,713.37	646,245.48	
2,670.00	12.20	85.50	2,653.15	51.40	50.83	190.42	197.09	75.05	466,714.64	646,264.07	
2,760.00	12.80	88.20	2,741.01	52.52	51.89	209.87	216.19	76.11	466,715.70	646,283.52	
2,849.00	12.20	81.80	2,827.91	54.22	53.54	229.03	235.21	76.84	466,717.35	646,302.68	
2,904.00	12.20	80.80	2,881.67	56.02	55.30	240.52	246.80	77.05	466,719.11	646,314.17	
3,024.00	11.50	82.50	2,999.11	59.68	58.89	264.90	271.36	77.47	466,722.70	646,338.55	
3,114.00	11.90	76.90	3,087.24	63.00	62.16	282.83	289.58	77.60	466,725.97	646,356.48	
3,204.00	13.10	72.10	3,175.11	68.30	67.40	301.57	309.02	77.40	466,731.21	646,375.22	
3,293.00	13.30	64.70	3,261.76	75.83	74.88	320.43	329.06	76.85	466,738.69	646,394.08	
3,383.00	13.90	60.20	3,349.24	85.68	84.68	339.17	349.58	75.98	466,748.49	646,412.82	
3,472.00	13.80	61.50	3,435.65	96.11	95.05	357.77	370.19	75.12	466,758.86	646,431.42	
3,562.00	13.70	58.40	3,523.08	106.88	105.76	376.29	390.87	74.30	466,769.57	646,449.94	
3,651.00	13.60	58.60	3,609.56	117.90	116.73	394.19	411.12	73.50	466,780.54	646,467.84	
3,741.00	12.90	59.70	3,697.17	128.54	127.32	411.90	431.13	72.82	466,791.13	646,485.55	
3,831.00	11.70	59.70	3,785.10	138.26	136.99	428.45	449.82	72.27	466,800.80	646,502.10	
3,920.00	10.60	65.90	3,872.42	146.20	144.88	443.72	466.77	71.92	466,808.69	646,517.37	
4,010.00	10.20	72.80	3,960.94	151.98	150.62	458.89	482.97	71.83	466,814.43	646,532.54	
4,099.00	10.30	70.90	4,048.52	156.96	155.56	473.93	498.81	71.83	466,819.37	646,547.58	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
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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)	
4,189.00	10.60	71.50	4,137.03	162.27	160.81	489.39	515.13	71.81	466,824.62	646,563.04	
4,279.00	10.90	71.90	4,225.45	167.58	166.08	505.33	531.92	71.81	466,829.89	646,578.98	
4,369.00	9.70	69.70	4,314.00	172.90	171.36	520.53	548.01	71.78	466,835.17	646,594.18	
4,458.00	9.20	68.30	4,401.79	178.18	176.59	534.17	562.60	71.71	466,840.40	646,607.82	
4,548.00	9.00	68.00	4,490.66	183.51	181.89	547.38	576.81	71.62	466,845.70	646,621.03	
4,637.00	8.80	66.30	4,578.59	188.89	187.23	560.07	590.54	71.52	466,851.04	646,633.72	
4,727.00	8.70	66.30	4,667.54	194.43	192.74	572.60	604.17	71.40	466,856.55	646,646.25	
4,817.00	9.00	66.30	4,756.47	200.04	198.30	585.28	617.96	71.28	466,862.11	646,658.93	
4,906.00	9.40	66.00	4,844.32	205.83	204.06	598.30	632.14	71.17	466,867.87	646,671.95	
4,996.00	9.60	64.80	4,933.09	212.05	210.24	611.80	646.92	71.04	466,874.05	646,685.45	
5,085.00	9.30	62.90	5,020.88	218.53	216.68	624.92	661.42	70.88	466,880.49	646,698.57	
5,175.00	9.30	68.00	5,109.70	224.61	222.71	638.13	675.88	70.76	466,886.52	646,711.78	
5,265.00	10.10	76.70	5,198.42	229.19	227.25	652.56	691.00	70.80	466,891.06	646,726.21	
5,354.00	9.70	75.60	5,286.09	232.89	230.91	667.42	706.23	70.92	466,894.72	646,741.07	
5,444.00	9.00	73.70	5,374.90	236.80	234.77	681.52	720.82	70.99	466,898.58	646,755.17	
5,534.00	8.70	72.90	5,463.83	240.81	238.75	694.78	734.66	71.04	466,902.56	646,768.43	
5,623.00	10.10	76.40	5,551.63	244.67	242.57	708.80	749.15	71.11	466,906.38	646,782.45	
5,713.00	11.20	74.20	5,640.08	248.95	246.80	724.88	765.74	71.20	466,910.61	646,798.53	
5,803.00	12.40	70.00	5,728.18	254.69	252.49	742.37	784.13	71.22	466,916.30	646,816.02	
5,892.00	12.40	69.90	5,815.10	261.29	259.04	760.32	803.24	71.19	466,922.85	646,833.97	
5,982.00	12.00	70.40	5,903.07	267.81	265.50	778.21	822.26	71.16	466,929.31	646,851.86	
6,071.00	11.40	70.40	5,990.22	273.91	271.55	795.21	840.30	71.15	466,935.36	646,868.86	
6,161.00	11.00	70.50	6,078.50	279.81	277.40	811.69	857.78	71.13	466,941.21	646,885.34	
6,250.00	11.00	67.10	6,165.87	286.00	283.54	827.51	874.74	71.09	466,947.35	646,901.16	
6,340.00	12.50	66.00	6,253.98	293.35	290.84	844.32	893.01	70.99	466,954.65	646,917.97	
6,429.00	12.20	67.00	6,340.92	300.99	298.44	861.78	911.99	70.90	466,962.25	646,935.43	
6,519.00	10.90	64.70	6,429.10	308.39	305.79	878.22	929.94	70.80	466,969.60	646,951.87	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
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)	
6,609.00	10.30	65.30	6,517.56	315.44	312.79	893.23	946.41	70.70	466,976.60	646,966.88	
6,698.00	11.00	64.90	6,605.03	322.41	319.71	908.15	962.78	70.61	466,983.52	646,981.80	
6,788.00	11.00	65.70	6,693.37	329.63	326.89	923.75	979.88	70.51	466,990.70	646,997.40	
6,878.00	10.20	65.80	6,781.84	336.47	333.69	938.84	996.38	70.43	466,997.50	647,012.49	
6,967.00	8.70	63.10	6,869.63	342.79	339.97	952.03	1,010.91	70.35	467,003.78	647,025.68	
7,057.00	7.20	59.30	6,958.76	348.78	345.93	962.95	1,023.20	70.24	467,009.74	647,036.60	
7,146.00	5.60	54.80	7,047.20	354.16	351.28	971.30	1,032.87	70.12	467,015.09	647,044.95	
7,236.00	5.10	71.10	7,136.82	358.01	355.10	978.67	1,041.10	70.06	467,018.91	647,052.32	
7,325.00	5.30	85.00	7,225.45	359.67	356.74	986.51	1,049.03	70.12	467,020.55	647,060.16	
7,415.00	5.30	84.60	7,315.07	360.45	357.50	994.79	1,057.08	70.23	467,021.31	647,068.44	
7,505.00	3.90	83.10	7,404.78	361.23	358.26	1,001.97	1,064.09	70.33	467,022.07	647,075.62	
7,595.00	2.40	76.00	7,494.64	362.07	359.08	1,006.83	1,068.95	70.37	467,022.89	647,080.48	
7,685.00	1.00	63.00	7,584.60	362.89	359.89	1,009.36	1,071.60	70.38	467,023.70	647,083.01	
7,774.00	0.60	133.80	7,673.59	362.92	359.92	1,010.39	1,072.58	70.39	467,023.73	647,084.04	
7,863.00	0.00	53.60	7,762.59	362.60	359.60	1,010.73	1,072.79	70.42	467,023.41	647,084.38	
7,953.00	0.10	91.80	7,852.59	362.59	359.60	1,010.80	1,072.86	70.42	467,023.41	647,084.45	
8,042.00	0.30	61.00	7,941.59	362.71	359.71	1,011.09	1,073.17	70.42	467,023.52	647,084.74	
8,132.00	0.20	51.10	8,031.59	362.92	359.92	1,011.41	1,073.55	70.41	467,023.73	647,085.06	
8,221.00	0.40	44.80	8,120.59	363.24	360.24	1,011.75	1,073.97	70.40	467,024.05	647,085.40	
8,311.00	0.90	341.40	8,210.58	364.13	361.13	1,011.75	1,074.27	70.36	467,024.94	647,085.40	
8,400.00	0.80	112.10	8,299.58	364.56	361.56	1,012.10	1,074.75	70.34	467,025.37	647,085.75	
8,490.00	1.70	147.00	8,389.55	363.21	360.20	1,013.41	1,075.52	70.43	467,024.01	647,087.06	
8,580.00	2.20	155.60	8,479.50	360.52	357.51	1,014.85	1,075.98	70.59	467,021.32	647,088.50	
8,670.00	2.00	138.40	8,569.44	357.78	354.76	1,016.61	1,076.73	70.76	467,018.57	647,090.26	
8,759.00	1.80	109.40	8,658.40	356.16	353.14	1,018.96	1,078.42	70.89	467,016.95	647,092.61	
8,849.00	2.00	132.40	8,748.35	354.64	351.61	1,021.45	1,080.27	71.01	467,015.42	647,095.10	
8,939.00	2.00	121.60	8,838.29	352.76	349.73	1,023.95	1,082.03	71.14	467,013.54	647,097.60	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
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)
9,028.00	1.60	154.60	8,927.25	350.83	347.79	1,025.80	1,083.16	71.27	467,011.60	647,099.45
9,118.00	1.30	155.80	9,017.22	348.77	345.73	1,026.76	1,083.40	71.39	467,009.54	647,100.41
9,207.00	1.20	177.10	9,106.20	346.92	343.87	1,027.22	1,083.25	71.49	467,007.68	647,100.87
9,296.00	1.10	202.80	9,195.18	345.20	342.16	1,026.94	1,082.44	71.57	467,005.97	647,100.59
9,386.00	1.70	184.90	9,285.16	343.07	340.03	1,026.49	1,081.34	71.67	467,003.84	647,100.14
9,475.00	1.80	187.10	9,374.12	340.37	337.33	1,026.20	1,080.22	71.80	467,001.14	647,099.85
9,547.00	1.90	198.60	9,446.08	338.11	335.07	1,025.68	1,079.03	71.91	466,998.88	647,099.33
9,637.00	2.20	346.00	9,536.06	338.37	335.34	1,024.79	1,078.26	71.88	466,999.15	647,098.44
9,727.00	12.80	6.90	9,625.17	349.98	346.94	1,025.57	1,082.67	71.31	467,010.75	647,099.22
9,816.00	21.60	5.40	9,710.10	376.14	373.09	1,028.30	1,093.89	70.06	467,036.90	647,101.95
9,906.00	30.40	359.00	9,790.93	415.49	412.44	1,029.47	1,109.01	68.17	467,076.25	647,103.12
9,996.00	39.80	4.10	9,864.50	467.12	464.06	1,031.13	1,130.75	65.77	467,127.87	647,104.78
10,085.00	50.50	7.20	9,927.18	529.81	526.73	1,037.49	1,163.55	63.08	467,190.54	647,111.14
10,174.00	62.20	7.70	9,976.41	603.17	600.06	1,047.10	1,206.86	60.18	467,263.87	647,120.75
10,264.00	75.20	5.70	10,009.04	686.30	683.16	1,056.80	1,258.39	57.12	467,346.97	647,130.45
10,353.00	85.60	2.20	10,023.87	773.73	770.58	1,062.80	1,312.76	54.06	467,434.39	647,136.45
10,443.00	89.70	2.60	10,027.55	863.57	860.40	1,066.56	1,370.35	51.11	467,524.21	647,140.21
10,536.00	91.90	2.80	10,026.26	956.46	953.29	1,070.94	1,433.76	48.33	467,617.10	647,144.59
10,629.00	92.40	3.80	10,022.77	1,049.25	1,046.07	1,076.29	1,500.88	45.82	467,709.88	647,149.94
10,722.00	89.30	3.40	10,021.39	1,142.07	1,138.86	1,082.13	1,570.99	43.54	467,802.67	647,155.78
10,816.00	90.30	1.60	10,021.72	1,235.98	1,232.76	1,086.23	1,643.05	41.38	467,896.57	647,159.88
10,909.00	91.10	359.60	10,020.58	1,328.97	1,325.75	1,087.20	1,714.53	39.35	467,989.56	647,160.85
10,999.00	88.80	358.90	10,020.66	1,418.95	1,415.73	1,086.02	1,784.31	37.49	468,079.54	647,159.67
11,088.00	88.80	358.40	10,022.52	1,507.90	1,504.69	1,083.93	1,854.45	35.77	468,168.50	647,157.58
11,178.00	88.00	358.00	10,025.04	1,597.81	1,594.61	1,081.10	1,926.54	34.14	468,258.42	647,154.75
11,267.00	90.00	358.00	10,026.59	1,686.73	1,683.54	1,078.00	1,999.09	32.63	468,347.35	647,151.65
11,357.00	92.20	357.90	10,024.86	1,776.64	1,773.46	1,074.78	2,073.72	31.22	468,437.27	647,148.43



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
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)	
11,447.00	90.70	358.90	10,022.58	1,866.56	1,863.39	1,072.27	2,149.88	29.92	468,527.20	647,145.92	
11,536.00	91.40	359.50	10,020.95	1,955.53	1,952.36	1,071.02	2,226.84	28.75	468,616.17	647,144.67	
11,626.00	92.80	0.70	10,017.65	2,045.47	2,042.30	1,071.18	2,306.17	27.68	468,706.11	647,144.83	
11,716.00	88.60	359.90	10,016.56	2,135.44	2,132.27	1,071.65	2,386.42	26.68	468,796.08	647,145.30	
11,805.00	88.00	359.30	10,019.20	2,224.40	2,221.23	1,071.03	2,465.96	25.74	468,885.04	647,144.68	
11,894.00	91.90	359.50	10,019.27	2,313.37	2,310.21	1,070.10	2,546.01	24.85	468,974.02	647,143.75	
11,984.00	91.50	359.60	10,016.60	2,403.33	2,400.16	1,069.39	2,627.62	24.02	469,063.97	647,143.04	
12,073.00	88.70	359.80	10,016.45	2,492.31	2,489.15	1,068.93	2,708.96	23.24	469,152.96	647,142.58	
12,163.00	88.20	359.50	10,018.88	2,582.28	2,579.12	1,068.38	2,791.65	22.50	469,242.93	647,142.03	
12,254.00	87.20	358.80	10,022.53	2,673.19	2,670.03	1,067.03	2,875.35	21.78	469,333.84	647,140.68	
12,344.00	89.80	358.40	10,024.89	2,763.12	2,759.97	1,064.83	2,958.26	21.10	469,423.78	647,138.48	
12,433.00	89.80	359.10	10,025.20	2,852.09	2,848.95	1,062.89	3,040.76	20.46	469,512.76	647,136.54	
12,523.00	89.40	0.00	10,025.83	2,942.08	2,938.94	1,062.18	3,125.00	19.87	469,602.75	647,135.83	
12,613.00	91.60	0.90	10,025.04	3,032.07	3,028.93	1,062.89	3,210.00	19.34	469,692.74	647,136.54	
12,703.00	93.00	0.70	10,021.43	3,121.99	3,118.84	1,064.14	3,295.39	18.84	469,782.65	647,137.79	
12,792.00	92.30	1.40	10,017.32	3,210.88	3,207.73	1,065.77	3,380.15	18.38	469,871.54	647,139.42	
12,882.00	92.00	0.70	10,013.94	3,300.81	3,297.65	1,067.42	3,466.11	17.94	469,961.46	647,141.07	
12,971.00	91.70	0.40	10,011.07	3,389.76	3,386.60	1,068.28	3,551.10	17.51	470,050.41	647,141.93	
13,061.00	89.30	359.20	10,010.28	3,479.74	3,476.59	1,067.96	3,636.92	17.08	470,140.40	647,141.61	
13,151.00	87.90	358.60	10,012.48	3,569.69	3,566.54	1,066.23	3,722.51	16.64	470,230.35	647,139.88	
13,240.00	88.70	358.20	10,015.12	3,658.61	3,655.47	1,063.75	3,807.10	16.23	470,319.28	647,137.40	
13,330.00	89.40	358.40	10,016.61	3,748.55	3,745.42	1,061.08	3,892.82	15.82	470,409.23	647,134.73	
13,420.00	89.10	357.20	10,017.79	3,838.46	3,835.34	1,057.63	3,978.49	15.42	470,499.15	647,131.28	
13,509.00	93.40	359.20	10,015.85	3,927.36	3,924.25	1,054.83	4,063.55	15.05	470,588.06	647,128.48	
13,599.00	93.20	359.50	10,010.67	4,017.20	4,014.10	1,053.81	4,150.12	14.71	470,677.91	647,127.46	
13,688.00	93.40	0.60	10,005.55	4,106.06	4,102.95	1,053.89	4,236.14	14.41	470,766.76	647,127.54	
13,778.00	91.60	1.80	10,001.62	4,195.95	4,192.84	1,055.77	4,323.72	14.13	470,856.65	647,129.42	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
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)	
13,867.00	87.90	1.70	10,002.01	4,284.90	4,281.78	1,058.49	4,410.67	13.89	470,945.59	647,132.14	
13,956.00	88.20	1.60	10,005.04	4,373.82	4,370.69	1,061.05	4,497.64	13.65	471,034.50	647,134.70	
14,046.00	88.30	0.90	10,007.79	4,463.76	4,460.63	1,063.01	4,585.54	13.40	471,124.44	647,136.66	
14,135.00	88.10	0.30	10,010.58	4,552.71	4,549.58	1,063.94	4,672.32	13.16	471,213.39	647,137.59	
14,225.00	88.70	359.70	10,013.09	4,642.68	4,639.54	1,063.94	4,759.97	12.92	471,303.35	647,137.59	
14,314.00	89.10	0.30	10,014.80	4,731.66	4,728.52	1,063.94	4,846.74	12.68	471,392.33	647,137.59	
14,404.00	90.10	0.60	10,015.43	4,821.65	4,818.52	1,064.65	4,934.73	12.46	471,482.33	647,138.30	
14,494.00	90.40	0.60	10,015.04	4,911.65	4,908.51	1,065.59	5,022.84	12.25	471,572.32	647,139.24	
14,584.00	88.00	1.20	10,016.29	5,001.63	4,998.48	1,067.01	5,111.10	12.05	471,662.29	647,140.66	
14,674.00	88.60	2.50	10,018.96	5,091.55	5,088.40	1,069.91	5,199.66	11.87	471,752.21	647,143.56	
14,764.00	86.90	2.00	10,022.50	5,181.41	5,178.25	1,073.44	5,288.34	11.71	471,842.06	647,147.09	
14,854.00	88.20	0.70	10,026.35	5,271.31	5,268.14	1,075.56	5,376.82	11.54	471,931.95	647,149.21	
14,943.00	90.10	0.40	10,027.67	5,360.29	5,357.12	1,076.41	5,464.20	11.36	472,020.93	647,150.06	
15,033.00	88.10	1.00	10,029.08	5,450.27	5,447.10	1,077.51	5,552.65	11.19	472,110.91	647,151.16	
15,122.00	88.30	0.80	10,031.87	5,539.22	5,536.05	1,078.91	5,640.20	11.03	472,199.86	647,152.56	
15,213.00	89.90	0.90	10,033.30	5,630.20	5,627.02	1,080.26	5,729.78	10.87	472,290.83	647,153.91	
15,302.00	90.10	0.60	10,033.30	5,719.20	5,716.01	1,081.43	5,817.41	10.71	472,379.82	647,155.08	
15,392.00	90.50	0.20	10,032.83	5,809.20	5,806.01	1,082.05	5,905.98	10.56	472,469.82	647,155.70	
15,481.00	89.70	359.50	10,032.68	5,898.19	5,895.01	1,081.82	5,993.45	10.40	472,558.82	647,155.47	
15,571.00	88.00	358.50	10,034.48	5,988.15	5,984.97	1,080.25	6,081.68	10.23	472,648.78	647,153.90	
15,661.00	88.10	358.90	10,037.55	6,078.07	6,074.90	1,078.21	6,169.84	10.06	472,738.71	647,151.86	
15,751.00	91.20	359.50	10,038.10	6,168.04	6,164.87	1,076.95	6,258.24	9.91	472,828.68	647,150.60	
15,840.00	92.30	359.90	10,035.38	6,257.00	6,253.83	1,076.49	6,345.80	9.77	472,917.64	647,150.14	
15,929.00	94.60	1.00	10,030.02	6,345.83	6,342.66	1,077.18	6,433.48	9.64	473,006.47	647,150.83	
16,019.00	94.30	1.80	10,023.04	6,435.53	6,432.36	1,079.38	6,522.29	9.53	473,096.17	647,153.03	
16,109.00	92.80	1.40	10,017.47	6,525.33	6,522.15	1,081.88	6,611.27	9.42	473,185.96	647,155.53	
16,198.00	92.70	2.40	10,013.20	6,614.19	6,611.00	1,084.83	6,699.41	9.32	473,274.81	647,158.48	



ProDirectional Survey Report



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Site: Blue Steel 21 WXY Fee
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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)	
16,288.00	93.30	2.40	10,008.49	6,704.00	6,700.79	1,088.60	6,788.64	9.23	473,364.60	647,162.25	
16,377.00	92.00	2.00	10,004.37	6,792.84	6,789.63	1,092.01	6,876.89	9.14	473,453.44	647,165.66	
16,474.00	90.50	1.00	10,002.26	6,889.79	6,886.57	1,094.55	6,973.01	9.03	473,550.38	647,168.20	
16,564.00	88.20	359.60	10,003.28	6,979.77	6,976.56	1,095.02	7,061.97	8.92	473,640.37	647,168.67	
16,654.00	88.90	359.30	10,005.55	7,069.74	7,066.52	1,094.15	7,150.73	8.80	473,730.33	647,167.80	
16,743.00	91.00	359.50	10,005.63	7,158.72	7,155.51	1,093.22	7,238.54	8.69	473,819.32	647,166.87	
16,833.00	87.50	358.80	10,006.81	7,248.69	7,245.48	1,091.89	7,327.29	8.57	473,909.29	647,165.54	
16,923.00	88.20	358.40	10,010.19	7,338.59	7,335.39	1,089.69	7,415.89	8.45	473,999.20	647,163.34	
17,012.00	89.60	358.20	10,011.89	7,427.52	7,424.33	1,087.05	7,503.49	8.33	474,088.14	647,160.70	
17,102.00	88.80	358.70	10,013.15	7,517.47	7,514.29	1,084.62	7,592.16	8.21	474,178.10	647,158.27	
17,191.00	90.20	358.10	10,013.93	7,606.43	7,603.25	1,082.13	7,679.87	8.10	474,267.06	647,155.78	
17,281.00	90.10	358.60	10,013.69	7,696.38	7,693.21	1,079.54	7,768.58	7.99	474,357.02	647,153.19	
17,370.00	89.20	358.70	10,014.24	7,785.35	7,782.18	1,077.44	7,856.42	7.88	474,445.99	647,151.09	
17,460.00	89.40	359.60	10,015.34	7,875.32	7,872.17	1,076.11	7,945.38	7.78	474,535.98	647,149.76	
17,550.00	88.60	0.20	10,016.91	7,965.31	7,962.15	1,075.95	8,034.52	7.70	474,625.96	647,149.60	
17,639.00	88.80	1.70	10,018.93	8,054.27	8,051.11	1,077.43	8,122.89	7.62	474,714.92	647,151.08	
17,729.00	89.00	1.30	10,020.65	8,144.23	8,141.07	1,079.78	8,212.36	7.56	474,804.88	647,153.43	
17,818.00	90.80	359.80	10,020.81	8,233.22	8,230.05	1,080.64	8,300.70	7.48	474,893.86	647,154.29	
17,908.00	87.90	358.90	10,021.83	8,323.20	8,320.03	1,079.62	8,389.79	7.39	474,983.84	647,153.27	
17,997.00	91.20	0.80	10,022.53	8,412.18	8,409.01	1,079.38	8,478.01	7.31	475,072.82	647,153.03	
18,086.00	91.60	0.50	10,020.35	8,501.15	8,497.98	1,080.39	8,566.38	7.25	475,161.79	647,154.04	
18,176.00	94.10	0.30	10,015.88	8,591.03	8,587.86	1,081.02	8,655.63	7.17	475,251.67	647,154.67	
18,265.00	92.20	359.50	10,010.99	8,679.89	8,676.72	1,080.86	8,743.78	7.10	475,340.53	647,154.51	
18,355.00	85.00	358.10	10,013.19	8,769.78	8,766.61	1,078.98	8,832.76	7.02	475,430.42	647,152.63	
18,445.00	86.60	358.00	10,019.78	8,859.47	8,856.32	1,075.93	8,921.43	6.93	475,520.13	647,149.58	
18,534.00	88.80	359.10	10,023.35	8,948.36	8,945.21	1,073.68	9,009.41	6.84	475,609.02	647,147.33	
18,624.00	89.70	359.80	10,024.53	9,038.34	9,035.20	1,072.82	9,098.66	6.77	475,699.01	647,146.47	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
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)
18,713.00	88.80	0.60	10,025.69	9,127.33	9,124.19	1,073.13	9,187.08	6.71	475,788.00	647,146.78
18,803.00	90.00	1.20	10,026.63	9,217.32	9,214.17	1,074.54	9,276.61	6.65	475,877.98	647,148.19
18,892.00	88.90	2.00	10,027.49	9,306.28	9,303.13	1,077.02	9,365.26	6.60	475,966.94	647,150.67
18,981.00	88.40	1.80	10,029.59	9,395.22	9,392.05	1,079.97	9,453.94	6.56	476,055.86	647,153.62
19,071.00	90.50	2.20	10,030.45	9,485.16	9,481.99	1,083.12	9,543.65	6.52	476,145.80	647,156.77
19,161.00	89.20	2.40	10,030.69	9,575.10	9,571.91	1,086.73	9,633.41	6.48	476,235.72	647,160.38
19,251.00	90.40	1.30	10,031.00	9,665.05	9,661.86	1,089.63	9,723.11	6.43	476,325.67	647,163.28
19,340.00	91.70	2.00	10,029.37	9,754.01	9,750.81	1,092.19	9,811.79	6.39	476,414.62	647,165.84
19,430.00	87.50	1.80	10,030.00	9,843.94	9,840.74	1,095.18	9,901.49	6.35	476,504.55	647,168.83
19,520.00	89.50	1.80	10,032.35	9,933.87	9,930.66	1,098.00	9,991.17	6.31	476,594.47	647,171.65
19,609.00	92.00	1.90	10,031.19	10,022.82	10,019.60	1,100.88	10,079.89	6.27	476,683.41	647,174.53
19,699.00	92.00	1.60	10,028.05	10,112.73	10,109.50	1,103.62	10,169.56	6.23	476,773.31	647,177.27
19,788.00	91.10	1.60	10,025.64	10,201.67	10,198.43	1,106.11	10,258.24	6.19	476,862.24	647,179.76
19,878.00	87.10	358.90	10,027.05	10,291.63	10,288.39	1,106.50	10,347.72	6.14	476,952.20	647,180.15
19,968.00	86.90	357.60	10,031.76	10,381.45	10,378.23	1,103.76	10,436.75	6.07	477,042.04	647,177.41
20,057.00	87.80	356.90	10,035.88	10,470.24	10,467.03	1,099.49	10,524.62	6.00	477,130.84	647,173.14
20,146.00	87.70	356.40	10,039.37	10,559.01	10,555.81	1,094.29	10,612.38	5.92	477,219.62	647,167.94
Last Survey: 20146' MD										
20,202.00	87.70	356.40	10,041.62	10,614.84	10,611.65	1,090.78	10,667.56	5.87	477,275.46	647,164.43
PTB: 20202' MD										



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 8H
Wellbore: OH
Design: MWD-162'-20146', PTB: 20202'

Local Co-ordinate Reference: Well No. 8H
TVD Reference: Well @ 3027.00usft
MD Reference: Well @ 3027.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
411.00	410.94	-4.89	-4.44	Pro MWD First Survey: 411' MD
20,146.00	10,039.37	10,555.81	1,094.29	Last Survey: 20146' MD
20,202.00	10,041.62	10,611.65	1,090.78	PTB: 20202' MD

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. 30-015-45894
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Blue Steel 21 WXY Fee
8. Well Number 8H
9. OGRID Number 372098
10. Pool name or Wildcat Purple Sage; Wolfcamp (Gas)
4. Well Location Unit Letter <u>D</u> : <u>270</u> feet from the <u>NORTH</u> line and <u>1255</u> feet from the <u>WEST</u> line Section <u>28</u> Township <u>23S</u> Range <u>29E</u> NMPM County <u>EDDY</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3000' GL

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>D</u> : <u>270</u> feet from the <u>NORTH</u> line and <u>1255</u> feet from the <u>WEST</u> line Section <u>28</u> Township <u>23S</u> Range <u>29E</u> NMPM County <u>EDDY</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3000' GL	

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.

3/3/2020 - Perform Production Casing Pressure test to 9500 psi for 30 min. Good Test.

8/28/2021 - MIRU. Start Frac Prep Operations

9/25/2021 - Perf Stages 1 - 33 with 2 shots per foot for a total of 1005 shots, 0.35-in. in size using 23,990,700 lbs of 100 Mesh, stimulated with 7,182 gal of 15% HCl Acid. Total production interval from 10,183' to 20,133'. End Frac on 10/6/2021

10/11/2021 - RDMO. Ready to Produce

10/17/2021 - Turn to production and start flowback.

Spud Date:

8/23/2019

Rig Release Date:

11/5/2019

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

SIGNATURE Adrian Covarrubias TITLE Regulatory Professional DATE 10/21/2021

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 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 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										
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 6. Well Number: Blue Steel 21 WXY Fee 8H				
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 Purple Sage; Wolfcamp (Gas)				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	D	28	23S	29E		270	N	1255	W	Eddy
BH:	C	16	23S	29E		301	N	2299	W	Eddy
13. Date Spudded 8/23/2019	14. Date T.D. Reached 11/1/2019		15. Date Rig Released 11/5/2019			16. Date Completed (Ready to Produce) 10/11/2021		17. Elevations (DF and RKB, RT, GR, etc.) 3000' GL		
18. Total Measured Depth of Well 20202' MD / 10,042 TVD			19. Plug Back Measured Depth 20143' MD / 10,039' TVD			20. Was Directional Survey Made? Yes		21. Type Electric and Other Logs Run GR		
22. Producing Interval(s), of this completion - Top, Bottom, Name 10,183' - 20,133' MD, 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		364'		17-1/2"		490		
9-5/8"		40#, J55, LTC		2983'		12-1/4"		1075		
5-1/2"		20#, P110, Roughneck		20183'		8-3/4"		4425		
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET			
26. Perforation record (interval, size, and number) 10,183' - 20,133' MD, 0.35", 1005 shots						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						10,183' - 20,133' MD		23,990,700 lbs - 100 Mesh		
						10,183' - 20,133' MD		7182 gal - 15% HCl Acid		
						10,183' - 20,133' MD		446,696 bbls Brackish Water		
28. PRODUCTION										
Date First Production 10/17/2021		Production Method (<i>Flowing, gas lift, pumping - Size and type pump</i>) Flowing				Well Status (<i>Prod. or Shut-in</i>) Producing				
Date of Test 10/20/201	Hours Tested 24	Choke Size 18/64	Prod'n For Test Period	Oil - Bbl 178	Gas - MCF 294	Water - Bbl. 3146	Gas - Oil Ratio			
Flow Tubing Press. 0	Casing Pressure 1204	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (<i>Corr.</i>)				
29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>) 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>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</i>										
Signature 			Printed Name Adrian Covarrubias			Title Regulatory Professional			Date 10/21/2021	
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.

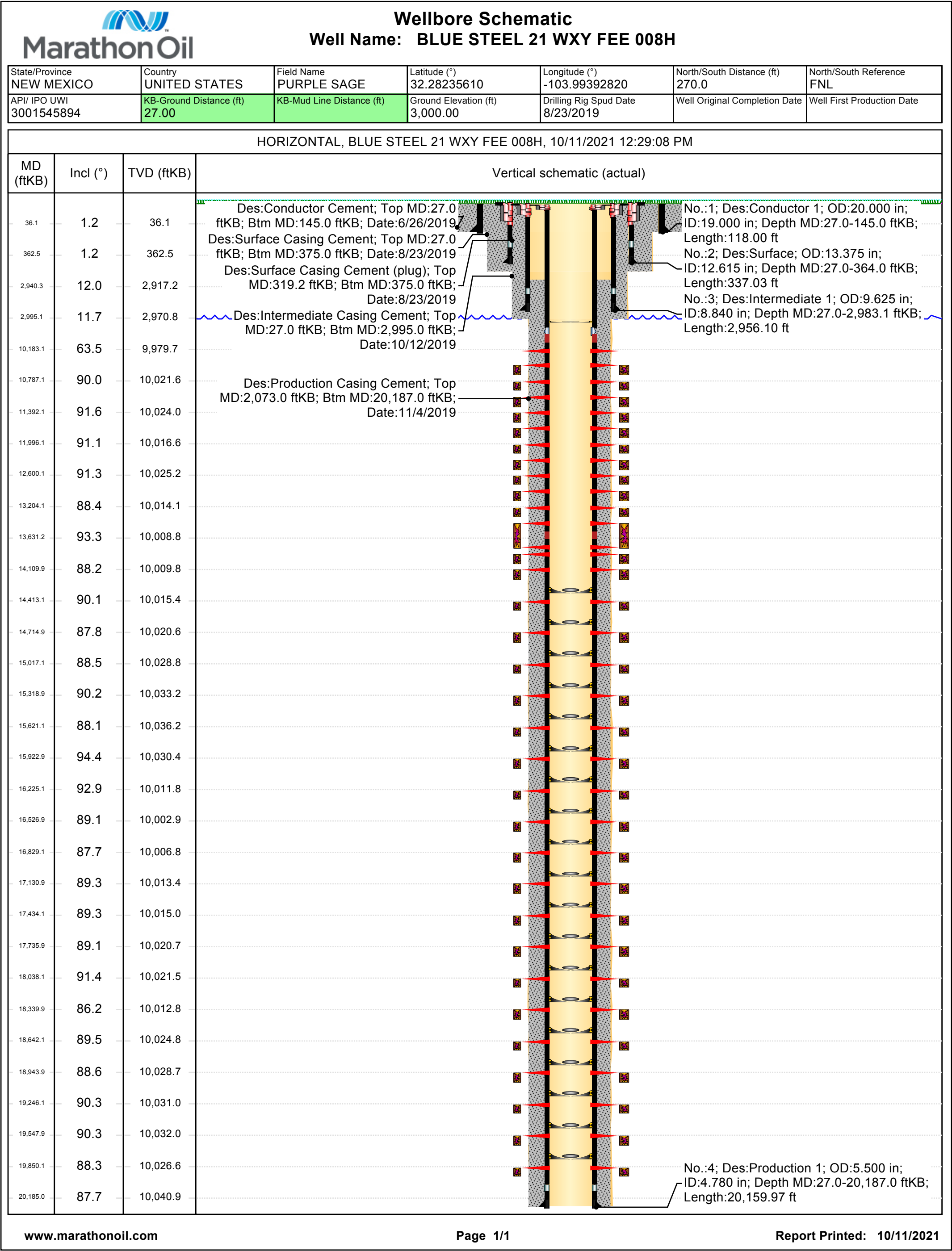
Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon 3061'	T. Ojo Alamo	T. Penn A"
T. Salt	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt 2979'	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House	T. Leadville
T. Queen	T. 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 6787' / 6692	T. Todilto	
T. Abo	T. Lamar 3026'	T. Entrada	
T. Wolfcamp 10152' / 9966'	T. Cherry Canyon 3934'	T. Wingate	
T. Penn	T. Brushy Canyon 5035'	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



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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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 76885

ACKNOWLEDGMENTS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 76885
	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
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Phone:(575) 393-6161 Fax:(575) 393-0720
District II
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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

CONDITIONS

Action 76885

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 76885
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	None	2/4/2022