



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Well Completion Print Report

04/04/2022

Operator Name MARATHON OIL PERMIAN LLC SHL NWNW Sec 28 23S 29E	Well Name BLUE STEEL 21 WXY FEE	Well Number 6H	US Well Number 3001545893
Well Type CONVENTIONAL GAS WELL	County EDDY	State NM	Lease Number(s) NMNM086024, NMNM86024, NMNM86024
Allottee/Tribe Name	Well Status Drilling Well	Agreement Name	Agreement Number(s) ID 10400035447
	Well Pad Name BLUE STEEL 21 FEE	Well Pad Number 302-1	

Section 1 - General

Well Completion Report Id: 81620**Submission Date:** N/A until DB Work**BLM Office:** Carlsbad Field Office**User:** ADRIAN COVARRUBIAS**Title:** regulatory Compliance**Federal/Indian:** FEDERAL**Lease Number:** NMNM086024**Lease Acres:** 1440**Agreement in place?:** NO**Federal or Indian Agreement:****Agreement Number:****Agreement Name:****Keep this Well Completion Report confidential?:** YES**APD Operator:** MARATHON OIL
PERMIAN LLC

Section 2 - Well Information

Field/Pool or Exploratory: Field/Pool**Pool Name:** Wolfcamp**Field Name:** PIERCE CROSSING BON**Well Type:** CONVENTIONAL GAS WELL**Spud Date:** 08-22-2019**Date Total Measured Depth Reached:** 12-03-2019**Drill & Abandon or Ready To Produce:** READY TO PRODUCE**Well Class:** HORIZONTAL

Section 3 - Geologic Formations

Formation Name	Lithology	Describe Lithology	Elevation	TVD	MD	Mineral Resources	Describe Mineral Resources
SALADO	ANHYDRITE, DOLOMITE, SALT		2627	374	374	OTHER	Brine

Operator Name MARATHON OIL PERMIAN LLC SHL NWNW Sec 28 23S 29E	Well Name BLUE STEEL 21 WXY FEE	Well Number 6H	US Well Number 3001545893
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Section 3 - Geologic Formations

Formation Name	Lithology	Describe Lithology	Elevation	TVD	MD	Mineral Resources	Describe Mineral Resources
BASE OF SALT	LIMESTONE, SANDSTONE		66	2962	2962	OTHER	Brine
LAMAR	OTHER	Sand/Shales	20	3009	3009	OIL	
BELL CANYON	OTHER	Sands/Shale	-15	3044	3044	OIL	
CHERRY CANYON	OTHER	Sands/Carbonates	-888	3917	3917	OIL	
BRUSHY CANYON	OTHER	Sands/Carbonate	-2045	5074	5074	OIL	
BONE SPRING	OTHER	Sands/Carbonate	-3633	6660	6689	OIL	
WOLFCAMP	OTHER, SANDSTONE, SHALE	Carbonates	-6912	9939	10060	OIL	

Completion and Completed Intervals

Completion Data

Wellbore Code	Completion Code	Interval Number	Case Number	Lease Number	Well Completion Type	Describe Well Completion Type	Completion Status	Date Completed	Date First Produced	Formation	Interval Top (MD)	Interval Bottom (MD)	Interval Perforated?	Perforation Size	Number of Holes	Status of Interval
00	S1	1	NMNM86024	NMNM86024	NEW		PGW	10-10-2021	10-15-2021	WOLFCA MP	10070	19943	Y	.35	984	OPEN

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Allottee/Tribe Name	Well Pad Name BLUE STEEL 21 FEE	Well Pad Number 302-1	ID 10400035447

Treatment Data

Wellbore Code	Completion Code	Interval Number	Interval Treated?	Treatment Type	Total Fluid (bbls)	Total Proppant (lbs)	Treatment Remarks
00	S1	1	Y	FRAC	451332		Total Proppant: 24,438,381 lbs Brackish Water: 451,116 bbls

Production Data

Wellbore Code	Completion Code	Interval Number	API Oil Gravity	Gas Gravity	Production Method	Describe Production	Disposition of Gas	Describe Disposition
00	S1	1			FLows FROM WELL		SOLD	

Test Data

Wellbore Code	Completion Code	Interval Number	Test Date	Hours Tested	24-Hour Rate Oil (bbls)	24-Hour Rate Gas (MCF)	24-Hour Rate Water(BWPD)	Gas-Oil Ratio (SCF/bbl)	Choke Size	Tubing Pressure	Tubing Pressure Shut-In (psi)	Casing Pressure (psi)
00	S1	1	10/15/2021	24	25	70	67	2800	18/64	0		1476

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Well Location

Survey Type: RECTANGULAR

Survey Number: 21653

Datum: NAD83

Vertical Datum: NAVD88

Reference Datum:

	State	Meridian	County	Latitude	Longitude	Elevation (MSL)	Lease Type	Lease Number	Plug TVD (ft)	Plug MD (ft)	Plug Type	NS-Foot	NS-Indicator	EW-Foot	EW-Indicator	Township	Range	Section	Aliquot/LoTract
SHL	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.2824783	-103.9946133	3001	FEDERAL	NMNM086024				270	FNL	1195	FWL	23S	29E	28	NWNW
KOP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.2833398	-103.9952344	-6445	FEE	FEE				64	FSL	1004	FWL	23S	29E	21	SWSW
PPP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.2841291	-103.995241	-6929	FEE	FEE				330	FSL	1010	FWL	23S	29E	21	SWSW
EXIT Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.3115524	-103.9943654	-6993	FEE	FEE				332	FNL	1192	FWL	23S	29E	16	NWNW
BHL Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.3115524	-103.9943654	-6993	FEE	FEE				332	FNL	1192	FWL	23S	29E	16	NWNW

Casing, Liner and Tubing

Operator Name MARATHON OIL PERMIAN LLC SHL NWNW Sec 28 23S 29E	Well Name BLUE STEEL 21 WXY FEE	Well Number 6H	US Well Number 3001545893
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Casing and Liner

Wellbore Code	Casing String Type	Hole Size	Top Setting Depth (MD)	Bottom Setting Depth (MD)	Casing Size	Wt(lbs/ft)	Casing Grade	Describe Other Casing Grade	Joint	Other Joint	Amount Pulled (ft)
00	SURFACE	17.5	0	371	13.375	54.5	J-55		ST&C		
00	INTERMEDIATE	12.25	0	2980	9.625	40	J-55		LT&C		
00	PRODUCTION	8.75	0	20055	5.5	20	P-110		OTHER	Roughneck	

Cementing

Wellbore Code	Casing String Type	Stage Tool Depth	Cement Lead Type	Cement Lead Qty (sks)	Cement Lead Yield (cu.ft/sks)	Cement Lead Top (MD)	Cement Tail Type	Cement Tail Qty (sks)	Cement Tail Yield(cu.ft/sks)	Cement Tail Top (MD)	Total (Lead + Tail) Cement Slurry Volume (bbbls)
00	SURFACE		Class C	490	1.63	0					142.2
00	INTERMEDIATE		35/50 POZ C	920	1.91	0	35/50 POZ C	200	1.35		361
00	PRODUCTION		25/75 PM H	1685	2.14	1000	25/75 PM H	3055	1.14		1262.5

Logs

Wellbore Code	Log Upload	Was Well Cored?	Was DST Run?	Directional Survey?	Geologic Report Completed?	Wellbore Diagram
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Logs

Wellbore Code	Log Upload	Was Well Cored?	Was DST Run?	Directional Survey?	Geologic Report Completed?	Wellbore Diagram
00	YES	NO	NO	YES	NO	YES

Operator Certification

I hereby certify that the foregoing and attached information is complete and correct as determined from all available records. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Well Completion Reports through this system satisfies regulations requiring a submission of Form 3160-4 or a Well Completion Report.

Name: MARATHON OIL PERMIAN LLC

Signed By: ADRIAN COVARRUBIAS

Title: regulatory Compliance
Representative

Signed on: 03/10/2022

Street Address: 990 TOWN & COUNTRY BLVD

City: HOUSTON

State: TX

Zip: 77024

Phone: (713)296-3368

Email address: acovarrubias@marathonoil.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Extension:

Email address:

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Attachments

- WD_Final1inMDGraphBlueSteel21FeeWXY6H_2019_12_04_18.23.00_20211020113803.pdf
- 20200309_R3942_004___BLUE_STEEL_21_WXY_FEE_6H_REV._1___CERTIFIED_AS_DRILLED_signed_20211020113819.pdf
- Certified_Survey_Report_Blue_Steel_21_WXY_Fee_No._6H_20211020113841.PDF
- Wellbore_Schematic___BLUE_STEEL_21_WXY_FEE_006H___2021_10_11_20211020113852.pdf

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 30-015-45893	² Pool Code 98220	³ Pool Name Purple Sage (Wolfcamp)
⁴ Property Code 325396	⁵ Property Name Blue Steel 21 WXY Fee	⁶ Well Number 6H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 3001'

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	1195	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
D	16	23S	29E		332	NORTH	1192	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'

LAST TAKE POINT/BOTTOM HOLE LOCATION
332' FNL 1192' FWL, SECTION 16
20073' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 646056.89' / Y: 477240.73'
LAT: 32.31155243N / LON: 103.99436549W
NAD 27, SPCS NM EAST
X: 604873.90' / Y: 477181.06'
LAT: 32.31143057N / LON: 103.99387311W

FIRST TAKE POINT
330' FSL 1010' FWL, SECTION 16
10060' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 645827.45' / Y: 467263.63'
LAT: 32.28412913N / LON: 103.99521001W
NAD 27, SPCS NM EAST
X: 604644.17' / Y: 467204.20'
LAT: 32.28400703N / LON: 103.99471867W

KICK OFF POINT
64' FSL 1004' FWL, SECTION 16
9476' MEASURED DEPTH IN FEET
NAD 83, SPCS NM EAST
X: 645820.74' / Y: 466997.70'
LAT: 32.28339817N / LON: 103.99523442W
NAD 27, SPCS NM EAST
X: 604637.46' / Y: 466938.27'
LAT: 32.28327606N / LON: 103.99474310W

SURFACE HOLE LOCATION
270' FNL 1195' FWL, SECTION 28
NAD 83, SPCS NM EAST
X: 646013.73' / Y: 466663.67'
LAT: 32.28247830N / LON: 103.99461334W
NAD 27, SPCS NM EAST
X: 604830.44' / Y: 466604.25'
LAT: 32.28235618N / LON: 103.99412208W

¹⁷ OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

[Signature] **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-stakes 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:
[Signature]
Certificate Number
LLOYD P. SHORT 21653

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99992163 Convergence Angle: 0.18084607°



Marathon Oil Corporation

Blue Steel 21 WXY Fee No. 6H
Eddy County, NM

December 23, 2019

Job# LNM1525619
API# 30-015-45893

Survey Completion Report



Survey Certification Letter

December 23, 2019



Operator Name: Marathon Oil
Well Name: Blue Steel 21 WXY Fee No. 6H
County/Parish: Eddy County,
State: NM
Rig Name: Precision 582
Job Number: LNM1525619

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 – 20,010' MD	20,073' MD	10/02/19 – 12/03/19	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. 6H
OH

Survey: ProDirectional

Survey Report

23 December, 2019





ProDirectional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 6H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 3028.00usft
Site:	Blue Steel 21 WXY Fee	MD Reference:	Well @ 3028.00usft
Well:	No. 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD-184'-20010', PTB: 20073'	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. 6H, LNM1525619				
Well Position	+N/-S	0.00 usft	Northing:	466,663.67 usft	Latitude:	32.2824783
	+E/-W	0.00 usft	Easting:	646,013.73 usft	Longitude:	-103.9946133
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,001.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/1/2019	7.02	60.02	47,900.60

Design	MWD-184'-20010', PTB: 20073'			
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	0.22



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
MD Reference: Well @ 3028.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey Program **Date** 12/23/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
184.00	375.00	Survey #1 (OH)	GYRO-NS-CT	OWSG XYZ Accel with XY Static and Continuous Gyro
411.00	20,073.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HRGM

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	466,663.67	646,013.73
184.00	0.70	276.80	184.00	0.13	0.13	-1.12	1.12	276.80	466,663.80	646,012.61
277.00	0.80	282.80	276.99	0.34	0.34	-2.31	2.34	278.46	466,664.01	646,011.42
375.00	0.80	266.80	374.98	0.44	0.46	-3.66	3.69	277.12	466,664.13	646,010.07
411.00	0.90	289.50	410.97	0.52	0.54	-4.18	4.22	277.33	466,664.21	646,009.55
Pro MWD First Survey: 411' MD										
502.00	0.80	272.60	501.96	0.78	0.81	-5.49	5.55	278.35	466,664.48	646,008.24
592.00	0.80	304.80	591.96	1.17	1.19	-6.63	6.74	280.19	466,664.86	646,007.10
685.00	1.80	344.70	684.93	2.94	2.97	-7.55	8.12	291.48	466,666.64	646,006.18
778.00	2.20	343.50	777.88	6.06	6.09	-8.44	10.41	305.81	466,669.76	646,005.29
871.00	1.90	343.80	870.82	9.25	9.28	-9.38	13.20	314.70	466,672.95	646,004.35
965.00	1.90	321.00	964.77	11.95	11.99	-10.80	16.14	318.00	466,675.66	646,002.93
1,058.00	1.90	316.00	1,057.71	14.25	14.30	-12.84	19.22	318.08	466,677.97	646,000.89
1,148.00	1.50	311.30	1,147.67	16.09	16.15	-14.76	21.88	317.58	466,679.82	645,998.97
1,238.00	1.00	318.90	1,237.65	17.46	17.52	-16.16	23.83	317.31	466,681.19	645,997.57
1,327.00	1.30	319.60	1,326.64	18.81	18.87	-17.33	25.62	317.45	466,682.54	645,996.40
1,417.00	1.10	306.40	1,416.62	20.09	20.16	-18.68	27.49	317.18	466,683.83	645,995.05
1,506.00	1.30	312.00	1,505.60	21.27	21.35	-20.12	29.33	316.69	466,685.02	645,993.61
1,596.00	2.50	318.00	1,595.54	23.40	23.49	-22.19	32.31	316.62	466,687.16	645,991.54
1,685.00	4.60	324.20	1,684.37	27.73	27.83	-25.58	37.80	317.41	466,691.50	645,988.15
1,775.00	7.40	326.90	1,773.87	35.49	35.61	-30.86	47.12	319.09	466,699.28	645,982.87



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
MD Reference: Well @ 3028.00usft
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)	
1,864.00	8.70	325.60	1,861.99	45.82	45.96	-37.79	59.50	320.58	466,709.63	645,975.94	
1,954.00	8.70	325.80	1,950.95	57.04	57.21	-45.46	73.07	321.53	466,720.88	645,968.27	
2,044.00	10.20	327.30	2,039.73	69.34	69.55	-53.59	87.80	322.38	466,733.22	645,960.14	
2,133.00	9.30	329.20	2,127.44	82.12	82.36	-61.53	102.80	323.23	466,746.03	645,952.20	
2,223.00	8.40	331.70	2,216.37	94.13	94.39	-68.37	116.55	324.08	466,758.06	645,945.36	
2,312.00	8.20	337.00	2,304.44	105.67	105.96	-73.93	129.20	325.09	466,769.63	645,939.80	
2,402.00	8.90	336.30	2,393.44	117.93	118.24	-79.24	142.34	326.17	466,781.91	645,934.49	
2,492.00	9.90	336.20	2,482.23	131.37	131.69	-85.16	156.83	327.11	466,795.36	645,928.57	
2,581.00	8.60	335.90	2,570.07	144.42	144.77	-90.97	170.98	327.86	466,808.44	645,922.76	
2,671.00	9.20	333.90	2,658.99	157.00	157.37	-96.88	184.80	328.38	466,821.04	645,916.85	
2,761.00	8.80	335.00	2,747.88	169.68	170.07	-102.95	198.81	328.81	466,833.74	645,910.78	
2,850.00	7.50	332.80	2,835.98	180.99	181.41	-108.49	211.37	329.12	466,845.08	645,905.24	
2,911.00	7.20	332.30	2,896.48	187.90	188.34	-112.08	219.16	329.24	466,852.01	645,901.65	
3,024.00	6.80	331.70	3,008.63	200.04	200.50	-118.55	232.92	329.41	466,864.17	645,895.18	
3,113.00	6.90	331.20	3,097.00	209.34	209.82	-123.62	243.53	329.49	466,873.49	645,890.11	
3,203.00	7.30	330.00	3,186.31	219.01	219.51	-129.08	254.65	329.54	466,883.18	645,884.65	
3,292.00	7.30	331.30	3,274.59	228.85	229.37	-134.63	265.96	329.59	466,893.04	645,879.10	
3,382.00	7.50	329.80	3,363.84	238.92	239.46	-140.33	277.54	329.63	466,903.13	645,873.40	
3,471.00	8.60	329.50	3,451.96	249.65	250.21	-146.63	290.01	329.63	466,913.88	645,867.10	
3,561.00	9.90	330.80	3,540.79	262.17	262.76	-153.82	304.47	329.66	466,926.43	645,859.91	
3,650.00	10.10	328.30	3,628.44	275.46	276.08	-161.65	319.92	329.65	466,939.75	645,852.08	
3,740.00	10.50	327.30	3,716.99	289.04	289.70	-170.23	336.01	329.56	466,953.37	645,843.50	
3,830.00	10.40	330.10	3,805.49	302.95	303.64	-178.71	352.32	329.52	466,967.31	645,835.02	
3,919.00	9.50	331.60	3,893.15	316.35	317.06	-186.20	367.70	329.58	466,980.73	645,827.53	
4,009.00	8.60	330.10	3,982.03	328.69	329.43	-193.09	381.85	329.62	466,993.10	645,820.64	
4,098.00	8.60	330.10	4,070.03	340.20	340.97	-199.72	395.16	329.64	467,004.64	645,814.01	
4,187.00	5.00	339.50	4,158.39	349.59	350.37	-204.40	405.64	329.74	467,014.04	645,809.33	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
MD Reference: Well @ 3028.00usft
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)	
4,277.00	3.70	349.90	4,248.13	356.11	356.91	-206.28	412.23	329.97	467,020.58	645,807.45	
4,367.00	1.90	340.40	4,338.02	360.37	361.17	-207.29	416.43	330.15	467,024.84	645,806.44	
4,456.00	1.20	312.10	4,426.99	362.38	363.19	-208.48	418.77	330.14	467,026.86	645,805.25	
4,546.00	0.20	89.50	4,516.99	363.01	363.82	-209.02	419.59	330.12	467,027.49	645,804.71	
4,636.00	1.00	133.80	4,606.98	362.47	363.28	-208.30	418.76	330.17	467,026.95	645,805.43	
4,726.00	0.80	120.10	4,696.97	361.62	362.42	-207.19	417.46	330.24	467,026.09	645,806.54	
4,815.00	1.20	132.40	4,785.96	360.68	361.48	-205.96	416.04	330.33	467,025.15	645,807.77	
4,905.00	1.90	156.30	4,875.92	358.69	359.48	-204.67	413.66	330.35	467,023.15	645,809.06	
4,994.00	1.70	157.00	4,964.88	356.13	356.91	-203.56	410.88	330.30	467,020.58	645,810.17	
5,084.00	1.80	149.60	5,054.84	353.68	354.46	-202.32	408.14	330.28	467,018.13	645,811.41	
5,173.00	2.30	151.20	5,143.78	350.92	351.69	-200.75	404.96	330.28	467,015.36	645,812.98	
5,263.00	2.20	153.60	5,233.71	347.79	348.56	-199.12	401.43	330.26	467,012.23	645,814.61	
5,353.00	2.00	162.90	5,323.65	344.75	345.51	-197.89	398.17	330.20	467,009.18	645,815.84	
5,442.00	1.60	159.80	5,412.61	342.10	342.86	-197.00	395.43	330.12	467,006.53	645,816.73	
5,532.00	1.70	156.40	5,502.57	339.71	340.46	-196.03	392.86	330.07	467,004.13	645,817.70	
5,621.00	1.40	168.60	5,591.54	337.43	338.19	-195.29	390.52	330.00	467,001.86	645,818.44	
5,711.00	1.50	178.30	5,681.51	335.18	335.93	-195.04	388.44	329.86	466,999.60	645,818.69	
5,801.00	1.30	175.00	5,771.48	332.98	333.74	-194.91	386.48	329.71	466,997.41	645,818.82	
5,891.00	1.60	186.30	5,861.45	330.72	331.47	-194.96	384.55	329.54	466,995.14	645,818.77	
5,981.00	0.90	199.10	5,951.43	328.80	329.55	-195.33	383.09	329.34	466,993.22	645,818.40	
6,070.00	0.90	231.20	6,040.42	327.70	328.45	-196.10	382.54	329.16	466,992.12	645,817.63	
6,159.00	0.60	325.30	6,129.41	327.64	328.40	-196.91	382.91	329.05	466,992.07	645,816.82	
6,249.00	1.00	335.20	6,219.41	328.74	329.50	-197.51	384.16	329.06	466,993.17	645,816.22	
6,338.00	1.00	335.50	6,308.39	330.15	330.91	-198.16	385.71	329.09	466,994.58	645,815.57	
6,428.00	0.80	335.50	6,398.38	331.43	332.20	-198.75	387.11	329.11	466,995.87	645,814.98	
6,518.00	0.90	357.50	6,488.37	332.71	333.48	-199.04	388.36	329.17	466,997.15	645,814.69	
6,608.00	0.70	357.80	6,578.36	333.96	334.73	-199.09	389.46	329.26	466,998.40	645,814.64	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
MD Reference: Well @ 3028.00usft
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)	
6,698.00	0.50	341.70	6,668.36	334.89	335.65	-199.23	390.33	329.31	466,999.32	645,814.50	
6,787.00	1.00	329.30	6,757.35	335.92	336.69	-199.75	391.49	329.32	467,000.36	645,813.98	
6,877.00	1.10	324.40	6,847.33	337.29	338.07	-200.66	393.13	329.31	467,001.74	645,813.07	
6,967.00	0.90	356.00	6,937.32	338.70	339.48	-201.21	394.62	329.34	467,003.15	645,812.52	
7,056.00	1.50	351.20	7,026.30	340.55	341.32	-201.43	396.33	329.45	467,004.99	645,812.30	
7,146.00	1.10	3.10	7,116.28	342.57	343.35	-201.57	398.14	329.58	467,007.02	645,812.16	
7,235.00	1.60	8.90	7,205.25	344.66	345.43	-201.33	399.82	329.76	467,009.10	645,812.40	
7,325.00	1.00	357.90	7,295.23	346.68	347.46	-201.16	401.49	329.93	467,011.13	645,812.57	
7,414.00	1.00	340.70	7,384.22	348.19	348.97	-201.45	402.94	330.00	467,012.64	645,812.28	
7,503.00	1.00	350.20	7,473.20	349.69	350.46	-201.84	404.43	330.06	467,014.13	645,811.89	
7,594.00	1.00	334.40	7,564.19	351.18	351.96	-202.32	405.97	330.11	467,015.63	645,811.41	
7,684.00	0.80	289.90	7,654.18	352.10	352.89	-203.25	407.23	330.06	467,016.56	645,810.48	
7,773.00	0.70	311.60	7,743.17	352.67	353.46	-204.24	408.22	329.98	467,017.13	645,809.49	
7,862.00	0.90	302.10	7,832.16	353.40	354.19	-205.24	409.36	329.91	467,017.86	645,808.49	
7,952.00	0.70	192.60	7,922.16	353.24	354.03	-205.95	409.58	329.81	467,017.70	645,807.78	
8,042.00	1.60	167.10	8,012.14	351.48	352.27	-205.79	407.98	329.71	467,015.94	645,807.94	
8,131.00	1.00	155.60	8,101.12	349.56	350.35	-205.20	406.02	329.64	467,014.02	645,808.53	
8,221.00	1.20	153.80	8,191.10	348.00	348.79	-204.46	404.30	329.62	467,012.46	645,809.27	
8,310.00	1.10	153.70	8,280.08	346.40	347.19	-203.67	402.51	329.60	467,010.86	645,810.06	
8,400.00	1.00	147.50	8,370.07	344.97	345.75	-202.86	400.87	329.60	467,009.42	645,810.87	
8,489.00	1.50	158.40	8,459.05	343.23	344.01	-202.01	398.94	329.58	467,007.68	645,811.72	
8,579.00	1.60	159.10	8,549.01	340.97	341.74	-201.13	396.54	329.52	467,005.41	645,812.60	
8,669.00	1.00	163.00	8,638.99	339.05	339.82	-200.45	394.54	329.46	467,003.49	645,813.28	
8,759.00	1.50	158.60	8,728.97	337.20	337.97	-199.80	392.61	329.41	467,001.64	645,813.93	
8,848.00	1.60	179.30	8,817.94	334.88	335.64	-199.36	390.38	329.29	466,999.31	645,814.37	
8,938.00	0.60	271.80	8,907.92	333.63	334.40	-199.81	389.55	329.14	466,998.07	645,813.92	
9,028.00	0.70	22.40	8,997.92	334.15	334.92	-200.07	390.13	329.15	466,998.59	645,813.66	



ProDirectional Survey Report



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Project: Eddy County, NM(NAD 83)
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Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
MD Reference: Well @ 3028.00usft
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)	
9,117.00	1.10	72.20	9,086.91	334.92	335.69	-199.05	390.27	329.33	466,999.36	645,814.68	
9,207.00	1.20	90.60	9,176.89	335.18	335.94	-197.29	389.59	329.58	466,999.61	645,816.44	
9,296.00	1.00	114.70	9,265.88	334.85	335.61	-195.65	388.47	329.76	466,999.28	645,818.08	
9,385.00	1.00	115.40	9,354.86	334.20	334.95	-194.24	387.20	329.89	466,998.62	645,819.49	
9,476.00	1.00	137.40	9,445.85	333.28	334.03	-192.99	385.77	329.98	466,997.70	645,820.74	
9,565.00	8.30	13.40	9,534.55	338.98	339.71	-190.97	389.71	330.66	467,003.38	645,822.76	
9,654.00	16.00	3.80	9,621.50	357.50	358.23	-188.66	404.88	332.23	467,021.90	645,825.07	
9,745.00	27.40	357.00	9,705.93	391.04	391.77	-188.93	434.95	334.25	467,055.44	645,824.80	
9,835.00	35.80	358.30	9,782.52	438.11	438.85	-190.80	478.53	336.50	467,102.52	645,822.93	
9,924.00	43.20	359.90	9,851.14	494.67	495.41	-191.62	531.18	338.85	467,159.08	645,822.11	
10,014.00	51.10	5.00	9,912.32	560.50	561.23	-188.62	592.08	341.42	467,224.90	645,825.11	
10,104.00	63.30	2.10	9,960.99	635.88	636.59	-184.08	662.67	343.87	467,300.26	645,829.65	
10,193.00	76.10	358.20	9,991.82	719.16	719.87	-183.98	743.00	345.66	467,383.54	645,829.75	
10,229.00	81.60	356.60	9,998.78	754.42	755.14	-185.58	777.61	346.19	467,418.81	645,828.15	
10,280.00	89.00	357.60	10,002.95	805.14	805.86	-188.15	827.54	346.86	467,469.53	645,825.58	
10,374.00	90.80	357.80	10,003.12	899.04	899.78	-191.92	920.02	347.96	467,563.45	645,821.81	
10,466.00	91.30	357.50	10,001.43	990.93	991.69	-195.69	1,010.82	348.84	467,655.36	645,818.04	
10,560.00	91.70	357.80	9,998.97	1,084.81	1,085.58	-199.55	1,103.77	349.58	467,749.25	645,814.18	
10,653.00	91.40	359.20	9,996.45	1,177.73	1,178.51	-201.98	1,195.69	350.27	467,842.18	645,811.75	
10,742.00	91.00	359.80	9,994.59	1,266.70	1,267.49	-202.76	1,283.60	350.91	467,931.16	645,810.97	
10,832.00	89.30	0.30	9,994.35	1,356.70	1,357.48	-202.68	1,372.53	351.51	468,021.15	645,811.05	
10,921.00	88.30	359.60	9,996.22	1,445.67	1,446.46	-202.76	1,460.60	352.02	468,110.13	645,810.97	
11,011.00	89.40	359.80	9,998.02	1,535.65	1,536.44	-203.23	1,549.82	352.47	468,200.11	645,810.50	
11,100.00	90.80	0.10	9,997.87	1,624.65	1,625.44	-203.30	1,638.10	352.87	468,289.11	645,810.43	
11,190.00	90.60	0.90	9,996.77	1,714.64	1,715.43	-202.52	1,727.34	353.27	468,379.10	645,811.21	
11,279.00	92.80	3.10	9,994.13	1,803.55	1,804.32	-199.42	1,815.31	353.69	468,467.99	645,814.31	
11,369.00	91.40	2.80	9,990.83	1,893.38	1,894.14	-194.79	1,904.13	354.13	468,557.81	645,818.94	



ProDirectional Survey Report



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Local Co-ordinate Reference: Well No. 6H
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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)	
11,459.00	89.50	359.50	9,990.12	1,983.35	1,984.10	-192.98	1,993.47	354.44	468,647.77	645,820.75	
11,548.00	89.30	359.40	9,991.06	2,072.34	2,073.10	-193.84	2,082.14	354.66	468,736.77	645,819.89	
11,638.00	90.60	359.90	9,991.14	2,162.33	2,163.09	-194.39	2,171.81	354.86	468,826.76	645,819.34	
11,728.00	91.10	0.70	9,989.80	2,252.32	2,253.08	-193.91	2,261.41	355.08	468,916.75	645,819.82	
11,817.00	90.10	0.80	9,988.87	2,341.31	2,342.07	-192.75	2,349.98	355.30	469,005.74	645,820.98	
11,906.00	90.50	0.80	9,988.40	2,430.30	2,431.06	-191.51	2,438.59	355.50	469,094.73	645,822.22	
11,995.00	90.90	0.60	9,987.31	2,519.29	2,520.04	-190.42	2,527.23	355.68	469,183.71	645,823.31	
12,085.00	89.50	1.50	9,987.00	2,609.28	2,610.02	-188.77	2,616.84	355.86	469,273.69	645,824.96	
12,175.00	90.00	1.20	9,987.39	2,699.26	2,700.00	-186.65	2,706.44	356.05	469,363.67	645,827.08	
12,264.00	90.60	1.50	9,986.93	2,788.24	2,788.97	-184.55	2,795.07	356.21	469,452.64	645,829.18	
12,354.00	88.80	1.60	9,987.40	2,878.21	2,878.93	-182.12	2,884.69	356.38	469,542.60	645,831.61	
12,443.00	88.60	1.40	9,989.42	2,967.17	2,967.88	-179.79	2,973.32	356.53	469,631.55	645,833.94	
12,533.00	89.40	1.70	9,990.99	3,057.13	3,057.83	-177.36	3,062.97	356.68	469,721.50	645,836.37	
12,623.00	90.10	1.40	9,991.38	3,147.10	3,147.80	-174.92	3,152.65	356.82	469,811.47	645,838.81	
12,713.00	89.60	0.30	9,991.62	3,237.10	3,237.79	-173.59	3,242.44	356.93	469,901.46	645,840.14	
12,802.00	90.60	0.10	9,991.46	3,326.09	3,326.78	-173.28	3,331.29	357.02	469,990.45	645,840.45	
12,892.00	91.80	0.60	9,989.58	3,416.07	3,416.76	-172.73	3,421.12	357.11	470,080.43	645,841.00	
12,981.00	91.50	1.30	9,987.01	3,505.03	3,505.71	-171.25	3,509.89	357.20	470,169.38	645,842.48	
13,071.00	91.20	0.60	9,984.89	3,594.99	3,595.67	-169.76	3,599.68	357.30	470,259.34	645,843.97	
13,161.00	89.40	359.60	9,984.42	3,684.99	3,685.67	-169.60	3,689.57	357.37	470,349.34	645,844.13	
13,250.00	88.60	358.90	9,985.98	3,773.96	3,774.64	-170.77	3,778.50	357.41	470,438.31	645,842.96	
13,340.00	88.70	358.40	9,988.10	3,863.90	3,864.59	-172.89	3,868.46	357.44	470,528.26	645,840.84	
13,430.00	88.20	357.80	9,990.53	3,953.81	3,954.51	-175.87	3,958.42	357.45	470,618.18	645,837.86	
13,519.00	90.00	358.20	9,991.93	4,042.72	4,043.44	-178.98	4,047.40	357.47	470,707.11	645,834.75	
13,609.00	89.50	359.70	9,992.32	4,132.70	4,133.42	-180.62	4,137.37	357.50	470,797.09	645,833.11	
13,698.00	90.30	359.90	9,992.48	4,221.70	4,222.42	-180.94	4,226.30	357.55	470,886.09	645,832.79	
13,788.00	89.70	359.70	9,992.48	4,311.69	4,312.42	-181.25	4,316.23	357.59	470,976.09	645,832.48	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
MD Reference: Well @ 3028.00usft
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)	
13,877.00	88.70	359.30	9,993.72	4,400.68	4,401.41	-182.03	4,405.17	357.63	471,065.08	645,831.70	
13,989.00	88.60	358.90	9,996.36	4,512.62	4,513.36	-183.78	4,517.10	357.67	471,177.03	645,829.95	
14,079.00	90.00	359.50	9,997.46	4,602.60	4,603.34	-185.04	4,607.06	357.70	471,267.01	645,828.69	
14,168.00	90.50	359.00	9,997.07	4,691.59	4,692.33	-186.21	4,696.03	357.73	471,356.00	645,827.52	
14,258.00	90.30	358.80	9,996.44	4,781.56	4,782.32	-187.93	4,786.01	357.75	471,445.99	645,825.80	
14,347.00	90.20	358.00	9,996.05	4,870.51	4,871.28	-190.42	4,875.00	357.76	471,534.95	645,823.31	
14,437.00	89.10	359.00	9,996.60	4,960.47	4,961.24	-192.77	4,964.99	357.77	471,624.91	645,820.96	
14,527.00	90.40	359.70	9,996.99	5,050.45	5,051.24	-193.80	5,054.95	357.80	471,714.91	645,819.93	
14,617.00	90.70	358.80	9,996.13	5,140.44	5,141.22	-194.97	5,144.92	357.83	471,804.89	645,818.76	
14,707.00	91.70	0.40	9,994.25	5,230.41	5,231.20	-195.60	5,234.85	357.86	471,894.87	645,818.13	
14,797.00	90.60	0.20	9,992.44	5,320.39	5,321.18	-195.13	5,324.75	357.90	471,984.85	645,818.60	
14,887.00	90.60	0.70	9,991.50	5,410.38	5,411.17	-194.42	5,414.66	357.94	472,074.84	645,819.31	
14,976.00	89.90	1.40	9,991.11	5,499.37	5,500.15	-192.79	5,503.53	357.99	472,163.82	645,820.94	
15,066.00	90.30	1.30	9,990.95	5,589.35	5,590.13	-190.67	5,593.38	358.05	472,253.80	645,823.06	
15,155.00	88.40	1.00	9,991.96	5,678.33	5,679.10	-188.89	5,682.24	358.10	472,342.77	645,824.84	
15,246.00	88.70	0.30	9,994.26	5,769.30	5,770.06	-187.85	5,773.12	358.14	472,433.73	645,825.88	
15,335.00	89.50	359.70	9,995.66	5,858.29	5,859.05	-187.85	5,862.06	358.16	472,522.72	645,825.88	
15,425.00	90.80	359.60	9,995.43	5,948.28	5,949.05	-188.40	5,952.03	358.19	472,612.72	645,825.33	
15,514.00	89.20	359.70	9,995.43	6,037.27	6,038.04	-188.95	6,041.00	358.21	472,701.71	645,824.78	
15,604.00	88.40	359.70	9,997.31	6,127.25	6,128.02	-189.42	6,130.95	358.23	472,791.69	645,824.31	
15,694.00	88.80	0.50	9,999.51	6,217.22	6,217.99	-189.26	6,220.87	358.26	472,881.66	645,824.47	
15,784.00	90.70	1.40	9,999.90	6,307.21	6,307.97	-187.77	6,310.77	358.29	472,971.64	645,825.96	
15,873.00	91.60	0.60	9,998.12	6,396.18	6,396.94	-186.22	6,399.65	358.33	473,060.61	645,827.51	
15,962.00	90.70	1.00	9,996.33	6,485.15	6,485.91	-184.97	6,488.55	358.37	473,149.58	645,828.76	
16,052.00	90.00	0.90	9,995.78	6,575.15	6,575.90	-183.48	6,578.46	358.40	473,239.57	645,830.25	
16,142.00	90.60	0.70	9,995.31	6,665.14	6,665.89	-182.23	6,668.38	358.43	473,329.56	645,831.50	
16,231.00	91.70	0.90	9,993.52	6,754.11	6,754.86	-180.98	6,757.28	358.47	473,418.53	645,832.75	



ProDirectional Survey Report



Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
MD Reference: Well @ 3028.00usft
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)	
16,321.00	90.50	1.40	9,991.80	6,844.08	6,844.82	-179.18	6,847.17	358.50	473,508.49	645,834.55	
16,410.00	89.10	1.60	9,992.11	6,933.06	6,933.79	-176.85	6,936.04	358.54	473,597.46	645,836.88	
16,500.00	90.10	2.00	9,992.73	7,023.02	7,023.74	-174.02	7,025.90	358.58	473,687.41	645,839.71	
16,589.00	90.20	1.40	9,992.50	7,111.99	7,112.70	-171.38	7,114.77	358.62	473,776.37	645,842.35	
16,679.00	90.80	0.60	9,991.72	7,201.98	7,202.68	-169.81	7,204.68	358.65	473,866.35	645,843.92	
16,769.00	89.60	0.20	9,991.40	7,291.98	7,292.68	-169.18	7,294.64	358.67	473,956.35	645,844.55	
16,859.00	90.60	359.80	9,991.24	7,381.97	7,382.68	-169.18	7,384.62	358.69	474,046.35	645,844.55	
16,948.00	89.40	0.30	9,991.24	7,470.97	7,471.68	-169.10	7,473.59	358.70	474,135.35	645,844.63	
17,038.00	88.10	359.70	9,993.21	7,560.95	7,561.65	-169.10	7,563.54	358.72	474,225.32	645,844.63	
17,128.00	89.40	359.50	9,995.17	7,650.92	7,651.63	-169.73	7,653.51	358.73	474,315.30	645,844.00	
17,217.00	89.20	359.50	9,996.26	7,739.90	7,740.62	-170.51	7,742.49	358.74	474,404.29	645,843.22	
17,306.00	89.30	358.90	9,997.42	7,828.88	7,829.60	-171.75	7,831.48	358.74	474,493.27	645,841.98	
17,396.00	90.20	359.50	9,997.82	7,918.87	7,919.59	-173.01	7,921.48	358.75	474,583.26	645,840.72	
17,486.00	90.60	358.60	9,997.19	8,008.84	8,009.57	-174.50	8,011.47	358.75	474,673.24	645,839.23	
17,575.00	90.40	359.50	9,996.41	8,097.82	8,098.56	-175.98	8,100.47	358.76	474,762.23	645,837.75	
17,665.00	89.70	0.30	9,996.33	8,187.82	8,188.55	-176.13	8,190.45	358.77	474,852.22	645,837.60	
17,755.00	88.90	359.90	9,997.43	8,277.81	8,278.55	-175.98	8,280.42	358.78	474,942.22	645,837.75	
17,844.00	88.00	358.20	9,999.84	8,366.75	8,367.50	-177.45	8,369.38	358.79	475,031.17	645,836.28	
17,933.00	90.50	358.80	10,001.00	8,455.70	8,456.45	-179.78	8,458.36	358.78	475,120.12	645,833.95	
18,023.00	90.50	1.60	10,000.22	8,545.69	8,546.44	-179.47	8,548.32	358.80	475,210.11	645,834.26	
18,112.00	89.30	4.40	10,000.37	8,634.57	8,635.31	-174.81	8,637.08	358.84	475,298.98	645,838.92	
18,202.00	89.40	5.30	10,001.40	8,724.27	8,724.98	-167.20	8,726.58	358.90	475,388.65	645,846.53	
18,291.00	93.00	8.40	9,999.53	8,812.63	8,813.30	-156.59	8,814.69	358.98	475,476.97	645,857.14	
18,381.00	91.80	9.50	9,995.76	8,901.51	8,902.12	-142.60	8,903.26	359.08	475,565.79	645,871.13	
18,470.00	88.20	8.40	9,995.76	8,989.46	8,990.02	-128.76	8,990.94	359.18	475,653.69	645,884.97	
18,560.00	87.50	8.70	9,999.14	9,078.45	9,078.96	-115.39	9,079.69	359.27	475,742.63	645,898.34	
18,649.00	88.50	10.60	10,002.25	9,166.19	9,166.64	-100.48	9,167.19	359.37	475,830.31	645,913.25	



ProDirectional Survey Report

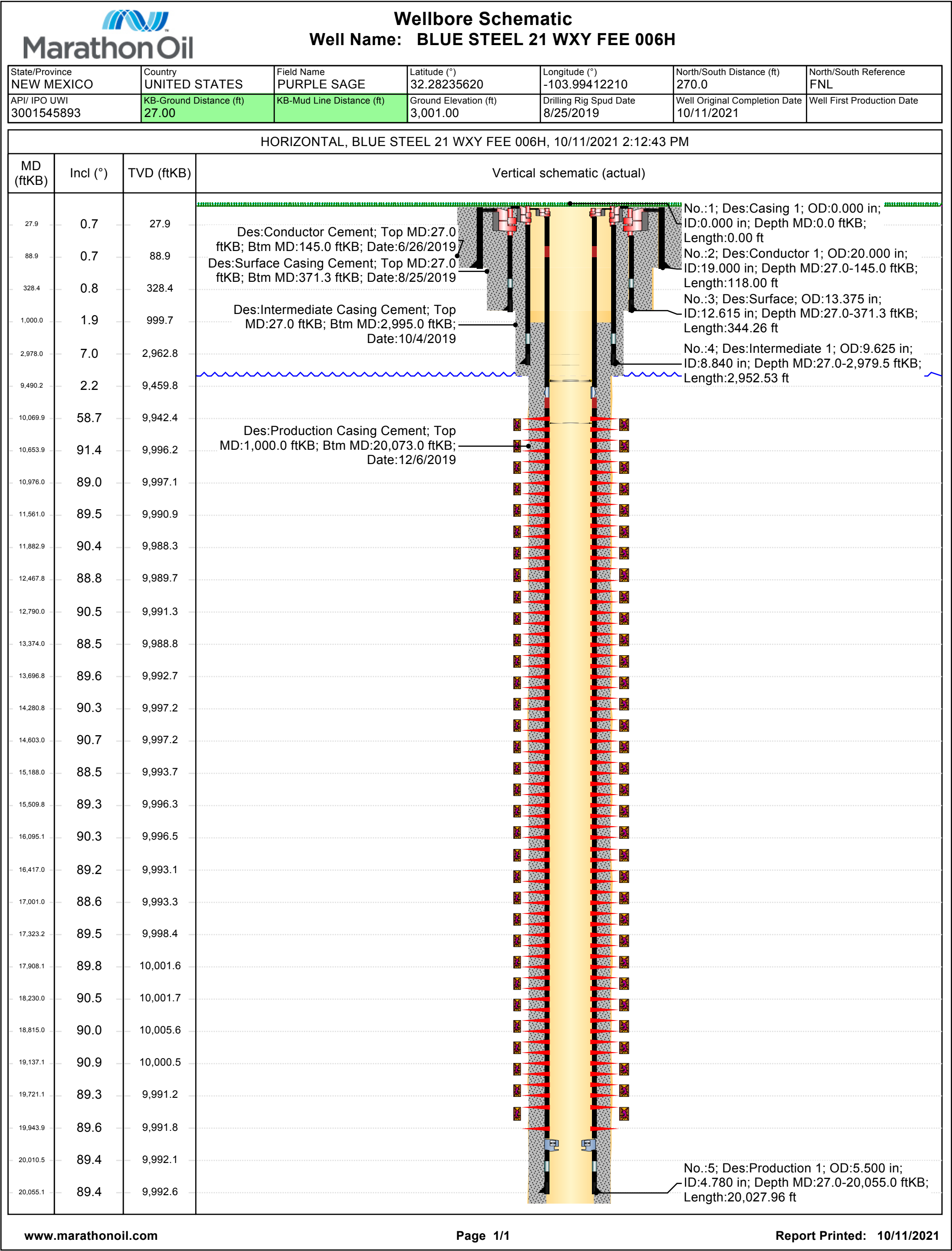


Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Blue Steel 21 WXY Fee
Well: No. 6H
Wellbore: OH
Design: MWD-184'-20010', PTB: 20073'

Local Co-ordinate Reference: Well No. 6H
TVD Reference: Well @ 3028.00usft
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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)	
18,739.00	89.00	11.10	10,004.21	9,254.62	9,255.01	-83.54	9,255.39	359.48	475,918.68	645,930.19	
18,828.00	90.20	11.10	10,004.83	9,342.02	9,342.34	-66.41	9,342.58	359.59	476,006.01	645,947.32	
18,918.00	91.00	11.20	10,003.89	9,430.38	9,430.64	-49.00	9,430.76	359.70	476,094.31	645,964.73	
19,007.00	91.30	10.40	10,002.10	9,517.85	9,518.04	-32.33	9,518.10	359.81	476,181.71	645,981.40	
19,097.00	91.10	9.10	10,000.22	9,606.58	9,606.72	-17.09	9,606.74	359.90	476,270.39	645,996.64	
19,187.00	90.60	9.20	9,998.88	9,695.48	9,695.57	-2.78	9,695.57	359.98	476,359.24	646,010.95	
19,276.00	91.10	9.80	9,997.56	9,783.31	9,783.33	11.90	9,783.34	0.07	476,447.00	646,025.63	
19,366.00	90.10	8.00	9,996.62	9,872.27	9,872.24	25.83	9,872.27	0.15	476,535.91	646,039.56	
19,456.00	92.90	7.80	9,994.26	9,961.42	9,961.35	38.19	9,961.42	0.22	476,625.02	646,051.92	
19,545.00	92.00	6.00	9,990.46	10,049.73	10,049.62	48.87	10,049.74	0.28	476,713.29	646,062.60	
19,635.00	89.40	2.10	9,989.36	10,139.50	10,139.36	55.23	10,139.51	0.31	476,803.03	646,068.96	
19,725.00	89.30	359.30	9,990.38	10,229.48	10,229.34	56.33	10,229.49	0.32	476,893.01	646,070.06	
19,814.00	90.50	357.40	9,990.53	10,318.43	10,318.30	53.76	10,318.44	0.30	476,981.97	646,067.49	
19,904.00	88.80	357.70	9,991.08	10,408.32	10,408.21	49.92	10,408.33	0.27	477,071.88	646,063.65	
19,993.00	89.20	358.00	9,992.64	10,497.23	10,497.13	46.58	10,497.24	0.25	477,160.80	646,060.31	
20,010.00	89.40	357.50	9,992.85	10,514.22	10,514.12	45.91	10,514.22	0.25	477,177.79	646,059.64	
Last Survey: 20010' MD											
20,073.00	89.40	357.50	9,993.50	10,577.14	10,577.06	43.16	10,577.14	0.23	477,240.73	646,056.89	
PTB: 20073' MD											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
411.00	410.97	0.54	-4.18	Pro MWD First Survey: 411' MD
20,010.00	9,992.85	10,514.12	45.91	Last Survey: 20010' MD
20,073.00	9,993.50	10,577.06	43.16	PTB: 20073' MD



Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

ACKNOWLEDGMENTS

Action 95449

ACKNOWLEDGMENTS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 95449
	Action Type: [C-105] Well (Re)Completion (C-105)

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.
☐	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.

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

CONDITIONS

Action 95449

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 95449
	Action Type: [C-105] Well (Re)Completion (C-105)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	Future submittal of approved 3160-4 AFMSS Completion Report only requires the approved AFMSS report and not the C-102, Directional Survey, or the Wellbore Schematic as they are already included in the C-104 Completion Packet.	11/18/2024