

Form 3160-3  
(June 2015)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

1a. Type of work:	<input checked="" type="checkbox"/> DRILL	<input type="checkbox"/> REENTER	7. If Unit or CA Agreement, Name and No.	
1b. Type of Well:	<input checked="" type="checkbox"/> Oil Well	<input type="checkbox"/> Gas Well	8. Lease Name and Well No.	
1c. Type of Completion:	<input type="checkbox"/> Hydraulic Fracturing	<input checked="" type="checkbox"/> Single Zone	<input type="checkbox"/> Multiple Zone	301H
2. Name of Operator	MARATHON OIL PERMIAN LLC			9. API Well No.
3a. Address	990 TOWN & COUNTRY BLVD, HOUSTON, TX 77024			30-025-55586
3b. Phone No. (include area code)	(713) 296-2113			10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *)	At surface NWNW / 403 FNL / 1246 FWL / LAT 32.1511541 / LONG -103.4452836			RED HILLS/BONE SPRING EAST
	At proposed prod. zone SWSW / 100 FSL / 660 FWL / LAT 32.1090142 / LONG -103.4471553			11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*			12. County or Parish	13. State
15 miles			LEA	NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	403 feet	16. No of acres in lease	17. Spacing Unit dedicated to this well	
			480.0	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	30 feet	19. Proposed Depth	20. BLM/BIA Bond No. in file	
		10450 feet / 25924 feet	FED: NMB001555	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	3359 feet	22. Approximate date work will start*	23. Estimated duration	
		09/13/2025	30 days	
24. Attachments				

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) ADRIAN COVARRUBIAS / Ph: (713) 929-6600	Date 08/22/2024
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Title regulatory Compliance Representative		
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Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) CHRISTOPHER WALLS / Ph: (575) 234-2234	Date 03/25/2025
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Title Petroleum Engineer	Office Carlsbad Field Office	
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Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

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 to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM I:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

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(Form 3160-3, page 2)

(Continued on page 3)

## Additional Operator Remarks

### Location of Well

0. SHL: NWNW / 403 FNL / 1246 FWL / TWSP: 25S / RANGE: 34E / SECTION: 11 / LAT: 32.1511541 / LONG: -103.4452836 ( TVD: 0 feet, MD: 0 feet )  
PPP: NWNW / 100 FNL / 660 FWL / TWSP: 25S / RANGE: 34E / SECTION: 11 / LAT: 32.1519912 / LONG: -103.4471788 ( TVD: 9877 feet, MD: 9908 feet )  
PPP: NWSW / 2639 FNL / 660 FWL / TWSP: 25S / RANGE: 34E / SECTION: 11 / LAT: 32.1450129 / LONG: -103.447175 ( TVD: 10450 feet, MD: 12827 feet )  
PPP: NWSW / 2639 FNL / 658 FWL / TWSP: 25S / RANGE: 34E / SECTION: 14 / LAT: 32.1305025 / LONG: -103.4471671 ( TVD: 10450 feet, MD: 18106 feet )  
BHL: SWSW / 100 FSL / 660 FWL / TWSP: 25S / RANGE: 34E / SECTION: 23 / LAT: 32.1090142 / LONG: -103.4471553 ( TVD: 10450 feet, MD: 25924 feet )

### BLM Point of Contact

Name: PAMELLA HERNANDEZ  
Title: LIE  
Phone: (575) 234-5954  
Email: PHERNANDEZ@BLM.GOV

### **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

CONFIDENTIAL



U.S. Department of the Interior

Bureau of Land Management

## Application for Permit to Drill

### APD Package Report

Date Printed: 04/14/2025 03:31 PM

APD ID: 10400100577

Well Status: AAPD

APD Received Date: 08/22/2024 07:40 AM

Well Name: MILLION DOLLAR MAN W I

Operator: MARATHON OIL PERMIAN LLC

Well Number: 301H

#### APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
  - Well Plat: 2 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
  - Blowout Prevention Choke Diagram Attachment: 2 file(s)
  - Blowout Prevention BOP Diagram Attachment: 1 file(s)
  - Casing Design Assumptions and Worksheet(s): 3 file(s)
  - Hydrogen sulfide drilling operations plan: 1 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 1 file(s)
  - Other Facets: 3 file(s)
  - Other Variances: 5 file(s)
- SUPO Report
- SUPO Attachments
  - Existing Road Map: 1 file(s)
  - New Road Map: 1 file(s)
  - Attach Well map: 1 file(s)
  - Production Facilities map: 2 file(s)
  - Water source and transportation map: 1 file(s)
  - Construction Materials source location attachment: 1 file(s)
  - Well Site Layout Diagram: 2 file(s)
  - Recontouring attachment: 2 file(s)
  - Other SUPO Attachment: 1 file(s)
- PWD Report
- PWD Attachments
  - None

- Bond Report
- Bond Attachments
- None

C-102

Submit Electronically  
Via OCD PermittingState of New Mexico  
Energy, Minerals, & Natural Resources Department  
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal Type:  
[X] Initial Submittal  
[E] Amended Report  
[E] As Drilled

## WELL LOCATION INFORMATION

API Number <b>30-025-55586</b>	Pool Code 97369	Pool Name RED HILLS; BONE SPRING EAST
Property Code 336882	Property Name MILLION DOLLAR MAN W FED COM	Well Number 301H
OGRID No. 372098	Operator Name MARATHON OIL PERMIAN LLC	Ground Level Elevation 3359'
Surface Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal	Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	

## Surface Location

UL D	Section 11	Township 25S	Range 34E	Lot	Ft. from N/S 403' FNL	Ft. from E/W 1246' FWL	Latitude (NAD83) 32.15115419	Longitude (NAD83) -103.44528365	County LEA
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## Bottom Hole Location

UL M	Section 23	Township 25S	Range 34E	Lot	Ft. from N/S 100' FSL	Ft. from E/W 660' FWL	Latitude (NAD83) 32.10901429	Longitude (NAD83) -103.44715537	County LEA
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Dedicated Acres 240.00	Infill or Defining Well Defining	Defining Well API	Overlapping Spacing Unit (Y/N) Y	Consolidation Code N/A
Order Numbers: N/A			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

## Kick Off Point (KOP)

UL D	Section 11	Township 25S	Range 34E	Lot	Ft. from N/S 100' FNL	Ft. from E/W 660' FWL	Latitude (NAD83) 32.15199120	Longitude (NAD83) -103.44717883	County LEA
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## First Take Point (FTP)

UL D	Section 11	Township 25S	Range 34E	Lot	Ft. from N/S 100' FNL	Ft. from E/W 660' FWL	Latitude (NAD83) 32.15199120	Longitude (NAD83) -103.44717883	County LEA
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## Last Take Point (LTP)

UL M	Section 23	Township 25S	Range 34E	Lot	Ft. from N/S 100' FSL	Ft. from E/W 660' FWL	Latitude (NAD83) 32.10901429	Longitude (NAD83) -103.44715537	County LEA
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Unitized Area or Area of Uniform Interest COM	Spacing Unit Type: <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation 3359'
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## OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Adrian Covarrubias 8/19/2024

Signature Date

Adrian Covarrubias

Printed Name

acovarrubias@marathonoil.com

Email Address

## SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.



Signature and Seal of Professional Surveyor

Certificate Number Date of Survey

21653

AUGUST 12, 2024

## ACREAGE DEDICATION PLATS

## MILLION DOLLAR MAN W FED COM 301H



**SHL**  
FNL 403' FWL 1246', SECTION 11  
NAD 83, SPCS NM EAST  
X:816174.54' / Y:419858.75'  
LAT:32.15115419 / LON:-103.44528365  
**NAD 27, SPCS NM EAST**  
X:774988.58' / Y:419800.49'  
LAT:32.15102900 / LON:-103.44481427

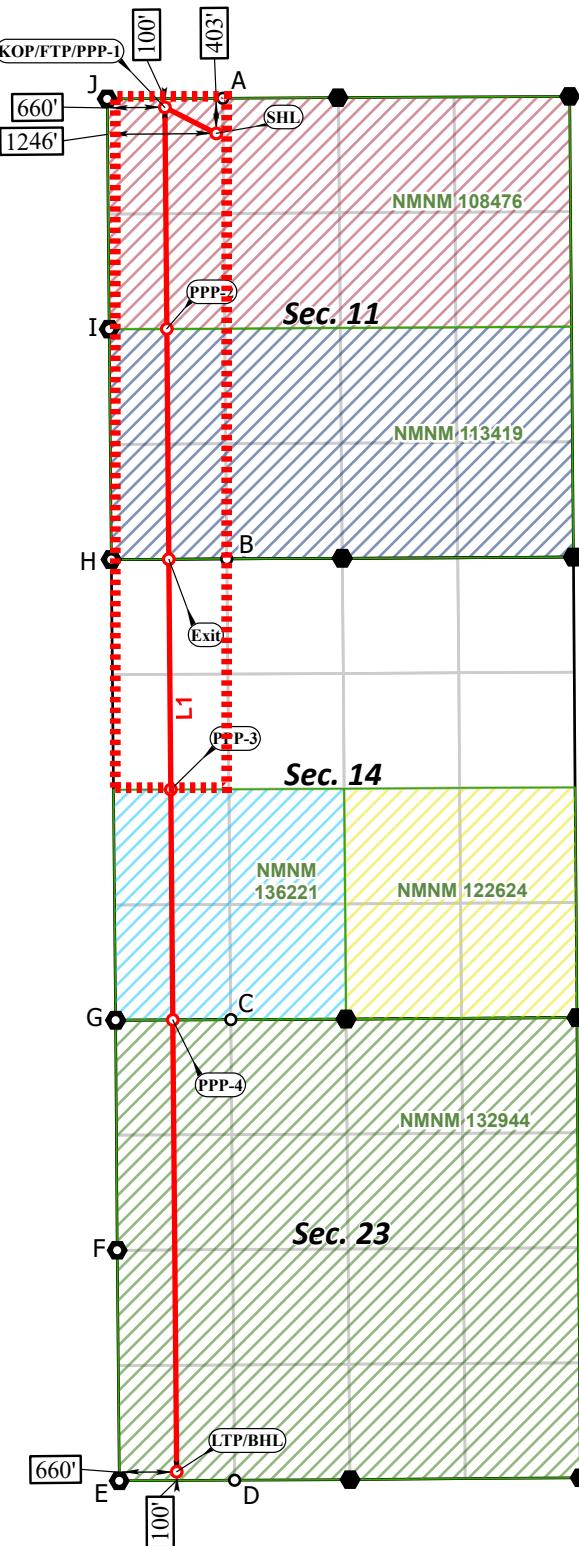
**KOP/FTP/PPP-1**  
FNL 100' FWL 660', SECTION 11  
NAD 83, SPCS NM EAST  
X:815585.49' / Y:420158.42'  
LAT:32.15199120 / LON:-103.44717883  
**NAD 27, SPCS NM EAST**  
X:774399.55' / Y:420100.15'  
LAT:32.15186604 / LON:-103.44670932

**PPP-2**  
FNL 2639' FWL 660', SECTION 11  
NAD 83, SPCS NM EAST  
X:815607.55' / Y:417619.79'  
LAT:32.14501299 / LON:-103.44717505  
**NAD 27, SPCS NM EAST**  
X:774421.49' / Y:417561.59'  
LAT:32.14488779 / LON:-103.44670597

**PPP-3**  
FNL 2639' FWL 658', SECTION 14  
NAD 83, SPCS NM EAST  
X:815653.43' / Y:412340.97'  
LAT:32.13050253 / LON:-103.44716716  
**NAD 27, SPCS NM EAST**  
X:774467.11' / Y:412282.91'  
LAT:32.13037725 / LON:-103.44669896

**PPP-4**  
FNL 0' FWL 655', SECTION 14  
NAD 83, SPCS NM EAST  
X:815676.37' / Y:409701.62'  
LAT:32.12324743 / LON:-103.44716319  
**NAD 27, SPCS NM EAST**  
X:774489.93' / Y:409643.63'  
LAT:32.12312211 / LON:-103.44669544

**LTP/BHL**  
FSL 100' FWL 660', SECTION 23  
NAD 83, SPCS NM EAST  
X:815721.37' / Y:404523.71'  
LAT:32.10901429 / LON:-103.44715537  
**NAD 27, SPCS NM EAST**  
X:774534.68' / Y:404465.86'  
LAT:32.10888889 / LON:-103.44668848



\*FTP TO LTP LINE BEARINGS

PRODUCTION LINE	BEARING/LENGTH
L1	S 00°29'53" E ~ 15635.30'

## CORNER COORDINATES

NAD 83, SPCS NM EAST

A - X: 816246.85' / Y: 420261.68'  
B - X: 816294.11' / Y: 414984.13'  
C - X: 816341.42' / Y: 409704.95'  
D - X: 816384.72' / Y: 404427.05'  
E - X: 815062.26' / Y: 404420.39'  
F - X: 815038.72' / Y: 407062.31'  
G - X: 815021.10' / Y: 409698.33'  
H - X: 814970.58' / Y: 414976.46'  
I - X: 814947.61' / Y: 417616.28'  
J - X: 814924.62' / Y: 420254.80'

## CORNER COORDINATES

NAD 27, SPCS NM EAST

A - X: 775060.90' / Y: 420203.41'  
B - X: 775107.91' / Y: 414925.99'  
C - X: 775154.97' / Y: 409646.96'  
D - X: 775198.01' / Y: 404369.19'  
E - X: 773875.58' / Y: 404362.55'  
F - X: 773852.16' / Y: 407004.40'  
G - X: 773834.67' / Y: 409640.35'  
H - X: 773784.41' / Y: 414918.34'  
I - X: 773761.56' / Y: 417558.09'  
J - X: 773738.70' / Y: 420196.54'



Drill Line Events Section Corners Drill Line Dimension Lines Federal Leases NMSLO HSU HSU Corners  
All bearings and coordinates refer to New Mexico State Plane Coordinate System, East Zone, U.S. Survey Feet.

JOB No. MRO\_0035\_MM  
REV 1 NDS 8/9/2024

Distances/areas relative to NAD 83 grid measurements. Combined Scale Factor: 0.99834710 and a Convergence Angle: 0.47147300°

C-102

Submit Electronically  
Via OCD PermittingState of New Mexico  
Energy, Minerals, & Natural Resources Department  
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal  Initial Submittal  
 Amended Report  
Type:  As Drilled

## WELL LOCATION INFORMATION

API Number <b>30-025-55586</b>	Pool Code 96340	Pool Name FAIRVIEW MILLS; BONE SPRING
Property Code 336882	Property Name MILLION DOLLAR MAN W FED COM	Well Number 301H
OGRID No. 372098	Operator Name MARATHON OIL PERMIAN LLC	Ground Level Elevation 3359'
Surface Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal	Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	

## Surface Location

UL D	Section 11	Township 25S	Range 34E	Lot	Ft. from N/S 403' FNL	Ft. from E/W 1246' FWL	Latitude (NAD83) 32.15115419	Longitude (NAD83) -103.44528365	County LEA
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## Bottom Hole Location

UL M	Section 23	Township 25S	Range 34E	Lot	Ft. from N/S 100' FSL	Ft. from E/W 660' FWL	Latitude (NAD83) 32.10901429	Longitude (NAD83) -103.44715537	County LEA
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Dedicated Acres 240.00	Infill or Defining Well Defining	Defining Well API N/A	Overlapping Spacing Unit (Y/N) Y	Consolidation Code N/A
Order Numbers: N/A			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

## Kick Off Point (KOP)

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## Last Take Point (LTP)

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Adrian Covarrubias 8/19/2024

Signature  Date

Adrian Covarrubias

Printed Name

acovarrubias@marathonoil.com

Email Address

## SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.



Signature and Seal of Professional Surveyor

Certificate Number  Date of Survey

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AUGUST 12, 2024

## ACREAGE DEDICATION PLATS

## MILLION DOLLAR MAN W FED COM 301H



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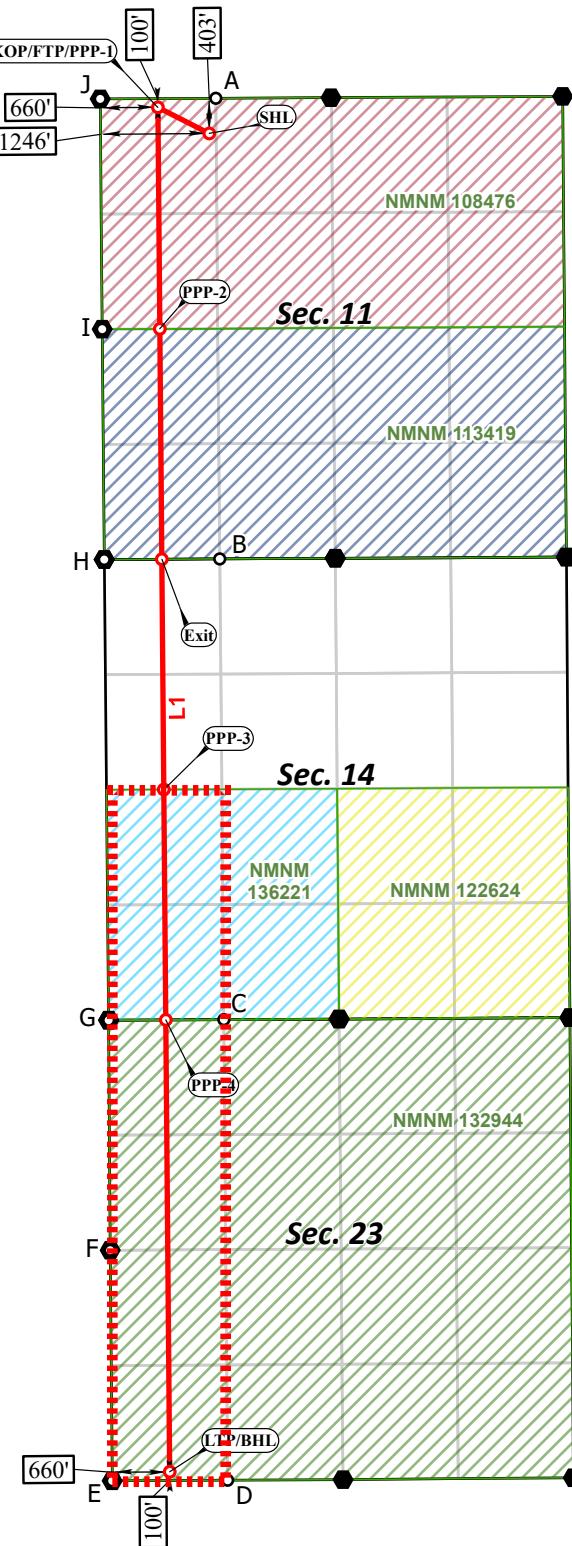
**KOP/FTP/PPP-1**  
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\*FTP TO LTP LINE BEARINGS

PRODUCTION LINE	BEARING/LENGTH
L1	S 00°29'53" E ~ 15635.30'

## CORNER COORDINATES

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F - X: 815038.72' / Y: 407062.31'  
G - X: 815021.10' / Y: 409698.33'  
H - X: 814970.58' / Y: 414976.46'  
I - X: 814947.61' / Y: 417616.28'  
J - X: 814924.62' / Y: 420254.80'

## CORNER COORDINATES

NAD 27, SPCS NM EAST

A - X: 775060.90' / Y: 420203.41'  
B - X: 775107.91' / Y: 414925.99'  
C - X: 775154.97' / Y: 409646.96'  
D - X: 775198.01' / Y: 404369.19'  
E - X: 773875.58' / Y: 404362.55'  
F - X: 773852.16' / Y: 407004.40'  
G - X: 773834.67' / Y: 409640.35'  
H - X: 773784.41' / Y: 414918.34'  
I - X: 773761.56' / Y: 417558.09'  
J - X: 773738.70' / Y: 420196.54'



Drill Line Events ● Section Corners — Drill Line ← Dimension Lines □ Federal Leases ■ NMSLO □ HSU • HSU Corners  
All bearings and coordinates refer to New Mexico State Plane Coordinate System, East Zone, U.S. Survey Feet.

JOB No. MRO\_0035\_MM  
REV 1 NDS 8/9/2024

Distances/areas relative to NAD 83 grid measurements. Combined Scale Factor: 0.99834710 and a Convergence Angle: 0.47147300°

## PECOS DISTRICT

### DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MARATHON OIL COMPANY		
WELL NAME & NO.:	MILLION DOLLAE MAN W FED COM 301H		
LOCATION:	Section 11, T.25 S., R.34 E.		
COUNTY:	Lea County, New Mexico		

COA

<b>H2S</b>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Wellhead Variance	<input type="radio"/> Diverter		
Other	<input type="checkbox"/> 4 String	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Open Annulus
Cementing	<input checked="" type="checkbox"/> Contingency Cement Squeeze	<input type="checkbox"/> EchoMeter	<input type="checkbox"/> Primary Cement Squeeze
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry		
Special Requirements Variance	<input checked="" type="checkbox"/> Break Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

#### A. CASING

##### Alternate Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **970** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The **9-5/8** inch intermediate casing shall be set at approximately **9808** feet. **Keep casing full during run for collapse SF.** Review cement volumes for possible salt washout. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Option 2 (DV Tool):**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally and the **DV tool is placed below the salt interval.** The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Bradenhead (Contingency):**

Operator has proposed to perform a bradenhead squeeze if the primary cementing attempt fails to reach surface.

Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified.

**Operator has proposed to pump down 9-5/8" X 13-3/8" annulus. Operator must top out cement after the bradenhead squeeze and verify cement to surface. Operator can also check TOC with Echo-meter. CBL must be run from TD of the 9-5/8" casing to surface if confidence is lacking on the quality of the bradenhead squeeze cement job. Submit results to BLM.**

**If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.**

**Bradenhead squeeze in the production interval is only as an edge case remediation measure and is NOT approved in this COA. If production cement job experiences losses and a bradenhead squeeze is needed for tie-back, BLM Engineering should be notified prior to job with volumes and planned wellbore schematic. CBL will be needed when this occurs.**

3. The **5-1/2** inch production casing shall be set at approximately **25,924** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification.
- In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface. Contact BLM Engineer if this happens to discuss.

## **B. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

**(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system)**

**BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone

Springs formation.

- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR part 3170 Subpart 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

## **SPECIAL REQUIREMENT (S)**

### **Communityization Agreement**

- The operator will submit a Communityization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communityization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communityization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 43 CFR part 3170 Subpart 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communityization Agreement number is known, it shall also be on the sign.

### **Offline Cementing**

Operator is approved for offline cementing for surface and intermediate intervals. Notify the BLM prior to the commencement of any offline cementing procedure.

## **GENERAL REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

**Contact Eddy County Petroleum Engineering Inspection Staff:**

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; [BLM\\_NM\\_CFO\\_DrillingNotifications@BLM.GOV](mailto:BLM_NM_CFO_DrillingNotifications@BLM.GOV); (575) 361-2822

**Contact Lea County Petroleum Engineering Inspection Staff:**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

**A. CASING**

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

## B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - i.In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - ii.In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
  - iii.The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - iv.The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - v.The results of the test shall be reported to the appropriate BLM office.
  - vi.All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - vii.The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
  - viii.BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

### C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

#### **D. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**KPI 1/19/2025**



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

## Operator Certification Data Report

04/14/2025

### Operator

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

**NAME:** ADRIAN COVARRUBIAS

**Signed on:** 08/20/2024

**Title:** regulatory Compliance Representative

**Street Address:** 990 TOWN & COUNTRY BLVD

**City:** HOUSTON                    **State:** TX

**Zip:** 77024

**Phone:** (713)296-3368

**Email address:** acovarrubias@marathonoil.com

### Field

**Representative Name:**

**Street Address:**

**City:**                            **State:**                            **Zip:**

**Phone:**

**Email address:**



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

## Application Data

04/14/2025

APD ID: 10400100577	Submission Date: 08/22/2024	Highlighted data reflects the most recent changes <a href="#">Show Final Text</a>
Operator Name: MARATHON OIL PERMIAN LLC	Well Number: 301H	
Well Name: MILLION DOLLAR MAN W FED COM	Well Work Type: Drill	
Well Type: OIL WELL		

### Section 1 - General

APD ID: 10400100577	Tie to previous NOS? N	Submission Date: 08/22/2024
BLM Office: Carlsbad	User: ADRIAN COVARRUBIAS	Title: regulatory Compliance Representative
Federal/Indian APD: FED	Is the first lease penetrated for production Federal or Indian? FED	
Lease number: NMNM108476	Lease Acres:	
Surface access agreement in place?	Allotted?	Reservation:
Agreement in place? NO	Federal or Indian agreement:	
Agreement number:		
Agreement name:		
Keep application confidential? Y		
Permitting Agent? NO	APD Operator: MARATHON OIL PERMIAN LLC	
Operator letter of		

### Operator Info

Operator Organization Name: MARATHON OIL PERMIAN LLC

Operator Address: 990 TOWN & COUNTRY BLVD

Zip: 77024

Operator PO Box:

Operator City: HOUSTON State: TX

Operator Phone: (713)929-6600

Operator Internet Address:

### Section 2 - Well Information

Well in Master Development Plan? NO	Master Development Plan name:	
Well in Master SUPO? NO	Master SUPO name:	
Well in Master Drilling Plan? NO	Master Drilling Plan name:	
Well Name: MILLION DOLLAR MAN W FED COM	Well Number: 301H	Well API Number:
Field/Pool or Exploratory? Field and Pool	Field Name: RED HILLS	Pool Name: BONE SPRING EAST

**Operator Name:** MARATHON OIL PERMIAN LLC**Well Name:** MILLION DOLLAR MAN W FED COM**Well Number:** 301H**Is the proposed well in an area containing other mineral resources?** NATURAL GAS**Is the proposed well in a Helium production area?** N **Use Existing Well Pad?** N **New surface disturbance?****Type of Well Pad:** MULTIPLE WELL**Multiple Well Pad Name:**  
MILLION DOLLAR MAN WEST**Well Class:** HORIZONTAL**Number of Legs:** 1**Well Work Type:** Drill**Well Type:** OIL WELL**Describe Well Type:****Well sub-Type:** INFILL**Describe sub-type:****Distance to town:** 15 Miles**Distance to nearest well:** 30 FT**Distance to lease line:** 403 FT**Reservoir well spacing assigned acres Measurement:** 480 Acres**Well plat:** A2\_C102\_Million\_Dollar\_Man\_W\_Fed\_Com\_301H\_20240820111342.pdf

A2\_Million\_Dollar\_Man\_W\_Fed\_Com\_301H\_PAY.GOV\_RECEIPT\_20240820123351.pdf

**Well work start Date:** 09/13/2025**Duration:** 30 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR**Describe Survey Type:****Datum:** NAD83**Vertical Datum:** NAVD88**Survey number:** 21653**Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	403	FNL	1246	FWL	25S	34E	11	Aliquot NWN W	32.1511541	-103.4452836	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108476	3359	0	0	Y
KOP Leg #1	100	FNL	660	FWL	25S	34E	11	Aliquot NWN W	32.1519912	-103.4471788	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108476	-6518	9908	9877	Y

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: MILLION DOLLAR MAN W FED COM

Well Number: 301H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-1	100	FNL	660	FW L	25S	34E	11	Aliquot NWN W	32.1519912	-103.4471788	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108476	-6518	9908	9877	Y
PPP Leg #1-2	263	FNL	660	FW L	25S	34E	11	Aliquot NWS W	32.1450129	-103.447175	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 113419	-7091	12827	10450	Y
PPP Leg #1-3	263	FNL	658	FW L	25S	34E	14	Aliquot NWS W	32.1305025	-103.4471671	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 136221	-7091	18106	10450	Y
EXIT Leg #1	100	FSL	660	FW L	25S	34E	23	Aliquot SWS W	32.1090142	-103.4471553	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 132944	-7091	25924	10450	Y
BHL Leg #1	100	FSL	660	FW L	25S	34E	23	Aliquot SWS W	32.1090142	-103.4471553	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 132944	-7091	25924	10450	Y



APD ID: 10400100577

Submission Date: 08/22/2024

Highlighted data  
reflects the most  
recent changes

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: MILLION DOLLAR MAN W FED COM

Well Number: 301H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formation
15275636	PERMIAN	3359	0	0	ALLUVIUM, SANDSTONE	NONE	N
15275637	RUSTLER	2441	918	945	ANHYDRITE	USEABLE WATER	N
15275638	SALADO	1979	1380	1407	ANHYDRITE, SALT	NONE	N
15275639	CASTILE	-145	3504	3531	ANHYDRITE, SALT	NONE	N
15275640	LAMAR	-2100	5459	5486	SANDSTONE, SHALE	NONE	N
15275648	BELL CANYON	-2143	5502	5529	SANDSTONE	OIL	N
15275641	CHERRY CANYON	-3381	6740	6767	SANDSTONE	OIL	N
15275642	BRUSHY CANYON	-4652	8011	8038	SANDSTONE	OIL	N
15275644	BONE SPRING 1ST	-7074	10433	10460	SANDSTONE	OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M

Rating Depth: 10000

**Equipment:** 13 5/8 BOP Annular (5,000 psi WP) and BOP Stack (10,000 psi WP) will be installed and tested before drilling all holes.

**Requesting Variance? YES**

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. Marathon requests a 5M annular variance for the 10M BOP system. Please see attached procedure.

**Testing Procedure:** BOP/BOPE will be tested to 250 psi low and a high of 100% WP for the Annular and 5,000psi for the BOP Stacking before drilling the intermediate hole, 10,000psi for the BOP Stacking before drilling the production hole.

Testing will be conducted by an independent service company per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the Equipment Description above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock, full opening safety valve / inside BOP and choke

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: MILLION DOLLAR MAN W FED COM

Well Number: 301H

lines and choke manifold. See attached schematics. Formation integrity test will be performed per 43 CFR 3172. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. A multibowl wellhead is being used. The BOP will be tested per 43 CFR 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

**Choke Diagram Attachment:**

D2\_MRO\_Choke\_Manifold\_20240808134920.pdf

D2\_MRO\_Flex\_Hose\_20240808134920.pdf

**BOP Diagram Attachment:**

D2\_MRO\_10M\_BOP\_20240321205019.pdf

**Section 3 - Casing**

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	970	0	943	3359	2416	970	J-55	54.5	BUTT	5.22	1.81	BUOY	4.52	BUOY	4.52
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	9808	0	9777	2997	-6418	9808	P-110	40	BUTT	1.2	1.42	BUOY	2.44	BUOY	2.44
3	PRODUCTION	8.75	5.5	NEW	API	N	0	25924	0	10450	2919	-7091	25924	P-110	23	OTHER - TLW	2.53	1.26	BUOY	2.22	BUOY	2.22

**Casing Attachments**

Casing ID: 1 String SURFACE

**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

D3\_Million\_Dollar\_Man\_W\_Fed\_Com\_301H\_Casing\_Assumptions\_20240820114349.pdf

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: MILLION DOLLAR MAN W FED COM

Well Number: 301H

**Casing Attachments****Casing ID:** 2      **String**      INTERMEDIATE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

D3\_Million\_Dollar\_Man\_W\_Fed\_Com\_301H\_Casing\_Assumptions\_20240820114420.pdf

**Casing ID:** 3      **String**      PRODUCTION**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

D3\_Million\_Dollar\_Man\_W\_Fed\_Com\_301H\_Casing\_Assumptions\_20240820114450.pdf

**Section 4 - Cement**

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	820	359	2.12	12.5	761	25	Class C	Extender, Accelerator, LCM
SURFACE	Tail		820	970	99	1.32	14.8	130	25	Class C	Accelerator
INTERMEDIATE	Lead		0	9308	1699	2.18	12.4	3704	25	Class C	Extender, Accelerator LCM
INTERMEDIATE	Tail		9308	9808	147	1.33	14.8	196	25	Class C	Retarder
PRODUCTION	Lead		9508	2592 4	3126	1.68	13	5252	25	Class H	Retarder, extender, fluid loss, suspension agent

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: MILLION DOLLAR MAN W FED COM

Well Number: 301H

## Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with 43 CFR 3172:**

**Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:**

**Describe what will be on location to control well or mitigate other conditions:** The necessary mud products for additional weight and fluid loss control will be on location at all times.

**Describe the mud monitoring system utilized:** Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

## Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	pH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	970	WATER-BASED MUD	8.4	8.8							
970	9808	OIL-BASED MUD	9.2	10.2							
9808	25924	OIL-BASED MUD	10.5	12.5							

## Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

GR from TD to Surface (horizontal well - vertical portion of well)

**List of open and cased hole logs run in the well:**

GAMMA RAY LOG, MEASUREMENT WHILE DRILLING, DIRECTIONAL SURVEY,

**Coring operation description for the well:**

NA

**Operator Name:** MARATHON OIL PERMIAN LLC

**Well Name:** MILLION DOLLAR MAN W FED COM

**Well Number:** 301H

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 6793

**Anticipated Surface Pressure:** 4493

**Anticipated Bottom Hole Temperature(F):** 195

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations**

D7\_Million\_Dollar\_Man\_W\_Fed\_Com\_\_\_H2S\_Plan\_20240820114747.pdf

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

D8\_Million\_Dollar\_Man\_W\_Fed\_Com\_301H\_\_\_Directional\_Plan\_1\_20240820114800.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

D8\_Million\_Dollar\_Man\_W\_Fed\_Com\_301H\_Drill\_Plan\_20240820114810.pdf

D8\_Million\_Dollar\_Man\_W\_Fed\_Com\_\_\_Rig\_Layout\_20240820114819.pdf

D8\_NGMP\_OCD\_\_Million\_Dollar\_Man\_West\_20240820114834.pdf

**Other Variance attachment:**

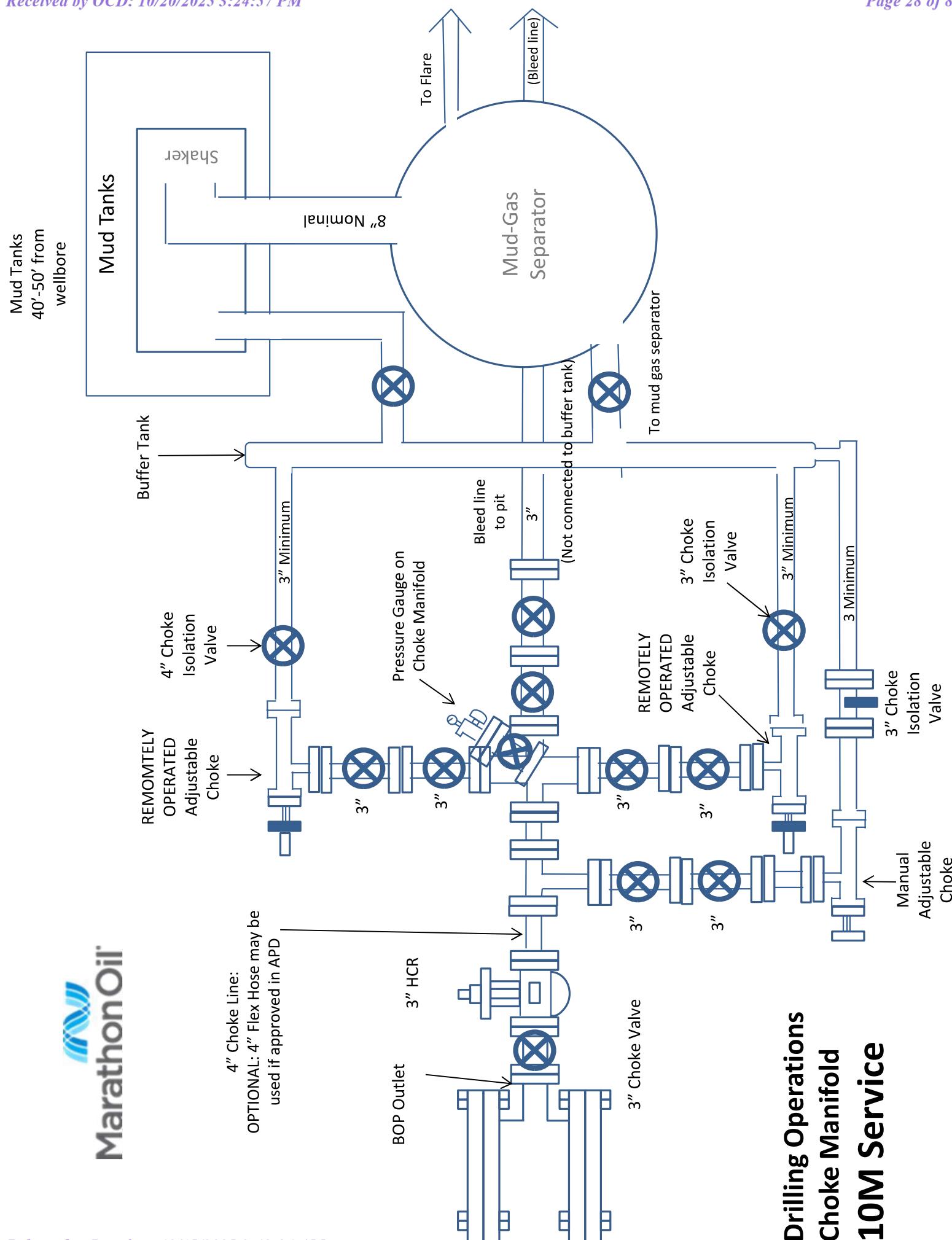
D8\_MRO\_BOP\_Break\_Test\_Variance\_20240321210046.pdf

D8\_MRO\_Cement\_Variance\_Request\_20240321210055.pdf

D8\_MRO\_Variance\_Request\_20240321210000.pdf

D8\_MRO\_Well\_Control\_Plan\_20240321210010.pdf

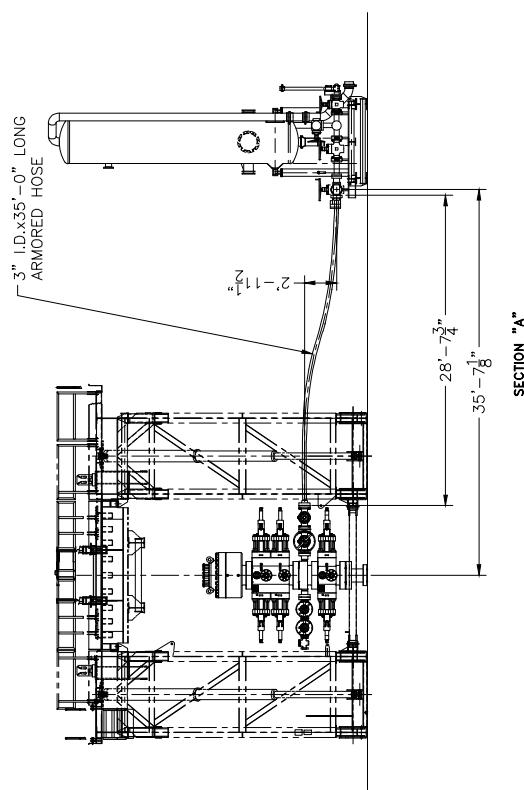
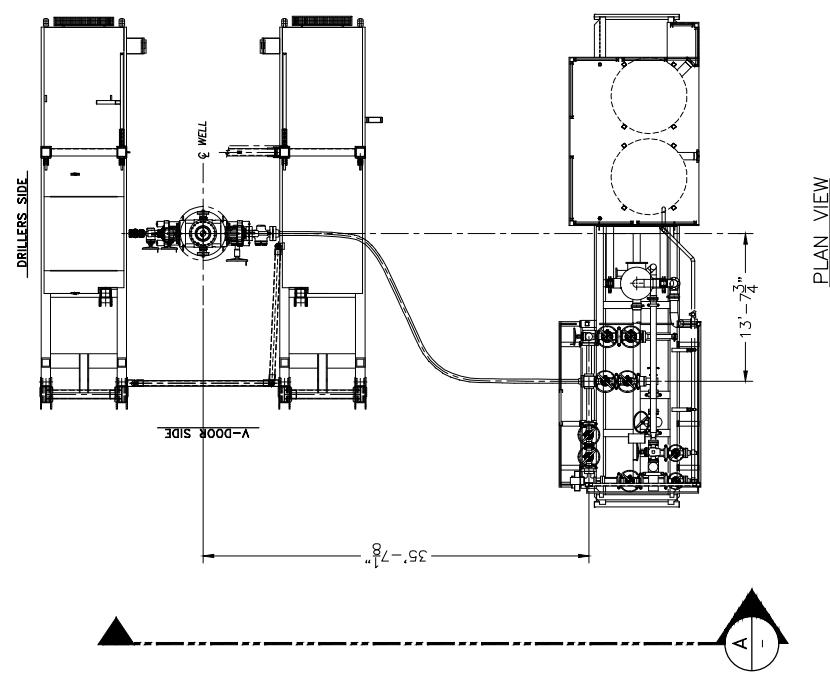
D8\_MRO\_Wellhead\_Diagram\_20240321210021.pdf



## MarathonOil

**4" Choke Line:**  
**OPTIONAL: 4" Flex Hose may be used if approved in APD**

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ISSUED FOR  
FABRICATION  
December-19-2007  
DRAFTSMAN \_\_\_\_\_  
ENGINEER \_\_\_\_\_

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.	
CHOKE LINE SYSTEM FLEXRIG3	
ENGINEERING APPROVAL DATE	TITLE:
CUSTOMER:	
PROJECT:	
JAV	JBG
REMOVED SHEET TOTAL CALLOUT	DATE: 4-10-07
REV	BY
DATE	SCALE: 1/16=1'
DESCRIPTION	
SHEET: 2 OF 2	
REF: 210-0-P-07 A	

**PROPRIETARY**  
THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED  
HEREIN ARE THE PROPERTY OF HELMERICH & PAYNE  
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RIZED OFFICER OF HELMERICH & PAYNE INT'L DRILLING CO.



## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## HYDROSTATIC TESTING REPORT

LTYY/QR-5.7.1-28

No: 230826004

Product Name	Choke And Kill Hose	Standard	API Spec 16C 3 <sup>rd</sup> edition
Product Specification	3"×10000psi×35ft (10.67m)	Serial Number	7660134
Inspection Equipment	MTU-BS-1600-3200-E	Test medium	Water
Inspection Department	Q.C. Department	Inspection Date	2023.08.17

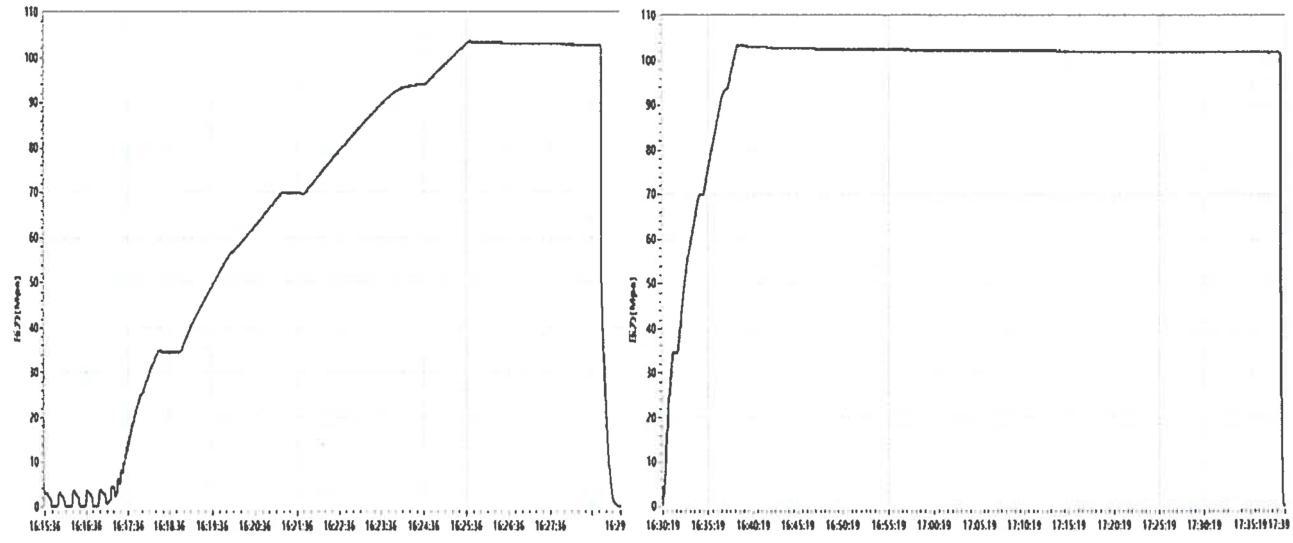
## Rate of length change

Standard requirements	At working pressure ,the rate of length change should not more than $\pm 2\%$
Testing result	10000psi (69.0MPa) ,Rate of length change 0.9%

## Hydrostatic testing

Standard requirements	At 1.5 times working pressure, the initial pressure-holding period of not less than three minutes, the second pressure-holding period of not less than one hour, no leaks.
Testing result	15000psi (103.5MPa), 3 min for the first time, 60 min for the second time, no leakage

Graph of pressure testing:



Conclusion	The inspected items meet standard requirements of API Spec 16C 3 <sup>rd</sup> edition				
Approver	Jianlong Chen	Auditor	Huijing Dong	Inspector	Zhansheng Wang



## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## CERTIFICATE OF QUALITY

LTYY/QR-5.7.1-19B

No: LT2023-126-001

Customer Name	Austin Hose		
Product Name	Choke And Kill Hose		
Product Specification	3"×10000psi×35ft (10.67m)	Quantity	12PCS
Serial Number	7660131~7660142	FSL	FSL3
Temperature Range	-29°C ~ +121°C	Standard	API Spec 16C 3 <sup>rd</sup> edition
Inspection Department	Q.C. Department	Inspection date	2023.08.26

Inspection Items	Inspection results
Appearance Checking	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Size and Lengths	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Dimensions and Tolerances	In accordance with API Spec 16C 3 <sup>rd</sup> edition
End Connections: 4-1/16"×10000psi Integral flange for sour gas service	In accordance with API Spec 6A 21 <sup>st</sup> edition
End Connections: 4-1/16"×10000psi Integral flange for sour gas service	In accordance with API Spec 17D 3 <sup>rd</sup> edition
Hydrostatic Testing	In accordance with API Spec 16C 3 <sup>rd</sup> edition
product Marking	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Inspection conclusion	The inspected items meet standard requirements of API Spec 16C 3 <sup>rd</sup> edition
Remarks	
Approver	Jiaolong Chen
Auditor	Huijing Dong
Inspector	Zhanheng Wang



**LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD**

**CERTIFICATE OF CONFORMANCE**

**№:LT230826013**

Product Name: Choke And Kill Hose

Product Specification: 3"×10000psi×35ft(10.67m)

Serial Number: 7660131~7660142

End Connections: 4-1/16"×10000psi Integral flange for sour gas service

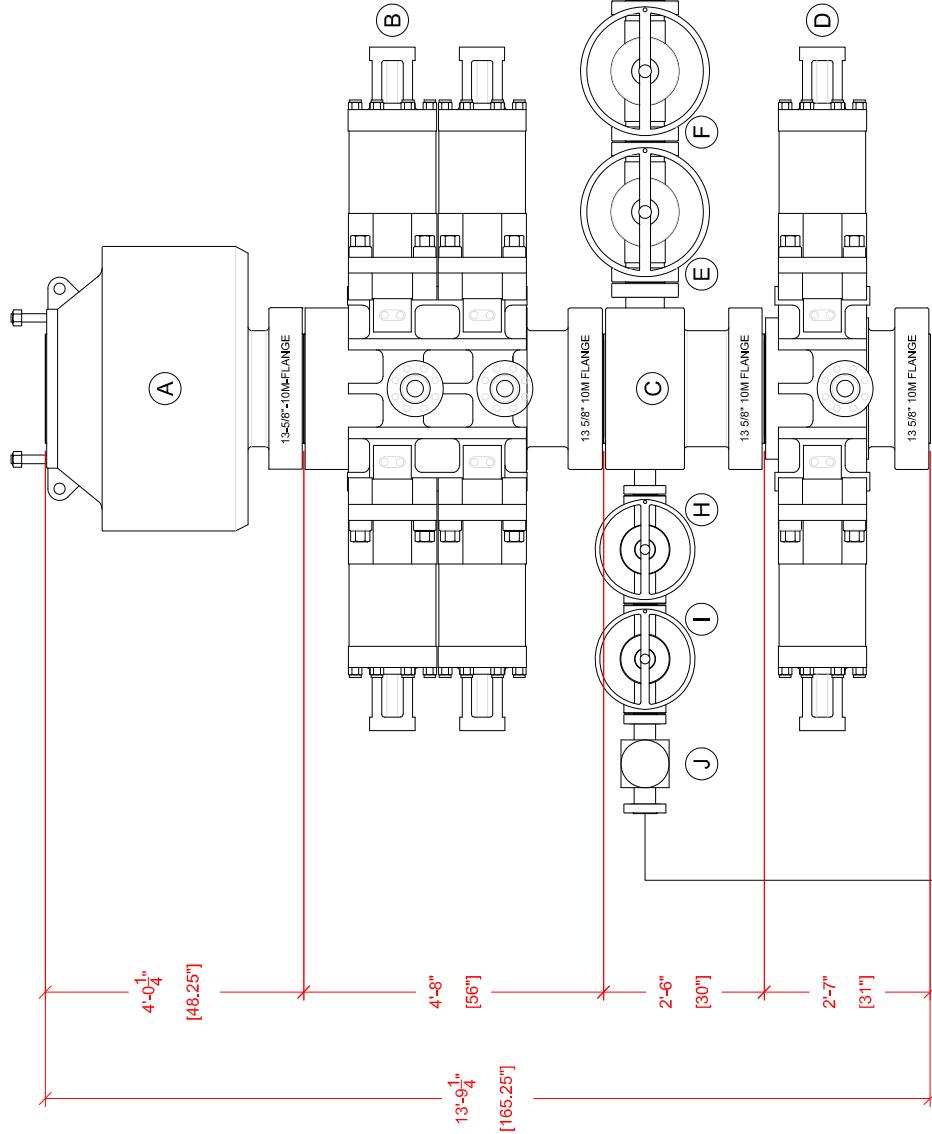
The Choke And Kill Hose assembly was produced by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD . in Aug 2023, and inspected by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD. according to API Spec 16C 3<sup>rd</sup> edition on Aug 26, 2023. The overall condition is good. This is to certify that the Choke And Kill Hose complies with all current standards and specifications for API Spec 16C 3<sup>rd</sup> edition .

QC Manager:

Jiaolong Chen

Date:Aug 26, 2023

BOP INFORMATION			
ITEM	DESCRIPTION	MAKE	MODEL
A	ANNULAR BOP	CAMERON	13 5/8" 5M T90
B	DOUBLE RAM BOP	CAMERON	13 5/8" 10M U
C	MUD CROSS	CAMERON	13 5/8" 10M
D	SINGLE RAM BOP	CAMERON	13 5/8" 10M U
E	WING VALVE	CAMERON	4 1/8" 10M FLS MANUAL
F	HCR VALVE	CAMERON	4 1/8" 10M HCR
G	CHOKE BLOCK	CAMERON	4 1/8" 10M
H	KILL VALVE	CAMERON	2 7/8" 10M FLS MANUAL
I	KILL VALVE	CAMERON	2 7/8" 10M FLS MANUAL
J	CHECK VALVE	CAMERON	2 7/8" 10M FR *CHECK
K	CHOKE LINE	GATES	4 1/8" 10M FR
L	KILL LINE	GATES	2 7/8" 10M FR



TO CHOKE LINE  
(K)

TO KILL LINE  
(L)

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Drilling Co., L.L.C.  
Oklahoma City, OK, U.S.A.

Tel: 405-577-5347 Fax: 405-577-9306

RIG 170  
BOP STACK-UP  
B  
CAC170-A005

CACTUS  
Drilling Co., L.L.C.  
Oklahoma City, OK, U.S.A.  
Tel: 405-577-5347 Fax: 405-577-9306

TITLE:

FILE:

DWG BY

CONCENTRICITY

DECIMAL

FILE:

1. F.I.R.

2. J.O. F.I.R.

3. X.XX F.I.R.

4. APP BY

5. D.GREE

ANGLES  $\pm .5$  DEGREES

SCALE: INCHES

ACAD FILE: CAC170-A-005-00-RO

SYN

DATE

REVISION

BY



## **Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan**

**Million Dollar Man W Fed Com 301H  
403' FNL 1246' FWL Sec. 11-25S-34E, Lea County, NM**

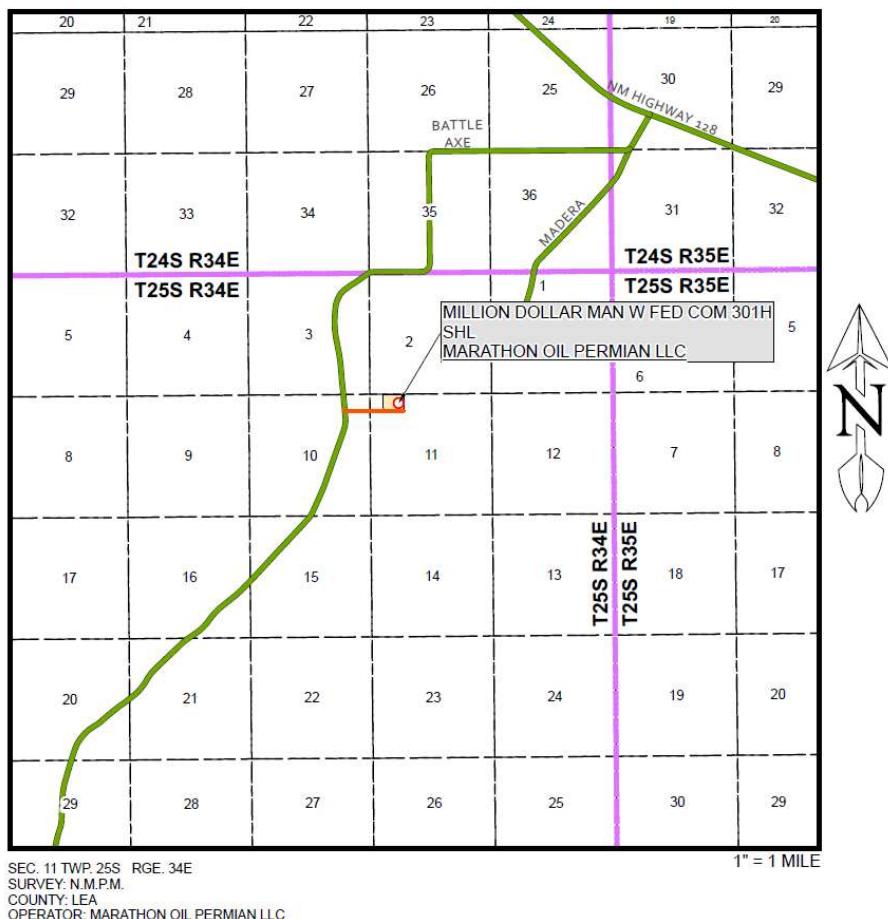
**Million Dollar Man W Fed Com 302H  
493' FNL 1246' FWL Sec. 11-25S-34E, Lea County, NM**

**Million Dollar Man W Fed Com 501H  
463' FNL 1246' FWL Sec. 11-25S-34E, Lea County, NM**

**Million Dollar Man W Fed Com 502H  
302' FNL 1097' FWL Sec. 11-25S-34E, Lea County, NM**

**Marathon Oil Permian, LLC**  
**Million Dollar Man W Fed Com**

This is an open drilling site. H2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H2S, including warning signs, wind indicators and H2S monitor.



**Escape**

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

**Assumed 100 ppm ROE = 3000'**

**100 ppm H2S concentration shall trigger activation of this plan.**

### Emergency Procedures

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - Detection of H<sub>2</sub>S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

### Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air = 1	2 ppm	N/A	1000 ppm

### Contacting Authorities

Marathon Oil Permian, LLC personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Marathon Oil Permian LLC response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

**Marathon Oil Permian, LLC**  
**Hydrogen Sulfide Drilling Operation Plan**

**I. HYDROGEN SULFIDE (H<sub>2</sub>S) TRAINING**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- The effects of H<sub>2</sub>S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan.
- There will be weekly H<sub>2</sub>S and well control drills for all personnel in each crew.

**II. HYDROGEN SULFIDE TRAINING**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

- Well Control Equipment
  - Flare line
  - Choke manifold - Remotely Operated
  - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

- Auxiliary equipment may include if applicable: annular preventer and rotating head.
- Mud/Gas Separator
- Protective equipment for essential personnel:
  - 30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.
  - Fire extinguishers are located at various locations around the rig. First Aid supplies are located in the top doghouse and the rig manager's office.
- H2S detection and monitoring equipment:
  - Portable H2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H2S levels reach 10 ppm and audible sirens which activate at 15 ppm.

Sensor locations:

  - Bell nipple
  - Rig floor
  - Cellar
  - Possum Belly/Shale shaker
  - Choke manifold
- Visual warning systems:
  - Wind direction indicators as shown on well site diagram
  - Caution/Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.
- Mud program:
  - The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

- Metallurgy:
  - All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H2S trim.
  - All elastomers used for packing and seals shall be H2S trim.
- Communication:
  - Company personnel have/use cellular telephones in the field.
  - Land line (telephone) communications at Office
- Well testing:
  - Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.
  - There will be no drill stem testing.

## EMERGENCY &amp; MEDICAL FACILITIES

Marathon Oil Corporation Emergency Numbers			
Anders Storaune	Drilling Manager	<a href="mailto:astoraune@marathonoil.com">astoraune@marathonoil.com</a>	713-296-2985
Allen Livingston	Drilling Superintendent	<a href="mailto:alivingston@marathonoil.com">alivingston@marathonoil.com</a>	832-680-2348
Joshua Love	Drilling Superintendent	<a href="mailto:jlove@marathonoil.com">jlove@marathonoil.com</a>	405-657-6126
Steve Donley	Drilling Engineer	<a href="mailto:sdonley@marathonoil.com">sdonley@marathonoil.com</a>	405-593-4331
Court Nelson	Drilling Engineer	<a href="mailto:cnelson1@marathonoil.com">cnelson1@marathonoil.com</a>	406-565-0604
Scott Schmidt	Drilling Engineer	<a href="mailto:sschmidt1@marathonoil.com">sschmidt1@marathonoil.com</a>	405-249-6843
John Burt	HES Supervisor	<a href="mailto:jburt@marathonoil.com">jburt@marathonoil.com</a>	713-296-2903
Unit Rig 409	Company Man	<a href="mailto:unit409@marathonoil.com">unit409@marathonoil.com</a>	
Precision Rig 580	Company Man	<a href="mailto:precision580@marathonoil.com">precision580@marathonoil.com</a>	
Cactus Rig 169	Company Man	<a href="mailto:cactus169@marathonoil.com">cactus169@marathonoil.com</a>	
Cactus Rig 170	Company Man	<a href="mailto:cactus170@marathonoil.com">cactus170@marathonoil.com</a>	
Cactus Rig 171	Company Man	<a href="mailto:cactus171@marathonoil.com">cactus171@marathonoil.com</a>	

Emergency Services Area Numbers: Or Call 911			
Sheriff (Eddy County, NM)	575-887-7551	New Mexico Poison Control	800-222-1222
Sheriff (Lea County, NM)	575-396-3611	Border Patrol (Las Cruces, NM)	575-528-6600
New Mexico State Police	575-392-5580/5588	Energy Minerals & Natural Resources Dept.	575-748-1283
Carlsbad Medical Center	575-887-4100	Environmental Health Dept.	505-476-8600
Lea Regional Medical Center	575-492-5000	OSHA (Santa Fe, NM)	505-827-2855
Police (Carlsbad, NM)	575-885-2111		
Police (Hobbs, NM)	575-392-9265		
Fire (Carlsbad, NM)	575-885-3124		
Fire (Hobbs, NM)	575-397-9308		
Ambulance Service	911	TOTAL SAFETY H2S - SAFETY SERVICES For Life Flight 1 <sup>st</sup> dial 911, nearest helicopter will be determined	432-561-5049



Project: Lea County, NM (NAD27 NME)  
Site: Million Dollar Man  
Well: Million Dollar Man W Fed Com  
Wellbore: OH  
Design: Permit Plan 1  
Rig: TBD

## PHOENIX

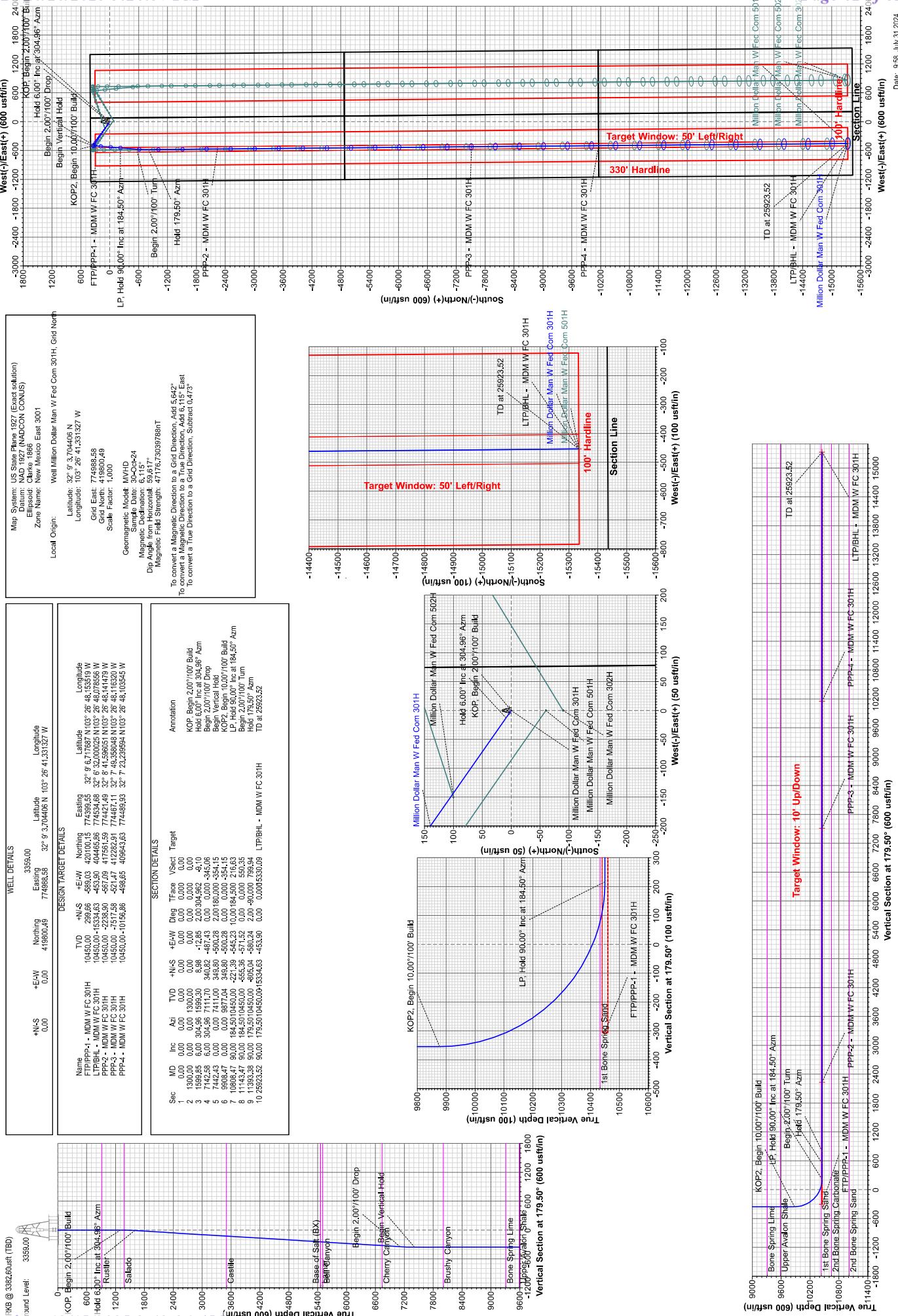
True North: -0.4°  
Magnetic North: 5.64°  
Magnetic Field Strength: 47176.7nT  
Dip Angle: 59.62°  
Date: 10/30/2024  
Model: WWD

Project: Lea County, NM (NAD27 NME)  
Site: Million Dollar Man  
Well: Million Dollar Man W Fed Com  
Wellbore: OH  
Design: Permit Plan 1  
Rig: TBD

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Page 41 of 81





# **Marathon Oil Permian LLC**

**Lea County, NM (NAD27 NME)**

**Million Dollar Man**

**Million Dollar Man W Fed Com 301H**

**OH**

**Plan: Permit Plan 1**

# **Standard Planning Report**

**31 July, 2024**





# Phoenix

## Planning Report



<b>Database:</b> USAEDMDB	<b>Local Co-ordinate Reference:</b>	Well Million Dollar Man W Fed Com 301H
<b>Company:</b> Marathon Oil Permian LLC	<b>TVD Reference:</b>	RKB @ 3382.60usft (TBD)
<b>Project:</b> Lea County, NM (NAD27 NME)	<b>MD Reference:</b>	RKB @ 3382.60usft (TBD)
<b>Site:</b> Million Dollar Man	<b>North Reference:</b>	Grid
<b>Well:</b> Million Dollar Man W Fed Com 301H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b> OH		
<b>Design:</b> Permit Plan 1		

<b>Project</b>	Lea County, NM (NAD27 NME)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b>	Million Dollar Man				
<b>Site Position:</b>	Map	<b>Northing:</b>	419,800.49 usft	<b>Latitude:</b>	32° 9' 3.704406 N
<b>From:</b>		<b>Easting:</b>	774,988.58 usft	<b>Longitude:</b>	103° 26' 41.331327 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.473 °

<b>Well</b>	Million Dollar Man W Fed Com 301H					
<b>Well Position</b>	<b>+N/-S</b> 0.00 usft	<b>Northing:</b> 419,800.49 usft	<b>Latitude:</b> 32° 9' 3.704406 N	<b>+E/-W</b> 0.00 usft	<b>Easting:</b> 774,988.58 usft	<b>Longitude:</b> 103° 26' 41.331327 W
<b>Position Uncertainty</b>	1.00 usft	<b>Wellhead Elevation:</b>	3,359.00 usft			<b>Ground Level:</b>

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	MVHD	10/30/24	6.115	59.617	47,176.73039787

<b>Design</b>	Permit Plan 1				
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>		<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
		0.00	0.00	0.00	179.50

<b>Plan Survey Tool Program</b>	<b>Date</b>	7/31/24		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	25,923.52 Permit Plan 1 (OH)	MWD+IFR1+MS OWSG Rev. 2 MWD + IFR1	

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	USAEDMDB Marathon Oil Permian LLC Lea County, NM (NAD27 NME) Million Dollar Man Million Dollar Man W Fed Com 301H OH Permit Plan 1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Well Million Dollar Man W Fed Com 301H RKB @ 3382.60usft (TBD) RKB @ 3382.60usft (TBD) Grid Minimum Curvature
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**Plan Sections**

<b>Measured</b>	<b>Depth</b> <b>(usft)</b>	<b>Inclination</b> <b>(°)</b>	<b>Azimuth</b> <b>(°)</b>	<b>Vertical</b> <b>Depth</b> <b>(usft)</b>	<b>+N/-S</b> <b>(usft)</b>	<b>+E/-W</b> <b>(usft)</b>	<b>Dogleg</b> <b>Rate</b> <b>(°/100usft)</b>	<b>Build</b> <b>Rate</b> <b>(°/100usft)</b>	<b>Turn</b> <b>Rate</b> <b>(°/100usft)</b>	<b>TFO</b> <b>(°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,599.85	6.00	304.96	1,599.30	8.98	-12.85	2.00	2.00	0.00	0.00	304.962	
7,142.58	6.00	304.96	7,111.70	340.82	-487.43	0.00	0.00	0.00	0.00	0.000	
7,442.43	0.00	0.00	7,411.00	349.80	-500.28	2.00	-2.00	0.00	0.00	180.000	
9,908.47	0.00	0.00	9,877.04	349.80	-500.28	0.00	0.00	0.00	0.00	0.000	
10,808.47	90.00	184.50	10,450.00	-221.39	-545.23	10.00	10.00	0.00	0.00	184.500	
11,143.47	90.00	184.50	10,450.00	-555.36	-571.52	0.00	0.00	0.00	0.00	0.000	
11,393.38	90.00	179.50	10,450.00	-805.04	-580.24	2.00	0.00	-2.00	-90.000		
25,923.52	90.00	179.50	10,450.00	-15,334.63	-453.90	0.00	0.00	0.00	0.000	LTP/BHL - MDM W	

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	USAEDMDB Marathon Oil Permian LLC Lea County, NM (NAD27 NME) Million Dollar Man Million Dollar Man W Fed Com 301H OH Permit Plan 1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Well Million Dollar Man W Fed Com 301H RKB @ 3382.60usft (TBD) RKB @ 3382.60usft (TBD) Grid Minimum Curvature
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Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
918.00	0.00	0.00	918.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Rustler</b>										
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>KOP, Begin 2.00°/100' Build</b>										
1,380.01	1.60	304.96	1,380.00	0.64	-0.92	-0.65	2.00	2.00	0.00	
<b>Salado</b>										
1,400.00	2.00	304.96	1,399.98	1.00	-1.43	-1.01	2.00	2.00	0.00	
1,500.00	4.00	304.96	1,499.84	4.00	-5.72	-4.05	2.00	2.00	0.00	
1,599.85	6.00	304.96	1,599.30	8.98	-12.85	-9.10	2.00	2.00	0.00	
<b>Hold 6.00° Inc at 304.96° Azm</b>										
1,600.00	6.00	304.96	1,599.45	8.99	-12.86	-9.10	0.00	0.00	0.00	
1,700.00	6.00	304.96	1,698.90	14.98	-21.42	-15.17	0.00	0.00	0.00	
1,800.00	6.00	304.96	1,798.36	20.97	-29.99	-21.23	0.00	0.00	0.00	
1,900.00	6.00	304.96	1,897.81	26.95	-38.55	-27.29	0.00	0.00	0.00	
2,000.00	6.00	304.96	1,997.26	32.94	-47.11	-33.35	0.00	0.00	0.00	
2,100.00	6.00	304.96	2,096.72	38.93	-55.67	-39.41	0.00	0.00	0.00	
2,200.00	6.00	304.96	2,196.17	44.91	-64.24	-45.47	0.00	0.00	0.00	
2,300.00	6.00	304.96	2,295.62	50.90	-72.80	-51.53	0.00	0.00	0.00	
2,400.00	6.00	304.96	2,395.07	56.89	-81.36	-57.60	0.00	0.00	0.00	
2,500.00	6.00	304.96	2,494.53	62.87	-89.92	-63.66	0.00	0.00	0.00	
2,600.00	6.00	304.96	2,593.98	68.86	-98.48	-69.72	0.00	0.00	0.00	
2,700.00	6.00	304.96	2,693.43	74.85	-107.05	-75.78	0.00	0.00	0.00	
2,800.00	6.00	304.96	2,792.88	80.83	-115.61	-81.84	0.00	0.00	0.00	
2,900.00	6.00	304.96	2,892.34	86.82	-124.17	-87.90	0.00	0.00	0.00	
3,000.00	6.00	304.96	2,991.79	92.81	-132.73	-93.96	0.00	0.00	0.00	
3,100.00	6.00	304.96	3,091.24	98.79	-141.30	-100.02	0.00	0.00	0.00	
3,200.00	6.00	304.96	3,190.70	104.78	-149.86	-106.09	0.00	0.00	0.00	
3,300.00	6.00	304.96	3,290.15	110.77	-158.42	-112.15	0.00	0.00	0.00	
3,400.00	6.00	304.96	3,389.60	116.76	-166.98	-118.21	0.00	0.00	0.00	
3,500.00	6.00	304.96	3,489.05	122.74	-175.54	-124.27	0.00	0.00	0.00	
3,515.03	6.00	304.96	3,504.00	123.64	-176.83	-125.18	0.00	0.00	0.00	
<b>Castile</b>										
3,600.00	6.00	304.96	3,588.51	128.73	-184.11	-130.33	0.00	0.00	0.00	
3,700.00	6.00	304.96	3,687.96	134.72	-192.67	-136.39	0.00	0.00	0.00	
3,800.00	6.00	304.96	3,787.41	140.70	-201.23	-142.45	0.00	0.00	0.00	
3,900.00	6.00	304.96	3,886.86	146.69	-209.79	-148.51	0.00	0.00	0.00	
4,000.00	6.00	304.96	3,986.32	152.68	-218.36	-154.58	0.00	0.00	0.00	
4,100.00	6.00	304.96	4,085.77	158.66	-226.92	-160.64	0.00	0.00	0.00	
4,200.00	6.00	304.96	4,185.22	164.65	-235.48	-166.70	0.00	0.00	0.00	
4,300.00	6.00	304.96	4,284.68	170.64	-244.04	-172.76	0.00	0.00	0.00	
4,400.00	6.00	304.96	4,384.13	176.62	-252.60	-178.82	0.00	0.00	0.00	
4,500.00	6.00	304.96	4,483.58	182.61	-261.17	-184.88	0.00	0.00	0.00	
4,600.00	6.00	304.96	4,583.03	188.60	-269.73	-190.94	0.00	0.00	0.00	
4,700.00	6.00	304.96	4,682.49	194.58	-278.29	-197.00	0.00	0.00	0.00	
4,800.00	6.00	304.96	4,781.94	200.57	-286.85	-203.07	0.00	0.00	0.00	
4,900.00	6.00	304.96	4,881.39	206.56	-295.42	-209.13	0.00	0.00	0.00	
5,000.00	6.00	304.96	4,980.84	212.54	-303.98	-215.19	0.00	0.00	0.00	
5,100.00	6.00	304.96	5,080.30	218.53	-312.54	-221.25	0.00	0.00	0.00	
5,200.00	6.00	304.96	5,179.75	224.52	-321.10	-227.31	0.00	0.00	0.00	
5,300.00	6.00	304.96	5,279.20	230.50	-329.67	-233.37	0.00	0.00	0.00	
5,400.00	6.00	304.96	5,378.66	236.49	-338.23	-239.43	0.00	0.00	0.00	
5,480.79	6.00	304.96	5,459.00	241.33	-345.14	-244.33	0.00	0.00	0.00	

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	USAEDMDB Marathon Oil Permian LLC Lea County, NM (NAD27 NME) Million Dollar Man Million Dollar Man W Fed Com 301H OH Permit Plan 1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Well Million Dollar Man W Fed Com 301H RKB @ 3382.60usft (TBD) RKB @ 3382.60usft (TBD) Grid Minimum Curvature
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Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>Base of Salt (BX) - Lamar</b>									
5,500.00	6.00	304.96	5,478.11	242.48	-346.79	-245.50	0.00	0.00	0.00
5,524.02	6.00	304.96	5,502.00	243.92	-348.85	-246.95	0.00	0.00	0.00
<b>Bell Canyon</b>									
5,600.00	6.00	304.96	5,577.56	248.47	-355.35	-251.56	0.00	0.00	0.00
5,700.00	6.00	304.96	5,677.01	254.45	-363.91	-257.62	0.00	0.00	0.00
5,800.00	6.00	304.96	5,776.47	260.44	-372.48	-263.68	0.00	0.00	0.00
5,900.00	6.00	304.96	5,875.92	266.43	-381.04	-269.74	0.00	0.00	0.00
6,000.00	6.00	304.96	5,975.37	272.41	-389.60	-275.80	0.00	0.00	0.00
6,100.00	6.00	304.96	6,074.83	278.40	-398.16	-281.86	0.00	0.00	0.00
6,200.00	6.00	304.96	6,174.28	284.39	-406.73	-287.92	0.00	0.00	0.00
6,300.00	6.00	304.96	6,273.73	290.37	-415.29	-293.99	0.00	0.00	0.00
6,400.00	6.00	304.96	6,373.18	296.36	-423.85	-300.05	0.00	0.00	0.00
6,500.00	6.00	304.96	6,472.64	302.35	-432.41	-306.11	0.00	0.00	0.00
6,600.00	6.00	304.96	6,572.09	308.33	-440.97	-312.17	0.00	0.00	0.00
6,700.00	6.00	304.96	6,671.54	314.32	-449.54	-318.23	0.00	0.00	0.00
6,768.84	6.00	304.96	6,740.00	318.44	-455.43	-322.40	0.00	0.00	0.00
<b>Cherry Canyon</b>									
6,800.00	6.00	304.96	6,770.99	320.31	-458.10	-324.29	0.00	0.00	0.00
6,900.00	6.00	304.96	6,870.45	326.29	-466.66	-330.35	0.00	0.00	0.00
7,000.00	6.00	304.96	6,969.90	332.28	-475.22	-336.41	0.00	0.00	0.00
7,100.00	6.00	304.96	7,069.35	338.27	-483.79	-342.48	0.00	0.00	0.00
7,142.58	6.00	304.96	7,111.70	340.82	-487.43	-345.06	0.00	0.00	0.00
<b>Begin 2.00°/100' Drop</b>									
7,200.00	4.85	304.96	7,168.86	343.93	-491.88	-348.20	2.00	-2.00	0.00
7,300.00	2.85	304.96	7,268.63	347.77	-497.38	-352.10	2.00	-2.00	0.00
7,400.00	0.85	304.96	7,368.57	349.62	-500.02	-353.97	2.00	-2.00	0.00
7,442.43	0.00	0.00	7,411.00	349.80	-500.28	-354.15	2.00	-2.00	0.00
<b>Begin Vertical Hold</b>									
8,042.43	0.00	0.00	8,011.00	349.80	-500.28	-354.15	0.00	0.00	0.00
<b>Brushy Canyon</b>									
9,341.43	0.00	0.00	9,310.00	349.80	-500.28	-354.15	0.00	0.00	0.00
<b>Bone Spring Lime</b>									
9,619.43	0.00	0.00	9,588.00	349.80	-500.28	-354.15	0.00	0.00	0.00
<b>Upper Avalon Shale</b>									
9,908.47	0.00	0.00	9,877.04	349.80	-500.28	-354.15	0.00	0.00	0.00
<b>KOP2, Begin 10.00°/100' Build</b>									
10,000.00	9.15	184.50	9,968.18	342.53	-500.85	-346.88	10.00	10.00	0.00
10,100.00	19.15	184.50	10,065.02	318.18	-502.77	-322.56	10.00	10.00	0.00
10,200.00	29.15	184.50	10,156.15	277.44	-505.97	-281.85	10.00	10.00	0.00
10,300.00	39.15	184.50	10,238.80	221.54	-510.37	-225.99	10.00	10.00	0.00
10,400.00	49.15	184.50	10,310.46	152.19	-515.83	-156.69	10.00	10.00	0.00
10,500.00	59.15	184.50	10,368.95	71.48	-522.18	-76.04	10.00	10.00	0.00
10,600.00	69.15	184.50	10,412.49	-18.12	-529.24	13.50	10.00	10.00	0.00
10,668.56	76.01	184.50	10,433.00	-83.29	-534.37	78.63	10.00	10.00	0.00
<b>1st Bone Spring Sand</b>									
10,700.00	79.15	184.50	10,439.76	-113.90	-536.77	109.21	10.00	10.00	0.00
10,800.00	89.15	184.50	10,449.94	-212.95	-544.57	208.19	10.00	10.00	0.00
10,808.47	90.00	184.50	10,450.00	-221.39	-545.23	216.63	10.00	10.00	0.00
<b>LP, Hold 90.00° Inc at 184.50° Azm</b>									
10,900.00	90.00	184.50	10,450.00	-312.64	-552.42	307.81	0.00	0.00	0.00
11,000.00	90.00	184.50	10,450.00	-412.33	-560.26	407.43	0.00	0.00	0.00
11,100.00	90.00	184.50	10,450.00	-512.02	-568.11	507.05	0.00	0.00	0.00

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	USAEDMDB Marathon Oil Permian LLC Lea County, NM (NAD27 NME) Million Dollar Man Million Dollar Man W Fed Com 301H OH Permit Plan 1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Well Million Dollar Man W Fed Com 301H RKB @ 3382.60usft (TBD) RKB @ 3382.60usft (TBD) Grid Minimum Curvature
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Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,143.47	90.00	184.50	10,450.00	-555.36	-571.52	550.35	0.00	0.00	0.00	
<b>Begin 2.00°/100' Turn</b>										
11,200.00	90.00	183.37	10,450.00	-611.76	-575.40	606.71	2.00	0.00	-2.00	
11,300.00	90.00	181.37	10,450.00	-711.67	-579.53	706.58	2.00	0.00	-2.00	
11,393.38	90.00	179.50	10,450.00	-805.04	-580.24	799.94	2.00	0.00	-2.00	
<b>Hold 179.50° Azm</b>										
11,400.00	90.00	179.50	10,450.00	-811.66	-580.18	806.57	0.00	0.00	0.00	
11,500.00	90.00	179.50	10,450.00	-911.66	-579.31	906.57	0.00	0.00	0.00	
11,600.00	90.00	179.50	10,450.00	-1,011.65	-578.44	1,006.57	0.00	0.00	0.00	
11,700.00	90.00	179.50	10,450.00	-1,111.65	-577.57	1,106.57	0.00	0.00	0.00	
11,800.00	90.00	179.50	10,450.00	-1,211.64	-576.70	1,206.57	0.00	0.00	0.00	
11,900.00	90.00	179.50	10,450.00	-1,311.64	-575.84	1,306.57	0.00	0.00	0.00	
12,000.00	90.00	179.50	10,450.00	-1,411.64	-574.97	1,406.57	0.00	0.00	0.00	
12,100.00	90.00	179.50	10,450.00	-1,511.63	-574.10	1,506.57	0.00	0.00	0.00	
12,200.00	90.00	179.50	10,450.00	-1,611.63	-573.23	1,606.57	0.00	0.00	0.00	
12,300.00	90.00	179.50	10,450.00	-1,711.63	-572.36	1,706.57	0.00	0.00	0.00	
12,400.00	90.00	179.50	10,450.00	-1,811.62	-571.49	1,806.57	0.00	0.00	0.00	
12,500.00	90.00	179.50	10,450.00	-1,911.62	-570.62	1,906.57	0.00	0.00	0.00	
12,600.00	90.00	179.50	10,450.00	-2,011.61	-569.75	2,006.57	0.00	0.00	0.00	
12,700.00	90.00	179.50	10,450.00	-2,111.61	-568.88	2,106.57	0.00	0.00	0.00	
12,800.00	90.00	179.50	10,450.00	-2,211.61	-568.01	2,206.57	0.00	0.00	0.00	
12,900.00	90.00	179.50	10,450.00	-2,311.60	-567.14	2,306.57	0.00	0.00	0.00	
13,000.00	90.00	179.50	10,450.00	-2,411.60	-566.27	2,406.57	0.00	0.00	0.00	
13,100.00	90.00	179.50	10,450.00	-2,511.59	-565.40	2,506.57	0.00	0.00	0.00	
13,200.00	90.00	179.50	10,450.00	-2,611.59	-564.53	2,606.57	0.00	0.00	0.00	
13,300.00	90.00	179.50	10,450.00	-2,711.59	-563.66	2,706.57	0.00	0.00	0.00	
13,400.00	90.00	179.50	10,450.00	-2,811.58	-562.79	2,806.57	0.00	0.00	0.00	
13,500.00	90.00	179.50	10,450.00	-2,911.58	-561.92	2,906.57	0.00	0.00	0.00	
13,600.00	90.00	179.50	10,450.00	-3,011.58	-561.05	3,006.57	0.00	0.00	0.00	
13,700.00	90.00	179.50	10,450.00	-3,111.57	-560.18	3,106.57	0.00	0.00	0.00	
13,800.00	90.00	179.50	10,450.00	-3,211.57	-559.31	3,206.57	0.00	0.00	0.00	
13,900.00	90.00	179.50	10,450.00	-3,311.56	-558.45	3,306.57	0.00	0.00	0.00	
14,000.00	90.00	179.50	10,450.00	-3,411.56	-557.58	3,406.57	0.00	0.00	0.00	
14,100.00	90.00	179.50	10,450.00	-3,511.56	-556.71	3,506.57	0.00	0.00	0.00	
14,200.00	90.00	179.50	10,450.00	-3,611.55	-555.84	3,606.57	0.00	0.00	0.00	
14,300.00	90.00	179.50	10,450.00	-3,711.55	-554.97	3,706.57	0.00	0.00	0.00	
14,400.00	90.00	179.50	10,450.00	-3,811.55	-554.10	3,806.57	0.00	0.00	0.00	
14,500.00	90.00	179.50	10,450.00	-3,911.54	-553.23	3,906.57	0.00	0.00	0.00	
14,600.00	90.00	179.50	10,450.00	-4,011.54	-552.36	4,006.57	0.00	0.00	0.00	
14,700.00	90.00	179.50	10,450.00	-4,111.53	-551.49	4,106.57	0.00	0.00	0.00	
14,800.00	90.00	179.50	10,450.00	-4,211.53	-550.62	4,206.57	0.00	0.00	0.00	
14,900.00	90.00	179.50	10,450.00	-4,311.53	-549.75	4,306.57	0.00	0.00	0.00	
15,000.00	90.00	179.50	10,450.00	-4,411.52	-548.88	4,406.57	0.00	0.00	0.00	
15,100.00	90.00	179.50	10,450.00	-4,511.52	-548.01	4,506.57	0.00	0.00	0.00	
15,200.00	90.00	179.50	10,450.00	-4,611.52	-547.14	4,606.57	0.00	0.00	0.00	
15,300.00	90.00	179.50	10,450.00	-4,711.51	-546.27	4,706.57	0.00	0.00	0.00	
15,400.00	90.00	179.50	10,450.00	-4,811.51	-545.40	4,806.57	0.00	0.00	0.00	
15,500.00	90.00	179.50	10,450.00	-4,911.50	-544.53	4,906.57	0.00	0.00	0.00	
15,600.00	90.00	179.50	10,450.00	-5,011.50	-543.66	5,006.57	0.00	0.00	0.00	
15,700.00	90.00	179.50	10,450.00	-5,111.50	-542.79	5,106.57	0.00	0.00	0.00	
15,800.00	90.00	179.50	10,450.00	-5,211.49	-541.92	5,206.57	0.00	0.00	0.00	
15,900.00	90.00	179.50	10,450.00	-5,311.49	-541.06	5,306.57	0.00	0.00	0.00	
16,000.00	90.00	179.50	10,450.00	-5,411.49	-540.19	5,406.57	0.00	0.00	0.00	



# Phoenix

## Planning Report



<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	USAEDMDB Marathon Oil Permian LLC Lea County, NM (NAD27 NME) Million Dollar Man Million Dollar Man W Fed Com 301H OH Permit Plan 1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Well Million Dollar Man W Fed Com 301H RKB @ 3382.60usft (TBD) RKB @ 3382.60usft (TBD) Grid Minimum Curvature
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### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,100.00	90.00	179.50	10,450.00	-5,511.48	-539.32	5,506.57	0.00	0.00	0.00
16,200.00	90.00	179.50	10,450.00	-5,611.48	-538.45	5,606.57	0.00	0.00	0.00
16,300.00	90.00	179.50	10,450.00	-5,711.47	-537.58	5,706.57	0.00	0.00	0.00
16,400.00	90.00	179.50	10,450.00	-5,811.47	-536.71	5,806.57	0.00	0.00	0.00
16,500.00	90.00	179.50	10,450.00	-5,911.47	-535.84	5,906.57	0.00	0.00	0.00
16,600.00	90.00	179.50	10,450.00	-6,011.46	-534.97	6,006.57	0.00	0.00	0.00
16,700.00	90.00	179.50	10,450.00	-6,111.46	-534.10	6,106.57	0.00	0.00	0.00
16,800.00	90.00	179.50	10,450.00	-6,211.46	-533.23	6,206.57	0.00	0.00	0.00
16,900.00	90.00	179.50	10,450.00	-6,311.45	-532.36	6,306.57	0.00	0.00	0.00
17,000.00	90.00	179.50	10,450.00	-6,411.45	-531.49	6,406.57	0.00	0.00	0.00
17,100.00	90.00	179.50	10,450.00	-6,511.44	-530.62	6,506.57	0.00	0.00	0.00
17,200.00	90.00	179.50	10,450.00	-6,611.44	-529.75	6,606.57	0.00	0.00	0.00
17,300.00	90.00	179.50	10,450.00	-6,711.44	-528.88	6,706.57	0.00	0.00	0.00
17,400.00	90.00	179.50	10,450.00	-6,811.43	-528.01	6,806.57	0.00	0.00	0.00
17,500.00	90.00	179.50	10,450.00	-6,911.43	-527.14	6,906.57	0.00	0.00	0.00
17,600.00	90.00	179.50	10,450.00	-7,011.42	-526.27	7,006.57	0.00	0.00	0.00
17,700.00	90.00	179.50	10,450.00	-7,111.42	-525.40	7,106.57	0.00	0.00	0.00
17,800.00	90.00	179.50	10,450.00	-7,211.42	-524.53	7,206.57	0.00	0.00	0.00
17,900.00	90.00	179.50	10,450.00	-7,311.41	-523.66	7,306.57	0.00	0.00	0.00
18,000.00	90.00	179.50	10,450.00	-7,411.41	-522.80	7,406.57	0.00	0.00	0.00
18,100.00	90.00	179.50	10,450.00	-7,511.41	-521.93	7,506.57	0.00	0.00	0.00
18,200.00	90.00	179.50	10,450.00	-7,611.40	-521.06	7,606.57	0.00	0.00	0.00
18,300.00	90.00	179.50	10,450.00	-7,711.40	-520.19	7,706.57	0.00	0.00	0.00
18,400.00	90.00	179.50	10,450.00	-7,811.39	-519.32	7,806.57	0.00	0.00	0.00
18,500.00	90.00	179.50	10,450.00	-7,911.39	-518.45	7,906.57	0.00	0.00	0.00
18,600.00	90.00	179.50	10,450.00	-8,011.39	-517.58	8,006.57	0.00	0.00	0.00
18,700.00	90.00	179.50	10,450.00	-8,111.38	-516.71	8,106.57	0.00	0.00	0.00
18,800.00	90.00	179.50	10,450.00	-8,211.38	-515.84	8,206.57	0.00	0.00	0.00
18,900.00	90.00	179.50	10,450.00	-8,311.38	-514.97	8,306.57	0.00	0.00	0.00
19,000.00	90.00	179.50	10,450.00	-8,411.37	-514.10	8,406.57	0.00	0.00	0.00
19,100.00	90.00	179.50	10,450.00	-8,511.37	-513.23	8,506.57	0.00	0.00	0.00
19,200.00	90.00	179.50	10,450.00	-8,611.36	-512.36	8,606.57	0.00	0.00	0.00
19,300.00	90.00	179.50	10,450.00	-8,711.36	-511.49	8,706.57	0.00	0.00	0.00
19,400.00	90.00	179.50	10,450.00	-8,811.36	-510.62	8,806.57	0.00	0.00	0.00
19,500.00	90.00	179.50	10,450.00	-8,911.35	-509.75	8,906.57	0.00	0.00	0.00
19,600.00	90.00	179.50	10,450.00	-9,011.35	-508.88	9,006.57	0.00	0.00	0.00
19,700.00	90.00	179.50	10,450.00	-9,111.35	-508.01	9,106.57	0.00	0.00	0.00
19,800.00	90.00	179.50	10,450.00	-9,211.34	-507.14	9,206.57	0.00	0.00	0.00
19,900.00	90.00	179.50	10,450.00	-9,311.34	-506.27	9,306.57	0.00	0.00	0.00
20,000.00	90.00	179.50	10,450.00	-9,411.33	-505.41	9,406.57	0.00	0.00	0.00
20,100.00	90.00	179.50	10,450.00	-9,511.33	-504.54	9,506.57	0.00	0.00	0.00
20,200.00	90.00	179.50	10,450.00	-9,611.33	-503.67	9,606.57	0.00	0.00	0.00
20,300.00	90.00	179.50	10,450.00	-9,711.32	-502.80	9,706.57	0.00	0.00	0.00
20,400.00	90.00	179.50	10,450.00	-9,811.32	-501.93	9,806.57	0.00	0.00	0.00
20,500.00	90.00	179.50	10,450.00	-9,911.32	-501.06	9,906.57	0.00	0.00	0.00
20,600.00	90.00	179.50	10,450.00	-10,011.31	-500.19	10,006.57	0.00	0.00	0.00
20,700.00	90.00	179.50	10,450.00	-10,111.31	-499.32	10,106.57	0.00	0.00	0.00
20,800.00	90.00	179.50	10,450.00	-10,211.30	-498.45	10,206.57	0.00	0.00	0.00
20,900.00	90.00	179.50	10,450.00	-10,311.30	-497.58	10,306.57	0.00	0.00	0.00
21,000.00	90.00	179.50	10,450.00	-10,411.30	-496.71	10,406.57	0.00	0.00	0.00
21,100.00	90.00	179.50	10,450.00	-10,511.29	-495.84	10,506.57	0.00	0.00	0.00
21,200.00	90.00	179.50	10,450.00	-10,611.29	-494.97	10,606.57	0.00	0.00	0.00
21,300.00	90.00	179.50	10,450.00	-10,711.28	-494.10	10,706.57	0.00	0.00	0.00
21,400.00	90.00	179.50	10,450.00	-10,811.28	-493.23	10,806.57	0.00	0.00	0.00

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	USAEDMDB Marathon Oil Permian LLC Lea County, NM (NAD27 NME) Million Dollar Man Million Dollar Man W Fed Com 301H OH Permit Plan 1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Well Million Dollar Man W Fed Com 301H RKB @ 3382.60usft (TBD) RKB @ 3382.60usft (TBD) Grid Minimum Curvature
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**Planned Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
21,500.00	90.00	179.50	10,450.00	-10,911.28	-492.36	10,906.57	0.00	0.00	0.00
21,600.00	90.00	179.50	10,450.00	-11,011.27	-491.49	11,006.57	0.00	0.00	0.00
21,700.00	90.00	179.50	10,450.00	-11,111.27	-490.62	11,106.57	0.00	0.00	0.00
21,800.00	90.00	179.50	10,450.00	-11,211.27	-489.75	11,206.57	0.00	0.00	0.00
21,900.00	90.00	179.50	10,450.00	-11,311.26	-488.88	11,306.57	0.00	0.00	0.00
22,000.00	90.00	179.50	10,450.00	-11,411.26	-488.02	11,406.57	0.00	0.00	0.00
22,100.00	90.00	179.50	10,450.00	-11,511.25	-487.15	11,506.57	0.00	0.00	0.00
22,200.00	90.00	179.50	10,450.00	-11,611.25	-486.28	11,606.57	0.00	0.00	0.00
22,300.00	90.00	179.50	10,450.00	-11,711.25	-485.41	11,706.57	0.00	0.00	0.00
22,400.00	90.00	179.50	10,450.00	-11,811.24	-484.54	11,806.57	0.00	0.00	0.00
22,500.00	90.00	179.50	10,450.00	-11,911.24	-483.67	11,906.57	0.00	0.00	0.00
22,600.00	90.00	179.50	10,450.00	-12,011.24	-482.80	12,006.57	0.00	0.00	0.00
22,700.00	90.00	179.50	10,450.00	-12,111.23	-481.93	12,106.57	0.00	0.00	0.00
22,800.00	90.00	179.50	10,450.00	-12,211.23	-481.06	12,206.57	0.00	0.00	0.00
22,900.00	90.00	179.50	10,450.00	-12,311.22	-480.19	12,306.57	0.00	0.00	0.00
23,000.00	90.00	179.50	10,450.00	-12,411.22	-479.32	12,406.57	0.00	0.00	0.00
23,100.00	90.00	179.50	10,450.00	-12,511.22	-478.45	12,506.57	0.00	0.00	0.00
23,200.00	90.00	179.50	10,450.00	-12,611.21	-477.58	12,606.57	0.00	0.00	0.00
23,300.00	90.00	179.50	10,450.00	-12,711.21	-476.71	12,706.57	0.00	0.00	0.00
23,400.00	90.00	179.50	10,450.00	-12,811.21	-475.84	12,806.57	0.00	0.00	0.00
23,500.00	90.00	179.50	10,450.00	-12,911.20	-474.97	12,906.57	0.00	0.00	0.00
23,600.00	90.00	179.50	10,450.00	-13,011.20	-474.10	13,006.57	0.00	0.00	0.00
23,700.00	90.00	179.50	10,450.00	-13,111.19	-473.23	13,106.57	0.00	0.00	0.00
23,800.00	90.00	179.50	10,450.00	-13,211.19	-472.36	13,206.57	0.00	0.00	0.00
23,900.00	90.00	179.50	10,450.00	-13,311.19	-471.49	13,306.57	0.00	0.00	0.00
24,000.00	90.00	179.50	10,450.00	-13,411.18	-470.63	13,406.57	0.00	0.00	0.00
24,100.00	90.00	179.50	10,450.00	-13,511.18	-469.76	13,506.57	0.00	0.00	0.00
24,200.00	90.00	179.50	10,450.00	-13,611.18	-468.89	13,606.57	0.00	0.00	0.00
24,300.00	90.00	179.50	10,450.00	-13,711.17	-468.02	13,706.57	0.00	0.00	0.00
24,400.00	90.00	179.50	10,450.00	-13,811.17	-467.15	13,806.57	0.00	0.00	0.00
24,500.00	90.00	179.50	10,450.00	-13,911.16	-466.28	13,906.57	0.00	0.00	0.00
24,600.00	90.00	179.50	10,450.00	-14,011.16	-465.41	14,006.57	0.00	0.00	0.00
24,700.00	90.00	179.50	10,450.00	-14,111.16	-464.54	14,106.57	0.00	0.00	0.00
24,800.00	90.00	179.50	10,450.00	-14,211.15	-463.67	14,206.57	0.00	0.00	0.00
24,900.00	90.00	179.50	10,450.00	-14,311.15	-462.80	14,306.57	0.00	0.00	0.00
25,000.00	90.00	179.50	10,450.00	-14,411.15	-461.93	14,406.57	0.00	0.00	0.00
25,100.00	90.00	179.50	10,450.00	-14,511.14	-461.06	14,506.57	0.00	0.00	0.00
25,200.00	90.00	179.50	10,450.00	-14,611.14	-460.19	14,606.57	0.00	0.00	0.00
25,300.00	90.00	179.50	10,450.00	-14,711.13	-459.32	14,706.57	0.00	0.00	0.00
25,400.00	90.00	179.50	10,450.00	-14,811.13	-458.45	14,806.57	0.00	0.00	0.00
25,500.00	90.00	179.50	10,450.00	-14,911.13	-457.58	14,906.57	0.00	0.00	0.00
25,600.00	90.00	179.50	10,450.00	-15,011.12	-456.71	15,006.57	0.00	0.00	0.00
25,700.00	90.00	179.50	10,450.00	-15,111.12	-455.84	15,106.57	0.00	0.00	0.00
25,800.00	90.00	179.50	10,450.00	-15,211.11	-454.97	15,206.57	0.00	0.00	0.00
25,900.00	90.00	179.50	10,450.00	-15,311.11	-454.10	15,306.57	0.00	0.00	0.00
25,923.52	90.00	179.50	10,450.00	-15,334.63	-453.90	15,330.09	0.00	0.00	0.00
<b>TD at 25923.52</b>									

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	USAEDMDB Marathon Oil Permian LLC Lea County, NM (NAD27 NME) Million Dollar Man Million Dollar Man W Fed Com 301H OH Permit Plan 1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Well Million Dollar Man W Fed Com 301H RKB @ 3382.60usft (TBD) RKB @ 3382.60usft (TBD) Grid Minimum Curvature
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**Design Targets**
**Target Name**

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
PPP-3 - MDM W FC	0.00	0.00	10,450.00	-7,517.58	-521.47	412,282.91	774,467.11	32° 7' 49.358048 N	3° 26' 48.116320 W
- plan misses target center by 0.40usft at 18106.18usft MD (10450.00 TVD, -7517.58 N, -521.87 E)									
- Point									
PPP-2 - MDM W FC	0.00	0.00	10,450.00	-2,238.90	-567.09	417,561.59	774,421.49	32° 8' 41.596051 N	3° 26' 48.141479 W
- plan misses target center by 0.68usft at 12827.30usft MD (10450.00 TVD, -2238.91 N, -567.77 E)									
- Point									
FTP/PPP-1 - MDM W	0.00	0.00	10,450.00	299.66	-589.03	420,100.15	774,399.55	32° 9' 6.717687 N	3° 26' 48.153519 W
- plan misses target center by 215.82usft at 10400.00usft MD (10310.46 TVD, 152.19 N, -515.83 E)									
- Point									
LTP/BHL - MDM W F	0.00	179.50	10,450.00	-15,334.63	-453.90	404,465.86	774,534.68	32° 6' 32.000025 N	3° 26' 48.078557 W
- plan hits target center									
- Rectangle (sides W100.00 H15,634.87 D20.00)									
PPP-4 - MDM W FC	0.00	0.00	10,450.00	-10,156.86	-498.65	409,643.63	774,489.93	32° 7' 23.239594 N	3° 26' 48.103545 W
- plan misses target center by 0.27usft at 20745.56usft MD (10450.00 TVD, -10156.86 N, -498.92 E)									
- Point									

**Formations**

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
918.00	918.00	Rustler		0.000	179.50
1,380.01	1,380.00	Salado		0.000	179.50
3,515.03	3,504.00	Castile		0.000	179.50
5,480.79	5,459.00	Base of Salt (BX)		0.000	179.50
5,480.79	5,459.00	Lamar		0.000	179.50
5,524.02	5,502.00	Bell Canyon		0.000	179.50
6,768.84	6,740.00	Cherry Canyon		0.000	179.50
8,042.43	8,011.00	Brushy Canyon		0.000	179.50
9,341.43	9,310.00	Bone Spring Lime		0.000	179.50
9,619.43	9,588.00	Upper Avalon Shale		0.000	179.50
10,668.56	10,433.00	1st Bone Spring Sand		0.000	179.50

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,300.00	1,300.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,599.85	1,599.30	8.98	-12.85	Hold 6.00° Inc at 304.96° Azm
7,142.58	7,111.70	340.82	-487.43	Begin 2.00°/100' Drop
7,442.43	7,411.00	349.80	-500.28	Begin Vertical Hold
9,908.47	9,877.04	349.80	-500.28	KOP2, Begin 10.00°/100' Build
10,808.47	10,450.00	-221.39	-545.23	LP, Hold 90.00° Inc at 184.50° Azm
11,143.47	10,450.00	-555.36	-571.52	Begin 2.00°/100' Turn
11,393.38	10,450.00	-805.04	-580.24	Hold 179.50° Azm
25,923.52	10,450.00	-15,334.63	-453.90	TD at 25923.52

MARATHON OIL PERMIAN, LLC.  
**DRILLING AND OPERATIONS PLAN**



WELL NAME &amp; NUMBER:

**Million Dollar Man W FEDERAL COM 301H**

LOCATION:

SECTION **11** TOWNSHIP **25S** RANGE **34E**  
 LEA COUNTY, **NEW MEXICO**

**Section 1:****GEOLOGICAL FORMATIONS**

Name of Surface Formation: Permian  
 Elevation: 3359 feet

**Estimated Tops of Important Geological Markers:**

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	918	945	2441	Anhydrite	Brine	No
Salado	1380	1407	1979	Salt/Anhydrite	Brine	No
Castile	3504	3531	-145	Salt/Anhydrite	Brine	No
Base of Salt (BX)	5459	5486	-2100	Salt/Anhydrite	Brine	No
Lamar	5459	5486	-2100	Sandstone/Shale	None	No
Bell Canyon	5502	5529	-2143	Sandstone	Oil	No
Cherry Canyon	6740	6767	-3381	Sandstone	Oil	No
Brushy Canyon	8011	8038	-4652	Sandstone	Oil	No
Bone Spring Lime	9310	9337	-5951	Limestone	None	No
Upper Avalon Shale	9588	9615	-6229	Shale	Oil	Yes
1st Bone Spring Sand	10433	10460	-7074	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	10645	10672	-7286	Limestone/Shale	None	No
2nd Bone Spring Sand	11012	11039	-7653	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	11461	11488	-8102	Limestone	Oil	No
3rd Bone Spring Sand	12017	12044	-8658	Sandstone	Oil	Yes
Wolfcamp	12490	12517	-9131	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	12573	12600	-9214	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	12925	12952	-9566	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp C	13120	13147	-9761	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp D	13322	13349	-9963	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Strawn	13862	13889	-10503	Carbonates/Sands/Clays	Natural Gas	Possible

**Section 2:****BLOWOUT PREVENTER TESTING PROCEDURE**

Pressure Rating (PSI): 10M

Rating Depth: 10000

Equipment: 13 5/8 BOP Annular (5,000 psi WP) and BOP Stack (10,000 psi WP) will be installed and tested before drilling all holes.

Requesting Variance?: Yes

Variance Request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.

Testing Procedure: BOP/BOPE will be tested to 250 psi low and a high of 100% WP for the Annular and 5,000psi for the BOP Stacking before drilling the intermediate hole, 10,000psi for the BOP Stacking before drilling the production hole. Testing will be conducted by an independent service company per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the Equipment Description above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock, full opening safety valve / inside BOP and choke lines and choke manifold. See attached schematics.

Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

Marathon Oil Permian LLC.

Drilling &amp; Operations Plan - Page 2 of 3

## Section 3:

## CASING PROGRAM

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	970	0	943	3359	2416	54.5	J55	BTG	5.22	1.81	BUOY	4.52	BUOY	4.52
Intermediate	12.25	9.625	0	9808	0	9777	3359	-6418	40	P110HC	BTG	1.20	1.42	BUOY	2.44	BUOY	2.44
Production	8.75	5.5	0	25924	0	10450	3359	-7091	23	P110HC	TLW	2.53	1.26	BUOY	2.22	BUOY	2.22

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Safety Factors will Meet or Exceed

**Casing Condition:** New  
**Casing Standard:** API  
**Tapered String?** No

Yes or No

Is casing new? If used, attach certification as required in Onshore Order #1.	Yes
Does casing meet API specifications? If no, attach casing specification sheet.	Yes
Is premium or uncommon casing planned? If yes attach casing specification sheet.	No
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Yes
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Yes
Is well located within Capitan Reef?	No
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is proposed well within the designated four string boundary?	
Is well located in R-111-P and SOPA?	No
If yes, are the first three strings cemented to surface?	
Is the second string set 100' to 600' below the base of salt?	
Is well located in SOPA but not in R-111-P?	No
If yes, are the first 2 strings cemented to surface and third string cement tied back 500' into previous casing?	
Is well located in high Cave/Karst?	No
If yes, are there two strings cemented to surface?	
If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	No
If yes, are there three strings cemented to surface?	

## Section 4:

## CEMENT PROGRAM

String Type	Lead/Tail	Top MD	Bottom MD	Quantity (sks)	Yield (ft <sup>3</sup> /sks)	Density (ppg)	Slurry Volume (ft <sup>3</sup> )	Excess (%)	Cement Type	Additives
Surface	Lead	0	820	359	2.12	12.5	761	25	Class C	Extender, Accelerator, LCM
Surface	Tail	820	970	99	1.32	14.8	130	25	Class C	Accelerator
Intermediate	Lead	0	9308	1699	2.18	12.4	3704	25	Class C	Extender, Accelerator, LCM
Intermediate	Tail	9308	9808	147	1.33	14.8	196	25	Class C	Retarder
Production	Tail	9508	25924	3126	1.68	13	5252	25	Class H	Retarder, Extender, Fluid Loss, Suspension Agent

Stage tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

**Pilot Hole?** No  
**Pilot Hole Depth:** N/A  
**KOP Depth:** N/A

Plugging Procedure for Pilot Hole: N/A

Plug Top	Plug Bottom	Excess (%)	Quantity (sks)	Density (ppg)	Yield (ft <sup>3</sup> /sks)	Water gal/sk	Slurry Description and Cement Type

Marathon Oil Permian LLC.

Drilling &amp; Operations Plan - Page 3 of 3

**Section 5:****CIRCULATING MEDIUM**

**Mud System Type:** Closed  
**Will an air or gas system be used?** No

**Describe what will be on location to control well or mitigate other conditions:**

The necessary mud products for additional weight and fluid loss control will be on location at all times.

**Describe the mud monitoring system utilized:**

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

**Circulating Medium Table:**

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max Weight (ppg)
0	970	Water Based Mud	8.4	8.8
970	9808	Brine or Oil Based Mud	9.2	10.2
9808	25924	Oil Based Mud	10.5	12.5

**Section 6:****TESTING, LOGGING, CORING****List of production tests including testing procedures, equipment and safety measures:**

GR from TD to surface (horizontal well - vertical portion of hole)

**List of open and cased hole logs run in the well:**

GR while drilling from Intermediate casing shoe to TD.

**Coring operation description for the well:**

Run gamma-ray (GR) and corrected neutron log (CNL) or analogous to surface for future development of the area, one per shared well pad not to exceed 200' radial distance.

**Section 7:****ANTICIPATED PRESSURE****Anticipated Bottom Hole Pressure:**

6793 PSI

**Anticipated Bottom Hole Temperature:**

195 °F

**Anticipated Abnormal Pressure?**

No

**Anticipated Abnormal Temperature?**

No

**Potential Hazards:**

H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. See attached H2S Contingency Plan.

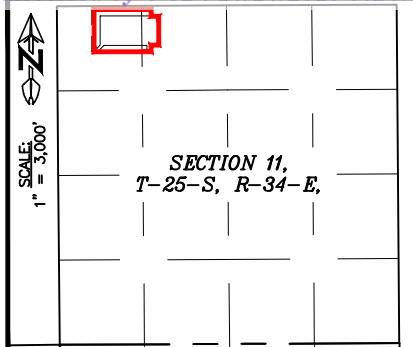
**Section 8:****OTHER INFORMATION****Auxiliary Well Control and Monitoring Equipment:**

A Kelly cock will be in the drill string at all times. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the BLM.

**Anticipated Starting Date and Duration of Operations:**

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days.



# RIG LAYOUT

MILLION DOLLAR MAN W FED COM  
SEC. 11 TWP. 25-S RGE. 34-E  
SURVEY: N.M.P.M.  
COUNTY: LEA

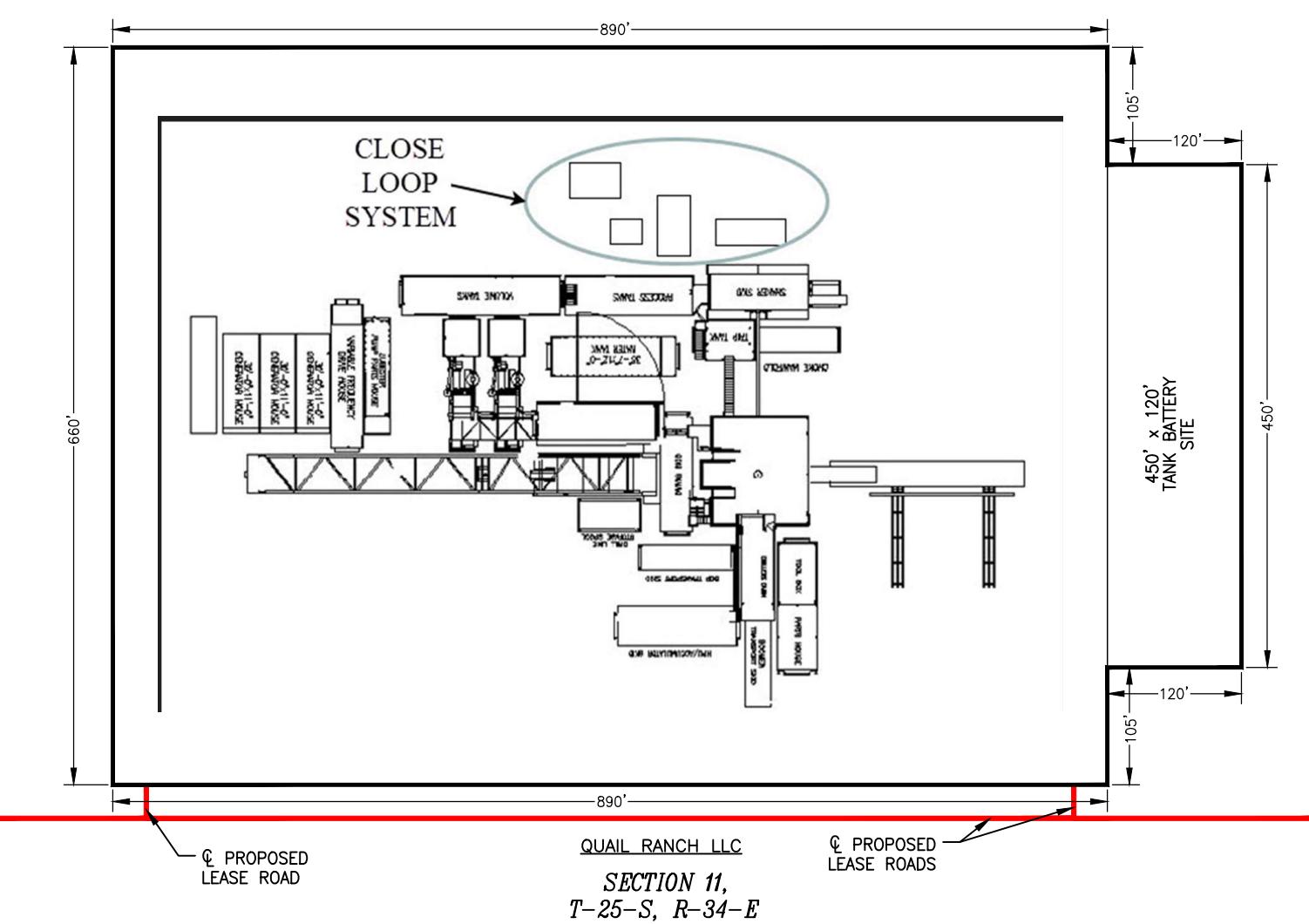
OPERATOR: MARATHON OIL PERMIAN LLC  
U.S.G.S. TOPOGRAPHIC MAP: WOODLEY FLAT, N.M.

75' 0' 75' 150'  
SCALE: 1" = 150'

## LEGEND

PROPOSED WELL PAD  
PROPOSED LEASE ROAD

SECTION 2,  
T-25-S, R-34-E



## BASIS OF BEARING

ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE BASED GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.999995182 AND A CONVERGENCE ANGLE OF 0.471472926.

JOB NUMBER				
MRO_0035_MM		REV.	DATE	BY

NOTES	SHEET 6 OF 7	DELTA FIELD SERVICES, LLC		
THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY.	DRAWN BY: DEF	510 TRENTON STREET WEST MONROE, LA 71291 (318) 323-6900		
	DATE DRAWN: 04/15/2024			
	CHECKED BY: MWS			

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

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

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** Marathon Oil Permian LLC **972098** **OGRID:** \_\_\_\_\_ **Date:** 8 / 20 / 2024

**II. Type:**  Original  Amendment due to  19.15.27.9.D(6)(a) NMAC  19.15.27.9.D(6)(b) NMAC  Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
See attached list						

**IV. Central Delivery Point Name:** Million Dollar Man West CTB [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
See attached.						

**VI. Separation Equipment:**  Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:**  Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:**  Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

**Section 2 – Enhanced Plan**  
**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

**IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

**X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.**  Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system  will  will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator  does  does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:**  Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

## Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

- Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or
- Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.
- If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.**  Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.**  Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

## Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	<i>Adrian Covarrubias</i>
Printed Name:	Adrian Covarrubias
Title:	Adv. Regulatory Compliance Rep
E-mail Address:	acovarrubas@marathonoil.com
Date:	8/20/2024
Phone:	713-296-3368
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

**APPENDIX**  
Section 1 - Parts VI, VII, and VIII

**VI. Separation Equipment:**  Attach a complete description of how Operator will size separation equipment to optimize gas capture.

- Separation equipment is sized to allow for retention time and velocity to adequately separate oil, gas, and water at anticipated peak rates.
- All central tank battery equipment is designed to efficiently capture the remaining gas from the liquid phase.
- Valves and meters are designed to service without flow interruption or venting of gas.

**VII. Operational Practices:**  Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

◆ **19.15.27.8 (A) – Venting and Flaring Of Natural Gas**

- Marathon Oil Permian's field operations are designed with the goal of minimizing flaring and preventing venting of natural gas. If capturing the gas is not possible then the gas is combusted/flared using properly sized flares or combustors in accordance with state air permit rules.

◆ **19.15.27.8 (B) – Venting and Flaring During Drilling Operations**

- A properly-sized flare stack will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared. Venting will only occur if there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.

◆ **19.15.27.8 (C) – Venting and Flaring During Completion or Recompletion Operations**

- During all phases of flowback, wells will flow through a sand separator, or other appropriate flowback separation equipment, and the well stream will be directed to a central tank battery (CTB) through properly sized flowlines.
- The CTB will have properly sized separation equipment for maximum anticipated flow rates.
- Multiple stages of separation will be used to separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet.

◆ **19.15.27.8 (D) – Venting and Flaring During Production Operations**

- During production, the well stream will be routed to the CTB where multiple stages of separation will separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet, minimizing tank emissions.
- Flares are equipped with auto-ignition systems and continuous pilot operations.
- Automatic gauging equipment is installed on all tanks.

◆ **19.15.27.8 (E) – Performance Standards**

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- Automatic gauging equipment is installed on all tanks to minimize venting.
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Flares are equipped with continuous pilots and auto-ignitors along with remote monitoring of the pilot status.
- Weekly AVOs and monthly LDAR inspections will be performed on all wells and facilities that produce more than 60 MCFD.
- Gas/H2S detectors will be installed throughout the facilities and wellheads to detect leaks and enable timely repairs.

◆ **19.15.27.8 (F) – Measurement or Estimation of Vented and Flared Natural Gas**

- All high pressure flared gas is measured by equipment conforming to API 14.10.
- No meter bypasses are installed.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated through flare flow curves with the assistance of air emissions consultants, as necessary.

**VIII. Best Management Practices:**  Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

- Marathon Oil Permian will use best management practices to vent as minimally as possible during well intervention operations and downhole well maintenance.
- All natural gas is routed into the gas gathering system and directed to one of Marathon Oil Permian's multiple gas sales outlets.
- All venting events will be recorded and all start-up, shutdown, maintenance logs will be kept for control equipment.
- All control equipment will be maintained to provide highest run-time possible.
- All procedures are drafted to keep venting and flaring to the absolute minimum.

**III. Wells**

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Million Dollar Man W Fed Com 301H		D-11-25S-34E	403' FNL & 1246' FWL	2300	4200	3500
Million Dollar Man W Fed Com 501H		D-11-25S-34E	463' FNL & 1246' FWL	2300	4200	3500
Million Dollar Man W Fed Com 302H		D-11-25S-34E	493' FNL & 1246' FWL	2300	4200	3500
Million Dollar Man W Fed Com 502H		D-11-25S-34E	302' FNL & 1097' FWL	2300	4200	3500

**V. Anticipated Schedule**

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Million Dollar Man W Fed Com 301H		9/13/2025	10/13/2025	11/13/2025	12/13/2025	12/14/2025
Million Dollar Man W Fed Com 501H		9/13/2025	10/13/2025	11/13/2025	12/13/2025	12/14/2025
Million Dollar Man W Fed Com 302H		9/13/2025	10/13/2025	11/13/2025	12/13/2025	12/14/2025
Million Dollar Man W Fed Com 502H		9/13/2025	10/13/2025	11/13/2025	12/13/2025	12/14/2025

# BOP Break Test Variance Request

## Executive Summary

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- Request for a Variance allowing break testing of the blowout preventer equipment. Marathon requests to only test broken pressure seals on the BOP and function test BOP when skidding between wells on a pad
- Currently CFR Title 43 Part 3170 states that a test shall be performed “whenever any seal subject to test pressure is broken” and BLM interprets this as requiring a full BOP test
- API 53 states that for pad drilling operations, ONLY the connections that have a pressure seal broken are required to be tested
- Marathon feels break testing meets and or exceeds CFR Title 43 and API 53 required standards and is good drilling practice. It also may reduce wear and tear on BOP components.

# BOP Break Test Variance Request

## Background

- API Standard 53, “Well Control Equipment Systems for Drilling Wells 5th addition, Dec 2018, Annex C Table C.4) states “ For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure – containing and pressure controlling connection when the integrity of a pressure seal is broken.
- Marathon’s rigs utilize quick connects to allow the release of the BOP from wellhead to wellhead without breaking any BOP stack components. This technology allows for break testing
- BLM has previously approved this variance of break testing for other operators in the area

Table C.4—Initial Pressure Testing, Surface BOP Stacks

Component to be Pressure Tested	Pressure Test—Low Pressure <sup>a</sup> psig (MPa)	Pressure Test—High Pressure <sup>a,c</sup>
Annular preventer <sup>b</sup>	250 to 350 (1.72 to 2.41)	Change Out of Component, Elastomer, or Ring Gasket
Fixed pipe, variable bore, blind, and BSR preventers <sup>b,d</sup>	250 to 350 (1.72 to 2.41)	RWP of annular preventer
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower
Choke manifold—upstream of chokes <sup>e</sup>	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower
Choke manifold—downstream of chokes <sup>e</sup>	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	ITP

<sup>a</sup> Pressure test evaluation periods shall be a minimum of five minutes.

<sup>b</sup> The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

<sup>c</sup> Annular(s) and VBR(s) shall be pressure tested on the largest and smallest O/D drill pipe to be used in well program.

<sup>d</sup> For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

<sup>e</sup> For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

<sup>f</sup> Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.



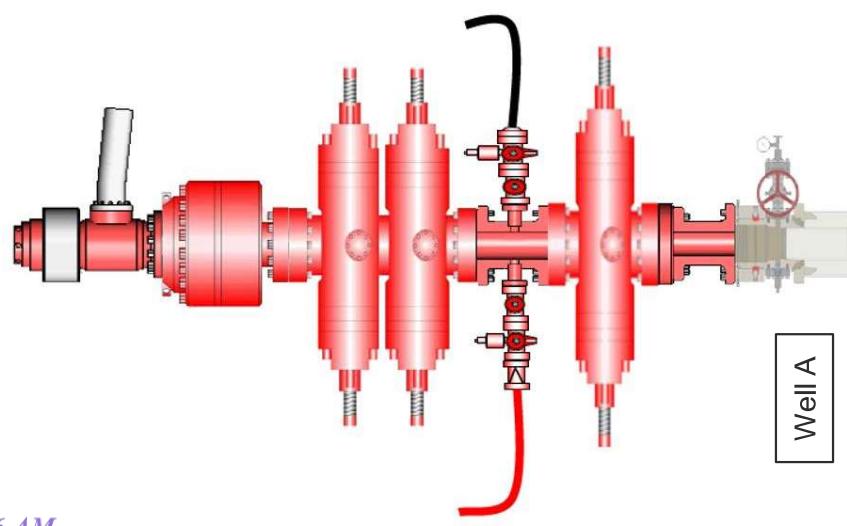
# Procedures

## Procedural Steps

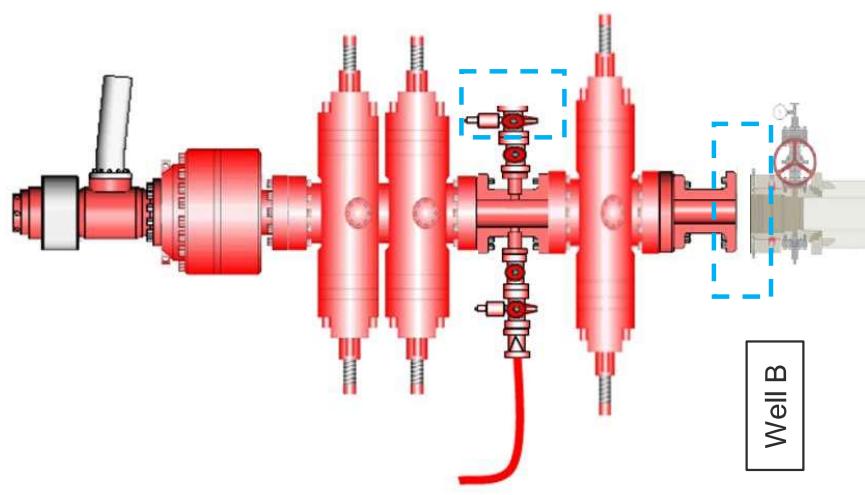
1. Marathon will use this document for break testing plan for New Mexico Delaware Basin.
2. Marathon will perform BOP break testing on well pads where multiple intermediate sections can be drilled and cased within the 21 day test window and will meet the following criteria:
  - a) A full BOP test will be conducted on the first well on the pad
  - b) The deepest intermediate well on the pad will be drilled first
  - c) A Full BOP test will be required prior to drilling any production hole
3. After completing the first full BOP test and drilling the intermediate section, two breaks will be performed on the BOP:
  - a) BOP quick connect and wellhead
  - b) HCV and Choke line connection
4. The BOP will be lifted from well A to well B
5. The two connections stated above will be reconnected
6. Test plug will be installed into wellhead utilizing drillpipe or test joint
7. Shell test will be performed against the upper pipe rams and testing the two breaks consisting of the following tests:
  - a) 250psi low test and high test performed to 5,000 (well and sundry specific)
8. Function test will then be performed on the lower pipe rams, blind rams, and annular (performed each trip or every 7 days - whichever is more frequent)
9. This process will be repeated for other wells on the pad while being in the 21 day BOP test window

# Sequence Diagram

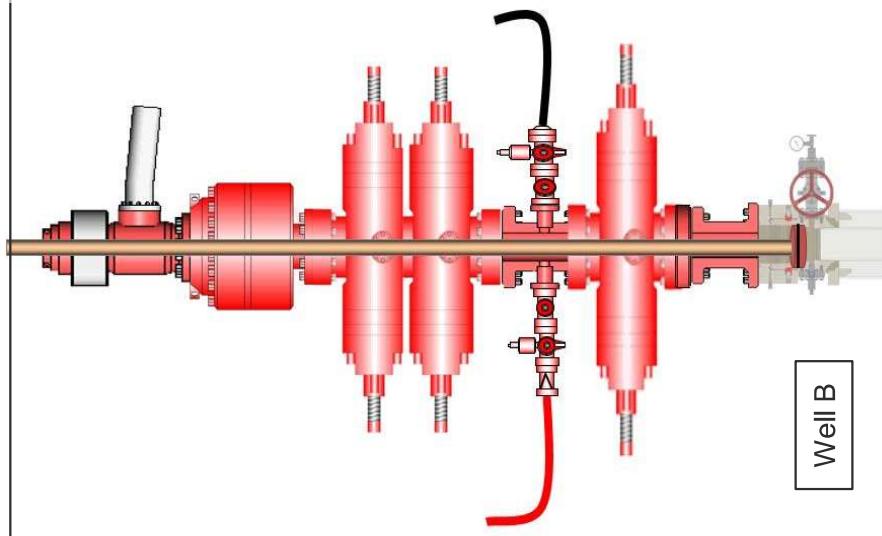
Well A: BOP installed on Well A



BOP picked up and moved from Well A to Well B.  
Disconnected at the **quick connect** and the **choke line valve**

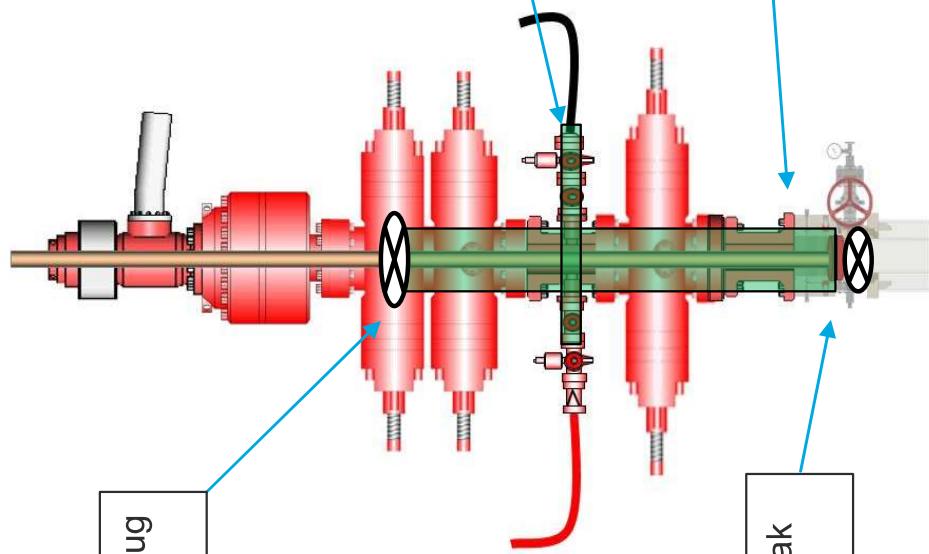


Well B: Quick connect and choke line reconnected. Test plug installed.



# Procedures

## Diagram



- Break Test**  
The break test will consist of one test that tests both breaks (quick connect/wellhead and choke line/HCV simultaneously after each skid)
- Connection between the HCV and choke line will be broken and then retested after each skid during the break test
- Connection between the wellhead and BOP (quick connect) will be broken and then retested after each skid during the break test

## Summary

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- A variance is requested to only test the broken pressure seals on the BOP equipment when moving from wellhead to wellhead. This is in full compliance with API Standard 53
- Marathon will meet the following criteria when break testing:
  - Time of last BOP test was less than 21 days
  - A full BOP test was conducted on the first well on the pad
  - The first intermediate hole section on the pad will be the deepest intermediate hole section.
  - Break testing will not occur on intermediate sections of over 5000 psi MASP





### **Cement Variance Request**

Marathon Oil Permian requests to pump a two stage cement job on the 9 5/8" intermediate casing in the event the primary stage is not circulated to surface.

If cement is not circulated to surface on the primary cement job, the second stage will be performed as a bradenhead squeeze until cement reaches surface.

Following the first stage, we will ensure the cement job was cemented properly and the well is static with floats holding. We will also ensure there is no pressure on the csg annulus as with all other casing strings where batch drilling operations occur. Before moving off the rig the TA cap will be installed as per standard batch drilling ops.

If there are indications that there are gaps in cement coverage after the bradenhead squeeze, a CBL will be run to identify where the gaps are. After the bradenhead squeeze, the lines will NOT be washed into the annulus. The annulus will be topped off approximately an hour after the bradenhead job with cement and verified circulated to surface. If confidence is lacking on the TOC, an echo meter or CBL will be run to verify TOC. BLM Engineer will be notified of such issues.

## Batch Drilling Plan

- Marathon Oil Permian LLC. respectfully requests the option to “batch” drill sections of a well with intentions of returning to the well for later completion.
- When it is determined that the use of a “batch” drilling process to increase overall efficiency and reduce rig time on location, the following steps will be utilized to ensure compliant well control before releasing drilling rig during the batch process.
- Succeeding a successful cement job, fluid levels will be monitored in both the annulus and casing string to be verified static.
- A mandrel hanger packoff will be ran and installed in the multi-bowl wellhead isolating and creating a barrier on the annulus. This packoff will be tested to 5,000 PSI validating the seals.
- At this point the well is secure and the drilling adapter will be removed from the wellhead.
- A 13-5/8" 5M temporary abandonment cap will be installed on the wellhead by stud and nut flange. The seals of the TA cap will then be pressure tested to 5,000 PSI.
- The drilling rig will skid to the next well on the pad to continue the batch drilling process.
- When returning to the well with the TA cap, the TA cap will be removed and the BOP will be nippled up on the wellhead.
- A BOP test will then be conducted according to Onshore Order #2 and drilling operations will resume on the subject well.

## Request for Surface Rig

- Marathon Oil Permian LLC. Requests the option to contract a surface rig to drill, set surface casing and cement on the subject well. If the timing between rigs is such that Marathon Oil Permian LLC. would not be able to preset the surface section, the primary drilling rig will drill the well in its entirety per the APD.

## 1. DRILLING WELL CONTROL PLAN

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### 1.1 WELL CONTROL - CERTIFICATIONS

#### Required IADC/IWCF Well Control Certifications Supervisor Level:

Any personnel who supervises or operates the BOP must possess a valid current IADC training certification and photo identification. This would include the onsite drilling supervisor, tool pusher/rig manager, driller, and any personnel that will be acting in these capacities. Another example of this may be a wireline or snubbing crew rigged up on the rig to assist the rig, the operator of each system must also have a valid control certification for their level of operation.

BLM recognizes IADC training as the industry approved accredited training. Online self-certifications will not be acceptable. Enforcement actions for the lack of a valid Supervisory Level certificate shall be prompt action to correct the deficiency. **Enforcement actions include but are not limited to immediate replacement of personnel lacking certifications, drilling operations being shut down or installment of a 10M annular.**

IADC Driller Level for all Drillers and general knowledge for the Assistant Driller, Derrick Hands, Floor Hands and Motor Hands is recognized by the BLM; however, a Driller Level certification will need to be presented only if acting in a temporary Driller Level certification capacity.

#### **Well Control-Position/Roles**

IADC Well control training and certification is targeted toward each role, e.g., Supervisor Level toward those who direct, Driller Level to those who act, Introductory to those who need to know.

- **Supervisor Level**
  - Specifies and has oversight that the correct actions are carried out
  - Role is to supervise well control equipment, training, testing, and well control events
  - Directs the testing of BOP and other well control equipment
  - Regularly direct well control crew drills
  - Land based rigs – usually runs the choke during a well kill operation
  - Due to role on the rig, training and certification is targeted more toward management of well control and managing an influx out of the well
- **Driller Level**
  - Performs an action to prevent or respond to well control accident
  - Role is to monitor the well via electronic devices while drilling and detect unplanned influxes
  - Assist with the testing of BOP and other well control equipment
  - Regularly assist with well control crew drills
  - When influx is detected, responsible to close the BOP
  - Due to role on the rig, training and certification is targeted more toward monitoring and shutting the well in (closing the BOP) when an influx is detected

**(Well Control-Positions/Roles Continued)**

- **Derrick Hand, Assistant Driller Introductory Level**
  - Role is to assist Driller with kick detection by physically monitoring the well at the mixing pits/tanks
  - Regularly record mud weights/viscosity for analysis by the Supervisor level and mud engineer so pre-influx signs can be detected
  - Mix required kill fluids as directed by Supervisor or Driller
  - Due to role on the rig, training and certification is targeted more toward monitoring for influxes, either via mud samples or visual signs on the pits/tanks
- **Motorman, Floor Hand Introductory Level**
  - Role is to assist the Supervisor, Driller, or Derrick Hand with detecting influxes
  - Be certain all valves are aligned for proper well control as directed by Supervisor
  - Perform Supervisor or Driller assigned tasks during a well control event
  - Due to role on the rig, training and certification is targeted more toward monitoring for influxes

**1.2 WELL CONTROL-COMPONENT AND PREVENTER COMPATIBILITY CHECKLIST**

The table below, which covers the drilling and casing of the 10M Stack portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

- Example 6-1/8" Production hole section, 10M requirement

Component	OD	Preventer	RWP
Drill pipe	4"	Upper and Lower 3.5-5.5" VBRs	10M
HWDP	4"	Upper and Lower 3.5-5.5" VBRs	10M
Drill collars and MWD tools	4.75-5"	Upper and Lower 3.5-5.5" VBRs	10M
Mud Motor	4.75-5.25"	Upper and Lower 3.5-5.5" VBRs	10M
Production casing	4.5"	Upper and Lower 3.5-5.5" VBRs	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

- VBR = Variable Bore Ram. Compatible range listed in chart.

**1.3 WELL CONTROL-BOP TESTING**

BOP Test will be completed per Onshore Oil and Gas Order #2 Well Control requirements. The 5M Annular Preventer on a required 10M BOP stack will be tested to 70 % of rated working

pressure including a 10 minute low pressure test. Pressure shall be maintained at least 10 minutes.

## 1.4 WELL CONTROL - DRILLS

The following drills are conducted and recorded in the Daily Drilling Report and the Contractor's reporting system while engaged in drilling operations:

Type	Frequency	Objective	Comments
Shallow gas kick drill - drilling	Once per well with crew on tour	Response training to a shallow gas influx	To be done prior to drilling surface hole if shallow gas is noted
Kick drill - drilling	Once per week per crew	Response training to an influx while drilling (bit on bottom)	Only one kick drill per week per crew is required, alternating between drilling and tripping.
Kick drill - tripping	Once per week per crew	Response training to an influx while tripping (bit off bottom). Practice stabbing TIW valve	

## 1.5 WELL CONTROL – MONITORING

- Drilling operations which utilize static fluid levels in the wellbore as the active barrier element, a means of accurately monitoring fill-up and displacement volumes during trips are available to the driller and operator. A recirculating trip tank is installed and equipped with a volume indicator easily read from the driller's / operator's position. This data is recorded on a calibrated chart recorder or digitally. The actual volumes are compared to the calculated volumes.
- The On-Site Supervisor ensures hole-filling and pit monitoring procedures are established and documented for every rig operation.
- The well is kept full of fluid with a known density and monitored at all times even when out of the hole.
- Flow checks are a minimum of 15 minutes.
- A flow check is made:
  - In the event of a drilling break.
  - After indications of down hole gains or losses.
  - Prior to all trips out of the hole.
  - After pulling into the casing shoe.
  - Before the BHA enters the BOP stack.
  - If trip displacement is incorrect.

### Well Control-Monitoring (Continued)

- Prior to dropping a survey instrument.
- Prior to dropping a core ball.

- After a well kill operation.
- When the mud density is reduced in the well.
- Flow checks may be made at any time at the sole discretion of the driller or his designate. The Onsite Supervisor ensures that personnel are aware of this authority and the authority to close the well in immediately without further consultation.
- Record slow circulating rates ( SCR ) after each crew change, bit trip, and 500' of new hole drilled and after any variance greater than 0.2 ppg in MW. Slow pump rate recordings should include return flow percent, TVD, MD & pressure. SCR's will be done on all pumps at 30, 40 & 50 SPM. Pressures will be recorded at the choke panel. SCR will be recorded in the IADC daily report and ORB Wellview daily report
- Drilling blind (i.e. without returns) is permissible only in known lithology where the absence of hydrocarbons has been predetermined and written approval of the Drilling Manager.
- All open hole logs to be run with pack-off or lubricator.
- The Drilling Contractor has a fully working pit level totalizer / monitoring system with read out for the driller and an audible alarm set to 10 BBL gain / loss volume. Systems are selectable to enable monitoring of all pits in use. Pit volumes are monitored at all times, especially when transferring fluids. Both systems data is recorded on a calibrated chart recorder or electronically.
- The Drilling Contractor has a fully working return mud flow indicator with drillers display and an audible alarm, and is adjustable to record any variance in return volumes.

## 1.6 WELL CONTROL – SHUT IN

- The “hard shut in” method (i.e. against a closed choke using either an annular or ram type preventer) is the Company standard.
- The HCR(s) or failsafe valves are left closed during drilling to prevent any erosion and buildup of solids. The adjustable choke should also be left closed.
- The rig specific shut in procedure, the BOP configuration along with space-out position for the tool joints is posted in the Driller’s control cabin or doghouse.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Manager.
- During a well kill by circulation, constant bottom hole pressure is maintained throughout.
- Kill sheets are maintained by the Driller and posted in the Driller’s control cabin or doghouse. The sheet is updated at a minimum every 500 feet.

## 2. SHUT-IN PROCEDURES:

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### 2.1 PROCEDURE WHILE DRILLING

- Sound alarm (alert crew)

- Space out drill string – Stop rotating, pick the drill string up off bottom, and space out to ensure no tool joint is located in the BOP element selected for initial closure.
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
  - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify toolpusher/company representative
- Gather all relevant data required:
  - SIDPP and SICP
  - Hole Depth and Hole TVD
  - Pit gain
  - Time
  - Kick Volume
  - Pipe depth
  - MW in, MW out
  - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

## 2.2 PROCEDURE WHILE TRIPPING

- Sound alarm (alert crew)
- Stab full opening safety valve in the drill string and close.
- Space out drill string (ensure no tool joint is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
  - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
  - SIDPP and SICP
  - Hole Depth and Hole TVD
  - Pit gain
  - Time
  - Kick Volume
  - Pipe depth

### Procedure While Tripping (Continued)

- Time
- Kick Volume
- Pipe depth

- MW in, MW out
- SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

### 2.3 PROCEDURE WHILE RUNNING CASING

- Sound alarm (alert crew)
- Stab crossover and full opening safety valve and close
- Space out casing (ensure no coupling is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
  - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
  - SIDPP and SICP
  - Hole Depth and Hole TVD
  - Pit gain
  - Time
  - Kick Volume
  - Pipe depth
  - MW in, MW out
  - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

### 2.4 PROCEDURE WITH NO PIPE IN HOLE (OPEN HOLE)

- Sound alarm (alert crew)
- Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
- Confirm shut-in

- Notify toolpusher/company representative
- Gather all relevant data required:
  - Shut-In Pressure
  - Hole Depth and Hole TVD
  - Pit gain
  - Time
  - Kick Volume
  - MW in, MW out
  - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit.

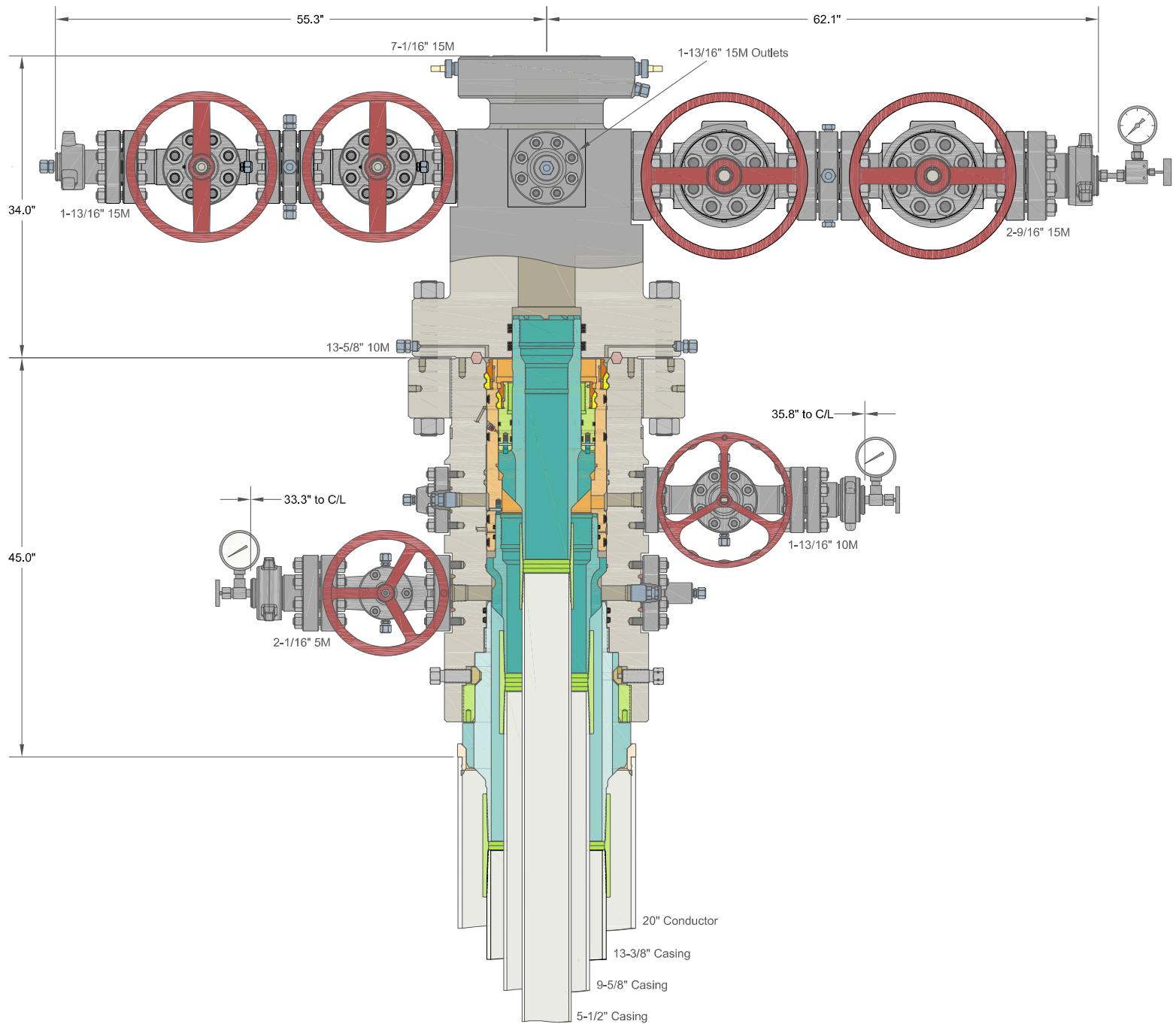
## 2.5 PROCEDURE WHILE PULLING BHA THRU STACK

- PRIOR to pulling last joint of drill pipe thru the stack.
- Perform flow check, if flowing.
- Sound alarm (alert crew).
- Stab full opening safety valve and close
- Space out drill string with tool joint just beneath the upper pipe ram.
- Shut-in using upper pipe ram. (HCR and choke will already be in the closed position).
- Confirm shut-in.
- Notify toolpusher/company representative
- Read and record the following:
  - SIDPP and SICP
  - Pit gain
  - Time
- Regroup and identify forward plan
- **With BHA in the stack and compatible ram preventer and pipe combo immediately available.**
  - Sound alarm (alert crew)
  - Stab crossover and full opening safety valve and close
  - Space out drill string with upset just beneath the compatible pipe ram.
  - Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
  - Confirm shut-in
  - Notify toolpusher/company representative
  - Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time

### Procedures While Pulling BHA thru Stack (Continued)

- Time
- Regroup and identify forward plan

- **With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.**
  - Sound alarm (alert crew)
  - If possible to pick up high enough, pull string clear of the stack and follow “Open Hole” scenario.
  - If impossible to pick up high enough to pull the string clear of the stack:
  - Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close
  - Space out drill string with tool joint just beneath the upper pipe ram.
  - Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
  - Confirm shut-in
  - Notify toolpusher/company representative
  - Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time



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ALL DIMENSIONS APPROXIMATE

## CACTUS WELLHEAD LLC

20" x 13-3/8" x 9-5/8" x 5-1/2" MBU-3T-CFL-R-DBLO System  
With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head  
And 9-5/8" & 5-1/2" Mandrel Casing Hangers

## MARATHON OIL & GAS

DRAWN	DLE	20OCT21
APPRV		
DRAWING NO.		HBE0000621



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

## Bond Info Data

04/14/2025

**APD ID:** 10400100577**Submission Date:** 08/22/2024

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

**Operator Name:** MARATHON OIL PERMIAN LLC**Well Number:** 301H**Well Name:** MILLION DOLLAR MAN W FED COM**Well Work Type:** Drill**Well Type:** OIL WELL

### Bond

**Federal/Indian APD:** FED**BLM Bond number:** NMB001555**BIA Bond number:****Do you have a reclamation bond?** NO**Is the reclamation bond a rider under the BLM bond?****Is the reclamation bond BLM or Forest Service?****BLM reclamation bond number:****Forest Service reclamation bond number:****Forest Service reclamation bond attachment:****Reclamation bond amount:****Reclamation bond rider amount:****Additional reclamation bond information attachment:**

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 518334

**ACKNOWLEDGMENTS**

Operator:	OGRID:
MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	372098
	Action Number:
	518334

Action Type:  
[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
-------------------------------------	--

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**

CONDITIONS

Action 518334

**CONDITIONS**

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 518334
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
rrussell01	Cement is required to circulate on both surface and intermediate1 strings of casing.	10/20/2025
rrussell01	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	10/20/2025
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.	12/15/2025
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.	12/15/2025
jeffrey.harrison	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	12/15/2025
jeffrey.harrison	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	12/15/2025