Page 1 of 30



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

Well Name: HEGEMON WC FEDERAL Well Location: T26S / R29E / SEC 28 / County or Parish/State:

NWNW /

Well Number: 702H Type of Well: CONVENTIONAL GAS Allottee or Tribe Name:

WELL

Unit or CA Name: Unit or CA Number: Lease Number: NMNM138837

US Well Number: 3001553923 Operator: MARATHON OIL

Well Status: Approved Application for

PERMIAN LLC Permit to Drill

Notice of Intent

Sundry ID: 2775269

Type of Submission: Notice of Intent Type of Action: APD Change Date Sundry Submitted: 02/15/2024 Time Sundry Submitted: 10:34

Date proposed operation will begin: 02/23/2024

Procedure Description: Marathon Oil Permian respectfully request approval for an APD change for the Hegemon 21 WD Fed #26H as shown below and on the attached: Well Name change to: Hegemon WC Federal Com #702H Change TVD: 9936' Cement variance request SHL & BHL changes: Approved: SHL: 675' FNL & 695' FWL, Sec. 28, BHL: 330' FNL& 1034' FWL, Sec. 21. Proposed: SHL: 267' FNL & 690' FWL, Sec 28, BHL: 330' FNL & 1320' FWL, Sec. 21 Change to Casing Design: Change from 4 string to 3 string design. Approved Csg design: Surf, 13.375 set @ 370' Int I, 9.625" set @ 2700' Int II, 7" set @ 10200' Prod, 4.5" liner set @ 9900-15428' Proposed casing design: Surf, 13.375 set @ 553' Int, 9.625" set @ 9183' Prod, 5.5" set @ 14554' Please see attached drill plan for cement design changes, C102, directional plan. NO new disturbance request. Well pad approved 550' X 750 no change.

NOI Attachments

Procedure Description

Hegemon_Well_Pad_diagram_20240307151941.pdf

Hegemon_WC_Federal_Com_702H_Dir_Plan_20240307151015.pdf

Hegemon_WC_Fed_Com_702H_Drill_Plan_20240307150942.pdf

C102_Hegemon_WC_Fed_Com_702H_20240307150924.pdf

Received by OCD: AND MANAGE AND EMORMIC FEDERAL Well Location: T26S / R29E / SEC 28 /

NWNW /

County or Parish/State:

Allottee or Tribe Name:

Page 2 of 30

COM

Well Number: 702H

Type of Well: CONVENTIONAL GAS

Unit or CA Name:

Lease Number: NMNM138837

Unit or CA Number:

US Well Number: 3001553923

Well Status: Approved Application for

Permit to Drill

Operator: MARATHON OIL

PERMIAN LLC

Conditions of Approval

Additional

HEGEMON_WC_FEDERAL_COM_702H___SUNDRY_COA_20240308122038.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: TERRI STATHEM Signed on: MAR 07, 2024 03:10 PM

Name: MARATHON OIL PERMIAN LLC Title: Regulatory Compliance Manager

Street Address: 990 TOWN & COUNTRY BLVD City: HOUSTON State: TX

Phone: (713) 296-2113

Email address: TSTATHEM@MARATHONOIL.COM

Field

Representative Name:

Street Address:

City: State: Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CODY LAYTON BLM POC Title: Assistant Field Manager Lands & Minerals

BLM POC Phone: 5752345959 BLM POC Email Address: clayton@blm.gov

Disposition: Approved Disposition Date: 03/25/2024

Signature: Cody R. Layton

Page 2 of 2

Form 3160-5 (June 2019)

UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

BUR	EAU OF LAND MANAGEMENT	5. Lease Serial No. NA	5. Lease Serial No. NMNM138837					
Do not use this t	IOTICES AND REPORTS ON Vitorm for proposals to drill or to Use Form 3160-3 (APD) for su	6. If Indian, Allottee or	Tribe Name					
SUBMIT IN	TRIPLICATE - Other instructions on pag	7. If Unit of CA/Agreer	ment, Name and/or No.					
1. Type of Well Oil Well Gas V	Vell Other		8. Well Name and No.	HEGEMON 21 WD FEDERAL/26H				
2. Name of Operator MARATHON OI	<u> </u>		9. API Well No. 30015	HEGEWON 21 WD FEDERAL/20H				
		(1 . 1 1 .)						
3a. Address 990 TOWN & COUNTR	Y BLVD, HOUSTON, TX (713) 296-21	(include area code) 13	10. Field and Pool or E PURPLE SAGE/BO					
4. Location of Well (Footage, Sec., T.,F SEC 28/T26S/R29E/NMP	C.,M., or Survey Description)		11. Country or Parish, S EDDY/NM	State				
12. CHE	CK THE APPROPRIATE BOX(ES) TO IN	DICATE NATURE OF N	OTICE, REPORT OR OTH	ER DATA				
TYPE OF SUBMISSION		TYPE OF	ACTION					
✓ Notice of Intent Subsequent Report		raulic Fracturing	Production (Start/Resume) Reclamation Recomplete	Water Shut-Off Well Integrity Other				
Final Abandonment Notice			Temporarily Abandon Water Disposal					
the Bond under which the work will completion of the involved operation completed. Final Abandonment No is ready for final inspection.) Marathon Oil Permian respect attached: Well Name change to: Hegem Change TVD: 9936' Cement variance request SHL & BHL changes: Approved: SHL: 675' FNL & 69 Proposed: SHL: 267' FNL & 69 Change to Casing Design: Chapproved Csg design: Surf, 13.375 set @ 370' Continued on page 3 additional	Marathon Oil Permian respectfully request approval for an APD change for the Hegemon 21 WD Fed #26H as shown below and on the attached: Well Name change to: Hegemon WC Federal Com #702H Change TVD: 9936' Cement variance request SHL & BHL changes: Approved: SHL: 675' FNL & 695' FWL, Sec. 28, BHL: 330' FNL& 1034' FWL, Sec. 21. Proposed: SHL: 267' FNL & 690' FWL, Sec 28, BHL: 330' FNL & 1320' FWL, Sec. 21 Change to Casing Design: Change from 4 string to 3 string design. Approved Csg design:							
TERRI STATHEM / Ph: (713) 296-	true and correct. Name (Printed/Typed) 2113	Regulatory Com	npliance Manager					
Signature (Electronic Submission	on)	Date	03/07/20	24				
	THE SPACE FOR FED	ERAL OR STATE	OFICE USE					
Approved by								
CODY LAYTON / Ph: (575) 234-59	959 / Approved	Assistant F	Field Manager Lands & D	03/25/2024 Pate				
	hed. Approval of this notice does not warran equitable title to those rights in the subject le duct operations thereon.		L					
								

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

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

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

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 St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Additional Remarks

Int I, 9.625" set @ 2700'
Int II, 7" set @ 10200'

Prod, 4.5" liner set @ 9900-15428'

Proposed casing design:

Surf, 13.375 set @ 553'

Int, 9.625" set @ 9183'

Prod, 5.5" set @ 14554'

Please see attached drill plan for cement design changes, C102, directional plan.

NO new disturbance request. Well pad approved 550' X 750 no change.

Location of Well

0. SHL: NWNW / 675 FNL / 695 FWL / TWSP: 26S / RANGE: 29E / SECTION: 28 / LAT: 32.0193089 / LONG: -103.9956928 (TVD: 0 feet, MD: 0 feet)
PPP: SWSW / 330 FSL / 1019 FWL / TWSP: 26S / RANGE: 29E / SECTION: 21 / LAT: 32.0220614 / LONG: -103.9946483 (TVD: 10688 feet, MD: 10836 feet)
BHL: NWNW / 330 FNL / 1034 FWL / TWSP: 26S / RANGE: 29E / SECTION: 21 / LAT: 32.0346186 / LONG: -103.9948927 (TVD: 10786 feet, MD: 15428 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

Hegemon WC Federal Com #702H – Sundry COA – All previous COAs still apply

S28 T26S R29E SHL: 267N 690W BHL: 330N 1320W

Marathon Oil Permian respectfully request approval for an APD change for the Hegemon 21 WD Fed #26H as shown below and on the attached:

Well Name change to: Hegemon WC Federal Com #702H

Change TVD: 9936' Cement variance request SHL & BHL changes:

Approved: SHL: 675' FNL & 695' FWL, Sec. 28, BHL: 330' FNL& 1034' FWL, Sec.

21.

Proposed: SHL: 267' FNL & 690' FWL, Sec 28, BHL: 330' FNL & 1320' FWL, Sec. 21

Change to Casing Design: Change from 4 string to 3 string design.

Approved Csg design:

Surf, 13.375 set @ 370'

Int I, 9.625" set @ 2700'

Int II, 7" set @ 10200'

Prod, 4.5" liner set @ 9900-15428'

Proposed casing design: Surf, 13.375 set @ 553' Int, 9.625" set @ 9183' Prod, 5.5" set @ 14554'

Please see attached drill plan for cement design changes, C102, directional plan. NO new disturbance request. Well pad approved 550' X 750 no change.

COA

H2S	• Yes	O No	
Potash	None	O Secretary	O R-111-P
Cave/Karst Potential	O Low	• Medium	O High
Cave/Karst Potential	O Critical		
Variance	O None	• Flex Hose	Other
Wellhead	O Conventional	Multibowl	OBoth
Wellhead Variance	O Diverter		
Other	☐4 String	☐ Capitan Reef	□WIPP
Other	☐ Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Cementing	☐ Contingency	☐ EchoMeter	☑ Primary Cement

	Cement Squeeze		Squeeze
Special Requirements	☐ Water Disposal	☑ COM	□ Unit
Special Requirements	☐ Batch Sundry		
Special Requirements	☐ Break Testing	☐ Offline	☐ Casing
Variance		Cementing	Clearance

A. CASING

Alternate Casing Design:

- 1. The 13-3/8 inch surface casing shall be set at approximately 553 feet (a minimum of 70 feet (Eddy 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 9183 feet. 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 (Bradenhead):

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

- a. First stage: Operator will cement with intent to reach the top of the **Brushy** Canyon at 4975'
- b. Second stage:

• 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 **14,554** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

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)
 - If well located in Eddy County
 EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
 BLM_NM_CFO_DrillingNotifications@BLM.GOV (575) 361-2822
 - If well located in Lea County 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
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd 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. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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. <u>Wait on cement (WOC) for Potash Areas:</u> 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, 2) until cement has been in place at least <u>24</u>

- hours. WOC time will be recorded in the driller's log. The casing intergrity 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-P 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 part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 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:
 - 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. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR part 3170 Subpart 3172 must be followed.
 - e. 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.
 - a. 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).
 - b. 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.)
 - c. 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 part 3170 Subpart 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 water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- d. 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.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. 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 part 3170 Subpart 3172.

C. DRILLING MUD

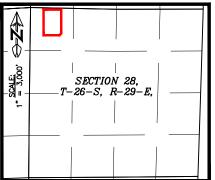
Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

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.

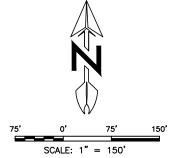
KPI 3/8/2024

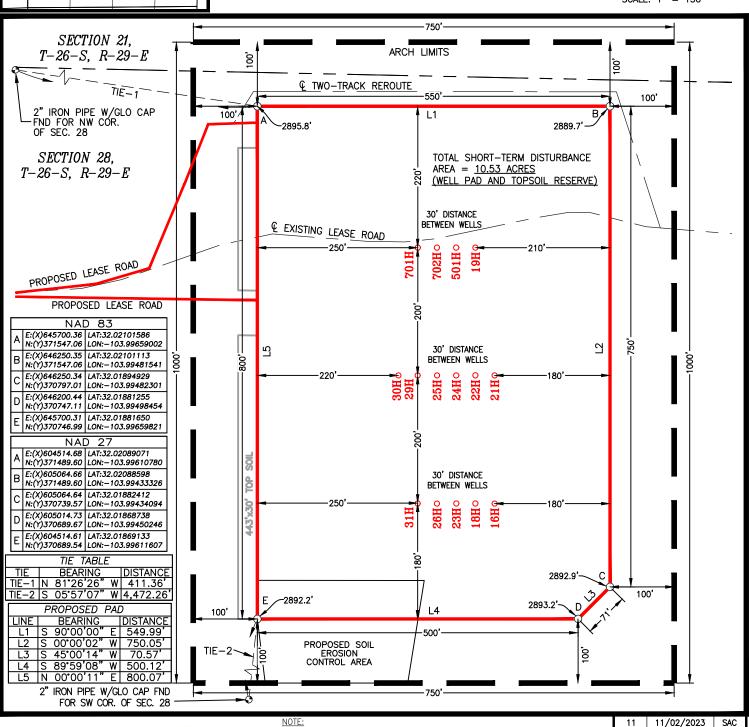


WELL PAD LOCATION PLAT

HEGEMON 21 FED
SEC. 28 TWP. 26-S RGE. 29-E
SURVEY: N.M.P.M.
COUNTY: EDDY

OPERATOR: MARATHON OIL PERMIAN LLC U.S.G.S. TOPOGRAPHIC MAP: ROSS RANCH, N.M.





DECEMBER 1, 2023

Lood P. SHOP

21653

Released to Imaging: 3/25/2024 4:36:00 PM

THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

C-102 INCLUDED IN THIS SUBMITTAL.

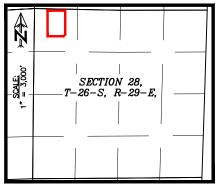
I, LLOYD P. SHORT, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21653, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FUTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

SHEET 2 OF 5

DATE

BY

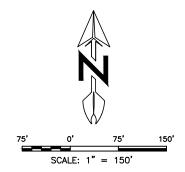
REV.

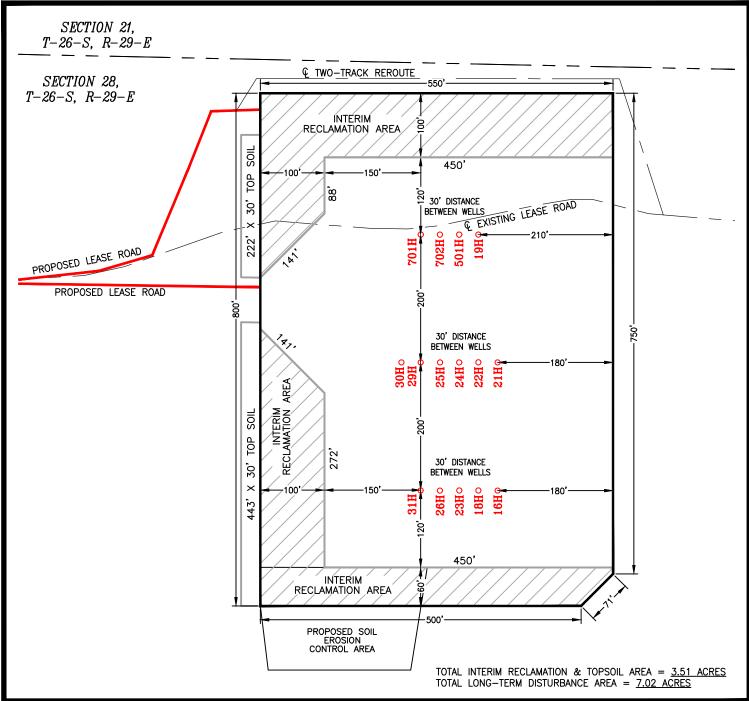


WELL PAD LOCATION PLAT

HEGEMON 21 FED SEC. 28 TWP. 26-S RGE. 29-E SURVEY: N.M.P.M. COUNTY: EDDY

OPERATOR: MARATHON OIL PERMIAN LLC U.S.G.S. TOPOGRAPHIC MAP: ROSS RANCH, N.M.





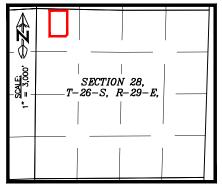
DECEMBER 1, 2023 Released to Imaging: 3/25/2024 4:36:00 PM THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA

PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY, BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

I, LLOYD P. SHORT, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21653, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FUTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

11/02/2023 REV. DATE BY

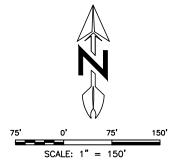
SHEET 3 OF 5

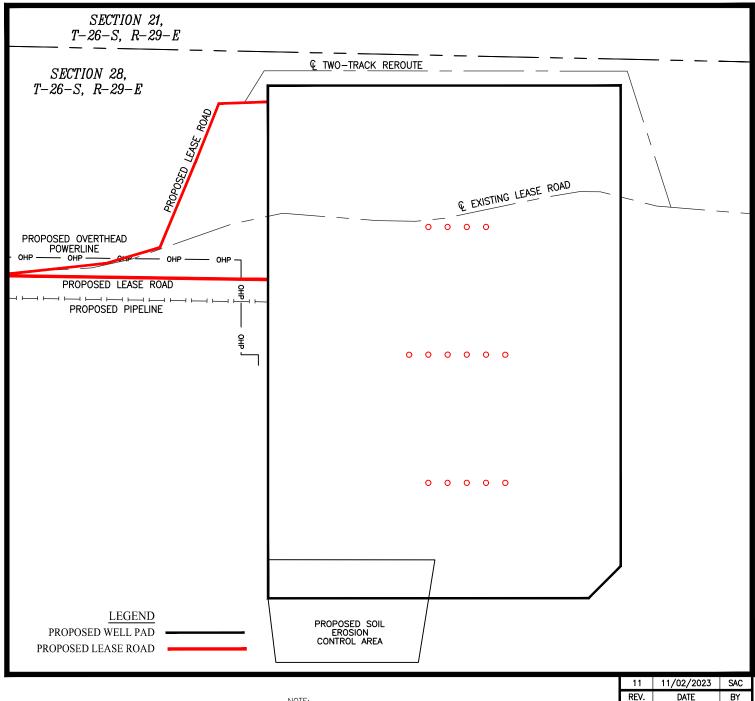


RIG LAYOUT

HEGEMON 21 FED SEC. 28 TWP. 26-S RGE. 29-E SURVEY: N.M.P.M. COUNTY: EDDY

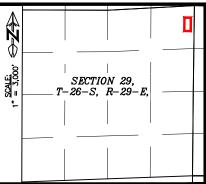
OPERATOR: MARATHON OIL PERMIAN LLC U.S.G.S. TOPOGRAPHIC MAP: ROSS RANCH, N.M.





 $\underline{\text{NOTE:}}$ this is not a boundary survey, apparent property corners and property lines are shown for information only. Boundary data shown is from state of New Mexico oil conservation division form C-102 included in this submittal.

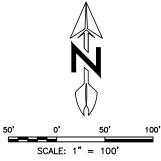
SHEET 4 OF 5

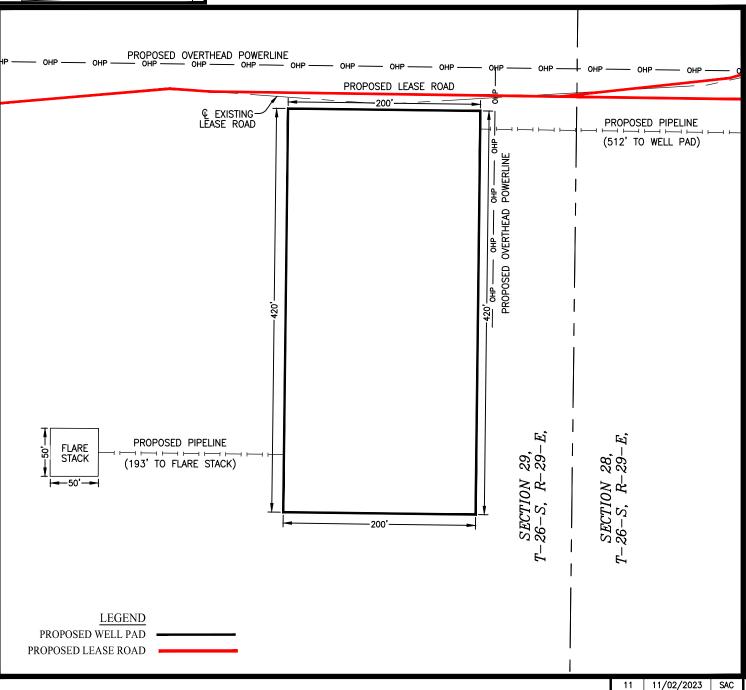


FACILITY LAYOUT

HEGEMON 21 FED SEC. 29 TWP. 26-S RGE. 29-E SURVEY: N.M.P.M. COUNTY: EDDY

OPERATOR: MARATHON OIL PERMIAN LLC U.S.G.S. TOPOGRAPHIC MAP: ROSS RANCH, N.M.



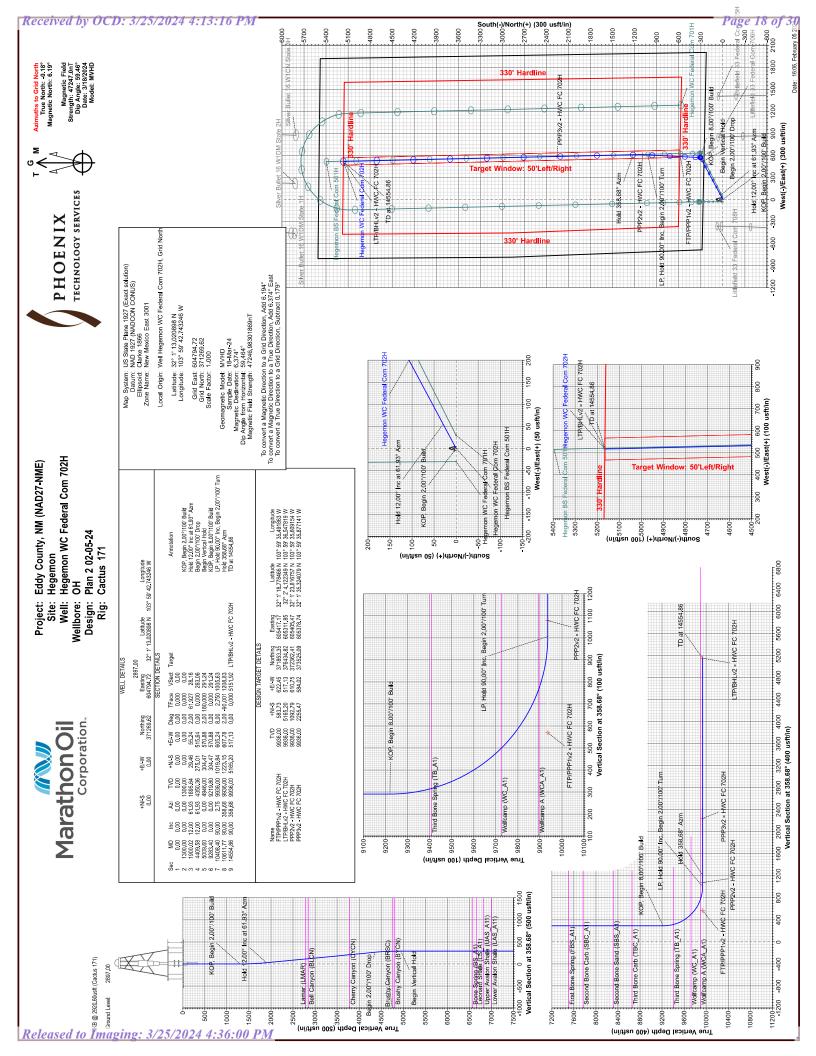


 $\frac{\text{NOTE:}}{\text{THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.$

SHEET 5 OF 5

DATE

REV.





Marathon Oil Permian LLC

Eddy County, NM (NAD27-NME)
Hegemon
Hegemon WC Federal Com 702H

OH

Plan: Plan 2 02-05-24

Standard Planning Report

05 February, 2024







Database: USAEDMDB

Company: Marathon Oil Permian LLC
Project: Eddy County, NM (NAD27-NME)

Site:

Hegemon

Well: Hegemon WC Federal Com 702H

Wellbore: OH

Design: Plan 2 02-05-24

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Hegemon WC Federal Com 702H

RKB @ 2920.60usft (Cactus 171) RKB @ 2920.60usft (Cactus 171)

Grid

Minimum Curvature

Project Eddy County, NM (NAD27-NME)

Map System: Geo Datum: US State Plane 1927 (Exact solution) NAD 1927 (NADCON CONUS)

Map Zone: New Mexico East 3001

System Datum:

Mean Sea Level

Site Hegemon

 Site Position:
 Northing:
 371,269.61 usft
 Latitude:
 32° 1' 13.021727 N

 From:
 Map
 Easting:
 604,764.75 usft
 Longitude:
 103° 59' 43.091362 W

Position Uncertainty: 0.00 usft Slot Radius: 13-3/16 "

Well Hegemon WC Federal Com 702H

 Well Position
 +N/-S
 0.00 usft
 Northing:
 371,269.62 usft
 Latitude:
 32° 1′ 13.020898 N

 +E/-W
 0.00 usft
 Easting:
 604,794.72 usft
 Longitude:
 103° 59′ 42.743246 W

 +E/-W
 0.00 usft
 Easting:
 604,794.72 usft
 Longitude:
 103° 59' 42.743246 W

 Position Uncertainty
 0.00 usft
 Wellhead Elevation:
 usft
 Ground Level:
 2,897.00 usft

Grid Convergence: 0.179 °

Wellbore OH

 Magnetics
 Model Name
 Sample Date
 Declination (°)
 Dip Angle (°)
 Field Strength (nT)

 MVHD
 3/18/24
 6.374
 59.464
 47,246,98301870

Design Plan 2 02-05-24

Audit Notes:

Version:Phase:PLANTie On Depth:0.00

 Vertical Section:
 Depth From (TVD) (usft)
 +N/-S (usft)
 +E/-W (usft)
 Direction (°)

 0.00
 0.00
 0.00
 358.68

Plan Survey Tool Program Date 2/05/24

Depth From Depth To

(usft) (usft) Survey (Wellbore) Tool Name Remarks

1 0.00 14,554.86 Plan 2 02-05-24 (OH) MWD+IFR1+MS

OWSG Rev. 2 MWD + IFR1



Project:

PhoenixPlanning Report



Database: USAEDMDB Company: Marathon Oil

Marathon Oil Permian LLC Eddy County, NM (NAD27-NME)

Site: Hegemon

Well: Hegemon WC Federal Com 702H

Wellbore: OH

Design: Plan 2 02-05-24

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Hegemon WC Federal Com 702H

RKB @ 2920.60usft (Cactus 171) RKB @ 2920.60usft (Cactus 171)

Grid

Plan Section	ns									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,300.0	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,900.0	2 12.00	61.93	1,895.64	29.46	55.24	2.00	2.00	0.00	61.927	
4,409.5	8 12.00	61.93	4,350.36	275.01	515.64	0.00	0.00	0.00	0.000	
5,009.6	0.00	0.00	4,946.00	304.47	570.88	2.00	-2.00	0.00	180.000	
9,283.4	0.00	0.00	9,219.80	304.47	570.88	0.00	0.00	0.00	0.000	
10,408.4	0 90.00	2.75	9,936.00	1,019.84	605.24	8.00	8.00	0.00	2.750	
10,611.7	7 90.00	358.68	9,936.00	1,223.15	607.78	2.00	0.00	-2.00	-90.001	
14,554.8	6 90.00	358.68	9,936.00	5,165.20	517.13	0.00	0.00	0.00	0.000 L	TP/BHLv2 - HWC



Project:

PhoenixPlanning Report



Database: USAEDMDB Company: Marathon Oil

Marathon Oil Permian LLC Eddy County, NM (NAD27-NME)

Site: Hegemon

Well: Hegemon WC Federal Com 702H

Wellbore: OH

Design: Plan 2 02-05-24

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Hegemon WC Federal Com 702H

RKB @ 2920.60usft (Cactus 171) RKB @ 2920.60usft (Cactus 171)

Grid

esign:	•	Plan 2 02-05	-24							
Planne	d 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 1,300.00 KOP, Begi r	0.00 0.00 1 2.00°/100' B u	0.00 0.00 ii l d	0.00 1,300.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
	1,400.00 1,500.00 1,600.00	2.00 4.00 6.00	61.93 61.93 61.93	1,399.98 1,499.84 1,599.45	0.82 3.28 7.39	1.54 6.16 13.85	0.79 3.14 7.06	2.00 2.00 2.00	2.00 2.00 2.00	0.00 0.00 0.00
	1,700.00 1,800.00 1,900.00 1,900.02	8.00 10.00 12.00 12.00	61.93 61.93 61.93 61.93	1,698.70 1,797.47 1,895.62 1,895.64	13.12 20.48 29.46 29.46	24.60 38.40 55.24 55.24	12.55 19.59 28.18 28.18	2.00 2.00 2.00 2.00	2.00 2.00 2.00 2.00	0.00 0.00 0.00 0.00
	Hold 12.00	° Inc at 61.93°								
	2,000.00 2,100.00	12.00 12.00	61.93 61.93	1,993.44 2.091.25	39.24 49.03	73.58 91.93	37.54 46.90	0.00	0.00 0.00	0.00 0.00
	2,100.00 2,200.00 2,300.00 2,400.00 2,500.00	12.00 12.00 12.00 12.00 12.00	61.93 61.93 61.93 61.93	2,189.07 2,286.88 2,384.70 2,482.51	58.81 68.60 78.38 88.17	110.27 128.62 146.97 165.31	56.26 65.62 74.98 84.34	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
	2,600.00 2,700.00 2,800.00 2,814.97	12.00 12.00 12.00 12.00	61.93 61.93 61.93 61.93	2,580.33 2,678.14 2,775.95 2,790.60	97.95 107.74 117.52 118.98	183.66 202.00 220.35 223.10	93.69 103.05 112.41 113.81	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
	Lamar (LM. 2,872.22	AR) 12.00	64.02	2 946 60	124.59	222.60	110 17	0.00	0.00	0.00
	Bell Canyo		61.93	2,846.60	124.59	233.60	119.17	0.00	0.00	0.00
	2,900.00 3,000.00 3,100.00 3,200.00 3,300.00	12.00 12.00 12.00 12.00 12.00	61.93 61.93 61.93 61.93	2,873.77 2,971.58 3,069.40 3,167.21 3,265.03	127.30 137.09 146.87 156.66 166.44	238.70 257.04 275.39 293.73 312.08	121.77 131.13 140.49 149.85 159.21	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	3,400.00 3,500.00 3,600.00 3,700.00 3,800.00	12.00 12.00 12.00 12.00 12.00	61.93 61.93 61.93 61.93	3,362.84 3,460.66 3,558.47 3,656.29 3,754.10	176.23 186.01 195.80 205.58 215.36	330.42 348.77 367.12 385.46 403.81	168.57 177.93 187.29 196.65 206.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	3,834.25	12.00	61.93	3,787.60	218.72	410.09	209.21	0.00	0.00	0.00
	3,900.00 4,000.00 4,100.00 4,200.00	12.00 12.00 12.00 12.00 12.00	61.93 61.93 61.93	3,851.92 3,949.73 4,047.54 4,145.36	225.15 234.93 244.72 254.50	422.15 440.50 458.84 477.19	215.36 224.72 234.08 243.44	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
	4,300.00 4,400.00 4,409.58	12.00 12.00 12.00	61.93 61.93 61.93	4,243.17 4,340.99 4,350.36	264.29 274.07 275.01	495.54 513.88 515.64	252.80 262.16 263.06	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	Begin 2.00° 4.500.00		64.02	4 420 00	202.20	E20.00	270.00	2.00	2.00	0.00
	4,500.00 4,600.00	10.19 8.19	61.93 61.93	4,439.09 4,537.80	283.20 290.71	530.99 545.09	270.89 278.08	2.00 2.00	-2.00 -2.00	0.00 0.00
	4,700.00 4,800.00 4,819.06	6.19 4.19 3.81	61.93 61.93 61.93	4,637.00 4,736.59 4,755.60	296.61 300.86 301.49	556.13 564.12 565.29	283.72 287.79 288.39	2.00 2.00 2.00	-2.00 -2.00 -2.00	0.00 0.00 0.00
		nyon (BRSC)								<u>.</u>
		2.81 nyon (BYCN)	61.93	4,805.60	302.85	567.84	289.69	2.00	-2.00	0.00
	4,900.00	2.19	61.93	4,836.43	303.48	569.03	290.29	2.00	-2.00	0.00





Database: Company: Project:

Site:

USAEDMDB

Marathon Oil Permian LLC Eddy County, NM (NAD27-NME)

Hegemon

Well: Wellbore:

Hegemon WC Federal Com 702H

ОН

Design: Plan 2 02-05-24

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Hegemon WC Federal Com 702H

RKB @ 2920.60usft (Cactus 171)

RKB @ 2920.60usft (Cactus 171)

Desigi	n:	Plan 2 02-05	-24							
Plann	ed 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)
	5,000.00 5,009.60	0.19 0.00	61.93 0.00	4,936.40 4,946.00	304.46 304.47	570.87 570.88	291.23 291.24	2.00 2.00	-2.00 -2.00	0.00 0.00
	Begin Verti 6,629.20 Bone Sprin	0.00	0.00	6,565.60	304.47	570.88	291.24	0.00	0.00	0.00
	6,731.20	0.00 nale (LS A1)	0.00	6,667.60	304.47	570.88	291.24	0.00	0.00	0.00
	6,891.20	0.00 on Shale (UA	0.00 S_A11)	6,827.60	304.47	570.88	291.24	0.00	0.00	0.00
	7,064.20 Lower Aval	0.00 on Shale (LAS	0.00 S A11)	7,000.60	304.47	570.88	291.24	0.00	0.00	0.00
	7,569.20	0.00 Spring (FBS	0.00	7,505.60	304.47	570.88	291.24	0.00	0.00	0.00
	7,831.20	0.00 ne Carb (SBC	0.00 _ A1)	7,767.60	304.47	570.88	291.24	0.00	0.00	0.00
		0.00 ne Sand (SBS		8,313.60	304.47	570.88	291.24	0.00	0.00	0.00
	8,718.20 Third Bone	0.00 Carb (TBC_A	0.00	8,654.60	304.47	570.88	291.24	0.00	0.00	0.00
		0.00 8.00°/100' B u		9,219.80	304.47	570.88	291.24	0.00	0.00	0.00
	9,300.00 9,400.00 9,474.46	1.33 9.33 15.28	2.75 2.75 2.75	9,236.40 9,335.89 9,408.60	304.66 313.93 329.77	570.89 571.33 572.10	291.43 300.69 316.51	8.00 8.00 8.00	8.00 8.00 8.00	0.00 0.00 0.00
		Spring (TB_A	•	9,433.12	336.94	572.44	323.66	8.00	8.00	0.00
	9,500.00 9,600.00 9,700.00 9,800.00 9,845.01	17.33 25.33 33.33 41.33 44.93	2.75 2.75 2.75 2.75 2.75	9,526.19 9,613.30 9,692.76 9,725.60	373.24 422.12 482.64 513.37	572.44 574.18 576.53 579.44 580.91	359.91 408.73 469.16 499.85	8.00 8.00 8.00 8.00 8.00	8.00 8.00 8.00 8.00 8.00	0.00 0.00 0.00 0.00 0.00
	Wolfcamp			. =		500.05	= 10.01			
	9,900.00 10,000.00 10,100.00 10,163.70	49.33 57.33 65.33 70.42	2.75 2.75 2.75 2.75	9,763.00 9,822.68 9,870.62 9,894.60	553.62 633.67 721.23 780.15	582.85 586.69 590.90 593.73	540.04 619.98 707.43 766.27	8.00 8.00 8.00 8.00	8.00 8.00 8.00 8.00	0.00 0.00 0.00 0.00
	Wolfcamp / 10,200.00 10,300.00	73.33 81.33	2.75 2.75	9,905.89 9,927.81	814.61 911.98	595.38 600.06	800.68 897.92	8.00 8.00	8.00 8.00	0.00 0.00
	10,400.00 10,408.40	89.33 90.00	2.75 2.75	9,935.95 9,936.00	1,011.45 1,019.84	604.84 605.24	997.25 1,005.63	8.00 8.00	8.00 8.00	0.00 0.00
		.00° Inc, Begi			4 444 00	000 4=	4 007 00	2.25	2.25	0.00
	10,500.00 10,600.00 10,611.77	90.00 90.00 90.00	0.92 358.92 358.68	9,936.00 9,936.00 9,936.00	1,111.39 1,211.39 1,223.15	608.17 608.03 607.78	1,097.09 1,197.06 1,208.83	2.00 2.00 2.00	0.00 0.00 0.00	-2.00 -2.00 -2.00
	Hold 358.6									
	10,700.00 10,800.00 10,900.00 11,000.00 11,100.00	90.00 90.00 90.00 90.00 90.00	358.68 358.68 358.68 358.68 358.68	9,936.00 9,936.00 9,936.00 9,936.00 9,936.00	1,311.36 1,411.34 1,511.31 1,611.28 1,711.26	605.76 603.46 601.16 598.86 596.56	1,297.06 1,397.06 1,497.06 1,597.06 1,697.06	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	11,200.00 11,300.00	90.00 90.00	358.68 358.68	9,936.00 9,936.00	1,811.23 1,911.20	594.26 591.96	1,797.06 1,897.06	0.00 0.00	0.00 0.00	0.00 0.00





Database: Company: Project:

Site:

USAEDMDB

Marathon Oil Permian LLC Eddy County, NM (NAD27-NME)

Hegemon

Well: Hegemon WC Federal Com 702H

Wellbore: OH

Design: Plan 2 02-05-24

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Hegemon WC Federal Com 702H

RKB @ 2920.60usft (Cactus 171) RKB @ 2920.60usft (Cactus 171)

Grid

esign:	Plan 2 02-05								
lanned 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)
11,400.00	90.00	358.68	9,936.00	2,011.18	589.66	1,997.06	0.00	0.00	0.00
11,500.00	90.00	358.68	9,936.00	2,111.15	587.36	2,097.06	0.00	0.00	0.00
11,600.00	90.00	358.68	9,936.00	2,211.12	585.06	2,197.06	0.00	0.00	0.00
11,700.00	90.00	358.68	9,936.00	2,311.10	582.76	2,297.06	0.00	0.00	0.00
11,800.00	90.00	358.68	9,936.00	2,411.07	580.47	2,397.06	0.00	0.00	0.00
11,900.00	90.00	358.68	9,936.00	2,511.05	578.17	2,497.06	0.00	0.00	0.00
12,000.00	90.00	358.68	9,936.00	2,611.02	575.87	2,597.06	0.00	0.00	0.00
12,100.00	90.00	358.68	9,936.00	2,710.99	573.57	2,697.06	0.00	0.00	0.00
12,200.00	90.00	358.68	9,936.00	2,810.97	571.27	2,797.06	0.00	0.00	0.00
12,300.00	90.00	358.68	9,936.00	2,910.94	568.97	2,897.06	0.00	0.00	0.00
12,400.00	90.00	358.68	9,936.00	3,010.91	566.67	2,997.06	0.00	0.00	0.00
12,500.00	90.00	358.68	9,936.00	3,110.89	564.37	3,097.06	0.00	0.00	0.00
12,600.00	90.00	358.68	9,936.00	3,210.86	562.07	3,197.06	0.00	0.00	0.00
12,700.00	90.00	358.68	9,936.00	3,310.83	559.77	3,297.06	0.00	0.00	0.00
12,800.00	90.00	358.68	9,936.00	3,410.81	557.48	3,397.06	0.00	0.00	0.00
12,900.00	90.00	358.68	9,936.00	3,510.78	555.18	3,497.06	0.00	0.00	0.00
13,000.00	90.00	358.68	9,936.00	3,610.75	552.88	3,597.06	0.00	0.00	0.00
13,100.00	90.00	358.68	9,936.00	3,710.73	550.58	3,697.06	0.00	0.00	0.00
13,200.00	90.00	358.68	9,936.00	3,810.70	548.28	3,797.06	0.00	0.00	0.00
13,300.00	90.00	358.68	9,936.00	3,910.68	545.98	3,897.06	0.00	0.00	0.00
13,400.00	90.00	358.68	9,936.00	4,010.65	543.68	3,997.06	0.00	0.00	0.00
13,500.00	90.00	358.68	9,936.00	4,110.62	541.38	4,097.06	0.00	0.00	0.00
13,600.00	90.00	358.68	9,936.00	4,210.60	539.08	4,197.06	0.00	0.00	0.00
13,700.00	90.00	358.68	9,936.00	4,310.57	536.78	4,297.06	0.00	0.00	0.00
13,800.00	90.00	358.68	9,936.00	4,410.54	534.48	4,397.06	0.00	0.00	0.00
13,900.00	90.00	358.68	9,936.00	4,510.52	532.19	4,497.06	0.00	0.00	0.00
14,000.00	90.00	358.68	9,936.00	4,610.49	529.89	4,597.06	0.00	0.00	0.00
14,100.00	90.00	358.68	9,936.00	4,710.46	527.59	4,697.06	0.00	0.00	0.00
14,200.00	90.00	358.68	9,936.00	4,810.44	525.29	4,797.06	0.00	0.00	0.00
14,300.00	90.00	358.68	9,936.00	4,910.41	522.99	4,897.06	0.00	0.00	0.00
14,400.00	90.00	358.68	9,936.00	5,010.38	520.69	4,997.06	0.00	0.00	0.00
14,500.00	90.00	358.68	9,936.00	5,110.36	518.39	5,097.06	0.00	0.00	0.00
14,554.86	90.00	358.68	9,936.00	5,165.20	517.13	5,151.92	0.00	0.00	0.00
TD at 14554			,	,		,			





USAEDMDB Database:

Company: Marathon Oil Permian LLC Project: Eddy County, NM (NAD27-NME)

Site: Hegemon

Well: Hegemon WC Federal Com 702H

Wellbore: OH

Design: Plan 2 02-05-24 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Hegemon WC Federal Com 702H

RKB @ 2920.60usft (Cactus 171) RKB @ 2920.60usft (Cactus 171)

Minimum Curvature

Design	

т.	 -4	NI.	am	_

- hit/miss target Dip Angle Dip Dir. **TVD** +N/-S +E/-W **Northing Easting** - Shape (usft) (usft) (usft) (usft) (usft) Latitude Longitude

PPP2v2 - HWC FC 70 0.00 372,362.41 0.00 9,936.00 1,092.79 610.75 605,405.47 32° 1' 23.816757 N 3° 59' 35.609154 W - plan misses target center by 2.93usft at 10481.49usft MD (9936.00 TVD, 1092.88 N, 607.82 E)

- Point

LTP/BHLv2 - HWC FC 0.00 358.68 9,936.00 5,165.20 517.13 376,434.82 605,311.85 32° 2' 4.122349 N 3° 59' 36.547820 W

- plan hits target center

- Rectangle (sides W100.00 H4,582.68 D0.00)

FTP/PPP1v2 - HWC F 0.00 0.00 9,936.00 583.73 622.45 371,853.35 605,417.17 32° 1' 18.778466 N 3° 59' 35.491863 W

- plan misses target center by 127.62usft at 10012.12usft MD (9829.14 TVD, 643.91 N, 587.18 E)
- Point

PPP3v2 - HWC FC 70 0.00 0.00 9,936.00 2,255.47 584.02 373,525.09 605,378.74 32° 1' 35.324080 N 3° 59' 35.877142 W

- plan misses target center by 0.02usft at 11644.36usft MD (9936.00 TVD, 2255.47 N, 584.04 E)

- Point

Formations							
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	2,814.97	2,790.60	Lamar (LMAR)		0.000	358.68	
	2,872.22	2,846.60	Bell Canyon (BLCN)		0.000	358.68	
	3,834.25	3,787.60	Cherry Canyon (CYCN)		0.000	358.68	
	4,819.06	4,755.60	Brushy Canyon (BRSC)		0.000	358.68	
	4,869.14	4,805.60	Brushy Canyon (BYCN)		0.000	358.68	
	6,629.20	6,565.60	Bone Spring (BS_A1)		0.000	358.68	
	6,731.20	6,667.60	Leonard Shale (LS_A1)		0.000	358.68	
	6,891.20	6,827.60	Upper Avalon Shale (UAS_A11)		0.000	358.68	
	7,064.20	7,000.60	Lower Avalon Shale (LAS_A11)		0.000	358.68	
	7,569.20	7,505.60	First Bone Spring (FBS_A1)		0.000	358.68	
	7,831.20	7,767.60	Second Bone Carb (SBC_A1)		0.000	358.68	
	8,377.20	8,313.60	Second Bone Sand (SBS_A1)		0.000	358.68	
	8,718.20	8,654.60	Third Bone Carb (TBC_A1)		0.000	358.68	
	9,474.46	9,408.60	Third Bone Spring (TB_A1)		0.000	358.68	
	9,845.01	9,725.60	Wolfcamp (WC_A1)		0.000	358.68	
	10,163.70	9,894.60	Wolfcamp A (WCA_A1)		0.000	358.68	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coor +N/-S (usft)	dinates +E/-W (usft)	Comment
1,300.00	1,300.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,900.02	1,895.64	29.46	55.24	Hold 12.00° Inc at 61.93° Azm
4,409.58	4,350.36	275.01	515.64	Begin 2.00°/100' Drop
5,009.60	4,946.00	304.47	570.88	Begin Vertical Hold
9,283.40	9,219.80	304.47	570.88	KOP, Begin 8.00°/100' Build
10,408.40	9,936.00	1,019.84	605.24	LP, Hold 90.00° Inc, Begin 2.00°/100' Turn
10,611.77	9,936.00	1,223.15	607.78	Hold 358.68° Azm
14,554.86	9,936.00	5,165.20	517.13	TD at 14554.86

MARATHON OIL PERMIAN, LLC. DRILLING AND OPERATIONS PLAN



WELL NAME & NUMBER:

HEGEMON WC FEDERAL COM 702H

LOCATION: SECTION 28 TOWNSHIP 26S RANGE 29E

EDDY COUNTY, NEW MEXICO

Section 1:

GEOLOGICAL FORMATIONS

Name of Surface Formation: Permian Elevation: 2897 feet

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	456	483	2441	Anhydrite	Brine	No
Salado	822	849	2075	Salt/Anhydrite	Brine	No
Castile	1069	1096	1828	Salt/Anhydrite	Brine	No
Base of Salt (BX)	2626	2653	271	Salt/Anhydrite	Brine	No
Lamar	2814	2841	83	Sandstone/Shale	None	No
Bell Canyon	2856	2883	41	Sandstone	Oil	No
Cherry Canyon	3934	3961	-1037	Sandstone	Oil	No
Brushy Canyon	4975	5002	-2078	Sandstone	Oil	No
Bone Spring Lime	6589	6616	-3692	Limestone	None	No
Upper Avalon Shale	6874	6901	-3977	Shale	Oil	Yes
1st Bone Spring Sand	7488	7515	-4591	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	7771	7798	-4874	Limestone/Shale	None	No
2nd Bone Spring Sand	8034	8061	-5137	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	8669	8696	-5772	Limestone	Oil	No
3rd Bone Spring Sand	9365	9392	-6468	Sandstone	Oil	Yes
Wolfcamp	9716	9743	-6819	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	9854	9881	-6957	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	10191	10218	-7294	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp C	10504	10531	-7607	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp D	11028	11055	-8131	Sandstone/Shale/Carbonates	Natural Gas / Oil	No

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.

Safety Factors will Meet or Exceed

Marathon Oil Permian LLC. Drilling & Operations Plan - Page 2 of 3

CASING PROGRAM Section 3: Weight (lbs/ft) Bottom Set MD Bottom Set TVD Joint SF Type Body SF Type Joint Type String Type Collapse SF Casing Size Bottom Set Hole Size Top Set Top Set TVD Top Set MSL **Burst SF** SF SF Grade MD MSL Joint Body Surface 17.5 13.375 0 553 0 526 2897 2371 54.5 J55 BTC 5.22 1.81 BUOY 4.52 BUOY 4.52 Intermediate 12.25 9.625 0 9183 0 9119 2897 -6222 40 P110HC втс 1.20 1.42 BUOY 2.44 BUOY 2.44 Production 0 0 9936 2897 -7039 23 P110HC TLW 2.53 BUOY BUOY 2.22 14554 2.22

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

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	Тор МБ	Bottom MD	Quantity (sks)	Yield (ft³/sks)	Density (ppg)	Slurry Volume (ft³)	Excess (%)	Cement Type	Additives
Surface	Lead	0	403	188	2.12	12.5	399	25	Class C	Extender,Accelerator,LCM
Surface	Tail	403	553	99	1.32	14.8	130	25	Class C	Accelerator
Intermediate	Lead	0	8683	1575	2.18	12.4	3434	25	Class C	Extender,Accelerator,LCM
Intermediate	Tail	8683	9183	147	1.33	14.8	196	25	Class C	Retarder
Production	Tail	8883	14554	1106	1.68	13	1859	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
 Plugging Procedure for Pilot Hole:
 N/A

Pilot Hole Depth: N/A KOP Depth: N/A

Plug Top	Plug Bottom	Excess (%)	Quantity (sx)	Density (ppg)	Yield (ft3/sks)	Water gal/sk	Slurry Description and Cement Type

Marathon Oil Permian LLC. Drilling & Operations Plan - Page 3 of 4

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	553	Water Based Mud	8.4	8.8
553	9183	Brine or Oil Based Mud	9.2	10.2
9183	14554	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:

None

Section 7:	ANTICIPATED PRESSUR
------------	---------------------

Anticipated Bottom Hole Pressure:	6458	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.

District IV

1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 <u>District II</u> 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

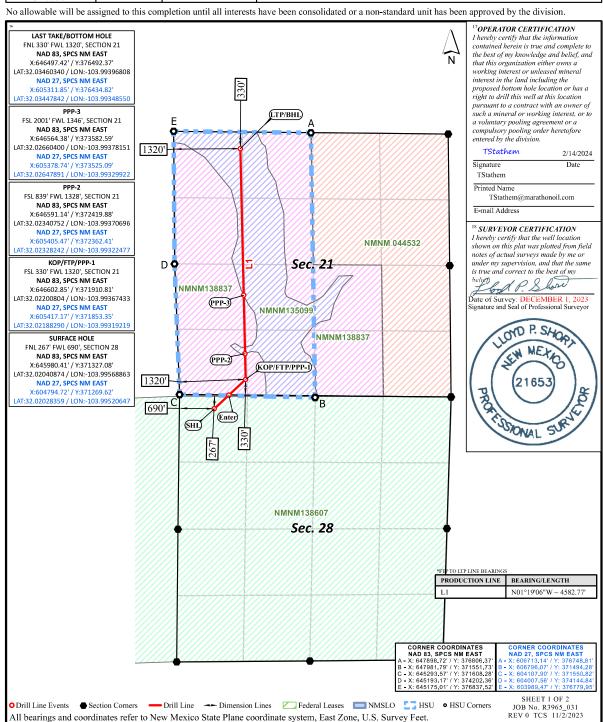
¹ API Number	² Pool Code	3 Pool Name			
30-015-53923	98220	98220 PURPLE SAGE; WOLFCA			
4 Property Code		Property Name	6 Well Number		
334191	HEGEMON	WC FEDERAL COM	702H		
7 OGRID No.		Operator Name	9 Elevation		
372098	MARATHON	NOIL PERMIAN LLC	2897'		

¹⁰ Surface Location

	UL or lot no. D	Section 28	Township 26S	Range 29E	Lot Idn	Feet from the 267'	North/South line NORTH	Feet from the 690'	East/West line WEST	EDDY
11 Bottom Hole Location If Different From Surface										

Bottom Hole Location If Different From Surface

UL or lot no.	Section 21	Township 26S	Range 29E	Lot Idn	Feet from the 330'	North/South line NORTH	Feet from the 1320'	East/West line WEST	EDDY
¹² Dedicated Acres 320.00	¹³ Jo	int or Infill	14 Cons	olidation Code	15 Order No.				



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

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 326570

CONDITIONS

Operator:	OGRID:
MARATHON OIL PERMIAN LLC	372098
990 Town & Country Blvd.	Action Number:
Houston, TX 77024	326570
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By		Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	3/25/2024