Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No. NMNM112275

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No. QUEENIE 15-10 FEDERAL COM/2H

2. Name of Operator MARATHON OIL PERMIAN LLC

9. API Well No.

3a. Address 990 TOWN & COUNTRY BLVD, HOUSTON, TX

3b. Phone No. *(include area code)* (713) 296-2113

10. Field and Pool or Exploratory Area SALT LAKE/Bone Spring

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SEC 22/T20S/R32E/NMP

11. Country or Parish, State LEA/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

API #: 30-025-52325 APD ID: 10400091503

Marathon Oil Permian respectfully requests approval to change the BHL, Well Name, and Drill plan for the Queenie Federal Com #2H as follows:

New Well Name: Queenie Federal Com #504H

Approved BHL: 100 FNL & 661 FEL, Sec. 10, 20S, 32E
Proposed BHL: 100 FNL & 330 FEL, Sec. 10, 20S, 32E

Casing & Cement Design Change:
Surface and Intermediate 1 casing have no change from previously approved
Intermediate 2 Casing:

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* TERRI STATHEM / Ph: (713) 296-2113

Title Regulatory Compliance Manager

Signature (Electronic Submission)

Date 12/22/2023

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by ZOTA M STEVENS / Ph: (575) 234-5998 / Approved

Title Petroleum Engineer

Date 12/22/2023

Conditions of approval, if any, are attached. Approval of this notice 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.

Office CARLSBAD

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)

Well Name: QUEENIE FEDERAL COM	**Well Location:** T20S / R32E / SEC 22 / NENE /	**County or Parish/State:**
Well Number: 504H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM112275	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 3002552325	**Well Status:** Approved Application for Permit to Drill	**Operator:** MARATHON OIL PERMIAN LLC

Notice of Intent

Sundry ID: 2767046

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 12/20/2023

Time Sundry Submitted: 08:21

Date proposed operation will begin: 12/26/2023

Procedure Description: API #: 30-025-52325 APD ID: 10400091503 Marathon Oil Permian respectfully requests approval to change the BHL, Well Name, and Drill plan for the Queenie Federal Com #2H as follows: New Well Name: Queenie Federal Com #504H Approved BHL: 100' FNL & 661' FEL, Sec. 10, 20S, 32E Proposed BHL: 100' FNL & 330' FEL, Sec. 10, 20S, 32E Casing & Cement Design Change: Surface and Intermediate 1 casing have no change from previously approved Intermediate 2 Casing: Approved: 8.75" hole, 7.625", 29.7#, P110, FM3 casing set @ 9290' Lead: 441 Class C, 114 Class H Proposed: 8.75" hole, 7.625", 29.7#, P110, FM3 casing set @ 8674' Lead: 260 sx Class H, Tail 45 sx Class H Production Casing: Approved: 6.75" hole, 5.5", 20#, P110CY, TLW casing set @ 19979' Lead: 68 sx Class H, Tail 951 sx Class H Proposed: 6.75" hole, 5.5", 23#, P110HC, TLW casing set @ 19510' 1067 sx Class H Please see attached, C102, Drill Plan, Directional Survey for additional information. No new surface disturbance or other changes.

NOI Attachments

Procedure Description

QUEENIE_FED_COM_504H_Drill_Plan_20231222074505.pdf

Queenie_Fed_Com_504H___Plan_1_12_15_23_20231220201523.pdf

Queenie_Fed_Com_504H___Plan_1_12_15_23_AC_Report_20231220201513.pdf

C102_Queenie_Fed_Com_504H_20231220201459.pdf

Well Name: QUEENIE FEDERAL COM	**Well Location:** T20S / R32E / SEC 22 / NENE /	**County or Parish/State:**
Well Number: 504H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM112275	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 3002552325	**Well Status:** Approved Application for Permit to Drill	**Operator:** MARATHON OIL PERMIAN LLC

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: DEC 22, 2023 07:45 AM

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: ZOTA M STEVENS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752345998

BLM POC Email Address: ZSTEVENS@BLM.GOV

Disposition: Approved

Disposition Date: 12/22/2023

Signature: Zota Stevens

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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand 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

Approved: 8.75 hole, 7.625, 29.7#, P110, FM3 casing set @ 9290 Lead: 441 Class C, 114 Class H

Proposed: 8.75 hole, 7.625, 29.7#, P110, FM3 casing set @ 8674 Lead: 260 sx Class H, Tail 45 sx Class H

Production Casing:

Approved: 6.75 hole, 5.5, 20#, P110CY, TLW casing set @ 19979 Lead: 68 sx Class H, Tail 951 sx Class H

Proposed: 6.75 hole, 5.5, 23#, P110HC, TLW casing set @ 19510 1067 sx Class H

Please see attached, C102, Drill Plan, Directional Survey for additional information. No new surface disturbance or other changes.

Location of Well

0. SHL: NENE / 108 FNL / 421 FEL / TWSP: 20S / RANGE: 32E / SECTION: 22 / LAT: 32.5656453 / LONG: -103.7468359 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 100 FSL / 663 FEL / TWSP: 20S / RANGE: 32E / SECTION: 15 / LAT: 32.5662189 / LONG: -103.7476193 (TVD: 4323 feet, MD: 4335 feet)

PPP: SESE / 0 FSL / 660 FEL / TWSP: 20S / RANGE: 32E / SECTION: 10 / LAT: 32.5804484 / LONG: -103.7476209 (TVD: 4323 feet, MD: 4335 feet)

BHL: NENE / 100 FNL / 661 FEL / TWSP: 20S / RANGE: 32E / SECTION: 10 / LAT: 32.5946898 / LONG: -103.7476131 (TVD: 9728 feet, MD: 19978 feet)

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-52325	53560	SALT LAKE (BONE SPRING)

[4] Property Code	[5] Property Name	[6] Well Number
335053	QUEENIE FED COM	504H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372098	MARATHON OIL PERMIAN LLC	3529'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	22	20S	32E		108'	NORTH	421'	EAST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	20S	32E		100'	NORTH	330'	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640.00			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

LTP/BHL
FNL 100' FEL 330', SECTION 10
NAD 83, SPCS NM EAST
X:722054.13' / Y:580575.89'
LAT:32.59468567 / LON:-103.74653938
NAD 27, SPCS NM EAST
X:680874.00' / Y:580513.51'
LAT:32.59456430 / LON:-103.74604192

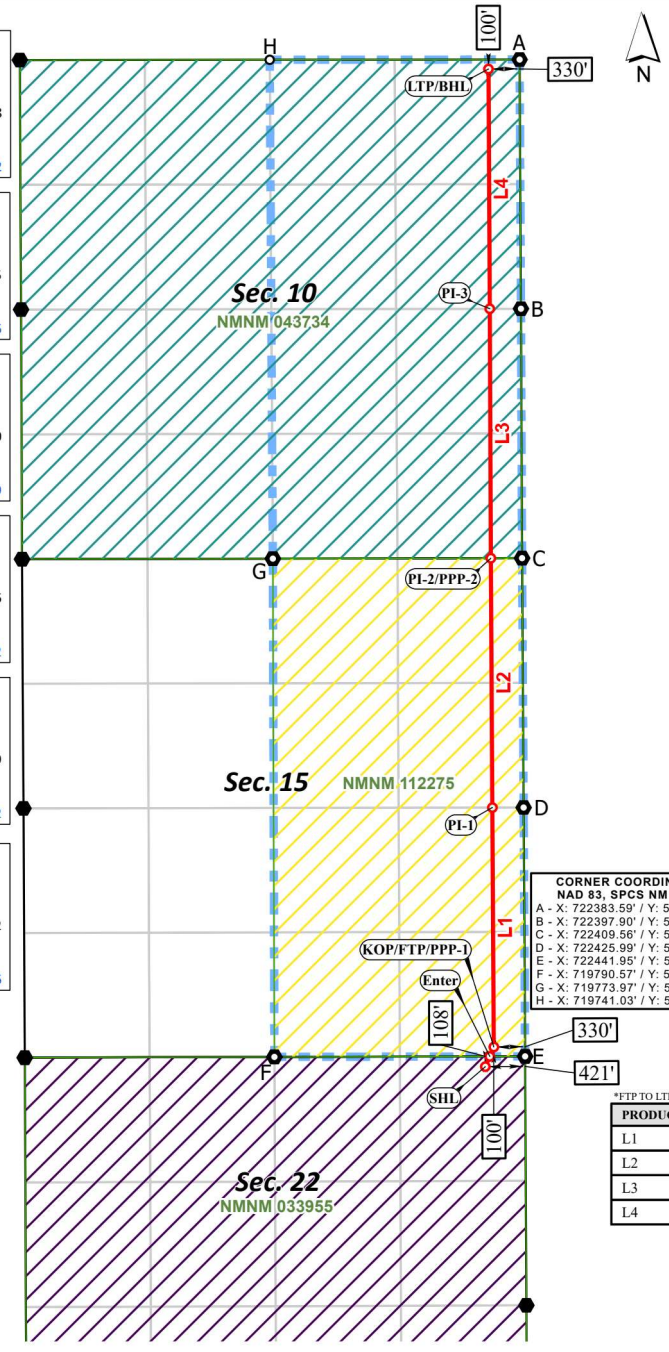
PI-3
FNL 2639' FEL 330', SECTION 10
NAD 83, SPCS NM EAST
X:722067.90' / Y:578036.69'
LAT:32.58770620 / LON:-103.74654015
NAD 27, SPCS NM EAST
X:680887.70' / Y:577974.37'
LAT:32.58758479 / LON:-103.74604296

PI-2/PPP-2
FSL 0' FEL 330', SECTION 10
NAD 83, SPCS NM EAST
X:722079.56' / Y:575395.03'
LAT:32.58044514 / LON:-103.74654960
NAD 27, SPCS NM EAST
X:680899.28' / Y:575332.77'
LAT:32.58032369 / LON:-103.74605269

PI-1
FSL 2635' FEL 330', SECTION 15
NAD 83, SPCS NM EAST
X:722095.99' / Y:572753.58'
LAT:32.57318458 / LON:-103.74654356
NAD 27, SPCS NM EAST
X:680915.64' / Y:572691.39'
LAT:32.57306308 / LON:-103.74604692

KOP/FTP/PPP-1
FSL 100' FEL 330', SECTION 15
NAD 83, SPCS NM EAST
X:722111.34' / Y:570218.33'
LAT:32.56621594 / LON:-103.74653909
NAD 27, SPCS NM EAST
X:680930.92' / Y:570156.21'
LAT:32.56609439 / LON:-103.74604272

SHL
FNL 108' FEL 421', SECTION 22
NAD 83, SPCS NM EAST
X:722021.04' / Y:570010.23'
LAT:32.56564533 / LON:-103.74683592
NAD 27, SPCS NM EAST
X:680840.62' / Y:569948.12'
LAT:32.56552378 / LON:-103.74633956



CORNER COORDINATES NAD 83, SPCS NM EAST	CORNER COORDINATES NAD 27, SPCS NM EAST
A - X: 722383.59' / Y: 580676.23'	A - X: 681203.46' / Y: 580613.84'
B - X: 722397.90' / Y: 578037.24'	B - X: 681217.70' / Y: 577974.92'
C - X: 722409.56' / Y: 575395.68'	C - X: 681229.28' / Y: 575333.42'
D - X: 722425.99' / Y: 572754.12'	D - X: 681245.64' / Y: 572691.93'
E - X: 722441.95' / Y: 570119.07'	E - X: 681261.52' / Y: 570056.94'
F - X: 719790.57' / Y: 570113.17'	F - X: 678610.16' / Y: 570051.06'
G - X: 719773.97' / Y: 575390.48'	G - X: 678593.71' / Y: 575328.24'
H - X: 719741.03' / Y: 580673.53'	H - X: 678560.91' / Y: 580611.16'

*FTP TO LTP LINE BEARINGS

PRODUCTION LINE	BEARING/LENGTH
L1	N00°20'49"W ~ 2535.29'
L2	N00°21'23"W ~ 2641.50'
L3	N00°15'10"W ~ 2641.69'
L4	N00°18'39"W ~ 2539.24'

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

T Stathem — 12/20/2023
Signature — Date

T Stathem
Printed Name

TStathem@marathonoil.com
E-mail Address

[18] ***SURVEYOR CERTIFICATION***
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.

Date of Survey: DECEMBER 14, 2023
Signature and Seal of Professional Surveyor

LLOYD P. SHORT · NEW MEXICO · 21653 · PROFESSIONAL SURVEYOR

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.

Distances/areas shown on NAD 83 grid measurements. Combined Scale Factor: 0.99977765 and a Convergence Angle: 0.316440372°

SHEET 1 OF 2
JOB No. R3887_005
REV 3 SAC 10/13/2023

MARATHON OIL PERMIAN, LLC.

DRILLING AND OPERATIONS PLAN

WELL NAME & NUMBER: **QUEENIE FED COM 504H**

LOCATION: SECTION **22** TOWNSHIP **20S** RANGE **32E**

LEA COUNTY, **NEW MEXICO**

Section 1: GEOLOGICAL FORMATIONS

Name of Surface Formation: Permian

Elevation: 3529 *feet*

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	1045	1045	2484	Anhydrite	Brine	No
Yates	3148	3148	381	Salt/Anhydrite	Brine	No
Seven Rivers	NA	NA		Salt/Anhydrite	Brine	No
Capitan Reef	3526	3526	3	Salt/Anhydrite	Brine	No
Lamar	na	na		Sandstone/Shale	None	No
Bell Canyon	4636	4636	-1107	Sandstone	Oil	No
Cherry Canyon	4784	4784	-1255	Sandstone	Oil	No
Brushy Canyon	5966	5966	-2437	Sandstone	Oil	No
Bone Spring Lime	7742	7742	-4213	Limestone	None	No
Upper Avalon Shale	7856	7856	-4327	Shale	Oil	Yes
1st Bone Spring Sand	8770	8770	-5241	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	9082	9082	-5553	Limestone/Shale	None	No
2nd Bone Spring Sand	9347	9347	-5818	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	10055	10055	-6526	Limestone	Oil	No
3rd Bone Spring Sand	10492	10492	-6963	Sandstone	Oil	Yes
Wolfcamp	10786	10786	-7257	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	10918	10918	-7389	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	10976	10976	-7447	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp C	11078	11078	-7549	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp D	11110	11110	-7581	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 Stack before drilling the intermediate holes, 10,000psi for the BOP Stacking before drilling the production hole. Testing will be conducted by an independent service company per 43 CFR 3172 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 and Blind rams will be operationally checked on each trip out of the hole, but not to exceed more than once per day. 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 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. Will be tested in accordance with 43 CFR 3172. 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.

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	1095	0	1095	3529	2434	54.5	J55	BTC	5.22	1.81	BUOY	4.52	BUOY	4.52
Intermediate I	12.25	9.625	0	3175	0	3175	3529	354	40	P110HC	BTC	1.20	1.42	BUOY	2.44	BUOY	2.44
Intermediate II	8.75	7.625	0	8674	0	8661	3529	-5132	29.7	P110	USS Liberty	2.00	1.24	BUOY	2.83	BUOY	2.83
Production	6.75	5.5	0	19510	0	9162	3529	-5633	23	P110HC	TLW	2.53	1.26	BUOY	2.22	BUOY	2.22
All casing strings will be tested in accordance with 43 CFR 3172.												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 43 CFR 3171.	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^3/sks)	Density (ppg)	Slurry Volume (ft^3)	Excess (%)	Cement Type	Additives
Surface	Lead	0	945	410	2.12	12.5	869	25	Class C	Extender,Accelerator,LCM
Surface	Tail	945	1095	99	1.32	14.8	130	25	Class C	Accelerator
Intermediate I	Lead	0	2675	511	2.18	12.4	1115	25	Class C	Extender,Accelerator,LCM
Intermediate I	Tail	2675	3175	147	1.33	14.8	196	25	Class C	Retarder
Intermediate II	Lead	0	8174	259	4.09	10.5	1059	25	Class H	Extender
Intermediate II	Tail	8174	8674	45	1.4	14.5	63	25	Class H	Viscosifier, Fluid Loss
Production	Tail	8374	19510	1088	1.68	13	1827	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 (sx)	Density (ppg)	Yield (ft3/sks)	Water gal/sk	Slurry Description and Cement Type

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	1095	Water Based Mud	8.4	8.8
1095	8661	Brine or Oil Based Mud	9.2	10.2
8661	19510	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 PRESSURE

Anticipated Bottom Hole Pressure: **5955** 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 43 CFR 3176. 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.

Marathon Oil Corporation

Project: Lea County, NM (NAD27 NME)
Site: Queenie Fed Com
Well: Queenie Fed Com 504H
Wellbore: OH
Design: Plan 1 12-15-23
Rig: Cactus 171

PHOENIX TECHNOLOGY SERVICES

Azimuths to Grid North
True North: -0.32°
Magnetic North: 6.15°

Magnetic Field
Strength: 47697.2nT
Dip Angle: 60.30°
Date: 2024-02-01
Model: MVHD

RKB @ 3552.60usft (Cactus 171)
Ground Level: 3529.00

WELL DETAILS

3529.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	569948.12	680840.62	32° 33' 55.885663 N	103° 44' 46.822382 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - Queenie Fed Com 504H	9162.59	10565.39	33.38	580513.51	680874.00	32° 35' 40.431501 N	103° 44' 45.750917 W
PI-3 - Queenie Fed Com 504H	9206.91	8026.25	47.08	577974.37	680887.70	32° 35' 15.305256 N	103° 44' 45.754651 W
PI-2 - Queenie Fed Com 504H	9253.02	5384.65	58.66	575332.77	680899.28	32° 34' 49.165227 N	103° 44' 45.789738 W
PI-1 - Queenie Fed Com 504H	9299.12	2743.27	75.02	572691.39	680915.64	32° 34' 23.027083 N	103° 44' 45.768913 W
FTP - Queenie Fed Com 504H	9347.00	208.09	90.30	570156.21	680930.92	32° 33' 57.939851 N	103° 44' 45.753831 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00		
2	4431.50	0.00	0.00	4431.50	0.00	0.00	0.00	0.000	0.00		KOP, Begin 2.00°/100' Build
3	4931.60	10.00	29.81	4929.06	37.78	21.64	2.00	29.807	37.66		Hold 10.00° Inc at 29.81° Azm
4	5479.30	10.00	29.81	5468.44	120.32	68.93	0.00	0.000	119.95		Begin 2.00°/100' Drop
5	5979.40	0.00	0.00	5966.00	158.10	90.57	2.00	180.000	157.61		Begin Vertical Hold
6	8774.60	0.00	0.00	8761.20	158.10	90.57	0.00	0.000	157.61		KOP2, Begin 10.00°/100' Build
7	9684.60	91.00	359.66	9334.07	741.05	87.06	10.00	359.655	740.56		LP, Hold 91.00° Inc at 359.66° Azm
8	11687.16	91.00	359.66	9299.12	2743.27	75.02	0.00	0.000	2742.82	PI-1 - Queenie Fed Com 504H	Begin 2.00°/100' Turn
9	11687.68	91.00	359.65	9299.12	2743.78	75.02	2.00	-90.002	2743.34		Begin 2.00°/100' Turn
10	14329.00	91.00	359.65	9253.02	5384.65	58.66	0.00	0.000	5384.25	PI-2 - Queenie Fed Com 504H	Begin 2.00°/100' Turn
11	14334.19	91.00	359.75	9252.93	5389.84	58.63	2.00	89.994	5389.44		Hold 359.75° Azm
12	16971.03	91.00	359.75	9206.91	8026.25	47.08	0.00	0.000	8025.88	PI-3 - Queenie Fed Com 504H	Begin 2.00°/100' Turn
13	16973.93	91.00	359.69	9206.86	8029.15	47.07	2.00	-90.004	8028.78		Hold 359.69° Azm
14	19510.59	91.00	359.69	9162.59	10565.39	33.38	0.00	0.000	10565.05	BHL - Queenie Fed Com 504H	TD at 19510.59

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

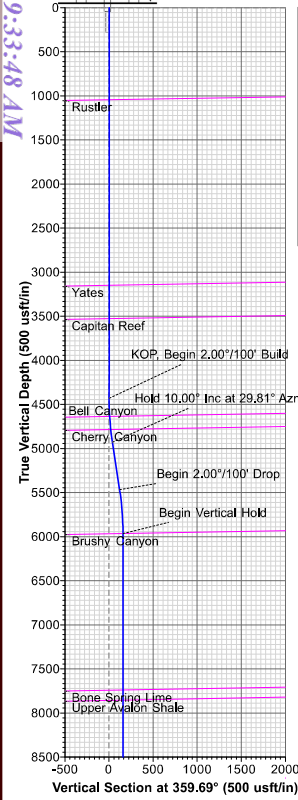
Local Origin: Well Queenie Fed Com 504H, Grid North

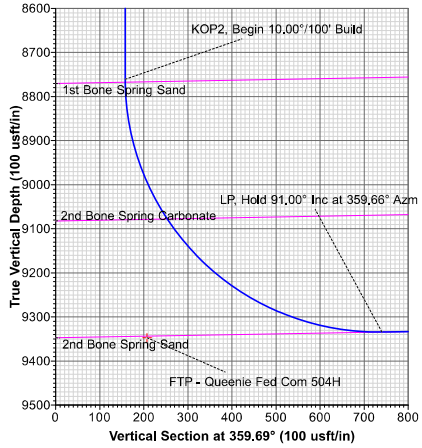
Latitude: 32° 33' 55.885663 N
Longitude: 103° 44' 46.822382 W

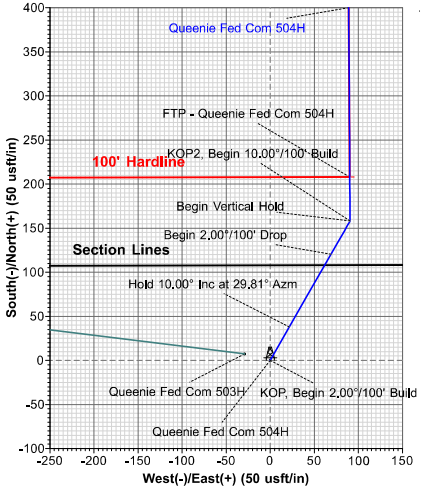
Grid East: 680840.62
Grid North: 569948.12
Scale Factor: 1.000

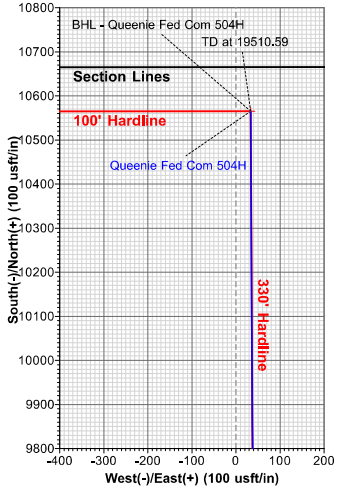
Geomagnetic Model: MVHD
Sample Date: 01-Feb-24
Magnetic Declination: 6.468°
Dip Angle from Horizontal: 60.296°
Magnetic Field Strength: 47697.19857952nT

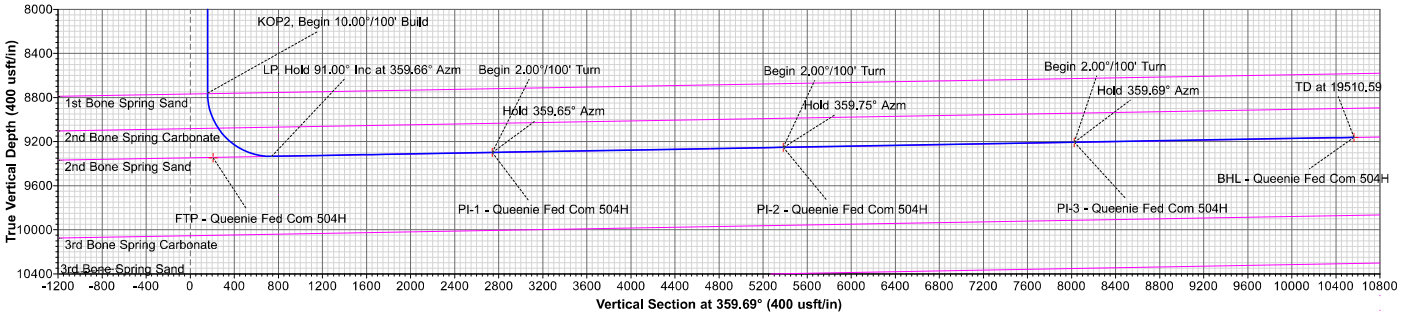
To convert a Magnetic Direction to a Grid Direction, Add 6.152°
To convert a Magnetic Direction to a True Direction, Add 6.468° East
To convert a True Direction to a Grid Direction, Subtract 0.316°

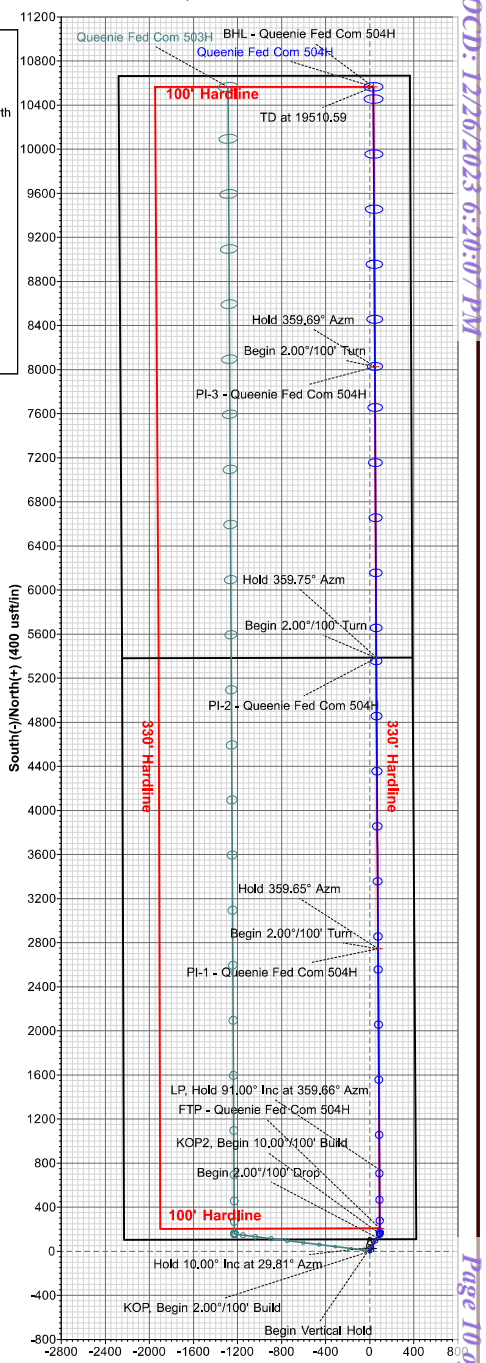












Date: 13:38, December 15 2023

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TECHNOLOGY SERVICES

Marathon Oil Permian LLC

Lea County, NM (NAD27 NME)
Queenie Fed Com
Queenie Fed Com 504H

OH

Plan: Plan 1 12-15-23

Standard Planning Report

15 December, 2023

Marathon Oil Corporation

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site:	Queenie Fed Com	**North Reference:**	Grid
Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 12-15-23		

Project Lea County, NM (NAD27 NME)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Queenie Fed Com

Site Position:		**Northing:**	569,955.46 usft	**Latitude:**	32° 33' 55.959840 N
From:	Map	**Easting:**	680,811.55 usft	**Longitude:**	103° 44' 47.161500 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Queenie Fed Com 504H

Well Position	**+N/-S**	0.00 usft	**Northing:**	569,948.12 usft	**Latitude:**	32° 33' 55.885663 N
	+E/-W	0.00 usft	**Easting:**	680,840.62 usft	**Longitude:**	103° 44' 46.822382 W
Position Uncertainty		1.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,529.00 usft
Grid Convergence:		0.316 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	2024-02-01	6.468	60.296	47,697.19857952

Design Plan 1 12-15-23

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.69

Plan Survey Tool Program **Date** 2023-12-15

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,510.59	Plan 1 12-15-23 (OH)	MWD+IFR1+MS OWSG Rev. 2 MWD + IFR1	

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site:	Queenie Fed Com	**North Reference:**	Grid
Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 12-15-23		

Plan Sections

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
4,431.50	0.00	0.00	4,431.50	0.00	0.00	0.00	0.00	0.00	0.000	
4,931.60	10.00	29.81	4,929.06	37.78	21.64	2.00	2.00	0.00	29.807	
5,479.30	10.00	29.81	5,468.44	120.32	68.93	0.00	0.00	0.00	0.000	
5,979.40	0.00	0.00	5,966.00	158.10	90.57	2.00	-2.00	0.00	180.000	
8,774.60	0.00	0.00	8,761.20	158.10	90.57	0.00	0.00	0.00	0.000	
9,684.60	91.00	359.66	9,334.07	741.05	87.06	10.00	10.00	-0.04	359.655	
11,687.17	91.00	359.66	9,299.13	2,743.27	75.02	0.00	0.00	0.00	0.000	PI-1 - Queenie Fed
11,687.68	91.00	359.65	9,299.12	2,743.78	75.02	2.00	0.00	-2.00	-90.002	
14,329.00	91.00	359.65	9,253.02	5,384.65	58.66	0.00	0.00	0.00	0.000	PI-2 - Queenie Fed
14,334.19	91.00	359.75	9,252.93	5,389.84	58.63	2.00	0.00	2.00	89.994	
16,971.03	91.00	359.75	9,206.91	8,026.25	47.08	0.00	0.00	0.00	0.000	PI-3 - Queenie Fed
16,973.93	91.00	359.69	9,206.86	8,029.15	47.07	2.00	0.00	-2.00	-90.004	
19,510.59	91.00	359.69	9,162.59	10,565.39	33.38	0.00	0.00	0.00	0.000	BHL - Queenie Fed

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site:	Queenie Fed Com	**North Reference:**	Grid
Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 12-15-23		

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
4,431.50	0.00	0.00	4,431.50	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
4,500.00	1.37	29.81	4,499.99	0.71	0.41	0.71	2.00	2.00	0.00
4,600.00	3.37	29.81	4,599.90	4.30	2.46	4.29	2.00	2.00	0.00
4,700.00	5.37	29.81	4,699.61	10.91	6.25	10.88	2.00	2.00	0.00
4,800.00	7.37	29.81	4,798.98	20.54	11.76	20.47	2.00	2.00	0.00
4,900.00	9.37	29.81	4,897.91	33.17	19.00	33.06	2.00	2.00	0.00
4,931.60	10.00	29.81	4,929.06	37.78	21.64	37.66	2.00	2.00	0.00
Hold 10.00° Inc at 29.81° Azm									
5,000.00	10.00	29.81	4,996.42	48.09	27.55	47.94	0.00	0.00	0.00
5,100.00	10.00	29.81	5,094.90	63.16	36.18	62.96	0.00	0.00	0.00
5,200.00	10.00	29.81	5,193.38	78.23	44.81	77.99	0.00	0.00	0.00
5,300.00	10.00	29.81	5,291.86	93.30	53.45	93.01	0.00	0.00	0.00
5,400.00	10.00	29.81	5,390.35	108.37	62.08	108.03	0.00	0.00	0.00
5,479.30	10.00	29.81	5,468.44	120.32	68.93	119.95	0.00	0.00	0.00
Begin 2.00°/100' Drop									
5,500.00	9.59	29.81	5,488.84	123.38	70.68	122.99	2.00	-2.00	0.00
5,600.00	7.59	29.81	5,587.71	136.33	78.10	135.91	2.00	-2.00	0.00
5,700.00	5.59	29.81	5,687.05	146.29	83.80	145.83	2.00	-2.00	0.00
5,800.00	3.59	29.81	5,786.72	153.23	87.78	152.75	2.00	-2.00	0.00
5,900.00	1.59	29.81	5,886.61	157.15	90.02	156.66	2.00	-2.00	0.00
5,979.40	0.00	0.00	5,966.00	158.10	90.57	157.61	2.00	-2.00	-37.54
Begin Vertical Hold									
8,774.60	0.00	0.00	8,761.20	158.10	90.57	157.61	0.00	0.00	0.00
KOP2, Begin 10.00°/100' Build									
8,800.00	2.54	359.66	8,786.60	158.66	90.57	158.17	10.00	10.00	0.00
8,900.00	12.54	359.66	8,885.61	171.77	90.49	171.28	10.00	10.00	0.00
9,000.00	22.54	359.66	8,980.83	201.87	90.31	201.37	10.00	10.00	0.00
9,100.00	32.54	359.66	9,069.39	248.04	90.03	247.55	10.00	10.00	0.00
9,200.00	42.54	359.66	9,148.58	308.90	89.66	308.41	10.00	10.00	0.00
9,300.00	52.54	359.66	9,216.01	382.58	89.22	382.09	10.00	10.00	0.00
9,400.00	62.54	359.66	9,269.61	466.84	88.71	466.36	10.00	10.00	0.00
9,500.00	72.54	359.66	9,307.76	559.14	88.16	558.65	10.00	10.00	0.00
9,600.00	82.54	359.66	9,329.31	656.66	87.57	656.18	10.00	10.00	0.00
9,684.60	91.00	359.66	9,334.07	741.05	87.06	740.56	10.00	10.00	0.00
LP, Hold 91.00° Inc at 359.66° Azm									
9,700.00	91.00	359.66	9,333.81	756.44	86.97	755.96	0.00	0.00	0.00
9,800.00	91.00	359.66	9,332.06	856.43	86.37	855.95	0.00	0.00	0.00
9,900.00	91.00	359.66	9,330.32	956.41	85.77	955.93	0.00	0.00	0.00
10,000.00	91.00	359.66	9,328.57	1,056.39	85.17	1,055.92	0.00	0.00	0.00
10,100.00	91.00	359.66	9,326.82	1,156.38	84.57	1,155.90	0.00	0.00	0.00
10,200.00	91.00	359.66	9,325.08	1,256.36	83.96	1,255.89	0.00	0.00	0.00
10,300.00	91.00	359.66	9,323.33	1,356.34	83.36	1,355.87	0.00	0.00	0.00
10,400.00	91.00	359.66	9,321.59	1,456.32	82.76	1,455.86	0.00	0.00	0.00
10,500.00	91.00	359.66	9,319.84	1,556.31	82.16	1,555.84	0.00	0.00	0.00
10,600.00	91.00	359.66	9,318.10	1,656.29	81.56	1,655.83	0.00	0.00	0.00
10,700.00	91.00	359.66	9,316.35	1,756.27	80.96	1,755.81	0.00	0.00	0.00
10,800.00	91.00	359.66	9,314.61	1,856.26	80.36	1,855.79	0.00	0.00	0.00
10,900.00	91.00	359.66	9,312.86	1,956.24	79.75	1,955.78	0.00	0.00	0.00
11,000.00	91.00	359.66	9,311.12	2,056.22	79.15	2,055.76	0.00	0.00	0.00
11,100.00	91.00	359.66	9,309.37	2,156.21	78.55	2,155.75	0.00	0.00	0.00
11,200.00	91.00	359.66	9,307.63	2,256.19	77.95	2,255.73	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site:	Queenie Fed Com	**North Reference:**	Grid
Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 12-15-23		

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)
11,300.00	91.00	359.66	9,305.88	2,356.17	77.35	2,355.72	0.00	0.00	0.00
11,400.00	91.00	359.66	9,304.14	2,456.15	76.75	2,455.70	0.00	0.00	0.00
11,500.00	91.00	359.66	9,302.39	2,556.14	76.15	2,555.69	0.00	0.00	0.00
11,600.00	91.00	359.66	9,300.65	2,656.12	75.54	2,655.67	0.00	0.00	0.00
11,687.17	91.00	359.66	9,299.13	2,743.27	75.02	2,742.82	0.00	0.00	0.00
Begin 2.00°/100' Turn									
11,687.68	91.00	359.65	9,299.12	2,743.78	75.02	2,743.34	2.00	0.00	-2.00
Hold 359.65° Azm									
11,700.00	91.00	359.65	9,298.90	2,756.10	74.94	2,755.66	0.00	0.00	0.00
11,800.00	91.00	359.65	9,297.16	2,856.09	74.32	2,855.64	0.00	0.00	0.00
11,900.00	91.00	359.65	9,295.41	2,956.07	73.70	2,955.63	0.00	0.00	0.00
12,000.00	91.00	359.65	9,293.67	3,056.05	73.08	3,055.61	0.00	0.00	0.00
12,100.00	91.00	359.65	9,291.92	3,156.03	72.46	3,155.60	0.00	0.00	0.00
12,200.00	91.00	359.65	9,290.17	3,256.02	71.84	3,255.58	0.00	0.00	0.00
12,300.00	91.00	359.65	9,288.43	3,356.00	71.22	3,355.57	0.00	0.00	0.00
12,400.00	91.00	359.65	9,286.68	3,455.98	70.61	3,455.55	0.00	0.00	0.00
12,500.00	91.00	359.65	9,284.94	3,555.97	69.99	3,555.54	0.00	0.00	0.00
12,600.00	91.00	359.65	9,283.19	3,655.95	69.37	3,655.52	0.00	0.00	0.00
12,700.00	91.00	359.65	9,281.45	3,755.93	68.75	3,755.50	0.00	0.00	0.00
12,800.00	91.00	359.65	9,279.70	3,855.91	68.13	3,855.49	0.00	0.00	0.00
12,900.00	91.00	359.65	9,277.96	3,955.90	67.51	3,955.47	0.00	0.00	0.00
13,000.00	91.00	359.65	9,276.21	4,055.88	66.89	4,055.46	0.00	0.00	0.00
13,100.00	91.00	359.65	9,274.47	4,155.86	66.27	4,155.44	0.00	0.00	0.00
13,200.00	91.00	359.65	9,272.72	4,255.85	65.65	4,255.43	0.00	0.00	0.00
13,300.00	91.00	359.65	9,270.98	4,355.83	65.03	4,355.41	0.00	0.00	0.00
13,400.00	91.00	359.65	9,269.23	4,455.81	64.41	4,455.40	0.00	0.00	0.00
13,500.00	91.00	359.65	9,267.49	4,555.79	63.79	4,555.38	0.00	0.00	0.00
13,600.00	91.00	359.65	9,265.74	4,655.78	63.17	4,655.37	0.00	0.00	0.00
13,700.00	91.00	359.65	9,264.00	4,755.76	62.56	4,755.35	0.00	0.00	0.00
13,800.00	91.00	359.65	9,262.25	4,855.74	61.94	4,855.34	0.00	0.00	0.00
13,900.00	91.00	359.65	9,260.51	4,955.73	61.32	4,955.32	0.00	0.00	0.00
14,000.00	91.00	359.65	9,258.76	5,055.71	60.70	5,055.31	0.00	0.00	0.00
14,100.00	91.00	359.65	9,257.02	5,155.69	60.08	5,155.29	0.00	0.00	0.00
14,200.00	91.00	359.65	9,255.27	5,255.67	59.46	5,255.28	0.00	0.00	0.00
14,300.00	91.00	359.65	9,253.52	5,355.66	58.84	5,355.26	0.00	0.00	0.00
14,329.00	91.00	359.65	9,253.02	5,384.65	58.66	5,384.25	0.00	0.00	0.00
Begin 2.00°/100' Turn									
14,334.19	91.00	359.75	9,252.93	5,389.84	58.63	5,389.44	2.00	0.00	2.00
Hold 359.75° Azm									
14,400.00	91.00	359.75	9,251.78	5,455.64	58.34	5,455.25	0.00	0.00	0.00
14,500.00	91.00	359.75	9,250.03	5,555.62	57.91	5,555.23	0.00	0.00	0.00
14,600.00	91.00	359.75	9,248.29	5,655.61	57.47	5,655.21	0.00	0.00	0.00
14,700.00	91.00	359.75	9,246.54	5,755.59	57.03	5,755.20	0.00	0.00	0.00
14,800.00	91.00	359.75	9,244.80	5,855.58	56.59	5,855.18	0.00	0.00	0.00
14,900.00	91.00	359.75	9,243.05	5,955.56	56.15	5,955.17	0.00	0.00	0.00
15,000.00	91.00	359.75	9,241.31	6,055.54	55.72	6,055.15	0.00	0.00	0.00
15,100.00	91.00	359.75	9,239.56	6,155.53	55.28	6,155.14	0.00	0.00	0.00
15,200.00	91.00	359.75	9,237.82	6,255.51	54.84	6,255.12	0.00	0.00	0.00
15,300.00	91.00	359.75	9,236.07	6,355.50	54.40	6,355.11	0.00	0.00	0.00
15,400.00	91.00	359.75	9,234.33	6,455.48	53.96	6,455.09	0.00	0.00	0.00
15,500.00	91.00	359.75	9,232.58	6,555.46	53.52	6,555.08	0.00	0.00	0.00
15,600.00	91.00	359.75	9,230.84	6,655.45	53.09	6,655.06	0.00	0.00	0.00
15,700.00	91.00	359.75	9,229.09	6,755.43	52.65	6,755.05	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site:	Queenie Fed Com	**North Reference:**	Grid
Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 12-15-23		

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)
15,800.00	91.00	359.75	9,227.35	6,855.41	52.21	6,855.03	0.00	0.00	0.00
15,900.00	91.00	359.75	9,225.60	6,955.40	51.77	6,955.02	0.00	0.00	0.00
16,000.00	91.00	359.75	9,223.86	7,055.38	51.33	7,055.00	0.00	0.00	0.00
16,100.00	91.00	359.75	9,222.11	7,155.37	50.90	7,154.99	0.00	0.00	0.00
16,200.00	91.00	359.75	9,220.36	7,255.35	50.46	7,254.97	0.00	0.00	0.00
16,300.00	91.00	359.75	9,218.62	7,355.33	50.02	7,354.95	0.00	0.00	0.00
16,400.00	91.00	359.75	9,216.87	7,455.32	49.58	7,454.94	0.00	0.00	0.00
16,500.00	91.00	359.75	9,215.13	7,555.30	49.14	7,554.92	0.00	0.00	0.00
16,600.00	91.00	359.75	9,213.38	7,655.28	48.71	7,654.91	0.00	0.00	0.00
16,700.00	91.00	359.75	9,211.64	7,755.27	48.27	7,754.89	0.00	0.00	0.00
16,800.00	91.00	359.75	9,209.89	7,855.25	47.83	7,854.88	0.00	0.00	0.00
16,900.00	91.00	359.75	9,208.15	7,955.24	47.39	7,954.86	0.00	0.00	0.00
16,971.03	91.00	359.75	9,206.91	8,026.25	47.08	8,025.88	0.00	0.00	0.00
Begin 2.00°/100' Turn									
16,973.93	91.00	359.69	9,206.86	8,029.15	47.07	8,028.78	2.00	0.00	-2.00
Hold 359.69° Azm									
17,000.00	91.00	359.69	9,206.40	8,055.22	46.93	8,054.85	0.00	0.00	0.00
17,100.00	91.00	359.69	9,204.66	8,155.20	46.39	8,154.83	0.00	0.00	0.00
17,200.00	91.00	359.69	9,202.91	8,255.19	45.85	8,254.82	0.00	0.00	0.00
17,300.00	91.00	359.69	9,201.17	8,355.17	45.31	8,354.80	0.00	0.00	0.00
17,400.00	91.00	359.69	9,199.42	8,455.15	44.77	8,454.79	0.00	0.00	0.00
17,500.00	91.00	359.69	9,197.68	8,555.14	44.23	8,554.77	0.00	0.00	0.00
17,600.00	91.00	359.69	9,195.93	8,655.12	43.69	8,654.76	0.00	0.00	0.00
17,700.00	91.00	359.69	9,194.19	8,755.10	43.15	8,754.74	0.00	0.00	0.00
17,800.00	91.00	359.69	9,192.44	8,855.09	42.61	8,854.73	0.00	0.00	0.00
17,900.00	91.00	359.69	9,190.70	8,955.07	42.07	8,954.71	0.00	0.00	0.00
18,000.00	91.00	359.69	9,188.95	9,055.05	41.53	9,054.70	0.00	0.00	0.00
18,100.00	91.00	359.69	9,187.20	9,155.04	40.99	9,154.68	0.00	0.00	0.00
18,200.00	91.00	359.69	9,185.46	9,255.02	40.45	9,254.67	0.00	0.00	0.00
18,300.00	91.00	359.69	9,183.71	9,355.00	39.91	9,354.65	0.00	0.00	0.00
18,400.00	91.00	359.69	9,181.97	9,454.99	39.37	9,454.63	0.00	0.00	0.00
18,500.00	91.00	359.69	9,180.22	9,554.97	38.83	9,554.62	0.00	0.00	0.00
18,600.00	91.00	359.69	9,178.48	9,654.95	38.29	9,654.60	0.00	0.00	0.00
18,700.00	91.00	359.69	9,176.73	9,754.94	37.75	9,754.59	0.00	0.00	0.00
18,800.00	91.00	359.69	9,174.99	9,854.92	37.21	9,854.57	0.00	0.00	0.00
18,900.00	91.00	359.69	9,173.24	9,954.90	36.67	9,954.56	0.00	0.00	0.00
19,000.00	91.00	359.69	9,171.50	10,054.89	36.13	10,054.54	0.00	0.00	0.00
19,100.00	91.00	359.69	9,169.75	10,154.87	35.60	10,154.53	0.00	0.00	0.00
19,200.00	91.00	359.69	9,168.01	10,254.85	35.06	10,254.51	0.00	0.00	0.00
19,300.00	91.00	359.69	9,166.26	10,354.84	34.52	10,354.50	0.00	0.00	0.00
19,400.00	91.00	359.69	9,164.52	10,454.82	33.98	10,454.48	0.00	0.00	0.00
19,500.00	91.00	359.69	9,162.77	10,554.80	33.44	10,554.47	0.00	0.00	0.00
19,510.59	91.00	359.69	9,162.59	10,565.39	33.38	10,565.05	0.00	0.00	0.00
TD at 19510.59									

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site:	Queenie Fed Com	**North Reference:**	Grid
Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 12-15-23		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL - Queenie Fed C - plan hits target center - Point	0.00	0.00	9,162.59	10,565.39	33.38	580,513.51	680,874.00	32° 35' 40.431501 N	3° 44' 45.750917 W
PI-3 - Queenie Fed C - plan hits target center - Point	0.00	0.00	9,206.91	8,026.25	47.08	577,974.37	680,887.70	32° 35' 15.305256 N	3° 44' 45.754651 W
PI-2 - Queenie Fed C - plan hits target center - Point	0.00	0.00	9,253.02	5,384.65	58.66	575,332.77	680,899.28	32° 34' 49.165227 N	3° 44' 45.789738 W
PI-1 - Queenie Fed C - plan hits target center - Point	0.00	0.00	9,299.13	2,743.27	75.02	572,691.39	680,915.64	32° 34' 23.027083 N	3° 44' 45.768913 W
FTP - Queenie Fed C - plan misses target center by 212.34usft at 9259.65usft MD (9190.36 TVD, 351.44 N, 89.41 E) - Point	0.00	0.00	9,347.00	208.09	90.30	570,156.21	680,930.92	32° 33' 57.939851 N	3° 44' 45.753831 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,045.00	1,045.00	Rustler		-1.000	359.69
3,148.00	3,148.00	Yates		-1.000	359.69
3,526.00	3,526.00	Capitan Reef		-1.000	359.69
4,636.06	4,635.89	Bell Canyon		-1.000	359.69
4,784.57	4,783.67	Cherry Canyon		-1.000	359.69
5,976.65	5,963.25	Brushy Canyon		-1.000	359.69
7,752.65	7,739.25	Bone Spring Lime		-1.000	359.69
7,866.65	7,853.25	Upper Avalon Shale		-1.000	359.69
8,780.64	8,767.25	1st Bone Spring Sand		-1.000	359.69
9,109.77	9,077.59	2nd Bone Spring Carbonate		-1.000	359.69
9,683.46	9,334.09	2nd Bone Spring Sand		-1.000	359.69

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
4,431.50	4,431.50	0.00	0.00	KOP, Begin 2.00°/100' Build
4,931.60	4,929.06	37.78	21.64	Hold 10.00° Inc at 29.81° Azm
5,479.30	5,468.44	120.32	68.93	Begin 2.00°/100' Drop
5,979.40	5,966.00	158.10	90.57	Begin Vertical Hold
8,774.60	8,761.20	158.10	90.57	KOP2, Begin 10.00°/100' Build
9,684.60	9,334.07	741.05	87.06	LP, Hold 91.00° Inc at 359.66° Azm
11,687.17	9,299.13	2,743.27	75.02	Begin 2.00°/100' Turn
11,687.68	9,299.12	2,743.78	75.02	Hold 359.65° Azm
14,329.00	9,253.02	5,384.65	58.66	Begin 2.00°/100' Turn
14,334.19	9,252.93	5,389.84	58.63	Hold 359.75° Azm
16,971.03	9,206.91	8,026.25	47.08	Begin 2.00°/100' Turn
16,973.93	9,206.86	8,029.15	47.07	Hold 359.69° Azm
19,510.59	9,162.59	10,565.39	33.38	TD at 19510.59

PHOENIX
TECHNOLOGY SERVICES

Marathon Oil Permian LLC

Lea County, NM (NAD27 NME)
Queenie Fed Com
Queenie Fed Com 504H

OH
Plan 1 12-15-23

Anticollision Report

15 December, 2023

Marathon Oil Corporation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

Marathon Oil Corporation

Company:	Marathon Oil Permian LLC	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Reference Site:	Queenie Fed Com	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site Error:	0.00	**North Reference:**	Grid
Reference Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USAEDMDB
Reference Design:	Plan 1 12-15-23	**Offset TVD Reference:**	Offset Datum

Reference	Plan 1 12-15-23		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Max. Cent. Dist. of 1,000.00usft or Max. SF of 4	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 2023-12-15

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,510.59	Plan 1 12-15-23 (OH)	MWD+IFR1+MS	OWSG Rev. 2 MWD + IFR1 + Multi-Station Correction

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centers (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Queenie Fed Com						
Queenie Fed Com 503H - OH - Plan 1 12-15-23	2,000.00	2,000.00	29.97	15.66	2.095	CC, ES, SF

Offset Design Queenie Fed Com 503H - OH - Plan 1 12-15-23 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+MS — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Center +N/-S (usft)	Offset Wellbore Center +E/-W (usft)	Distance Between Centers (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	1.00	1.00	-75.83	7.34	-29.06	29.97				
100.00	100.00	100.00	100.00	1.04	1.04	-75.83	7.34	-29.06	29.97	27.90	2.07	14.455	
200.00	200.00	200.00	200.00	1.18	1.18	-75.83	7.34	-29.06	29.97	27.61	2.37	12.667	
300.00	300.00	300.00	300.00	1.41	1.41	-75.83	7.34	-29.06	29.97	27.16	2.82	10.646	
400.00	400.00	400.00	400.00	1.68	1.68	-75.83	7.34	-29.06	29.97	26.62	3.36	8.924	
500.00	500.00	500.00	500.00	1.98	1.98	-75.83	7.34	-29.06	29.97	26.02	3.96	7.573	
600.00	600.00	600.00	600.00	2.30	2.30	-75.83	7.34	-29.06	29.97	25.38	4.59	6.529	
700.00	700.00	700.00	700.00	2.62	2.62	-75.83	7.34	-29.06	29.97	24.73	5.25	5.714	
800.00	800.00	800.00	800.00	2.96	2.96	-75.83	7.34	-29.06	29.97	24.06	5.91	5.068	
900.00	900.00	900.00	900.00	3.30	3.30	-75.83	7.34	-29.06	29.97	23.38	6.59	4.546	
1,000.00	1,000.00	1,000.00	1,000.00	3.64	3.64	-75.83	7.34	-29.06	29.97	22.69	7.28	4.117	
1,100.00	1,100.00	1,100.00	1,100.00	3.99	3.99	-75.83	7.34	-29.06	29.97	22.00	7.97	3.760	
1,200.00	1,200.00	1,200.00	1,200.00	4.33	4.33	-75.83	7.34	-29.06	29.97	21.31	8.67	3.458	
1,300.00	1,300.00	1,300.00	1,300.00	4.68	4.68	-75.83	7.34	-29.06	29.97	20.61	9.37	3.200	
1,400.00	1,400.00	1,400.00	1,400.00	5.03	5.03	-75.83	7.34	-29.06	29.97	19.91	10.07	2.977	
1,500.00	1,500.00	1,500.00	1,500.00	5.39	5.39	-75.83	7.34	-29.06	29.97	19.20	10.77	2.783	
1,600.00	1,600.00	1,600.00	1,600.00	5.74	5.74	-75.83	7.34	-29.06	29.97	18.50	11.48	2.612	
1,700.00	1,700.00	1,700.00	1,700.00	6.09	6.09	-75.83	7.34	-29.06	29.97	17.79	12.18	2.460	
1,800.00	1,800.00	1,800.00	1,800.00	6.45	6.45	-75.83	7.34	-29.06	29.97	17.08	12.89	2.325	
1,900.00	1,900.00	1,900.00	1,900.00	6.80	6.80	-75.83	7.34	-29.06	29.97	16.37	13.60	2.204	
2,000.00	2,000.00	2,000.00	2,000.00	7.16	7.16	-75.83	7.34	-29.06	29.97	15.66	14.31	2.095	CC, ES, SF
2,100.00	2,100.00	2,098.93	2,098.91	7.51	7.50	-76.22	7.54	-30.76	31.69	16.69	15.00	2.112	
2,200.00	2,200.00	2,197.63	2,197.47	7.87	7.84	-77.16	8.17	-35.83	36.83	21.16	15.67	2.350	
2,300.00	2,300.00	2,295.86	2,295.34	8.22	8.17	-78.24	9.20	-44.21	45.40	29.08	16.32	2.782	

CC - Min center to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

Marathon Oil Corporation

Company:	Marathon Oil Permian LLC	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Reference Site:	Queenie Fed Com	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site Error:	0.00	**North Reference:**	Grid
Reference Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USAEDMDB
Reference Design:	Plan 1 12-15-23	**Offset TVD Reference:**	Offset Datum

Offset Design Queenie Fed Com 503H - OH - Plan 1 12-15-23 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+IFR1+MS — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Center +N/-S (usft)	Offset Wellbore Center +E/-W (usft)	Distance Between Centers (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,400.00	2,400.00	2,393.40	2,392.16	8.58	8.51	-79.22	10.63	-55.83	57.37	40.42	16.95	3.384	
2,500.00	2,500.00	2,490.03	2,487.64	8.93	8.85	-80.00	12.45	-70.56	72.70	55.14	17.56	4.139	
2,600.00	2,600.00	2,585.54	2,581.47	9.29	9.18	-80.59	14.62	-88.25	91.35	73.20	18.15	5.032	
2,700.00	2,700.00	2,679.76	2,673.40	9.65	9.52	-81.04	17.15	-108.73	113.24	94.52	18.72	6.049	
2,800.00	2,800.00	2,772.50	2,763.17	10.00	9.85	-81.38	19.99	-131.81	138.31	119.05	19.26	7.179	
2,900.00	2,900.00	2,864.29	2,851.25	10.36	10.17	-81.64	23.15	-157.46	166.45	146.64	19.81	8.403	
3,000.00	3,000.00	2,959.91	2,942.67	10.72	10.52	-81.84	26.57	-185.26	195.74	175.25	20.49	9.552	
3,100.00	3,100.00	3,055.52	3,034.09	11.07	10.87	-81.99	29.99	-213.06	225.03	203.85	21.18	10.625	
3,200.00	3,200.00	3,151.13	3,125.50	11.43	11.23	-82.10	33.42	-240.86	254.32	232.45	21.87	11.628	
3,300.00	3,300.00	3,246.74	3,216.92	11.79	11.58	-82.19	36.84	-268.66	283.61	261.05	22.57	12.568	
3,400.00	3,400.00	3,342.36	3,308.34	12.14	11.94	-82.27	40.27	-296.46	312.91	289.64	23.26	13.450	
3,500.00	3,500.00	3,437.97	3,399.76	12.50	12.30	-82.33	43.69	-324.26	342.20	318.24	23.96	14.280	
3,600.00	3,600.00	3,533.58	3,491.17	12.86	12.67	-82.38	47.11	-352.06	371.50	346.83	24.67	15.060	
3,700.00	3,700.00	3,629.19	3,582.59	13.22	13.03	-82.42	50.54	-379.86	400.79	375.42	25.37	15.796	
3,800.00	3,800.00	3,724.81	3,674.01	13.57	13.40	-82.46	53.96	-407.66	430.09	404.00	26.08	16.490	
3,900.00	3,900.00	3,820.42	3,765.43	13.93	13.77	-82.49	57.38	-435.46	459.38	432.59	26.79	17.147	
4,000.00	4,000.00	3,916.03	3,856.84	14.29	14.14	-82.52	60.81	-463.26	488.67	461.17	27.50	17.769	
4,100.00	4,100.00	4,011.64	3,948.26	14.65	14.51	-82.55	64.23	-491.06	517.97	489.75	28.22	18.358	
4,200.00	4,200.00	4,107.26	4,039.68	15.00	14.89	-82.57	67.65	-518.86	547.26	518.33	28.93	18.917	
4,300.00	4,300.00	4,202.87	4,131.10	15.36	15.26	-82.59	71.08	-546.66	576.56	546.91	29.65	19.448	
4,400.00	4,400.00	4,298.48	4,222.51	15.72	15.64	-82.61	74.50	-574.46	605.85	575.49	30.36	19.953	
4,431.50	4,431.50	4,328.60	4,251.31	15.83	15.75	-82.62	75.58	-583.22	615.08	584.49	30.59	20.107	
4,500.00	4,499.99	4,394.00	4,313.84	16.08	16.01	-112.11	77.92	-602.24	635.45	604.37	31.08	20.445	
4,600.00	4,599.90	4,489.05	4,404.72	16.43	16.39	-111.87	81.32	-629.87	666.24	634.45	31.79	20.954	
4,700.00	4,699.61	4,583.52	4,495.04	16.79	16.76	-111.84	84.71	-657.34	698.32	665.81	32.50	21.484	
4,800.00	4,798.98	4,677.28	4,584.69	17.14	17.13	-112.00	88.06	-684.60	731.72	698.51	33.21	22.034	
4,900.00	4,897.91	4,770.21	4,673.55	17.49	17.50	-112.31	91.39	-711.62	766.51	732.61	33.91	22.606	
4,931.60	4,929.06	4,799.39	4,701.45	17.61	17.62	-112.43	92.44	-720.11	777.81	743.68	34.13	22.792	
5,000.00	4,996.42	4,862.45	4,761.74	17.85	17.87	-113.17	94.69	-738.44	802.49	767.89	34.60	23.193	
5,100.00	5,094.90	4,954.64	4,849.88	18.20	18.24	-114.18	98.00	-765.25	838.77	803.48	35.30	23.764	
5,200.00	5,193.38	5,046.83	4,938.03	18.55	18.61	-115.10	101.30	-792.05	875.26	839.27	35.99	24.318	
5,300.00	5,291.86	5,139.02	5,026.17	18.90	18.98	-115.96	104.60	-818.86	911.94	875.25	36.69	24.856	
5,400.00	5,390.35	5,231.21	5,114.31	19.26	19.35	-116.75	107.90	-845.66	948.79	911.40	37.39	25.377	
5,479.30	5,468.44	5,304.31	5,184.21	19.54	19.64	-117.33	110.52	-866.92	978.11	940.16	37.94	25.778	
5,500.00	5,488.84	5,323.41	5,202.48	19.61	19.72	-117.62	111.20	-872.47	985.74	947.65	38.09	25.880	

PHOENIX TECHNOLOGY SERVICES

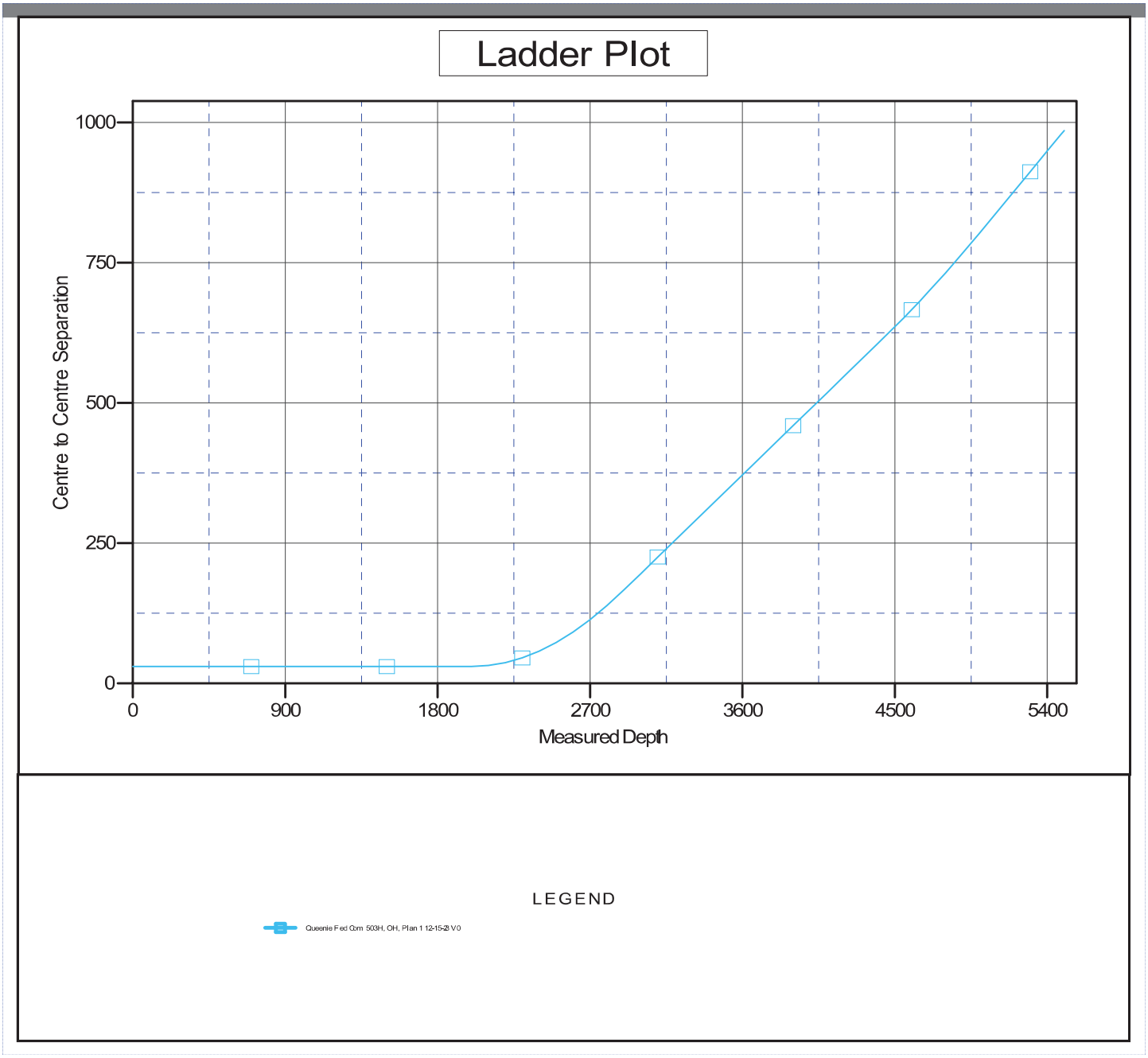
Anticollision Report

Marathon Oil Corporation

Company:	Marathon Oil Permian LLC	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
Reference Site:	Queenie Fed Com	**MD Reference:**	RKB @ 3552.60usft (Cactus 171)
Site Error:	0.00	**North Reference:**	Grid
Reference Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USAEDMDB
Reference Design:	Plan 1 12-15-23	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3552.60usft (Cactus 171)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.000000 W °

Coordinates are relative to: Queenie Fed Com 504H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.316°



CC - Min center to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

Marathon Oil Corporation

Company:	Marathon Oil Permian LLC	**Local Co-ordinate Reference:**	Well Queenie Fed Com 504H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3552.60usft (Cactus 171)
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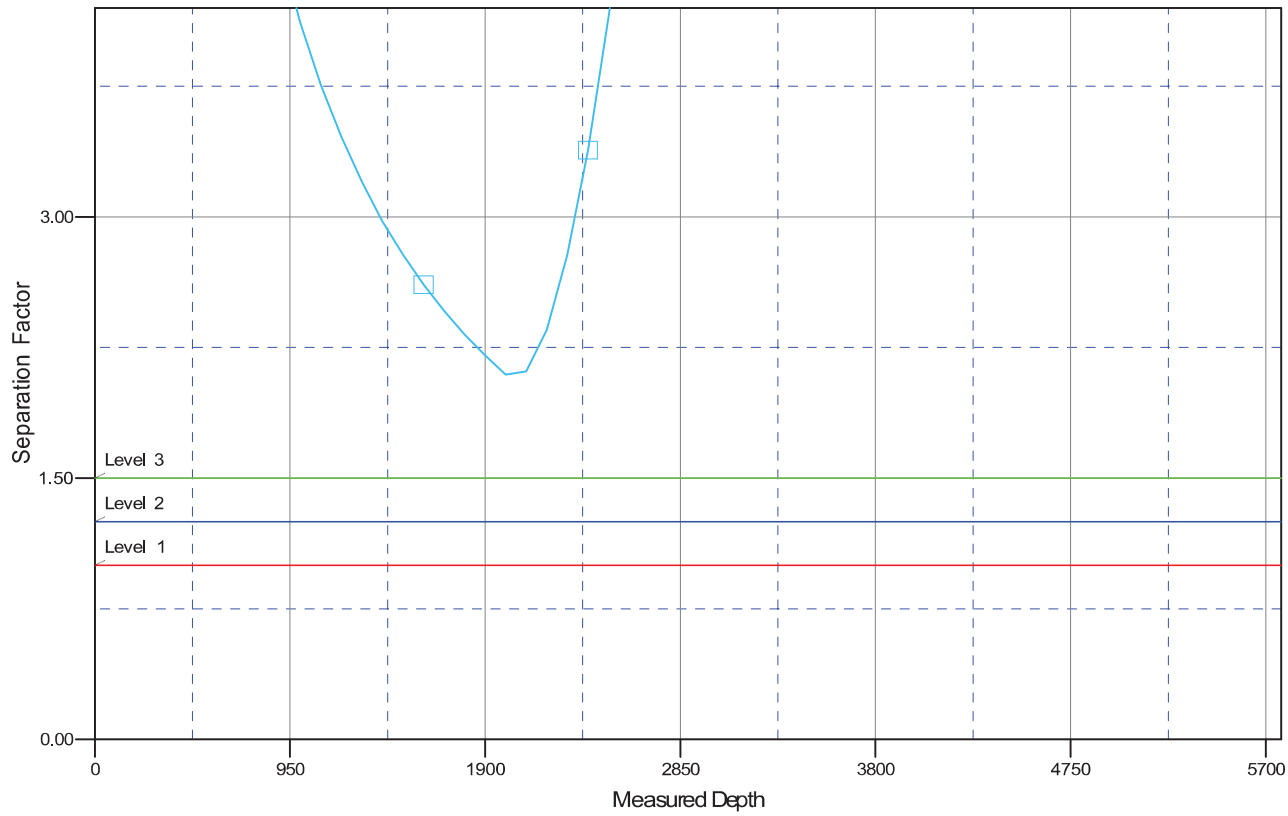
Site Error:	0.00	**North Reference:**	Grid
Reference Well:	Queenie Fed Com 504H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USAEDMDB
Reference Design:	Plan 1 12-15-23	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3552.60usft (Cactus 171)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.000000 W °

Coordinates are relative to: Queenie Fed Com 504H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.316°

Separation Factor Plot



LEGEND

Queenie Fed Com 503H, OH, Plan 1 12-15-23 V0

CC - Min center to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 297622

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 297622
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	12/27/2023