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. NMNM85939

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. COLIBRI 10 WA FEDERAL/10H

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 WC-025 G-08 S223227D; UPPER WOLFCAMP

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SEC 10/T23S/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# 30-025-51535

Marathon Oil Permian LLC, request to make the following changes to the approved APD:

Well Name Change
From: Colibri 10 WA Federal 10H
To: Catnip Everdeen Federal Com 502H

Pool Change:
From: WC-025 G-08 S223227D; Upper Wolfcamp (98236)
To: Diamondtail; Bone Spring (17644)

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* ADRIAN COVARRUBIAS / Ph: (713) 296-3368

Title regulatory Compliance Representative

Signature Adrian Covarrubias

Date 06/05/2023

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved

Title Petroleum Engineer

Date 07/07/2023

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)

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

SHL

From: 392 FSL 1437 FEL (Sec 10-23S-32E)

To: 393 FSL 1557 FEL (Sec 10-23S-32E)

BHL

From 100 FNL 330 FEL (Sec 10-23S-32E)

To 100 FNL 1320 FEL (Sec 3-23S-32E)

Update Drilling, Casing, and Cementing Plans.

Please see attached updated C-102, Drill Plan, and Directional Survey.

Location of Well

0. SHL: SWSE / 392 FSL / 1437 FEL / TWSP: 23S / RANGE: 32E / SECTION: 10 / LAT: 32.3130036 / LONG: -103.6586148 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 100 FSL / 330 FEL / TWSP: 23S / RANGE: 32E / SECTION: 10 / LAT: 32.3122086 / LONG: -103.655035 (TVD: 12430 feet, MD: 12525 feet)

BHL: NENE / 100 FNL / 330 FEL / TWSP: 23S / RANGE: 32E / SECTION: 10 / LAT: 32.3261882 / LONG: -103.6550404 (TVD: 12430 feet, MD: 17396 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
30-025-51535	17644	DIAMONDTAIL; BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
334072	CATNIP EVERDEEN FEDERAL COM	502H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372098	MARATHON OIL PERMIAN, LLC	3706'

[10] Surface Location

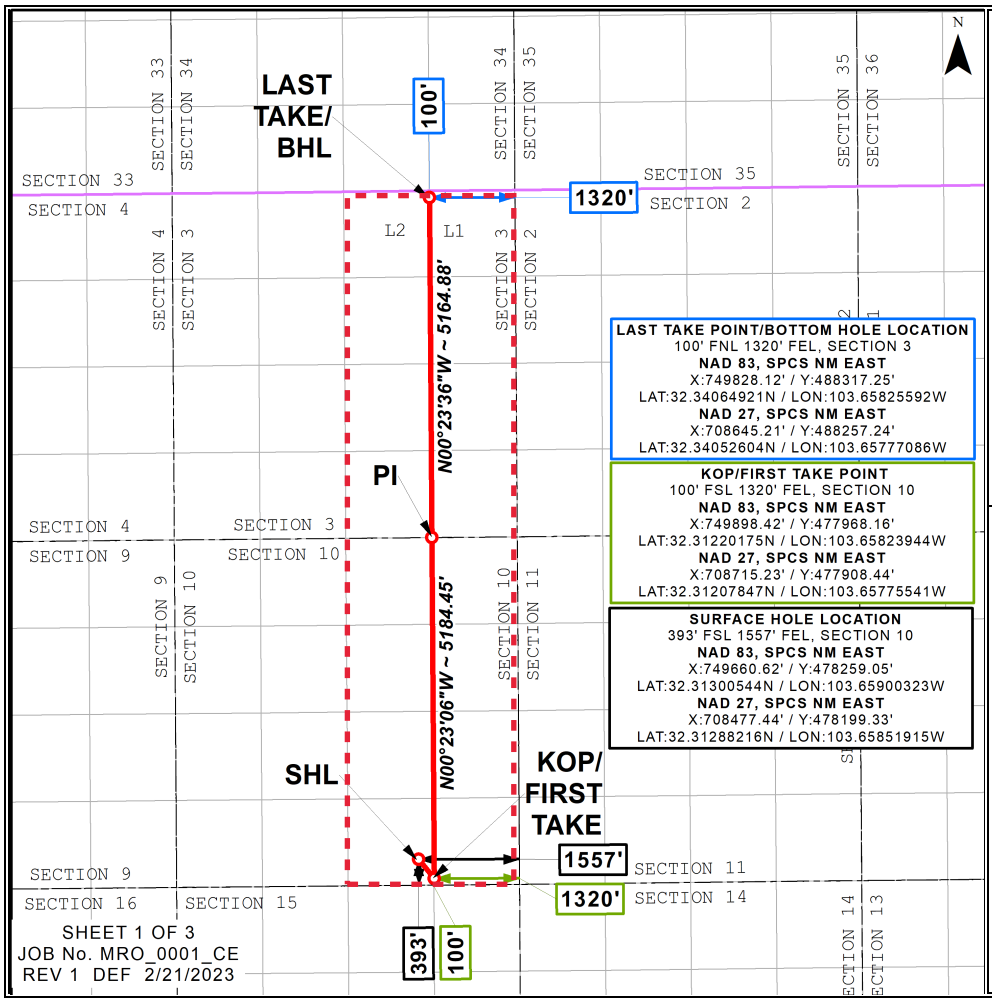
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	10	23S	32E		393	SOUTH	1557	EAST	LEA

[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
L 1	3	23S	32E		100	NORTH	1320	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640			

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.



[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.

Adrian Covarrubias 6/5/2023
Signature Date

Adrian Covarrubias
Printed Name

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.

MARCH 3, 2023
Date of Survey

Signature and Seal of Professional Surveyor:

LLOYD P. SHORT NEW MEXICO 21653 PROFESSIONAL SURVEYOR

LLOYD P. SHORT 21653
Certificate Number

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99914426 Convergence Angle: 0°07'17.93119"

MARATHON OIL PERMIAN, LLC.

DRILLING AND OPERATIONS PLAN

WELL NAME & NUMBER: **CATNIP EVERDEEN FEDERAL COM 502H**

LOCATION: SECTION **10** TOWNSHIP **23S** RANGE **32E**

LEA COUNTY, **NEW MEXICO**

Section 1: GEOLOGICAL FORMATIONS

Name of Surface Formation: Permian

Elevation: 3706 *feet*

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	1221	1248	2485	Anhydrite	Brine	No
Salado	1696	1723	2010	Salt/Anhydrite	Brine	No
Castile	3604	3631	102	Salt/Anhydrite	Brine	No
Base of Salt (BX)	4942	4969	-1236	Salt/Anhydrite	Brine	No
Lamar	4942	4969	-1236	Sandstone/Shale	None	No
Bell Canyon	4994	5021	-1288	Sandstone	Oil	No
Cherry Canyon	6117	6144	-2411	Sandstone	Oil	No
Brushy Canyon	7094	7121	-3388	Sandstone	Oil	No
Bone Spring Lime	8757	8784	-5051	Limestone	None	No
Upper Avalon Shale	8887	8914	-5181	Shale	Oil	Yes
1st Bone Spring Sand	9940	9967	-6234	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	10242	10269	-6536	Limestone/Shale	None	No
2nd Bone Spring Sand	10607	10634	-6901	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	11115	11142	-7409	Limestone	Oil	No
3rd Bone Spring Sand	11890	11917	-8184	Sandstone	Oil	Yes
Wolfcamp	12176	12203	-8470	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	12395	12422	-8689	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	12831	12858	-9125	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp C	12997	13024	-9291	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp D	13108	13135	-9402	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 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 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 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.

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	1318	0	1291	3706	2415	54.5	J55	BTC	5.22	1.81	BUOY	4.52	BUOY	4.52
Intermediate	12.25	9.625	0	10241	0	10220	3706	-6514	40	P110HC	BTC	1.20	1.42	BUOY	2.44	BUOY	2.44
Production	8.75	5.5	0	21067	0	10893	3706	-7187	23	P110HC	TLW	2.53	1.26	BUOY	2.22	BUOY	2.22
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h												Safety Factors will Meet or Exceed					

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

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

Section 4: CEMENT PROGRAM

String Type	Lead/Tail	Top MD	Bottom MD	Quantity (sks)	Yield (ft³/sks)	Density (ppg)	Slurry Volume (ft³)	Excess (%)	Cement Type	Additives
Surface	Lead	0	1168	501	2.12	12.5	1063	25	Class C	Extender,Accelerator,LCM
Surface	Tail	1168	1318	99	1.32	14.8	130	25	Class C	Accelerator
Intermediate	Lead	0	9741	1787	2.18	12.4	3895	25	Class C	Extender,Accelerator,LCM
Intermediate	Tail	9741	10241	147	1.33	14.8	196	25	Class C	Retarder
Production	Tail	9941	21067	2132	1.68	13	3581	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	1318	Water Based Mud	8.4	8.8
1318	10241	Brine or Oil Based Mud	9.2	10.2
10241	21067	Oil Based Mud	10.5	12.5

Section 6: TESTING, LOGGING, CORING

List of production tests including testing procedures, equipment and safety measures:
GR from TD to surface (horizontal well - vertical portion of hole)

List of open and cased hole logs run in the well:
GR while drilling from Intermediate casing shoe to TD.

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

Section 7: ANTICIPATED PRESSURE

Anticipated Bottom Hole Pressure: **7080** 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.

DRILL PLAN CHANGE REGISTER

CATNIP EVERDEEN FEDERAL COM 502H
SECTION 10, TOWNSHIP 23S, RANGE 32E
LEA COUNTY, NEW MEXICO

Original Document Date:	Friday, April 21, 2023
Prepared By:	Court Nelson
Submitted By:	Adrian Covarrubias

Revised Date:	Monday, October 18, 2021	Submittal Date:	Monday, November 1, 2021
Revised By:	Court Nelson (Drilling Engineer)	Submittal Type:	NOI Change to AAPD Sundry Notice
	Matt Baker (Geologist)	Submitted By:	Melissa Szudera

Summary of Revisions:

Section	Description
2 - Casing	Removed second intermediate string
4 - Cement	Removed second intermediate string
5 - Mud	Removed second intermediate string

Revised Date:		Submittal Date:	
Revised By:		Submittal Type:	
		Submitted By:	

Summary of Revisions:

Section	Description

Revised Date:		Submittal Date:	
Revised By:		Submittal Type:	
		Submitted By:	

Summary of Revisions:

Section	Description

Revised Date:		Submittal Date:	
Revised By:		Submittal Type:	
		Submitted By:	

Summary of Revisions:

Section	Description

RKB @ 3729.60usft (Cactus 169)

Ground Level: 3706.00

Marathon Oil Corporation

Project: Lea County, NM (NAD27 NME)
Site: Catnip Everdeen
Well: Catnip Everdeen Federal Com 502H
Wellbore: OH
Design: Plan 1 04-13-23
Rig: Cactus 169

PHOENIX TECHNOLOGY SERVICES

T G M

Azimuths to Grid North
True North: -0.36°
Magnetic North: 5.92°

Magnetic Field
Strength: 47565.6nT
Dip Angle: 59.88°
Date: 6/10/2023
Model: MVHD

WELL DETAILS

3706.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	478199.33	708477.44	32° 18' 46.375804 N	103° 39' 30.668890 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP - CEFC 502H	10893.60	-290.89	237.79	477908.44	708715.23	32° 18' 43.482463 N	103° 39' 27.919517 W
LTP/BHL - CEFC 502H	10893.60	10057.91	167.77	488257.24	708645.21	32° 20' 25.893701 N	103° 39' 27.975069 W
TP1 - CEFC 502H	10893.60	4893.30	203.10	483092.63	708680.54	32° 19' 34.784998 N	103° 39' 27.942915 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	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.000	0.00		KOP, Begin 2.00°/100' Build
3	1600.13	6.00	145.06	1599.58	-12.88	8.99	2.00	145.064	-12.94		Hold 6.00° Inc at 145.06° Azm
4	5276.12	6.00	145.06	5255.42	-328.01	229.13	0.00	0.000	-329.56		Begin 2.00°/100' Drop
5	5576.25	0.00	0.00	5555.00	-340.89	238.12	2.00	180.000	-342.50		Begin Vertical Hold
6	10341.89	0.00	0.00	10320.64	-340.89	238.12	0.00	0.000	-342.50		KOP2, Begin 10.00°/100' Build
7	11241.89	90.00	359.62	10893.60	232.06	234.29	10.00	359.617	230.46		LP, Hold 90.00° Inc at 359.62° Azm
8	15903.24	90.00	359.62	10893.60	4893.30	203.10	0.00	0.000	4891.80	TP1 - CEFC 502H	Begin 2.00°/100' Turn
9	15903.67	90.00	359.61	10893.60	4893.73	203.10	2.00	-90.000	4892.23		Begin 2.00°/100' Turn
10	21067.97	90.00	359.61	10893.60	10057.91	167.77	0.00	0.000	10056.54	LTP/BHL - CEFC 502H	TD at 21067.97

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

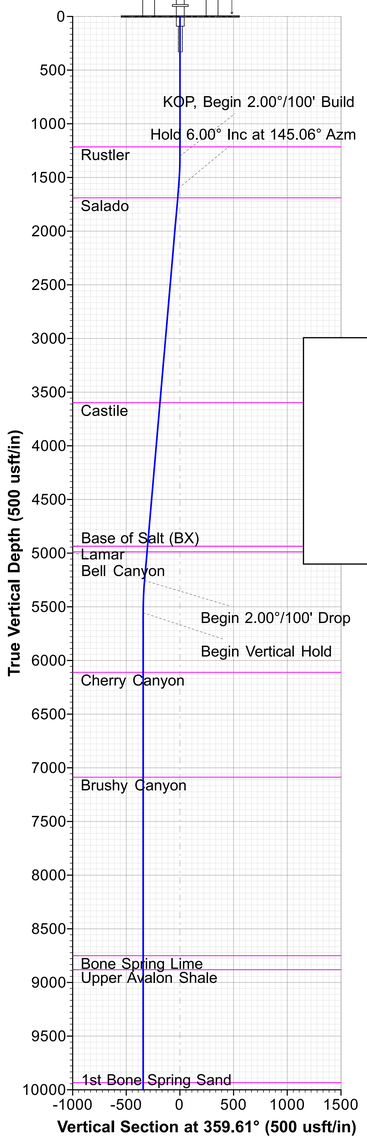
Local Origin: Well Catnip Everdeen Federal Com 502H, Grid North

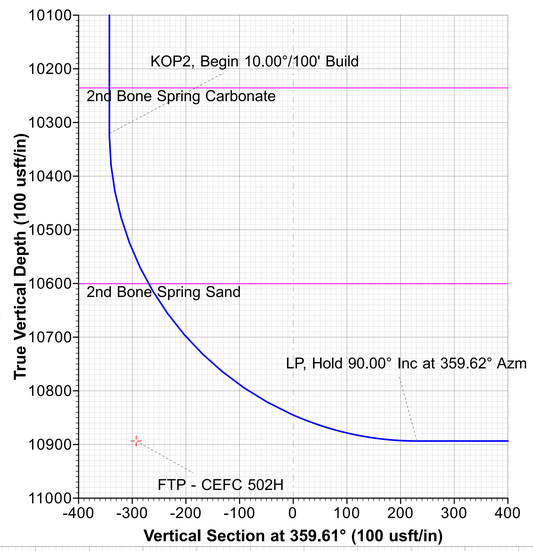
Latitude: 32° 18' 46.375804 N
Longitude: 103° 39' 30.668890 W

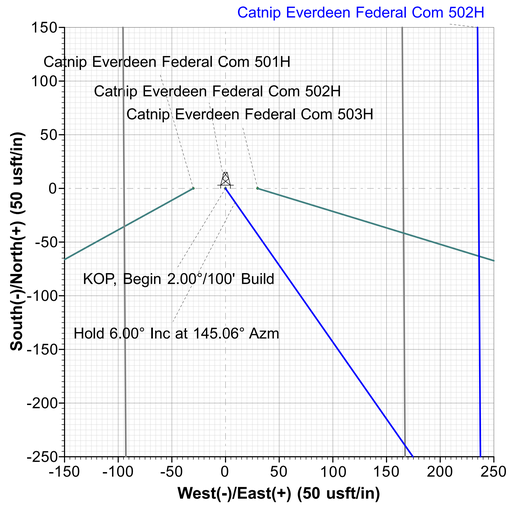
Grid East: 708477.44
Grid North: 478199.33
Scale Factor: 1.000

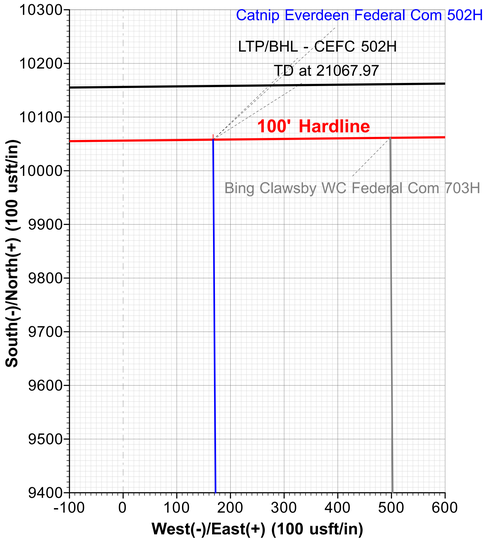
Geomagnetic Model: MVHD
Sample Date: 10-Jun-23
Magnetic Declination: 6.285°
Dip Angle from Horizontal: 59.880°
Magnetic Field Strength: 47565.60000253nT

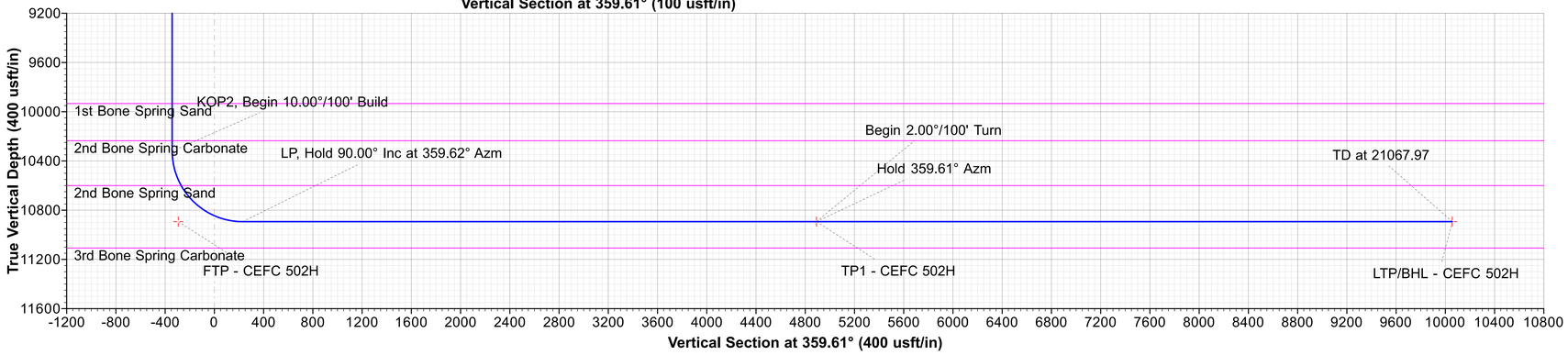
To convert a Magnetic Direction to a Grid Direction, Add 5.924°
To convert a Magnetic Direction to a True Direction, Add 6.285° East
To convert a True Direction to a Grid Direction, Subtract 0.361°

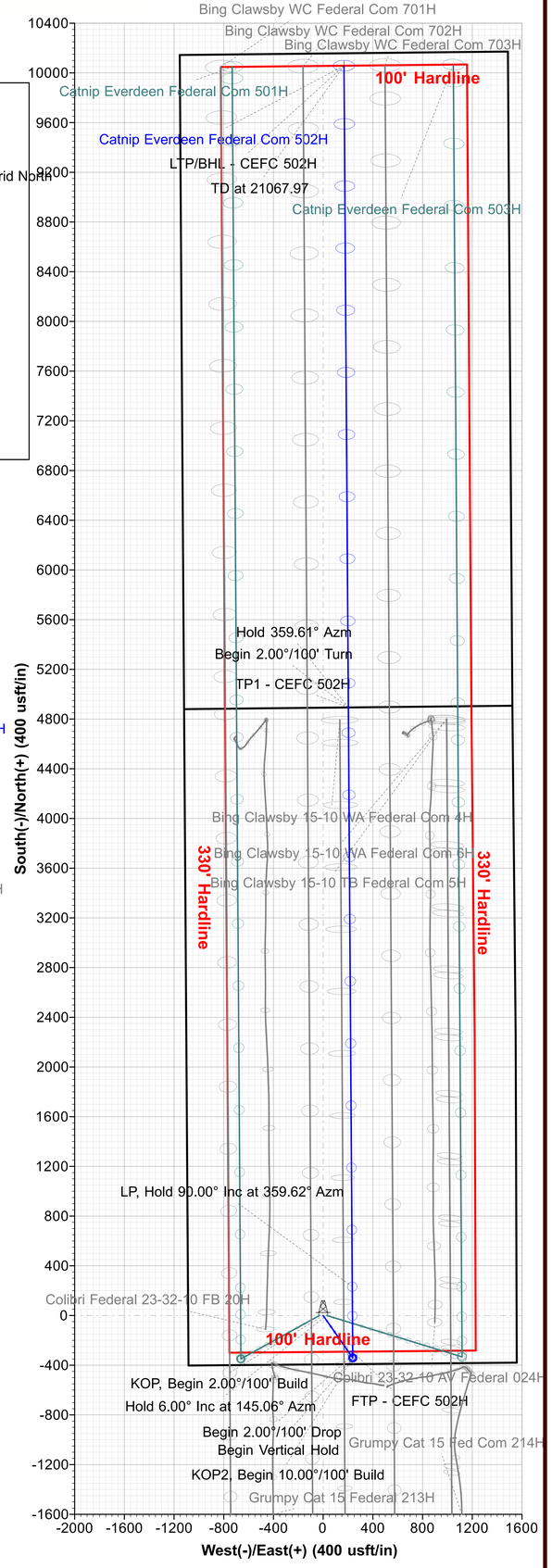












Date: 12:53, April 13 2023

PHOENIX
TECHNOLOGY SERVICES

Marathon Oil Permian LLC

Lea County, NM (NAD27 NME)
Catnip Everdeen
Catnip Everdeen Federal Com 502H

OH

Plan: Plan 1 04-13-23

Standard Planning Report

13 April, 2023

Marathon Oil Corporation

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Catnip Everdeen Federal Com 502H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3729.60usft (Cactus 169)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3729.60usft (Cactus 169)
Site:	Catnip Everdeen	**North Reference:**	Grid
Well:	Catnip Everdeen Federal Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 04-13-23		

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 Catnip Everdeen

Site Position:		**Northing:**	478,199.33 usft	**Latitude:**	32° 18' 46.377673 N
From:	Map	**Easting:**	708,447.44 usft	**Longitude:**	103° 39' 31.018451 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Catnip Everdeen Federal Com 502H

Well Position	**+N/-S**	0.00 usft	**Northing:**	478,199.33 usft	**Latitude:**	32° 18' 46.375804 N
	+E/-W	0.00 usft	**Easting:**	708,477.44 usft	**Longitude:**	103° 39' 30.668890 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,706.00 usft
Grid Convergence:		0.361 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	6/10/23	6.285	59.880	47,565.60000253

Design Plan 1 04-13-23

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	359.61

Plan Survey Tool Program **Date** 4/13/23

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	21,067.97	Plan 1 04-13-23 (OH)	MWD+IFR1+MS OWSG Rev. 2 MWD + IFR1	

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

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Well:	Catnip Everdeen Federal Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 04-13-23		

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	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,600.13	6.00	145.06	1,599.58	-12.88	8.99	2.00	2.00	0.00	145.064	
5,276.12	6.00	145.06	5,255.42	-328.01	229.13	0.00	0.00	0.00	0.000	
5,576.25	0.00	0.00	5,555.00	-340.89	238.12	2.00	-2.00	0.00	180.000	
10,341.89	0.00	0.00	10,320.64	-340.89	238.12	0.00	0.00	0.00	0.000	
11,241.89	90.00	359.62	10,893.60	232.06	234.29	10.00	10.00	0.00	359.617	
15,903.24	90.00	359.62	10,893.60	4,893.30	203.10	0.00	0.00	0.00	0.000	TP1 - CEFC 502H
15,903.67	90.00	359.61	10,893.60	4,893.73	203.10	2.00	0.00	-2.00	-90.000	
21,067.97	90.00	359.61	10,893.60	10,057.91	167.77	0.00	0.00	0.00	0.000	LTP/BHL - CEFC 5(

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

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Well:	Catnip Everdeen Federal Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 04-13-23		

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
1,214.60	0.00	0.00	1,214.60	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
1,400.00	2.00	145.06	1,399.98	-1.43	1.00	-1.44	2.00	2.00	0.00
1,500.00	4.00	145.06	1,499.84	-5.72	4.00	-5.75	2.00	2.00	0.00
1,600.00	6.00	145.06	1,599.45	-12.87	8.99	-12.93	2.00	2.00	0.00
1,600.13	6.00	145.06	1,599.58	-12.88	8.99	-12.94	2.00	2.00	0.00
Hold 6.00° Inc at 145.06° Azm									
1,690.65	6.00	145.06	1,689.60	-20.64	14.42	-20.73	0.00	0.00	0.00
Salado									
1,700.00	6.00	145.06	1,698.90	-21.44	14.98	-21.54	0.00	0.00	0.00
1,800.00	6.00	145.06	1,798.36	-30.01	20.96	-30.15	0.00	0.00	0.00
1,900.00	6.00	145.06	1,897.81	-38.58	26.95	-38.77	0.00	0.00	0.00
2,000.00	6.00	145.06	1,997.26	-47.16	32.94	-47.38	0.00	0.00	0.00
2,100.00	6.00	145.06	2,096.71	-55.73	38.93	-55.99	0.00	0.00	0.00
2,200.00	6.00	145.06	2,196.16	-64.30	44.92	-64.61	0.00	0.00	0.00
2,300.00	6.00	145.06	2,295.61	-72.88	50.91	-73.22	0.00	0.00	0.00
2,400.00	6.00	145.06	2,395.07	-81.45	56.89	-81.83	0.00	0.00	0.00
2,500.00	6.00	145.06	2,494.52	-90.02	62.88	-90.45	0.00	0.00	0.00
2,600.00	6.00	145.06	2,593.97	-98.59	68.87	-99.06	0.00	0.00	0.00
2,700.00	6.00	145.06	2,693.42	-107.17	74.86	-107.67	0.00	0.00	0.00
2,800.00	6.00	145.06	2,792.87	-115.74	80.85	-116.29	0.00	0.00	0.00
2,900.00	6.00	145.06	2,892.32	-124.31	86.84	-124.90	0.00	0.00	0.00
3,000.00	6.00	145.06	2,991.78	-132.88	92.83	-133.51	0.00	0.00	0.00
3,100.00	6.00	145.06	3,091.23	-141.46	98.81	-142.13	0.00	0.00	0.00
3,200.00	6.00	145.06	3,190.68	-150.03	104.80	-150.74	0.00	0.00	0.00
3,300.00	6.00	145.06	3,290.13	-158.60	110.79	-159.35	0.00	0.00	0.00
3,400.00	6.00	145.06	3,389.58	-167.18	116.78	-167.97	0.00	0.00	0.00
3,500.00	6.00	145.06	3,489.03	-175.75	122.77	-176.58	0.00	0.00	0.00
3,600.00	6.00	145.06	3,588.49	-184.32	128.76	-185.19	0.00	0.00	0.00
3,609.16	6.00	145.06	3,597.60	-185.11	129.30	-185.98	0.00	0.00	0.00
Castile									
3,700.00	6.00	145.06	3,687.94	-192.89	134.74	-193.81	0.00	0.00	0.00
3,800.00	6.00	145.06	3,787.39	-201.47	140.73	-202.42	0.00	0.00	0.00
3,900.00	6.00	145.06	3,886.84	-210.04	146.72	-211.03	0.00	0.00	0.00
4,000.00	6.00	145.06	3,986.29	-218.61	152.71	-219.65	0.00	0.00	0.00
4,100.00	6.00	145.06	4,085.75	-227.19	158.70	-228.26	0.00	0.00	0.00
4,200.00	6.00	145.06	4,185.20	-235.76	164.69	-236.87	0.00	0.00	0.00
4,300.00	6.00	145.06	4,284.65	-244.33	170.68	-245.49	0.00	0.00	0.00
4,400.00	6.00	145.06	4,384.10	-252.90	176.66	-254.10	0.00	0.00	0.00
4,500.00	6.00	145.06	4,483.55	-261.48	182.65	-262.71	0.00	0.00	0.00
4,600.00	6.00	145.06	4,583.00	-270.05	188.64	-271.33	0.00	0.00	0.00
4,700.00	6.00	145.06	4,682.46	-278.62	194.63	-279.94	0.00	0.00	0.00
4,800.00	6.00	145.06	4,781.91	-287.20	200.62	-288.55	0.00	0.00	0.00
4,900.00	6.00	145.06	4,881.36	-295.77	206.61	-297.17	0.00	0.00	0.00
4,954.54	6.00	145.06	4,935.60	-300.44	209.87	-301.87	0.00	0.00	0.00
Base of Salt (BX) - Lamar									
5,000.00	6.00	145.06	4,980.81	-304.34	212.59	-305.78	0.00	0.00	0.00
5,006.83	6.00	145.06	4,987.60	-304.93	213.00	-306.37	0.00	0.00	0.00
Bell Canyon									
5,100.00	6.00	145.06	5,080.26	-312.91	218.58	-314.39	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

Marathon Oil Corporation

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Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3729.60usft (Cactus 169)
Site:	Catnip Everdeen	**North Reference:**	Grid
Well:	Catnip Everdeen Federal Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 04-13-23		

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)
5,200.00	6.00	145.06	5,179.71	-321.49	224.57	-323.01	0.00	0.00	0.00
5,276.12	6.00	145.06	5,255.42	-328.01	229.13	-329.56	0.00	0.00	0.00
Begin 2.00°/100' Drop									
5,300.00	5.53	145.06	5,279.18	-329.98	230.50	-331.54	2.00	-2.00	0.00
5,400.00	3.53	145.06	5,378.86	-336.45	235.02	-338.04	2.00	-2.00	0.00
5,500.00	1.53	145.06	5,478.76	-340.06	237.54	-341.67	2.00	-2.00	0.00
5,576.25	0.00	0.00	5,555.00	-340.89	238.12	-342.50	2.00	-2.00	0.00
Begin Vertical Hold									
6,131.85	0.00	0.00	6,110.60	-340.89	238.12	-342.50	0.00	0.00	0.00
Cherry Canyon									
7,108.85	0.00	0.00	7,087.60	-340.89	238.12	-342.50	0.00	0.00	0.00
Brushy Canyon									
8,771.85	0.00	0.00	8,750.60	-340.89	238.12	-342.50	0.00	0.00	0.00
Bone Spring Lime									
8,901.85	0.00	0.00	8,880.60	-340.89	238.12	-342.50	0.00	0.00	0.00
Upper Avalon Shale									
9,954.85	0.00	0.00	9,933.60	-340.89	238.12	-342.50	0.00	0.00	0.00
1st Bone Spring Sand									
10,256.85	0.00	0.00	10,235.60	-340.89	238.12	-342.50	0.00	0.00	0.00
2nd Bone Spring Carbonate									
10,341.89	0.00	0.00	10,320.64	-340.89	238.12	-342.50	0.00	0.00	0.00
KOP2, Begin 10.00°/100' Build									
10,400.00	5.81	359.62	10,378.65	-337.95	238.10	-339.56	10.00	10.00	0.00
10,500.00	15.81	359.62	10,476.75	-319.21	237.98	-320.83	10.00	10.00	0.00
10,600.00	25.81	359.62	10,570.11	-283.73	237.74	-285.34	10.00	10.00	0.00
10,634.39	29.25	359.62	10,600.60	-267.84	237.64	-269.45	10.00	10.00	0.00
2nd Bone Spring Sand									
10,700.00	35.81	359.62	10,655.88	-232.58	237.40	-234.19	10.00	10.00	0.00
10,800.00	45.81	359.62	10,731.48	-167.31	236.96	-168.91	10.00	10.00	0.00
10,900.00	55.81	359.62	10,794.58	-89.90	236.45	-91.51	10.00	10.00	0.00
11,000.00	65.81	359.62	10,843.29	-2.71	235.86	-4.32	10.00	10.00	0.00
11,100.00	75.81	359.62	10,876.12	91.61	235.23	90.01	10.00	10.00	0.00
11,200.00	85.81	359.62	10,892.07	190.20	234.57	188.60	10.00	10.00	0.00
11,241.89	90.00	359.62	10,893.60	232.06	234.29	230.46	10.00	10.00	0.00
LP, Hold 90.00° Inc at 359.62° Azm									
11,300.00	90.00	359.62	10,893.60	290.16	233.90	288.56	0.00	0.00	0.00
11,400.00	90.00	359.62	10,893.60	390.16	233.23	388.56	0.00	0.00	0.00
11,500.00	90.00	359.62	10,893.60	490.16	232.56	488.56	0.00	0.00	0.00
11,600.00	90.00	359.62	10,893.60	590.15	231.89	588.56	0.00	0.00	0.00
11,700.00	90.00	359.62	10,893.60	690.15	231.23	688.56	0.00	0.00	0.00
11,800.00	90.00	359.62	10,893.60	790.15	230.56	788.56	0.00	0.00	0.00
11,900.00	90.00	359.62	10,893.60	890.15	229.89	888.56	0.00	0.00	0.00
12,000.00	90.00	359.62	10,893.60	990.14	229.22	988.56	0.00	0.00	0.00
12,100.00	90.00	359.62	10,893.60	1,090.14	228.55	1,088.56	0.00	0.00	0.00
12,200.00	90.00	359.62	10,893.60	1,190.14	227.88	1,188.56	0.00	0.00	0.00
12,300.00	90.00	359.62	10,893.60	1,290.14	227.21	1,288.56	0.00	0.00	0.00
12,400.00	90.00	359.62	10,893.60	1,390.14	226.54	1,388.56	0.00	0.00	0.00
12,500.00	90.00	359.62	10,893.60	1,490.13	225.87	1,488.56	0.00	0.00	0.00
12,600.00	90.00	359.62	10,893.60	1,590.13	225.20	1,588.56	0.00	0.00	0.00
12,700.00	90.00	359.62	10,893.60	1,690.13	224.53	1,688.56	0.00	0.00	0.00
12,800.00	90.00	359.62	10,893.60	1,790.13	223.86	1,788.56	0.00	0.00	0.00
12,900.00	90.00	359.62	10,893.60	1,890.12	223.20	1,888.56	0.00	0.00	0.00
13,000.00	90.00	359.62	10,893.60	1,990.12	222.53	1,988.56	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

Marathon Oil Corporation

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Design:	Plan 1 04-13-23		

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)
13,100.00	90.00	359.62	10,893.60	2,090.12	221.86	2,088.56	0.00	0.00	0.00
13,200.00	90.00	359.62	10,893.60	2,190.12	221.19	2,188.56	0.00	0.00	0.00
13,300.00	90.00	359.62	10,893.60	2,290.12	220.52	2,288.56	0.00	0.00	0.00
13,400.00	90.00	359.62	10,893.60	2,390.11	219.85	2,388.56	0.00	0.00	0.00
13,500.00	90.00	359.62	10,893.60	2,490.11	219.18	2,488.56	0.00	0.00	0.00
13,600.00	90.00	359.62	10,893.60	2,590.11	218.51	2,588.56	0.00	0.00	0.00
13,700.00	90.00	359.62	10,893.60	2,690.11	217.84	2,688.56	0.00	0.00	0.00
13,800.00	90.00	359.62	10,893.60	2,790.10	217.17	2,788.56	0.00	0.00	0.00
13,900.00	90.00	359.62	10,893.60	2,890.10	216.50	2,888.56	0.00	0.00	0.00
14,000.00	90.00	359.62	10,893.60	2,990.10	215.84	2,988.56	0.00	0.00	0.00
14,100.00	90.00	359.62	10,893.60	3,090.10	215.17	3,088.56	0.00	0.00	0.00
14,200.00	90.00	359.62	10,893.60	3,190.10	214.50	3,188.56	0.00	0.00	0.00
14,300.00	90.00	359.62	10,893.60	3,290.09	213.83	3,288.56	0.00	0.00	0.00
14,400.00	90.00	359.62	10,893.60	3,390.09	213.16	3,388.56	0.00	0.00	0.00
14,500.00	90.00	359.62	10,893.60	3,490.09	212.49	3,488.56	0.00	0.00	0.00
14,600.00	90.00	359.62	10,893.60	3,590.09	211.82	3,588.56	0.00	0.00	0.00
14,700.00	90.00	359.62	10,893.60	3,690.08	211.15	3,688.56	0.00	0.00	0.00
14,800.00	90.00	359.62	10,893.60	3,790.08	210.48	3,788.56	0.00	0.00	0.00
14,900.00	90.00	359.62	10,893.60	3,890.08	209.81	3,888.56	0.00	0.00	0.00
15,000.00	90.00	359.62	10,893.60	3,990.08	209.14	3,988.56	0.00	0.00	0.00
15,100.00	90.00	359.62	10,893.60	4,090.08	208.47	4,088.56	0.00	0.00	0.00
15,200.00	90.00	359.62	10,893.60	4,190.07	207.81	4,188.56	0.00	0.00	0.00
15,300.00	90.00	359.62	10,893.60	4,290.07	207.14	4,288.56	0.00	0.00	0.00
15,400.00	90.00	359.62	10,893.60	4,390.07	206.47	4,388.56	0.00	0.00	0.00
15,500.00	90.00	359.62	10,893.60	4,490.07	205.80	4,488.56	0.00	0.00	0.00
15,600.00	90.00	359.62	10,893.60	4,590.06	205.13	4,588.56	0.00	0.00	0.00
15,700.00	90.00	359.62	10,893.60	4,690.06	204.46	4,688.56	0.00	0.00	0.00
15,800.00	90.00	359.62	10,893.60	4,790.06	203.79	4,788.56	0.00	0.00	0.00
15,900.00	90.00	359.62	10,893.60	4,890.06	203.12	4,888.56	0.00	0.00	0.00
15,903.24	90.00	359.62	10,893.60	4,893.30	203.10	4,891.80	0.00	0.00	0.00
Begin 2.00°/100' Turn									
15,903.67	90.00	359.61	10,893.60	4,893.73	203.10	4,892.23	1.99	0.00	-1.99
Hold 359.61° Azm									
16,000.00	90.00	359.61	10,893.60	4,990.06	202.44	4,988.56	0.00	0.00	0.00
16,100.00	90.00	359.61	10,893.60	5,090.05	201.75	5,088.56	0.00	0.00	0.00
16,200.00	90.00	359.61	10,893.60	5,190.05	201.07	5,188.56	0.00	0.00	0.00
16,300.00	90.00	359.61	10,893.60	5,290.05	200.39	5,288.56	0.00	0.00	0.00
16,400.00	90.00	359.61	10,893.60	5,390.05	199.70	5,388.56	0.00	0.00	0.00
16,500.00	90.00	359.61	10,893.60	5,490.04	199.02	5,488.56	0.00	0.00	0.00
16,600.00	90.00	359.61	10,893.60	5,590.04	198.33	5,588.56	0.00	0.00	0.00
16,700.00	90.00	359.61	10,893.60	5,690.04	197.65	5,688.56	0.00	0.00	0.00
16,800.00	90.00	359.61	10,893.60	5,790.04	196.97	5,788.56	0.00	0.00	0.00
16,900.00	90.00	359.61	10,893.60	5,890.03	196.28	5,888.56	0.00	0.00	0.00
17,000.00	90.00	359.61	10,893.60	5,990.03	195.60	5,988.56	0.00	0.00	0.00
17,100.00	90.00	359.61	10,893.60	6,090.03	194.91	6,088.56	0.00	0.00	0.00
17,200.00	90.00	359.61	10,893.60	6,190.03	194.23	6,188.56	0.00	0.00	0.00
17,300.00	90.00	359.61	10,893.60	6,290.02	193.55	6,288.56	0.00	0.00	0.00
17,400.00	90.00	359.61	10,893.60	6,390.02	192.86	6,388.56	0.00	0.00	0.00
17,500.00	90.00	359.61	10,893.60	6,490.02	192.18	6,488.56	0.00	0.00	0.00
17,600.00	90.00	359.61	10,893.60	6,590.02	191.49	6,588.56	0.00	0.00	0.00
17,700.00	90.00	359.61	10,893.60	6,690.02	190.81	6,688.56	0.00	0.00	0.00
17,800.00	90.00	359.61	10,893.60	6,790.01	190.13	6,788.56	0.00	0.00	0.00
17,900.00	90.00	359.61	10,893.60	6,890.01	189.44	6,888.56	0.00	0.00	0.00
18,000.00	90.00	359.61	10,893.60	6,990.01	188.76	6,988.56	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Catnip Everdeen Federal Com 502H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3729.60usft (Cactus 169)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3729.60usft (Cactus 169)
Site:	Catnip Everdeen	**North Reference:**	Grid
Well:	Catnip Everdeen Federal Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 04-13-23		

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)
18,100.00	90.00	359.61	10,893.60	7,090.01	188.07	7,088.56	0.00	0.00	0.00
18,200.00	90.00	359.61	10,893.60	7,190.00	187.39	7,188.56	0.00	0.00	0.00
18,300.00	90.00	359.61	10,893.60	7,290.00	186.70	7,288.56	0.00	0.00	0.00
18,400.00	90.00	359.61	10,893.60	7,390.00	186.02	7,388.56	0.00	0.00	0.00
18,500.00	90.00	359.61	10,893.60	7,490.00	185.34	7,488.56	0.00	0.00	0.00
18,600.00	90.00	359.61	10,893.60	7,589.99	184.65	7,588.56	0.00	0.00	0.00
18,700.00	90.00	359.61	10,893.60	7,689.99	183.97	7,688.56	0.00	0.00	0.00
18,800.00	90.00	359.61	10,893.60	7,789.99	183.28	7,788.56	0.00	0.00	0.00
18,900.00	90.00	359.61	10,893.60	7,889.99	182.60	7,888.56	0.00	0.00	0.00
19,000.00	90.00	359.61	10,893.60	7,989.99	181.92	7,988.56	0.00	0.00	0.00
19,100.00	90.00	359.61	10,893.60	8,089.98	181.23	8,088.56	0.00	0.00	0.00
19,200.00	90.00	359.61	10,893.60	8,189.98	180.55	8,188.56	0.00	0.00	0.00
19,300.00	90.00	359.61	10,893.60	8,289.98	179.86	8,288.56	0.00	0.00	0.00
19,400.00	90.00	359.61	10,893.60	8,389.98	179.18	8,388.56	0.00	0.00	0.00
19,500.00	90.00	359.61	10,893.60	8,489.97	178.50	8,488.56	0.00	0.00	0.00
19,600.00	90.00	359.61	10,893.60	8,589.97	177.81	8,588.56	0.00	0.00	0.00
19,700.00	90.00	359.61	10,893.60	8,689.97	177.13	8,688.56	0.00	0.00	0.00
19,800.00	90.00	359.61	10,893.60	8,789.97	176.44	8,788.56	0.00	0.00	0.00
19,900.00	90.00	359.61	10,893.60	8,889.96	175.76	8,888.56	0.00	0.00	0.00
20,000.00	90.00	359.61	10,893.60	8,989.96	175.08	8,988.56	0.00	0.00	0.00
20,100.00	90.00	359.61	10,893.60	9,089.96	174.39	9,088.56	0.00	0.00	0.00
20,200.00	90.00	359.61	10,893.60	9,189.96	173.71	9,188.56	0.00	0.00	0.00
20,300.00	90.00	359.61	10,893.60	9,289.95	173.02	9,288.56	0.00	0.00	0.00
20,400.00	90.00	359.61	10,893.60	9,389.95	172.34	9,388.56	0.00	0.00	0.00
20,500.00	90.00	359.61	10,893.60	9,489.95	171.66	9,488.56	0.00	0.00	0.00
20,600.00	90.00	359.61	10,893.60	9,589.95	170.97	9,588.56	0.00	0.00	0.00
20,700.00	90.00	359.61	10,893.60	9,689.95	170.29	9,688.56	0.00	0.00	0.00
20,800.00	90.00	359.61	10,893.60	9,789.94	169.60	9,788.56	0.00	0.00	0.00
20,900.00	90.00	359.61	10,893.60	9,889.94	168.92	9,888.56	0.00	0.00	0.00
21,000.00	90.00	359.61	10,893.60	9,989.94	168.23	9,988.56	0.00	0.00	0.00
21,067.97	90.00	359.61	10,893.60	10,057.91	167.77	10,056.53	0.00	0.00	0.00
TD at 21067.97									

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
TP1 - CEFC 502H - plan hits target center - Point	0.00	0.00	10,893.60	4,893.30	203.10	483,092.63	708,680.54	32° 19' 34.784998 N	3° 39' 27.942915 W
LTP/BHL - CEFC 502I - plan hits target center - Point	0.00	0.01	10,893.60	10,057.91	167.77	488,257.24	708,645.21	32° 20' 25.893702 N	3° 39' 27.975069 W
FTP - CEFC 502H - plan misses target center by 203.21usft at 10806.66usft MD (10736.09 TVD, -162.50 N, 236.93 E) - Point	0.00	0.00	10,893.60	-290.89	237.79	477,908.44	708,715.23	32° 18' 43.482464 N	3° 39' 27.919517 W

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

Marathon Oil Corporation

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Catnip Everdeen Federal Com 502H
Company:	Marathon Oil Permian LLC	**TVD Reference:**	RKB @ 3729.60usft (Cactus 169)
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	RKB @ 3729.60usft (Cactus 169)
Site:	Catnip Everdeen	**North Reference:**	Grid
Well:	Catnip Everdeen Federal Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 04-13-23		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,214.60	1,214.60	Rustler		0.000	359.61
1,690.65	1,689.60	Salado		0.000	359.61
3,609.16	3,597.60	Castile		0.000	359.61
4,954.54	4,935.60	Base of Salt (BX)		0.000	359.61
4,954.54	4,935.60	Lamar		0.000	359.61
5,006.83	4,987.60	Bell Canyon		0.000	359.61
6,131.85	6,110.60	Cherry Canyon		0.000	359.61
7,108.85	7,087.60	Brushy Canyon		0.000	359.61
8,771.85	8,750.60	Bone Spring Lime		0.000	359.61
8,901.85	8,880.60	Upper Avalon Shale		0.000	359.61
9,954.85	9,933.60	1st Bone Spring Sand		0.000	359.61
10,256.85	10,235.60	2nd Bone Spring Carbonate		0.000	359.61
10,634.39	10,600.60	2nd Bone Spring Sand		0.000	359.61

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,300.00	1,300.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,600.13	1,599.58	-12.88	8.99	Hold 6.00° Inc at 145.06° Azm
5,276.12	5,255.42	-328.01	229.13	Begin 2.00°/100' Drop
5,576.25	5,555.00	-340.89	238.12	Begin Vertical Hold
10,341.89	10,320.64	-340.89	238.12	KOP2, Begin 10.00°/100' Build
11,241.89	10,893.60	232.06	234.29	LP, Hold 90.00° Inc at 359.62° Azm
15,903.24	10,893.60	4,893.30	203.10	Begin 2.00°/100' Turn
15,903.67	10,893.60	4,893.73	203.10	Hold 359.61° Azm
21,067.97	10,893.60	10,057.91	167.77	TD at 21067.97

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marathon Oil Permian LLC
LEASE NO.:	NMNM085939
COUNTY:	Lea

Wells:

Colibri 10 TB Federal 5H
Surface Hole Location: 393' FSL & 1587' FEL, Section 10 T. 23 S., R. 32 E.
Bottom Hole Location: 100' FNL & 2640' FEL, Section 10, T. 23 S, R 32 E.

Colibri 10 WA Federal 6H
Surface Hole Location: 393' FSL & 1557' FEL, Section 10 T. 23 S., R. 32 E.
Bottom Hole Location: 100' FNL & 2640' FEL, Section 10, T. 23 S, R 32 E.

Colibri 10 TB Federal 7H
Surface Hole Location: 393' FSL & 1527' FEL, Section 10 T. 23 S., R. 32 E.
Bottom Hole Location: 100' FNL & 1485' FEL, Section 10, T. 23 S, R 32 E.

Colibri 10 WA Federal 8H
Surface Hole Location: 392' FSL & 1497' FEL, Section 10 T. 23 S., R. 32 E.
Bottom Hole Location: 100' FNL & 1485' FEL, Section 10, T. 23 S, R 32 E.

Colibri 10 TB Federal 9H
Surface Hole Location: 392' FSL & 1467' FEL, Section 10 T. 23 S., R. 32 E.
Bottom Hole Location: 100' FNL & 330' FEL, Section 10, T. 23 S, R 32 E.

Colibri 10 WA Federal 10H
Surface Hole Location: 392' FSL & 1437' FEL, Section 10 T. 23 S., R. 32 E.
Bottom Hole Location: 100' FNL & 330' FEL, Section 10, T. 23 S, R 32 E.

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

☐**Road Section Diagram**
☒**Production (Post Drilling)**
Well Structures & Facilities
☐**Interim Reclamation**
☐**Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Watershed:
The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

WELL PAD: Stormwater control.
Stormwater diversion flow lines will be created to control erosion, runoff, and siltation of surrounding areas. This will include ditching and diverting stormwater around the well pad and the installation of silt fence on lower slopes. The integrity of the stormwater diversion flow lines shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.

TANK BATTERY:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Range:

Livestock Watering Requirement
Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

Cattleguards
Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the

maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Ground-level Abandoned Well Marker to avoid raptor perching:

Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

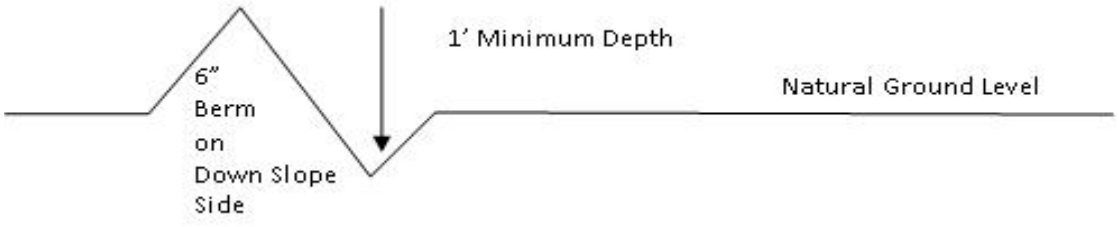
Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

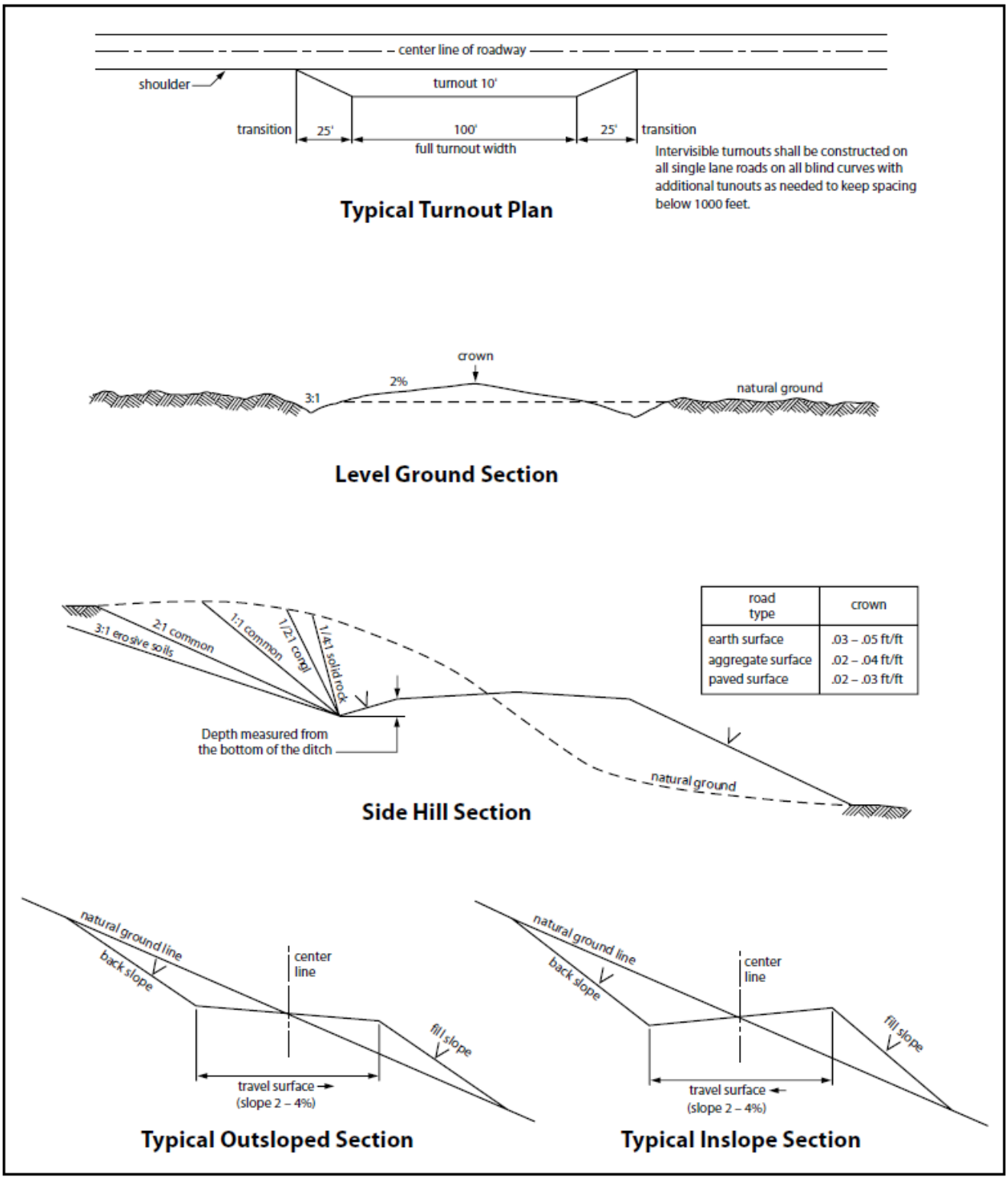


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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811 S. First St., Artesia, NM 88210
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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 237781

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 237781
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	IN ADDITION TO PRVIOUS COA, IF ON ANY STRING CEMENT DOES NOT CIRCULATE, A CBL MUST BE RUN ON THAT STRING OF CASING.	8/10/2023