

Well Name: POKER LAKE UNIT 29-20 BS	Well Location: T25S / R31E / SEC 29 / NWNW /	County or Parish/State:
Well Number: 104H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMLC062140A	Unit or CA Name: POKER LAKE	Unit or CA Number: NMNM071016X
US Well Number: 3001549117	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2652929

Type of Submission: Notice of Intent

Date Sundry Submitted: 01/18/2022

Date proposed operation will begin: 02/01/2022

Type of Action: Other

Time Sundry Submitted: 07:51

Procedure Description: **Spacing, Casing/Cement, Drilling Variance Changes XTO Permian Operating, LLC requests permission to make the following changes to the original APD: No Additional Surface Disturbance Change BHL fr/50'FNL & 2430'FWL to 2608'FSL & 2473'FWL, Section 18-25S-31E Casing/Cement design per the attached drilling program. Attachments: C102 Drilling Program Directional Plan

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

01.18.22_PLU_29_20BS_104H_NOI_Attachments_20220118075113.pdf

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Conditions of Approval

Specialist Review

Conditions_of_Approval_20220119062303.pdf

Operator Certification

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 submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: STEPHANIE RABADUE	Signed on: JAN 18, 2022 07:51 AM
Name: XTO PERMIAN OPERATING LLC	
Title: Regulatory Coordinator	
Street Address: 500 W. Illinois St, Ste 100	
City: Midland	State: TX
Phone: (432) 620-6714	
Email address: STEPHANIE.RABADUE@EXXONMOBIL.COM	

Field Representative

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: JENNIFER SANCHEZ	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5756270237	BLM POC Email Address: j1sanchez@blm.gov
Disposition: Approved	Disposition Date: 01/19/2022
Signature: Jennifer Sanchez	

Form 3160-5
(June 2019)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

3a. Address

3b. Phone No. (include area code)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

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

8. Well Name and No.

9. API Well No.

10. Field and Pool or Exploratory Area

11. Country or Parish, State

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 recompleat 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 performed 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 recompleat 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.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

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

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

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

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

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

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

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

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

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

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

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

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

Additional Information

Additional Remarks

Directional Plan

Location of Well

0. SHL: NWNW / 537 FNL / 2574 FEL / TWSP: 25S / RANGE: 31E / SECTION: 29 / LAT: 32.107084 / LONG: -103.800021 (TVD: 0 feet, MD: 0 feet)

PPP: SENW / 537 FNL / 2574 FEL / TWSP: 25S / RANGE: 31E / SECTION: 20 / LAT: 32.110381 / LONG: -103.802384 (TVD: 11541 feet, MD: 14825 feet)

PPP: NESW / 537 FNL / 2600 FEL / TWSP: 25S / RANGE: 31E / SECTION: 29 / LAT: 32.107084 / LONG: -103.800021 (TVD: 11541 feet, MD: 13505 feet)

PPP: SENW / 2310 FNL / 2430 FWL / TWSP: 25S / RANGE: 31E / SECTION: 21 / LAT: 32.102208 / LONG: -103.801037 (TVD: 11541 feet, MD: 12185 feet)

BHL: NENW / 50 FNL / 2430 FWL / TWSP: 25S / RANGE: 31E / SECTION: 20 / LAT: 32.122996 / LONG: -103.800848 (TVD: 11541 feet, MD: 19747 feet)

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

XTO Energy Inc.
PLU 29-20 BS 104H
Projected TD: 23165' MD / 11495' TVD
SHL: 537' FNL & 2574' FEL , Section 29, T25S, R31E
BHL: 2608' FSL & 2473' FWL , Section 18, T25S, R31E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	939'	Water
Top of Salt	1269'	Water
Base of Salt	3989'	Water
Delaware	4199'	Water
Brushy Canyon	6459'	Water/Oil/Gas
Bone Spring	8104'	Water
1st Bone Spring Ss	9094'	Water/Oil/Gas
2nd Bone Spring Ss	9869'	Water/Oil/Gas
3rd Bone Spring Ss	10999'	Water/Oil/Gas
Wolfcamp	11464'	Water/Oil/Gas
Wolfcamp X	11489'	Water/Oil/Gas
Target/Land Curve	11519'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 9.625 inch casing @ 1039' (230' above the salt) and circulating cement back to surface. The intermediate will isolate from the top of salt down to the next casing seat by setting 7.625 inch casing at 10873' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 23165 MD/TD and 5.5 x 5.5 inch production casing will be set at TD and cemented back up to 2nd intermediate (estimated TOC 10573 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 1039'	9.625	40	J-55	BTC	New	1.28	5.47	15.16
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	2.18	2.65	1.73
8.75	4000' – 10873'	7.625	29.7	HC L-80	Flush Joint	New	1.58	1.84	1.99
6.75	0' – 10773'	5.5	23	RY P-110	Semi-Premium	New	1.21	2.26	1.98
6.75	10773' - 11450'	5.5	23	RY P-110	Semi-Flush	New	1.21	2.12	5.01
6.75	11450' - 23165'	5.5	23	RY P-110	Semi-Flush	New	1.21	2.12	5.75

- XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing per this Sundry
- XTO requests to not utilize centralizers in the curve and lateral
- 7.625 Collapse analyzed using 50% evacuation based on regional experience.
- 5.5 Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less
- XTO requests the option to use 5" BTC Float equipment for the the production casing

Wellhead:

Permanent Wellhead – Multibowl System

A. Starting Head: 11" 10M top flange x 9-5/8" SOW bottom

B. Tubing Head: 11" 10M bottom flange x 7-1/16" 15M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 7-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 1039'

Lead: 240 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Tail: 130 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

Top of Cement: Surface

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 10873'

1st Stage

Optional Lead: 350 sxs Class C (mixed at 10.5 ppg, 2.77 ft³/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 410 sxs Class C (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6459

Compressives: 12-hr = 900 psi 24 hr = 1150 psi

2nd Stage

Lead: 0 sxs Class C (mixed at 12.9 ppg, 2.16 ft³/sx, 9.61 gal/sx water)

Tail: 730 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Top of Cement: 0

Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6459') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

XTO will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

XTO will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

XTO requests to pump an Optional Lead if well conditions dictate in an attempt to bring cement inside the first intermediate casing. If cement reaches the desired height, the BLM will be notified and the second stage bradenhead squeeze and subsequent TOC verification will be negated.

XTO requests the option to conduct the bradenhead squeeze and TOC verification offline as per standard approval from BLM when unplanned remediation is needed and batch drilling is approved. In the event the bradenhead is conducted, we will ensure the first stage cement job is cemented properly and the well is static with floats holding and no pressure on the csg annulus as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

Production Casing: 5.5, 23 New Semi-Flush, RY P-110 casing to be set at +/- 23165'

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 10573 feet

Tail: 860 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 11073 feet

Compressives: 12-hr = 800 psi 24 hr = 1500 psi

XTO requests the option to offline cement and remediate (if needed) surface and intermediate casing strings where batch drilling is approved and if unplanned remediation is needed. XTO will ensure well is static with no pressure on the csg annulus, as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed when applicable per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence.

5. Pressure Control Equipment

Once the permanent WH is installed on the 9.625 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 4345 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 9.625, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per Cactus recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production hole

on each of the wells.

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. Based on discussions with the BLM on February 27th 2020, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met: 1. After a full BOP test is conducted on the first well on the pad 2. When skidding to drill an intermediate section that does not penetrate into the Wolfcamp.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 1039'	12.25	FW/Native	8.7-9.2	35-40	NC
1039' - 10873'	8.75	FW / Cut Brine / Direct Emulsion	9.7-10.2	30-32	NC
10873' - 23165'	6.75	OBM	11.5-12	50-60	NC - 20

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

Spud with fresh water/native mud. Drill out from under 9-5/8" surface casing with brine solution. A 9.7 ppg - 10.2 ppg cut brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 9.625 casing.

8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 180 to 200 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6874 psi.

10. Anticipated Starting Date and Duration of Operations

Anticipated spud date will be after BLM approval. Move in operations and drilling is expected to take 40 days.

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

PRE-COMPLETION

¹ API Number 30-015- 49117		² Pool Code 98220		³ Pool Name Purple Sage; Wolfcamp (Gas)	
⁴ Property Code		⁵ Property Name POKER LAKE UNIT 29-20 BS			⁶ Well Number 104H
⁷ OGRID No. 373075		⁸ Operator Name XTO PERMIAN OPERATING, LLC.			⁹ Elevation 3,369'

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
B	29	25 S	31 E		537	NORTH	2,574	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	18	25 S	31 E		2,608	SOUTH	2,473	WEST	EDDY

¹² Dedicated Acres 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division. NOTE: DATA FURNISHED BY XTO ENERGY

¹⁶ 		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. Stephanie Rabadue 11/01/2021 Signature Date Stephanie Rabadue Printed Name stephanie.rabadue@exxonmobil.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. 10-26-2021 Date of Survey Signature and Seal of Professional Surveyor: 		MARK DILLON HARP 23786 Certificate Number LM 2019082879

Well Plan Report - PLU 29-20 BS 104H

Measured Depth:	23165.00 ft	Site:	PLU 29-20 Big Sinks
TVD RKB:	11495.00 ft		Pad B
Location		Slot:	23
Cartographic Reference System:	New Mexico East - NAD 27		
Northing:	403040.70 ft		
Easting:	665279.40 ft		
RKB:	3370.00 ft		
Ground Level:	3340.00 ft		
North Reference:	Grid		
Convergence Angle:	0.28 Deg		

Plan Sections PLU 29-20 BS 104H									
Measured	TVD					Build	Turn	Dogleg	
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate	Target
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
2557.97	21.16	171.24	2534.09	-190.89	29.41	2.00	0.00	2.00	
6237.90	21.16	171.24	5965.91	-1503.73	231.71	0.00	0.00	0.00	
7295.87	0.00	0.00	7000.00	-1694.62	261.12	-2.00	0.00	2.00	
11073.87	0.00	0.00	10778.00	-1694.62	261.12	0.00	0.00	0.00	Slant KOP 18
12187.73	90.00	330.00	11487.11	-1080.51	-93.43	8.08	0.00	8.08	Slant FTP 18
23065.23	90.00	330.00	11495.00	8339.67	-5532.18	0.00	0.00	0.00	Slant LTP 18
23165.22	90.00	330.00	11495.00	8426.27	-5582.18	0.00	0.00	0.00	Slant BHL 18

Position Uncertainty PLU 29-20 BS 104H														
Measured	TVD Highside			Lateral		Vertical		Magnitude		Semi-major	Semi-minor	Semi-minor	Tool	
Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.297	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.468	0.000	0.468	0.000	2.299	0.000	0.000	0.556	0.358	135.000	MWD+IFR1+MS
200.000	0.000	0.000	200.000	0.983	0.000	0.983	0.000	2.307	0.000	0.000	1.191	0.717	135.000	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.403	0.000	1.403	0.000	2.321	0.000	0.000	1.668	1.075	135.000	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.797	0.000	1.797	0.000	2.340	0.000	0.000	2.099	1.434	135.000	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.179	0.000	2.179	0.000	2.364	0.000	0.000	2.507	1.792	135.000	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.554	0.000	2.554	0.000	2.393	0.000	0.000	2.902	2.151	135.000	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.925	0.000	2.925	0.000	2.428	0.000	0.000	3.288	2.509	135.000	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.292	0.000	3.292	0.000	2.467	0.000	0.000	3.669	2.867	135.000	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.659	0.000	3.659	0.000	2.511	0.000	0.000	4.046	3.226	135.000	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.024	0.000	4.024	0.000	2.559	0.000	0.000	4.420	3.584	135.000	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.387	0.000	4.387	0.000	2.613	0.000	0.000	4.791	3.943	135.000	MWD+IFR1+MS
1200.000	0.000	0.000	1200.000	4.751	0.000	4.751	0.000	2.670	0.000	0.000	5.161	4.302	135.000	MWD+IFR1+MS
1300.000	0.000	0.000	1300.000	5.113	0.000	5.113	0.000	2.731	0.000	0.000	5.529	4.660	135.000	MWD+IFR1+MS
1400.000	0.000	0.000	1400.000	5.474	0.000	5.474	0.000	2.797	0.000	0.000	5.896	5.018	135.000	MWD+IFR1+MS
1500.000	0.000	0.000	1500.000	5.836	0.000	5.836	0.000	2.866	0.000	0.000	6.262	5.377	135.000	MWD+IFR1+MS

1600.000	1.999	171.200	1599.980	6.089	0.000	6.277	-0.000	2.939	0.000	0.000	6.577	5.767	132.793	MWD+IFR1+MS
1700.000	4.000	171.200	1699.838	6.799	0.000	6.602	-0.000	3.015	0.000	0.000	7.170	6.210	119.940	MWD+IFR1+MS
1800.000	6.000	171.200	1799.452	7.449	0.000	6.932	-0.000	3.098	0.000	0.000	7.782	6.584	112.700	MWD+IFR1+MS
1900.000	7.999	171.200	1898.702	8.054	0.000	7.263	-0.000	3.187	0.000	0.000	8.382	6.932	108.568	MWD+IFR1+MS
2000.000	10.000	171.200	1997.465	8.622	0.000	7.598	-0.000	3.288	0.000	0.000	8.962	7.273	106.028	MWD+IFR1+MS
2100.000	11.990	171.200	2095.623	9.159	0.000	7.935	-0.000	3.399	0.000	0.000	9.520	7.609	104.342	MWD+IFR1+MS
2200.000	14.000	171.200	2193.055	9.668	0.000	8.274	-0.000	3.524	0.000	0.000	10.058	7.946	103.168	MWD+IFR1+MS
2300.000	15.990	171.200	2289.643	10.152	0.000	8.616	-0.000	3.662	0.000	0.000	10.577	8.284	102.327	MWD+IFR1+MS
2400.000	18.000	171.200	2385.268	10.616	0.000	8.960	-0.000	3.817	0.000	0.000	11.081	8.623	101.692	MWD+IFR1+MS
2500.000	19.990	171.200	2479.816	11.064	0.000	9.309	-0.000	3.987	0.000	0.000	11.573	8.966	101.213	MWD+IFR1+MS
2557.900	21.150	171.200	2534.090	11.224	0.000	9.506	-0.000	4.061	0.000	0.000	11.770	9.166	101.145	MWD+IFR1+MS
2600.000	21.150	171.200	2573.282	11.347	0.000	9.646	-0.000	4.110	0.000	0.000	11.885	9.310	101.170	MWD+IFR1+MS
2700.000	21.150	171.200	2666.539	11.643	0.000	9.994	-0.000	4.238	0.000	0.000	12.163	9.663	101.400	MWD+IFR1+MS
2800.000	21.150	171.200	2759.797	11.958	0.000	10.353	-0.000	4.375	0.000	0.000	12.461	10.021	101.754	MWD+IFR1+MS
2900.000	21.150	171.200	2853.055	12.280	0.000	10.719	-0.000	4.519	0.000	0.000	12.764	10.386	102.119	MWD+IFR1+MS
3000.000	21.150	171.200	2946.313	12.606	0.000	11.086	-0.000	4.667	0.000	0.000	13.072	10.752	102.490	MWD+IFR1+MS
3100.000	21.150	171.200	3039.571	12.942	0.000	11.455	-0.000	4.821	0.000	0.000	13.388	11.120	102.826	MWD+IFR1+MS
3200.000	21.150	171.200	3132.829	13.282	0.000	11.829	-0.000	4.980	0.000	0.000	13.708	11.493	103.182	MWD+IFR1+MS
3300.000	21.150	171.200	3226.087	13.630	0.000	12.204	-0.000	5.142	0.000	0.000	14.034	11.867	103.511	MWD+IFR1+MS
3400.000	21.150	171.200	3319.345	13.982	0.000	12.579	-0.000	5.309	0.000	0.000	14.364	12.242	103.836	MWD+IFR1+MS
3500.000	21.150	171.200	3412.603	14.340	0.000	12.959	-0.000	5.480	0.000	0.000	14.700	12.621	104.158	MWD+IFR1+MS
3600.000	21.150	171.200	3505.861	14.701	0.000	13.340	-0.000	5.654	0.000	0.000	15.039	13.001	104.476	MWD+IFR1+MS
3700.000	21.150	171.200	3599.119	15.066	0.000	13.721	-0.000	5.833	0.000	0.000	15.380	13.381	104.790	MWD+IFR1+MS
3800.000	21.150	171.200	3692.376	15.436	0.000	14.106	-0.000	6.013	0.000	0.000	15.727	13.765	105.100	MWD+IFR1+MS
3900.000	21.150	171.200	3785.634	15.808	0.000	14.491	-0.000	6.198	0.000	0.000	16.075	14.149	105.397	MWD+IFR1+MS
4000.000	21.150	171.200	3878.892	16.185	0.000	14.879	-0.000	6.385	0.000	0.000	16.428	14.537	105.692	MWD+IFR1+MS
4100.000	21.150	171.200	3972.150	16.567	0.000	15.267	-0.000	6.575	0.000	0.000	16.786	14.924	105.965	MWD+IFR1+MS
4200.000	21.150	171.200	4065.408	16.948	0.000	15.656	-0.000	6.768	0.000	0.000	17.142	15.312	106.251	MWD+IFR1+MS
4300.000	21.150	171.200	4158.666	17.333	0.000	16.044	-0.000	6.963	0.000	0.000	17.502	15.699	106.508	MWD+IFR1+MS
4400.000	21.150	171.200	4251.924	17.722	0.000	16.435	-0.000	7.162	0.000	0.000	17.867	16.090	106.761	MWD+IFR1+MS
4500.000	21.150	171.200	4345.182	18.112	0.000	16.826	-0.000	7.362	0.000	0.000	18.232	16.480	107.010	MWD+IFR1+MS
4600.000	21.150	171.200	4438.440	18.505	0.000	17.220	-0.000	7.565	0.000	0.000	18.601	16.873	107.247	MWD+IFR1+MS
4700.000	21.150	171.200	4531.698	18.900	0.000	17.614	-0.000	7.770	0.000	0.000	18.970	17.266	107.488	MWD+IFR1+MS
4800.000	21.150	171.200	4624.956	19.296	0.000	18.007	-0.000	7.978	0.000	0.000	19.341	17.659	107.719	MWD+IFR1+MS
4900.000	21.150	171.200	4718.213	19.694	0.000	18.400	-0.000	8.188	0.000	0.000	19.714	18.051	107.926	MWD+IFR1+MS
5000.000	21.150	171.200	4811.471	20.096	0.000	18.795	-0.000	8.400	0.000	0.000	20.091	18.446	108.122	MWD+IFR1+MS
5100.000	21.150	171.200	4904.729	20.498	0.000	19.193	-0.000	8.614	0.000	0.000	20.468	18.844	108.342	MWD+IFR1+MS
5200.000	21.150	171.200	4997.987	20.901	0.000	19.587	-0.000	8.831	0.000	0.000	20.845	19.238	108.524	MWD+IFR1+MS
5300.000	21.150	171.200	5091.245	21.306	0.000	19.984	-0.000	9.049	0.000	0.000	21.225	19.635	108.710	MWD+IFR1+MS
5400.000	21.150	171.200	5184.503	21.711	0.000	20.381	-0.000	9.269	0.000	0.000	21.605	20.031	108.886	MWD+IFR1+MS
5500.000	21.150	171.200	5277.761	22.119	0.000	20.779	-0.000	9.492	0.000	0.000	21.987	20.429	109.059	MWD+IFR1+MS
5600.000	21.150	171.200	5371.019	22.529	0.000	21.178	-0.000	9.716	0.000	0.000	22.372	20.827	109.209	MWD+IFR1+MS
5700.000	21.150	171.200	5464.277	22.938	0.000	21.575	-0.000	9.943	0.000	0.000	22.757	21.225	109.343	MWD+IFR1+MS
5800.000	21.150	171.200	5557.535	23.348	0.000	21.975	-0.000	10.169	0.000	0.000	23.143	21.625	109.508	MWD+IFR1+MS
5900.000	21.150	171.200	5650.793	23.762	0.000	22.374	-0.000	10.402	0.000	0.000	23.530	22.024	109.643	MWD+IFR1+MS
6000.000	21.150	171.200	5744.051	24.174	0.000	22.773	-0.000	10.630	0.000	0.000	23.917	22.423	109.769	MWD+IFR1+MS
6100.000	21.150	171.200	5837.308	24.589	0.000	23.174	-0.000	10.867	0.000	0.000	24.306	22.823	109.893	MWD+IFR1+MS
6200.000	21.150	171.200	5930.566	25.004	0.000	23.574	-0.000	11.104	0.000	0.000	24.697	23.224	109.989	MWD+IFR1+MS
6237.800	21.150	171.200	5965.910	25.159	0.000	23.724	-0.000	11.194	0.000	0.000	24.841	23.376	109.995	MWD+IFR1+MS
6300.000	19.910	171.200	6024.063	25.460	0.000	23.968	-0.000	11.340	0.000	0.000	25.081	23.623	109.922	MWD+IFR1+MS
6400.000	17.910	171.200	6118.656	25.977	0.000	24.359	-0.000	11.589	0.000	0.000	25.518	24.019	109.258	MWD+IFR1+MS
6500.000	15.910	171.200	6214.324	26.488	0.000	24.748	-0.000	11.836	0.000	0.000	25.984	24.412	108.358	MWD+IFR1+MS
6600.000	13.910	171.200	6310.949	26.960	0.000	25.129	-0.000	12.071	0.000	0.000	26.445	24.796	107.502	MWD+IFR1+MS

6700.000	11.910	171.200	6408.413	27.389	0.000	25.504	-0.000	12.292	0.000	0.000	26.897	25.174	106.769	MWD+IFR1+MS
6800.000	9.917	171.200	6506.598	27.779	0.000	25.872	-0.000	12.506	0.000	0.000	27.343	25.544	106.102	MWD+IFR1+MS
6900.000	7.917	171.200	6605.385	28.126	0.000	26.233	-0.000	12.712	0.000	0.000	27.779	25.906	105.506	MWD+IFR1+MS
7000.000	5.917	171.200	6704.652	28.430	0.000	26.583	-0.000	12.915	0.000	0.000	28.205	26.257	104.986	MWD+IFR1+MS
7100.000	3.917	171.200	6804.279	28.693	0.000	26.927	-0.000	13.107	0.000	0.000	28.619	26.600	104.547	MWD+IFR1+MS
7200.000	1.917	171.200	6904.144	28.915	0.000	27.263	-0.000	13.297	0.000	0.000	29.022	26.935	104.169	MWD+IFR1+MS
7295.800	0.000	0.000	7000.000	29.177	0.000	27.368	0.000	13.476	0.000	0.000	29.298	27.239	104.258	MWD+IFR1+MS
7300.000	0.000	0.000	7004.126	29.187	0.000	27.381	0.000	13.483	0.000	0.000	29.308	27.251	104.269	MWD+IFR1+MS
7400.000	0.000	0.000	7104.126	29.464	0.000	27.688	0.000	13.671	0.000	0.000	29.586	27.557	104.439	MWD+IFR1+MS
7500.000	0.000	0.000	7204.126	29.746	0.000	28.000	0.000	13.860	0.000	0.000	29.871	27.866	104.722	MWD+IFR1+MS
7600.000	0.000	0.000	7304.126	30.028	0.000	28.314	0.000	14.053	0.000	0.000	30.157	28.177	105.018	MWD+IFR1+MS
7700.000	0.000	0.000	7404.126	30.313	0.000	28.630	0.000	14.251	0.000	0.000	30.446	28.490	105.316	MWD+IFR1+MS
7800.000	0.000	0.000	7504.126	30.601	0.000	28.947	0.000	14.453	0.000	0.000	30.737	28.802	105.606	MWD+IFR1+MS
7900.000	0.000	0.000	7604.126	30.889	0.000	29.264	0.000	14.659	0.000	0.000	31.028	29.116	105.905	MWD+IFR1+MS
8000.000	0.000	0.000	7704.126	31.179	0.000	29.582	0.000	14.866	0.000	0.000	31.321	29.431	106.192	MWD+IFR1+MS
8100.000	0.000	0.000	7804.126	31.469	0.000	29.902	0.000	15.080	0.000	0.000	31.616	29.747	106.493	MWD+IFR1+MS
8200.000	0.000	0.000	7904.126	31.749	0.000	30.221	0.000	15.294	0.000	0.000	31.900	30.061	106.892	MWD+IFR1+MS
8300.000	0.000	0.000	8004.126	32.047	0.000	30.542	0.000	15.515	0.000	0.000	32.201	30.379	107.154	MWD+IFR1+MS
8400.000	0.000	0.000	8104.126	32.342	0.000	30.864	0.000	15.735	0.000	0.000	32.500	30.698	107.459	MWD+IFR1+MS
8500.000	0.000	0.000	8204.126	32.634	0.000	31.187	0.000	15.962	0.000	0.000	32.796	31.016	107.793	MWD+IFR1+MS
8600.000	0.000	0.000	8304.126	32.939	0.000	31.509	0.000	16.193	0.000	0.000	33.104	31.335	108.011	MWD+IFR1+MS
8700.000	0.000	0.000	8404.126	33.242	0.000	31.828	0.000	16.426	0.000	0.000	33.409	31.651	108.227	MWD+IFR1+MS
8800.000	0.000	0.000	8504.126	33.541	0.000	32.156	0.000	16.661	0.000	0.000	33.713	31.975	108.565	MWD+IFR1+MS
8900.000	0.000	0.000	8604.126	33.838	0.000	32.481	0.000	16.903	0.000	0.000	34.014	32.296	108.902	MWD+IFR1+MS
9000.000	0.000	0.000	8704.126	34.147	0.000	32.802	0.000	17.146	0.000	0.000	34.325	32.615	109.084	MWD+IFR1+MS
9100.000	0.000	0.000	8804.126	34.438	0.000	33.136	0.000	17.393	0.000	0.000	34.623	32.943	109.578	MWD+IFR1+MS
9200.000	0.000	0.000	8904.126	34.742	0.000	33.451	0.000	17.644	0.000	0.000	34.929	33.256	109.757	MWD+IFR1+MS
9300.000	0.000	0.000	9004.126	35.057	0.000	33.779	0.000	17.900	0.000	0.000	35.247	33.581	109.935	MWD+IFR1+MS
9400.000	0.000	0.000	9104.126	35.355	0.000	34.117	0.000	18.158	0.000	0.000	35.551	33.914	110.436	MWD+IFR1+MS
9500.000	0.000	0.000	9204.126	35.665	0.000	34.438	0.000	18.417	0.000	0.000	35.863	34.232	110.610	MWD+IFR1+MS
9600.000	0.000	0.000	9304.126	35.972	0.000	34.771	0.000	18.682	0.000	0.000	36.175	34.560	110.949	MWD+IFR1+MS
9700.000	0.000	0.000	9404.126	36.290	0.000	35.100	0.000	18.950	0.000	0.000	36.495	34.887	111.123	MWD+IFR1+MS
9800.000	0.000	0.000	9504.126	36.592	0.000	35.440	0.000	19.222	0.000	0.000	36.803	35.221	111.633	MWD+IFR1+MS
9900.000	0.000	0.000	9604.126	36.905	0.000	35.763	0.000	19.499	0.000	0.000	37.119	35.541	111.800	MWD+IFR1+MS
10000.000	0.000	0.000	9704.126	37.216	0.000	36.097	0.000	19.776	0.000	0.000	37.433	35.871	112.139	MWD+IFR1+MS
10100.000	0.000	0.000	9804.126	37.523	0.000	36.428	0.000	20.060	0.000	0.000	37.746	36.198	112.479	MWD+IFR1+MS
10200.000	0.000	0.000	9904.126	37.842	0.000	36.770	0.000	20.345	0.000	0.000	38.068	36.535	112.819	MWD+IFR1+MS
10300.000	0.000	0.000	10004.126	38.158	0.000	37.094	0.000	20.632	0.000	0.000	38.387	36.857	112.979	MWD+IFR1+MS
10400.000	0.000	0.000	10104.126	38.471	0.000	37.430	0.000	20.926	0.000	0.000	38.704	37.188	113.317	MWD+IFR1+MS
10500.000	0.000	0.000	10204.126	38.794	0.000	37.762	0.000	21.220	0.000	0.000	39.030	37.519	113.473	MWD+IFR1+MS
10600.000	0.000	0.000	10304.126	39.102	0.000	38.105	0.000	21.520	0.000	0.000	39.345	37.855	113.994	MWD+IFR1+MS
10700.000	0.000	0.000	10404.126	39.421	0.000	38.432	0.000	21.822	0.000	0.000	39.666	38.179	114.150	MWD+IFR1+MS
10800.000	0.000	0.000	10504.126	39.737	0.000	38.769	0.000	22.129	0.000	0.000	39.986	38.511	114.486	MWD+IFR1+MS
10900.000	0.000	0.000	10604.126	40.062	0.000	39.115	0.000	22.439	0.000	0.000	40.316	38.853	114.822	MWD+IFR1+MS
11000.000	0.000	0.000	10704.126	40.373	0.000	39.446	0.000	22.751	0.000	0.000	40.632	39.180	115.157	MWD+IFR1+MS
11073.000	0.000	0.000	10778.000	40.608	0.000	39.699	0.000	22.985	0.000	0.000	40.869	39.430	115.418	MWD+IFR1+MS
11100.000	2.110	330.000	10804.120	39.775	0.000	40.488	0.000	23.067	0.000	0.000	40.953	39.508	115.230	MWD+IFR1+MS
11200.000	10.190	330.000	10903.462	39.389	0.000	40.799	0.000	23.392	0.000	0.000	41.433	40.054	107.083	MWD+IFR1+MS
11300.000	18.270	330.000	11000.313	39.182	0.000	41.086	0.000	23.801	0.000	0.000	42.367	40.657	89.790	MWD+IFR1+MS
11400.000	26.350	330.000	11092.750	38.530	0.000	41.339	0.000	24.343	0.000	0.000	43.318	41.031	81.269	MWD+IFR1+MS
11500.000	34.430	330.000	11178.938	37.557	0.000	41.556	0.000	25.062	0.000	0.000	44.169	41.293	77.304	MWD+IFR1+MS
11600.000	42.510	330.000	11257.165	36.370	0.000	41.729	0.000	25.975	0.000	0.000	44.841	41.488	75.267	MWD+IFR1+MS
11700.000	50.590	330.000	11325.879	35.144	0.000	41.878	0.000	27.081	0.000	0.000	45.352	41.644	74.242	MWD+IFR1+MS

11800.000	58.670	330.000	11383.715	34.049	0.000	41.984	0.000	28.360	0.000	0.000	45.693	41.751	73.784	MWD+IFR1+MS
11900.000	66.750	330.000	11429.525	33.278	0.000	42.051	0.000	29.771	0.000	0.000	45.903	41.808	73.766	MWD+IFR1+MS
12000.000	74.830	330.000	11462.400	32.997	0.000	42.085	0.000	31.268	0.000	0.000	46.001	41.832	73.921	MWD+IFR1+MS
12100.000	82.910	330.000	11481.685	33.323	0.000	42.070	0.000	32.802	0.000	0.000	46.027	41.803	74.204	MWD+IFR1+MS
12187.000	90.000	330.000	11487.106	33.867	0.000	42.035	0.000	33.867	0.000	0.000	46.035	41.759	74.382	MWD+IFR1+MS
12200.000	90.000	330.000	11487.106	33.897	0.000	42.034	0.000	33.897	0.000	0.000	46.036	41.758	74.364	MWD+IFR1+MS
12300.000	90.000	330.000	11487.106	34.117	0.000	41.982	0.000	34.117	0.000	0.000	46.036	41.698	74.469	MWD+IFR1+MS
12400.000	90.000	330.000	11487.106	34.351	0.000	41.938	0.000	34.351	0.000	0.000	46.043	41.642	74.676	MWD+IFR1+MS
12500.000	90.000	330.000	11487.106	34.612	0.000	41.920	0.000	34.612	0.000	0.000	46.060	41.611	74.891	MWD+IFR1+MS
12600.000	90.000	330.000	11487.106	34.886	0.000	41.902	0.000	34.886	0.000	0.000	46.064	41.582	75.117	MWD+IFR1+MS
12700.000	90.000	330.000	11487.106	35.171	0.000	41.901	0.000	35.171	0.000	0.000	46.078	41.567	75.391	MWD+IFR1+MS
12800.000	90.000	330.000	11487.106	35.468	0.000	41.913	0.000	35.468	0.000	0.000	46.090	41.566	75.676	MWD+IFR1+MS
12900.000	90.000	330.000	11487.106	35.777	0.000	41.941	0.000	35.777	0.000	0.000	46.111	41.579	76.012	MWD+IFR1+MS
13000.000	90.000	330.000	11487.106	36.111	0.000	41.973	0.000	36.111	0.000	0.000	46.130	41.593	76.398	MWD+IFR1+MS
13100.000	90.000	330.000	11487.106	36.455	0.000	42.027	0.000	36.455	0.000	0.000	46.149	41.632	76.770	MWD+IFR1+MS
13200.000	90.000	330.000	11487.106	36.810	0.000	42.088	0.000	36.810	0.000	0.000	46.177	41.673	77.228	MWD+IFR1+MS
13300.000	90.000	330.000	11487.106	37.175	0.000	42.162	0.000	37.175	0.000	0.000	46.204	41.727	77.711	MWD+IFR1+MS
13400.000	90.000	330.000	11487.106	37.563	0.000	42.239	0.000	37.563	0.000	0.000	46.230	41.782	78.253	MWD+IFR1+MS
13500.000	90.000	330.000	11487.106	37.961	0.000	42.339	0.000	37.961	0.000	0.000	46.256	41.862	78.800	MWD+IFR1+MS
13600.000	90.000	330.000	11487.106	38.367	0.000	42.446	0.000	38.367	0.000	0.000	46.291	41.942	79.442	MWD+IFR1+MS
13700.000	90.000	330.000	11487.106	38.781	0.000	42.565	0.000	38.781	0.000	0.000	46.327	42.034	80.126	MWD+IFR1+MS
13800.000	90.000	330.000	11487.106	39.217	0.000	42.699	0.000	39.217	0.000	0.000	46.372	42.138	80.886	MWD+IFR1+MS
13900.000	90.000	330.000	11487.106	39.648	0.000	42.835	0.000	39.648	0.000	0.000	46.408	42.241	81.701	MWD+IFR1+MS
14000.000	90.000	330.000	11487.106	40.100	0.000	42.988	0.000	40.100	0.000	0.000	46.465	42.355	82.620	MWD+IFR1+MS
14100.000	90.000	330.000	11487.106	40.571	0.000	43.160	0.000	40.571	0.000	0.000	46.513	42.491	83.570	MWD+IFR1+MS
14200.000	90.000	330.000	11487.106	41.037	0.000	43.329	0.000	41.037	0.000	0.000	46.573	42.614	84.651	MWD+IFR1+MS
14300.000	90.000	330.000	11487.106	41.521	0.000	43.518	0.000	41.521	0.000	0.000	46.635	42.757	85.802	MWD+IFR1+MS
14400.000	90.000	330.000	11487.106	42.012	0.000	43.720	0.000	42.012	0.000	0.000	46.700	42.908	87.054	MWD+IFR1+MS
14500.000	90.000	330.000	11487.106	42.509	0.000	43.927	0.000	42.509	0.000	0.000	46.779	43.055	88.429	MWD+IFR1+MS
14600.000	90.000	330.000	11487.106	43.012	0.000	44.145	0.000	43.012	0.000	0.000	46.862	43.209	89.913	MWD+IFR1+MS
14700.000	90.000	330.000	11487.106	43.532	0.000	44.375	0.000	43.532	0.000	0.000	46.949	43.368	91.521	MWD+IFR1+MS
14800.000	90.000	330.000	11487.106	44.057	0.000	44.611	0.000	44.057	0.000	0.000	47.053	43.520	93.240	MWD+IFR1+MS
14900.000	90.000	330.000	11487.106	44.587	0.000	44.866	0.000	44.587	0.000	0.000	47.165	43.686	95.093	MWD+IFR1+MS
15000.000	90.000	330.000	11487.106	45.122	0.000	45.123	0.000	45.122	0.000	0.000	47.284	43.844	97.057	MWD+IFR1+MS
15100.000	90.000	330.000	11487.106	45.673	0.000	45.394	0.000	45.673	0.000	0.000	47.422	44.002	99.115	MWD+IFR1+MS
15200.000	90.000	330.000	11487.106	46.217	0.000	45.667	0.000	46.217	0.000	0.000	47.570	44.148	101.240	MWD+IFR1+MS
15300.000	90.000	330.000	11487.106	46.776	0.000	45.958	0.000	46.776	0.000	0.000	47.730	44.304	103.486	MWD+IFR1+MS
15400.000	90.000	330.000	11487.106	47.350	0.000	46.252	0.000	47.350	0.000	0.000	47.901	44.446	105.758	MWD+IFR1+MS
15500.000	90.000	330.000	11487.106	47.917	0.000	46.558	0.000	47.917	0.000	0.000	48.095	44.586	108.021	MWD+IFR1+MS
15600.000	90.000	330.000	11487.106	48.497	0.000	46.873	0.000	48.497	0.000	0.000	48.301	44.721	110.284	MWD+IFR1+MS
15700.000	90.000	330.000	11487.106	49.082	0.000	47.200	0.000	49.082	0.000	0.000	48.531	44.852	112.488	MWD+IFR1+MS
15800.000	90.000	330.000	11487.106	49.669	0.000	47.531	0.000	49.669	0.000	0.000	48.773	44.969	114.604	MWD+IFR1+MS
15900.000	90.000	330.000	11487.106	50.259	0.000	47.869	0.000	50.259	0.000	0.000	49.028	45.081	116.648	MWD+IFR1+MS
16000.000	90.000	330.000	11487.106	50.863	0.000	48.217	0.000	50.863	0.000	0.000	49.296	45.188	118.622	MWD+IFR1+MS
16100.000	90.000	330.000	11487.106	51.468	0.000	48.575	0.000	51.468	0.000	0.000	49.584	45.292	120.452	MWD+IFR1+MS
16200.000	90.000	330.000	11487.106	52.077	0.000	48.943	0.000	52.077	0.000	0.000	49.885	45.392	122.196	MWD+IFR1+MS
16300.000	90.000	330.000	11487.106	52.688	0.000	49.313	0.000	52.688	0.000	0.000	50.202	45.484	123.734	MWD+IFR1+MS
16400.000	90.000	330.000	11487.106	53.310	0.000	49.692	0.000	53.310	0.000	0.000	50.530	45.572	125.189	MWD+IFR1+MS
16500.000	90.000	330.000	11487.106	53.926	0.000	50.080	0.000	53.926	0.000	0.000	50.869	45.655	126.567	MWD+IFR1+MS
16600.000	90.000	330.000	11487.106	54.562	0.000	50.475	0.000	54.562	0.000	0.000	51.217	45.736	127.864	MWD+IFR1+MS
16700.000	90.000	330.000	11487.106	55.191	0.000	50.873	0.000	55.191	0.000	0.000	51.578	45.812	128.987	MWD+IFR1+MS
16800.000	90.000	330.000	11487.106	55.821	0.000	51.286	0.000	55.821	0.000	0.000	51.951	45.892	130.096	MWD+IFR1+MS
16900.000	90.000	330.000	11487.106	56.462	0.000	51.699	0.000	56.462	0.000	0.000	52.331	45.962	131.098	MWD+IFR1+MS

17000.000	90.000	330.000	11487.106	57.105	0.000	52.114	0.000	57.105	0.000	0.000	52.719	46.030	131.958	MWD+IFR1+MS
17100.000	90.000	330.000	11487.106	57.749	0.000	52.545	0.000	57.749	0.000	0.000	53.120	46.101	132.818	MWD+IFR1+MS
17200.000	90.000	330.000	11487.106	58.395	0.000	52.974	0.000	58.395	0.000	0.000	53.523	46.166	133.593	MWD+IFR1+MS
17300.000	90.000	330.000	11487.106	59.051	0.000	53.419	0.000	59.051	0.000	0.000	53.944	46.240	134.332	MWD+IFR1+MS
17400.000	90.000	330.000	11487.106	59.708	0.000	53.865	0.000	59.708	0.000	0.000	54.367	46.306	135.000	MWD+IFR1+MS
17500.000	90.000	330.000	11487.106	60.366	0.000	54.309	0.000	60.366	0.000	0.000	54.792	46.366	-44.395	MWD+IFR1+MS
17600.000	90.000	330.000	11487.106	61.025	0.000	54.768	0.000	61.025	0.000	0.000	55.230	46.429	-43.783	MWD+IFR1+MS
17700.000	90.000	330.000	11487.106	61.693	0.000	55.227	0.000	61.693	0.000	0.000	55.672	46.493	-43.258	MWD+IFR1+MS
17800.000	90.000	330.000	11487.106	62.362	0.000	55.693	0.000	62.362	0.000	0.000	56.121	46.555	-42.752	MWD+IFR1+MS
17900.000	90.000	330.000	11487.106	63.032	0.000	56.168	0.000	63.032	0.000	0.000	56.581	46.622	-42.292	MWD+IFR1+MS
18000.000	90.000	330.000	11487.106	63.702	0.000	56.647	0.000	63.702	0.000	0.000	57.045	46.689	-41.847	MWD+IFR1+MS
18100.000	90.000	330.000	11487.106	64.382	0.000	57.126	0.000	64.382	0.000	0.000	57.511	46.749	-41.442	MWD+IFR1+MS
18200.000	90.000	330.000	11487.106	65.054	0.000	57.618	0.000	65.054	0.000	0.000	57.990	46.820	-41.048	MWD+IFR1+MS
18300.000	90.000	330.000	11487.106	65.734	0.000	58.108	0.000	65.734	0.000	0.000	58.467	46.879	-40.665	MWD+IFR1+MS
18400.000	90.000	330.000	11487.106	66.415	0.000	58.599	0.000	66.415	0.000	0.000	58.947	46.938	-40.338	MWD+IFR1+MS
18500.000	90.000	330.000	11487.106	67.104	0.000	59.104	0.000	67.104	0.000	0.000	59.441	47.008	-40.018	MWD+IFR1+MS
18600.000	90.000	330.000	11487.106	67.794	0.000	59.606	0.000	67.794	0.000	0.000	59.934	47.073	-39.725	MWD+IFR1+MS
18700.000	90.000	330.000	11487.106	68.476	0.000	60.114	0.000	68.476	0.000	0.000	60.433	47.137	-39.437	MWD+IFR1+MS
18800.000	90.000	330.000	11487.106	69.174	0.000	60.627	0.000	69.174	0.000	0.000	60.936	47.199	-39.154	MWD+IFR1+MS
18900.000	90.000	330.000	11487.106	69.864	0.000	61.146	0.000	69.864	0.000	0.000	61.447	47.268	-38.895	MWD+IFR1+MS
19000.000	90.000	330.000	11487.106	70.555	0.000	61.670	0.000	70.555	0.000	0.000	61.962	47.336	-38.640	MWD+IFR1+MS
19100.000	90.000	330.000	11487.106	71.253	0.000	62.193	0.000	71.253	0.000	0.000	62.477	47.399	-38.405	MWD+IFR1+MS
19200.000	90.000	330.000	11487.106	71.951	0.000	62.721	0.000	71.951	0.000	0.000	62.998	47.469	-38.189	MWD+IFR1+MS
19300.000	90.000	330.000	11487.106	72.657	0.000	63.254	0.000	72.657	0.000	0.000	63.524	47.537	-37.976	MWD+IFR1+MS
19400.000	90.000	330.000	11487.106	73.355	0.000	63.785	0.000	73.355	0.000	0.000	64.049	47.600	-37.779	MWD+IFR1+MS
19500.000	90.000	330.000	11487.106	74.061	0.000	64.329	0.000	74.061	0.000	0.000	64.585	47.674	-37.584	MWD+IFR1+MS
19600.000	90.000	330.000	11487.106	74.766	0.000	64.870	0.000	74.766	0.000	0.000	65.120	47.742	-37.404	MWD+IFR1+MS
19700.000	90.000	330.000	11487.106	75.472	0.000	65.415	0.000	75.472	0.000	0.000	65.660	47.810	-37.224	MWD+IFR1+MS
19800.000	90.000	330.000	11487.106	76.177	0.000	65.965	0.000	76.177	0.000	0.000	66.203	47.886	-37.057	MWD+IFR1+MS
19900.000	90.000	330.000	11487.106	76.890	0.000	66.514	0.000	76.890	0.000	0.000	66.748	47.956	-36.905	MWD+IFR1+MS
20000.000	90.000	330.000	11487.106	77.602	0.000	67.069	0.000	77.602	0.000	0.000	67.297	48.032	-36.737	MWD+IFR1+MS
20100.000	90.000	330.000	11487.106	78.313	0.000	67.627	0.000	78.313	0.000	0.000	67.849	48.098	-36.586	MWD+IFR1+MS
20200.000	90.000	330.000	11487.106	79.032	0.000	68.187	0.000	79.032	0.000	0.000	68.405	48.175	-36.443	MWD+IFR1+MS
20300.000	90.000	330.000	11487.106	79.743	0.000	68.749	0.000	79.743	0.000	0.000	68.963	48.240	-36.316	MWD+IFR1+MS
20400.000	90.000	330.000	11487.106	80.461	0.000	69.319	0.000	80.461	0.000	0.000	69.528	48.320	-36.185	MWD+IFR1+MS
20500.000	90.000	330.000	11487.106	81.179	0.000	69.885	0.000	81.179	0.000	0.000	70.090	48.399	-36.061	MWD+IFR1+MS
20600.000	90.000	330.000	11487.106	81.896	0.000	70.457	0.000	81.896	0.000	0.000	70.658	48.471	-35.940	MWD+IFR1+MS
20700.000	90.000	330.000	11487.106	82.620	0.000	71.030	0.000	82.620	0.000	0.000	71.226	48.547	-35.816	MWD+IFR1+MS
20800.000	90.000	330.000	11487.106	83.343	0.000	71.612	0.000	83.343	0.000	0.000	71.804	48.623	-35.705	MWD+IFR1+MS
20900.000	90.000	330.000	11487.106	84.065	0.000	72.189	0.000	84.065	0.000	0.000	72.377	48.698	-35.599	MWD+IFR1+MS
21000.000	90.000	330.000	11487.106	84.788	0.000	72.768	0.000	84.788	0.000	0.000	72.953	48.784	-35.499	MWD+IFR1+MS
21100.000	90.000	330.000	11487.106	85.510	0.000	73.352	0.000	85.510	0.000	0.000	73.533	48.856	-35.393	MWD+IFR1+MS
21200.000	90.000	330.000	11487.106	86.238	0.000	73.943	0.000	86.238	0.000	0.000	74.122	48.928	-35.297	MWD+IFR1+MS
21300.000	90.000	330.000	11487.106	86.966	0.000	74.526	0.000	86.966	0.000	0.000	74.702	49.016	-35.209	MWD+IFR1+MS
21400.000	90.000	330.000	11487.106	87.693	0.000	75.119	0.000	87.693	0.000	0.000	75.291	49.095	-35.107	MWD+IFR1+MS
21500.000	90.000	330.000	11487.106	88.419	0.000	75.714	0.000	88.419	0.000	0.000	75.883	49.170	-35.023	MWD+IFR1+MS
21600.000	90.000	330.000	11487.106	89.152	0.000	76.312	0.000	89.152	0.000	0.000	76.478	49.256	-34.943	MWD+IFR1+MS
21700.000	90.000	330.000	11487.106	89.883	0.000	76.903	0.000	89.883	0.000	0.000	77.066	49.334	-34.860	MWD+IFR1+MS
21800.000	90.000	330.000	11487.106	90.615	0.000	77.500	0.000	90.615	0.000	0.000	77.660	49.425	-34.772	MWD+IFR1+MS
21900.000	90.000	330.000	11487.106	91.345	0.000	78.106	0.000	91.345	0.000	0.000	78.264	49.504	-34.707	MWD+IFR1+MS
22000.000	90.000	330.000	11487.106	92.081	0.000	78.705	0.000	92.081	0.000	0.000	78.860	49.589	-34.626	MWD+IFR1+MS
22100.000	90.000	330.000	11487.106	92.812	0.000	79.311	0.000	92.812	0.000	0.000	79.464	49.674	-34.553	MWD+IFR1+MS
22200.000	90.000	330.000	11487.106	93.547	0.000	79.913	0.000	93.547	0.000	0.000	80.063	49.759	-34.483	MWD+IFR1+MS

22300.000	90.000	330.000	11487.106	94.287	0.000	80.526	0.000	94.287	0.000	0.000	80.674	49.847	-34.415	MWD+IFR1+MS
22400.000	90.000	330.000	11487.106	95.021	0.000	81.134	0.000	95.021	0.000	0.000	81.280	49.935	-34.350	MWD+IFR1+MS
22500.000	90.000	330.000	11487.106	95.760	0.000	81.743	0.000	95.760	0.000	0.000	81.886	50.026	-34.282	MWD+IFR1+MS
22600.000	90.000	330.000	11487.106	96.499	0.000	82.359	0.000	96.499	0.000	0.000	82.500	50.118	-34.221	MWD+IFR1+MS
22700.000	90.000	330.000	11487.106	97.237	0.000	82.973	0.000	97.237	0.000	0.000	83.112	50.193	-34.161	MWD+IFR1+MS
22800.000	90.000	330.000	11487.106	97.974	0.000	83.584	0.000	97.974	0.000	0.000	83.721	50.287	-34.099	MWD+IFR1+MS
22900.000	90.000	330.000	11487.106	98.717	0.000	84.202	0.000	98.717	0.000	0.000	84.337	50.381	-34.045	MWD+IFR1+MS
23000.000	90.000	330.000	11487.106	99.459	0.000	84.824	0.000	99.459	0.000	0.000	84.958	50.470	-33.991	MWD+IFR1+MS
23065.000	90.000	330.000	11495.000	99.940	0.000	85.225	0.000	99.940	0.000	0.000	85.357	50.539	-33.951	MWD+IFR1+MS
23100.000	90.000	330.000	11495.000	100.200	0.000	85.443	0.000	100.200	0.000	0.000	85.575	50.577	-33.935	MWD+IFR1+MS
23165.000	90.000	330.000	11495.000	100.648	0.000	85.846	0.000	100.648	0.000	0.000	85.976	50.637	-33.901	MWD+IFR1+MS

Plan Targets		PLU 29-20 BS 104H			
	Measured Depth	Grid Northing	Grid Easting	TVD MSL	Target Shape
Target Name	(ft)	(ft)	(ft)	(ft)	
Slant KOP 18	11073.87	401346.08	665540.52	7408.00	CIRCLE
Slant FTP 18	12198.14	401966.99	665182.04	8125.00	CIRCLE
Slant LTP 18	23065.71	411380.37	659747.22	8125.00	CIRCLE
Slant BHL 18	23165.23	411466.97	659697.22	8125.00	CIRCLE

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating, LLC
LEASE NO.:	NMLC-062140A
WELL NAME & NO.:	Poker Lake Unit 29-20 BS 104H
SURFACE HOLE FOOTAGE:	0537' FNL & 2574' FEL
BOTTOM HOLE FOOTAGE:	2608' FSL & 2473' FWL Sec. 18, T.25 S., R.31 E.
LOCATION:	Section 29, T.25 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

COA

H2S	☐ Yes	☒ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☐ Low	☒ Medium	☐ High
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☒ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☒ Unit

Medium Cave/Karst

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

Abnormal pressure may be encountered in the 3rd Bone Spring and all subsequent formations.

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately **1230** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
 - Cement as proposed. Report Echo meter results on subsequent sundry. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**
 3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

C. PRESSURE CONTROL

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

BOP Break Testing Variance

- Shell testing is not approved for any portion of the hole with a MASP of 5000 psi or greater.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOP Break Testing operations.
- A full BOP test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOP test will be required.

D. SPECIAL REQUIREMENT (S)

Unit Wells

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months.

GENERAL REQUIREMENTS

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

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

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
4. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
5. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
6. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 01192022

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 120991

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 120991
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	• NSP Will require administrative order for non-standard spacing unit	7/5/2022
kpickford	Adhere to previous NMOCD Conditions of Approval	7/5/2022