

Well Name: BIG EDDY UNIT DI 30
WEST 15-17

Well Location: T20S / R31E / SEC 15 /
NESE / 32.570288 / -103.848843

County or Parish/State: EDDY /
NM

Well Number: 3H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMLC063667

Unit or CA Name: BIG EDDY

Unit or CA Number:
NMNM68294X

US Well Number:

Operator: XTO PERMIAN OPERATING
LLC

Notice of Intent

Sundry ID: 2822468

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/14/2024

Time Sundry Submitted: 07:43

Date proposed operation will begin: 11/22/2024

Procedure Description: BIG EDDY UNIT DI 30 West 15-17 3H APD ID# 10400097386 SUNDRY LANGUAGE XTO Permian Operating, LLC. respectfully requests approval to make the below listed changes to the approved APD – 1. Casing design to be changed from a proposed 4-string engineered weak point design to a 4-string design with an uncemented annulus between 2nd intermediate and production casing strings 2. Associated changes required in the cement program & the mud circulation system as per the newly proposed casing design mentioned above No changes requested to the SHL/BHL/take points, proposed MD/TVD and formation (pool). There will be no new surface disturbance. See attached drilling program for the updated casing design, cement program & mud circulation system. Attachments: Drilling Program, Well bore diagram.

NOI Attachments

Procedure Description

Sundry_Attachments___3H_20241114074146_20241118101941.pdf

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LLC

Conditions of Approval

Specialist Review

Big_Eddy_Unit_DI_30_West_15_17_1H_2H_3H_COA_20241207120210.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SRINIVAS LAGHUVARAPU

Signed on: NOV 18, 2024 10:19 AM

Name: XTO PERMIAN OPERATING LLC

Title: REGULATORY ANALYST

Street Address: 22777 SPRINGWOODS VILLAGE PARKWAY

City: SPRING

State: TX

Phone: (720) 539-1673

Email address: SRINIVAS.N.LAGHUVARAPU@EXXONMOBIL.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: ZOTA M STEVENS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752345998

BLM POC Email Address: ZSTEVENS@BLM.GOV

Disposition: Approved

Disposition Date: 12/07/2024

Signature: Zota Stevens

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

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

5. Lease Serial No.
NMLC063667

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
XTO PERMIAN OPERATING LLC

3a. Address
6401 HOLIDAY HILL ROAD BLDG 5, MIDLAND,

3b. Phone No. (include area code)
(432) 683-2277

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)
SEC 15/T20S/R31E/NMP

7. If Unit of CA/Agreement, Name and/or No.
BIG EDDY/NMNM68294X

8. Well Name and No.
BIG EDDY UNIT DI 30 WEST 15-17/3H

9. API Well No.

10. Field and Pool or Exploratory Area
WC WILLIAMS SINK/Bone Spring

11. Country or Parish, State
EDDY/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	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ 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 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 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 determined that the site is ready for final inspection.)

BIG EDDY UNIT DI 30 West 15-17 3H
APD ID# 10400097386
SUNDRY LANGUAGE

XTO Permian Operating, LLC. respectfully requests approval to make the below listed changes to the approved APD

1. Casing design to be changed from a proposed 4-string engineered weak point design to a 4-string design with an uncemented annulus between 2nd intermediate and production casing strings

2. Associated changes required in the cement program & the mud circulation system as per the newly proposed casing design mentioned above

No changes requested to the SHL/BHL/take points, proposed MD/TVD and formation (pool). There will be no new surface disturbance.

See attached drilling program for the updated casing design, cement program & mud circulation system.

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
SRINIVAS LAGHUVARAPU / Ph: (720) 539-1673

Title
REGULATORY ANALYST

Signature (Electronic Submission)

Date
11/18/2024

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

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.

Petroleum Engineer

Office CARLSBAD

Date
12/07/2024

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

Attachments: Drilling Program, Well bore diagram.

Location of Well

0. SHL: NESE / 1543 FSL / 120 FEL / TWSP: 20S / RANGE: 31E / SECTION: 15 / LAT: 32.570288 / LONG: -103.848843 (TVD: 0 feet, MD: 0 feet)

PPP: SENE / 2188 FNL / 0 FWL / TWSP: 20S / RANGE: 31E / SECTION: 17 / LAT: 32.574657 / LONG: -103.882724 (TVD: 9323 feet, MD: 20500 feet)

PPP: SWNW / 2192 FNL / 1319 FWL / TWSP: 20S / RANGE: 31E / SECTION: 15 / LAT: 32.574623 / LONG: -103.86128 (TVD: 9381 feet, MD: 13900 feet)

PPP: SENE / 2200 FNL / 100 FEL / TWSP: 20S / RANGE: 31E / SECTION: 15 / LAT: 32.574602 / LONG: -103.848782 (TVD: 9415 feet, MD: 10000 feet)

BHL: SWNW / 2200 FNL / 50 FWL / TWSP: 20S / RANGE: 31E / SECTION: 17 / LAT: 32.574682 / LONG: -103.899816 (TVD: 9282 feet, MD: 25224 feet)

CONFIDENTIAL

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

XTO Energy Inc.
BEU DI 30 West 15-17 3H
Projected TD: 25224' MD / 9282' TVD
SHL: 1543' FSL & 120' FEL , Section 15, T20S, R31E
BHL: 2200' FNL & 50' FWL , Section 17, T20S, 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	Water/Oil/Gas
Rustler	690'	Water
Salado	950'	Water
Base Salt	1970'	Water
Capitan	2740'	Water
Delaware	3950'	Water/Oil/Gas
Brushy Canyon	5785'	Water/Oil/Gas
Basal Brushy Canyon	7140'	Water/Oil/Gas
Bone Spring Lime	7371'	Water/Oil/Gas
Avalon Mid Carb Top	7930'	Water/Oil/Gas
Avalon Mid Carb Base	8090'	Water/Oil/Gas
1st Bone Spring Lime	8300'	Water/Oil/Gas
1st Bone Spring Sand	8577'	Water/Oil/Gas
2nd Bone Spring Lime	8811'	Water/Oil/Gas
2nd Bone Spring Sand	9070'	Water/Oil/Gas
2nd Bone Spring Sand Inner Carb	9093'	Water/Oil/Gas
B Target Top	9400'	Water/Oil/Gas
B Landing Point	9415'	Water/Oil/Gas
B Target Base	9430'	Water/Oil/Gas

Section 2 Summary:

*** Deepest Expected Groundwater Depth: 40' (per NM State Engineers Office).

No other formations are expected to give up oil, gas or fresh water in measurable quantities.
Surface fresh water sands will be protected by setting 20"inch casing at 925' and circulating cement back to surface.

3. Casing Design

Primary Design:

Hole Size	MD	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
26" / 24"	0' - 925'	20"	94	J-55	BTC	New	7.43	1.30	6.14
17.5	0' - 2120'	13-3/8"	54.5	J-55	BTC	New	4.21	1.23	4.59
12.25	0' - 4000'	9-5/8"	40	HC L-80	BTC	New	5.03	2.44	3.89
8.75" / 8.5"	0' - 25224'	6"	26	P-110 - CY	P110 - Wedge 461	New	1.18	3.33	1.86

Section 3 Summary:

XTO will keep casing fluid filled to meet BLM's collapse requirement.

Wellhead:

A multi-bowl wellhead system will be utilized. The well design chosen is: 4-String Big Potash (Capitan Reef)

Wellhead will be installed by manufacturer's representatives.

Manufacturer will monitor welding process to ensure appropriate temperature of seal.

4. Cement Program

Primary Cementing								
Casing	Slurry Type	No. Sacks	Density (ppg)	Yield (ft ³ /sack)	TOC (ft)	Casing Setting Depth (MD)	Excess (%)	Slurry Description
Surface 1	Lead	892	12.4	2.11	0	925	100%	Surface Class C Lead Cement
Surface 1	Tail	679	14.8	1.33	625	925	100%	Surface Class C Tail Cement
Intermediate 1	Lead	939	12.9	2.02	0	2120	50%	Intermediate Class C Lead Cement
Intermediate 1	Tail	216	14.8	1.45	1820	2120	50%	Intermediate Class C Tail Cement
Intermediate 2	Lead	861	12.9	2.02	0	4000	50%	Intermediate Class C Lead Cement
Intermediate 2	Tail	87	14.8	1.45	3700	4000	35%	Intermediate Class C Tail Cement
Production 1	Lead							
Production 1	Tail	2987	13.2	1.44	5785	25224	0%	Production Class C Tail Cement
Remedial Cementing								
Casing	Slurry Type	No. Sacks	Density (ppg)	Yield (ft ³ /sack)	TOC	Excess (%)	Slurry Description	
Production 1	Bradenhead Squeeze	534	14.8	1.45	3500	0%	Production Class C Bradenhead Squeeze Cement	

Section 4 Summary:

Open 2nd intermediate x production annulus to monitor during completion. In the event of production casing failure, pressure will either release at surface or into the formation below 2nd intermediate shoe in the Delaware Mountain group / Brushy Canyon relief zone (R111Q Figure E)

Production casing will consist of a primary cement job with TOC at the top of the Brushy Canyon formation within the Delaware Mountain Group with 0% excess and well below the minimum of 500' from Intermediate 2 casing shoe. After hydraulic fracturing has been completed and no longer than 180 days after well is on production, production cement to be tied back with bradenhead job no less than 500' inside previous casing shoe (intermediate 2 casing) but with top below Marker Bed 126 "Potash Interval".

5. Pressure Control Equipment**Section 5 Summary:**

Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of a minimum 5M Hydril Annular and a minimum 5M Double Ram BOP.

All BOP testing will be done by an independent service company. Operator will Test as per BLM 43CFR-3172

The maximum bottom hole pressure anticipated is 4700 psi.

Requested Variances**Offline Cementing Variance**

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. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence. The TA cap will also be installed when applicable per wellhead manufacturer's procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

Break Test Variance

A break testing 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.

Flex Hose Variance

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.

Diverter Variance

Operator request a variance to utilize a temporary blowout preventer equipment (Diverter) to drill 1st intermediate section. This temporary diverter consist of a minimum 2M Hydril. Once the casing is run and cemented, and the multi-bowl wellhead system is installed and tested, the full BOP system with Hydril and rams will be installed before continue drilling the 2nd intermediate and production sections or enter in an oil and gas bearing interval.

Spudder Rig Variance

XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing.

Batch Drilling Variance

XTO requests a variance to be able to batch drill this well. 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. 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.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW	Viscosity	Fluid Loss	Comments
			(ppg)	(sec/qt)	(cc)	
0' – 925'	26" / 24"	FW/Native	8.3 – 8.7	35-40	NC	Fresh Water or Native Water
925' – 2120'	17.5	Brine	9.5 – 10	30-32	NC	Fully saturated salt across Salado / Salt
2120' – 4000'	12.25	Fresh Water	8.3 – 8.7	35-40	NC	Fresh Water
4000' – 25224'	8.75" / 8.5"	Cut Brine / OBM	9 – 9.6	50-60	NC – 20	OBM or Cut Brine depending on Well Conditions

Section 6 Summary:

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 surface casing with a fully saturated brine 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. An EDR (Electronic Drilling Recorder) 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**Section 7 Summary:**

A Kelly cock will be in the drill string at all times.

A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.

H2S monitors will be on location when drilling below the 20" casing.

8. Logging, Coring and Testing Program**Section 8 Summary:**

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards**Section 9 Summary:**

The estimated bottom hole temperature of 160F to 180F. 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 is possible throughout the well.

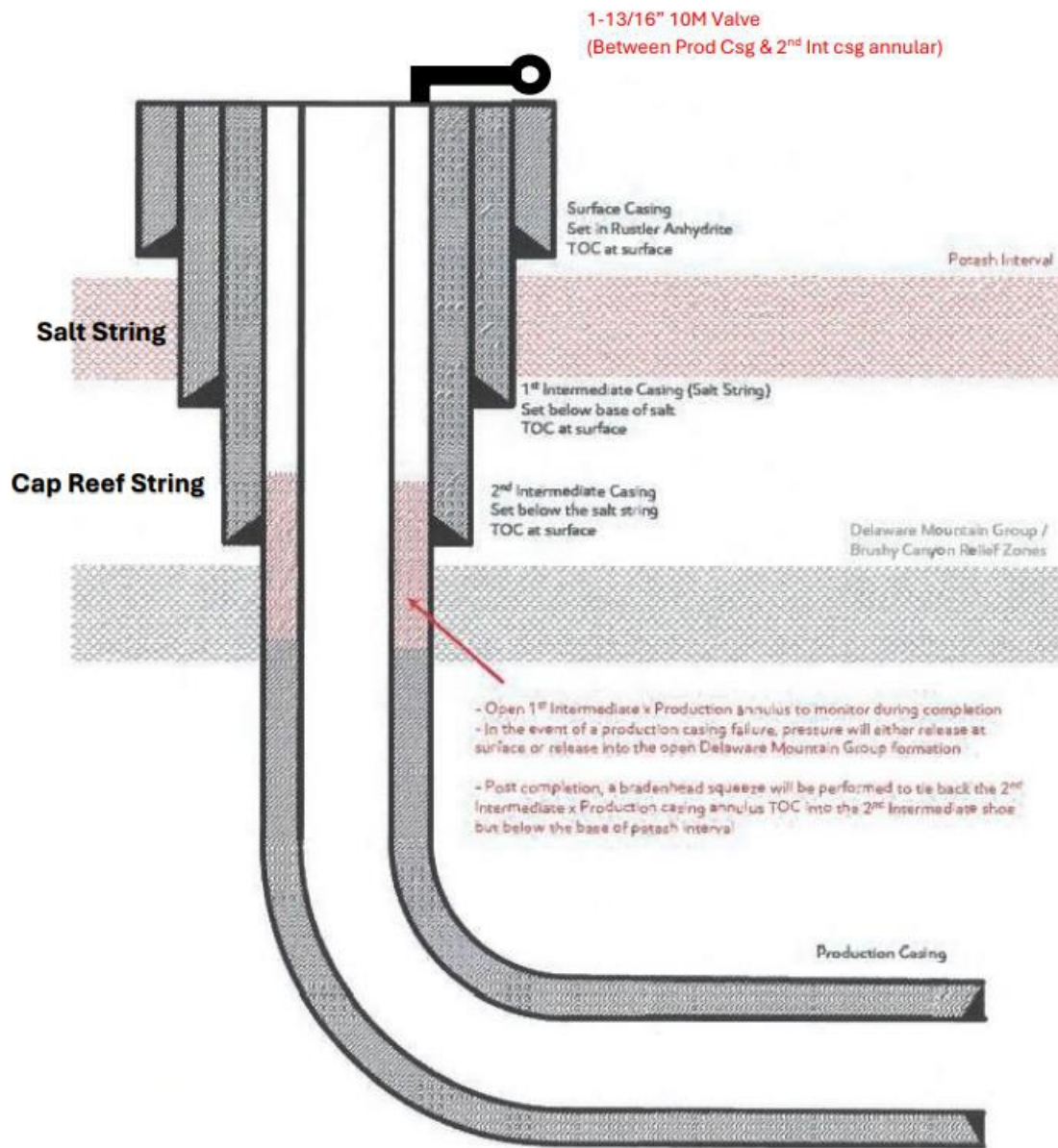
10. Anticipated Starting Date and Duration of Operations**Section 10 Summary:**

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

Update May 2024:

XTO Permian Operating LLC is aware of R-111-Q update and will comply with these requirements including (but not limited to):

- Alignment with KPLA requirements per schematic below, with open 2nd Int x production casing design and utilizing new casing that meets API standards.
- Production casing will consist of a primary cement job with TOC at the top of the Brushy Canyon formation within the Delaware Mountain Group with 0% excess and well below the minimum of 500' from Intermediate 2 casing shoe.
 - After hydraulic fracturing has been completed and no longer than 180 days after well is on production, production cement to be tied back with bradenhead job no less than 500' inside previous casing shoe (intermediate 2 casing) but with top below Marker Bed 126 "Potash Interval".
- Monitor separation Distance to offsets and maintain a Separation Factor greater than 1.0 while drilling through the salt intervals. For blind or inclination only wells, XTO Permian Operating LLC will maintain greater than 300' center-to-center separation.



[Figure E] 4 String – Uncemented Annulus between 2nd Intermediate and Production Casing Strings. (Reference R-111-Q: Exhibit B)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO
LEASE NO.:	NMLC063667
LOCATION:	Sec. 15, T.20 S, R 31 E
COUNTY:	Eddy County, New Mexico
WELL NAME & NO.:	Big Eddy Unit DI 30 West 15-17 1H
SURFACE HOLE FOOTAGE:	1543'/S & 180'/E
BOTTOM HOLE FOOTAGE:	440'/N & 50'/W

WELL NAME & NO.:	Big Eddy Unit DI 30 West 15-17 2H
SURFACE HOLE FOOTAGE:	1543'/S & 150'/E
BOTTOM HOLE FOOTAGE:	1310'/N & 50'/W

WELL NAME & NO.:	Big Eddy Unit DI 30 West 15-17 3H
SURFACE HOLE FOOTAGE:	1543'/S & 120'/E
BOTTOM HOLE FOOTAGE:	2200'/N & 50'/W

WELL NAME & NO.:	Big Eddy Unit DI 30 West 15-17 5H
SURFACE HOLE FOOTAGE:	673'/S & 60'/E
BOTTOM HOLE FOOTAGE:	1310'/S & 50'/W

WELL NAME & NO.:	Big Eddy Unit DI 30 West 15-17 6H
SURFACE HOLE FOOTAGE:	673'/S & 180'/E
BOTTOM HOLE FOOTAGE:	440'/S & 50'/W

WELL NAME & NO.:	Big Eddy Unit DI 30 West 15-17 4H
SURFACE HOLE FOOTAGE:	1543'/S & 90'/E
BOTTOM HOLE FOOTAGE:	2200'/S & 50'/W

Changes approved through engineering via **Sundry 2822454,2822462, 2822468, 2820493, 2822480,2822475** on 12-7-2024. Any previous COAs not addressed within the updated COAs still apply.

COA

H ₂ S	☒ No ☐ Yes			
Potash / WIPP	☐ None	☐ Secretary	☒ R-111-Q	☒ Open Annulus
	4-String Design: Open 1st Int x Production Casing (ICP 2 above Relief Zone)			☐ WIPP
Cave / Karst	☒ Low	☐ Medium	☐ High	☐ Critical
Wellhead	☐ Conventional	☐ Multibowl	☐ Both	☒ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	☐ DV Tool

Special Req	☒ Capitan Reef	☐ Water Disposal	☐ COM	☒ Unit
Waste Prev.	☐ Self-Certification	☐ Waste Min. Plan	☒ APD Submitted prior to 06/10/2024	
Additional Language	☒ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☒ Break Testing
	☒ Four-String	☒ Offline Cementing	☒ Fluid-Filled	

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 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the updated order.

B. CASING

1. The **20** inch surface casing shall be set at approximately **850** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.

- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)

- Switch to freshwater mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

3. The minimum required fill of cement behind the **9-5/8** inch 2nd Intermediate casing is:

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

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.

4. The minimum required fill of cement behind the **6** inch production casing is:

- Cement should tie-back **500 feet** into the previous casing but not higher than the **Delaware Group. Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Using a Multibowl Wellhead
 - a. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 1st intermediate casing shoe shall be **5000 (5M) psi**. A Diverter system is approved as a variance to drill the intermediate casing section. **Variance is approved to use a 2000 (2M) Annular.**
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

- iii. Manufacturer representative shall install the test plug for the initial BOP test.
- iv. 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.
- v. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

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. **(This is not necessary for secondary recovery unit wells)**

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing

Contact the BLM prior to the commencement of any offline cementing procedure.

GENERAL REQUIREMENTS

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

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

Contact Eddy County Petroleum Engineering Inspection Staff:

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's

requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.
 - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve

- open. (only applies to single stage cement jobs, prior to the cement setting up.)
- iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - v. The results of the test shall be reported to the appropriate BLM office.
 - vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
 - viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Approved by Zota Stevens on 12/7/2024
575-234-5998 / zstevens@blm.gov

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 409723

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 409723
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing.	1/28/2025
ward.rikala	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	1/28/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	1/28/2025