



U.S. Department of the Interior  
Bureau of Land Management

*Application for Permit to Drill*

**APD Package Report**

Date Printed: 10/30/2024 01:09 PM

APD ID: 10400094908

Well Status: AAPD

APD Received Date: 10/01/2023 07:49 PM

Well Name: POKER LAKE UNIT 29 BS

Operator: XTO PERMIAN OPERATING LLC

Well Number: 110H

APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
  - Well Plat: 1 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
  - Blowout Prevention Choke Diagram Attachment: 1 file(s)
  - Blowout Prevention BOP Diagram Attachment: 1 file(s)
  - Casing Spec Documents: 2 file(s)
  - Casing Taperd String Specs: 2 file(s)
  - Casing Design Assumptions and Worksheet(s): 3 file(s)
  - Hydrogen sulfide drilling operations plan: 1 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 1 file(s)
  - Other Facets: 7 file(s)
  - Other Variances: 4 file(s)
- SUPO Report
- SUPO Attachments
  - Existing Road Map: 1 file(s)
  - New Road Map: 1 file(s)
  - Attach Well map: 1 file(s)
  - Production Facilities map: 3 file(s)
  - Water source and transportation map: 1 file(s)
  - Well Site Layout Diagram: 2 file(s)
  - Recontouring attachment: 4 file(s)
  - Other SUPO Attachment: 2 file(s)
- PWD Report
- PWD Attachments

-- None

- Bond Report

- Bond Attachments

-- None

Form 3160-3  
(June 2015)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 20185. Lease Serial No.  
NMLC061634B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.  
NMNM071016X/POKER LAKE UNIT8. Lease Name and Well No.  
POKER LAKE UNIT 29 BS

110H

9. API Well No.  
30-015-5597410. Field and Pool, or Exploratory  
WILDCAT BIG SINK/bone spring11. Sec., T. R. M. or Blk. and Survey or Area  
SEC 29/T25S/R31E/NMP1a. Type of work: ☒ DRILL ☐ REENTER  
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other  
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☒ Multiple Zone2. Name of Operator  
XTO PERMIAN OPERATING LLC3a. Address 3b. Phone No. (include area code)  
6401 HOLIDAY HILL ROAD BLDG 5, MIDLAND, TX 7970 (432) 683-22774. Location of Well (Report location clearly and in accordance with any State requirements. \*)  
At surface SWNW / 2435 FNL / 691 FWL / LAT 32.101857 / LONG -103.806657  
At proposed prod. zone SWSW / 50 FSL / 770 FWL / LAT 32.079484 / LONG -103.806493

14. Distance in miles and direction from nearest town or post office\*

12. County or Parish  
EDDY 13. State  
NM15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)  
691 feet

16. No of acres in lease

17. Spacing Unit dedicated to this well  
280.018. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft. 30 feet19. Proposed Depth  
10896 feet / 19382 feet20. BLM/BIA Bond No. in file  
FED: COB00005021. Elevations (Show whether DF, KDB, RT, GL, etc.)  
3369 feet22. Approximate date work will start\*  
09/20/202423. Estimated duration  
45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be requested by the BLM.

25. Signature  
(Electronic Submission)Name (Printed/Typed)  
CASSIE EVANS / Ph: (432) 682-8873Date  
10/01/2023Title  
Regulatory AnalystApproved by (Signature)  
(Electronic Submission)Name (Printed/Typed)  
CODY LAYTON / Ph: (575) 234-5959Date  
10/28/2024Title  
Assistant Field Manager Lands & MineralsOffice  
Carlsbad Field Office

Application approval 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.

Conditions of approval, if any, are attached.

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.

**APPROVED WITH CONDITIONS**  
Approval Date: 10/28/2024

(Continued on page 2)

\*(Instructions on page 2)

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws 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, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM I:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**ITEM 24:** 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 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., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

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

The BLM connects this information to a new evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.



## Additional Operator Remarks

### Location of Well

0. SHL: SWNW / 2435 FNL / 691 FWL / TWSP: 25S / RANGE: 31E / SECTION: 29 / LAT: 32.101857 / LONG: -103.806657 ( TVD: 0 feet, MD: 0 feet )

PPP: SWNW / 2435 FNL / 770 FWL / TWSP: 25S / RANGE: 31E / SECTION: 29 / LAT: 32.101858 / LONG: -103.806402 ( TVD: 10896 feet, MD: 11300 feet )

BHL: SWSW / 50 FSL / 770 FWL / TWSP: 25S / RANGE: 31E / SECTION: 32 / LAT: 32.079484 / LONG: -103.806493 ( TVD: 10896 feet, MD: 19382 feet )

### BLM Point of Contact

Name: MARIAH HUGHES

Title: Land Law Examiner

Phone: (575) 234-5972

Email: mhughes@blm.gov

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### **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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## WELL LOCATION INFORMATION

|                                                                                                                                                        |                                              |                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| API Number<br>30-015 -55974                                                                                                                            | Pool Code<br>96654                           | Pool Name<br>WILDCAT BIG SINK; BONE SPRING                                                                                                                        |
| Property Code<br>325388                                                                                                                                | Property Name<br>POKER LAKE UNIT 29 BS       | Well Number<br>110H                                                                                                                                               |
| ORGID No.<br>373075                                                                                                                                    | Operator Name<br>XTO PERMIAN OPERATING, LLC. | Ground Level Elevation<br>3,369'                                                                                                                                  |
| Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal |                                              | Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal |

## Surface Location

|         |               |                  |               |     |                            |                          |                       |                          |                |
|---------|---------------|------------------|---------------|-----|----------------------------|--------------------------|-----------------------|--------------------------|----------------|
| UL<br>E | Section<br>29 | Township<br>25 S | Range<br>31 E | Lot | Ft. from N/S<br>2,435' FNL | Ft. from E/W<br>691' FWL | Latitude<br>32.101857 | Longitude<br>-103.806657 | County<br>EDDY |
|---------|---------------|------------------|---------------|-----|----------------------------|--------------------------|-----------------------|--------------------------|----------------|

## Bottom Hole Location

|         |               |                  |               |     |                         |                          |                       |                          |                |
|---------|---------------|------------------|---------------|-----|-------------------------|--------------------------|-----------------------|--------------------------|----------------|
| UL<br>M | Section<br>32 | Township<br>25 S | Range<br>31 E | Lot | Ft. from N/S<br>50' FSL | Ft. from E/W<br>770' FWL | Latitude<br>32.079484 | Longitude<br>-103.806493 | County<br>EDDY |
|---------|---------------|------------------|---------------|-----|-------------------------|--------------------------|-----------------------|--------------------------|----------------|

|                        |                                   |                   |                                                                                                               |                         |
|------------------------|-----------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------|-------------------------|
| Dedicated Acres<br>280 | Infill or Defining Well<br>INFILL | Defining Well API | Overlapping Spacing Unit (Y/N)<br>N                                                                           | Consolidation Code<br>U |
| Order Numbers.         |                                   |                   | Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                         |

## Kick Off Point (KOP)

|         |               |                  |               |     |                            |                          |                       |                          |                |
|---------|---------------|------------------|---------------|-----|----------------------------|--------------------------|-----------------------|--------------------------|----------------|
| UL<br>E | Section<br>29 | Township<br>25 S | Range<br>31 E | Lot | Ft. from N/S<br>2,435' FNL | Ft. from E/W<br>691' FWL | Latitude<br>32.101857 | Longitude<br>-103.806657 | County<br>EDDY |
|---------|---------------|------------------|---------------|-----|----------------------------|--------------------------|-----------------------|--------------------------|----------------|

## First Take Point (FTP)

|         |               |                  |               |     |                            |                          |                       |                          |                |
|---------|---------------|------------------|---------------|-----|----------------------------|--------------------------|-----------------------|--------------------------|----------------|
| UL<br>E | Section<br>29 | Township<br>25 S | Range<br>31 E | Lot | Ft. from N/S<br>2,435' FNL | Ft. from E/W<br>770' FWL | Latitude<br>32.101858 | Longitude<br>-103.806402 | County<br>EDDY |
|---------|---------------|------------------|---------------|-----|----------------------------|--------------------------|-----------------------|--------------------------|----------------|

## Last Take Point (LTP)

|         |               |                  |               |     |                          |                          |                       |                          |                |
|---------|---------------|------------------|---------------|-----|--------------------------|--------------------------|-----------------------|--------------------------|----------------|
| UL<br>M | Section<br>32 | Township<br>25 S | Range<br>31 E | Lot | Ft. from N/S<br>100' FSL | Ft. from E/W<br>770' FWL | Latitude<br>32.079622 | Longitude<br>-103.806492 | County<br>EDDY |
|---------|---------------|------------------|---------------|-----|--------------------------|--------------------------|-----------------------|--------------------------|----------------|

|                                                           |                                                                                                    |                                |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------|
| Unitized Area or Area of Uniform Interest<br>NMNM-071016X | Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical | Ground Floor Elevation: 3,369' |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------|

## OPERATOR CERTIFICATIONS

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.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling form the division.

*Samantha Weis* 12/16/2024

Signature Date

Samantha Weis

Printed Name

samantha.r.bartnik@exxonmobil.com

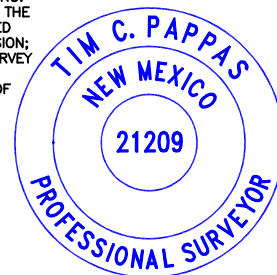
Email Address

## SURVEYOR CERTIFICATIONS

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.

I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

TIM C. PAPPAS  
REGISTERED PROFESSIONAL LAND SURVEYOR  
STATE OF NEW MEXICO NO. 21209



Signature and Seal of Professional Surveyor

Certificate Number

TIM C. PAPPAS 21209

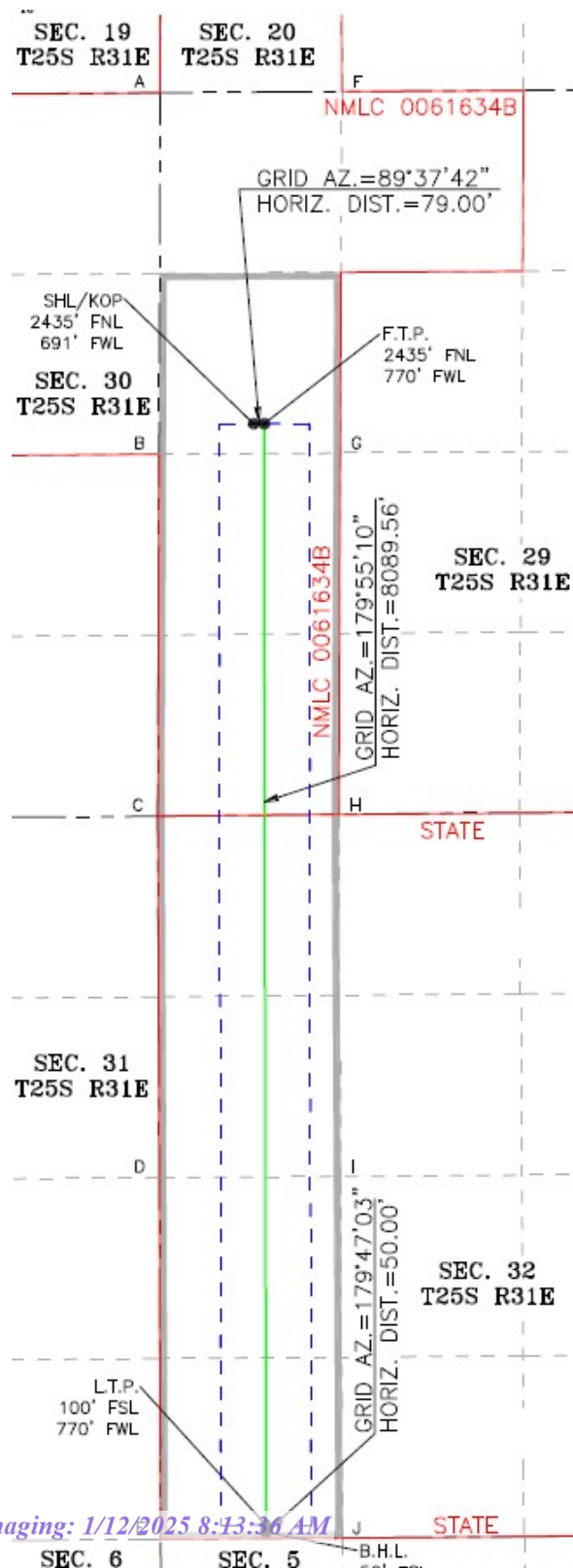
Date of Survey

7/10/2024

Note: 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.

# LEGEND

--- SECTION LINE  
 --- PROPOSED WELLBORE  
 --- NEW MEXICO MINERAL LEASE  
 --- 330' BUFFER  
 --- DEDICATED ACREAGE



|                                       |               |                        |               |
|---------------------------------------|---------------|------------------------|---------------|
| <b>SHL/KOP (NAD83 NME)</b>            |               | <b>LTP (NAD83 NME)</b> |               |
| Y =                                   | 401,190.6     | Y =                    | 393,101.9     |
| X =                                   | 704,421.2     | X =                    | 704,511.6     |
| LAT. =                                | 32.101857 °N  | LAT. =                 | 32.079622 °N  |
| LONG. =                               | 103.806657 °W | LONG. =                | 103.806492 °W |
| <b>FTP (NAD83 NME)</b>                |               | <b>BHL(NAD83 NME)</b>  |               |
| Y =                                   | 401,191.1     | Y =                    | 393,051.9     |
| X =                                   | 704,500.2     | X =                    | 704,511.8     |
| LAT. =                                | 32.101858 °N  | LAT. =                 | 32.079484 °N  |
| LONG. =                               | 103.806402 °W | LONG. =                | 103.806493 °W |
| <b>CORNER COORDINATES (NAD83 NME)</b> |               |                        |               |
| A - Y =                               | 403,621.2 N   | X =                    | 703,737.8 E   |
| B - Y =                               | 400,966.5 N   | X =                    | 703,729.5 E   |
| C - Y =                               | 398,308.0 N   | X =                    | 703,719.7 E   |
| D - Y =                               | 395,652.0 N   | X =                    | 703,732.0 E   |
| E - Y =                               | 392,996.2 N   | X =                    | 703,742.0 E   |
| F - Y =                               | 403,629.8 N   | X =                    | 705,067.8 E   |
| G - Y =                               | 400,975.3 N   | X =                    | 705,056.4 E   |
| H - Y =                               | 398,321.1 N   | X =                    | 705,044.2 E   |
| I - Y =                               | 395,661.7 N   | X =                    | 705,058.7 E   |
| J - Y =                               | 393,006.1 N   | X =                    | 705,072.1 E   |
| <b>SHL/KOP (NAD27 NME)</b>            |               | <b>LTP (NAD27 NME)</b> |               |
| Y =                                   | 401,132.7     | Y =                    | 393,044.2     |
| X =                                   | 663,235.6     | X =                    | 663,325.7     |
| LAT. =                                | 32.101733 °N  | LAT. =                 | 32.079497 °N  |
| LONG. =                               | 103.806178 °W | LONG. =                | 103.806015 °W |
| <b>FTP (NAD27 NME)</b>                |               | <b>BHL (NAD27 NME)</b> |               |
| Y =                                   | 401,133.2     | Y =                    | 392,994.2     |
| X =                                   | 663,314.6     | X =                    | 663,325.9     |
| LAT. =                                | 32.101733 °N  | LAT. =                 | 32.079360 °N  |
| LONG. =                               | 103.805923 °W | LONG. =                | 103.806015 °W |
| <b>CORNER COORDINATES (NAD27 NME)</b> |               |                        |               |
| A - Y =                               | 403,563.2 N   | X =                    | 662,552.3 E   |
| B - Y =                               | 400,908.6 N   | X =                    | 662,543.9 E   |
| C - Y =                               | 398,250.1 N   | X =                    | 662,534.0 E   |
| D - Y =                               | 395,594.2 N   | X =                    | 662,546.2 E   |
| E - Y =                               | 392,938.5 N   | X =                    | 662,556.1 E   |
| F - Y =                               | 403,571.9 N   | X =                    | 663,882.3 E   |
| G - Y =                               | 400,917.4 N   | X =                    | 663,870.8 E   |
| H - Y =                               | 398,263.3 N   | X =                    | 663,858.5 E   |
| I - Y =                               | 395,603.9 N   | X =                    | 663,872.9 E   |

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** XTO Permian Operating, LLC **OGRID:** 373075 **Date:** 09 / 25 / 2024

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name                  | API | ULSTR        | Footages           | Anticipated Oil BBL/D | 3 yr Anticipated decline Oil BBL/D | Anticipated Gas MCF/D | 3 yr Anticipated decline Gas MCF/D | Anticipated Produced Water BBL/D | 3 yr Anticipated decline Water BBL/D |
|----------------------------|-----|--------------|--------------------|-----------------------|------------------------------------|-----------------------|------------------------------------|----------------------------------|--------------------------------------|
| POKER LAKE UNIT 29 BS 109H | TBD | 29-T25S-R31E | 2435 FNL, 661 FWL  | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 110H | TBD | 29-T25S-R31E | 2435 FNL, 691 FWL  | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 111H | TBD | 29-T25S-R31E | 2435 FNL, 721 FWL  | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 208H | TBD | 29-T25S-R31E | 2435 FNL, 1981 FWL | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 209H | TBD | 29-T25S-R31E | 2435 FNL, 2011 FWL | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 210H | TBD | 29-T25S-R31E | 2435 FNL, 2041 FWL | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 308H | TBD | 29-T25S-R31E | 2435 FNL, 1979 FEL | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 309H | TBD | 29-T25S-R31E | 2435 FNL, 1949 FEL | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 310H | TBD | 29-T25S-R31E | 2435 FNL, 1919 FEL | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 408H | TBD | 29-T25S-R31E | 2435 FNL, 658 FEL  | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 409H | TBD | 29-T25S-R31E | 2435 FNL, 628 FEL  | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |
| POKER LAKE UNIT 29 BS 410H | TBD | 29-T25S-R31E | 2435 FNL, 598 FEL  | 1,100                 | 150                                | 2,000                 | 500                                | 2,250                            | 250                                  |

**IV. Central Delivery Point Name:** PLU 29 BS CTB [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name                  | API        | Spud Date  | TD Reached Date | Completion Commencement Date | Initial Flow Back Date | First Production Date |
|----------------------------|------------|------------|-----------------|------------------------------|------------------------|-----------------------|
| POKER LAKE UNIT 29 BS 109H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 110H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 111H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 208H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 209H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 210H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 308H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 309H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 310H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 408H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 409H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |
| POKER LAKE UNIT 29 BS 410H | <u>TBD</u> | <u>TBD</u> | <u>TBD</u>      | <u>TBD</u>                   | <u>TBD</u>             | <u>TBD</u>            |

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

## **Section 2 – Enhanced Plan** **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

### **IX. Anticipated Natural Gas Production:**

| Well | API | Anticipated Average Natural Gas Rate MCF/D | Anticipated Volume of Natural Gas for the First Year MCF |
|------|-----|--------------------------------------------|----------------------------------------------------------|
|      |     |                                            |                                                          |
|      |     |                                            |                                                          |

### **X. Natural Gas Gathering System (NGGS):**

| Operator | System | ULSTR of Tie-in | Anticipated Gathering Start Date | Available Maximum Daily Capacity of System Segment Tie-in |
|----------|--------|-----------------|----------------------------------|-----------------------------------------------------------|
|          |        |                 |                                  |                                                           |
|          |        |                 |                                  |                                                           |



**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☒ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### **Section 3 - Certifications**

**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### **Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Signature: <i>Samantha Weis</i>                                                                  |
| Printed Name: Samantha Weis                                                                      |
| Title: Permitting Advisor                                                                        |
| E-mail Address: Samantha.r.bartnik@exxonmobil.com                                                |
| Date: 11/4/2024                                                                                  |
| Phone: +1-832-625-7361                                                                           |
| <b>OIL CONSERVATION DIVISION</b><br><b>(Only applicable when submitted as a standalone form)</b> |
| Approved By:                                                                                     |
| Title:                                                                                           |
| Approval Date:                                                                                   |
| Conditions of Approval:                                                                          |

## VI. Separation Equipment:

XTO Permian Operating LLC. utilizes a "stage separation" process in which oil and gas separation is carried out through a series of separators operating at successively reduced pressures. Hydrocarbon liquids are produced into a high-pressure inlet separator, then carried through one or more lower pressure separation vessels before entering the storage tanks. The purpose of this separation process is to attain maximum recovery of liquid hydrocarbons from the fluids and allow maximum capture of produced gas into the sales pipeline. XTO utilizes a series of Low-Pressure Compression units to capture gas off the staged separation and send it to the sales pipeline. This process minimizes the amount of flash gas that enters the end-stage storage tanks that is subsequently vented or flared.

## VII. Operational Practices

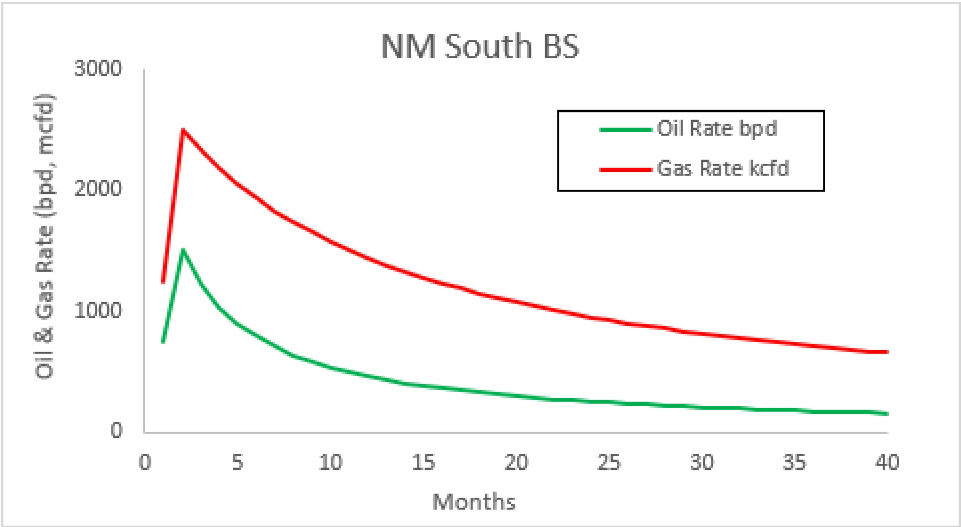
XTO Permian Operating LLC will employ best management practices and control technologies to maximize the recovery and minimize waste of natural gas through venting and flaring.

- During drilling operations, XTO will utilize flares to capture and control natural gas, where technically feasible. If flaring is deemed technically in-feasible, XTO will employ best management practices to minimize or reduce venting to the extent possible.
- During completions operations, XTO will utilize Green Completion methods to capture gas produced during well completions that is otherwise vented or flared. If capture is technically in-feasible, flares will be used to control flow back fluids entering into frac tanks during initial flowback. Upon indication of first measurable hydrocarbon volumes, XTO Permian Operating LLC will turn operations to onsite separation vessels and flow to the gathering pipeline.
- During production operations, XTO Permian Operating LLC will take every practical effort to minimize waste of natural gas through venting and flaring by:
  - Designing and constructing facilities in a manner consistent to achieve maximum capture and control of hydrocarbon liquids & produced gas
  - Utilizing a closed-loop capture system to collect, and route produced gas to sales line via low pressure compression, or to a flare/combustor
  - Flaring in lieu of venting, where technically feasible
  - Utilizing auto-ignitors or continuous pilots, with thermocouples connected to Scada, to quickly detect and resolve issues related to malfunctioning flares/combustors
  - Employ the use of automatic tank gauging to minimize storage tank venting during loading events
  - Installing air-driven or electric-driven pneumatics & combustion engines, where technically feasible to minimize venting to the atmosphere
  - Confirm equipment is properly maintained and repaired through a preventative maintenance and repair program to ensure equipment meets all manufacturer specifications

- Conduct and document AVO inspections on the frequency set forth in Part 27 to detect and repair any onsite leaks as quickly and efficiently as is feasible.

#### VIII. Best Management Practices during Maintenance

XTO Permian Operating LLC. will utilize best management practices to minimize venting during active and planned maintenance activities. XTO is operating under guidance that production facilities permitted under NOI permits have no provisions to allow high pressure flaring and high-pressure flaring is only allowed in disruption scenarios so long as the duration is less than eight hours. When technically feasible, flaring during maintenance activities will be utilized in lieu of venting to the atmosphere. XTO will work with third-party operators during scheduled maintenance of downstream pipeline or processing plants to address those events ahead of time to minimize venting. Actions considered include identifying alternative capture approaches or planning to temporarily reduce production or shut in the well to address these circumstances.





APD ID: 10400094908

Submission Date: 10/01/2023

Highlighted data  
reflects the most  
recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 29 BS

Well Number: 110H

Well Type: OIL WELL

Well Work Type: Drill

Show Final Text

## Section 1 - Geologic Formations

| Formation ID | Formation Name  | Elevation | True Vertical | Measured Depth | Lithologies                 | Mineral Resources                        | Producing Formatio |
|--------------|-----------------|-----------|---------------|----------------|-----------------------------|------------------------------------------|--------------------|
| 14396250     | QUATERNARY      | 3369      | 0             | 0              | ALLUVIUM                    | USEABLE WATER                            | N                  |
| 14396251     | RUSTLER         | 2585      | 784           | 784            | ANHYDRITE, SANDSTONE        | USEABLE WATER                            | N                  |
| 14396252     | SALADO          | 2206      | 1163          | 1163           | SALT                        | NONE                                     | N                  |
| 14396249     | BASE OF SALT    | -531      | 3900          | 3900           | SALT                        | NONE                                     | N                  |
| 14396253     | DELAWARE        | -749      | 4118          | 4118           | LIMESTONE, SANDSTONE        | NATURAL GAS, OIL, OTHER : Produced Water | N                  |
| 14396247     | BRUSHY CANYON   | -3395     | 6764          | 6764           | SANDSTONE                   | NATURAL GAS, OIL, OTHER : Produced Water | N                  |
| 14396254     | BONE SPRING     | -4687     | 8056          | 8056           | LIMESTONE, SANDSTONE        | NATURAL GAS, OIL, OTHER : Produced Water | Y                  |
| 14396255     | BONE SPRING 1ST | -5659     | 9028          | 9028           | LIMESTONE, SANDSTONE        | NATURAL GAS, OIL, OTHER : Produced Water | Y                  |
| 14396256     | BONE SPRING 2ND | -6359     | 9728          | 9728           | LIMESTONE, SANDSTONE        | NATURAL GAS, OIL, OTHER : Produced Water | Y                  |
| 14396257     | BONE SPRING 3RD | -7214     | 10583         | 10583          | SANDSTONE, SHALE, SILTSTONE | NATURAL GAS, OIL, OTHER : Produced Water | Y                  |

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 10896

**Equipment:** Once the permanent WH is installed on the surface casing, the blow out preventer equipment (BOP) will consist of a 5M Hydril and a 5M Double Ram BOP. XTO will use a Multi-Bowl system which is attached.

**Requesting Variance?** YES

**Variance request:** 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

Well Name: POKER LAKE UNIT 29 BS

Well Number: 110H

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. 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.

**Testing Procedure:** All BOP testing will be done by an independent service company. Operator will test as per 43 CFR 3172.

**Choke Diagram Attachment:**

PLU\_29\_BS\_5MCM\_20230925045906.pdf

**BOP Diagram Attachment:**

PLU\_29\_BS\_5MBOP\_20230925045919.pdf

Section 3 - Casing

| Casing ID | String Type  | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type                    | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|-----------|--------------|-----------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|-----------------------------|-------|--------|-------------------------------|-------------|----------|---------------|----------|--------------|---------|
| 1         | SURFACE      | 12.25     | 9.625    | NEW       | API      | N              | 0          | 884           | 0           | 884            | 3369        | 2485           | 884                         | J-55  | 40     | BUTT                          | 6.43        | 1.39     | DRY           | 17.82    | DRY          | 17.82   |
| 2         | INTERMEDIATE | 8.75      | 7.625    | NEW       | API      | Y              | 0          | 10000         | 0           | 9981           | 3369        | -6612          | 10000                       | L-80  | 29.7   | FJ                            | 2           | 1.67     | DRY           | 2.28     | DRY          | 2.28    |
| 3         | PRODUCTION   | 6.75      | 5.5      | NEW       | NON API  | Y              | 0          | 19382         | 0           | 10896          | 3369        | -7527          | 19382                       | P-110 | 23     | OTHER - Talon HTQ/Freedom HTQ | 2.23        | 1.21     | DRY           | 7.57     | DRY          | 7.57    |

**Casing Attachments**

Well Name: POKER LAKE UNIT 29 BS

Well Number: 110H

Casing Attachments

Casing ID: 1 String SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU\_29\_BS\_110H\_Csg\_20230927215239.pdf

Casing ID: 2 String INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

PLU\_29\_BS\_110H\_Csg\_20230927215434.pdf

Casing Design Assumptions and Worksheet(s):

PLU\_29\_BS\_110H\_Csg\_20230927215528.pdf

Casing ID: 3 String PRODUCTION

Inspection Document:

Spec Document:

Freedom\_Semi\_Premium\_5.5000\_23.0000\_0.4150\_\_P110\_RY\_20240902125202.pdf

Talon\_\_Semiflush\_HTQ\_RD\_5.5000\_23.0000\_0.4150\_\_P110\_RY\_20240902125202.pdf

Tapered String Spec:

PLU\_29\_BS\_110H\_Csg\_20240502105332.pdf

Casing Design Assumptions and Worksheet(s):

PLU\_29\_BS\_110H\_Csg\_20230927215755.pdf

Section 4 - Cement

Well Name: POKER LAKE UNIT 29 BS

Well Number: 110H

| String Type  | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft  | Excess% | Cement type     | Additives |
|--------------|-----------|------------------|--------|-----------|--------------|-------|---------|--------|---------|-----------------|-----------|
| SURFACE      | Lead      |                  | 0      | 884       | 190          | 1.87  | 12.9    | 355.3  | 100     | EconoCem-HLTRRC | NA        |
| SURFACE      | Tail      |                  | 0      | 884       | 130          | 1.35  | 14.8    | 175.5  | 100     | Class C         | NA        |
| INTERMEDIATE | Lead      |                  | 0      | 6450      | 300          | 1.35  | 14.8    | 405    | 100     | NeoCem          | NA        |
| INTERMEDIATE | Tail      |                  | 6450   | 10000     | 760          | 1.33  | 14.8    | 1010.8 | 100     | VersaCem        | NA        |
| PRODUCTION   | Lead      |                  | 9700   | 10400     | 20           | 2.69  | 11.5    | 53.8   | 30      | NeoCem          | NA        |
| PRODUCTION   | Tail      |                  | 10400  | 19382     | 640          | 1.51  | 13.2    | 966.4  | 30      | VersaCem        | NA        |

### Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

**Describe what will be on location to control well or mitigate other conditions:** The necessary mud products for weight addition and fluid loss control will be on location at all times.

**Describe the mud monitoring system utilized:** Spud with fresh water/native mud. Drill out from under surface casing with Saturated Salt solution. Saturated Salt 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.

### Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type      | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|---------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 10000     | 19382        | OIL-BASED MUD | 11.5                 | 12                   |                     |                             |    |                |                |                 |                            |

Well Number: 110H

| Top Depth | Bottom Depth | Mud Type        | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|-----------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 4118      | 10000        | OTHER : BDE/OBM | 9                    | 9.5                  |                     |                             |    |                |                |                 |                            |
| 0         | 884          | WATER-BASED MUD | 8.7                  | 9.2                  |                     |                             |    |                |                |                 |                            |
| 884       | 4118         | SALT SATURATED  | 10.5                 | 11                   |                     |                             |    |                |                |                 |                            |

## Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

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

Open hole logging will not be done on this well.

**List of open and cased hole logs run in the well:**

GAMMA RAY LOG,CEMENT BOND LOG,MEASUREMENT WHILE DRILLING,MUD LOG/GEOLOGICAL LITHOLOGY LOG,DIRECTIONAL SURVEY,

**Coring operation description for the well:**

No coring is planned for the well.

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure: 6799**

**Anticipated Surface Pressure: 4401**

**Anticipated Bottom Hole Temperature(F): 195**

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geoharzards description:**

## Contingency Plans geohazards

**Hydrogen Sulfide drilling operations plan required? YES**

## Hydrogen sulfide drilling operations

XTO\_Energy\_H2S\_Plan\_Updated\_20240823130411.pdf

Well Name: POKER LAKE UNIT 29 BS

Well Number: 110H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

PLU\_29\_BS\_110H\_DD\_20230927220940.pdf

Other proposed operations facets description:

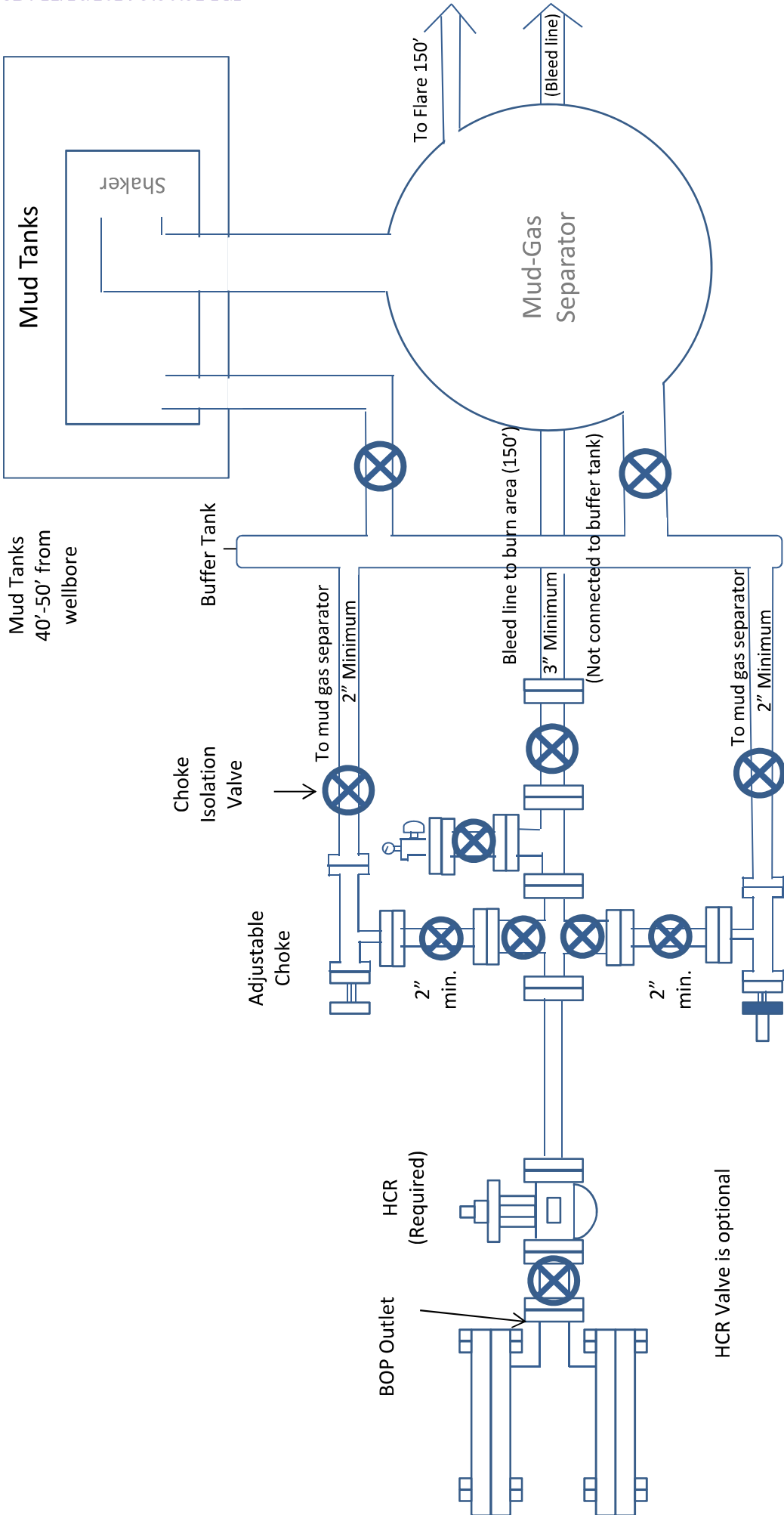
Other proposed operations facets attachment:

- PLU\_29\_BS\_110H\_Cmt\_20240323140221.pdf
- PLU\_29\_BS\_MBS\_20240620010232.pdf
- PLU\_29\_BS\_H2S\_DiaA\_20240902125849.pdf
- PLU\_29\_BS\_H2S\_DiaC\_20240902125850.pdf
- PLU\_29\_BS\_H2S\_DiaB\_20240902125850.pdf
- PLU\_29\_BS\_H2S\_DiaD\_20240902125851.pdf
- PLU\_29\_BS\_MBS\_20240902125855.pdf

Other Variance attachment:

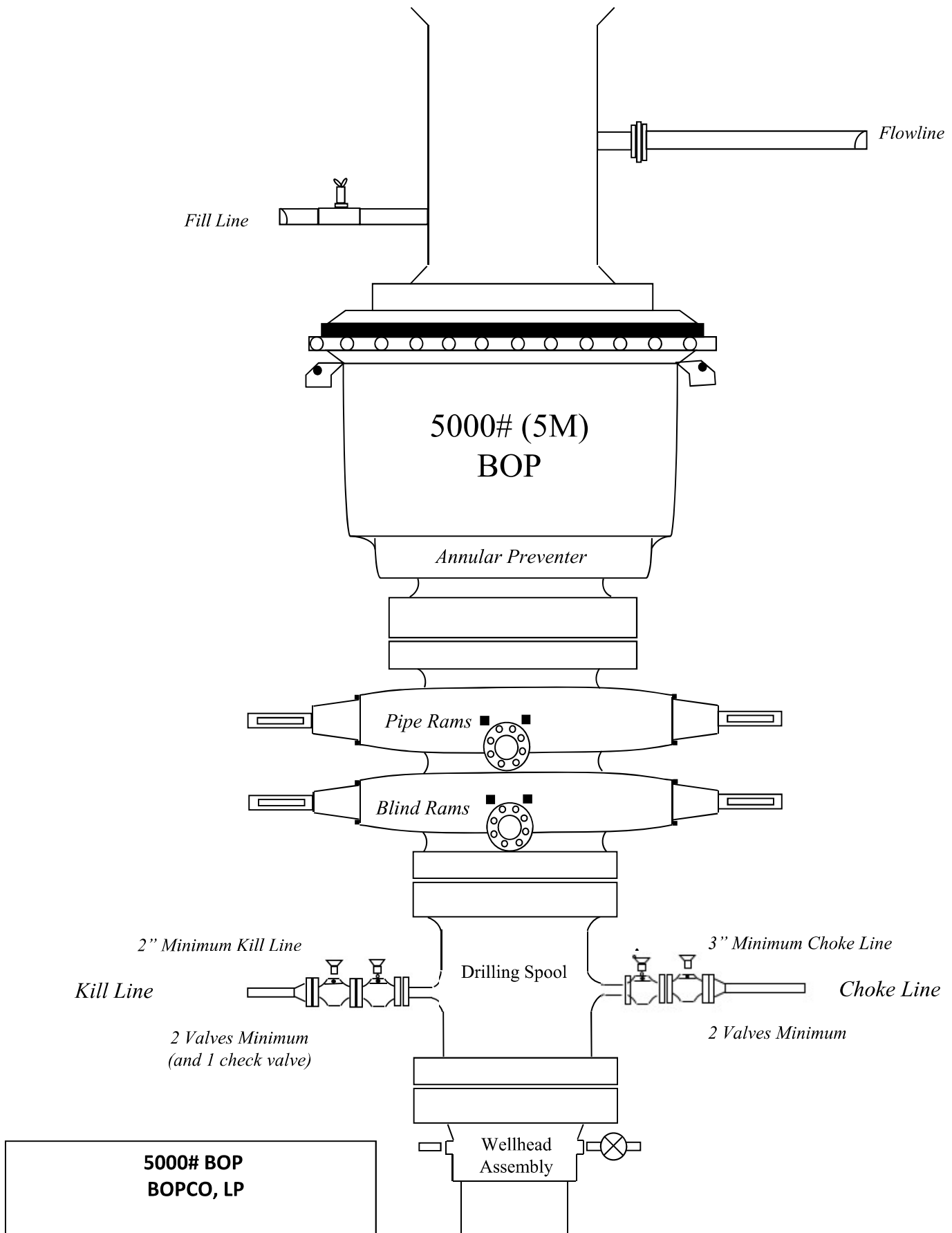
- PLU\_29\_BS\_OLCV\_20230925075008.pdf
- Spudder\_Rig\_Request\_20240902125928.pdf
- Flex\_Hose\_Updated\_20240902125929.pdf
- BOP\_Break\_Test\_Variance\_20240905105249.pdf

Bleed line will discharge 100' from wellhead for non-H2S situations and 150' from wellhead for H2S situations



5M Choke Manifold Diagram  
BOPCO, LP

**Drilling Operations  
Choke Manifold  
5M Service**







U. S. Steel Tubular Products

5.500" 23.00lb/ft (0.415" Wall) P110 RY USS-TALON HTQ™ RD



| MECHANICAL PROPERTIES            | Pipe    | USS-TALON HTQ™ RD |            | [6] |
|----------------------------------|---------|-------------------|------------|-----|
| Minimum Yield Strength           | 110,000 | —                 | psi        | —   |
| Maximum Yield Strength           | 125,000 | —                 | psi        | —   |
| Minimum Tensile Strength         | 125,000 | —                 | psi        | —   |
| DIMENSIONS                       | Pipe    | USS-TALON HTQ™ RD |            | —   |
| Outside Diameter                 | 5.500   | 5.900             | in.        | —   |
| Wall Thickness                   | 0.415   | --                | in.        | —   |
| Inside Diameter                  | 4.670   | 4.670             | in.        | —   |
| Standard Drift                   | 4.545   | 4.545             | in.        | —   |
| Alternate Drift                  | —       | --                | in.        | —   |
| Nominal Linear Weight, T&C       | 23.00   | --                | lb/ft      | —   |
| Plain End Weight                 | 22.56   | --                | lb/ft      | —   |
| SECTION AREA                     | Pipe    | USS-TALON HTQ™ RD |            | —   |
| Critical Area                    | 6.630   | 6.425             | sq. in.    | --  |
| Joint Efficiency                 | --      | 96.9              | %          | [2] |
| PERFORMANCE                      | Pipe    | USS-TALON HTQ™ RD |            | —   |
| Minimum Collapse Pressure        | 14,540  | 14,540            | psi        | --  |
| Minimum Internal Yield Pressure  | 14,520  | 14,520            | psi        | --  |
| Minimum Pipe Body Yield Strength | 729,000 | --                | lb         | --  |
| Joint Strength                   | --      | 707,000           | lb         | --  |
| Compression Rating               | --      | 707,000           | lb         | --  |
| Reference Length                 | --      | 20,490            | ft         | [5] |
| Maximum Uniaxial Bend Rating     | --      | 88.9              | deg/100 ft | [3] |
| MAKE-UP DATA                     | Pipe    | USS-TALON HTQ™ RD |            | —   |
| Make-Up Loss                     | --      | 5.58              | in.        | --  |
| Minimum Make-Up Torque           | --      | 20,800            | ft-lb      | [4] |
| Maximum Make-Up Torque           | --      | 23,800            | ft-lb      | [4] |
| Maximum Operating Torque         | --      | 39,800            | ft-lb      | [4] |

UNCONTROLLED

Notes

- Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- Joint efficiencies are calculated by dividing the connection critical area by the pipe body area.
- Uniaxial bend rating shown is structural only.
- Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- Reference length is calculated by Joint Strength divided by Nominal Linear Weight, T&C with a 1.5 Safety factor.
- Coupling must meet minimum mechanical properties of the pipe.

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Spring, Texas 77380

1-877-893-9461  
connections@uss.com  
www.usstubular.com



U. S. Steel Tubular Products  
5.500" 23.00lb/ft (0.415" Wall) P110 RY USS-FREEDOM HTQ®



| MECHANICAL PROPERTIES            | Pipe    | USS-FREEDOM HTQ® |            | — |
|----------------------------------|---------|------------------|------------|---|
| Minimum Yield Strength           | 110,000 | —                | psi        | — |
| Maximum Yield Strength           | 125,000 | —                | psi        | — |
| Minimum Tensile Strength         | 125,000 | —                | psi        | — |
| DIMENSIONS                       | Pipe    | USS-FREEDOM HTQ® |            | — |
| Outside Diameter                 | 5.500   | 6.300            | in.        | — |
| Wall Thickness                   | 0.415   | --               | in.        | — |
| Inside Diameter                  | 4.670   | 4.670            | in.        | — |
| Standard Drift                   | 4.545   | 4.545            | in.        | — |
| Alternate Drift                  | --      | --               | in.        | — |
| Nominal Linear Weight, T&C       | 23.00   | --               | lb/ft      | — |
| Plain End Weight                 | 22.56   | --               | lb/ft      | — |
| SECTION AREA                     | Pipe    | USS-FREEDOM HTQ® |            | — |
| Critical Area                    | 6.630   | 6.630            | sq. in.    | — |
| Joint Efficiency                 | —       | 100.0            | %          | — |
| PERFORMANCE                      | Pipe    | USS-FREEDOM HTQ® |            | — |
| Minimum Collapse Pressure        | 14,540  | 14,540           | psi        | — |
| Minimum Internal Yield Pressure  | 14,520  | 14,520           | psi        | — |
| Minimum Pipe Body Yield Strength | 729,000 | --               | lb         | — |
| Joint Strength                   | --      | 729,000          | lb         | — |
| Compression Rating               | --      | 729,000          | lb         | — |
| Reference Length [4]             | --      | 21,138           | ft         | — |
| Maximum Uniaxial Bend Rating [2] | --      | 91.7             | deg/100 ft | — |
| MAKE-UP DATA                     | Pipe    | USS-FREEDOM HTQ® |            | — |
| Make-Up Loss                     | --      | 4.13             | in.        | — |
| Minimum Make-Up Torque [3]       | --      | 15,000           | ft-lb      | — |
| Maximum Make-Up Torque [3]       | --      | 21,000           | ft-lb      | — |
| Maximum Operating Torque[3]      | --      | 32,500           | ft-lb      | — |

UNCONTROLLED

Notes

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4. Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.

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Spring, Texas 77380  
1-877-893-9461  
connections@uss.com  
www.usstubular.com

## Casing Design

| Hole Size | Depth           | OD Csg | Weight | Grade    | Collar       | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-----------------|--------|--------|----------|--------------|----------|----------|-------------|------------|
| 12.25     | 0' – 884'       | 9.625  | 40     | J-55     | BTC          | New      | 1.39     | 6.43        | 17.82      |
| 8.75      | 0' – 4000'      | 7.625  | 29.7   | RY P-110 | Flush Joint  | New      | 2.30     | 2.65        | 1.88       |
| 8.75      | 4000' – 10000'  | 7.625  | 29.7   | HC L-80  | Flush Joint  | New      | 1.67     | 2.00        | 2.28       |
| 6.75      | 0' – 9900'      | 5.5    | 23     | RY P-110 | Semi-Premium | New      | 1.21     | 2.46        | 2.25       |
| 6.75      | 9900' - 10613'  | 5.5    | 23     | RY P-110 | Semi-Flush   | New      | 1.21     | 2.29        | 6.29       |
| 6.75      | 10613' - 19382' | 5.5    | 23     | RY P-110 | Semi-Flush   | New      | 1.21     | 2.23        | 7.57       |

### **Cement Variance Request**

#### **Intermediate Casing :**

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 (6764') 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 :**

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.

XTO respectfully requests approval to utilize a spudder rig to pre-set surface casing.

Description of Operations:

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
  - a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
  - b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wing valves.
  - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling Operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nipped up and tested on the wellhead before drilling operations resume on each well.
  - a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
  - b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations
7. XTO will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, XTO will secure the wellhead area by placing a guard rail around the cellar area.

**XTO Permian Operating, LLC Offline Cementing Variance Request**

XTO requests the option to cement the surface and intermediate casing strings offline as a prudent batch drilling efficiency of acreage development.

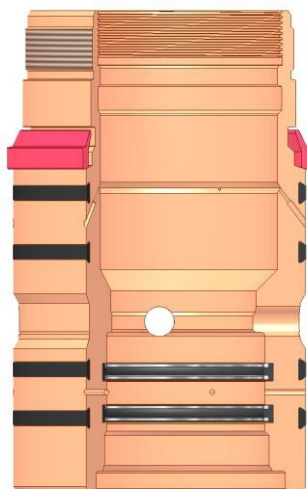
**1. Cement Program**

No changes to the cement program will take place for offline cementing.

**2. Offline Cementing Procedure**

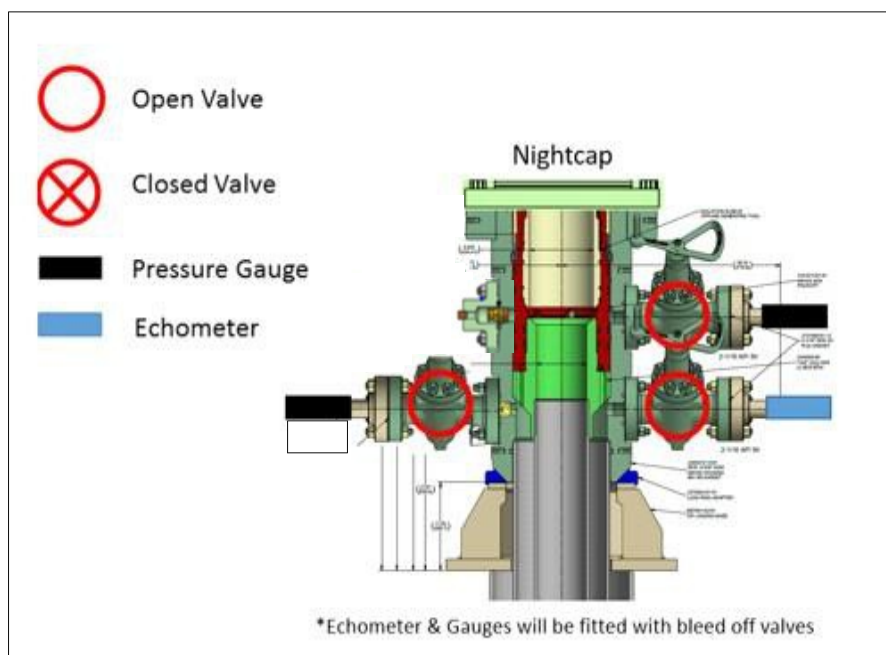
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal. Pressure ratings of wellhead components and valves is 5,000 psi.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
  - a. If any barrier fails to test, the BOP stack will not be nipped down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



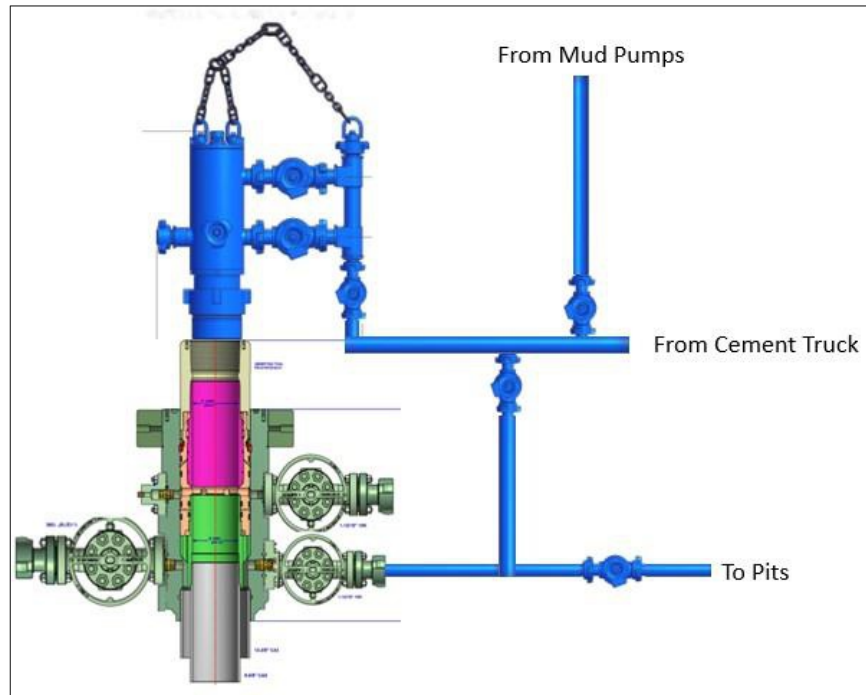
Annular packoff with both external and internal seals

## XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nipping up for further remediation.
  - a. Well Control Plan
    - i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
    - ii. Rig pumps or a 3<sup>rd</sup> party pump will be tied into the upper casing valve to pump down the casing ID
    - iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
    - iv. Once influx is circulated out of the hole, kill weight mud will be circulated
    - v. Well will be confirmed static
    - vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment

**XTO Permian Operating, LLC Offline Cementing Variance Request**

Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
  - a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
  - b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.



**BLACK GOLD®**

**GATES ENGINEERING & SERVICES NORTH AMERICA**  
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**Houston, TX. 77086**

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*NEW CHOKE HOSE*  
*INSTALLED 02-10-2024*

## CERTIFICATE OF CONFORMANCE

This is to verify that the items detailed below meet the requirements of the Customer's Purchase Order referenced herein, and are in Conformance with applicable specifications, and that Records of Required Tests are on file and subject to examination. The following items were inspected and hydrostatically tested at **Gates Engineering & Services North America** facilities in Houston, TX, USA.

**CUSTOMER:** NABORS DRILLING TECHNOLOGIES USA DBA NABORS DRILLING USA  
**CUSTOMER P.O.#:** 15582803 (TAG NABORS PO #15582803 SN 74621 ASSET 66-1531)  
**CUSTOMER P/N:** IMR RETEST SN 74621 ASSET #66-1531

**PART DESCRIPTION:** RETEST OF CUSTOMER 3" X 45 FT 16C CHOKE & KILL HOSE ASSEMBLY C/W 4 1/16" 10K FLANGES

**SALES ORDER #:** 529480  
**QUANTITY:** 1  
**SERIAL #:** 74621 H3-012524-1

**SIGNATURE:***F. Cismos***TITLE:****QUALITY ASSURANCE****DATE:**

1/25/2024



H3-15/16

1/25/2024 11:48:06 AM

# TEST REPORT

**CUSTOMER**

Company: Nabors Industries Inc.

Production description: 74621/66-1531

Sales order #: 529480

Customer reference: FG1213

**TEST OBJECT**

Serial number: H3-012524-1

Lot number:

Description: 74621/66-1531

Hose ID: 3" 16C CK

Part number:

**TEST INFORMATION**

Test procedure: GTS-04-053

Test pressure: 15000.00 psi

Test pressure hold: 3600.00 sec

Work pressure: 10000.00 psi

Work pressure hold: 900.00 sec

Length difference: 0.00 %

Length difference: 0.00 inch

Fitting 1: 3.0 x 4-1/16 10K

Part number:

Description:

Fitting 2: 3.0 x 4-1/16 10K

Part number:

Description:

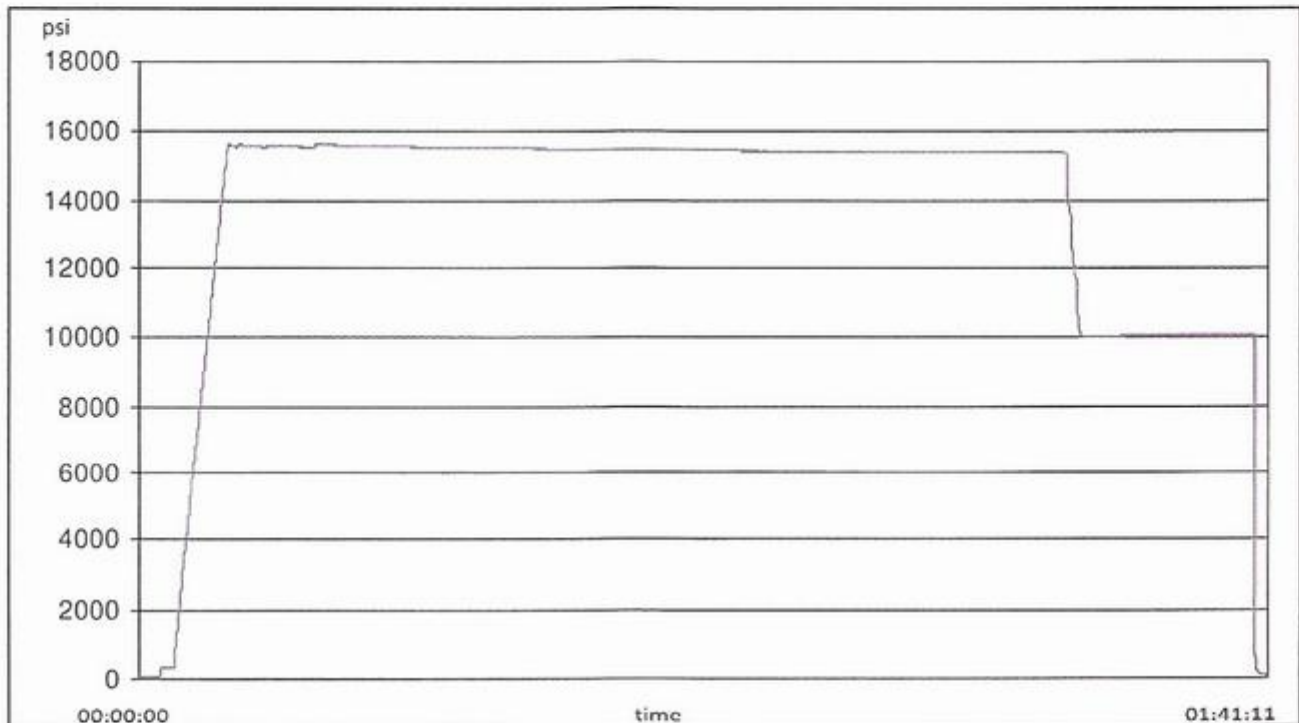
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





H3-15/16

1/25/2024 11:48:06 AM

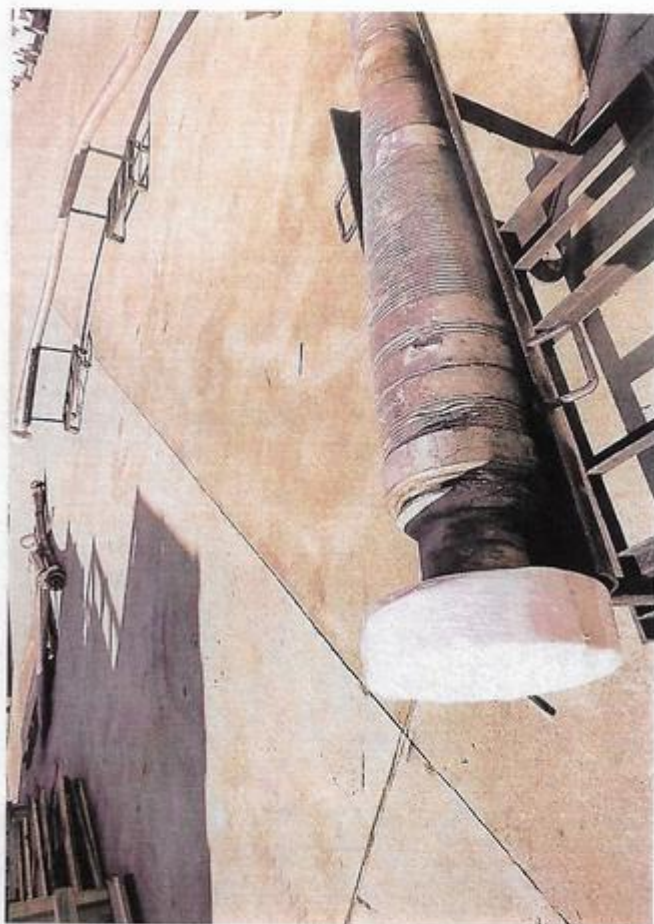
TEST REPORT

GAUGE TRACEABILITY

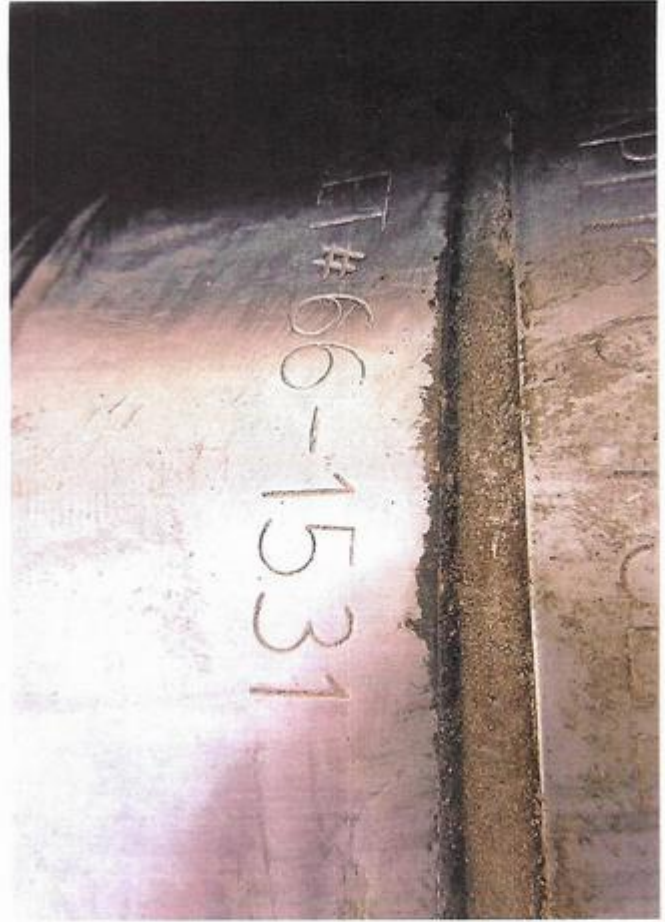
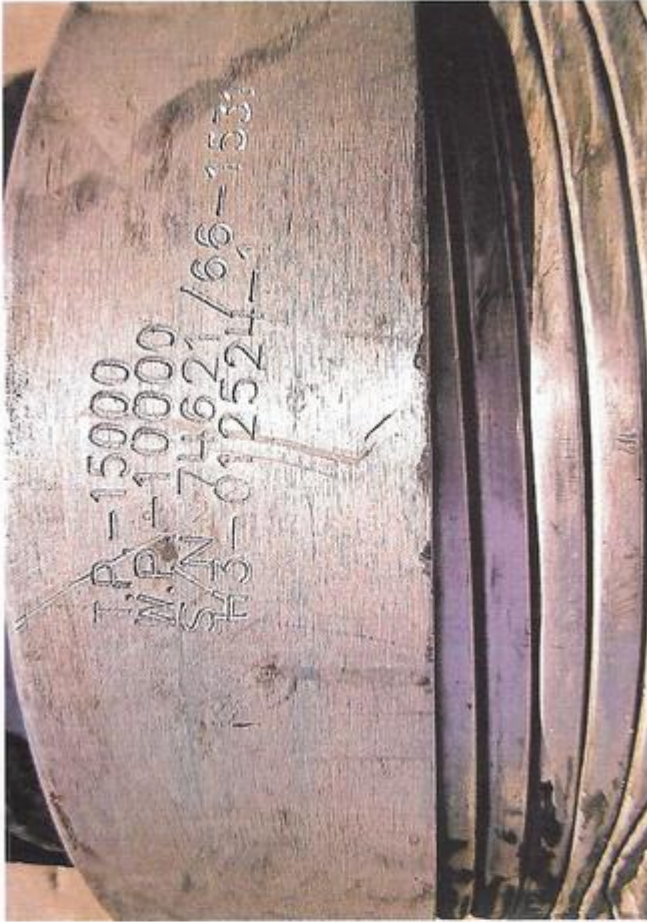
| Description | Serial number | Calibration date | Calibration due date |
|-------------|---------------|------------------|----------------------|
| S-25-A-W    | 110D3PHO      | 2023-06-06       | 2024-06-06           |
| S-25-A-W    | 110IQWDG      | 2023-05-16       | 2024-05-16           |

Comment









**Subject:** Request for a Variance Allowing break Testing of the Blowout Preventer Equipment (BOPE)

XTO Energy requests a variance to ONLY test broken pressure seals on the BOPE and function test BOP when skidding a drilling rig between multiple wells on a pad.

**Background**

Onshore Oil and Gas Order CFR Title 43 Part 3170, Drilling Operations, Sections III.A.2.i.iv.B states that the BOP test must be performed whenever any seal subject to test pressure is broken. The current interpretation of the Bureau of Land Management (BLM) requires a complete BOP test and not just a test of the affected component. CFR Title 43 Part 3170 states, "Some situation may exist either on a well-by-well basis or field-wide basis whereby it is commonly accepted practice to vary a particular minimum standard(s) established in this order. This situation can be resolved by requesting a variance...". XTO Energy feels the break testing the BOPE is such a situation. Therefore, as per CFR Title 43 Part 3170, XTO Energy submits this request for the variance.

**Supporting Documentation**

CFR Title 43 Part 3170 became effective on December 19, 1988 and has remained the standard for regulating BLM onshore drilling operations for over 30 years. During this time there have been significant changes in drilling technology. BLM continues to use the variance request process to allow for the use of modern technology and acceptable engineering practices that have arisen since CFR Title 43 Part 3170 was originally released. The XTO Energy drilling rig fleet has many modern upgrades that allow the intact BOP stack to be moved between well slots on a multi-well pad, as well as, wellhead designs that incorporate quick connects facilitating release of the BOP from the wellhead without breaking any BOP stack components apart. These technologies have been used extensively offshore, and other regulators, API, and many operators around the world have endorsed break testing as safe and reliable.

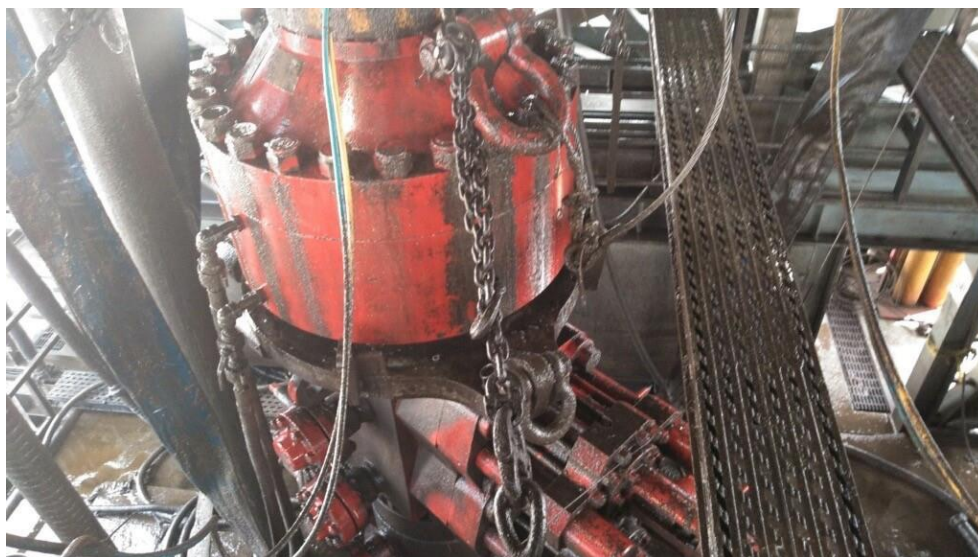


Figure 1: Winch System attached to BOP Stack



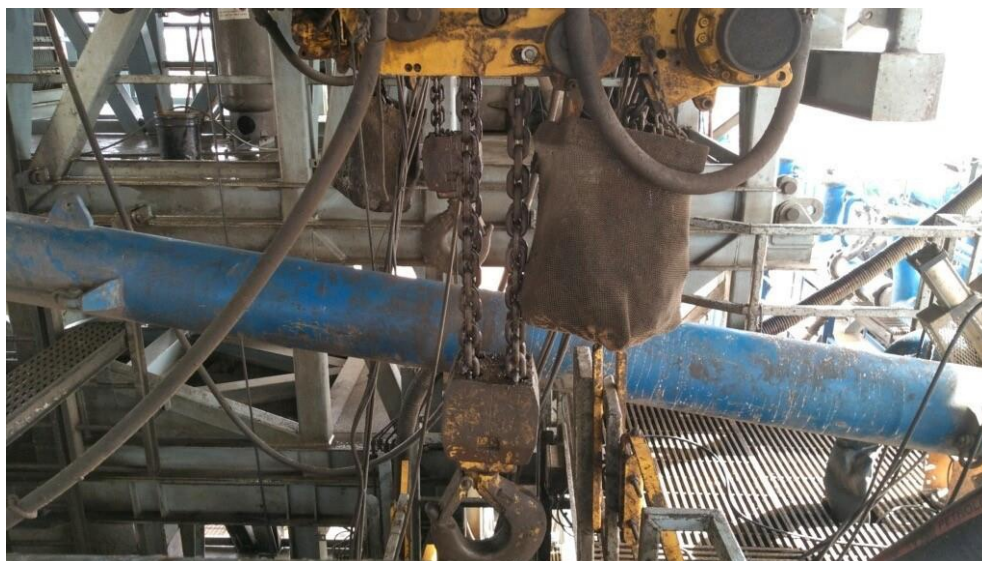


Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. CFR Title 43 Part 3170 recognizes API recommended Practices (RP) 53 in its original development. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (Fifth Edition, December 2018, Annex C, Table C.4) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 5.3.7.1 states “A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component.” See Table C.4 below for reference.

62

API STANDARD 53

Table C.4—Initial Pressure Testing, Surface BOP Stacks

| Component to be Pressure Tested                                                  | Pressure Test—Low Pressure <sup>ac</sup><br>psig (MPa) | Pressure Test—High Pressure <sup>ac</sup>                                  |                                                       |
|----------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------|
|                                                                                  |                                                        | Change Out of Component, Elastomer, or Ring Gasket                         | No Change Out of Component, Elastomer, or Ring Gasket |
| Annular preventer <sup>a</sup>                                                   | 250 to 350 (1.72 to 2.41)                              | RWP of annular preventer                                                   | MASP or 70% annular RWP, whichever is lower.          |
| Fixed pipe, variable bore, blind, and BSR preventers <sup>bd</sup>               | 250 to 350 (1.72 to 2.41)                              | RWP of ram preventer or wellhead system, whichever is lower                | ITP                                                   |
| Choke and kill line and BOP side outlet valves below ram preventers (both sides) | 250 to 350 (1.72 to 2.41)                              | RWP of side outlet valve or wellhead system, whichever is lower            | ITP                                                   |
| Choke manifold—upstream of chokes <sup>e</sup>                                   | 250 to 350 (1.72 to 2.41)                              | RWP of ram preventers or wellhead system, whichever is lower               | ITP                                                   |
| Choke manifold—downstream of chokes <sup>e</sup>                                 | 250 to 350 (1.72 to 2.41)                              | RWP of valve(s), line(s), or MASP for the well program, whichever is lower |                                                       |
| Kelly, kelly valves, drill pipe safety valves, IBOPs                             | 250 to 350 (1.72 to 2.41)                              | MASP for the well program                                                  |                                                       |

<sup>a</sup> Pressure test evaluation periods shall be a minimum of five minutes.

No visible leaks.

The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

<sup>b</sup> Annular(s) and VBR(s) shall be pressure tested on the largest and smallest OD drill pipe to be used in well program.

<sup>c</sup> For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

<sup>d</sup> For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

<sup>e</sup> Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specification and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations.

Break testing has been approved by the BLM in the past with other operators based on the detailed information provided in this document.

XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of CFR Title 43 Part 3170 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after

each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

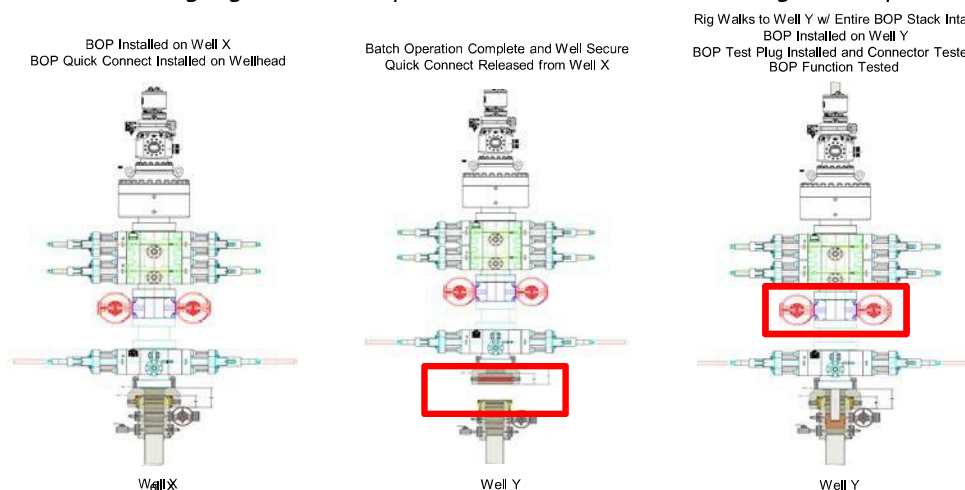
### **Procedures**

1. XTO Energy will use this document for our break testing plan for New Mexico Delaware basin. The summary below will be referenced in the APD or Sundry Notice and receive approval prior to implementing this variance.
2. XTO Energy will perform BOP break testing on multi-wells pads where multiple intermediate sections can be drilled and cased within the 21-day BOP test window.
  - a. A full BOP test will be conducted on the first well on the pad.
  - b. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
    - i. Our Lower WC targets set the intermediate casing shoe no deeper than the Wolfcamp B.
    - ii. Our Upper WC targets set the intermediate casing shoe shallower than the Wolfcamp B.
  - c. A Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
  - d. A full BOP test will be required prior to drilling any production hole.
3. After performing a complete BOP test on the first well, the intermediate hole section will be drilled and cased, two breaks would be made on the BOP equipment.
  - a. Between the HCV valve and choke line connection
  - b. Between the BOP quick connect and the wellhead
4. The BOP is then lifted and removed from the wellhead by a hydraulic system.
5. After skidding to the next well, the BOP is moved to the wellhead by the same hydraulic system and installed.
6. The connections mentioned in 3a and 3b will then be reconnected.
7. Install test plug into the wellhead using test joint or drill pipe.
8. A shell test is performed against the upper pipe rams testing the two breaks.
9. The shell test will consist of a 250 psi low test and a high test to the value submitted in the APD or Sundry (e.g. 5,000 psi or 10,000psi).
10. Function test will be performed on the following components: lower pipe rams, blind rams, and annular.



11. For a multi-well pad the same two breaks on the BOP would be made and on the next wells and steps 4 through 10 would be repeated.
12. A second break test would only be done if the intermediate hole section being drilled could not be completed within the 21 day BOP test window.

*Note: Picture below highlights BOP components that will be tested during batch operations*



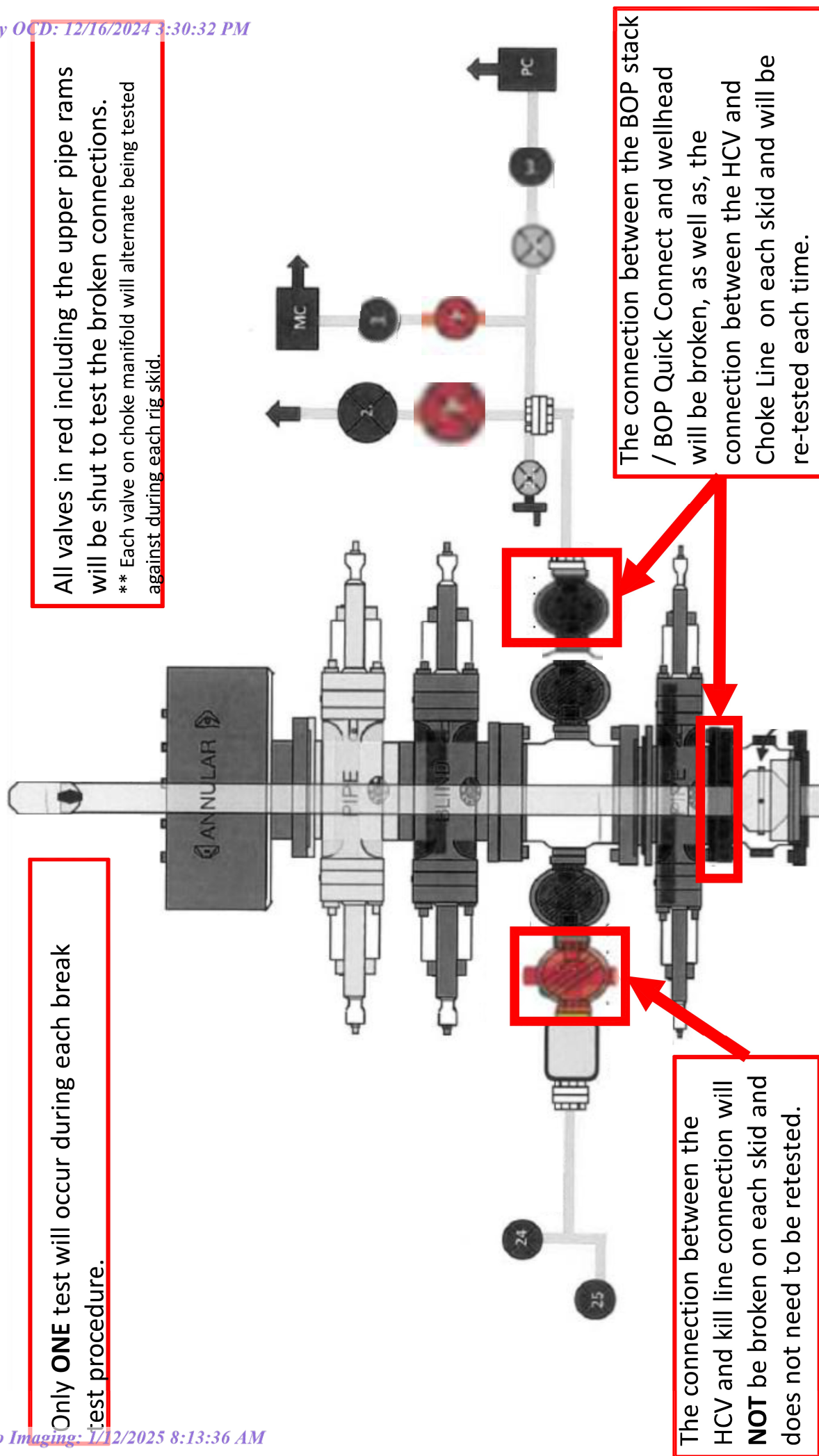
### Summary

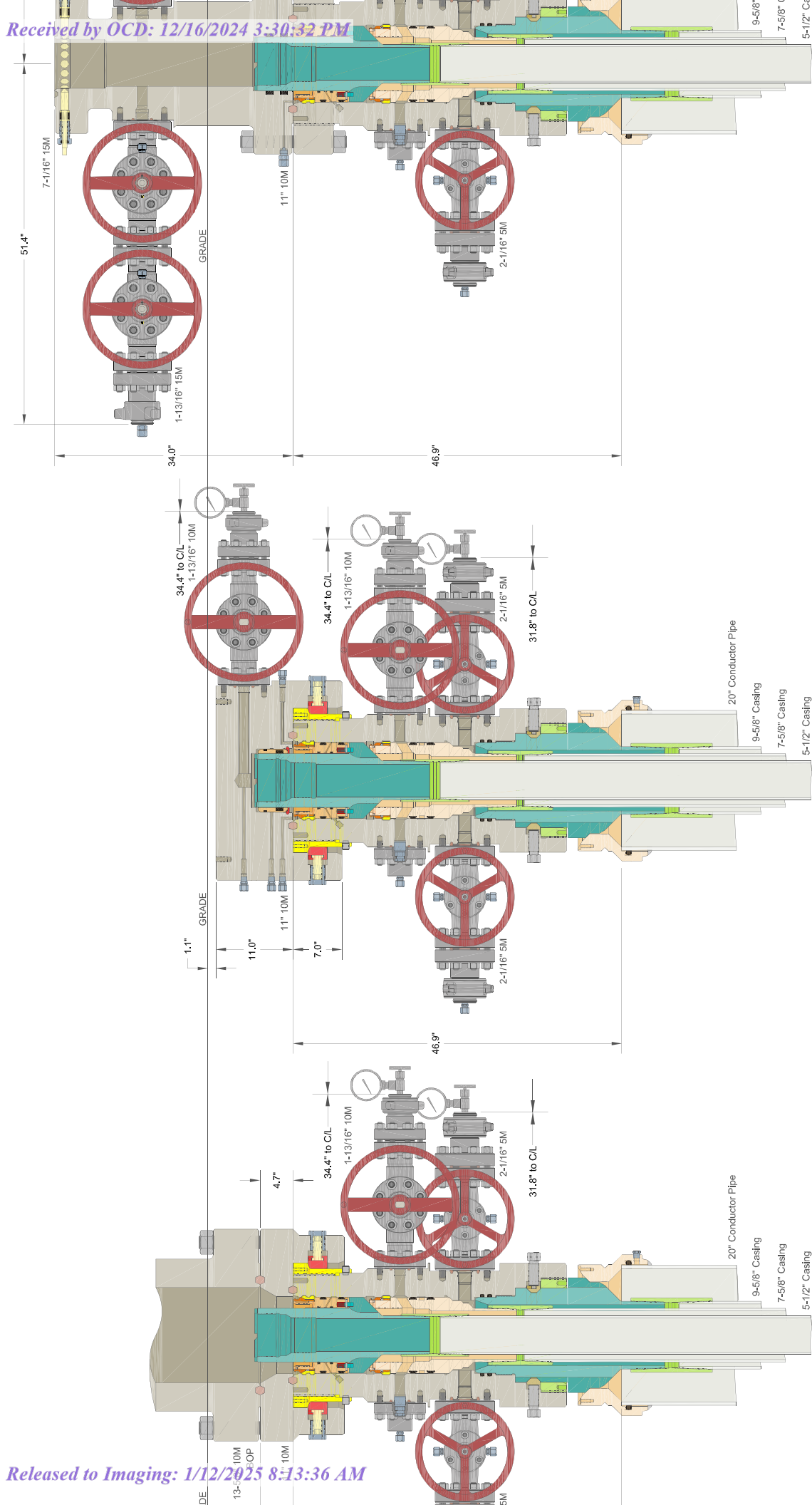
A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API Standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, 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. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
4. Full BOP test will be required prior to drilling the production hole.







## **XTO Energy**

**EDDY COUNTY, NM (NAD-27 / NME)**

**POKER LAKE UNIT 29 BS**

**110H**

**Wellbore #1**

**Plan: PERMIT**

## **Standard Planning Report**

**19 June, 2023**

+N/-S  
0.00

+E/-W  
0.00

Northing  
401132.67

Rig Name: TBD  
RKB = 30' @ 3399.00usft (TBD)  
Ground Level: 3369.00  
Easting  
663235.63

Latitude  
32.1017328

Longitude  
-103.8061781

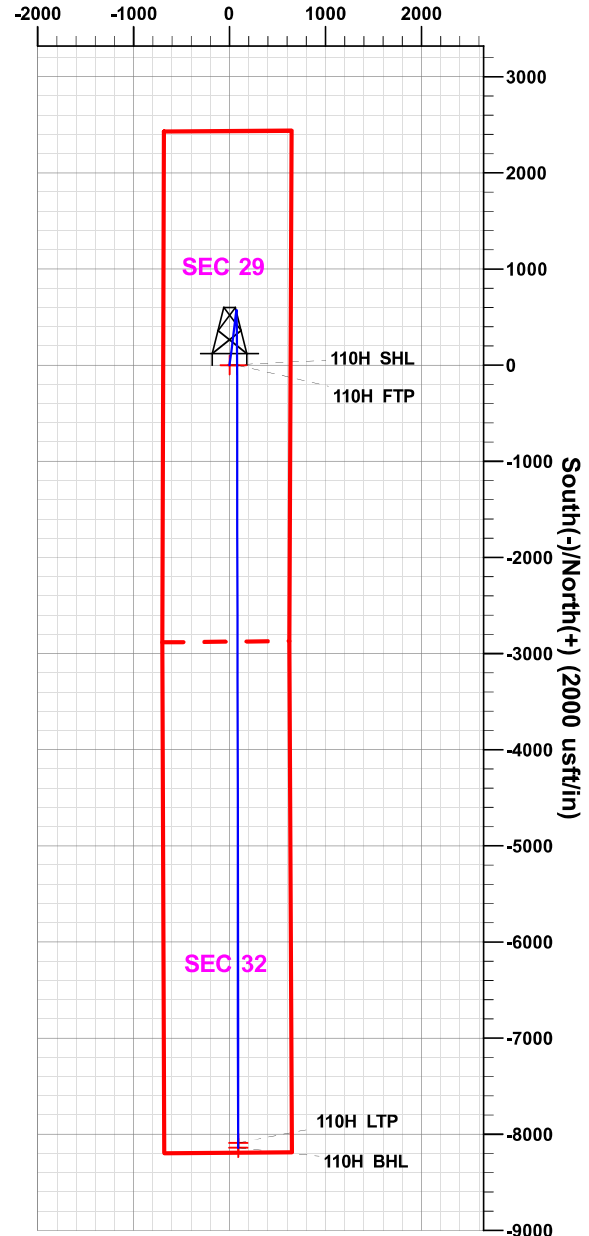
SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD      | +N/-S    | +E/-W | Dleg  | TFace   | VSect   | Target   |
|-----|----------|-------|--------|----------|----------|-------|-------|---------|---------|----------|
| 1   | 0.00     | 0.00  | 0.00   | 0.00     | 0.00     | 0.00  | 0.00  | 0.000   | 0.00    |          |
| 2   | 2000.00  | 0.00  | 0.00   | 2000.00  | 0.00     | 0.00  | 0.00  | 0.000   | 0.00    |          |
| 3   | 2201.57  | 4.03  | 7.24   | 2201.41  | 7.03     | 0.89  | 2.00  | 7.239   | -7.03   |          |
| 4   | 10303.33 | 4.03  | 7.24   | 10283.11 | 572.08   | 72.66 | 0.00  | 0.000   | -571.98 |          |
| 5   | 11243.31 | 90.00 | 179.92 | 10896.00 | 0.53     | 78.96 | 10.00 | 172.664 | -0.42   | 110H FTP |
| 6   | 19332.28 | 90.00 | 179.92 | 10896.00 | -8088.43 | 90.19 | 0.00  | 0.000   | 8088.55 | 110H LTP |
| 7   | 19382.28 | 90.00 | 179.92 | 10896.00 | -8138.43 | 90.26 | 0.00  | 0.000   | 8138.55 | 110H BHL |

DESIGN TARGET DETAILS

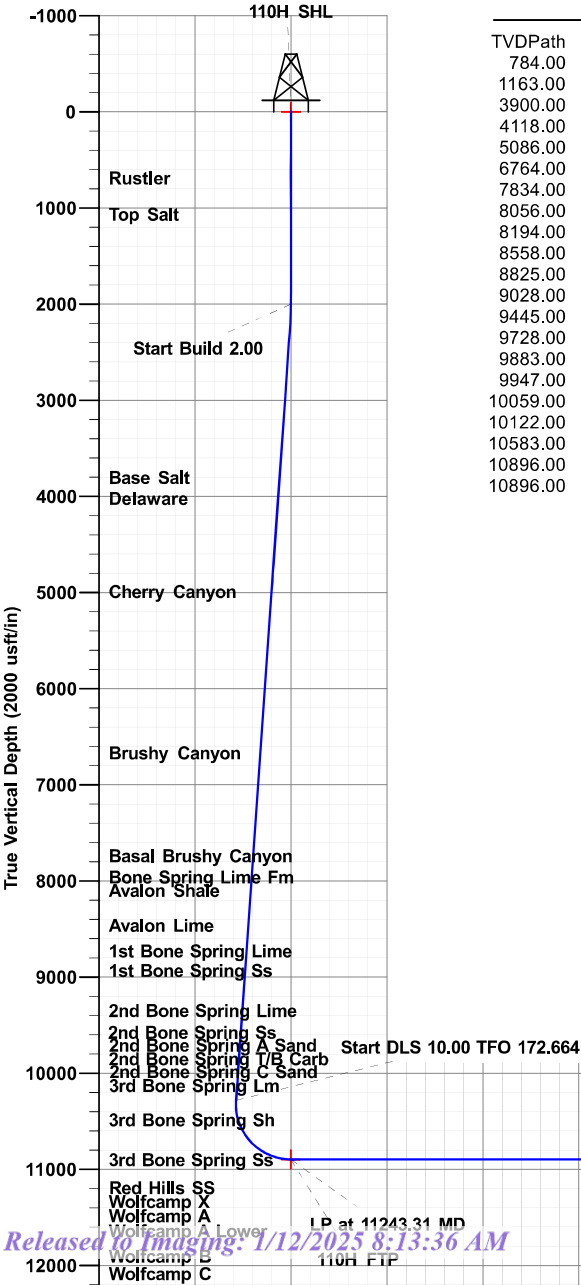
| Name     | TVD      | +N/-S    | +E/-W | Northing  | Easting   | Latitude   | Longitude    |
|----------|----------|----------|-------|-----------|-----------|------------|--------------|
| 110H SHL | 0.00     | 0.00     | 0.00  | 401132.67 | 663235.63 | 32.1017328 | -103.8061781 |
| 110H BHL | 10896.00 | -8138.43 | 90.26 | 392994.24 | 663325.89 | 32.0793595 | -103.8060152 |
| 110H FTP | 10896.00 | 0.53     | 78.96 | 401133.20 | 663314.59 | 32.1017332 | -103.8059232 |
| 110H LTP | 10896.00 | -8088.43 | 90.08 | 393044.24 | 663325.71 | 32.0794970 | -103.8060150 |

West(-)/East(+) (2000 usft/in)



FORMATION TOP DETAILS

| TVDPath  | Formation                |
|----------|--------------------------|
| 784.00   | Rustler                  |
| 1163.00  | Top Salt                 |
| 3900.00  | Base Salt                |
| 4118.00  | Delaware                 |
| 5086.00  | Cherry Canyon            |
| 6764.00  | Brushy Canyon            |
| 7834.00  | Basal Brushy Canyon      |
| 8056.00  | Bone Spring Lime Fm      |
| 8194.00  | Avalon Shale             |
| 8558.00  | Avalon Lime              |
| 8825.00  | 1st Bone Spring Lime     |
| 9028.00  | 1st Bone Spring Ss       |
| 9445.00  | 2nd Bone Spring Lime     |
| 9728.00  | 2nd Bone Spring Ss       |
| 9883.00  | 2nd Bone Spring A Sand   |
| 9947.00  | 2nd Bone Spring T/B Carb |
| 10059.00 | 2nd Bone Spring C Sand   |
| 10122.00 | 3rd Bone Spring Lm       |
| 10583.00 | 3rd Bone Spring Sh       |
| 10896.00 | Landing Point            |
| 10896.00 | TD                       |





## Planning Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well 110H                     |
| <b>Company:</b>  | XTO Energy                     | <b>TVD Reference:</b>               | RKB = 30' @ 3399.00usft (TBD) |
| <b>Project:</b>  | EDDY COUNTY, NM (NAD-27 / NME) | <b>MD Reference:</b>                | RKB = 30' @ 3399.00usft (TBD) |
| <b>Site:</b>     | POKER LAKE UNIT 29 BS          | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | 110H                           | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                    |                                     |                               |
| <b>Design:</b>   | PERMIT                         |                                     |                               |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | EDDY COUNTY, NM (NAD-27 / NME)       |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|             |                       |  |  |
|-------------|-----------------------|--|--|
| <b>Site</b> | POKER LAKE UNIT 29 BS |  |  |
|-------------|-----------------------|--|--|

|                              |           |                     |                 |                          |              |
|------------------------------|-----------|---------------------|-----------------|--------------------------|--------------|
| <b>Site Position:</b>        |           | <b>Northing:</b>    | 401,132.48 usft | <b>Latitude:</b>         | 32.1017327   |
| <b>From:</b>                 | Map       | <b>Easting:</b>     | 663,205.63 usft | <b>Longitude:</b>        | -103.8062750 |
| <b>Position Uncertainty:</b> | 0.00 usft | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> | 0.280 °      |

|             |      |  |  |
|-------------|------|--|--|
| <b>Well</b> | 110H |  |  |
|-------------|------|--|--|

|                             |              |            |                            |                 |                      |               |
|-----------------------------|--------------|------------|----------------------------|-----------------|----------------------|---------------|
| <b>Well Position</b>        | <b>+N/-S</b> | 0.19 usft  | <b>Northing:</b>           | 401,132.67 usft | <b>Latitude:</b>     | 32.1017328    |
|                             | <b>+E/-W</b> | 30.00 usft | <b>Easting:</b>            | 663,235.63 usft | <b>Longitude:</b>    | -103.8061781  |
| <b>Position Uncertainty</b> |              | 0.00 usft  | <b>Wellhead Elevation:</b> | 0.00 usft       | <b>Ground Level:</b> | 3,369.00 usft |

|                 |             |  |  |
|-----------------|-------------|--|--|
| <b>Wellbore</b> | Wellbore #1 |  |  |
|-----------------|-------------|--|--|

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2020   | 06/19/23    | 6.408           | 59.687        | 47,188              |

|               |        |  |  |
|---------------|--------|--|--|
| <b>Design</b> | PERMIT |  |  |
|---------------|--------|--|--|

## Audit Notes:

|                 |               |      |                      |      |
|-----------------|---------------|------|----------------------|------|
| <b>Version:</b> | <b>Phase:</b> | PLAN | <b>Tie On Depth:</b> | 0.00 |
|-----------------|---------------|------|----------------------|------|

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|-------------------|-------------------------|--------------|--------------|---------------|
|                   | 0.00                    | 0.00         | 0.00         | 179.92        |

|                      |  |  |  |  |  |  |  |  |  |  |
|----------------------|--|--|--|--|--|--|--|--|--|--|
| <b>Plan Sections</b> |  |  |  |  |  |  |  |  |  |  |
|----------------------|--|--|--|--|--|--|--|--|--|--|

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target   |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|----------|
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                   | 0.00                  | 0.000   |          |
| 2,000.00              | 0.00            | 0.00        | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                   | 0.00                  | 0.000   |          |
| 2,201.57              | 4.03            | 7.24        | 2,201.41              | 7.03         | 0.89         | 2.00                    | 2.00                   | 0.00                  | 7.239   |          |
| 10,303.33             | 4.03            | 7.24        | 10,283.11             | 572.08       | 72.66        | 0.00                    | 0.00                   | 0.00                  | 0.000   |          |
| 11,243.31             | 90.00           | 179.92      | 10,896.00             | 0.53         | 78.96        | 10.00                   | 9.15                   | 18.37                 | 172.664 | 110H FTP |
| 19,332.28             | 90.00           | 179.92      | 10,896.00             | -8,088.43    | 90.19        | 0.00                    | 0.00                   | 0.00                  | 0.000   | 110H LTP |
| 19,382.28             | 90.00           | 179.92      | 10,896.00             | -8,138.43    | 90.26        | 0.00                    | 0.00                   | 0.00                  | 0.000   | 110H BHL |





## Planning Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well 110H                     |
| <b>Company:</b>  | XTO Energy                     | <b>TVD Reference:</b>               | RKB = 30' @ 3399.00usft (TBD) |
| <b>Project:</b>  | EDDY COUNTY, NM (NAD-27 / NME) | <b>MD Reference:</b>                | RKB = 30' @ 3399.00usft (TBD) |
| <b>Site:</b>     | POKER LAKE UNIT 29 BS          | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | 110H                           | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                    |                                     |                               |
| <b>Design:</b>   | PERMIT                         |                                     |                               |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>110H SHL</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 100.00                | 0.00            | 0.00        | 100.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 200.00                | 0.00            | 0.00        | 200.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 300.00                | 0.00            | 0.00        | 300.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 400.00                | 0.00            | 0.00        | 400.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 500.00                | 0.00            | 0.00        | 500.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 600.00                | 0.00            | 0.00        | 600.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 700.00                | 0.00            | 0.00        | 700.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 784.00                | 0.00            | 0.00        | 784.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Rustler</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 800.00                | 0.00            | 0.00        | 800.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 900.00                | 0.00            | 0.00        | 900.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,000.00              | 0.00            | 0.00        | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00              | 0.00            | 0.00        | 1,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,163.00              | 0.00            | 0.00        | 1,163.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Top Salt</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,200.00              | 0.00            | 0.00        | 1,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,300.00              | 0.00            | 0.00        | 1,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00              | 0.00            | 0.00        | 1,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00              | 0.00            | 0.00        | 1,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00              | 0.00            | 0.00        | 1,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00              | 0.00            | 0.00        | 1,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00              | 0.00            | 0.00        | 1,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00              | 0.00            | 0.00        | 1,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00              | 0.00            | 0.00        | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00              | 2.00            | 7.24        | 2,099.98              | 1.73         | 0.22         | -1.73                   | 2.00                    | 2.00                   | 0.00                  |
| 2,201.57              | 4.03            | 7.24        | 2,201.41              | 7.03         | 0.89         | -7.03                   | 2.00                    | 2.00                   | 0.00                  |
| 2,300.00              | 4.03            | 7.24        | 2,299.59              | 13.90        | 1.77         | -13.89                  | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00              | 4.03            | 7.24        | 2,399.34              | 20.87        | 2.65         | -20.87                  | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00              | 4.03            | 7.24        | 2,499.10              | 27.85        | 3.54         | -27.84                  | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00              | 4.03            | 7.24        | 2,598.85              | 34.82        | 4.42         | -34.81                  | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00              | 4.03            | 7.24        | 2,698.60              | 41.79        | 5.31         | -41.79                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00              | 4.03            | 7.24        | 2,798.35              | 48.77        | 6.19         | -48.76                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00              | 4.03            | 7.24        | 2,898.11              | 55.74        | 7.08         | -55.73                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00              | 4.03            | 7.24        | 2,997.86              | 62.72        | 7.97         | -62.71                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00              | 4.03            | 7.24        | 3,097.61              | 69.69        | 8.85         | -69.68                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00              | 4.03            | 7.24        | 3,197.36              | 76.67        | 9.74         | -76.65                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00              | 4.03            | 7.24        | 3,297.12              | 83.64        | 10.62        | -83.63                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00              | 4.03            | 7.24        | 3,396.87              | 90.62        | 11.51        | -90.60                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00              | 4.03            | 7.24        | 3,496.62              | 97.59        | 12.40        | -97.57                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00              | 4.03            | 7.24        | 3,596.37              | 104.56       | 13.28        | -104.55                 | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00              | 4.03            | 7.24        | 3,696.13              | 111.54       | 14.17        | -111.52                 | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00              | 4.03            | 7.24        | 3,795.88              | 118.51       | 15.05        | -118.49                 | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00              | 4.03            | 7.24        | 3,895.63              | 125.49       | 15.94        | -125.47                 | 0.00                    | 0.00                   | 0.00                  |
| 3,904.38              | 4.03            | 7.24        | 3,900.00              | 125.79       | 15.98        | -125.77                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Base Salt</b>      |                 |             |                       |              |              |                         |                         |                        |                       |
| 4,000.00              | 4.03            | 7.24        | 3,995.38              | 132.46       | 16.82        | -132.44                 | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00              | 4.03            | 7.24        | 4,095.14              | 139.44       | 17.71        | -139.41                 | 0.00                    | 0.00                   | 0.00                  |
| 4,122.92              | 4.03            | 7.24        | 4,118.00              | 141.04       | 17.91        | -141.01                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Delaware</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 4,200.00              | 4.03            | 7.24        | 4,194.89              | 146.41       | 18.60        | -146.39                 | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00              | 4.03            | 7.24        | 4,294.64              | 153.39       | 19.48        | -153.36                 | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00              | 4.03            | 7.24        | 4,394.39              | 160.36       | 20.37        | -160.33                 | 0.00                    | 0.00                   | 0.00                  |



## Planning Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well 110H                     |
| <b>Company:</b>  | XTO Energy                     | <b>TVD Reference:</b>               | RKB = 30' @ 3399.00usft (TBD) |
| <b>Project:</b>  | EDDY COUNTY, NM (NAD-27 / NME) | <b>MD Reference:</b>                | RKB = 30' @ 3399.00usft (TBD) |
| <b>Site:</b>     | POKER LAKE UNIT 29 BS          | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | 110H                           | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                    |                                     |                               |
| <b>Design:</b>   | PERMIT                         |                                     |                               |

| Planned Survey             |                 |             |                       |              |              |                         |                         |                        |                       |
|----------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)      | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 4,500.00                   | 4.03            | 7.24        | 4,494.15              | 167.33       | 21.25        | -167.30                 | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00                   | 4.03            | 7.24        | 4,593.90              | 174.31       | 22.14        | -174.28                 | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00                   | 4.03            | 7.24        | 4,693.65              | 181.28       | 23.03        | -181.25                 | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00                   | 4.03            | 7.24        | 4,793.40              | 188.26       | 23.91        | -188.22                 | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00                   | 4.03            | 7.24        | 4,893.16              | 195.23       | 24.80        | -195.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00                   | 4.03            | 7.24        | 4,992.91              | 202.21       | 25.68        | -202.17                 | 0.00                    | 0.00                   | 0.00                  |
| 5,093.32                   | 4.03            | 7.24        | 5,086.00              | 208.72       | 26.51        | -208.68                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Cherry Canyon</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,100.00                   | 4.03            | 7.24        | 5,092.66              | 209.18       | 26.57        | -209.14                 | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00                   | 4.03            | 7.24        | 5,192.41              | 216.16       | 27.46        | -216.12                 | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00                   | 4.03            | 7.24        | 5,292.17              | 223.13       | 28.34        | -223.09                 | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00                   | 4.03            | 7.24        | 5,391.92              | 230.10       | 29.23        | -230.06                 | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                   | 4.03            | 7.24        | 5,491.67              | 237.08       | 30.11        | -237.04                 | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00                   | 4.03            | 7.24        | 5,591.42              | 244.05       | 31.00        | -244.01                 | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00                   | 4.03            | 7.24        | 5,691.18              | 251.03       | 31.88        | -250.98                 | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00                   | 4.03            | 7.24        | 5,790.93              | 258.00       | 32.77        | -257.96                 | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00                   | 4.03            | 7.24        | 5,890.68              | 264.98       | 33.66        | -264.93                 | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00                   | 4.03            | 7.24        | 5,990.43              | 271.95       | 34.54        | -271.90                 | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00                   | 4.03            | 7.24        | 6,090.19              | 278.93       | 35.43        | -278.88                 | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00                   | 4.03            | 7.24        | 6,189.94              | 285.90       | 36.31        | -285.85                 | 0.00                    | 0.00                   | 0.00                  |
| 6,300.00                   | 4.03            | 7.24        | 6,289.69              | 292.87       | 37.20        | -292.82                 | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00                   | 4.03            | 7.24        | 6,389.45              | 299.85       | 38.09        | -299.80                 | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00                   | 4.03            | 7.24        | 6,489.20              | 306.82       | 38.97        | -306.77                 | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00                   | 4.03            | 7.24        | 6,588.95              | 313.80       | 39.86        | -313.74                 | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00                   | 4.03            | 7.24        | 6,688.70              | 320.77       | 40.74        | -320.72                 | 0.00                    | 0.00                   | 0.00                  |
| 6,775.48                   | 4.03            | 7.24        | 6,764.00              | 326.04       | 41.41        | -325.98                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Brushy Canyon</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,800.00                   | 4.03            | 7.24        | 6,788.46              | 327.75       | 41.63        | -327.69                 | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00                   | 4.03            | 7.24        | 6,888.21              | 334.72       | 42.52        | -334.66                 | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00                   | 4.03            | 7.24        | 6,987.96              | 341.70       | 43.40        | -341.64                 | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00                   | 4.03            | 7.24        | 7,087.71              | 348.67       | 44.29        | -348.61                 | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00                   | 4.03            | 7.24        | 7,187.47              | 355.64       | 45.17        | -355.58                 | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00                   | 4.03            | 7.24        | 7,287.22              | 362.62       | 46.06        | -362.55                 | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00                   | 4.03            | 7.24        | 7,386.97              | 369.59       | 46.94        | -369.53                 | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00                   | 4.03            | 7.24        | 7,486.72              | 376.57       | 47.83        | -376.50                 | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00                   | 4.03            | 7.24        | 7,586.48              | 383.54       | 48.72        | -383.47                 | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00                   | 4.03            | 7.24        | 7,686.23              | 390.52       | 49.60        | -390.45                 | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00                   | 4.03            | 7.24        | 7,785.98              | 397.49       | 50.49        | -397.42                 | 0.00                    | 0.00                   | 0.00                  |
| 7,848.14                   | 4.03            | 7.24        | 7,834.00              | 400.85       | 50.91        | -400.78                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Basal Brushy Canyon</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,900.00                   | 4.03            | 7.24        | 7,885.73              | 404.47       | 51.37        | -404.39                 | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00                   | 4.03            | 7.24        | 7,985.49              | 411.44       | 52.26        | -411.37                 | 0.00                    | 0.00                   | 0.00                  |
| 8,070.69                   | 4.03            | 7.24        | 8,056.00              | 416.37       | 52.89        | -416.30                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Bone Spring Lime Fm</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,100.00                   | 4.03            | 7.24        | 8,085.24              | 418.41       | 53.15        | -418.34                 | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00                   | 4.03            | 7.24        | 8,184.99              | 425.39       | 54.03        | -425.31                 | 0.00                    | 0.00                   | 0.00                  |
| 8,209.03                   | 4.03            | 7.24        | 8,194.00              | 426.02       | 54.11        | -425.94                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Avalon Shale</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,300.00                   | 4.03            | 7.24        | 8,284.74              | 432.36       | 54.92        | -432.29                 | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00                   | 4.03            | 7.24        | 8,384.50              | 439.34       | 55.80        | -439.26                 | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00                   | 4.03            | 7.24        | 8,484.25              | 446.31       | 56.69        | -446.23                 | 0.00                    | 0.00                   | 0.00                  |
| 8,573.93                   | 4.03            | 7.24        | 8,558.00              | 451.47       | 57.34        | -451.39                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Avalon Lime</b>         |                 |             |                       |              |              |                         |                         |                        |                       |



## Planning Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well 110H                     |
| <b>Company:</b>  | XTO Energy                     | <b>TVD Reference:</b>               | RKB = 30' @ 3399.00usft (TBD) |
| <b>Project:</b>  | EDDY COUNTY, NM (NAD-27 / NME) | <b>MD Reference:</b>                | RKB = 30' @ 3399.00usft (TBD) |
| <b>Site:</b>     | POKER LAKE UNIT 29 BS          | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | 110H                           | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                    |                                     |                               |
| <b>Design:</b>   | PERMIT                         |                                     |                               |

| Planned Survey                  |                 |             |                       |              |              |                         |                         |                        |                       |
|---------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)           | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 8,600.00                        | 4.03            | 7.24        | 8,584.00              | 453.29       | 57.57        | -453.21                 | 0.00                    | 0.00                   | 0.00                  |
| 8,700.00                        | 4.03            | 7.24        | 8,683.75              | 460.26       | 58.46        | -460.18                 | 0.00                    | 0.00                   | 0.00                  |
| 8,800.00                        | 4.03            | 7.24        | 8,783.51              | 467.24       | 59.35        | -467.15                 | 0.00                    | 0.00                   | 0.00                  |
| 8,841.60                        | 4.03            | 7.24        | 8,825.00              | 470.14       | 59.72        | -470.05                 | 0.00                    | 0.00                   | 0.00                  |
| <b>1st Bone Spring Lime</b>     |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,900.00                        | 4.03            | 7.24        | 8,883.26              | 474.21       | 60.23        | -474.13                 | 0.00                    | 0.00                   | 0.00                  |
| 9,000.00                        | 4.03            | 7.24        | 8,983.01              | 481.19       | 61.12        | -481.10                 | 0.00                    | 0.00                   | 0.00                  |
| 9,045.10                        | 4.03            | 7.24        | 9,028.00              | 484.33       | 61.52        | -484.24                 | 0.00                    | 0.00                   | 0.00                  |
| <b>1st Bone Spring Ss</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,100.00                        | 4.03            | 7.24        | 9,082.76              | 488.16       | 62.00        | -488.07                 | 0.00                    | 0.00                   | 0.00                  |
| 9,200.00                        | 4.03            | 7.24        | 9,182.52              | 495.13       | 62.89        | -495.05                 | 0.00                    | 0.00                   | 0.00                  |
| 9,300.00                        | 4.03            | 7.24        | 9,282.27              | 502.11       | 63.78        | -502.02                 | 0.00                    | 0.00                   | 0.00                  |
| 9,400.00                        | 4.03            | 7.24        | 9,382.02              | 509.08       | 64.66        | -508.99                 | 0.00                    | 0.00                   | 0.00                  |
| 9,463.13                        | 4.03            | 7.24        | 9,445.00              | 513.49       | 65.22        | -513.39                 | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Lime</b>     |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,500.00                        | 4.03            | 7.24        | 9,481.77              | 516.06       | 65.55        | -515.97                 | 0.00                    | 0.00                   | 0.00                  |
| 9,600.00                        | 4.03            | 7.24        | 9,581.53              | 523.03       | 66.43        | -522.94                 | 0.00                    | 0.00                   | 0.00                  |
| 9,700.00                        | 4.03            | 7.24        | 9,681.28              | 530.01       | 67.32        | -529.91                 | 0.00                    | 0.00                   | 0.00                  |
| 9,746.84                        | 4.03            | 7.24        | 9,728.00              | 533.27       | 67.73        | -533.18                 | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Ss</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,800.00                        | 4.03            | 7.24        | 9,781.03              | 536.98       | 68.21        | -536.88                 | 0.00                    | 0.00                   | 0.00                  |
| 9,900.00                        | 4.03            | 7.24        | 9,880.78              | 543.96       | 69.09        | -543.86                 | 0.00                    | 0.00                   | 0.00                  |
| 9,902.22                        | 4.03            | 7.24        | 9,883.00              | 544.11       | 69.11        | -544.01                 | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring A Sand</b>   |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,966.38                        | 4.03            | 7.24        | 9,947.00              | 548.58       | 69.68        | -548.49                 | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring T/B Carb</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,000.00                       | 4.03            | 7.24        | 9,980.54              | 550.93       | 69.98        | -550.83                 | 0.00                    | 0.00                   | 0.00                  |
| 10,078.66                       | 4.03            | 7.24        | 10,059.00             | 556.42       | 70.67        | -556.32                 | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring C Sand</b>   |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,100.00                       | 4.03            | 7.24        | 10,080.29             | 557.90       | 70.86        | -557.80                 | 0.00                    | 0.00                   | 0.00                  |
| 10,141.81                       | 4.03            | 7.24        | 10,122.00             | 560.82       | 71.23        | -560.72                 | 0.00                    | 0.00                   | 0.00                  |
| <b>3rd Bone Spring Lm</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,200.00                       | 4.03            | 7.24        | 10,180.04             | 564.88       | 71.75        | -564.78                 | 0.00                    | 0.00                   | 0.00                  |
| 10,303.33                       | 4.03            | 7.24        | 10,283.11             | 572.08       | 72.66        | -571.98                 | 0.00                    | 0.00                   | 0.00                  |
| 10,350.00                       | 0.84            | 142.35      | 10,329.75             | 573.44       | 73.08        | -573.34                 | 10.00                   | -6.83                  | 289.49                |
| 10,400.00                       | 5.69            | 174.75      | 10,379.66             | 570.68       | 73.53        | -570.58                 | 10.00                   | 9.70                   | 64.80                 |
| 10,450.00                       | 10.68           | 177.19      | 10,429.13             | 563.58       | 73.99        | -563.47                 | 10.00                   | 9.98                   | 4.88                  |
| 10,500.00                       | 15.68           | 178.09      | 10,477.80             | 552.19       | 74.44        | -552.09                 | 10.00                   | 9.99                   | 1.79                  |
| 10,550.00                       | 20.67           | 178.56      | 10,525.29             | 536.61       | 74.89        | -536.50                 | 10.00                   | 10.00                  | 0.94                  |
| 10,600.00                       | 25.67           | 178.85      | 10,571.24             | 516.94       | 75.33        | -516.83                 | 10.00                   | 10.00                  | 0.59                  |
| 10,613.12                       | 26.99           | 178.91      | 10,583.00             | 511.12       | 75.44        | -511.02                 | 10.00                   | 10.00                  | 0.46                  |
| <b>3rd Bone Spring Sh</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,650.00                       | 30.67           | 179.05      | 10,615.30             | 493.34       | 75.76        | -493.24                 | 10.00                   | 10.00                  | 0.39                  |
| 10,700.00                       | 35.67           | 179.20      | 10,657.14             | 466.00       | 76.17        | -465.89                 | 10.00                   | 10.00                  | 0.30                  |
| 10,750.00                       | 40.67           | 179.32      | 10,696.44             | 435.11       | 76.57        | -435.00                 | 10.00                   | 10.00                  | 0.24                  |
| 10,800.00                       | 45.67           | 179.42      | 10,732.89             | 400.91       | 76.94        | -400.81                 | 10.00                   | 10.00                  | 0.19                  |
| 10,850.00                       | 50.67           | 179.50      | 10,766.23             | 363.67       | 77.29        | -363.56                 | 10.00                   | 10.00                  | 0.16                  |
| 10,900.00                       | 55.67           | 179.57      | 10,796.19             | 323.66       | 77.62        | -323.55                 | 10.00                   | 10.00                  | 0.14                  |
| 10,950.00                       | 60.67           | 179.63      | 10,822.55             | 281.20       | 77.91        | -281.09                 | 10.00                   | 10.00                  | 0.12                  |
| 11,000.00                       | 65.67           | 179.69      | 10,845.11             | 236.59       | 78.18        | -236.49                 | 10.00                   | 10.00                  | 0.11                  |
| 11,050.00                       | 70.67           | 179.74      | 10,863.70             | 190.20       | 78.41        | -190.09                 | 10.00                   | 10.00                  | 0.10                  |
| 11,100.00                       | 75.67           | 179.79      | 10,878.17             | 142.35       | 78.60        | -142.24                 | 10.00                   | 10.00                  | 0.10                  |
| 11,150.00                       | 80.67           | 179.84      | 10,888.42             | 93.43        | 78.76        | -93.32                  | 10.00                   | 10.00                  | 0.09                  |



## Planning Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well 110H                     |
| <b>Company:</b>  | XTO Energy                     | <b>TVD Reference:</b>               | RKB = 30' @ 3399.00usft (TBD) |
| <b>Project:</b>  | EDDY COUNTY, NM (NAD-27 / NME) | <b>MD Reference:</b>                | RKB = 30' @ 3399.00usft (TBD) |
| <b>Site:</b>     | POKER LAKE UNIT 29 BS          | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | 110H                           | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                    |                                     |                               |
| <b>Design:</b>   | PERMIT                         |                                     |                               |

| Planned Survey                       |                 |             |                       |              |              |                         |                         |                        |                       |
|--------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)                | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 11,200.00                            | 85.67           | 179.88      | 10,894.36             | 43.80        | 78.89        | -43.69                  | 10.00                   | 10.00                  | 0.09                  |
| 11,243.31                            | 90.00           | 179.92      | 10,896.00             | 0.53         | 78.96        | -0.42                   | 10.00                   | 10.00                  | 0.09                  |
| <b>TD - Landing Point - 110H FTP</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,300.00                            | 90.00           | 179.92      | 10,896.00             | -56.16       | 79.04        | 56.27                   | 0.00                    | 0.00                   | 0.00                  |
| 11,400.00                            | 90.00           | 179.92      | 10,896.00             | -156.16      | 79.18        | 156.27                  | 0.00                    | 0.00                   | 0.00                  |
| 11,500.00                            | 90.00           | 179.92      | 10,896.00             | -256.16      | 79.32        | 256.27                  | 0.00                    | 0.00                   | 0.00                  |
| 11,600.00                            | 90.00           | 179.92      | 10,896.00             | -356.16      | 79.46        | 356.27                  | 0.00                    | 0.00                   | 0.00                  |
| 11,700.00                            | 90.00           | 179.92      | 10,896.00             | -456.16      | 79.59        | 456.27                  | 0.00                    | 0.00                   | 0.00                  |
| 11,800.00                            | 90.00           | 179.92      | 10,896.00             | -556.16      | 79.73        | 556.27                  | 0.00                    | 0.00                   | 0.00                  |
| 11,900.00                            | 90.00           | 179.92      | 10,896.00             | -656.16      | 79.87        | 656.27                  | 0.00                    | 0.00                   | 0.00                  |
| 12,000.00                            | 90.00           | 179.92      | 10,896.00             | -756.16      | 80.01        | 756.27                  | 0.00                    | 0.00                   | 0.00                  |
| 12,100.00                            | 90.00           | 179.92      | 10,896.00             | -856.16      | 80.15        | 856.27                  | 0.00                    | 0.00                   | 0.00                  |
| 12,200.00                            | 90.00           | 179.92      | 10,896.00             | -956.16      | 80.29        | 956.27                  | 0.00                    | 0.00                   | 0.00                  |
| 12,300.00                            | 90.00           | 179.92      | 10,896.00             | -1,056.16    | 80.43        | 1,056.27                | 0.00                    | 0.00                   | 0.00                  |
| 12,400.00                            | 90.00           | 179.92      | 10,896.00             | -1,156.16    | 80.57        | 1,156.27                | 0.00                    | 0.00                   | 0.00                  |
| 12,500.00                            | 90.00           | 179.92      | 10,896.00             | -1,256.16    | 80.70        | 1,256.27                | 0.00                    | 0.00                   | 0.00                  |
| 12,600.00                            | 90.00           | 179.92      | 10,896.00             | -1,356.16    | 80.84        | 1,356.27                | 0.00                    | 0.00                   | 0.00                  |
| 12,700.00                            | 90.00           | 179.92      | 10,896.00             | -1,456.16    | 80.98        | 1,456.27                | 0.00                    | 0.00                   | 0.00                  |
| 12,800.00                            | 90.00           | 179.92      | 10,896.00             | -1,556.16    | 81.12        | 1,556.27                | 0.00                    | 0.00                   | 0.00                  |
| 12,900.00                            | 90.00           | 179.92      | 10,896.00             | -1,656.16    | 81.26        | 1,656.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,000.00                            | 90.00           | 179.92      | 10,896.00             | -1,756.16    | 81.40        | 1,756.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,100.00                            | 90.00           | 179.92      | 10,896.00             | -1,856.16    | 81.54        | 1,856.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,200.00                            | 90.00           | 179.92      | 10,896.00             | -1,956.16    | 81.68        | 1,956.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,300.00                            | 90.00           | 179.92      | 10,896.00             | -2,056.16    | 81.82        | 2,056.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,400.00                            | 90.00           | 179.92      | 10,896.00             | -2,156.15    | 81.95        | 2,156.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,500.00                            | 90.00           | 179.92      | 10,896.00             | -2,256.15    | 82.09        | 2,256.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,600.00                            | 90.00           | 179.92      | 10,896.00             | -2,356.15    | 82.23        | 2,356.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,700.00                            | 90.00           | 179.92      | 10,896.00             | -2,456.15    | 82.37        | 2,456.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,800.00                            | 90.00           | 179.92      | 10,896.00             | -2,556.15    | 82.51        | 2,556.27                | 0.00                    | 0.00                   | 0.00                  |
| 13,900.00                            | 90.00           | 179.92      | 10,896.00             | -2,656.15    | 82.65        | 2,656.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,000.00                            | 90.00           | 179.92      | 10,896.00             | -2,756.15    | 82.79        | 2,756.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,100.00                            | 90.00           | 179.92      | 10,896.00             | -2,856.15    | 82.93        | 2,856.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,200.00                            | 90.00           | 179.92      | 10,896.00             | -2,956.15    | 83.07        | 2,956.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,300.00                            | 90.00           | 179.92      | 10,896.00             | -3,056.15    | 83.20        | 3,056.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,400.00                            | 90.00           | 179.92      | 10,896.00             | -3,156.15    | 83.34        | 3,156.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,500.00                            | 90.00           | 179.92      | 10,896.00             | -3,256.15    | 83.48        | 3,256.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,600.00                            | 90.00           | 179.92      | 10,896.00             | -3,356.15    | 83.62        | 3,356.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,700.00                            | 90.00           | 179.92      | 10,896.00             | -3,456.15    | 83.76        | 3,456.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,800.00                            | 90.00           | 179.92      | 10,896.00             | -3,556.15    | 83.90        | 3,556.27                | 0.00                    | 0.00                   | 0.00                  |
| 14,900.00                            | 90.00           | 179.92      | 10,896.00             | -3,656.15    | 84.04        | 3,656.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,000.00                            | 90.00           | 179.92      | 10,896.00             | -3,756.15    | 84.18        | 3,756.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,100.00                            | 90.00           | 179.92      | 10,896.00             | -3,856.15    | 84.31        | 3,856.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,200.00                            | 90.00           | 179.92      | 10,896.00             | -3,956.15    | 84.45        | 3,956.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,300.00                            | 90.00           | 179.92      | 10,896.00             | -4,056.15    | 84.59        | 4,056.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,400.00                            | 90.00           | 179.92      | 10,896.00             | -4,156.15    | 84.73        | 4,156.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,500.00                            | 90.00           | 179.92      | 10,896.00             | -4,256.15    | 84.87        | 4,256.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,600.00                            | 90.00           | 179.92      | 10,896.00             | -4,356.15    | 85.01        | 4,356.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,700.00                            | 90.00           | 179.92      | 10,896.00             | -4,456.15    | 85.15        | 4,456.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,800.00                            | 90.00           | 179.92      | 10,896.00             | -4,556.15    | 85.29        | 4,556.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,900.00                            | 90.00           | 179.92      | 10,896.00             | -4,656.15    | 85.43        | 4,656.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,000.00                            | 90.00           | 179.92      | 10,896.00             | -4,756.15    | 85.56        | 4,756.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,100.00                            | 90.00           | 179.92      | 10,896.00             | -4,856.15    | 85.70        | 4,856.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,200.00                            | 90.00           | 179.92      | 10,896.00             | -4,956.15    | 85.84        | 4,956.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,300.00                            | 90.00           | 179.92      | 10,896.00             | -5,056.15    | 85.98        | 5,056.27                | 0.00                    | 0.00                   | 0.00                  |



## Planning Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well 110H                     |
| <b>Company:</b>  | XTO Energy                     | <b>TVD Reference:</b>               | RKB = 30' @ 3399.00usft (TBD) |
| <b>Project:</b>  | EDDY COUNTY, NM (NAD-27 / NME) | <b>MD Reference:</b>                | RKB = 30' @ 3399.00usft (TBD) |
| <b>Site:</b>     | POKER LAKE UNIT 29 BS          | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | 110H                           | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                    |                                     |                               |
| <b>Design:</b>   | PERMIT                         |                                     |                               |

## Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 16,400.00             | 90.00           | 179.92      | 10,896.00             | -5,156.15    | 86.12        | 5,156.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,500.00             | 90.00           | 179.92      | 10,896.00             | -5,256.15    | 86.26        | 5,256.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,600.00             | 90.00           | 179.92      | 10,896.00             | -5,356.15    | 86.40        | 5,356.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,700.00             | 90.00           | 179.92      | 10,896.00             | -5,456.15    | 86.54        | 5,456.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,800.00             | 90.00           | 179.92      | 10,896.00             | -5,556.15    | 86.67        | 5,556.27                | 0.00                    | 0.00                   | 0.00                  |
| 16,900.00             | 90.00           | 179.92      | 10,896.00             | -5,656.15    | 86.81        | 5,656.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,000.00             | 90.00           | 179.92      | 10,896.00             | -5,756.15    | 86.95        | 5,756.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,100.00             | 90.00           | 179.92      | 10,896.00             | -5,856.15    | 87.09        | 5,856.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,200.00             | 90.00           | 179.92      | 10,896.00             | -5,956.15    | 87.23        | 5,956.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,300.00             | 90.00           | 179.92      | 10,896.00             | -6,056.15    | 87.37        | 6,056.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,400.00             | 90.00           | 179.92      | 10,896.00             | -6,156.15    | 87.51        | 6,156.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,500.00             | 90.00           | 179.92      | 10,896.00             | -6,256.15    | 87.65        | 6,256.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,600.00             | 90.00           | 179.92      | 10,896.00             | -6,356.15    | 87.79        | 6,356.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,700.00             | 90.00           | 179.92      | 10,896.00             | -6,456.15    | 87.92        | 6,456.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,800.00             | 90.00           | 179.92      | 10,896.00             | -6,556.15    | 88.06        | 6,556.27                | 0.00                    | 0.00                   | 0.00                  |
| 17,900.00             | 90.00           | 179.92      | 10,896.00             | -6,656.15    | 88.20        | 6,656.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,000.00             | 90.00           | 179.92      | 10,896.00             | -6,756.15    | 88.34        | 6,756.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,100.00             | 90.00           | 179.92      | 10,896.00             | -6,856.15    | 88.48        | 6,856.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,200.00             | 90.00           | 179.92      | 10,896.00             | -6,956.15    | 88.62        | 6,956.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,300.00             | 90.00           | 179.92      | 10,896.00             | -7,056.15    | 88.76        | 7,056.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,400.00             | 90.00           | 179.92      | 10,896.00             | -7,156.15    | 88.90        | 7,156.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,500.00             | 90.00           | 179.92      | 10,896.00             | -7,256.15    | 89.04        | 7,256.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,600.00             | 90.00           | 179.92      | 10,896.00             | -7,356.15    | 89.17        | 7,356.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,700.00             | 90.00           | 179.92      | 10,896.00             | -7,456.15    | 89.31        | 7,456.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,800.00             | 90.00           | 179.92      | 10,896.00             | -7,556.15    | 89.45        | 7,556.27                | 0.00                    | 0.00                   | 0.00                  |
| 18,900.00             | 90.00           | 179.92      | 10,896.00             | -7,656.15    | 89.59        | 7,656.27                | 0.00                    | 0.00                   | 0.00                  |
| 19,000.00             | 90.00           | 179.92      | 10,896.00             | -7,756.15    | 89.73        | 7,756.27                | 0.00                    | 0.00                   | 0.00                  |
| 19,100.00             | 90.00           | 179.92      | 10,896.00             | -7,856.15    | 89.87        | 7,856.27                | 0.00                    | 0.00                   | 0.00                  |
| 19,200.00             | 90.00           | 179.92      | 10,896.00             | -7,956.15    | 90.01        | 7,956.27                | 0.00                    | 0.00                   | 0.00                  |
| 19,300.00             | 90.00           | 179.92      | 10,896.00             | -8,056.15    | 90.15        | 8,056.27                | 0.00                    | 0.00                   | 0.00                  |
| 19,332.28             | 90.00           | 179.92      | 10,896.00             | -8,088.43    | 90.19        | 8,088.55                | 0.00                    | 0.00                   | 0.00                  |
| <b>110H LTP</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 19,382.28             | 90.00           | 179.92      | 10,896.00             | -8,138.43    | 90.26        | 8,138.55                | 0.00                    | 0.00                   | 0.00                  |
| <b>110H BHL</b>       |                 |             |                       |              |              |                         |                         |                        |                       |





## Planning Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well 110H                     |
| <b>Company:</b>  | XTO Energy                     | <b>TVD Reference:</b>               | RKB = 30' @ 3399.00usft (TBD) |
| <b>Project:</b>  | EDDY COUNTY, NM (NAD-27 / NME) | <b>MD Reference:</b>                | RKB = 30' @ 3399.00usft (TBD) |
| <b>Site:</b>     | POKER LAKE UNIT 29 BS          | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | 110H                           | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                    |                                     |                               |
| <b>Design:</b>   | PERMIT                         |                                     |                               |

## Design Targets

| Target Name<br>- hit/miss target<br>- Shape                                                                           | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude   | Longitude    |
|-----------------------------------------------------------------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|------------|--------------|
| 110H SHL<br>- plan hits target center<br>- Point                                                                      | 0.00             | 0.00            | 0.00          | 0.00            | 0.00            | 401,132.67         | 663,235.63        | 32.1017328 | -103.8061781 |
| 110H LTP<br>- plan misses target center by 0.11usft at 19332.28usft MD (10896.00 TVD, -8088.43 N, 90.19 E)<br>- Point | 0.00             | 0.00            | 10,896.00     | -8,088.43       | 90.08           | 393,044.24         | 663,325.71        | 32.0794970 | -103.8060150 |
| 110H BHL<br>- plan hits target center<br>- Point                                                                      | 0.00             | 0.00            | 10,896.00     | -8,138.43       | 90.26           | 392,994.24         | 663,325.89        | 32.0793595 | -103.8060152 |
| 110H FTP<br>- plan hits target center<br>- Point                                                                      | 0.00             | 0.00            | 10,896.00     | 0.53            | 78.96           | 401,133.20         | 663,314.59        | 32.1017332 | -103.8059231 |

## Formations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Name                     | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |
|-----------------------------|-----------------------------|--------------------------|-----------|------------|-------------------------|
| 784.00                      | 784.00                      | Rustler                  |           |            |                         |
| 1,163.00                    | 1,163.00                    | Top Salt                 |           |            |                         |
| 3,904.38                    | 3,900.00                    | Base Salt                |           |            |                         |
| 4,122.92                    | 4,118.00                    | Delaware                 |           |            |                         |
| 5,093.32                    | 5,086.00                    | Cherry Canyon            |           |            |                         |
| 6,775.48                    | 6,764.00                    | Brushy Canyon            |           |            |                         |
| 7,848.14                    | 7,834.00                    | Basal Brushy Canyon      |           |            |                         |
| 8,070.69                    | 8,056.00                    | Bone Spring Lime Fm      |           |            |                         |
| 8,209.03                    | 8,194.00                    | Avalon Shale             |           |            |                         |
| 8,573.93                    | 8,558.00                    | Avalon Lime              |           |            |                         |
| 8,841.60                    | 8,825.00                    | 1st Bone Spring Lime     |           |            |                         |
| 9,045.10                    | 9,028.00                    | 1st Bone Spring Ss       |           |            |                         |
| 9,463.13                    | 9,445.00                    | 2nd Bone Spring Lime     |           |            |                         |
| 9,746.84                    | 9,728.00                    | 2nd Bone Spring Ss       |           |            |                         |
| 9,902.22                    | 9,883.00                    | 2nd Bone Spring A Sand   |           |            |                         |
| 9,966.38                    | 9,947.00                    | 2nd Bone Spring T/B Carb |           |            |                         |
| 10,078.66                   | 10,059.00                   | 2nd Bone Spring C Sand   |           |            |                         |
| 10,141.81                   | 10,122.00                   | 3rd Bone Spring Lm       |           |            |                         |
| 10,613.12                   | 10,583.00                   | 3rd Bone Spring Sh       |           |            |                         |
| 11,243.31                   | 10,896.00                   | TD                       |           |            |                         |
| 11,243.31                   | 10,896.00                   | Landing Point            |           |            |                         |



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

|                              |                            |
|------------------------------|----------------------------|
| <b>OPERATOR'S NAME:</b>      | XTO                        |
| <b>LEASE NO.:</b>            | NMLC061634B                |
| <b>LOCATION:</b>             | Sec. 29, T.25 S, R 31 E    |
| <b>COUNTY:</b>               | Eddy County, New Mexico ▼  |
| <b>WELL NAME &amp; NO.:</b>  | Poker Lake Unit 29 BS 110H |
| <b>SURFACE HOLE FOOTAGE:</b> | 2435'/N & 691'/W           |
| <b>BOTTOM HOLE FOOTAGE:</b>  | 50'/S & 770'/W             |

COA

| H <sub>2</sub> S           | <input checked="" type="radio"/> No                                                                                                                                                                                                                                                   | <input type="radio"/> Yes                                              |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>Potash / WIPP</b>       | <input checked="" type="radio"/> None <input type="radio"/> Secretary <input type="radio"/> R-111-Q<br><span style="color: red;">Choose an option (including blank option.)</span>                                                                                                    | <input type="checkbox"/> Open Annulus<br><input type="checkbox"/> WIPP |
| <b>Cave / Karst</b>        | <input type="radio"/> Low <input type="radio"/> Medium <input checked="" type="radio"/> High                                                                                                                                                                                          | <input type="radio"/> Critical                                         |
| <b>Wellhead</b>            | <input type="radio"/> Conventional <input checked="" type="radio"/> Multibowl <input type="radio"/> Both                                                                                                                                                                              | <input type="radio"/> Diverter                                         |
| <b>Cementing</b>           | <input checked="" type="checkbox"/> Primary Squeeze <input type="checkbox"/> Cont. Squeeze <input checked="" type="checkbox"/> EchoMeter                                                                                                                                              | <input type="checkbox"/> DV Tool                                       |
| <b>Special Req</b>         | <input type="checkbox"/> Capitan Reef <input type="checkbox"/> Water Disposal <input type="checkbox"/> COM                                                                                                                                                                            | <input checked="" type="checkbox"/> Unit                               |
| <b>Waste Prev.</b>         | <input type="radio"/> Self-Certification <input type="radio"/> Waste Min. Plan <input checked="" type="radio"/> APD Submitted prior to 06/10/2024                                                                                                                                     |                                                                        |
| <b>Additional Language</b> | <input checked="" type="checkbox"/> Flex Hose <input checked="" type="checkbox"/> Casing Clearance <input type="checkbox"/> Pilot Hole<br><input type="checkbox"/> Four-String <input checked="" type="checkbox"/> Offline Cementing <input checked="" type="checkbox"/> Fluid-Filled | <input checked="" type="checkbox"/> Break Testing                      |

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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.

### B. CASING

1. The 9-5/8 inch surface casing shall be set at approximately **1020** 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 **7-5/8** inch intermediate casing is: Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.
  - a. **First stage:** Operator will cement with intent to reach the top of the **Brushy Canyon at 6764'**.
  - b. **Second stage:** Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified.

**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

- ❖ In High 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.

Operator has proposed to pump down **Surface X Intermediate 1** annulus after primary cementing stage. **Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the Surface casing to tieback requirements listed above after the second stage BH to verify TOC.** Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

If cement does not reach surface, the next casing string must come to surface.

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.

### **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. 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 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 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.

Engineer may elect to vary this language. Speak with Chris about implementing changes and whether that change seems reasonable.

### **Casing Clearance**

String does not meet 0.422" clearance requirement per 43 CFR 3172. Cement tieback requirement increased 100' for Production casing tieback. Operator may contact approving engineer to discuss changing casing set depth or grade to meet clearance requirement.

## 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 2<sup>nd</sup> 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 2<sup>nd</sup> 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 10/7/2024**  
575-234-5998 / [zstevens@blm.gov](mailto:zstevens@blm.gov)



## HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN

### Assumed 100 ppm ROE = 3000'

100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

#### **Emergency Procedures**

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - o Detection of H<sub>2</sub>S, and
  - o Measures for protection against the gas,
  - o Equipment used for protection and emergency response.

#### **Ignition of Gas source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

#### **Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

| Common Name      | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|------------------|------------------|------------------|-----------------|-----------------|----------------------|
| Hydrogen Sulfide | H <sub>2</sub> S | 1.189 Air = 1    | 10 ppm          | 100 ppm/hr      | 600 ppm              |
| Sulfur Dioxide   | SO <sub>2</sub>  | 2.21 Air = 1     | 2 ppm           | N/A             | 1000 ppm             |

#### **Contacting Authorities**

All XTO location personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

**CARLSBAD OFFICE – EDDY & LEA COUNTIES**

3104 E. Greene St., Carlsbad, NM 88220  
Carlsbad, NM

575-887-7329

**XTO PERSONNEL:**

|                                                |              |
|------------------------------------------------|--------------|
| Will Dacus, Drilling Manager                   | 832-948-5021 |
| Brian Dunn, Drilling Supervisor                | 832-653-0490 |
| Robert Bartels, Construction Execution Planner | 406-478-3617 |
| Andy Owens, EH & S Manager                     | 903-245-2602 |
| Frank Fuentes, Production Foreman              | 575-689-3363 |

**SHERIFF DEPARTMENTS:**

|             |              |
|-------------|--------------|
| Eddy County | 575-887-7551 |
| Lea County  | 575-396-3611 |

**NEW MEXICO STATE POLICE:**

575-392-5588

**FIRE DEPARTMENTS:**

|           |              |
|-----------|--------------|
|           | 911          |
| Carlsbad  | 575-885-2111 |
| Eunice    | 575-394-2111 |
| Hobbs     | 575-397-9308 |
| Jal       | 575-395-2221 |
| Lovington | 575-396-2359 |

**HOSPITALS:**

|                             |              |
|-----------------------------|--------------|
|                             | 911          |
| Carlsbad Medical Emergency  | 575-885-2111 |
| Eunice Medical Emergency    | 575-394-2112 |
| Hobbs Medical Emergency     | 575-397-9308 |
| Jal Medical Emergency       | 575-395-2221 |
| Lovington Medical Emergency | 575-396-2359 |

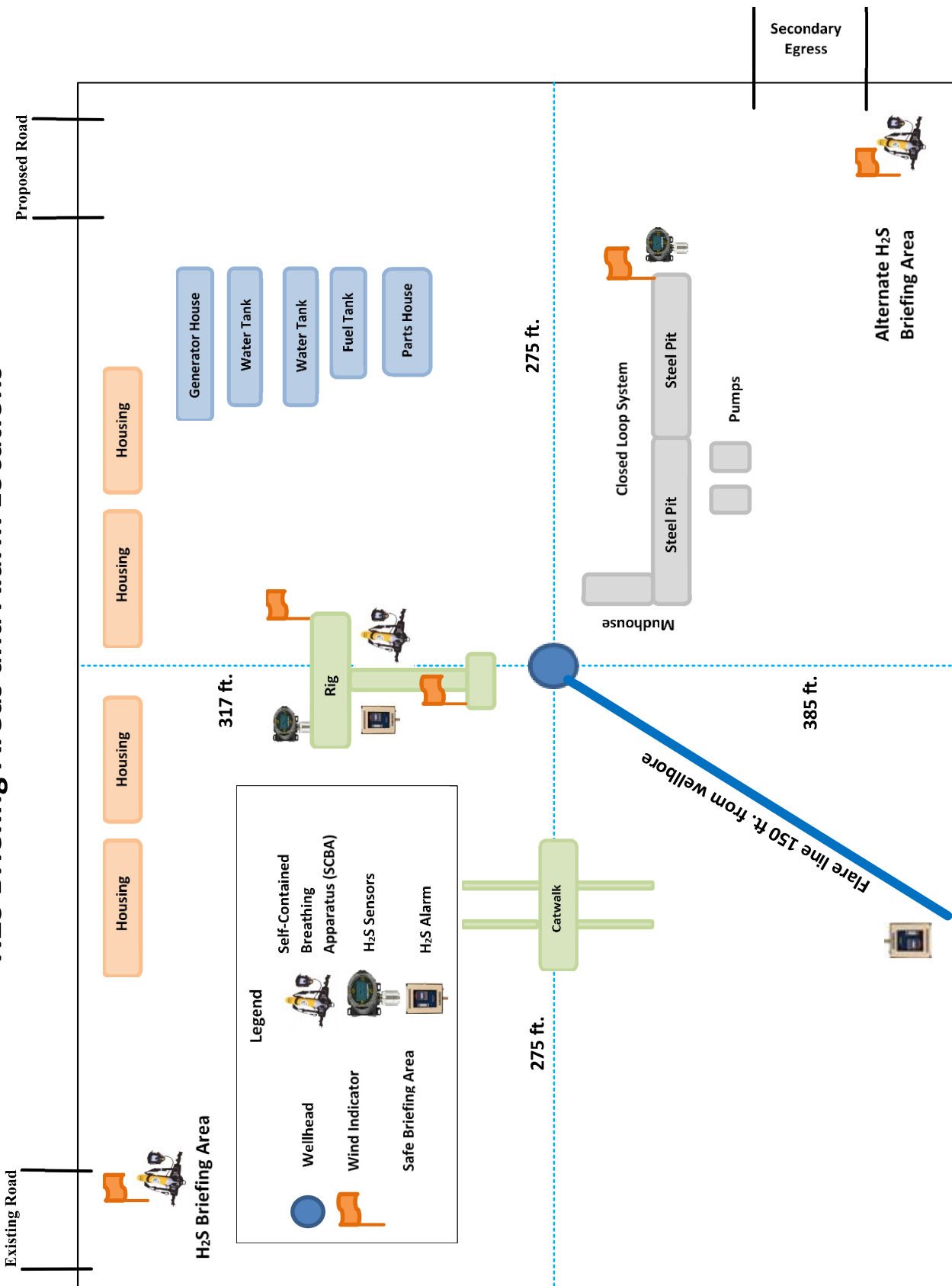
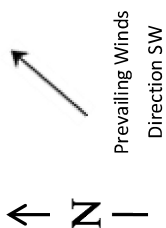
**AGENT NOTIFICATIONS:****For Lea County:**

|                                              |              |
|----------------------------------------------|--------------|
| Bureau of Land Management – Hobbs            | 575-393-3612 |
| New Mexico Oil Conservation Division – Hobbs | 575-393-6161 |

**For Eddy County:**

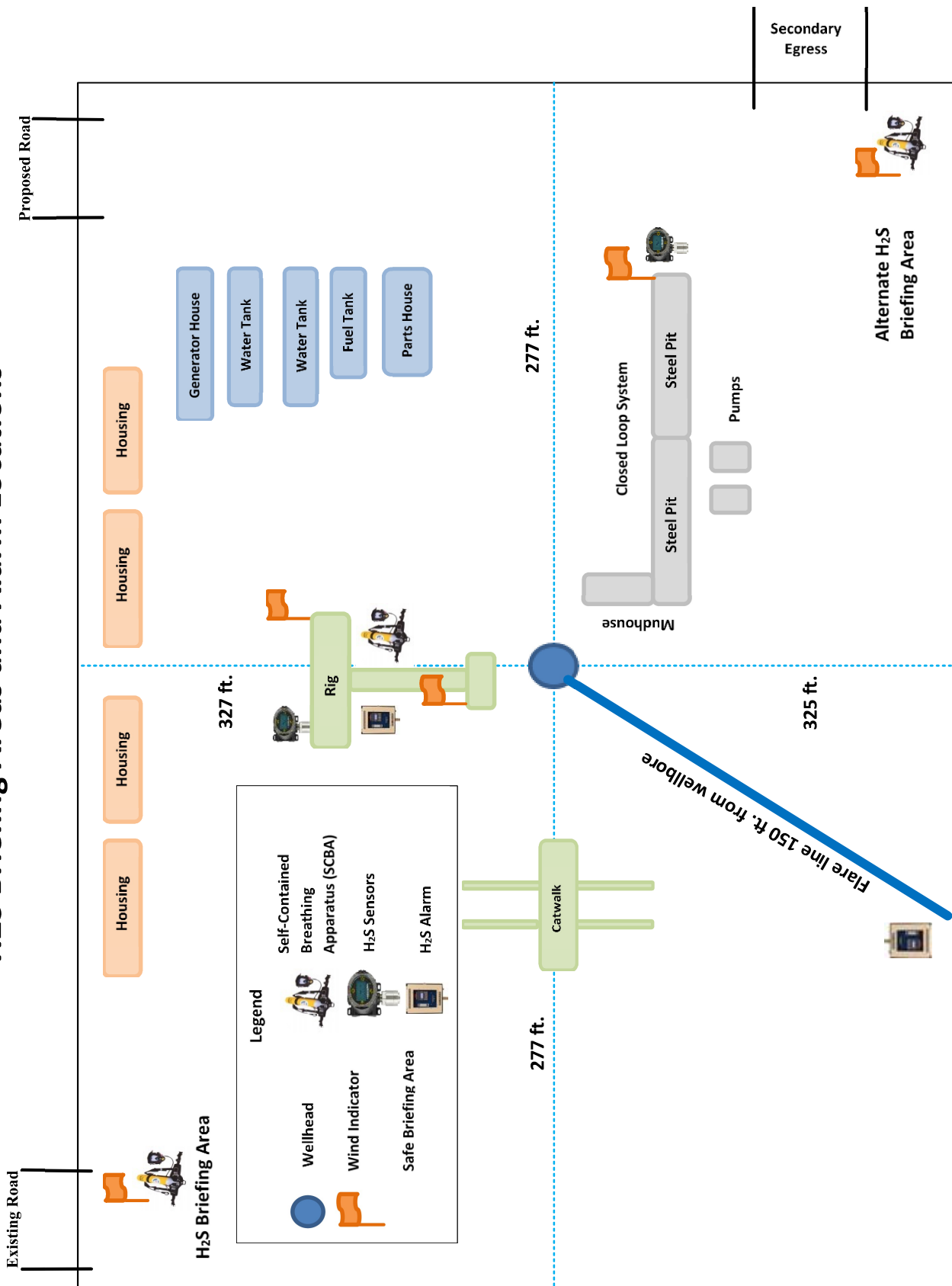
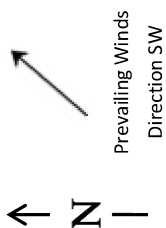
|                                                |              |
|------------------------------------------------|--------------|
| Bureau of Land Management - Carlsbad           | 575-234-5972 |
| New Mexico Oil Conservation Division - Artesia | 575-748-1283 |

# H2S Briefing Areas and Alarm Locations





# H2S Briefing Areas and Alarm Locations



Well Name: POKER LAKE UNIT 29 BS

Well Number: 110H

well location not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.

**Safe contaminant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** A licensed 3rd party contractor to haul and dispose of human waste.

### Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?** NO

**Reserve pit length (ft.)**

**Reserve pit width (ft.)**

**Reserve pit depth (ft.)**

**Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** Y

**Description of cuttings location** Cuttings. The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site. Drilling Fluids. These will be contained in steel mud pits and then taken to a NMOCD approved commercial disposal facility. Produced Fluids. Water produced from the well during completion will be held temporarily in steel tanks and then taken to a NMOCD approved commercial disposal facility. Oil produced during operations will be stored in tanks until sold.

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

**Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### Section 8 - Ancillary

**Are you requesting any Ancillary Facilities?:** N

**Ancillary Facilities**

Well Name: POKER LAKE UNIT 29 BS

Well Number: 110H

Comments:

## Section 9 - Well Site

Well Site Layout Diagram:

PLU\_29\_BS\_110H\_Well\_20240621084346.pdf

PLU\_29\_BS\_110H\_RL\_20240919091928.pdf

Comments: Multi-well pad.

## Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: PLU 29 BS

Multiple Well Pad Number: 1

Recontouring

PLU\_29\_BS\_IR4\_20240323140714.pdf

PLU\_29\_BS\_IR3\_20240323140714.pdf

PLU\_29\_BS\_IR2\_20240323140714.pdf

PLU\_29\_BS\_IR1\_20240323140714.pdf

**Drainage/Erosion control construction:** Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4-6 inches.

**Drainage/Erosion control reclamation:** Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gullying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.

|                                                        |                                                       |                                                          |
|--------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|
| <b>Well pad proposed disturbance</b><br>(acres): 14.06 | <b>Well pad interim reclamation (acres):</b><br>3.692 | <b>Well pad long term disturbance</b><br>(acres): 10.368 |
| <b>Road proposed disturbance (acres):</b><br>0.41      | <b>Road interim reclamation (acres):</b> 0            | <b>Road long term disturbance (acres):</b><br>0.41       |
| <b>Powerline proposed disturbance</b><br>(acres): 4.51 | <b>Powerline interim reclamation (acres):</b><br>4.51 | <b>Powerline long term disturbance</b><br>(acres): 0     |
| <b>Pipeline proposed disturbance</b><br>(acres): 8.09  | <b>Pipeline interim reclamation (acres):</b><br>8.09  | <b>Pipeline long term disturbance</b><br>(acres): 0      |
| <b>Other proposed disturbance (acres):</b> 0           | <b>Other interim reclamation (acres):</b> 0           | <b>Other long term disturbance (acres):</b> 0            |
| <b>Total proposed disturbance:</b> 27.07               | <b>Total interim reclamation:</b> 16.292              | <b>Total long term disturbance:</b> 10.778               |

Disturbance Comments:

**Reconstruction method:** The original stock piled topsoil will be spread over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors as close as possible to the original topography. The location will then be ripped and seeded

**Topsoil redistribution:** The original stock piled topsoil will be spread over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors as close as possible to the original topography. The location will then be ripped and seeded

**Well Name:** POKER LAKE UNIT 29 BS

**Well Number:** 110H

**Soil treatment:** A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community will be established on the site with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.

**Existing Vegetation at the well pad:** Soils are classified as Simona Gravelly Fine Sandy Loam and Simona-Bippus Complex. Simona soils are found on alluvial fans and plans and form in mixed alluvium and/or Aeolian sands. Bippus soils are found on alluvial fans and floodplains and form in mixed alluvium. The Simona-Bippus soils are dominant to the east and the Simona Gravelly Fine Sandy Loams are dominant to the West. Dominant vegetation species include: mesquite, sumac snakeweed, and various forbs and grasses. Ground cover is minimal, offering 90 percent visibility.

#### **Existing Vegetation at the well pad**

**Existing Vegetation Community at the road:** Soils are classified as Simona Gravelly Fine Sandy Loam and Simona-Bippus Complex. Simona soils are found on alluvial fans and plans and form in mixed alluvium and/or Aeolian sands. Bippus soils are found on alluvial fans and floodplains and form in mixed alluvium. The Simona-Bippus soils are dominant to the east and the Simona Gravelly Fine Sandy Loams are dominant to the West. Dominant vegetation species include: mesquite, sumac snakeweed, and various forbs and grasses. Ground cover is minimal, offering 90 percent visibility.

#### **Existing Vegetation Community at the road**

**Existing Vegetation Community at the pipeline:** Soils are classified as Simona Gravelly Fine Sandy Loam and Simona-Bippus Complex. Simona soils are found on alluvial fans and plans and form in mixed alluvium and/or Aeolian sands. Bippus soils are found on alluvial fans and floodplains and form in mixed alluvium. The Simona-Bippus soils are dominant to the east and the Simona Gravelly Fine Sandy Loams are dominant to the West. Dominant vegetation species include: mesquite, sumac snakeweed, and various forbs and grasses. Ground cover is minimal, offering 90 percent visibility.

#### **Existing Vegetation Community at the pipeline**

**Existing Vegetation Community at other disturbances:** Soils are classified as Simona Gravelly Fine Sandy Loam and Simona-Bippus Complex. Simona soils are found on alluvial fans and plans and form in mixed alluvium and/or Aeolian sands. Bippus soils are found on alluvial fans and floodplains and form in mixed alluvium. The Simona-Bippus soils are dominant to the east and the Simona Gravelly Fine Sandy Loams are dominant to the West. Dominant vegetation species include: mesquite, sumac snakeweed, and various forbs and grasses. Ground cover is minimal, offering 90 percent visibility.

#### **Existing Vegetation Community at other disturbances**

**Non native seed used?** N

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** N

**Seedling transplant description**

**Will seed be harvested for use in site reclamation?** N

**Seed harvest description:**

**Seed harvest description attachment:**

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 412527

CONDITIONS

|                                                                                            |                                                                           |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Operator:<br><br>XTO PERMIAN OPERATING LLC.<br>6401 HOLIDAY HILL ROAD<br>MIDLAND, TX 79707 | OGRID:<br><br>373075                                                      |
|                                                                                            | Action Number:<br><br>412527                                              |
|                                                                                            | Action Type:<br><br>[C-101] BLM - Federal/Indian Land Lease (Form 3160-3) |

CONDITIONS

| Created By  | Condition                                                                                                                                                                                                                                                             | Condition Date |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| tsebastian  | Cement is required to circulate on both surface and intermediate1 strings of casing.                                                                                                                                                                                  | 12/16/2024     |
| tsebastian  | If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.                                                                                                                                                            | 12/16/2024     |
| ward.rikala | Notify the OCD 24 hours prior to casing & cement.                                                                                                                                                                                                                     | 1/12/2025      |
| ward.rikala | File As Drilled C-102 and a directional Survey with C-104 completion packet.                                                                                                                                                                                          | 1/12/2025      |
| ward.rikala | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string. | 1/12/2025      |
| ward.rikala | Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.                  | 1/12/2025      |