AFMSS

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

*Application for Permit to Drill*

## APD Package Report

Date Printed:

| | |
|---|---|
| APD ID: | Well Status: |
| APD Received Date: | Well Name: |
| Operator: | Well Number: |

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: 4 file(s)
  -- Casing Taperd String Specs: 1 file(s)
  -- Casing Design Assumptions and Worksheet(s): 1 file(s)
  -- Hydrogen sulfide drilling operations plan: 1 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  -- Other Facets: 5 file(s)
  -- Other Variances: 4 file(s)

- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 1 file(s)
  -- Attach Well map: 1 file(s)
  -- Production Facilities map: 1 file(s)
  -- Water source and transportation map: 1 file(s)
  -- Well Site Layout Diagram: 2 file(s)
  -- Other SUPO Attachment: 1 file(s)

- PWD Report
- PWD Attachments
  -- None

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- Bond Report
- Bond Attachments
  -- None

*Please refer to approved NOI appended to this application for the most current well design

Form 3160-3
(October 2024)

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2027

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-015-59139

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

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

12. County or Parish

13. State

| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) | 16. No of acres in lease | 17. Spacing Unit dedicated to this well |
|---|---|---|
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. | 19. Proposed Depth | 20. BLM/BIA Bond No. in file |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) | 22. Approximate date work will start* | 23. Estimated duration |

## 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)

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

| 25. Signature | Name *(Printed/Typed)* | Date |
|---|---|---|
| Title | | |
| Approved by *(Signature)* | Name *(Printed/Typed)* | Date |
| Title | 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

(Continued on page 2)

*(Instructions on page 2)

**Approval Date: 02/13/2026**

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## 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 wen, 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 directionany 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 wen 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 win 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 conects this information to anow 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.



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**Approval Date: 02/13/2026**

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## Additional Operator Remarks

### Location of Well

0. SHL: SESE / 24 FSL / 713 FEL / TWSP: 21S / RANGE: 30E / SECTION: 21 / LAT: 32.457584 / LONG: -103.879228 ( TVD: 0 feet, MD: 0 feet )

PPP: SWSW / 770 FSL / 330 FWL / TWSP: 21S / RANGE: 30E / SECTION: 27 / LAT: 32.445114 / LONG: -103.87585 ( TVD: 11354 feet, MD: 14002 feet )

BHL: SESE / 770 FSL / 280 FEL / TWSP: 21S / RANGE: 30E / SECTION: 25 / LAT: 32.445051 / LONG: -103.826473 ( TVD: 11354 feet, MD: 28518 feet )

## BLM Point of Contact

Name: MARIAH HUGHES
Title: Land Law Examiner
Phone: (575) 234-5972
Email: MHUGHES@BLM.GOV

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**PECOS DISTRICT**

**SURFACE USE**

**CONDITIONS OF APPROVAL**

| | |
|---|---|
| OPERATOR'S NAME: | **XTO PERMIAN OPERATING, LLC.** |
| LEASE NO.: | **NMNM85912** |
| COUNTY: | Eddy County, New Mexico |

Wells:

| |
|---|
| BIG EDDY UNIT DI 9 ARROW FED COM 101H |
| BIG EDDY UNIT DI 9 ARROW FED COM 102H |
| BIG EDDY UNIT DI 9 ARROW FED COM 103H |
| BIG EDDY UNIT DI 9 ARROW FED COM 104H |
| BIG EDDY UNIT DI 9 ARROW FED COM 105H |
| BIG EDDY UNIT DI 9 ARROW FED COM 106H |
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| BIG EDDY UNIT DI 9 ARROW FED COM 110H |
| BIG EDDY UNIT DI 9 ARROW FED COM 111H |
| BIG EDDY UNIT DI 9 ARROW FED COM 112H |



 **Approval Date: 02/13/2026**

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| BIG EDDY UNIT DI 9 ARROW FED COM 109H |
| BIG EDDY UNIT DI 9 ARROW FED COM 110H |

BIG EDDY UNIT DI 9 ARROW FED COM 111H

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# 1. GENERAL PROVISIONS

The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## 1.1. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the operator, or any person working on the operator's behalf, on the public or federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area (within 100ft) of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer, in conjunction with a BLM Cultural Resource Specialist, to determine appropriate actions to prevent the loss of significant scientific values. The operator shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

Traditional Cultural Properties (TCPs) are protected by NHPA as codified in 36 CFR 800 for possessing traditional, religious, and cultural significance tied to a certain group of individuals. Though there are currently no designated TCPs within the project area or within a mile of the project area, but it is possible for a TCP to be designated after the approval of this project. **If a TCP is designated in the project area after the project's approval, the BLM Authorized Officer will notify the operator of the following conditions and the duration for which these conditions are required.**

1. Temporary halting of all construction, drilling, and production activities to lower noise.
2. Temporary shut-off of all artificial lights at night.

The operator is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA), specifically NAGPRA Subpart B regarding discoveries, to protect human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered during project work. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and a BLM-CFO Authorized Officer will be notified immediately. The BLM will then be required to be notified, in writing, within 24 hours of the discovery. The written notification should include the geographic location by county and state, the contents of the discovery, and the steps taken to protect said discovery. You must also include any potential threats to the discovery and a conformation that all activity within 100ft of the discovery has ceased and work will not resume until written certification is issued. All work on the entire project must halt for a minimum of 3 days and work cannot resume until an Authorized Officer grants permission to do so.

Any paleontological resource discovered by the operator, or any person working on the operator's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. The operator will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

**No new surface disturbance is authorized. If new disturbances are anticipated, please call the BLM-CFO Archeology Department.**

## 1.2. RANGELAND RESOURCES

### 1.2.1. **Cattleguards**

Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be

responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

1.2.2. **Fence Requirement**

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

1.2.3. **Livestock Watering Requirement**

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

## 1.3. NOXIOUS WEEDS

If noxious weeds were NOT found during onsite:

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

If noxious weeds WERE found during onsite:

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

### 1.3.1 African Rue (Peganum harmala)

**Spraying:** The spraying of African Rue must be completed by a licensed or certified applicator. In order to attempt to kill or remove African Rue the proper mix of chemical is needed. The mix consists of 2% Arsenal (Imazapyr) and 2% Roundup (Glyphosate) along with a nonionic surfactant. Any other chemicals or combinations shall be approved by the BLM Noxious Weeds Coordinator prior to treatment. African Rue shall be sprayed in connection to any dirt working activities or disturbances to the site being sprayed. Spraying of African Rue shall be done on immature plants at initial growth through flowering and mature plants between budding and flowering stages. Spraying shall not be conducted after flowering when plant is fruiting. This will ensure optimal intake of chemical and decrease chances of developing herbicide resistance. After spraying, the operator or necessary parties must contact the Carlsbad Field Office to inspect the effectiveness of the application treatment to the plant species. No ground disturbing activities can take place until the inspection by the authorized officer is complete. The operator may contact the Environmental Protection Department or the BLM Noxious Weed Coordinator at (575) 234-5972 or BLM_NM_CFO_NoxiousWeeds@blm.gov.

**Management Practices:** In addition to spraying for African Rue, good management practices should be followed. All equipment should be washed off using a power washer in a designated containment area. The containment area shall be bermed to allow for containment of the seed to prevent it from entering any open areas of the nearby landscape. The containment area shall be excavated near or adjacent to the well pad at a depth of three feet and just large enough to get equipment inside it to be washed off. This will allow all seeds to be in a centrally located area that can be treated at a later date if the need arises.

### 1.4. LIGHT POLLUTION

#### 1.4.1. **Downfacing**

All permanent lighting will be pointed straight down at the ground in order to prevent light spill beyond the edge of approved surface disturbance.

#### 1.4.2. **Shielding**

All permanent lighting will use full cutoff luminaires, which are fully shielded (i.e., not emitting direct or indirect light above an imaginary horizontal plane passing through the lowest part of the light source).

#### 1.4.3. **Lighting Color**

Lighting shall be 3,500 Kelvin or less (Warm White) except during drilling, completion, and workover operations. No bluish-white lighting shall be used in permanent outdoor lighting.

## 2. SPECIAL REQUIREMENTS

### 2.1. WATERSHED

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

### 2.2. CAVE/KARST

#### 2.2.1. **General Construction**

- No blasting
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction, and no additional construction shall occur until clearance has been issued by the Authorized Officer.
- All linear surface disturbance activities will avoid sinkholes and other karst features to lessen the possibility of encountering near surface voids during construction, minimize changes to runoff, and prevent untimely leaks and spills from entering the karst drainage system.
- This is a sensitive area and all spills or leaks will be reported to the BLM immediately for their immediate and proper treatment, as defined in NTL 3A for Major Undesirable Events.

#### 2.2.2. **Pad Construction**

- The pad will be constructed and leveled by adding the necessary fill and caliche. No blasting will be used for any construction or leveling activities.
- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).

- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised (i.e. an access road crossing the berm cannot be lower than the berm height).
- Following a rain event, all fluids will be vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

2.2.3. **Road Construction**

- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to alter the natural flow of water into or out of cave or karst features.
- Special restoration stipulations or realignment may be required if subsurface features are discovered during construction.

2.2.4. **Buried Pipeline/Cable Construction**

- Rerouting of the buried line(s) may be required if a subsurface void is encountered during construction to minimize the potential subsidence/collapse of the feature(s) as well as the possibility of leaks/spills entering the karst drainage system.

2.2.5. **Powerline Construction**

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.
- Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- Special restoration stipulations or realignment may be required if subsurface voids are encountered.

2.2.6. **Surface Flowlines Installation**

- Flowlines will be routed around sinkholes and other karst features to minimize the possibility of leaks/spills from entering the karst drainage system.

2.2.7. **Production Mitigation**

- Tank battery locations and facilities will be bermed and lined with a 20-mil thick permanent liner that has a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Secondary containment holding capacity must be large enough to contain 1 ½ times the content of the largest tank or 24-hour production, whichever is greater (displaced volume from all tanks within the berms MUST be subtracted from total volume of containment in calculating holding capacity).
- Implementation of a leak detection system to provide an early alert to operators when a leak has occurred.
- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

2.2.8. **Residual and Cumulative Mitigation**

The operator will perform annual pressure monitoring on all casing annuli. If the test results indicate a casing failure has occurred, contact a BLM Engineer immediately, and take remedial action to correct the problem.

2.2.9. **Plugging and Abandonment Mitigation**

Upon well abandonment in high cave karst areas, additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

## 2.3 SPECIAL STATUS PLANT SPECIES

## 2.4 VISUAL RESOURCE MANAGEMENT

2.5.1 **VRM IV**

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

### 2.6 Potash Resources

Lessees must comply with the 2012Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Big Eddy Unit Drill Island 9.

# 3. CONSTRUCTION REQUIRENMENTS

## 3.1 CONSTRCUTION NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at BLM_NM_CFO_Construction_Reclamation@blm.gov at least 3 working days prior to commencing construction of the access road and/or well pad.

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

## 3.2 TOPSOIL

The operator shall strip the topsoil (the A horizon) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. No more than the top 6 inches of topsoil shall be removed. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

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

## 3.3 CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No reserve pits will be used for drill cuttings. The operator shall properly dispose of drilling contents at an authorized disposal site.

## 3.4 FEDERAL MINERAL PIT

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

## 3.5 WELL PAD & SURFACING

Any surfacing material used to surface the well pad will be removed at the time of interim and final reclamation.

## 3.6 EXCLOSURE FENCING (CELLARS & PITS)

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

The operator will also install and maintain mesh netting for all open well cellars to prevent access to smaller wildlife before and after drilling operations until the well cellar is free of fluids and the operator. Use a maximum netting mesh size of 1 ½ inches. The netting must not have holes or gaps.

## 3.7 ON LEASE ACESS ROAD

### 3.7.1 **Road Width**

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

### 3.7.2 **Surfacing**

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

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

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

### 3.7.3 **Crowning**

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

### 3.7.4 **Ditching**

Ditching shall be required on both sides of the road.

### 3.7.5 **Turnouts**

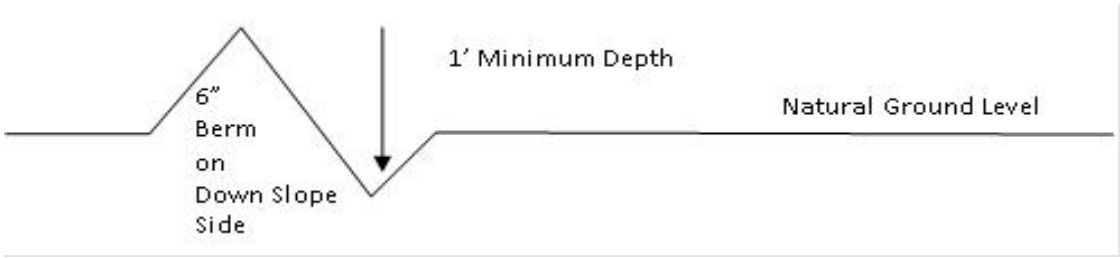
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### 3.7.6 **Drainage**

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

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

**Cross Section of a Typical Lead-off Ditch**




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

**Formula for Spacing Interval of Lead-off Ditches**

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

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

3.7.7 **Public Access**

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

**Construction Steps**

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

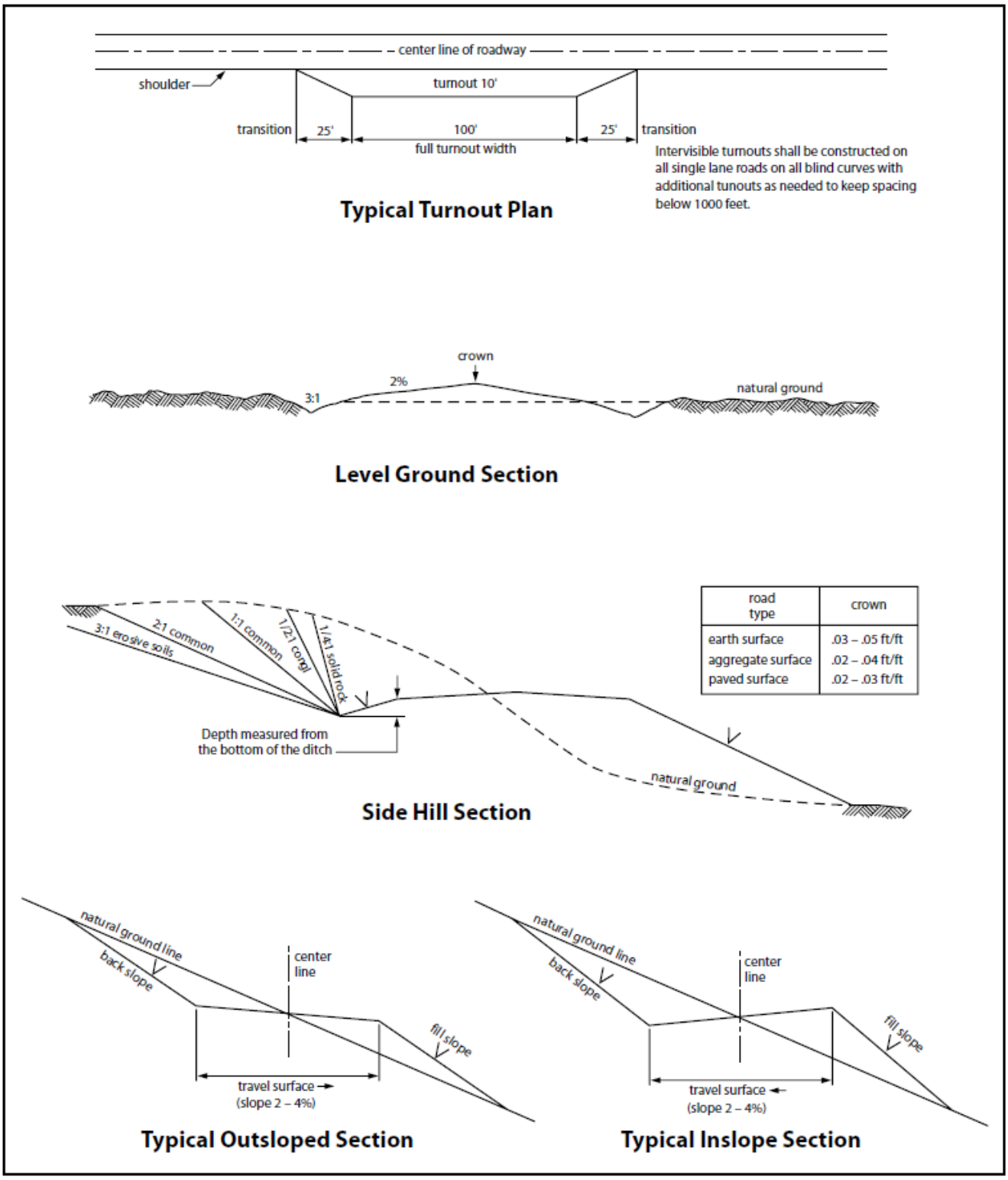



Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

# 5. PRODUCTION (POST DRILLING)

## 5.1 WELL STRUCTURES & FACILITIES

### 5.1.1 **Placement of Production Facilities**

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

### 5.1.2 **Exclosure Netting (Open-top Tanks)**

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

### 5.1.3. Chemical and Fuel Secondary Containment and Exclosure Screening

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

### 5.1.4. Open-Vent Exhaust Stack Exclosures

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

### 5.1.5. Containment Structures

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

# 6. RECLAMATION

Stipulations required by the Authorized Officer on specific actions may differ from the following general guidelines

## 6.1 ROAD AND SITE RECLAMATION

Any roads constructed during the life of the well will have the caliche removed or linear burial. If contaminants are indicated then testing will be required for chlorides and applicable contaminate anomalies for final disposal determination (disposed of in a manner approved by the Authorized Officer within Federal, State and Local statutes, regulations, and ordinances) and seeded to the specifications in sections 6.5 and 6.6.

## 6.2 EROSION CONTROL

Install erosion control berms, windrows, and hummocks. Windrows must be level and constructed perpendicular to down-slope drainage; steeper slopes will require greater windrow density. Topsoil between windrows must be ripped to a depth of at least 12”, unless bedrock is encountered. Any large boulders pulled up during ripping must be deep-buried on location. Ripping must be perpendicular to down-slope. The surface must be left rough in order to catch and contain rainfall on-site. Any trenches resulting from erosion cause by run-off shall be addressed immediately.

## 6.3 INTERIM RECLAMATION

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

Within six (6) months of well completion, operators must work with BLM surface protection specialists (BLM_NM_CFO_Construction_Reclamation@blm.gov) to devise the best strategies to reduce the size of the location. Interim reclamation must allow for remedial well operations, as well as safe and efficient removal of oil and gas.

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

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided in section 6.6.

Upon completion of interim reclamation, the operator shall submit a Sundry Notice, Subsequent Report of Reclamation (Form 3160-5).

## 6.4 FINAL ABANDONMENT & RECLAMATION

Prior to surface abandonment, the operator shall submit a Notice of Intent Sundry Notice and reclamation plan.

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

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

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding will be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM. After earthwork and seeding is completed, the operator is required to submit a Sundry Notice, Subsequent Report of Reclamation.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (BLM_NM_CFO_Construction_Reclamation@blm.gov).

## 6.5 SEEDING TECHNIQUES

Seeds shall be hydro-seeded, mechanically drilled, or broadcast, with the broadcast-seeded area raked, ripped or dragged to aid in covering the seed. The seed mixture shall be evenly and uniformly planted over the disturbed area.

## 6.6 SOIL SPECIFIC SEED MIXTURE

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

Seed land application will be accomplished by mechanical planting using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds tend to drop the bottom of the drill and are planted first; the operator shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory BLM or Soil Conservation

District stand is established as determined by the Authorized Officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding or until several months of precipitation have occurred, enabling a full four months of growth, with one or more seed generations being established

**Seed Mixture 2, for Sandy Site**

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

| Species | lb/acre |
|---|---|
| Sand dropseed (Sporobolus cryptandrus) | 1.0 |
| Sand love grass (Eragrostis trichodes) | 1.0 |
| Plains bristlegrass (Setaria macrostachya) | 2.0 |

*Pounds of pure live seed:

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

# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | XTO |
| **WELL NAME & NO.:** | Big Eddy Unit DI 9 Arrow Fed Com 115H |
| **LOCATION:** | 21-21S-30E-NMP |
| **COUNTY:** | Eddy County, New Mexico |

**Create COAs**

| $H_2S$ | Cave / Karst | Waste Prevention Rule |
|---|---|---|
| Not Reported | High | Waste Minimization Plan |

| Potash | R-111-Q Design |
|---|---|
| R-111-Q | 4-String: Open 1st Int x 2nd Annulus (ICP 2 below Relief Zone) |

| Wellhead | Casing | | |
|---|---|---|---|
| Multibowl | 4-String Well | | |
| | ☐ Liner | ☑ Fluid Filled | ☐ Casing Clearance |
| ☑ Flex Hose | **Cementing** | | |
| ☑ Break Testing | ☐ DV Tool | ☑ Bradenhead | ☑ Echometer |
| | ☑ Offline Cement | ☐ Open Annulus | ☐ Pilot Hole |

**Special Requirements**

☐ Capitan Reef ☐ Water Disposal ☑ COM ☐ Unit

**A. HYDROGEN SULFIDE**

Hydrogen Sulfide ($H_2S$) monitors shall be installed prior to drilling out the surface shoe. If $H_2S$ is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

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





**Approval Date: 02/13/2026**

**B. CASING**

1. The **13-3/8** inch surface casing shall be set at approximately **391** feet (a minimum of **70'** 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 (including 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.

2. The minimum required fill of cement behind the **9-5/8** inch 1st intermediate casing is **cement to surface**. If cement does not circulate, see B.1.a, c-d above.
    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of cave/karst, Capitan Reef, or potash features.

***2nd Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.***

3. The minimum required fill of cement behind the **7-5/8** inch 2nd intermediate casing is **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126 (base of the McNutt Potash ore zone.)
    - Operator must verify top of cement per R-111-Q requirements. Submit results to the BLM. Operator shall use one of the approved methods for cement verification located in the **General Requirements, Section A.1**.
    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of cave/karst, Capitan Reef, or potash features.

    **Bradenhead Squeeze:** 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**. **Excess calculates to -.1%. Additional cement maybe required.**
    b. **Second stage:** Operator to squeeze and top-out. Cement to meet requirements listed for this casing string. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down **Intermediate 1 X Intermediate 2** annulus. Submit results to the BLM. If cement does not tie back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

- Operator shall run a CBL from TD of the **Surface** casing to tieback requirements after the second stage BH to verify TOC.
- **Operator shall run Echo-meter to verify Cement Slurry/Fluid top in the annulus.** 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.
    - No displacement fluid/wash out shall be utilized at the top of the cement slurry during second stage bradenhead when running Echo-meter if cement is required to surface.
    - Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.
- **A monitored open annulus will be incorporated during completion by leaving the above annulus un-cemented and monitored.** Operator must follow **all** monitoring requirements listed within R-111-Q. Tieback shall be met within **180 days.**
- Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM.**
- Pressure monitoring device and Pressure Safety Valves must be installed at surface on both the intermediate annulus and the production annulus for the life of the well.
- **In the event of a casing failure during completion,** the operator **must** contact the BLM at engineers (575-706-2779) and inspection staff (575-361-2822 Eddy County).

4. The minimum required fill of cement behind the **5-1/2** inch production casing is **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126 (base of the McNutt Potash ore zone.)
    - Operator must verify top of cement per R-111-Q requirements. Submit results to the BLM. Operator shall use one of the approved methods for cement verification located in the **General Requirements, Section A.1**. **Excess calculates to 22%. Additional cement maybe required.**
    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of cave/karst, Capitan Reef, or potash features.
    - Operator shall run a CBL from TD of the **Surface** casing to tieback requirements after the second stage BH to verify TOC.
    - **Operator shall run Echo-meter to verify Cement Slurry/Fluid top in the annulus.** 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.
- No displacement fluid/wash out shall be utilized at the top of the cement slurry during second stage bradenhead when running Echo-meter if cement is required to surface.
- Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

## C. PRESSURE CONTROL

1. 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 **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) annular which shall be tested to 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.

2. 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).

3. Break testing has been approved for this well ONLY on those 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.)** If in the event break testing is not utilized, then a full BOPE test would be conducted.
   a. Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation. **BOPE Break Testing is NOT permitted to drill the production hole section.**
   b. While in transfer between wells, BOPE shall be secured by the hydraulic carrier or cradle.
   c. 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).

d. As a minimum, a full BOPE test shall be performed at 21-day intervals.
e. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**. 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.

## D. SPECIAL REQUIREMENT(S)

**Communitization Agreement:**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

**Offline Cementing**

Offline cementing has been approved for **all hole sections, excluding production.** Contact the BLM prior to the commencement of any offline cementing procedure.

# GENERAL REQUIREMENTS

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

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

**Contact Eddy County Petroleum Engineering Inspection Staff:**

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; **BLM_NM_CFO_DrillingNotifications@BLM.GOV**; (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 proposed to drill multiple wells utilizing a skid / walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
    b. When the operator proposes to set surface casing with Spudder Rig
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
        iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on swell.
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 always be operational 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 doghouse 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 & CEMENT

1. The current acceptable methods of cement verification are as follows:
    i. Observing cement circulated to surface,
    ii. Cement Bond Log (CBL),
    iii. Temperature log within 8-10 hours after completing the cement job,
    iv. Echometer (if a second-stage bradenhead is being utilized and operator was granted approval prior to operations.)

2. 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.
3. 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.
4. 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.
5. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Well specific cement details must be onsite prior to pumping the cement for each casing string.
6. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
7. 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.
8. If hard band 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.
9. 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. (This 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 -our 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 because 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 1/6/2026**
zstevens@blm.gov / 575-234-5998

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Operator Certification Data Report

02/18/2026

## Operator

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** RAVI SAGAR **Signed on:** 07/31/2025

**Title:** Regulatory Clerk

**Street Address:** 22777 SPRINGWOODS VILLAGE PKWY

**City:** SPRING **State:** TX **Zip:** 77389

**Phone:** (817)870-2800

**Email address:** RAVI.SAGAR@EXXONMOBIL.COM

## Field

**Representative Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Application Data
02/18/2026

**APD ID:** 10400106264
**Submission Date:** 07/31/2025
**Operator Name:** XTO PERMIAN OPERATING LLC
**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM
**Well Number:** 115H
**Well Type:** CONVENTIONAL GAS WELL
**Well Work Type:** Drill

Highlighted data reflects the most recent changes
Show Final Text

## Section 1 - General

**APD ID:** 10400106264
**Tie to previous NOS?** N
**Submission Date:** 07/31/2025
**BLM Office:** Carlsbad
**User:** RAVI SAGAR
**Title:** Regulatory Clerk
**Federal/Indian APD:** FED
**Is the first lease penetrated for production Federal or Indian?** FED
**Lease number:** NMNM130866
**Lease Acres:**
**Surface access agreement in place?**
**Allotted?**
**Reservation:**
**Agreement in place?** NO
**Federal or Indian agreement:**
**Agreement number:**
**Agreement name:**
**Keep application confidential?** Y
**Permitting Agent?** NO
**APD Operator:** XTO PERMIAN OPERATING LLC
**Operator letter of**

## Operator Info

**Operator Organization Name:** XTO PERMIAN OPERATING LLC
**Operator Address:** 6401 HOLIDAY HILL ROAD BLDG 5
**Zip:** 79707
**Operator PO Box:**
**Operator City:** MIDLAND
**State:** TX
**Operator Phone:** (432)683-2277
**Operator Internet Address:**

## Section 2 - Well Information

**Well in Master Development Plan?** NO
**Master Development Plan name:**
**Well in Master SUPO?** NO
**Master SUPO name:**
**Well in Master Drilling Plan?** NO
**Master Drilling Plan name:**
**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM
**Well Number:** 115H
**Field/Pool or Exploratory?** Field and Pool
**Field Name:** GOLDEN LANE
**Pool Name:** WOLFCAMP (GAS)



Released to Imaging: 11/20/2026 3:39:05 PM

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Is the proposed well in an area containing other mineral resources?** USEABLE WATER,OTHER,NATURAL GAS,OIL,POTASH

**Describe other minerals:** Produced Water

**Is the proposed well in a Helium production area?** N **Use Existing Well Pad?** Y **New surface disturbance?** N

**Type of Well Pad:** MULTIPLE WELL **Multiple Well Pad Name:** Big Eddy Unit DI 9 **Number:** 1

**Well Class:** HORIZONTAL **Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** CONVENTIONAL GAS WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** **Distance to nearest well:** 30 FT **Distance to lease line:** 24 FT

**Reservoir well spacing assigned acres Measurement:** 1920 Acres

**Well plat:** BIG_EDDY_UNIT_DI_9_ARROW_FED_COM_115H_C102_FINAL_10_21_2025_20251024081532.pdf

**Well work start Date:** 01/04/2027 **Duration:** 45 DAYS

## Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83 **Vertical Datum:** NAVD88

**Survey number:** **Reference Datum:** GROUND LEVEL

| Wellbore | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD | Will this well produce from this |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHL Leg #1 | 24 | FSL | 713 | FEL | 21S | 30E | 21 | Aliquot SESE | 32.457584 | -103.879228 | EDDY | NEW MEXICO | NEW MEXICO | S | STATE | 3152 | | | N |
| KOP Leg #1 | 770 | FSL | 330 | FWL | 21S | 30E | 27 | Aliquot SWSW | 32.445114 | -103.87585 | EDDY | NEW MEXICO | NEW MEXICO | F | NMNM 130866 | -7486 | 12877 | 10638 | Y |
| PPP Leg #1-1 | 770 | FSL | 330 | FWL | 21S | 30E | 27 | Aliquot SWSW | 32.445114 | -103.87585 | EDDY | NEW MEXICO | NEW MEXICO | F | NMNM 130866 | -8202 | 14002 | 11354 | Y |

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

| Wellbore | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD | Will this well produce from this |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXIT Leg #1 | 770 | FSL | 330 | FEL | 21S | 30E | 25 | Aliquot SESE | 32.445051 | -103.826635 | EDDY | NEW MEXICO | NEW MEXICO | F | NMNM 85912 | -8202 | 28468 | 11354 | Y |
| BHL Leg #1 | 770 | FSL | 280 | FEL | 21S | 30E | 25 | Aliquot SESE | 32.445051 | -103.826473 | EDDY | NEW MEXICO | NEW MEXICO | F | NMNM 85912 | -8202 | 28518 | 11354 | Y |

CONFIDENTIAL

Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

*Please refer to approved NOI appended to this application for the most current well design

C-102
Revised July 9, 2024
Submit Electronically via OCD Permitting

Submittal Type:
☒ Initial Submittal
☐ Amended Report
☐ As Drilled

## WELL LOCATION INFORMATION

| API Number | Pool Code | Pool Name |
|---|---|---|
| 30-015- | 77620 | GOLDEN LANE; WOLFCAMP (GAS) |

| Property Code | Property Name | Well Number |
|---|---|---|
| | BIG EDDY UNIT DI 9 ARROW FED COM | 115H |

| OGRID No. | Operator Name | Ground Level Elevation |
|---|---|---|
| 373075 | XTO PERMIAN OPERATING, LLC. | 3152' |

Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

### Surface Location

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 21 | 21S | 30E | | 24 FSL | 713 FEL | 32.457584 | -103.879228 | EDDY |

### Bottom Hole Location

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 25 | 21S | 30E | | 770 FSL | 280 FEL | 32.445051 | -103.826473 | EDDY |

| Dedicated Acres | Infill or Defining Well | Defining Well API | Overlapping Spacing Unit (Y/N) | Consolidation Code |
|---|---|---|---|---|
| 1,920.00 | INFILL | | N | P |

Order Numbers:
Well setbacks are under Common Ownership: ☒Yes ☐No

### Kick Off Point (KOP)

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 27 | 21S | 30E | | 770 FSL | 330 FWL | 32.445114 | -103.875850 | EDDY |

### First Take Point (FTP)

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 27 | 21S | 30E | | 770 FSL | 330 FWL | 32.445114 | -103.875850 | EDDY |

### Last Take Point (LTP)

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 25 | 21S | 30E | | 770 FSL | 330 FEL | 32.445051 | -103.826635 | EDDY |

| Unitized Area or Area of Uniform Interest | Spacing Unit Type ☒ Horizontal ☐ Vertical | Ground Floor Elevation: 3152' |
|---|---|---|
| | | |

### OPERATOR CERTIFICATIONS

*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral 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 order from the division.*

L.Srinivas Naveen 10/24/2025

Signature Date

Srinivas Naveen Laghuvarapu

Printed Name

srinivas.n.laghuvarapu@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.*

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

| Certificate Number | Date of Survey |
|---|---|
| 23786 | 10-21-2025 |

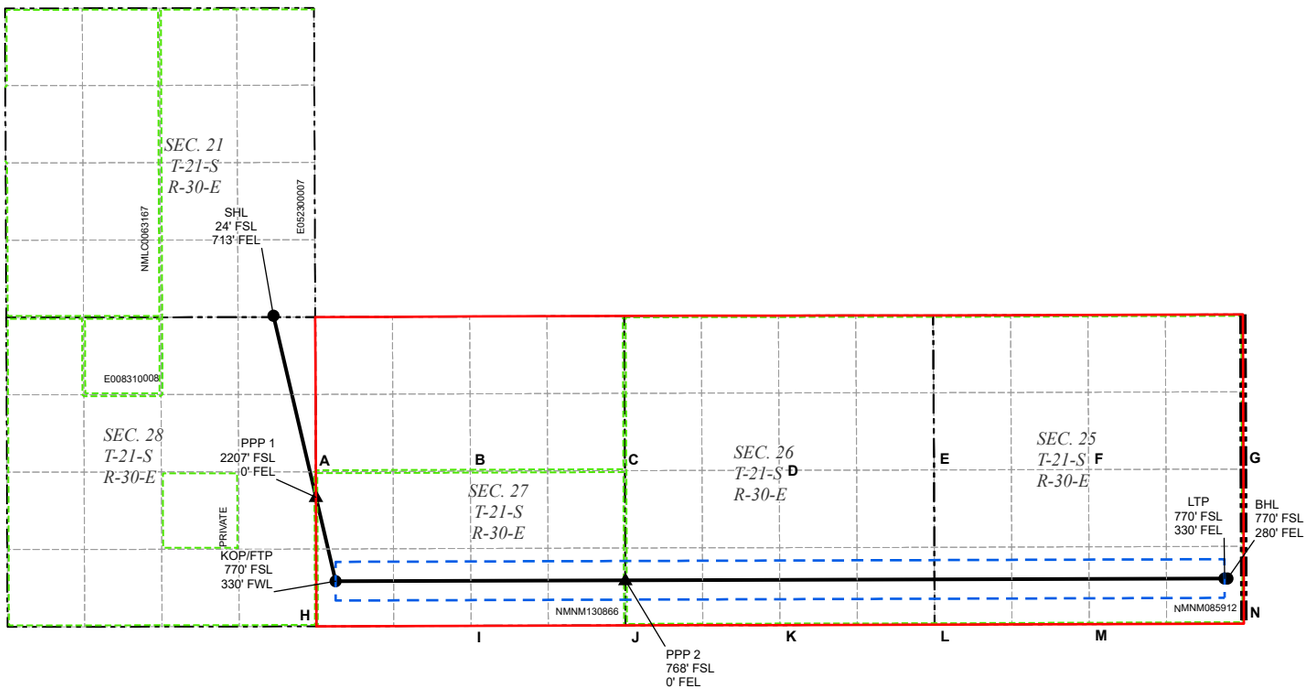
DN 618.013004.05-15

*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.*

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.




**LEGEND**

SECTION LINE
TOWNSHIP LINE
DEDICATED ACREAGE
330' BUFFER
MINERAL LEASE
WELLBORE
PPP
WELL

**WELL COORDINATE TABLE**

| WELL | NAD 83 NME X | NAD 83 NME Y | NAD 83 LAT | NAD 83 LON | NAD 27 NME X | NAD 27 NME Y | NAD 27 LAT | NAD 27 LON |
|---|---|---|---|---|---|---|---|---|
| SHL | 681,401.8 | 530,498.0 | 32.457584 | -103.879228 | 640,221.1 | 530,436.8 | 32.457462 | -103.878730 |
| KOP/FTP | 682,463.2 | 525,965.9 | 32.445114 | -103.875850 | 641,282.3 | 525,904.7 | 32.444992 | -103.875353 |
| LTP | 697,645.3 | 526,011.3 | 32.445051 | -103.826635 | 656,464.5 | 525,950.2 | 32.444929 | -103.826139 |
| BHL | 697,695.3 | 526,011.5 | 32.445051 | -103.826473 | 656,514.5 | 525,950.4 | 32.444928 | -103.825977 |
| PPP 1 | 682,127.1 | 527,401.1 | 32.449063 | -103.876920 | 640,946.2 | 527,339.9 | 32.448941 | -103.876422 |
| PPP 2 | 687,411.6 | 525,980.7 | 32.445096 | -103.859809 | 646,230.8 | 525,919.6 | 32.444974 | -103.859312 |

**CORNER COORDINATE TABLE**

| CORNER | NAD 83 NME X | NAD 83 NME Y | NAD 27 NME X | NAD 27 NME Y |
|---|---|---|---|---|
| A | 682,125.2 | 527,834.6 | 640,944.4 | 527,773.4 |
| B | 684,765.1 | 527,844.4 | 643,584.4 | 527,783.2 |
| C | 687,403.9 | 527,854.1 | 646,223.2 | 527,793.0 |
| D | 690,039.5 | 527,859.3 | 648,858.8 | 527,798.2 |
| E | 692,684.3 | 527,864.6 | 651,503.5 | 527,803.5 |
| F | 695,324.4 | 527,872.6 | 654,143.7 | 527,811.4 |
| G | 697,967.8 | 527,880.5 | 656,787.0 | 527,819.4 |
| H | 682,136.4 | 525,194.6 | 640,955.6 | 525,133.4 |
| I | 684,777.3 | 525,205.2 | 643,596.5 | 525,144.1 |
| J | 687,414.7 | 525,212.8 | 646,233.9 | 525,151.7 |
| K | 690,053.0 | 525,217.2 | 648,872.2 | 525,156.1 |
| L | 692,694.3 | 525,223.5 | 651,513.5 | 525,162.4 |
| M | 695,335.6 | 525,233.0 | 654,154.8 | 525,171.9 |
| N | 697,978.4 | 525,242.5 | 656,797.6 | 525,181.4 |

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# Drilling Plan Data Report
02/18/2026

**APD ID:** 10400106264
**Submission Date:** 07/31/2025

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM
**Well Number:** 115H

**Well Type:** CONVENTIONAL GAS WELL
**Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical | Measured Depth | Lithologies | Mineral Resources | Producing Formatio |
|---|---|---|---|---|---|---|---|
| 17449512 | QUATERNARY | 3152 | 0 | 0 | ALLUVIUM | USEABLE WATER | N |
| 17449513 | RUSTLER | 2965 | 187 | 187 | ANHYDRITE, SANDSTONE | USEABLE WATER | N |
| 17449514 | SALADO | 2736 | 416 | 416 | SALT | POTASH | N |
| 17449515 | BASE OF SALT | -42 | 3194 | 3194 | SALT | POTASH | N |
| 17449516 | DELAWARE | -332 | 3484 | 3484 | LIMESTONE, SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 17449517 | BRUSHY CANYON | -2932 | 6084 | 6084 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 17449518 | BONE SPRING | -4132 | 7284 | 7284 | LIMESTONE, SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 17449520 | BONE SPRING 1ST | -5177 | 8329 | 8329 | LIMESTONE, SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 17449522 | BONE SPRING 2ND | -6070 | 9222 | 9222 | LIMESTONE, SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 17449509 | BONE SPRING 3RD | -6972 | 10124 | 10124 | LIMESTONE, SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 17449510 | WOLFCAMP | -7282 | 10434 | 10434 | SANDSTONE, SHALE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 17449511 | WOLFCAMP | -8092 | 11244 | 11244 | SANDSTONE, SHALE | NATURAL GAS, OIL, OTHER : Produced Water | Y |

## Section 2 - Blowout Prevention

**Pressure Rating (PSI):** 10M
**Rating Depth:** 11354

**Equipment:** Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of a minimum 5M Hydril and a minimum 10M triple Ram BOP. XTO will use a Multi-Bowl System which is attached.

**Requesting Variance?** YES

**Variance request:** Offline Cementing Variance XOM requests the option to perform offline cement and bradenhead jobs (if needed) SURFACE and INTERMEDIATE casing strings where batch drilling is approved. XOM will ensure well is static with no pressure on the csg annulus, as with all other casing strings where

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

batch drilling operations occur before moving off the rig. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence. The TA cap will also be installed when applicable per wellhead manufacturer's procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops. Flex Hose Variance A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors. 10M Annular Variance XOM requests a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables attached along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP). Open Hole Logging Variance Open hole logging will not be done on this well. Spudder Rig Variance XOM requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing. Batch Drilling Variance XOM requests a variance to be able to batch drill this well. In doing so, XOM will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. XOM will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XOM will begin drilling the production hole on each of the wells.

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

**Choke Diagram Attachment:**

DI_9_ARROW_FED_COM_10MCM_20250729061938.pdf

**BOP Diagram Attachment:**

DI_9_ARROW_FED_COM_5M10M_BOP_20250729061949.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 | 17.5 | 13.375 | NEW | API | N | 0 | 391 | 0 | 391 | 3152 | 2761 | 391 | J-55 | 54.5 | BUTT | 13.34 | 22.84 | DRY | 7.2 | DRY | 7.2 |
| 2 | INTERMEDIATE | 12.25 | 9.625 | NEW | API | N | 0 | 3294 | 0 | 3294 | 3152 | -142 | 3294 | J-55 | 40 | BUTT | 3.6 | 3.91 | DRY | 3.18 | DRY | 3.18 |
| 3 | INTERMEDIATE | 8.75 | 7.625 | NEW | NON API | Y | 0 | 12727 | 0 | 10483 | 3152 | -7331 | 12727 | L-80 | 29.7 | OTHER - Tenaris Wedge 511 | 3.84 | 1.83 | DRY | 2.09 | DRY | 2.09 |
| 4 | PRODUCTION | 6.75 | 5.5 | NEW | NON API | Y | 0 | 28518 | 0 | 11354 | 3152 | -8202 | 28518 | P-110 | 20 | OTHER - Tenaris Wedge 441 | 2.26 | 1.18 | DRY | 2.51 | DRY | 2.51 |

**Casing Attachments**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Casing Attachments**

**Casing ID:** 1 **String** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

**Casing ID:** 2 **String** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

**Casing ID:** 3 **String** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

Wedge_511__7.625__29.70_0.375_L80_IC_20250729210428.pdf
Wedge_511__7.625__29.70_0.375_P110_ICY_20250729210427.pdf

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

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**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Casing Attachments**

**Casing ID:** 4 **String** PRODUCTION

**Inspection Document:**

**Spec Document:**

Wedge_441__5.500__20.00_0.361_P110_CY_20250729210645.pdf

Wedge_441__5.500__20.00_0.361_P110_ICY_20250729210645.pdf

**Tapered String Spec:**

DI_9_ARROW_FED_COM_CSG_20250729210716.pdf

**Casing Design Assumptions and Worksheet(s):**

DI_9_ARROW_FED_COM_CSG_20250729210753.pdf

## Section 4 - Cement

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCTION | Lead | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A |
| PRODUCTION | Tail | | 12227 | 28518 | 1152 | 1.44 | 13.2 | 1658.88 | 25 | Class C | N/A |
| SURFACE | Lead | | 0 | 91 | 60 | 2.11 | 12.4 | 126.6 | 100 | Class C | N/A |
| SURFACE | Tail | | 91 | 391 | 313 | 1.33 | 14.8 | 416.29 | 100 | Class C | N/A |
| INTERMEDIATE | Lead | | 0 | 2994 | 696 | 2.02 | 12.9 | 1405.92 | 50 | Class C | N/A |
| INTERMEDIATE | Tail | | 2994 | 3294 | 97 | 1.45 | 14.8 | 140.65 | 50 | Class C | N/A |
| INTERMEDIATE | Lead | | 2794 | 6084 | 308 | 1.45 | 14.8 | 446.6 | 35 | Class C | N/A |
| INTERMEDIATE | Tail | | 6084 | 12727 | 460 | 1.45 | 14.8 | 667 | 0 | Class C | N/A |

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

## 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 43 CFR 3172:**

**Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:**

**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:** Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. An EDR (Electronic Drilling Recorder) will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 391 | WATER-BASED MUD | 8.3 | 8.7 | | | | | | | Fresh Water or Native Water. |
| 391 | 3294 | OTHER : BDE/OBM or FW/Brine | 9.5 | 10 | | | | | | | Fluid type will be based upon well conditions. A fully saturated system will be used across the salt interval. |
| 3294 | 12727 | OTHER : BDE/OBM or FW/Brine | 9.5 | 10 | | | | | | | Fluid type will be based upon well conditions. |
| 12727 | 28518 | OTHER : OBM/Cut Brine | 9.5 | 12.5 | | | | | | | OBM or Cut Brine depending on Well Conditions. |

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

## Section 6 - Test, Logging, Coring

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

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,DIRECTIONAL SURVEY,MEASUREMENT WHILE DRILLING,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

**Coring operation description for the well:**

No Coring Operations for this Well.

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 7380 **Anticipated Surface Pressure:** 4882

**Anticipated Bottom Hole Temperature(F):** 197

**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**

DI_9_ARROW_FED_COM_H2S_PLAN_20250729062144.pdf

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

DI_9_Arrow_Fed_Com_115H_Survey_Report_20250731055844.pdf

DI_9_Arrow_Fed_Com_115H_Formation__Section_and_Plan_View_20251022114105.pdf

**Other proposed operations facets description:**

XTO Permian Operating LLC will abide by R-111-Q and monitor separation Distance to offsets and maintain a Separation Factor greater than 1.0 while drilling through the salt intervals. For blind or inclination only wells, XTO Permian Operating LLC will maintain greater than 300' center-to-center separation.
XTO Permian Operating, LLC., will not introduce any additive that contains PFAS chemicals in completion or recompletion of the well and will meet the certification.

**Other proposed operations facets attachment:**

13.375_X_9.625_X_7.625_X_5.5_4_String_Slimhole_SDT_3301_1_20250729195652.pdf

R_111_Q_Fig_D_4_String_Design_with_Int_2_Open_Annulus_and_Pop_Valve_20250729194735.pdf

DI_9_ARROW_FED_COM_H2S_Dia_20250729095122.pdf

DI9_Arrow_Fed_Com_115H_DP__4SH__Lower_WC_3Mi__20251022114127.pdf

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

Gas_Capture_Plan___Big_Eddy_Unit_DI_9_Arrow___Updated_20251022114217.pdf

**Other Variance request(s)?:** Y

**Other Variance attachment:**

DI_9_ARROW_FED_COM_FLEX_HOSE_VARIANCE_20250729063800.pdf

DI_9_ARROW_FED_COM_OFFLINE_CEMENTING_VARIANCE_SURFACE_AND_INTERMEDIATE_CASING_20250729063756.pdf

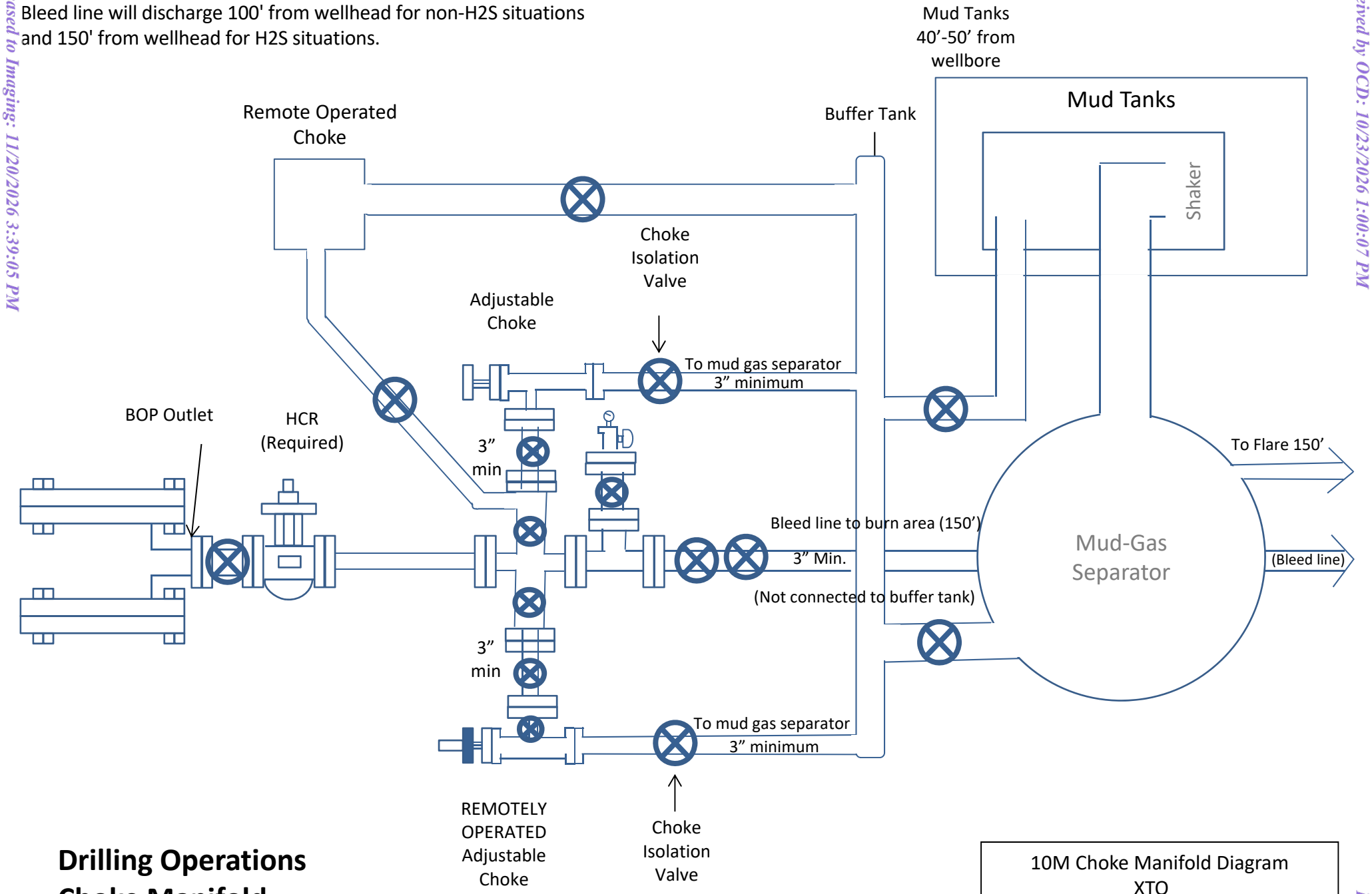
DI_9_ARROW_FED_COM_SPUDDER_RIG_VARIANCE_20250729063754.pdf

DI_9_ARROW_FED_COM_10M_ANNULAR_VARIANCE_20250731060112.pdf

CONFIDENTIAL

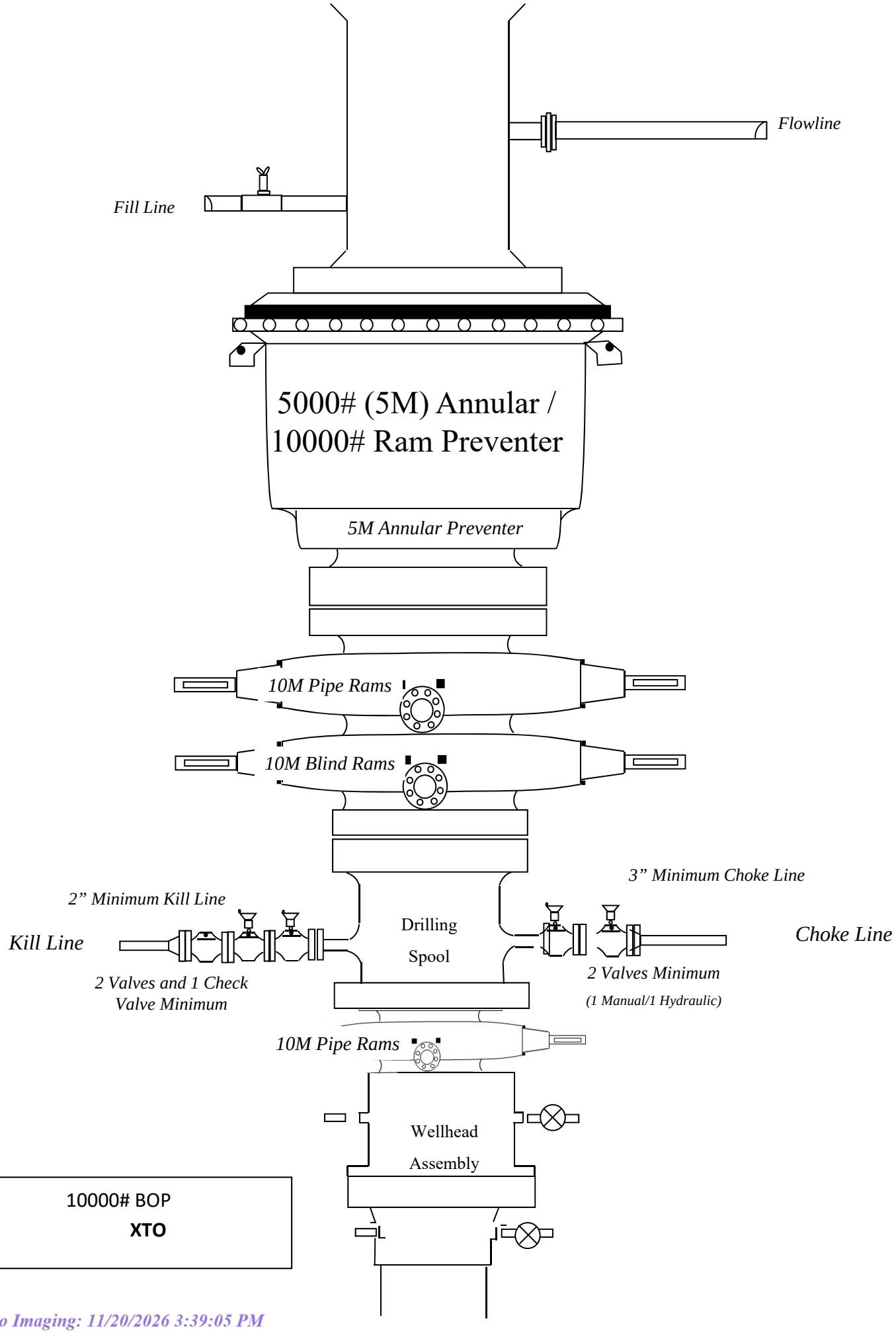
Released to Imaging: 11/20/2026 3:39:05 PM
Received by OCD: 10/23/2026 1:00:07 PM

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




**Drilling Operations**
**Choke Manifold**
**10M Service**

10M Choke Manifold Diagram
XTO




10000# BOP

**XTO**

Tenaris

# TenarisHydril Wedge 511



| Coupling | Pipe Body |
|---|---|
| Grade: **P110-ICY** | Grade: **P110-ICY** |
| Body: **White** | 1st Band: **White** |
| 1st Band: **Pale Green** | 2nd Band: **Pale Green** |
| 2nd Band: **-** | 3rd Band: **Pale Green** |
| 3rd Band: **-** | 4th Band: **-** |
| | 5th Band: **-** |
| | 6th Band: **-** |

| | | | | | |
|---|---|---|---|---|---|
| **Outside Diameter** | 7.625 in. | **Wall Thickness** | 0.375 in. | **Grade** | P110-ICY |
| **Min. Wall Thickness** | 90.00 % | **Pipe Body Drift** | API Standard | **Type** | Casing |
| **Connection OD Option** | REGULAR | | | | |

## Pipe Body Data

| Geometry | | | | Performance | |
|---|---|---|---|---|---|
| **Nominal OD** | 7.625 in. | **Wall Thickness** | 0.375 in. | **Body Yield Strength** | 1068 x1000 lb |
| **Nominal Weight** | 29.70 lb/ft | **Plain End Weight** | 29.06 lb/ft | **Min. Internal Yield Pressure** | 11,070 psi |
| **Drift** | 6.750 in. | **OD Tolerance** | API | **SMYS** | 125,000 psi |
| **Nominal ID** | 6.875 in. | | | **Collapse Pressure** | 7360 psi |

## Connection Data

| Geometry | | Performance | | Make-Up Torques | |
|---|---|---|---|---|---|
| **Connection OD** | 7.625 in. | **Tension Efficiency** | 61.10 % | **Minimum** | 5900 ft-lb |
| **Connection ID** | 6.787 in. | **Joint Yield Strength** | 653 x1000 lb | **Optimum** | 7100 ft-lb |
| **Make-up Loss** | 3.704 in. | **Internal Pressure Capacity** | 11,070 psi | **Maximum** | 10,300 ft-lb |
| **Threads per inch** | 3.28 | **Compression Efficiency** | 73.80 % | | |
| **Connection OD Option** | Regular | **Compression Strength** | 788 x1000 lb | **Operation Limit Torques** | |
| | | **Max. Allowable Bending** | 45.83 °/100 ft | **Operating Torque** | 55,000 ft-lb |
| | | **External Pressure Capacity** | 7360 psi | **Yield Torque** | 82,000 ft-lb |

## Notes

For the lastest performance data, always visit our website: www.tenaris.com
For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

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Tenaris

# TenarisHydril Wedge 511



| Coupling | Pipe Body |
|---|---|
| Grade: **L80-IC** | Grade: **L80-IC** |
| Body: **Red** | 1st Band: **Red** |
| 1st Band: **Brown** | 2nd Band: **Brown** |
| 2nd Band: **-** | 3rd Band: **Pale Green** |
| 3rd Band: **-** | 4th Band: **-** |
| | 5th Band: **-** |
| | 6th Band: **-** |

| | | | | | |
|---|---|---|---|---|---|
| **Outside Diameter** | 7.625 in. | **Wall Thickness** | 0.375 in. | **Grade** | L80-IC |
| **Min. Wall Thickness** | 87.50 % | **Pipe Body Drift** | API Standard | **Type** | Casing |
| **Connection OD Option** | REGULAR | | | | |

## Pipe Body Data

| Geometry | | | | Performance | |
|---|---|---|---|---|---|
| **Nominal OD** | 7.625 in. | **Wall Thickness** | 0.375 in. | **Body Yield Strength** | 683 x1000 lb |
| **Nominal Weight** | 29.70 lb/ft | **Plain End Weight** | 29.06 lb/ft | **Min. Internal Yield Pressure** | 6890 psi |
| **Drift** | 6.750 in. | **OD Tolerance** | API | **SMYS** | 80,000 psi |
| **Nominal ID** | 6.875 in. | | | **Collapse Pressure** | 5900 psi |

## Connection Data

| Geometry | | Performance | | Make-Up Torques | |
|---|---|---|---|---|---|
| **Connection OD** | 7.625 in. | **Tension Efficiency** | 61.10 % | **Minimum** | 5900 ft-lb |
| **Connection ID** | 6.787 in. | **Joint Yield Strength** | 417 x1000 lb | **Optimum** | 7100 ft-lb |
| **Make-up Loss** | 3.704 in. | **Internal Pressure Capacity** | 6890 psi | **Maximum** | 10,300 ft-lb |
| **Threads per inch** | 3.28 | **Compression Efficiency** | 73.80 % | | |
| **Connection OD Option** | Regular | **Compression Strength** | 504 x1000 lb | **Operation Limit Torques** | |
| | | **Max. Allowable Bending** | 29.33 °/100 ft | **Operating Torque** | 35,000 ft-lb |
| | | **External Pressure Capacity** | 5900 psi | **Yield Torque** | 52,000 ft-lb |

## Notes

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# TenarisHydril Wedge 441®



| Coupling | Pipe Body |
|---|---|
| Grade: **P110-ICY** | Grade: **P110-ICY** |
| Body: **White** | 1st Band: **White** |
| 1st Band: **Pale Green** | 2nd Band: **Pale Green** |
| 2nd Band: **-** | 3rd Band: **Pale Green** |
| 3rd Band: **-** | 4th Band: **-** |
| | 5th Band: **-** |
| | 6th Band: **-** |

| | | | | | |
|---|---|---|---|---|---|
| **Outside Diameter** | 5.500 in. | **Wall Thickness** | 0.361 in. | **Grade** | P110-ICY |
| **Min. Wall Thickness** | 87.50 % | **Pipe Body Drift** | API Standard | **Type** | Casing |
| **Connection OD Option** | REGULAR | | | | |

## Pipe Body Data

| Geometry | | | | Performance | |
|---|---|---|---|---|---|
| **Nominal OD** | 5.500 in. | **Wall Thickness** | 0.361 in. | **Body Yield Strength** | 729 x1000 lb |
| **Nominal Weight** | 20.00 lb/ft | **Plain End Weight** | 19.83 lb/ft | **Min. Internal Yield Pressure** | 14,360 psi |
| **Drift** | 4.653 in. | **OD Tolerance** | API | **SMYS** | 125,000 psi |
| **Nominal ID** | 4.778 in. | | | **Collapse Pressure** | 12,300 psi |

## Connection Data

| Geometry | | Performance | | Make-Up Torques | |
|---|---|---|---|---|---|
| **Connection OD** | 5.852 in. | **Tension Efficiency** | 81.50 % | **Minimum** | 15,000 ft-lb |
| **Coupling Length** | 8.714 in. | **Joint Yield Strength** | 594 x1000 lb | **Optimum** | 16,000 ft-lb |
| **Connection ID** | 4.778 in. | **Internal Pressure Capacity** | 14,360 psi | **Maximum** | 19,200 ft-lb |
| **Make-up Loss** | 3.780 in. | **Compression Efficiency** | 81.50 % | | |
| **Threads per inch** | 3.40 | **Compression Strength** | 594 x1000 lb | **Operation Limit Torques** | |
| **Connection OD Option** | Regular | **Max. Allowable Bending** | 84.76 °/100 ft | **Operating Torque** | 36,000 ft-lb |
| | | **External Pressure Capacity** | 12,300 psi | **Yield Torque** | 42,000 ft-lb |
| | | | | **Buck-On** | |
| | | | | **Minimum** | 19,200 ft-lb |
| | | | | **Maximum** | 20,700 ft-lb |

## Notes

This connection is fully interchangeable with:
Wedge 441® - 5.5 in. - 0.304 (17.00) in. (lb/ft)
Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) / 0.415 (23.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

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Tenaris

# TenarisHydril Wedge 441®



| Coupling | Pipe Body |
|---|---|
| Grade: **P110-CY** | Grade: **P110-CY** |
| Body: **White** | 1st Band: **White** |
| 1st Band: **Grey** | 2nd Band: **Grey** |
| 2nd Band: **-** | 3rd Band: **-** |
| 3rd Band: **-** | 4th Band: **-** |
| | 5th Band: **-** |
| | 6th Band: **-** |

| | | | | | |
|---|---|---|---|---|---|
| **Outside Diameter** | 5.500 in. | **Wall Thickness** | 0.361 in. | **Grade** | P110-CY |
| **Min. Wall Thickness** | 87.50 % | **Pipe Body Drift** | API Standard | **Type** | Casing |
| **Connection OD Option** | REGULAR | | | | |

## Pipe Body Data

| Geometry | | | | Performance | |
|---|---|---|---|---|---|
| **Nominal OD** | 5.500 in. | **Wall Thickness** | 0.361 in. | **Body Yield Strength** | 641 x1000 lb |
| **Nominal Weight** | 20.00 lb/ft | **Plain End Weight** | 19.83 lb/ft | **Min. Internal Yield Pressure** | 12,640 psi |
| **Drift** | 4.653 in. | **OD Tolerance** | API | **SMYS** | 110,000 psi |
| **Nominal ID** | 4.778 in. | | | **Collapse Pressure** | 11,100 psi |

## Connection Data

| Geometry | | Performance | | Make-Up Torques | |
|---|---|---|---|---|---|
| **Connection OD** | 5.852 in. | **Tension Efficiency** | 81.50 % | **Minimum** | 15,000 ft-lb |
| **Coupling Length** | 8.714 in. | **Joint Yield Strength** | 522 x1000 lb | **Optimum** | 16,000 ft-lb |
| **Connection ID** | 4.778 in. | **Internal Pressure Capacity** | 12,640 psi | **Maximum** | 19,200 ft-lb |
| **Make-up Loss** | 3.780 in. | **Compression Efficiency** | 81.50 % | | |
| **Threads per inch** | 3.40 | **Compression Strength** | 522 x1000 lb | **Operation Limit Torques** | |
| **Connection OD Option** | Regular | **Max. Allowable Bending** | 72.59 °/100 ft | **Operating Torque** | 32,000 ft-lb |
| | | **External Pressure Capacity** | 11,100 psi | **Yield Torque** | 38,000 ft-lb |
| | | | | **Buck-On** | |
| | | | | **Minimum** | 19,200 ft-lb |
| | | | | **Maximum** | 20,700 ft-lb |

## Notes

This connection is fully interchangeable with:
Wedge 441® - 5.5 in. - 0.304 (17.00) in. (lb/ft)
Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) / 0.415 (23.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

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**See drilling plan for the required casing assumptions table**

**See drilling plan for the required casing assumptions table**

# HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

## Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

**Emergency Procedures**

In the event of a release of gas containing $H_2S$, 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 $H_2S$ 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
  - Detection of $H_2S$, and
  - Measures for protection against the gas,
  - 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 ($SO_2$). 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 $H_2S$ and $SO_2$**

| Common Name | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|---|---|---|---|---|---|
| Hydrogen Sulfide | $H_2S$ | 1.189 Air = I | 10 ppm | 100 ppm/hr | 600 ppm |
| Sulfur Dioxide | $SO_2$ | 2.21 Air = I | 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 |

# Long Lead_Well Planning

**BEU DI 9**
**DI 9 Arrow Fed Com 115H**
**DI 9 Arrow Fed Com 115H**

**OH**

**Plan: Plan 1**

# Standard Planning Report

**04 July, 2025**

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**Project** BEU DI 9

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

**Site** DI 9 Arrow Fed Com 115H

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 530,436.80 usft | **Latitude:** | 32° 27' 26.865 N |
| **From:** | Map | **Easting:** | 640,221.10 usft | **Longitude:** | 103° 52' 43.428 W |
| **Position Uncertainty:** | 3.0 usft | **Slot Radius:** | 13-3/16 " | | |

**Well** DI 9 Arrow Fed Com 115H

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.0 usft | **Northing:** | 530,436.80 usft | **Latitude:** | 32° 27' 26.865 N |
| | **+E/-W** | 0.0 usft | **Easting:** | 640,221.10 usft | **Longitude:** | 103° 52' 43.428 W |
| **Position Uncertainty** | | 0.0 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,152.0 usft |
| **Grid Convergence:** | | 0.24 ° | | | | |

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2020 | 7/3/2025 | 6.23 | 59.93 | 47,181.13927754 |

**Design** Plan 1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.0 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 89.83 |

**Plan Survey Tool Program** **Date** 7/4/2025

| | Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name | Remarks |
|---|---|---|---|---|---|
| 1 | 0.0 | 28,518.3 | Plan 1 (OH) | XOM_R2OWSG MWD+IFR1+ | |
| | | | | OWSG MWD + IFR1 + Multi-St | |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**Plan Sections**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,200.0 | 0.00 | 0.00 | 3,200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,717.7 | 70.35 | 166.82 | 5,898.0 | -1,851.5 | 433.5 | 2.00 | 2.00 | 0.00 | 166.82 | |
| 7,621.8 | 70.35 | 166.82 | 6,202.0 | -2,680.6 | 627.7 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 11,139.5 | 0.00 | 0.00 | 8,900.0 | -4,532.1 | 1,061.2 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 12,877.3 | 0.00 | 0.00 | 10,637.8 | -4,532.1 | 1,061.2 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 14,002.3 | 90.00 | 89.83 | 11,354.0 | -4,530.0 | 1,777.4 | 8.00 | 8.00 | 0.00 | 89.83 | |
| 28,468.3 | 90.00 | 89.83 | 11,354.0 | -4,487.1 | 16,243.4 | 0.00 | 0.00 | 0.00 | 0.00 | LTP_115H |
| 28,518.3 | 90.00 | 89.83 | 11,354.0 | -4,486.9 | 16,293.4 | 0.00 | 0.00 | 0.00 | 0.00 | BHL_115H |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Alluvium - SHL_115H** | | | | | | | | | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 187.0 | 0.00 | 0.00 | 187.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Rustler** | | | | | | | | | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 416.0 | 0.00 | 0.00 | 416.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Salado/Top of Salt** | | | | | | | | | |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,144.0 | 0.00 | 0.00 | 1,144.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **MB 126** | | | | | | | | | |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 0.00 | 0.00 | 1,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 0.00 | 0.00 | 1,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 0.00 | 0.00 | 2,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 0.00 | 0.00 | 2,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 0.00 | 0.00 | 2,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 0.00 | 0.00 | 2,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 0.00 | 0.00 | 2,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 0.00 | 0.00 | 2,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 0.00 | 0.00 | 2,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 0.00 | 0.00 | 2,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 0.00 | 0.00 | 2,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 0.00 | 0.00 | 2,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 0.00 | 0.00 | 3,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 0.00 | 0.00 | 3,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,194.0 | 0.00 | 0.00 | 3,194.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Base Salt** | | | | | | | | | |
| 3,200.0 | 0.00 | 0.00 | 3,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 2.00 | 166.82 | 3,300.0 | -1.7 | 0.4 | 0.4 | 2.00 | 2.00 | 0.00 |
| 3,400.0 | 4.00 | 166.82 | 3,399.8 | -6.8 | 1.6 | 1.6 | 2.00 | 2.00 | 0.00 |
| 3,484.5 | 5.69 | 166.82 | 3,484.0 | -13.7 | 3.2 | 3.2 | 2.00 | 2.00 | 0.00 |
| **Delaware/Lamar** | | | | | | | | | |
| 3,500.0 | 6.00 | 166.82 | 3,499.5 | -15.3 | 3.6 | 3.5 | 2.00 | 2.00 | 0.00 |
| 3,562.0 | 7.24 | 166.82 | 3,561.0 | -22.2 | 5.2 | 5.1 | 2.00 | 2.00 | 0.00 |
| **Bell Canyon** | | | | | | | | | |
| 3,600.0 | 8.00 | 166.82 | 3,598.7 | -27.1 | 6.4 | 6.3 | 2.00 | 2.00 | 0.00 |
| 3,700.0 | 10.00 | 166.82 | 3,697.5 | -42.4 | 9.9 | 9.8 | 2.00 | 2.00 | 0.00 |
| 3,800.0 | 12.00 | 166.82 | 3,795.6 | -61.0 | 14.3 | 14.1 | 2.00 | 2.00 | 0.00 |
| 3,900.0 | 14.00 | 166.82 | 3,893.1 | -82.9 | 19.4 | 19.2 | 2.00 | 2.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 4,000.0 | 16.00 | 166.82 | 3,989.6 | -108.1 | 25.3 | 25.0 | 2.00 | 2.00 | 0.00 |
| 4,100.0 | 18.00 | 166.82 | 4,085.3 | -136.5 | 32.0 | 31.6 | 2.00 | 2.00 | 0.00 |
| 4,200.0 | 20.00 | 166.82 | 4,179.8 | -168.2 | 39.4 | 38.9 | 2.00 | 2.00 | 0.00 |
| 4,300.0 | 22.00 | 166.82 | 4,273.2 | -203.1 | 47.6 | 47.0 | 2.00 | 2.00 | 0.00 |
| 4,400.0 | 24.00 | 166.82 | 4,365.2 | -241.2 | 56.5 | 55.8 | 2.00 | 2.00 | 0.00 |
| 4,427.2 | 24.54 | 166.82 | 4,390.0 | -252.0 | 59.0 | 58.3 | 2.00 | 2.00 | 0.00 |
| **Cherry Canyon** | | | | | | | | | |
| 4,500.0 | 26.00 | 166.82 | 4,455.8 | -282.3 | 66.1 | 65.3 | 2.00 | 2.00 | 0.00 |
| 4,600.0 | 28.00 | 166.82 | 4,544.9 | -326.5 | 76.5 | 75.5 | 2.00 | 2.00 | 0.00 |
| 4,700.0 | 30.00 | 166.82 | 4,632.4 | -373.7 | 87.5 | 86.4 | 2.00 | 2.00 | 0.00 |
| 4,800.0 | 32.00 | 166.82 | 4,718.1 | -423.8 | 99.2 | 98.0 | 2.00 | 2.00 | 0.00 |
| 4,900.0 | 34.00 | 166.82 | 4,802.0 | -476.9 | 111.7 | 110.2 | 2.00 | 2.00 | 0.00 |
| 5,000.0 | 36.00 | 166.82 | 4,883.9 | -532.7 | 124.7 | 123.2 | 2.00 | 2.00 | 0.00 |
| 5,100.0 | 38.00 | 166.82 | 4,963.7 | -591.3 | 138.5 | 136.7 | 2.00 | 2.00 | 0.00 |
| 5,200.0 | 40.00 | 166.82 | 5,041.5 | -652.6 | 152.8 | 150.9 | 2.00 | 2.00 | 0.00 |
| 5,300.0 | 42.00 | 166.82 | 5,116.9 | -716.5 | 167.8 | 165.6 | 2.00 | 2.00 | 0.00 |
| 5,400.0 | 44.00 | 166.82 | 5,190.0 | -782.9 | 183.3 | 181.0 | 2.00 | 2.00 | 0.00 |
| 5,500.0 | 46.00 | 166.82 | 5,260.8 | -851.7 | 199.4 | 196.9 | 2.00 | 2.00 | 0.00 |
| 5,600.0 | 48.00 | 166.82 | 5,329.0 | -922.9 | 216.1 | 213.4 | 2.00 | 2.00 | 0.00 |
| 5,700.0 | 50.00 | 166.82 | 5,394.6 | -996.4 | 233.3 | 230.3 | 2.00 | 2.00 | 0.00 |
| 5,800.0 | 52.00 | 166.82 | 5,457.5 | -1,072.1 | 251.0 | 247.8 | 2.00 | 2.00 | 0.00 |
| 5,900.0 | 54.00 | 166.82 | 5,517.7 | -1,149.8 | 269.2 | 265.8 | 2.00 | 2.00 | 0.00 |
| 6,000.0 | 56.00 | 166.82 | 5,575.0 | -1,229.6 | 287.9 | 284.3 | 2.00 | 2.00 | 0.00 |
| 6,100.0 | 58.00 | 166.82 | 5,629.5 | -1,311.2 | 307.0 | 303.1 | 2.00 | 2.00 | 0.00 |
| 6,200.0 | 60.00 | 166.82 | 5,681.0 | -1,394.7 | 326.6 | 322.4 | 2.00 | 2.00 | 0.00 |
| 6,300.0 | 62.00 | 166.82 | 5,729.5 | -1,479.8 | 346.5 | 342.1 | 2.00 | 2.00 | 0.00 |
| 6,400.0 | 64.00 | 166.82 | 5,774.9 | -1,566.6 | 366.8 | 362.2 | 2.00 | 2.00 | 0.00 |
| 6,500.0 | 66.00 | 166.82 | 5,817.1 | -1,654.8 | 387.5 | 382.6 | 2.00 | 2.00 | 0.00 |
| 6,600.0 | 68.00 | 166.82 | 5,856.2 | -1,744.4 | 408.5 | 403.3 | 2.00 | 2.00 | 0.00 |
| 6,700.0 | 70.00 | 166.82 | 5,892.0 | -1,835.3 | 429.7 | 424.3 | 2.00 | 2.00 | 0.00 |
| 6,717.7 | 70.35 | 166.82 | 5,898.0 | -1,851.5 | 433.5 | 428.0 | 2.00 | 2.00 | 0.00 |
| 6,800.0 | 70.35 | 166.82 | 5,925.7 | -1,927.0 | 451.2 | 445.5 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 70.35 | 166.82 | 5,959.3 | -2,018.7 | 472.7 | 466.7 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 70.35 | 166.82 | 5,992.9 | -2,110.4 | 494.2 | 487.9 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 70.35 | 166.82 | 6,026.6 | -2,202.1 | 515.6 | 509.1 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 70.35 | 166.82 | 6,060.2 | -2,293.8 | 537.1 | 530.3 | 0.00 | 0.00 | 0.00 |
| 7,270.9 | 70.35 | 166.82 | 6,084.0 | -2,358.8 | 552.3 | 545.3 | 0.00 | 0.00 | 0.00 |
| **Brushy Canyon Ss.** | | | | | | | | | |
| 7,300.0 | 70.35 | 166.82 | 6,093.8 | -2,385.5 | 558.6 | 551.5 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 70.35 | 166.82 | 6,127.4 | -2,477.2 | 580.0 | 572.7 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 70.35 | 166.82 | 6,161.0 | -2,568.9 | 601.5 | 593.9 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 70.35 | 166.82 | 6,194.7 | -2,660.6 | 623.0 | 615.1 | 0.00 | 0.00 | 0.00 |
| 7,621.8 | 70.35 | 166.82 | 6,202.0 | -2,680.6 | 627.7 | 619.7 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 68.79 | 166.82 | 6,229.3 | -2,751.9 | 644.4 | 636.2 | 2.00 | -2.00 | 0.00 |
| 7,800.0 | 66.79 | 166.82 | 6,267.1 | -2,842.1 | 665.5 | 657.0 | 2.00 | -2.00 | 0.00 |
| 7,900.0 | 64.79 | 166.82 | 6,308.1 | -2,930.9 | 686.3 | 677.6 | 2.00 | -2.00 | 0.00 |
| 8,000.0 | 62.79 | 166.82 | 6,352.3 | -3,018.2 | 706.7 | 697.8 | 2.00 | -2.00 | 0.00 |
| 8,100.0 | 60.79 | 166.82 | 6,399.5 | -3,104.0 | 726.8 | 717.6 | 2.00 | -2.00 | 0.00 |
| 8,200.0 | 58.79 | 166.82 | 6,449.8 | -3,188.2 | 746.5 | 737.1 | 2.00 | -2.00 | 0.00 |
| 8,300.0 | 56.79 | 166.82 | 6,503.1 | -3,270.5 | 765.8 | 756.1 | 2.00 | -2.00 | 0.00 |
| 8,400.0 | 54.79 | 166.82 | 6,559.4 | -3,351.1 | 784.7 | 774.7 | 2.00 | -2.00 | 0.00 |
| 8,500.0 | 52.79 | 166.82 | 6,618.4 | -3,429.6 | 803.0 | 792.9 | 2.00 | -2.00 | 0.00 |
| 8,600.0 | 50.79 | 166.82 | 6,680.3 | -3,506.1 | 821.0 | 810.6 | 2.00 | -2.00 | 0.00 |
| 8,700.0 | 48.79 | 166.82 | 6,744.8 | -3,580.5 | 838.4 | 827.7 | 2.00 | -2.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 8,800.0 | 46.79 | 166.82 | 6,812.0 | -3,652.6 | 855.3 | 844.4 | 2.00 | -2.00 | 0.00 |
| 8,900.0 | 44.79 | 166.82 | 6,881.8 | -3,722.4 | 871.6 | 860.6 | 2.00 | -2.00 | 0.00 |
| 9,000.0 | 42.79 | 166.82 | 6,953.9 | -3,789.7 | 887.4 | 876.1 | 2.00 | -2.00 | 0.00 |
| 9,100.0 | 40.79 | 166.82 | 7,028.5 | -3,854.6 | 902.6 | 891.1 | 2.00 | -2.00 | 0.00 |
| 9,200.0 | 38.79 | 166.82 | 7,105.3 | -3,916.9 | 917.2 | 905.5 | 2.00 | -2.00 | 0.00 |
| 9,300.0 | 36.79 | 166.82 | 7,184.4 | -3,976.6 | 931.1 | 919.3 | 2.00 | -2.00 | 0.00 |
| 9,400.0 | 34.79 | 166.82 | 7,265.5 | -4,033.5 | 944.5 | 932.5 | 2.00 | -2.00 | 0.00 |
| 9,422.5 | 34.34 | 166.82 | 7,284.0 | -4,046.0 | 947.4 | 935.4 | 2.00 | -2.00 | 0.00 |
| **Bone Spring Lm.** | | | | | | | | | |
| 9,500.0 | 32.79 | 166.82 | 7,348.6 | -4,087.7 | 957.1 | 945.0 | 2.00 | -2.00 | 0.00 |
| 9,557.2 | 31.64 | 166.82 | 7,397.0 | -4,117.4 | 964.1 | 951.9 | 2.00 | -2.00 | 0.00 |
| **Avalon Ss.** | | | | | | | | | |
| 9,600.0 | 30.79 | 166.82 | 7,433.6 | -4,139.0 | 969.1 | 956.9 | 2.00 | -2.00 | 0.00 |
| 9,700.0 | 28.79 | 166.82 | 7,520.3 | -4,187.3 | 980.5 | 968.0 | 2.00 | -2.00 | 0.00 |
| 9,800.0 | 26.79 | 166.82 | 7,608.8 | -4,232.7 | 991.1 | 978.5 | 2.00 | -2.00 | 0.00 |
| 9,900.0 | 24.79 | 166.82 | 7,698.8 | -4,275.1 | 1,001.0 | 988.3 | 2.00 | -2.00 | 0.00 |
| 9,944.1 | 23.91 | 166.82 | 7,739.0 | -4,292.8 | 1,005.2 | 992.4 | 2.00 | -2.00 | 0.00 |
| **Middle Avalon Carb.** | | | | | | | | | |
| 10,000.0 | 22.79 | 166.82 | 7,790.3 | -4,314.4 | 1,010.2 | 997.4 | 2.00 | -2.00 | 0.00 |
| 10,090.2 | 20.99 | 166.82 | 7,874.0 | -4,347.1 | 1,017.9 | 1,005.0 | 2.00 | -2.00 | 0.00 |
| **Lw. Avalon Sh.** | | | | | | | | | |
| 10,100.0 | 20.79 | 166.82 | 7,883.2 | -4,350.5 | 1,018.7 | 1,005.8 | 2.00 | -2.00 | 0.00 |
| 10,200.0 | 18.79 | 166.82 | 7,977.3 | -4,383.5 | 1,026.4 | 1,013.4 | 2.00 | -2.00 | 0.00 |
| 10,254.5 | 17.70 | 166.82 | 8,029.0 | -4,400.1 | 1,030.3 | 1,017.2 | 2.00 | -2.00 | 0.00 |
| **First Bone Spring Carb.** | | | | | | | | | |
| 10,300.0 | 16.79 | 166.82 | 8,072.5 | -4,413.2 | 1,033.4 | 1,020.3 | 2.00 | -2.00 | 0.00 |
| 10,400.0 | 14.79 | 166.82 | 8,168.7 | -4,439.7 | 1,039.6 | 1,026.4 | 2.00 | -2.00 | 0.00 |
| 10,500.0 | 12.79 | 166.82 | 8,265.8 | -4,462.9 | 1,045.0 | 1,031.8 | 2.00 | -2.00 | 0.00 |
| 10,564.6 | 11.50 | 166.82 | 8,329.0 | -4,476.1 | 1,048.1 | 1,034.8 | 2.00 | -2.00 | 0.00 |
| **First Bone Spring Ss.** | | | | | | | | | |
| 10,600.0 | 10.79 | 166.82 | 8,363.7 | -4,482.8 | 1,049.7 | 1,036.3 | 2.00 | -2.00 | 0.00 |
| 10,700.0 | 8.79 | 166.82 | 8,462.3 | -4,499.3 | 1,053.5 | 1,040.2 | 2.00 | -2.00 | 0.00 |
| 10,800.0 | 6.79 | 166.82 | 8,561.3 | -4,512.5 | 1,056.6 | 1,043.2 | 2.00 | -2.00 | 0.00 |
| 10,900.0 | 4.79 | 166.82 | 8,660.8 | -4,522.4 | 1,058.9 | 1,045.5 | 2.00 | -2.00 | 0.00 |
| 11,000.0 | 2.79 | 166.82 | 8,760.6 | -4,528.8 | 1,060.4 | 1,047.0 | 2.00 | -2.00 | 0.00 |
| 11,047.4 | 1.84 | 166.82 | 8,808.0 | -4,530.7 | 1,060.9 | 1,047.4 | 2.00 | -2.00 | 0.00 |
| **Second Bone Spring Carb.** | | | | | | | | | |
| 11,100.0 | 0.79 | 166.82 | 8,860.5 | -4,531.8 | 1,061.1 | 1,047.7 | 2.00 | -2.00 | 0.00 |
| 11,139.5 | 0.00 | 0.00 | 8,900.0 | -4,532.1 | 1,061.2 | 1,047.7 | 2.00 | -2.00 | 0.00 |
| 11,200.0 | 0.00 | 0.00 | 8,960.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 11,300.0 | 0.00 | 0.00 | 9,060.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 11,308.5 | 0.00 | 0.00 | 9,069.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Second Bone Spring A Ss.** | | | | | | | | | |
| 11,400.0 | 0.00 | 0.00 | 9,160.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 11,439.5 | 0.00 | 0.00 | 9,200.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Second Bone Spring A/B Carb.** | | | | | | | | | |
| 11,461.5 | 0.00 | 0.00 | 9,222.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Second Bone Spring B Ss.** | | | | | | | | | |
| 11,500.0 | 0.00 | 0.00 | 9,260.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 11,600.0 | 0.00 | 0.00 | 9,360.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 11,623.5 | 0.00 | 0.00 | 9,384.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Third Bone Spring Carb.** | | | | | | | | | |
| 11,700.0 | 0.00 | 0.00 | 9,460.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 11,800.0 | 0.00 | 0.00 | 9,560.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 11,900.0 | 0.00 | 0.00 | 9,660.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 11,962.5 | 0.00 | 0.00 | 9,723.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Harkey Ss.** | | | | | | | | | |
| 12,000.0 | 0.00 | 0.00 | 9,760.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,003.5 | 0.00 | 0.00 | 9,764.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Third Bone Spring Shale** | | | | | | | | | |
| 12,100.0 | 0.00 | 0.00 | 9,860.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,200.0 | 0.00 | 0.00 | 9,960.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 0.00 | 0.00 | 10,060.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,363.5 | 0.00 | 0.00 | 10,124.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Third Bone Spring Ss.** | | | | | | | | | |
| 12,400.0 | 0.00 | 0.00 | 10,160.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 0.00 | 0.00 | 10,260.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,588.5 | 0.00 | 0.00 | 10,349.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Third Bone Spring Ss.- Red Hills** | | | | | | | | | |
| 12,600.0 | 0.00 | 0.00 | 10,360.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,673.5 | 0.00 | 0.00 | 10,434.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Wolfcamp Shale** | | | | | | | | | |
| 12,700.0 | 0.00 | 0.00 | 10,460.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,713.5 | 0.00 | 0.00 | 10,474.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Wolfcamp X Ss.** | | | | | | | | | |
| 12,800.0 | 0.00 | 0.00 | 10,560.5 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,808.5 | 0.00 | 0.00 | 10,569.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Wolfcamp Y Ss.** | | | | | | | | | |
| 12,843.5 | 0.00 | 0.00 | 10,604.0 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| **Wolfcamp A** | | | | | | | | | |
| 12,877.3 | 0.00 | 0.00 | 10,637.8 | -4,532.1 | 1,061.2 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 1.82 | 89.83 | 10,660.5 | -4,532.1 | 1,061.6 | 1,048.1 | 8.00 | 8.00 | 0.00 |
| 12,950.0 | 5.82 | 89.83 | 10,710.4 | -4,532.1 | 1,064.9 | 1,051.4 | 8.00 | 8.00 | 0.00 |
| 13,000.0 | 9.82 | 89.83 | 10,759.9 | -4,532.1 | 1,071.7 | 1,058.2 | 8.00 | 8.00 | 0.00 |
| 13,050.0 | 13.82 | 89.83 | 10,808.9 | -4,532.0 | 1,081.9 | 1,068.5 | 8.00 | 8.00 | 0.00 |
| 13,100.0 | 17.82 | 89.83 | 10,857.0 | -4,532.0 | 1,095.6 | 1,082.1 | 8.00 | 8.00 | 0.00 |
| 13,150.0 | 21.82 | 89.83 | 10,904.0 | -4,531.9 | 1,112.5 | 1,099.1 | 8.00 | 8.00 | 0.00 |
| 13,193.7 | 25.31 | 89.83 | 10,944.0 | -4,531.9 | 1,130.0 | 1,116.5 | 8.00 | 8.00 | 0.00 |
| **Wolfcamp D** | | | | | | | | | |
| 13,200.0 | 25.82 | 89.83 | 10,949.7 | -4,531.9 | 1,132.7 | 1,119.2 | 8.00 | 8.00 | 0.00 |
| 13,250.0 | 29.82 | 89.83 | 10,993.9 | -4,531.8 | 1,156.0 | 1,142.6 | 8.00 | 8.00 | 0.00 |
| 13,300.0 | 33.82 | 89.83 | 11,036.4 | -4,531.7 | 1,182.4 | 1,168.9 | 8.00 | 8.00 | 0.00 |
| 13,321.4 | 35.53 | 89.83 | 11,054.0 | -4,531.7 | 1,194.5 | 1,181.1 | 8.00 | 8.00 | 0.00 |
| **Wolfcamp F** | | | | | | | | | |
| 13,350.0 | 37.82 | 89.83 | 11,077.0 | -4,531.7 | 1,211.6 | 1,198.2 | 8.00 | 8.00 | 0.00 |
| 13,400.0 | 41.82 | 89.83 | 11,115.3 | -4,531.6 | 1,243.6 | 1,230.2 | 8.00 | 8.00 | 0.00 |
| 13,445.9 | 45.49 | 89.83 | 11,148.5 | -4,531.5 | 1,275.3 | 1,261.9 | 8.00 | 8.00 | 0.00 |
| **FTP_115H** | | | | | | | | | |
| 13,450.0 | 45.82 | 89.83 | 11,151.4 | -4,531.5 | 1,278.3 | 1,264.8 | 8.00 | 8.00 | 0.00 |
| 13,500.0 | 49.82 | 89.83 | 11,185.0 | -4,531.3 | 1,315.3 | 1,301.9 | 8.00 | 8.00 | 0.00 |
| 13,550.0 | 53.82 | 89.83 | 11,215.9 | -4,531.2 | 1,354.6 | 1,341.1 | 8.00 | 8.00 | 0.00 |
| 13,600.0 | 57.82 | 89.83 | 11,244.0 | -4,531.1 | 1,396.0 | 1,382.5 | 8.00 | 8.00 | 0.00 |
| 13,600.1 | 57.82 | 89.83 | 11,244.0 | -4,531.1 | 1,396.0 | 1,382.6 | 0.00 | 0.00 | 0.00 |
| **LWR Wolfcamp** | | | | | | | | | |
| 13,650.0 | 61.82 | 89.83 | 11,269.1 | -4,531.0 | 1,439.2 | 1,425.7 | 8.01 | 8.01 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 13,700.0 | 65.82 | 89.83 | 11,291.2 | -4,530.8 | 1,484.0 | 1,470.6 | 8.00 | 8.00 | 0.00 |
| 13,750.0 | 69.82 | 89.83 | 11,310.0 | -4,530.7 | 1,530.3 | 1,516.9 | 8.00 | 8.00 | 0.00 |
| 13,800.0 | 73.82 | 89.83 | 11,325.6 | -4,530.6 | 1,577.8 | 1,564.4 | 8.00 | 8.00 | 0.00 |
| 13,850.0 | 77.82 | 89.83 | 11,337.9 | -4,530.4 | 1,626.3 | 1,612.8 | 8.00 | 8.00 | 0.00 |
| 13,900.0 | 81.82 | 89.83 | 11,346.7 | -4,530.3 | 1,675.5 | 1,662.0 | 8.00 | 8.00 | 0.00 |
| 13,950.0 | 85.82 | 89.83 | 11,352.1 | -4,530.1 | 1,725.2 | 1,711.7 | 8.00 | 8.00 | 0.00 |
| 14,002.3 | 90.00 | 89.83 | 11,354.0 | -4,530.0 | 1,777.4 | 1,763.9 | 8.00 | 8.00 | 0.00 |
| **Landing Point** | | | | | | | | | |
| 14,100.0 | 90.00 | 89.83 | 11,354.0 | -4,529.7 | 1,875.1 | 1,861.7 | 0.00 | 0.00 | 0.00 |
| 14,200.0 | 90.00 | 89.83 | 11,354.0 | -4,529.4 | 1,975.1 | 1,961.7 | 0.00 | 0.00 | 0.00 |
| 14,300.0 | 90.00 | 89.83 | 11,354.0 | -4,529.1 | 2,075.1 | 2,061.7 | 0.00 | 0.00 | 0.00 |
| 14,400.0 | 90.00 | 89.83 | 11,354.0 | -4,528.8 | 2,175.1 | 2,161.7 | 0.00 | 0.00 | 0.00 |
| 14,500.0 | 90.00 | 89.83 | 11,354.0 | -4,528.5 | 2,275.1 | 2,261.7 | 0.00 | 0.00 | 0.00 |
| 14,600.0 | 90.00 | 89.83 | 11,354.0 | -4,528.2 | 2,375.1 | 2,361.7 | 0.00 | 0.00 | 0.00 |
| 14,700.0 | 90.00 | 89.83 | 11,354.0 | -4,527.9 | 2,475.1 | 2,461.7 | 0.00 | 0.00 | 0.00 |
| 14,800.0 | 90.00 | 89.83 | 11,354.0 | -4,527.6 | 2,575.1 | 2,561.7 | 0.00 | 0.00 | 0.00 |
| 14,900.0 | 90.00 | 89.83 | 11,354.0 | -4,527.3 | 2,675.1 | 2,661.7 | 0.00 | 0.00 | 0.00 |
| 15,000.0 | 90.00 | 89.83 | 11,354.0 | -4,527.0 | 2,775.1 | 2,761.7 | 0.00 | 0.00 | 0.00 |
| 15,100.0 | 90.00 | 89.83 | 11,354.0 | -4,526.7 | 2,875.1 | 2,861.7 | 0.00 | 0.00 | 0.00 |
| 15,200.0 | 90.00 | 89.83 | 11,354.0 | -4,526.4 | 2,975.1 | 2,961.7 | 0.00 | 0.00 | 0.00 |
| 15,300.0 | 90.00 | 89.83 | 11,354.0 | -4,526.1 | 3,075.1 | 3,061.7 | 0.00 | 0.00 | 0.00 |
| 15,400.0 | 90.00 | 89.83 | 11,354.0 | -4,525.8 | 3,175.1 | 3,161.7 | 0.00 | 0.00 | 0.00 |
| 15,500.0 | 90.00 | 89.83 | 11,354.0 | -4,525.5 | 3,275.1 | 3,261.7 | 0.00 | 0.00 | 0.00 |
| 15,600.0 | 90.00 | 89.83 | 11,354.0 | -4,525.2 | 3,375.1 | 3,361.7 | 0.00 | 0.00 | 0.00 |
| 15,700.0 | 90.00 | 89.83 | 11,354.0 | -4,524.9 | 3,475.1 | 3,461.7 | 0.00 | 0.00 | 0.00 |
| 15,800.0 | 90.00 | 89.83 | 11,354.0 | -4,524.6 | 3,575.1 | 3,561.7 | 0.00 | 0.00 | 0.00 |
| 15,900.0 | 90.00 | 89.83 | 11,354.0 | -4,524.3 | 3,675.1 | 3,661.7 | 0.00 | 0.00 | 0.00 |
| 16,000.0 | 90.00 | 89.83 | 11,354.0 | -4,524.0 | 3,775.1 | 3,761.7 | 0.00 | 0.00 | 0.00 |
| 16,100.0 | 90.00 | 89.83 | 11,354.0 | -4,523.8 | 3,875.1 | 3,861.7 | 0.00 | 0.00 | 0.00 |
| 16,200.0 | 90.00 | 89.83 | 11,354.0 | -4,523.5 | 3,975.1 | 3,961.7 | 0.00 | 0.00 | 0.00 |
| 16,300.0 | 90.00 | 89.83 | 11,354.0 | -4,523.2 | 4,075.1 | 4,061.7 | 0.00 | 0.00 | 0.00 |
| 16,400.0 | 90.00 | 89.83 | 11,354.0 | -4,522.9 | 4,175.1 | 4,161.7 | 0.00 | 0.00 | 0.00 |
| 16,500.0 | 90.00 | 89.83 | 11,354.0 | -4,522.6 | 4,275.1 | 4,261.7 | 0.00 | 0.00 | 0.00 |
| 16,600.0 | 90.00 | 89.83 | 11,354.0 | -4,522.3 | 4,375.1 | 4,361.7 | 0.00 | 0.00 | 0.00 |
| 16,700.0 | 90.00 | 89.83 | 11,354.0 | -4,522.0 | 4,475.1 | 4,461.7 | 0.00 | 0.00 | 0.00 |
| 16,800.0 | 90.00 | 89.83 | 11,354.0 | -4,521.7 | 4,575.1 | 4,561.7 | 0.00 | 0.00 | 0.00 |
| 16,900.0 | 90.00 | 89.83 | 11,354.0 | -4,521.4 | 4,675.1 | 4,661.7 | 0.00 | 0.00 | 0.00 |
| 17,000.0 | 90.00 | 89.83 | 11,354.0 | -4,521.1 | 4,775.1 | 4,761.7 | 0.00 | 0.00 | 0.00 |
| 17,100.0 | 90.00 | 89.83 | 11,354.0 | -4,520.8 | 4,875.1 | 4,861.7 | 0.00 | 0.00 | 0.00 |
| 17,200.0 | 90.00 | 89.83 | 11,354.0 | -4,520.5 | 4,975.1 | 4,961.7 | 0.00 | 0.00 | 0.00 |
| 17,300.0 | 90.00 | 89.83 | 11,354.0 | -4,520.2 | 5,075.1 | 5,061.7 | 0.00 | 0.00 | 0.00 |
| 17,400.0 | 90.00 | 89.83 | 11,354.0 | -4,519.9 | 5,175.1 | 5,161.7 | 0.00 | 0.00 | 0.00 |
| 17,500.0 | 90.00 | 89.83 | 11,354.0 | -4,519.6 | 5,275.1 | 5,261.7 | 0.00 | 0.00 | 0.00 |
| 17,600.0 | 90.00 | 89.83 | 11,354.0 | -4,519.3 | 5,375.1 | 5,361.7 | 0.00 | 0.00 | 0.00 |
| 17,700.0 | 90.00 | 89.83 | 11,354.0 | -4,519.0 | 5,475.1 | 5,461.7 | 0.00 | 0.00 | 0.00 |
| 17,800.0 | 90.00 | 89.83 | 11,354.0 | -4,518.7 | 5,575.1 | 5,561.7 | 0.00 | 0.00 | 0.00 |
| 17,900.0 | 90.00 | 89.83 | 11,354.0 | -4,518.4 | 5,675.1 | 5,661.7 | 0.00 | 0.00 | 0.00 |
| 18,000.0 | 90.00 | 89.83 | 11,354.0 | -4,518.1 | 5,775.1 | 5,761.7 | 0.00 | 0.00 | 0.00 |
| 18,100.0 | 90.00 | 89.83 | 11,354.0 | -4,517.8 | 5,875.1 | 5,861.7 | 0.00 | 0.00 | 0.00 |
| 18,200.0 | 90.00 | 89.83 | 11,354.0 | -4,517.5 | 5,975.1 | 5,961.7 | 0.00 | 0.00 | 0.00 |
| 18,300.0 | 90.00 | 89.83 | 11,354.0 | -4,517.2 | 6,075.1 | 6,061.7 | 0.00 | 0.00 | 0.00 |
| 18,400.0 | 90.00 | 89.83 | 11,354.0 | -4,516.9 | 6,175.1 | 6,161.7 | 0.00 | 0.00 | 0.00 |
| 18,500.0 | 90.00 | 89.83 | 11,354.0 | -4,516.6 | 6,275.1 | 6,261.7 | 0.00 | 0.00 | 0.00 |
| 18,600.0 | 90.00 | 89.83 | 11,354.0 | -4,516.3 | 6,375.1 | 6,361.7 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 18,700.0 | 90.00 | 89.83 | 11,354.0 | -4,516.0 | 6,475.1 | 6,461.7 | 0.00 | 0.00 | 0.00 |
| 18,800.0 | 90.00 | 89.83 | 11,354.0 | -4,515.7 | 6,575.1 | 6,561.7 | 0.00 | 0.00 | 0.00 |
| 18,900.0 | 90.00 | 89.83 | 11,354.0 | -4,515.4 | 6,675.1 | 6,661.7 | 0.00 | 0.00 | 0.00 |
| 19,000.0 | 90.00 | 89.83 | 11,354.0 | -4,515.1 | 6,775.1 | 6,761.7 | 0.00 | 0.00 | 0.00 |
| 19,100.0 | 90.00 | 89.83 | 11,354.0 | -4,514.8 | 6,875.1 | 6,861.7 | 0.00 | 0.00 | 0.00 |
| 19,200.0 | 90.00 | 89.83 | 11,354.0 | -4,514.6 | 6,975.1 | 6,961.7 | 0.00 | 0.00 | 0.00 |
| 19,300.0 | 90.00 | 89.83 | 11,354.0 | -4,514.3 | 7,075.1 | 7,061.7 | 0.00 | 0.00 | 0.00 |
| 19,400.0 | 90.00 | 89.83 | 11,354.0 | -4,514.0 | 7,175.1 | 7,161.7 | 0.00 | 0.00 | 0.00 |
| 19,500.0 | 90.00 | 89.83 | 11,354.0 | -4,513.7 | 7,275.1 | 7,261.7 | 0.00 | 0.00 | 0.00 |
| 19,600.0 | 90.00 | 89.83 | 11,354.0 | -4,513.4 | 7,375.1 | 7,361.7 | 0.00 | 0.00 | 0.00 |
| 19,700.0 | 90.00 | 89.83 | 11,354.0 | -4,513.1 | 7,475.1 | 7,461.7 | 0.00 | 0.00 | 0.00 |
| 19,800.0 | 90.00 | 89.83 | 11,354.0 | -4,512.8 | 7,575.1 | 7,561.7 | 0.00 | 0.00 | 0.00 |
| 19,900.0 | 90.00 | 89.83 | 11,354.0 | -4,512.5 | 7,675.1 | 7,661.7 | 0.00 | 0.00 | 0.00 |
| 20,000.0 | 90.00 | 89.83 | 11,354.0 | -4,512.2 | 7,775.1 | 7,761.7 | 0.00 | 0.00 | 0.00 |
| 20,100.0 | 90.00 | 89.83 | 11,354.0 | -4,511.9 | 7,875.1 | 7,861.7 | 0.00 | 0.00 | 0.00 |
| 20,200.0 | 90.00 | 89.83 | 11,354.0 | -4,511.6 | 7,975.1 | 7,961.7 | 0.00 | 0.00 | 0.00 |
| 20,300.0 | 90.00 | 89.83 | 11,354.0 | -4,511.3 | 8,075.1 | 8,061.7 | 0.00 | 0.00 | 0.00 |
| 20,400.0 | 90.00 | 89.83 | 11,354.0 | -4,511.0 | 8,175.1 | 8,161.7 | 0.00 | 0.00 | 0.00 |
| 20,500.0 | 90.00 | 89.83 | 11,354.0 | -4,510.7 | 8,275.1 | 8,261.7 | 0.00 | 0.00 | 0.00 |
| 20,600.0 | 90.00 | 89.83 | 11,354.0 | -4,510.4 | 8,375.1 | 8,361.7 | 0.00 | 0.00 | 0.00 |
| 20,700.0 | 90.00 | 89.83 | 11,354.0 | -4,510.1 | 8,475.1 | 8,461.7 | 0.00 | 0.00 | 0.00 |
| 20,800.0 | 90.00 | 89.83 | 11,354.0 | -4,509.8 | 8,575.1 | 8,561.7 | 0.00 | 0.00 | 0.00 |
| 20,900.0 | 90.00 | 89.83 | 11,354.0 | -4,509.5 | 8,675.1 | 8,661.7 | 0.00 | 0.00 | 0.00 |
| 21,000.0 | 90.00 | 89.83 | 11,354.0 | -4,509.2 | 8,775.1 | 8,761.7 | 0.00 | 0.00 | 0.00 |
| 21,100.0 | 90.00 | 89.83 | 11,354.0 | -4,508.9 | 8,875.1 | 8,861.7 | 0.00 | 0.00 | 0.00 |
| 21,200.0 | 90.00 | 89.83 | 11,354.0 | -4,508.6 | 8,975.1 | 8,961.7 | 0.00 | 0.00 | 0.00 |
| 21,300.0 | 90.00 | 89.83 | 11,354.0 | -4,508.3 | 9,075.1 | 9,061.7 | 0.00 | 0.00 | 0.00 |
| 21,400.0 | 90.00 | 89.83 | 11,354.0 | -4,508.0 | 9,175.1 | 9,161.7 | 0.00 | 0.00 | 0.00 |
| 21,500.0 | 90.00 | 89.83 | 11,354.0 | -4,507.7 | 9,275.1 | 9,261.7 | 0.00 | 0.00 | 0.00 |
| 21,600.0 | 90.00 | 89.83 | 11,354.0 | -4,507.4 | 9,375.1 | 9,361.7 | 0.00 | 0.00 | 0.00 |
| 21,700.0 | 90.00 | 89.83 | 11,354.0 | -4,507.1 | 9,475.1 | 9,461.7 | 0.00 | 0.00 | 0.00 |
| 21,800.0 | 90.00 | 89.83 | 11,354.0 | -4,506.8 | 9,575.1 | 9,561.7 | 0.00 | 0.00 | 0.00 |
| 21,900.0 | 90.00 | 89.83 | 11,354.0 | -4,506.5 | 9,675.1 | 9,661.7 | 0.00 | 0.00 | 0.00 |
| 22,000.0 | 90.00 | 89.83 | 11,354.0 | -4,506.2 | 9,775.1 | 9,761.7 | 0.00 | 0.00 | 0.00 |
| 22,100.0 | 90.00 | 89.83 | 11,354.0 | -4,505.9 | 9,875.1 | 9,861.7 | 0.00 | 0.00 | 0.00 |
| 22,200.0 | 90.00 | 89.83 | 11,354.0 | -4,505.7 | 9,975.1 | 9,961.7 | 0.00 | 0.00 | 0.00 |
| 22,300.0 | 90.00 | 89.83 | 11,354.0 | -4,505.4 | 10,075.1 | 10,061.7 | 0.00 | 0.00 | 0.00 |
| 22,400.0 | 90.00 | 89.83 | 11,354.0 | -4,505.1 | 10,175.1 | 10,161.7 | 0.00 | 0.00 | 0.00 |
| 22,500.0 | 90.00 | 89.83 | 11,354.0 | -4,504.8 | 10,275.1 | 10,261.7 | 0.00 | 0.00 | 0.00 |
| 22,600.0 | 90.00 | 89.83 | 11,354.0 | -4,504.5 | 10,375.1 | 10,361.7 | 0.00 | 0.00 | 0.00 |
| 22,700.0 | 90.00 | 89.83 | 11,354.0 | -4,504.2 | 10,475.1 | 10,461.7 | 0.00 | 0.00 | 0.00 |
| 22,800.0 | 90.00 | 89.83 | 11,354.0 | -4,503.9 | 10,575.1 | 10,561.7 | 0.00 | 0.00 | 0.00 |
| 22,900.0 | 90.00 | 89.83 | 11,354.0 | -4,503.6 | 10,675.1 | 10,661.7 | 0.00 | 0.00 | 0.00 |
| 23,000.0 | 90.00 | 89.83 | 11,354.0 | -4,503.3 | 10,775.1 | 10,761.7 | 0.00 | 0.00 | 0.00 |
| 23,100.0 | 90.00 | 89.83 | 11,354.0 | -4,503.0 | 10,875.1 | 10,861.7 | 0.00 | 0.00 | 0.00 |
| 23,200.0 | 90.00 | 89.83 | 11,354.0 | -4,502.7 | 10,975.1 | 10,961.7 | 0.00 | 0.00 | 0.00 |
| 23,300.0 | 90.00 | 89.83 | 11,354.0 | -4,502.4 | 11,075.1 | 11,061.7 | 0.00 | 0.00 | 0.00 |
| 23,400.0 | 90.00 | 89.83 | 11,354.0 | -4,502.1 | 11,175.1 | 11,161.7 | 0.00 | 0.00 | 0.00 |
| 23,500.0 | 90.00 | 89.83 | 11,354.0 | -4,501.8 | 11,275.1 | 11,261.7 | 0.00 | 0.00 | 0.00 |
| 23,600.0 | 90.00 | 89.83 | 11,354.0 | -4,501.5 | 11,375.1 | 11,361.7 | 0.00 | 0.00 | 0.00 |
| 23,700.0 | 90.00 | 89.83 | 11,354.0 | -4,501.2 | 11,475.1 | 11,461.7 | 0.00 | 0.00 | 0.00 |
| 23,800.0 | 90.00 | 89.83 | 11,354.0 | -4,500.9 | 11,575.1 | 11,561.7 | 0.00 | 0.00 | 0.00 |
| 23,900.0 | 90.00 | 89.83 | 11,354.0 | -4,500.6 | 11,675.1 | 11,661.7 | 0.00 | 0.00 | 0.00 |
| 24,000.0 | 90.00 | 89.83 | 11,354.0 | -4,500.3 | 11,775.1 | 11,761.7 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 24,100.0 | 90.00 | 89.83 | 11,354.0 | -4,500.0 | 11,875.1 | 11,861.7 | 0.00 | 0.00 | 0.00 |
| 24,200.0 | 90.00 | 89.83 | 11,354.0 | -4,499.7 | 11,975.1 | 11,961.7 | 0.00 | 0.00 | 0.00 |
| 24,300.0 | 90.00 | 89.83 | 11,354.0 | -4,499.4 | 12,075.1 | 12,061.7 | 0.00 | 0.00 | 0.00 |
| 24,400.0 | 90.00 | 89.83 | 11,354.0 | -4,499.1 | 12,175.1 | 12,161.7 | 0.00 | 0.00 | 0.00 |
| 24,500.0 | 90.00 | 89.83 | 11,354.0 | -4,498.8 | 12,275.1 | 12,261.7 | 0.00 | 0.00 | 0.00 |
| 24,600.0 | 90.00 | 89.83 | 11,354.0 | -4,498.5 | 12,375.1 | 12,361.7 | 0.00 | 0.00 | 0.00 |
| 24,700.0 | 90.00 | 89.83 | 11,354.0 | -4,498.2 | 12,475.1 | 12,461.7 | 0.00 | 0.00 | 0.00 |
| 24,800.0 | 90.00 | 89.83 | 11,354.0 | -4,497.9 | 12,575.1 | 12,561.7 | 0.00 | 0.00 | 0.00 |
| 24,900.0 | 90.00 | 89.83 | 11,354.0 | -4,497.6 | 12,675.1 | 12,661.7 | 0.00 | 0.00 | 0.00 |
| 25,000.0 | 90.00 | 89.83 | 11,354.0 | -4,497.3 | 12,775.1 | 12,761.7 | 0.00 | 0.00 | 0.00 |
| 25,100.0 | 90.00 | 89.83 | 11,354.0 | -4,497.0 | 12,875.1 | 12,861.7 | 0.00 | 0.00 | 0.00 |
| 25,200.0 | 90.00 | 89.83 | 11,354.0 | -4,496.8 | 12,975.1 | 12,961.7 | 0.00 | 0.00 | 0.00 |
| 25,300.0 | 90.00 | 89.83 | 11,354.0 | -4,496.5 | 13,075.1 | 13,061.7 | 0.00 | 0.00 | 0.00 |
| 25,400.0 | 90.00 | 89.83 | 11,354.0 | -4,496.2 | 13,175.1 | 13,161.7 | 0.00 | 0.00 | 0.00 |
| 25,500.0 | 90.00 | 89.83 | 11,354.0 | -4,495.9 | 13,275.1 | 13,261.7 | 0.00 | 0.00 | 0.00 |
| 25,600.0 | 90.00 | 89.83 | 11,354.0 | -4,495.6 | 13,375.1 | 13,361.7 | 0.00 | 0.00 | 0.00 |
| 25,700.0 | 90.00 | 89.83 | 11,354.0 | -4,495.3 | 13,475.1 | 13,461.7 | 0.00 | 0.00 | 0.00 |
| 25,800.0 | 90.00 | 89.83 | 11,354.0 | -4,495.0 | 13,575.1 | 13,561.7 | 0.00 | 0.00 | 0.00 |
| 25,900.0 | 90.00 | 89.83 | 11,354.0 | -4,494.7 | 13,675.1 | 13,661.7 | 0.00 | 0.00 | 0.00 |
| 26,000.0 | 90.00 | 89.83 | 11,354.0 | -4,494.4 | 13,775.1 | 13,761.7 | 0.00 | 0.00 | 0.00 |
| 26,100.0 | 90.00 | 89.83 | 11,354.0 | -4,494.1 | 13,875.1 | 13,861.7 | 0.00 | 0.00 | 0.00 |
| 26,200.0 | 90.00 | 89.83 | 11,354.0 | -4,493.8 | 13,975.1 | 13,961.7 | 0.00 | 0.00 | 0.00 |
| 26,300.0 | 90.00 | 89.83 | 11,354.0 | -4,493.5 | 14,075.1 | 14,061.7 | 0.00 | 0.00 | 0.00 |
| 26,400.0 | 90.00 | 89.83 | 11,354.0 | -4,493.2 | 14,175.1 | 14,161.7 | 0.00 | 0.00 | 0.00 |
| 26,500.0 | 90.00 | 89.83 | 11,354.0 | -4,492.9 | 14,275.1 | 14,261.7 | 0.00 | 0.00 | 0.00 |
| 26,600.0 | 90.00 | 89.83 | 11,354.0 | -4,492.6 | 14,375.1 | 14,361.7 | 0.00 | 0.00 | 0.00 |
| 26,700.0 | 90.00 | 89.83 | 11,354.0 | -4,492.3 | 14,475.1 | 14,461.7 | 0.00 | 0.00 | 0.00 |
| 26,800.0 | 90.00 | 89.83 | 11,354.0 | -4,492.0 | 14,575.1 | 14,561.7 | 0.00 | 0.00 | 0.00 |
| 26,900.0 | 90.00 | 89.83 | 11,354.0 | -4,491.7 | 14,675.1 | 14,661.7 | 0.00 | 0.00 | 0.00 |
| 27,000.0 | 90.00 | 89.83 | 11,354.0 | -4,491.4 | 14,775.1 | 14,761.7 | 0.00 | 0.00 | 0.00 |
| 27,100.0 | 90.00 | 89.83 | 11,354.0 | -4,491.1 | 14,875.1 | 14,861.7 | 0.00 | 0.00 | 0.00 |
| 27,200.0 | 90.00 | 89.83 | 11,354.0 | -4,490.8 | 14,975.1 | 14,961.7 | 0.00 | 0.00 | 0.00 |
| 27,300.0 | 90.00 | 89.83 | 11,354.0 | -4,490.5 | 15,075.1 | 15,061.7 | 0.00 | 0.00 | 0.00 |
| 27,400.0 | 90.00 | 89.83 | 11,354.0 | -4,490.2 | 15,175.1 | 15,161.7 | 0.00 | 0.00 | 0.00 |
| 27,500.0 | 90.00 | 89.83 | 11,354.0 | -4,489.9 | 15,275.1 | 15,261.7 | 0.00 | 0.00 | 0.00 |
| 27,600.0 | 90.00 | 89.83 | 11,354.0 | -4,489.6 | 15,375.1 | 15,361.7 | 0.00 | 0.00 | 0.00 |
| 27,700.0 | 90.00 | 89.83 | 11,354.0 | -4,489.3 | 15,475.1 | 15,461.7 | 0.00 | 0.00 | 0.00 |
| 27,800.0 | 90.00 | 89.83 | 11,354.0 | -4,489.0 | 15,575.1 | 15,561.7 | 0.00 | 0.00 | 0.00 |
| 27,900.0 | 90.00 | 89.83 | 11,354.0 | -4,488.7 | 15,675.1 | 15,661.7 | 0.00 | 0.00 | 0.00 |
| 28,000.0 | 90.00 | 89.83 | 11,354.0 | -4,488.4 | 15,775.1 | 15,761.7 | 0.00 | 0.00 | 0.00 |
| 28,100.0 | 90.00 | 89.83 | 11,354.0 | -4,488.1 | 15,875.1 | 15,861.7 | 0.00 | 0.00 | 0.00 |
| 28,200.0 | 90.00 | 89.83 | 11,354.0 | -4,487.8 | 15,975.1 | 15,961.7 | 0.00 | 0.00 | 0.00 |
| 28,300.0 | 90.00 | 89.83 | 11,354.0 | -4,487.6 | 16,075.1 | 16,061.7 | 0.00 | 0.00 | 0.00 |
| 28,400.0 | 90.00 | 89.83 | 11,354.0 | -4,487.3 | 16,175.1 | 16,161.7 | 0.00 | 0.00 | 0.00 |
| 28,468.3 | 90.00 | 89.83 | 11,354.0 | -4,487.1 | 16,243.4 | 16,230.0 | 0.00 | 0.00 | 0.00 |
| **LTP_115H** | | | | | | | | | |
| 28,500.0 | 90.00 | 89.83 | 11,354.0 | -4,487.0 | 16,275.1 | 16,261.7 | 0.00 | 0.00 | 0.00 |
| 28,518.3 | 90.00 | 89.83 | 11,354.0 | -4,486.9 | 16,293.4 | 16,280.0 | 0.00 | 0.00 | 0.00 |
| **BHL_115H** | | | | | | | | | |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**Design Targets**

| Target Name<br>- hit/miss target<br>- Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| SHL_115H<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 530,436.80 | 640,221.10 | 32° 27' 26.865 N | 103° 52' 43.428 W |
| BHL_115H<br>- plan misses target center by 0.5usft at 28518.3usft MD (11354.0 TVD, -4486.9 N, 16293.4 E)<br>- Point | 0.00 | 0.00 | 11,354.0 | -4,486.4 | 16,293.4 | 525,950.40 | 656,514.50 | 32° 26' 41.742 N | 103° 49' 33.517 W |
| FTP_115H<br>- plan misses target center by 296.7usft at 13445.9usft MD (11148.5 TVD, -4531.5 N, 1275.3 E)<br>- Point | 0.00 | 0.00 | 11,354.0 | -4,532.1 | 1,061.2 | 525,904.70 | 641,282.30 | 32° 26' 41.971 N | 103° 52' 31.270 W |
| LTP_115H<br>- plan misses target center by 0.5usft at 28468.3usft MD (11354.0 TVD, -4487.1 N, 16243.4 E)<br>- Point | 0.00 | 0.00 | 11,354.0 | -4,486.6 | 16,243.4 | 525,950.20 | 656,464.50 | 32° 26' 41.743 N | 103° 49' 34.100 W |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well DI 9 Arrow Fed Com 115H |
| **Company:** | Long Lead_Well Planning | **TVD Reference:** | RKB (+32) @ 3184.0usft |
| **Project:** | BEU DI 9 | **MD Reference:** | RKB (+32) @ 3184.0usft |
| **Site:** | DI 9 Arrow Fed Com 115H | **North Reference:** | Grid |
| **Well:** | DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 1 | | |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 0.0 | 0.0 | Alluvium | | | |
| 187.0 | 187.0 | Rustler | | | |
| 416.0 | 416.0 | Salado/Top of Salt | | | |
| 1,144.0 | 1,144.0 | MB 126 | | | |
| 3,194.0 | 3,194.0 | Base Salt | | | |
| 3,484.5 | 3,484.0 | Delaware/Lamar | | | |
| 3,562.0 | 3,561.0 | Bell Canyon | | | |
| 4,427.2 | 4,390.0 | Cherry Canyon | | | |
| 7,270.9 | 6,084.0 | Brushy Canyon Ss. | | | |
| 9,422.5 | 7,284.0 | Bone Spring Lm. | | | |
| 9,557.2 | 7,397.0 | Avalon Ss. | | | |
| 9,944.1 | 7,739.0 | Middle Avalon Carb. | | | |
| 10,090.2 | 7,874.0 | Lw. Avalon Sh. | | | |
| 10,254.5 | 8,029.0 | First Bone Spring Carb. | | | |
| 10,564.6 | 8,329.0 | First Bone Spring Ss. | | | |
| 11,047.4 | 8,808.0 | Second Bone Spring Carb. | | | |
| 11,308.5 | 9,069.0 | Second Bone Spring A Ss. | | | |
| 11,439.5 | 9,200.0 | Second Bone Spring A/B Carb. | | | |
| 11,461.5 | 9,222.0 | Second Bone Spring B Ss. | | | |
| 11,623.5 | 9,384.0 | Third Bone Spring Carb. | | | |
| 11,962.5 | 9,723.0 | Harkey Ss. | | | |
| 12,003.5 | 9,764.0 | Third Bone Spring Shale | | | |
| 12,363.5 | 10,124.0 | Third Bone Spring Ss. | | | |
| 12,588.5 | 10,349.0 | Third Bone Spring Ss.- Red Hills | | | |
| 12,673.5 | 10,434.0 | Wolfcamp Shale | | | |
| 12,713.5 | 10,474.0 | Wolfcamp X Ss. | | | |
| 12,808.5 | 10,569.0 | Wolfcamp Y Ss. | | | |
| 12,843.5 | 10,604.0 | Wolfcamp A | | | |
| 13,193.7 | 10,944.0 | Wolfcamp D | | | |
| 13,321.4 | 11,054.0 | Wolfcamp F | | | |
| 13,600.1 | 11,244.0 | LWR Wolfcamp | | | |
| 14,002.3 | 11,354.0 | Landing Point | | | |

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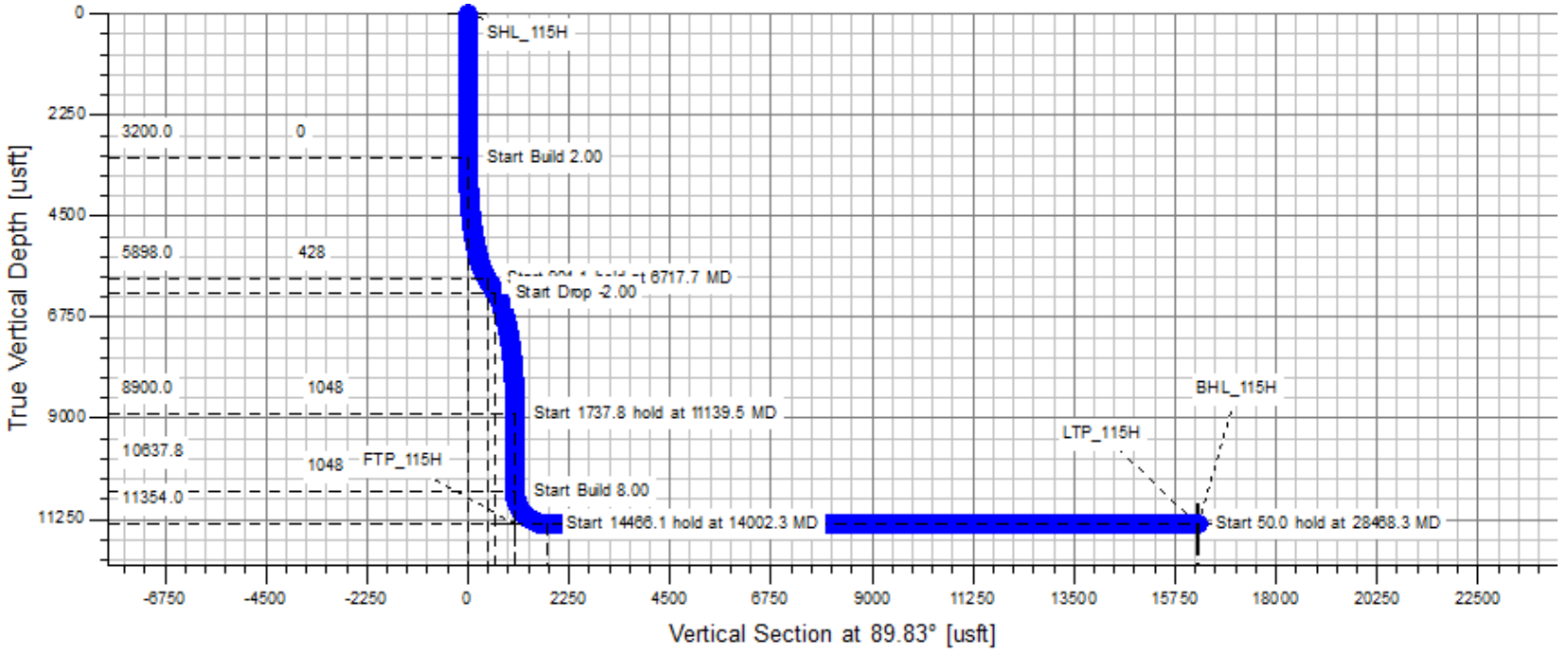
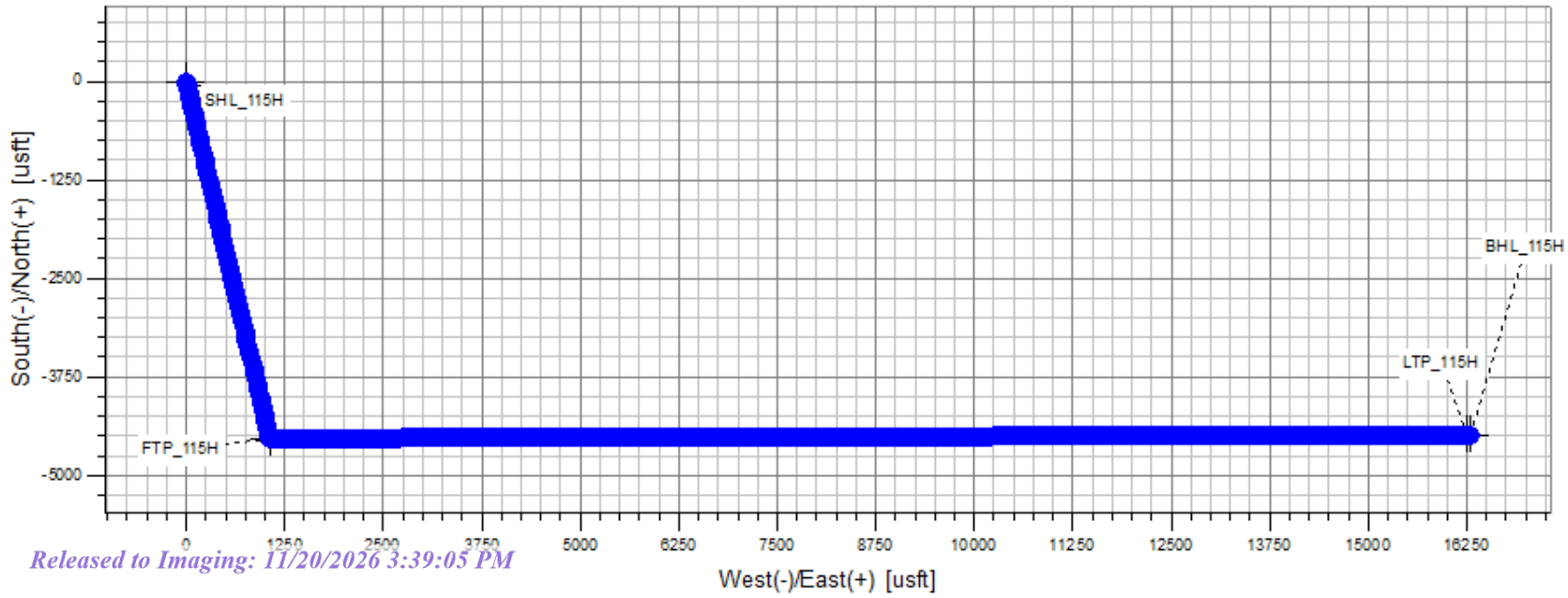
# BIG EDDY UNIT DI 9 ARROW FED COM **115H**




| Formation | TVDSS (feet) | MD TVD (feet) |
|---|---|---|
| | | |
| Alluvium | surface | surface |
| Rustler | 2,997' | 187' |
| Salado/Top of Salt | 2,768' | 416' |
| MB 126 | 2,040' | 1,144' |
| Base Salt | -10' | 3,194' |
| Delaware/Lamar | -300' | 3,484' |
| Bell Canyon | -377' | 3,561' |
| Cherry Canyon | -1,206' | 4,390' |
| Brushy Canyon Ss. | -2,900' | 6,084' |
| Bone Spring Lm. | -4,100' | 7,284' |
| Avalon Ss. | -4,213' | 7,397' |
| Middle Avalon Carb. | -4,555' | 7,739' |
| Lw. Avalon Sh. | -4,690' | 7,874' |
| First Bone Spring Carb. | -4,845' | 8,029' |
| First Bone Spring Ss. | -5,145' | 8,329' |
| Second Bone Spring Carb. | -5,624' | 8,808' |
| Second Bone Spring A Ss. | -5,885' | 9,069' |
| Second Bone Spring A/B Carb. | -6,016' | 9,200' |
| Second Bone Spring B Ss. | -6,038' | 9,222' |
| Third Bone Spring Carb. | -6,200' | 9,384' |
| Harkey Ss. | -6,539' | 9,723' |
| Third Bone Spring Shale | -6,580' | 9,764' |
| Third Bone Spring Ss. | -6,940' | 10,124' |
| Third Bone Spring Ss.- Red Hills | -7,165' | 10,349' |
| Wolfcamp Shale | -7,250' | 10,434' |
| Wolfcamp X Ss. | -7,290' | 10,474' |
| Wolfcamp Y Ss. | -7,385' | 10,569' |
| Wolfcamp A | -7,420' | 10,604' |
| Wolfcamp D | -7,760' | 10,944' |
| Wolfcamp F | -7,870' | 11,054' |
| LWR Wolfcamp | -8,060' | 11,244' |
| Landing Point | -8,170' | 11,354' |
| Strawn | -8,460' | 11,644' |

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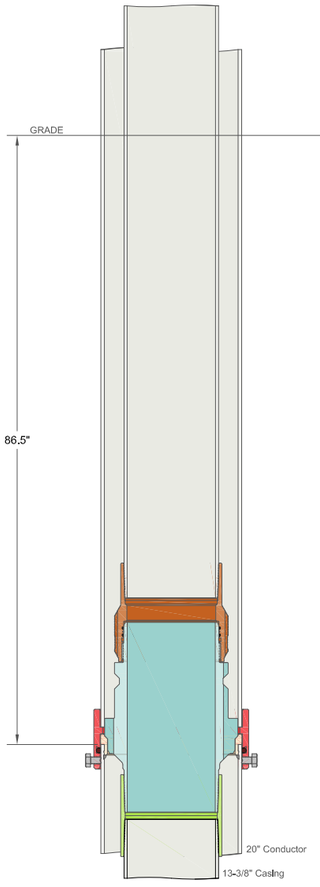


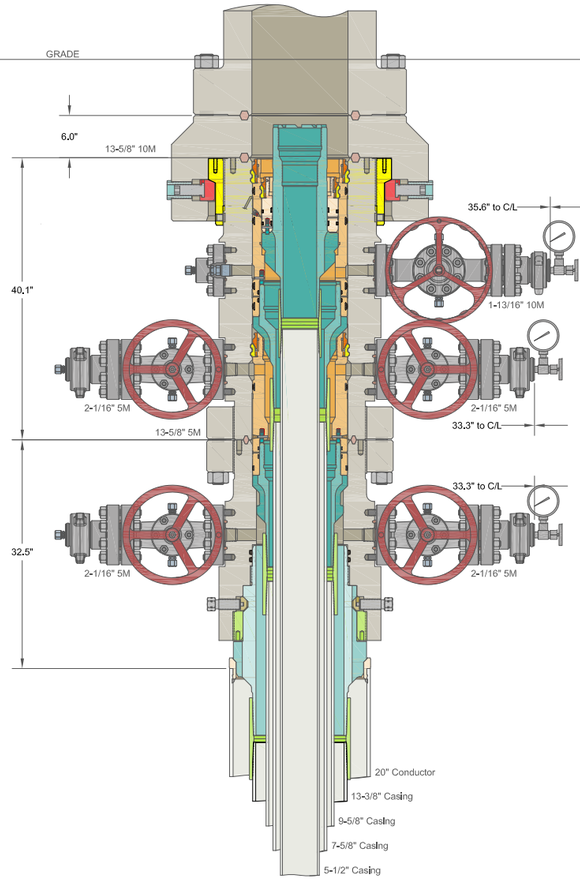


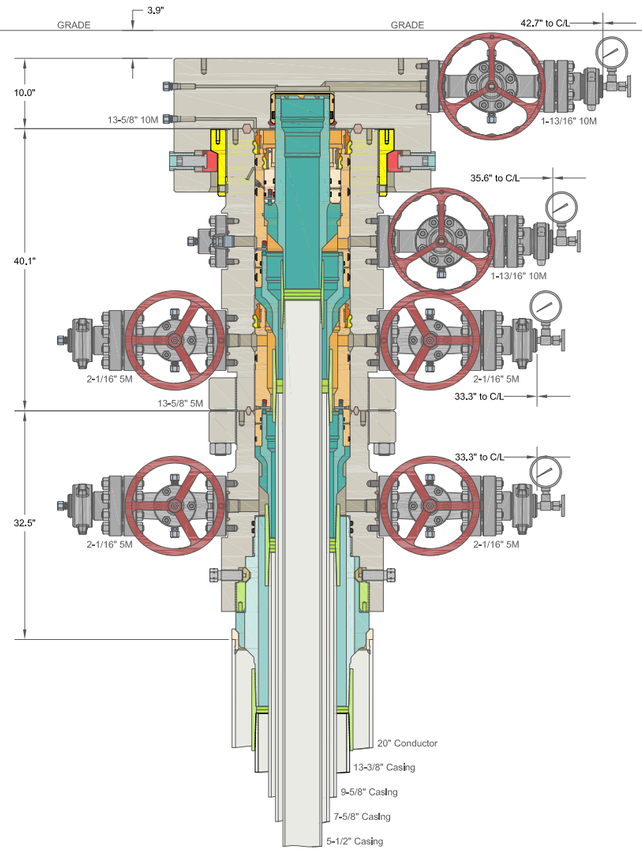


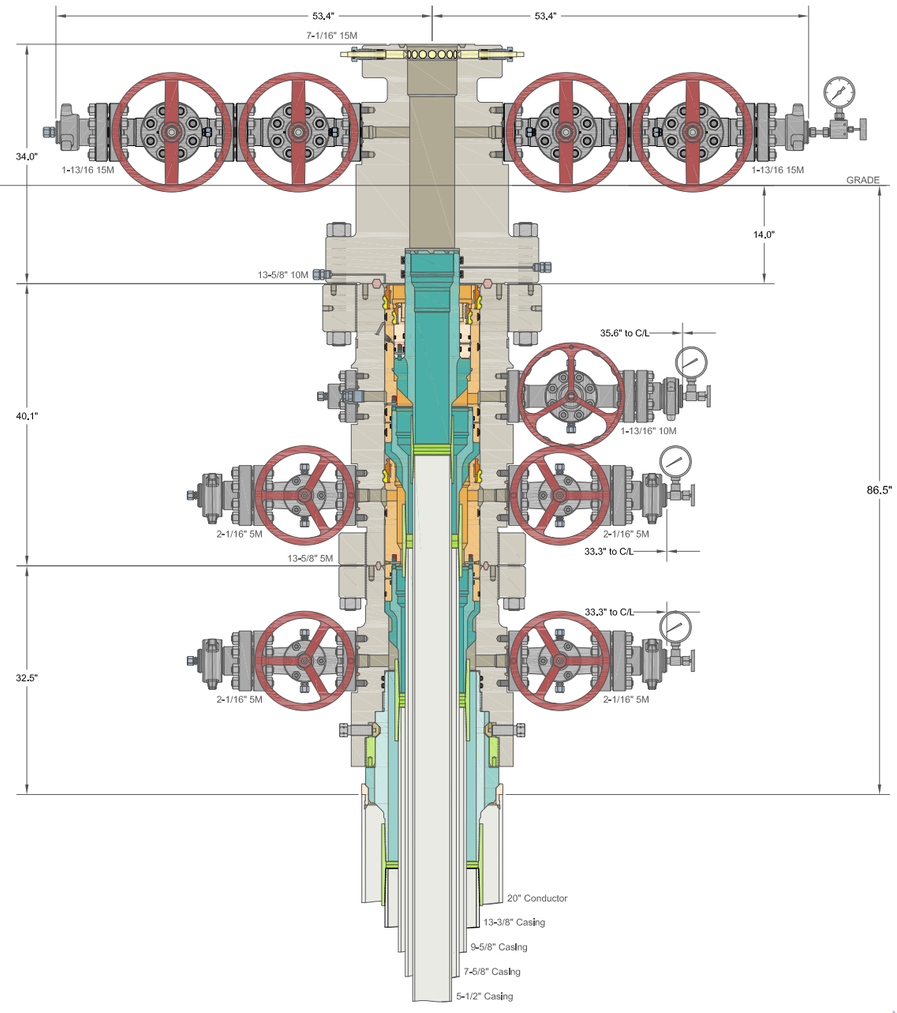


ALL DIMENSIONS APPROXIMATE

# CACTUS WELLHEAD LLC

(20") x 13-3/8" x 9-5/8" x 7-5/8" x 5-1/2" MBU-4T-CFL-R-DBLO
With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head
And Drilling & Skid Configurations

XTO ENERGY INC
DELAWARE BASIN

| | | |
|---|---|---|
| DRAWN | VJK | 31MAR22 |
| APPRV | | |

DRAWING NO. SDT-3301

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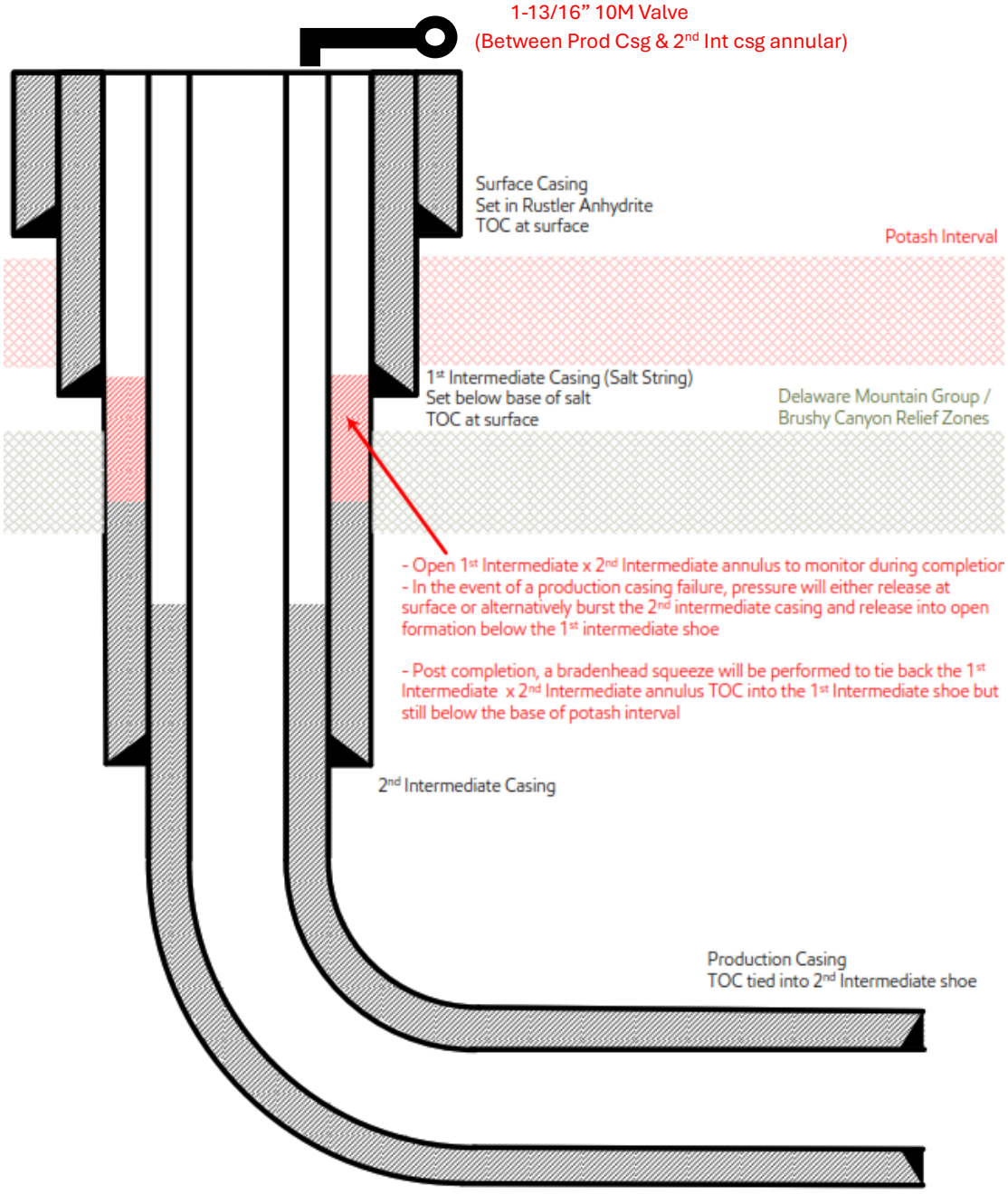
Received by OCD: 10/23/2026 1:00:07 PM

Released to Imaging: 11/20/2026 3:39:05 PM

# 4-String Design – Open 1st Int x 2nd Int Annulus (ICP 2 below relief Zone)

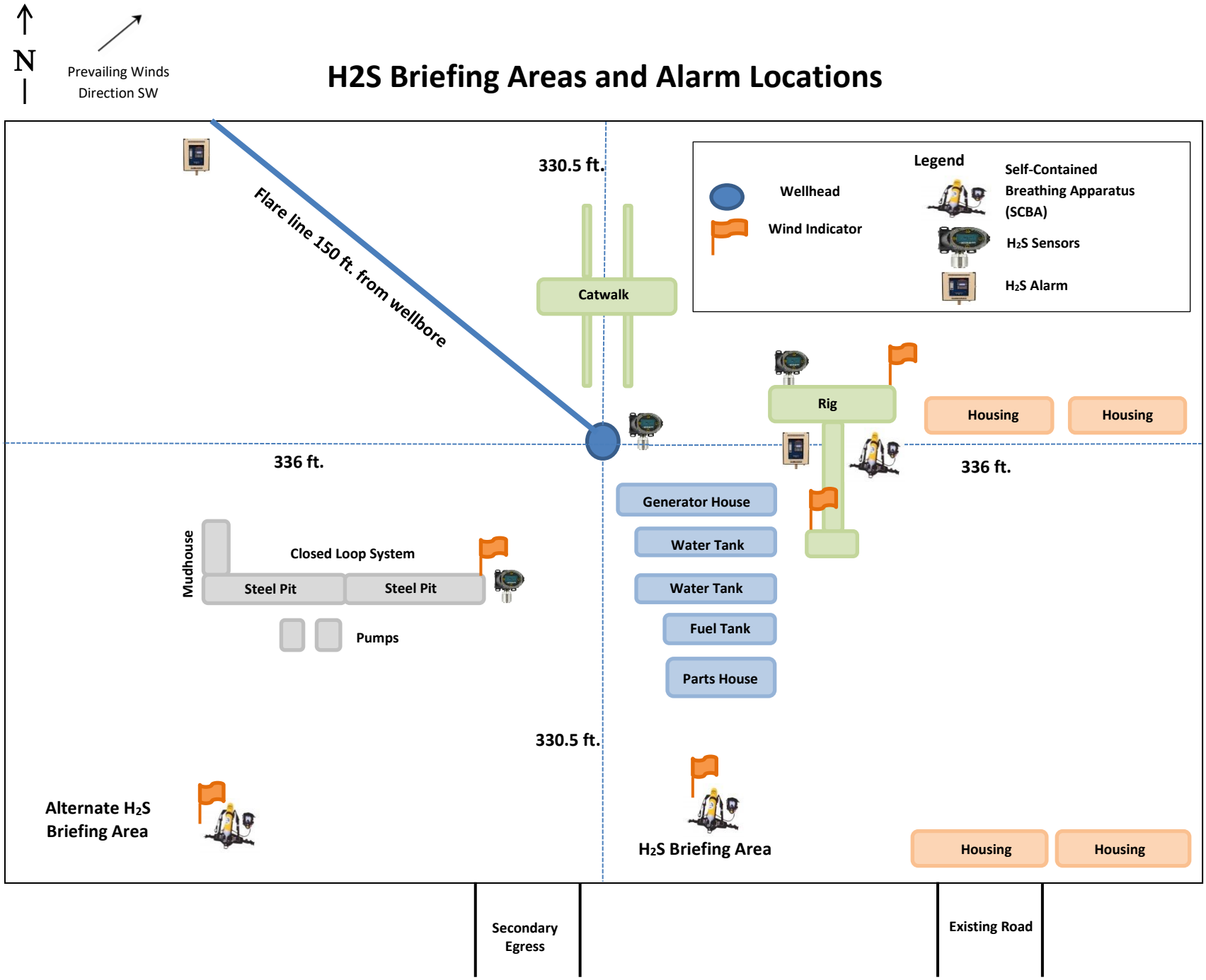



**[Figure D]** 4 String – Uncemented annulus between 1st and 2nd intermediate casing strings

Update May 2024:
XTO is aware of the R-111-Q update and will comply with these requirements including (but not limited to):

1) Alignment with KPLA requirements per schematic above, leaving open annulus open for pressure monitoring during frac and utilizing new casing that meets API standards.
2) Contingency plans in place to divert fluids away from salt interval in event of production casing failure.
3) **Intermediate 2 primary cement** job with TOC within Delaware Mountain Group with 0% excess & below the minimum 500' from intermediate 1 casing shoe.
    - **Intermediate 2 bradenhead squeeze** to be completed within 180 days after completions to tieback TOC to salt string at least 500ft but with top below Marker Bed 126.
4) Production cement to be tied back no less than 500ft inside previous casing shoe.

# H2S Briefing Areas and Alarm Locations



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

ExxonMobil
BIG EDDY UNIT DI 9 ARROW FED COM 115H
Projected TD: 28518' MD / 11354' TVD
SHL: 24' FSL & 713' FEL , Section 21, T21S, R30E
BHL: 770' FSL & 280' FEL , Section 25, T21S, R30E
Eddy County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

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

| Formation | Well Depth (TVD) | Water/Oil/Gas |
|---|---|---|
| Rustler | 187' | Water |
| Salado/Top of Salt | 416' | Water |
| MB 126 | 1144' | Water |
| Base Salt | 3194' | Water |
| Delaware/Lamar | 3484' | Water |
| Bell Canyon | 3561' | Water |
| Cherry Canyon | 4390' | Water/Oil/Gas |
| Brushy Canyon Ss. | 6084' | Water/Oil/Gas |
| Bone Spring Lm. | 7284' | Water/Oil/Gas |
| Avalon Ss. | 7397' | Water/Oil/Gas |
| Middle Avalon Carb. | 7739' | Water/Oil/Gas |
| Lw. Avalon Sh. | 7874' | Water/Oil/Gas |
| First Bone Spring Carb. | 8029' | Water/Oil/Gas |
| First Bone Spring Ss. | 8329' | Water/Oil/Gas |
| Second Bone Spring Carb. | 8808' | Water/Oil/Gas |
| Second Bone Spring A Ss. | 9069' | Water/Oil/Gas |
| Second Bone Spring A/B Carb. | 9200' | Water/Oil/Gas |
| Second Bone Spring B Ss. | 9222' | Water/Oil/Gas |
| Third Bone Spring Carb. | 9384' | Water/Oil/Gas |
| Harkey Ss. | 9723' | Water/Oil/Gas |
| Third Bone Spring Shale | 9764' | Water/Oil/Gas |
| Third Bone Spring Ss. | 10124' | Water/Oil/Gas |
| Third Bone Spring Ss.- Red Hills | 10349' | Water/Oil/Gas |
| Wolfcamp | 10434' | Water/Oil/Gas |
| Wolfcamp X Ss. | 10474' | Water/Oil/Gas |
| Wolfcamp Y Ss. | 10569' | Water/Oil/Gas |
| Wolfcamp A | 10604' | Water/Oil/Gas |
| Wolfcamp D | 10944' | Water/Oil/Gas |
| Wolfcamp F | 11054' | Water/Oil/Gas |
| Landing Point | 11354' | Water/Oil/Gas |

**Section 2 Summary:**

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

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13-3/8" inch casing at 391' and circulating cement back to surface.

**3. Primary Casing Design**

**Primary Design:**

| Hole Size (in.) | MD | Casing TVD | OD Csg | Weight | Grade | Collar | New/Used | SF Burst | SF Collapse | SF Tension |
|---|---|---|---|---|---|---|---|---|---|---|
| 17.5" | 0' – 391' | 391' | 13-3/8" | 54.5 | J55 | BTC | New | 22.84 | 13.34 | 7.20 |
| 12.25" | 0' – 3294' | 3294' | 9-5/8" | 40 | J55 | BTC | New | 3.91 | 3.60 | 3.18 |
| 8.75" | 0' – 3394' | 3394' | 7-5/8" | 29.7 | P110-ICY | Tenaris Wedge 511 | New | 6.17 | 10.01 | 2.95 |
| 8.75" | 3394' – 12727' | 10483' | 7-5/8" | 29.7 | L80-IC | Tenaris Wedge 511 | New | 1.83 | 3.84 | 2.09 |
| 6.75" | 0' – 12627' | 10383' | 5-1/2" | 20 | P110-ICY | Tenaris Wedge 441 | New | 1.34 | 2.73 | 2.73 |
| 6.75" | 12627' – 28518' | 11354' | 5-1/2" | 20 | P110-CY | Tenaris Wedge 441 | New | 1.18 | 2.26 | 2.51 |
| | | | | | | | | | | |

**Section 3 Summary:**

XTO will keep casing fluid filled to meet BLM's collapse requirement.
The planned kick off point is located at: 12877' MD / 10638' TVD.

**Wellhead:**

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

Wellhead will be installed by manufacturer's representatives.

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

**4. Cement Program**

| Primary Cementing | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Hole Section** | **Slurry Type** | **No. Sacks** | **Density (ppg)** | **Yield (ft3/sack)** | **TOC (ft)** | **Casing Setting Depth (MD)** | **Excess (%)** | **Slurry Description** |
| Surface 1 | Lead | 60 | 12.4 | 2.11 | 0 | 391 | 100% | Surface 1 Class C Lead Cement |
| Surface 1 | Tail | 313 | 14.8 | 1.33 | 91 | 391 | 100% | Surface 1 Class C Tail Cement |
| Intermediate 1 | Lead | 696 | 12.9 | 2.02 | 0 | 3,294 | 50% | Intermediate 1 Class C Lead Cement |
| Intermediate 1 | Tail | 97 | 14.8 | 1.45 | 2994 | 3,294 | 50% | Intermediate 1 Class C Tail Cement |
| Intermediate 2 | Lead | | | | | | | |
| Intermediate 2 | Tail | 460 | 14.8 | 1.45 | 6084 | 12,727 | 0% | Intermediate 2 Class C Tail Cement |
| Production 1 | Lead | | | | | | | |
| Production 1 | Tail | 1152 | 13.2 | 1.44 | 12227 | 28,518 | 25% | Production 1 Class C Tail Cement |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Breadenhead Cementing | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Casing** | **Slurry Type** | **No. Sacks** | **Density (ppg)** | **Yield (ft3/sack)** | **Cemented Interval** | **Excess (%)** | **Slurry Description** |
| Intermediate 2 | Bradenhead Squeeze | 308 | 14.8 | 1.45 | 2794 - 6084' | 35% | Intermediate Class C Bradenhead Squeeze Cement |
| | | | | | | | |

**Section 4 Summary:**

XOM will comply with the R-111-Q requirements including (but not limited to):
1)Alignment with KPLA requirements per R-111-Q Figure D schematic, leaving open annulus open for pressure monitoring during frac and utilizing new casing that meets API standards.
2)Contingency plans in place to divert fluids away from salt interval in event of production casing failure.
3)Intermediate 2 primary cement job with TOC within Delaware Mountain Group with 0% excess & below the minimum 500' from intermediate 2 casing shoe.
oIntermediate 2 bradenhead squeeze to be completed within 180 days after completions to tieback TOC to salt string at least 500ft but with top below Marker Bed 126.
4)Production cement to be tied back no less than 500ft inside previous casing shoe.

**5. Pressure Control Equipment**

**Section 5 Summary:**

Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of a minimum 5M Hydril and a minimum 10M triple Ram BOP.

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

No break testing will be done if intermediate casing point penetrates the Wolfcamp

**Requested Variances**

4A) Offline Cementing Variance
XOM requests the option to perform offline cement and bradenhead jobs (if needed) SURFACE and INTERMEDIATE casing strings where batch drilling is approved. XOM will ensure well is static with no pressure on the csg annulus, as with all other casing strings where batch drilling operations occur before moving off the rig. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence. The TA cap will also be installed when applicable per wellhead manufacturer's procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

5A) Flex Hose Variance
A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

5B) 10M Annular Variance
XOM requests a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables attached along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP).

8A) Open Hole Logging Variance
Open hole logging will not be done on this well.

10A) Spudder Rig Variance
XOM requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing.

10B) Batch Drilling Variance
XOM requests a variance to be able to batch drill this well. In doing so, XOM will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. XOM will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XOM will begin drilling the production hole on each of the wells.

**6. Proposed Mud Circulation System**

| INTERVAL | Hole Size | Mud Type | MW (ppg) | Viscosity (sec/qt) | Fluid Loss (cc) | Comments |
|---|---|---|---|---|---|---|
| 0' – 391' | 17.5" | FW/Native | 8.3 - 8.7 | 35-40 | NC | Fresh Water or Native Water |
| 391' – 3294' | 12.25" | BDE/OBM or FW/Brine | 9.5 - 10 | 30-32 | NC | Fluid type will be based upon on well conditions. A fully saturated system will be used across the salt interval. |
| 3294' – 12727' | 8.75" | BDE/OBM or FW/Brine | 9.5 - 10 | 30-32 | NC | Fluid type will be based upon on well conditions. |
| 12727' – 28518' | 6.75" | OBM / Cut Brine | 9.5 - 12.5 | 50-60 | NC - 20 | OBM or Cut Brine depending on Well Conditions |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Section 6 Summary:**

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

Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. An EDR (Electronic Drilling Recorder) will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

**7. Auxiliary Well Control and Monitoring Equipment**

**Section 7 Summary:**

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

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

H2S monitors will be on location when drilling below the 13-3/8" casing.

**8. Logging, Coring and Testing Program**

**Section 8 Summary:**

Open hole logging will not be done on this well.

**9. Abnormal Pressures and Temperatures / Potential Hazards**

**Section 9 Summary:**

The estimated bottom hole temperature of 177F to 197F. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation is possible throughout the well.

**10. Anticipated Starting Date and Duration of Operations**

**Section 10 Summary:**

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

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:** 07/25/2025

**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 | 3yr Anticipated Decline oil BBL/D | Anticipated Gas MCF/D | 3yr anticipated decline Gas MCF/D | Anticipated Produced Water BBL/D | 3yr anticipated decline Water BBL/D |
|---|---|---|---|---|---|---|---|---|---|
| BIG EDDY UNIT DI 9 ARROW FED COM 101H | TBD | 21 T21S R30E | 174 FSL, 523 FEL | 1564 | 188 | 2190 | 565 | 3871 | 489 |
| BIG EDDY UNIT DI 9 ARROW FED COM 102H | TBD | 21 T21S R30E | 114 FSL, 523 FEL | 1564 | 188 | 2190 | 565 | 3871 | 489 |
| BIG EDDY UNIT DI 9 ARROW FED COM 103H | TBD | 21 T21S R30E | 54 FSL, 523 FEL | 1564 | 188 | 2190 | 565 | 3871 | 489 |
| BIG EDDY UNIT DI 9 ARROW FED COM 104H | TBD | 21 T21S R30E | 24 FSL, 524 FEL | 1564 | 188 | 2190 | 565 | 3871 | 489 |
| BIG EDDY UNIT DI 9 ARROW FED COM 105H | TBD | 21 T21S R30E | 144 FSL, 523 FEL | 1539 | 175 | 2462 | 807 | 3292 | 298 |
| BIG EDDY UNIT DI 9 ARROW FED COM 106H | TBD | 21 T21S R30E | 84 FSL, 523 FEL | 1539 | 175 | 2462 | 807 | 3292 | 298 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BIG EDDY UNIT DI 9 ARROW FED COM 107H | TBD | 21 T21S R30E | 54 FSL, 618 FEL | 1539 | 175 | 2462 | 807 | 3292 | 298 |
| BIG EDDY UNIT DI 9 ARROW FED COM 108H | TBD | 21 T21S R30E | 144 FSL, 618 FEL | 1883 | 216 | 3767 | 973 | 7364 | 1209 |
| BIG EDDY UNIT DI 9 ARROW FED COM 109H | TBD | 21 T21S R30E | 114 FSL, 618 FEL | 1883 | 216 | 3767 | 973 | 7364 | 1209 |
| BIG EDDY UNIT DI 9 ARROW FED COM 110H | TBD | 21 T21S R30E | 84 FSL, 618 FEL | 1883 | 216 | 3767 | 973 | 7364 | 1209 |
| BIG EDDY UNIT DI 9 ARROW FED COM 111H | TBD | 21 T21S R30E | 24 FSL, 619 FEL | 1883 | 216 | 3767 | 973 | 7364 | 1209 |
| BIG EDDY UNIT DI 9 ARROW FED COM 112H | TBD | 21 T21S R30E | 174 FSL, 618 FEL | 1309 | 178 | 4715 | 2242 | 4642 | 357 |
| BIG EDDY UNIT DI 9 ARROW FED COM 113H | TBD | 21 T21S R30E | 84 FSL, 713 FEL | 1309 | 178 | 4715 | 2242 | 4642 | 357 |
| BIG EDDY UNIT DI 9 ARROW FED COM 114H | TBD | 21 T21S R30E | 54 FSL, 713 FEL | 1309 | 178 | 4715 | 2242 | 4642 | 357 |
| BIG EDDY UNIT DI 9 ARROW FED COM 115H | TBD | 21 T21S R30E | 24 FSL, 714 FEL | 1309 | 178 | 4715 | 2242 | 4642 | 357 |
| BIG EDDY UNIT DI 9 ARROW FED COM 116H | TBD | 21 T21S R30E | 174 FSL, 713 FEL | 1309 | 178 | 4715 | 2242 | 4642 | 357 |
| BIG EDDY UNIT DI 9 ARROW FED COM 117H | TBD | 21 T21S R30E | 144 FSL, 713 FEL | 1309 | 178 | 4715 | 2242 | 4642 | 357 |
| BIG EDDY UNIT DI 9 ARROW FED COM 118H | TBD | 21 T21S R30E | 114 FSL, 713 FEL | 1309 | 178 | 4715 | 2242 | 4642 | 357 |

**IV. Central Delivery Point Name:** Big Eddy Unit DI 9 CVB [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 |
|---|---|---|---|---|---|---|
| BIG EDDY UNIT DI 9 ARROW FED COM 101H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 102H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 103H | TBD | TBD | TBD | TBD | TBD | TBD |

| | | | | | | |
|---|---|---|---|---|---|---|
| BIG EDDY UNIT DI 9 ARROW FED COM 104H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 105H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 106H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 107H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 108H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 109H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 110H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 111H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 112H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 113H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 114H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 115H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 116H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 117H | TBD | TBD | TBD | TBD | TBD | TBD |
| BIG EDDY UNIT DI 9 ARROW FED COM 118H | TBD | TBD | TBD | TBD | TBD | TBD |

**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.

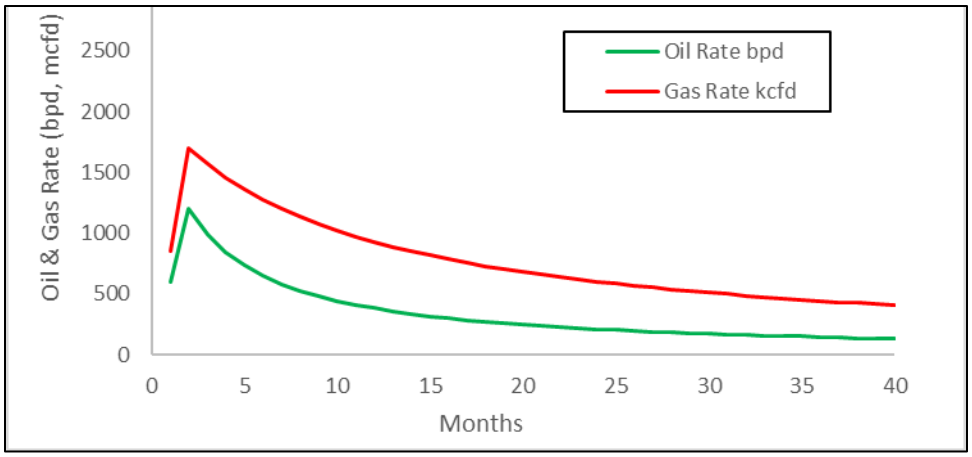
**I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.**

| |
|---|
| Signature: L.Srinivas Naveen |
| Printed Name: Srinivas Naveen Laghuvarapu |
| Title: Regulatory Analyst |
| E-mail Address: srinivas.n.laghuvarapu@exxonmobil.com |
| Date: 7/30/2025 |
| Phone: 346-224-6122 |

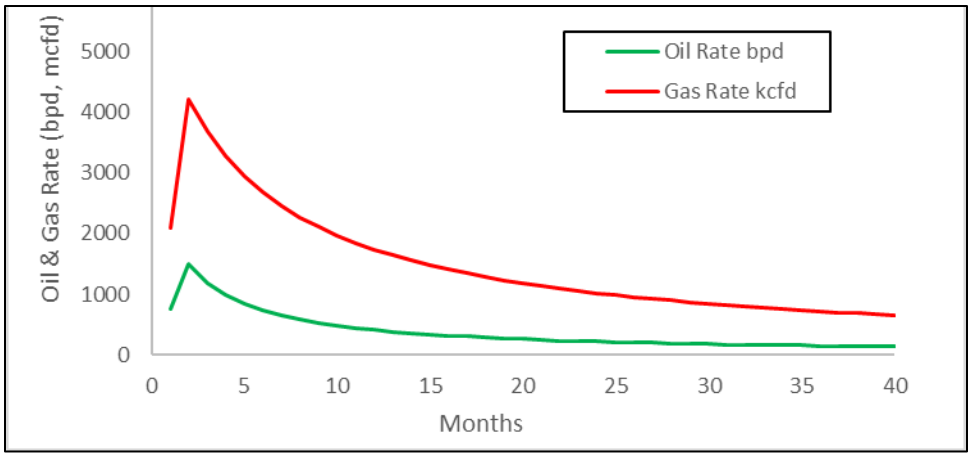
| **OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)** |
|---|
| Approved By: |
| Title: |
| Approval Date: |
| Conditions of Approval: |

**Big Eddy Unit DI 9 Arrow Fed Com -**

**Decline Curves: Bone Spring:**




**Wolfcamp:**



**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 infeasible, 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 e ort 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.

**BLACK GOLD®**

**GATES ENGINEERING & SERVICES NORTH AMERICA**
**7603 Prairie Oak Dr.**
**Houston, TX. 77086**

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**EMAIL: gesna.quality@gates.com**
**WEB: www.gates.com/oilandgas**

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. OSPINOS

**TITLE:** QUALITY ASSURANCE

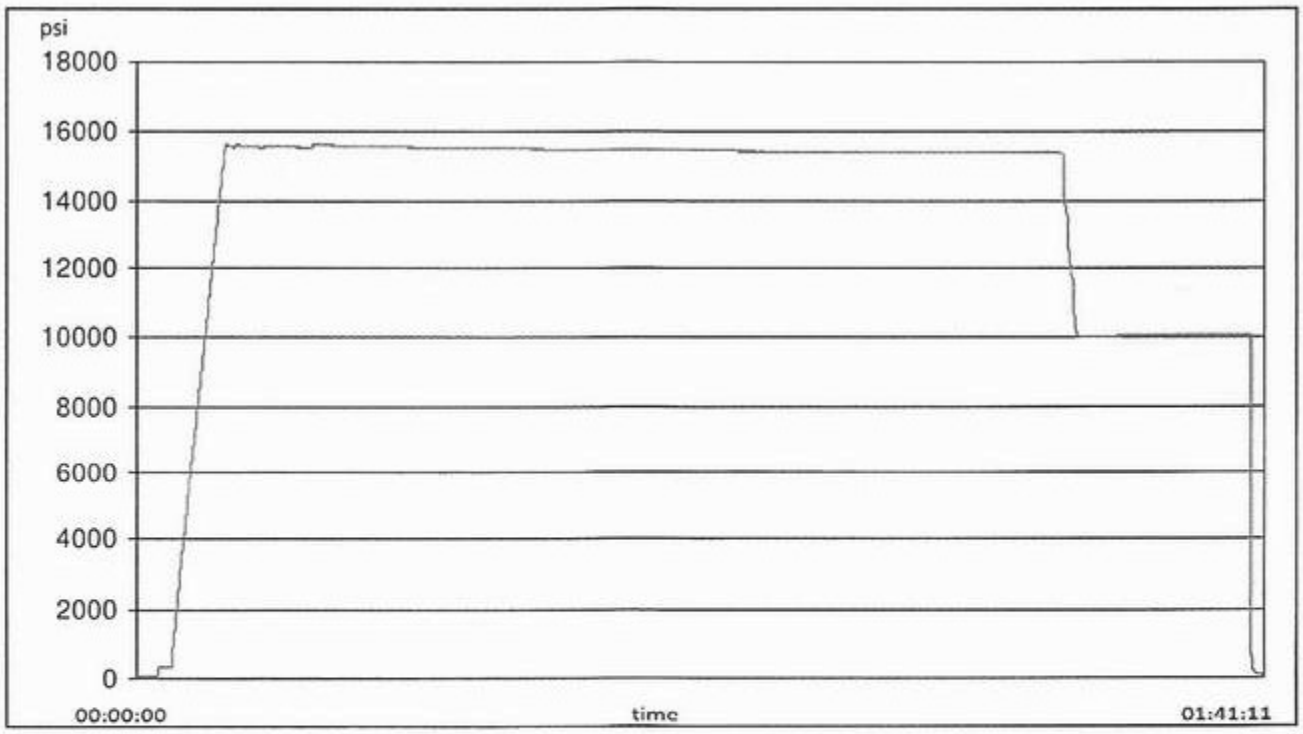
**DATE:** 1/25/2024

H3-15716

1/25/2024 11:48:06 AM

# TEST REPORT

| CUSTOMER | | | TEST OBJECT | | |
|---|---|---|---|---|---|
| Company: | Nabors Industries Inc. | | Serial number: | H3-012524-1 | |
| | | | Lot number: | | |
| Production description: | 74621/66-1531 | | Description: | 74621/66-1531 | |
| Sales order #: | 529480 | | | | |
| Customer reference: | FG1213 | | Hose ID: | 3" 16C CK | |
| | | | Part number: | | |
| **TEST INFORMATION** | | | | | |
| Test procedure: | GTS-04-053 | | Fitting 1: | 3.0 x 4-1/16 10K | |
| Test pressure: | 15000.00 | psi | Part number: | | |
| Test pressure hold: | 3600.00 | sec | Description: | | |
| Work pressure: | 10000.00 | psi | | | |
| Work pressure hold: | 900.00 | sec | Fitting 2: | 3.0 x 4-1/16 10K | |
| Length difference: | 0.00 | % | Part number: | | |
| Length difference: | 0.00 | inch | Description: | | |
| Visual check: | | | Length: | 45 | feet |
| Pressure test result: | PASS | | | | |
| Length measurement result: | | | | | |
| Test operator: | Travis | | | | |



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# TEST REPORT

## GAUGE TRACEABILITY

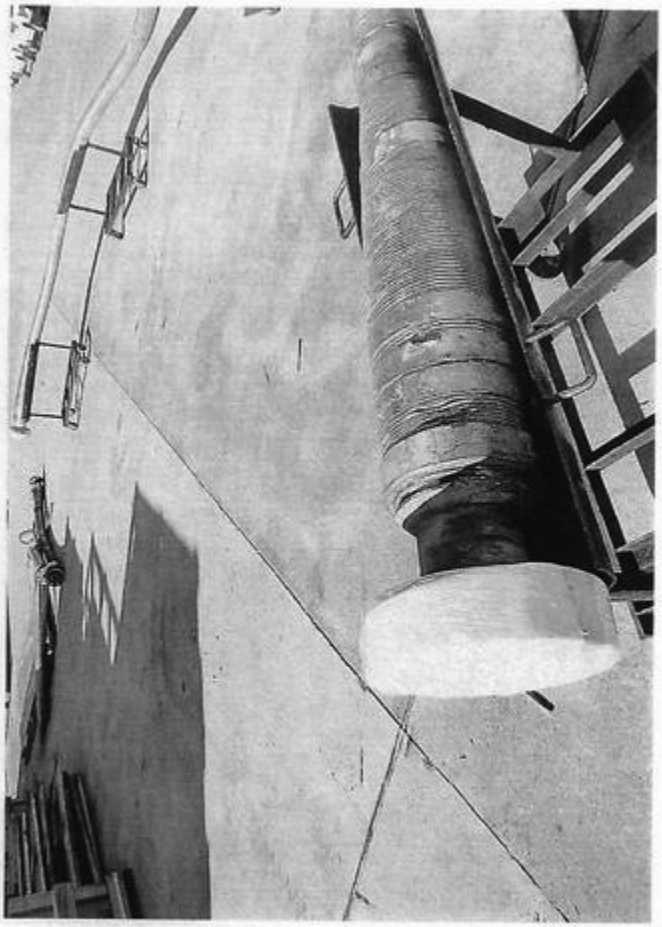
| Description | Serial number | Calibration date | Calibration due date |
|---|---|---|---|
| S-25-A-W | 110D3PHO | 2023-06-06 | 2024-06-06 |
| S-25-A-W | 110IQWDG | 2023-05-16 | 2024-05-16 |

Comment









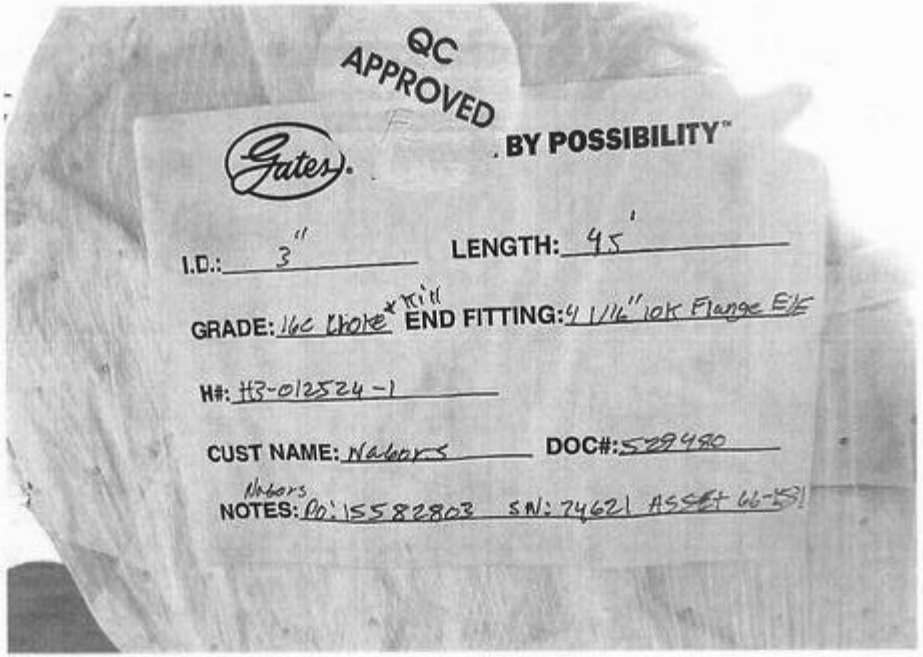
Released to Imaging: 11/20/2026 3:39:05 PM

Received by OCD: 10/23/2026 1:00:07 PM












**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.

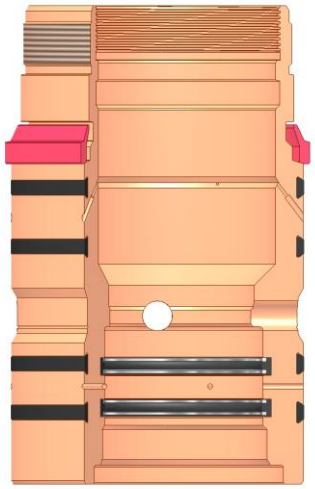
## 1. Cement Program

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

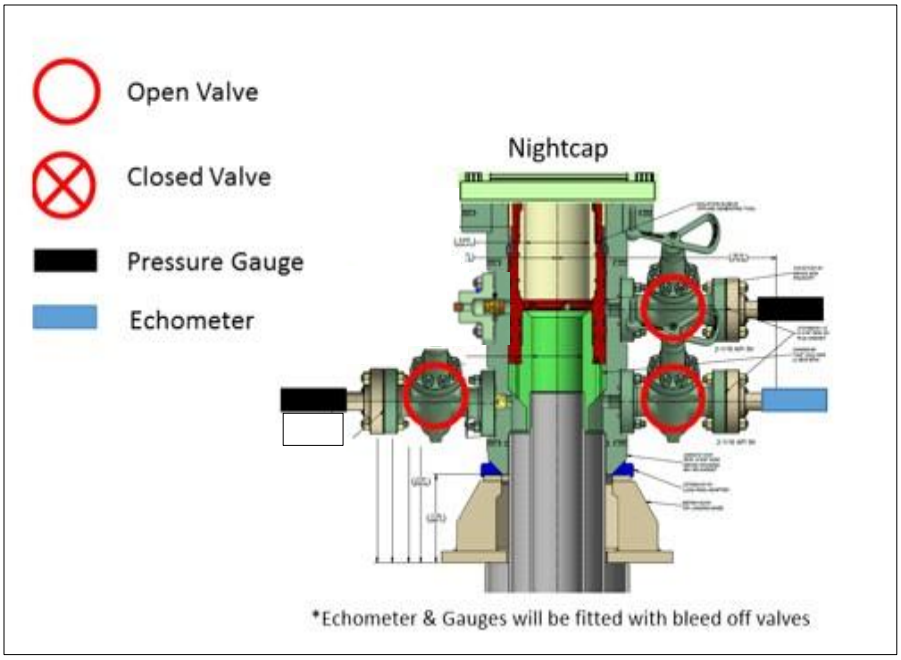
## 2. Offline Cementing Procedure

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 nippled 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.



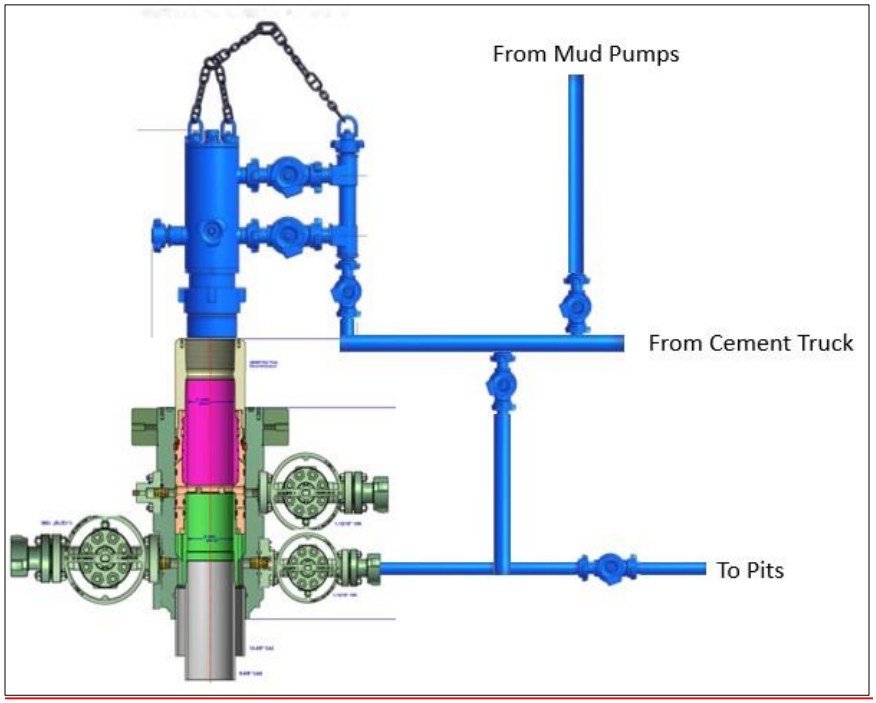
Annular packoff with both external and internal seals




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 nippling 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 3rd 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.

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 nippled 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.

# 10,000 PSI Annular BOP Variance Request

XTO Energy/Permian request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOPL).

## 1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

| 12-1/4" Intermediate Hole Section<br>10M psi Requirement | | | | | |
|---|---|---|---|---|---|
| **Component** | **OD** | **Primary Preventer** | **RWP** | **Alternate Preventer(s)** | **RWP** |
| Drillpipe | 5.000" or<br>4.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| HWDP | 5.000" or<br>4.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| Jars | 6.500" | Annular | 5M | - | - |
| DCs and MWD tools | 6.500"-8.000" | Annular | 5M | - | - |
| Mud Motor | 8.000"-9.625" | Annular | 5M | - | - |
| Intermediate Casing | 9.625" | Annular | 5M | - | - |
| Open-Hole | - | Blind Rams | 10M | - | - |

| 8-3/4" Production Hole Section<br>10M psi Requirement | | | | | |
|---|---|---|---|---|---|
| **Component** | **OD** | **Primary Preventer** | **RWP** | **Alternate Preventer(s)** | **RWP** |
| Drillpipe | 5.000" or<br>4.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| HWDP | 5.000" or<br>4.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| Jars | 6.500" | Annular | 5M | - | - |
| DCs and MWD tools | 6.500"-8.000" | Annular | 5M | - | - |
| Mud Motor | 6.750"-8.000" | Annular | 5M | - | - |
| Production Casing | 7" | Annular | 5M | - | - |
| Open-Hole | - | Blind Rams | 10M | - | - |

| 6-1/8" Lateral Hole Section<br>10M psi Requirement | | | | | |
|---|---|---|---|---|---|
| **Component** | **OD** | **Primary Preventer** | **RWP** | **Alternate Preventer(s)** | **RWP** |
| Drillpipe | 4.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| HWDP | 4.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| DCs and MWD tools | 4.750"-5.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| Mud Motor | 4.750"-5.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Lower 3.5"-5.5" VBR | 10M<br>10M |
| Production Casing | 4.500" | Annular | 5M | Upper 3.5"-5.5" VBR<br>Upper 3.5"-5.5" VBR | 10M<br>10M |
| Open-Hole | - | Blind Rams | 10M | - | - |

VBR = Variable Bore Ram

## 2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:
    a. Perform flow check. If flowing, continue to (b).
    b. Sound alarm (alert crew)
    c. Stab full-opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper variable bore rams
    e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP & SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
    a. Sound alarm (alert crew)
    b. Stab crossover and full-opening safety valve and close
    c. Space out drill string with upset just beneath the upper variable bore rams
    d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP & SICP

ii. Pit gain
iii. Time

h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
   a. Sound alarm (alert crew)
   b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
   c. If impossible to pull string clear of the stack:
   d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
   e. Space out drill string with tooljoint just beneath the upper variable bore ram
   f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
   g. Confirm shut-in
   h. Notify toolpusher/company representative
   i. Read and record the following:
      i. SIDPP & SICP
      ii. Pit gain
      iii. Time
   j. Regroup and identify forward plan

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# SUPO Data Report
02/18/2026

**APD ID:** 10400106264
**Submission Date:** 07/31/2025
**Operator Name:** XTO PERMIAN OPERATING LLC
**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM
**Well Number:** 115H
**Well Type:** CONVENTIONAL GAS WELL
**Well Work Type:** Drill

Highlighted data reflects the most recent changes
Show Final Text

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

BEU_DI_9_ARROW_115H_ROAD_MAP_20251024081854.pdf

**Existing Road Purpose:** ACCESS,FLUID TRANSPORT

**Row(s) Exist?** NO

### ROW ID(s)

**ID:**

**Do the existing roads need to be improved?** NO

**Existing Road Improvement Description:**

**Existing Road Improvement Attachment:**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** NO

## Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Existing Well map Attachment:**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

BEU_DI_9_Arrow_Fed_Com_1_Mile_Radius_Map_20251024121629.pdf

## Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** No new surface disturbance is requested for this development. 1. Production Facilities - No additional production facilities are requested for this development. Production from the proposed wells will be routed to the existing Big Eddy Unit DI 9 Battery. Facility layout which describes the placement of the facility components on the existing battery with appropriate labels, as per the 43 CFR requirements, has been attached under SUPO section 4 2. Buried & Surface Flowlines - No additional flowlines are requested for this development. There is no new surface disturbance 3. Electrical Lines - No additional electrical lines are requested for this development. There is no new surface disturbance 4. Midstream Tie In - No additional midstream tie-in connections are requested for this development. There is no new surface disturbance. 5. Aboveground Structures. All permanent (on site six months or longer) above-ground structures constructed or installed on location and not subject to safety requirements will be painted earth-tone colors such as shale green that reduce the visual impacts of the built environment

**Production Facilities map:**

Facility_Layout___Big_Eddy_Unit_DI_9_Battery_20250729143234.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source type:** OTHER

**Describe type:** Brackish Water Sourced from Texas Pacific Water Resources located at 27-25S-30E, Eddy city, New Mexico.

**Water source use type:** DUST CONTROL
INTERMEDIATE/PRODUCTION CASING
STIMULATION

**Source latitude:** **Source longitude:**

**Source datum:**

**City:**

**Water source permit type:** PRIVATE CONTRACT

**Water source transport method:** TRUCKING

**Source land ownership:** FEDERAL

**Source transportation land ownership:** STATE

**Water source volume (barrels):** 470000 **Source volume (acre-feet):** 60.57975528

**Source volume (gal):** 19740000

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Water source type:** OTHER

**Describe type:** Fresh Water Sourced from Commercial Trucking Companies.

**Water source use type:** SURFACE CASING

**Source latitude:** **Source longitude:**

**Source datum:**

**City:**

**Water source permit type:** PRIVATE CONTRACT

**Water source transport method:** TRUCKING

**Source land ownership:** COMMERCIAL

**Source transportation land ownership:** STATE

**Water source volume (barrels):** 130000 **Source volume (acre-feet):** 16.75610252

**Source volume (gal):** 5460000

**Water source and transportation**

BEU_DI_9_ARROW_115H_VICINITY_MAP_20251024082011.pdf

**Water source comments:** The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. Water composition depends on the mud type needed per formation to protect useable water. Fresh water is trucked to location for use in surface casing and cementing. All other water is brackish water coming from a third party (Texas Pacific Water Resources located at 27-25S-30E, Eddy city). Water is trucked from the 3rd party to the pit located at (32.365135, -103.867871) which will then be trucked to the drilling location. Anticipated water usage for drilling includes an estimated 50,000 barrels of water to drill a horizontal well in a combination of water and brine as detailed in the mud program in the drilling plans. These volumes are calculated for ~1.5bbls per foot of hole drilled with excess to accommodate any lost circulation or wash out that may occur. Actual water volumes used during operations will depend on the depth of the well, length of horizontal sections, and the losses that may occur during the operation. Temporary water flowlines will be permitted via ROW approval letter and proper grants as needed based on drilling and completion schedules as needed. Well completion is expected to require approximately 550,000 barrels of water per horizontal well. Actual water volumes used during operations depend on the depth of the well and length of horizontal sections.

**New water well?** N

## New Water Well Info

**Well latitude:** **Well Longitude:** **Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):** **Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):** **Well casing type:**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Using any construction materials:** YES

**Construction Materials description:** Source: 32.406051, -103.901219 Character: Lifts of compacted caliche Intended use: Maintenance of existing facilities, well pad, and access roads

**Construction Materials source location**

## Section 7 - Methods for Handling

**Waste type:** DRILLING

**Waste content description:** Drill Cuttings.

**Amount of waste:** 40000 pounds

**Waste disposal frequency :** One Time Only

**Safe containment description:** 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.

**Safe containmant attachment:**

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

**Disposal type description:**

**Disposal location description:** Drilling cuttings will be disposed at an NMOCD approved disposal facility ~40 times per well.

**Waste type:** GARBAGE

**Waste content description:** Garbage, Debris, Junk & Non-flammable waste materials.

**Amount of waste:** 5500 pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approved sanitary landfill. Immediately after drilling, all debris and other waste materials on and around the 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 containmant attachment:**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**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 garbage.

**Waste type:** SEWAGE

**Waste content description:** Human & Solid Waste

**Amount of waste:** 1260 gallons

**Waste disposal frequency :** Weekly

**Safe containment description:** Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completions activities, or as required, the toilet holding tanks will be pumped and the contents thereof will be disposed in an approved sewage disposal facility. All state and local laws and regulations pertaining to the disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completions operations and will be removed when all operations are complete.

**Safe containmant 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 human waste.

**Waste type:** DRILLING

**Waste content description:** Drilling Fluids.

**Amount of waste:** 600 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** Drilling fluids will be contained in steel mud pits & will be taken to an NMOCD approved commercial disposal facility.
**Safe containmant attachment:**

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

**Disposal location description:** Drilling fluids will be disposed at an NMOCD approved disposal facility ~5-6 times per well.

## Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**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**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**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** Drill cuttings will be held in roll-off style mud boxes and will be taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site. Drilling fluids will be contained in steel mud pits and will be taken to an NMOCD approved commercial disposal facility. Water produced from the well during completions will be held temporarily in steel tanks and then taken to an 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?**

**Cuttings area liner**

**Cuttings area liner specifications and installation description**

## Section 8 - Ancillary

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

**Ancillary Facilities**

**Comments:**

## Section 9 - Well Site

**Well Site Layout Diagram:**

DI_9_ARROW_FED_COM_115H_RL_20250731060358.pdf

BEU_DI9_ARROW_FED_COM_115H_WELL_SITE_10_21_2025_20251024082110.pdf

**Comments:** Multi-Well Pad.

## Section 10 - Plans for Surface

**Type of disturbance:** No New Surface Disturbance **Multiple Well Pad Name:** Big Eddy Unit DI 9

**Multiple Well Pad Number:** 1

**Recontouring**

**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

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

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, head cutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed

| | | |
|---|---|---|
| **Well pad proposed disturbance (acres):** | **Well pad interim reclamation (acres):** 0 | **Well pad long term disturbance (acres):** 0 |
| **Road proposed disturbance (acres):** | **Road interim reclamation (acres):** 0 | **Road long term disturbance (acres):** 0 |
| **Powerline proposed disturbance (acres):** | **Powerline interim reclamation (acres):** 0 | **Powerline long term disturbance (acres):** 0 |
| **Pipeline proposed disturbance (acres):** | **Pipeline interim reclamation (acres):** 0 | **Pipeline long term disturbance (acres):** 0 |
| **Other proposed disturbance (acres):** | **Other interim reclamation (acres):** 0 | **Other long term disturbance (acres):** 0 |
| **Total proposed disturbance:** 0 | **Total interim reclamation:** 0 | **Total long term disturbance:** 0 |

**Disturbance Comments:**

**Reconstruction method:** The original stockpiled 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 stockpiled 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.

**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:** There is no Existing Vegetation at the existing well pad.

**Existing Vegetation at the well pad**

**Existing Vegetation Community at the road:** There is no Existing Vegetation at the existing roads.

**Existing Vegetation Community at the road**

**Existing Vegetation Community at the pipeline:** There is no existing vegetation at the existing pipelines.

**Existing Vegetation Community at the pipeline**

**Existing Vegetation Community at other disturbances:** There is no existing vegetation at the other existing disturbances.

**Existing Vegetation Community at other disturbances**

**Non native seed used?** N

**Non native seed description:**

**Seedling transplant description:**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

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

**Seedling transplant description attachment:**

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

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed

### Seed Table

### Seed Summary

**Total pounds/Acre:**

| Seed Type | Pounds/Acre |
|---|---|

**Seed reclamation**

## Operator Contact/Responsible Official

**First Name:** Scott **Last Name:** Patterson

**Phone:** (432)301-2471 **Email:** scott.m.patterson@exxonmobil.com

**Seedbed prep:** 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. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.

**Seed BMP:** If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4-6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
**Seed method:** Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used. If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.
**Existing invasive species?** N

**Existing invasive species treatment description:**

**Existing invasive species treatment**

**Weed treatment plan description:** Weed control for all phases will be through the use of approved pesticides and herbicides according to applicable State, Federal and local laws.
**Weed treatment plan**

**Monitoring plan description:** Monitoring of invasive and noxious weeds will be visual and as-needed. If it is determined additional methods are required to monitor invasive and noxious weeds, appropriate BLM authorities will be contacted with a plan of action for approval prior to implementation
**Monitoring plan**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Success standards:** 100% compliance with applicable regulations.

**Pit closure description:** There will be no reserve pit as each well will be drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17.
**Pit closure attachment:**

## Section 11 - Surface

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT,STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NMSLO

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Disturbance type:** OTHER

**Describe:** FLOWLINES

**Surface Owner:** STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NMSLO

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Disturbance type:** OTHER

**Describe:** CENTRAL VESSEL BATTERY

**Surface Owner:** STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NMSLO

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NMSLO

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Disturbance type:** TRANSMISSION LINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT,STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NMSLO

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT,STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** NMSLO

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

## Section 12 - Other

**Right of Way needed?** N **Use APD as ROW?**

**ROW Type(s):**

## ROW

**SUPO Additional Information:** SUPO is written for all wells in the proposed BIG EDDY UNIT DI 9 ARROW FED COM development.

**Use a previously conducted onsite?** Y

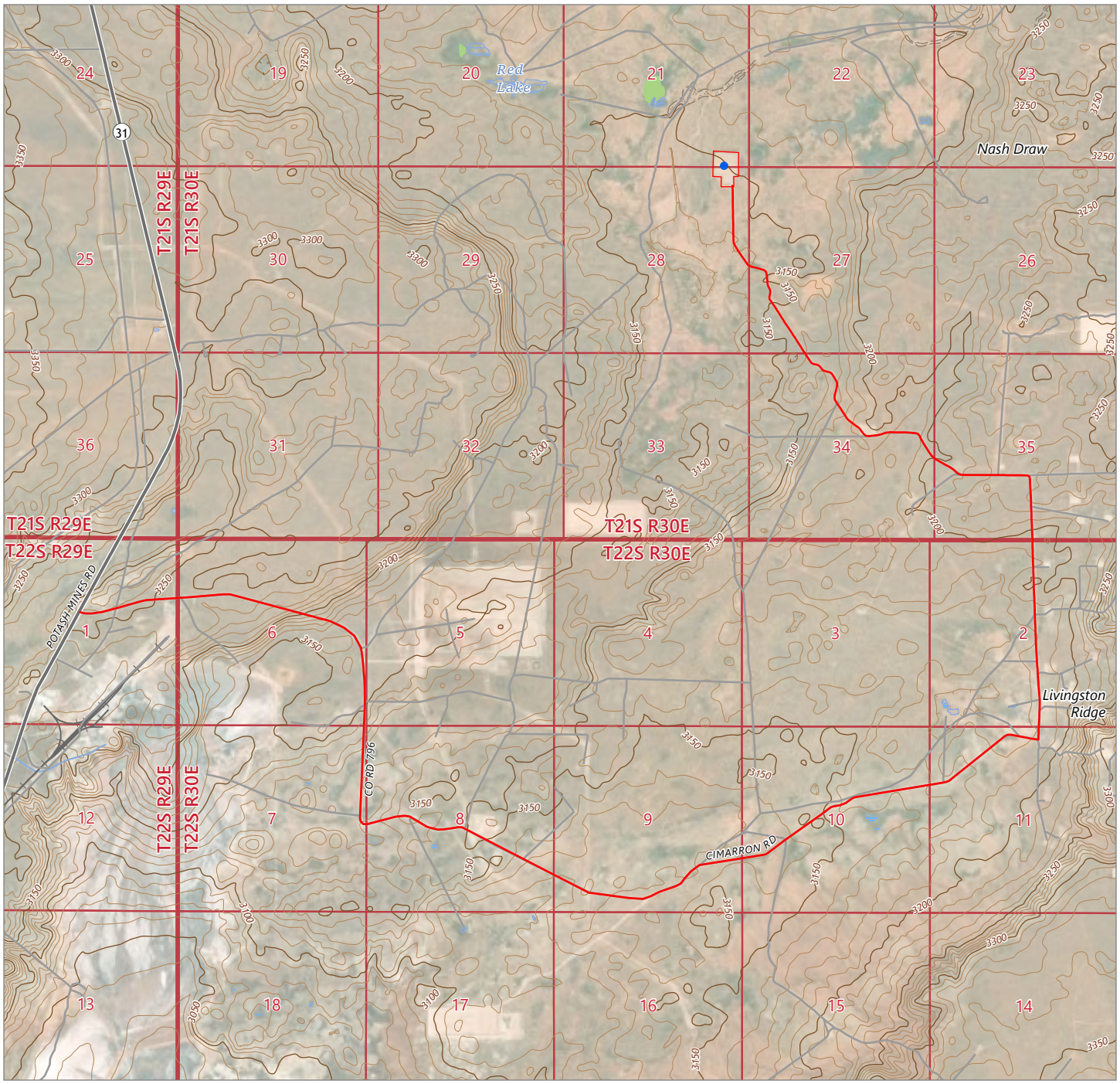
**Previous Onsite information:** XTO Permian Operating, LLC., requests no additional surface disturbance for this development. This location was originally onsited by the representatives from the BLM & the BOPCO L.P., on 6/10/2013.

## Other SUPO

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

SUPO_BEU_DI_9_Arrow_Fed_Com_Final_Updated_20251022123711.pdf




**DRIVING DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF POT ASH MINES ROAD (NM HWY 31)) AND CIMARRON ROAD, GO EAST ON CIMARRON ROAD FOR APPROX. 4.5 MILES TO A "Y" INTERSECTION. GO RIGHT (NORTHEAST) ON CIMARRON ROAD FOR APPROX. 2 MILES TO A "T" INTERSECTION. GO LEFT (NORTH) ON LEASE ROAD FOR APPROX. 1.4 MILES TO A "T" INTERSECTION. TURN LEFT (WEST) ON LEASE ROAD FOR APPROX. 0.3 MILES TO A "Y" INTERSECTION. TURN RIGHT (NORTHWEST) ON LEASE ROAD AND GO APPROX. 2.2 MILES ARRIVING AT THE LOCATION.

0 2,500 5,000 10,000
US Feet

N

**LEGEND**

- BIG EDDY UNIT DI 9 ARROW FED COM 115H WELL LOCATION
- EXISTING WELL PAD
- DRIVING ROUTE

Manhard CONSULTING
505 Pecan Street, Suite 201, Fort Worth, TX 76102
Ph: 972.972.4250 manhard.com
Texas Board of Professional Engineers & Land Surveyors Reg. No. F-10194754 (Surv), F-22053 (Eng)

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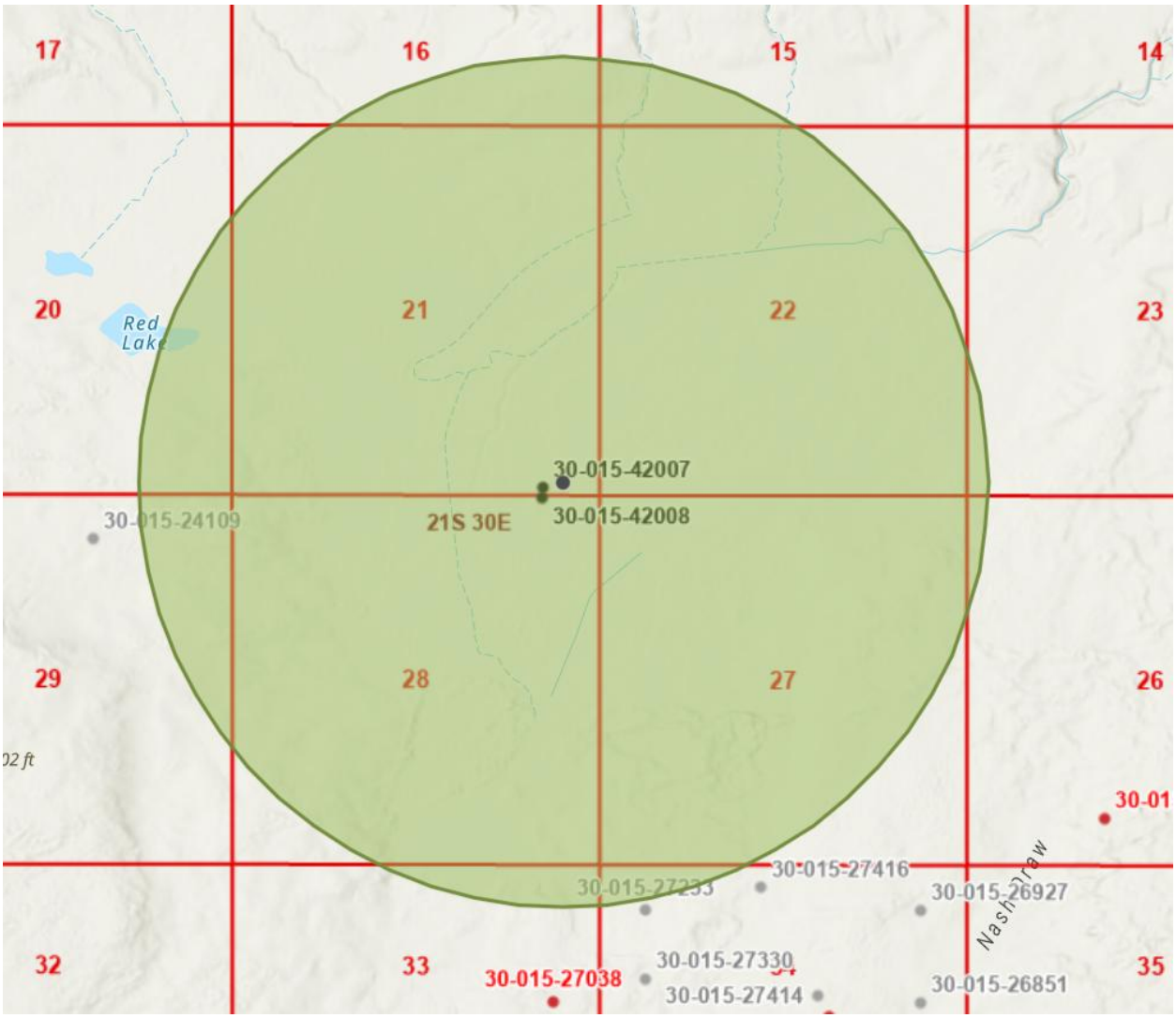
# A TOPOGRAPHICAL AND ACCESS ROAD MAP FOR XTO PERMIAN OPERATING, LLC. BIG EDDY UNIT DI 9 ARROW FED COM 115H

LOCATED 24 FEET FROM THE SOUTH LINE AND 713 FEET FROM THE EAST LINE OF SECTION 21, TOWNSHIP 21 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

| CHECKED BY: | DATE: | SCALE: | PROJECT NUMBER: |
|---|---|---|---|
| AI | 10/23/2025 | 1":5,000' | 618.013004.05-15 |
| DRAWN BY: | FIELD CREW: | REVISION NUMBER: | SHEET: |
| RE | RD | 0 | 3 OF 3 |

P:\618\013\XTO Energy - NM\004 Big Eddy Unit - Eddy Lea\05 - BEU D 9 - EDDY\GIS\DRAWING DIRECTIONS\NM_WELLPLAT_PACKAGE\NM_WELLPLAT_PACKAGE.aprx

# 1 Mile Radius Map – Big Eddy Unit Dl 9 Arrow Fed Com Wells



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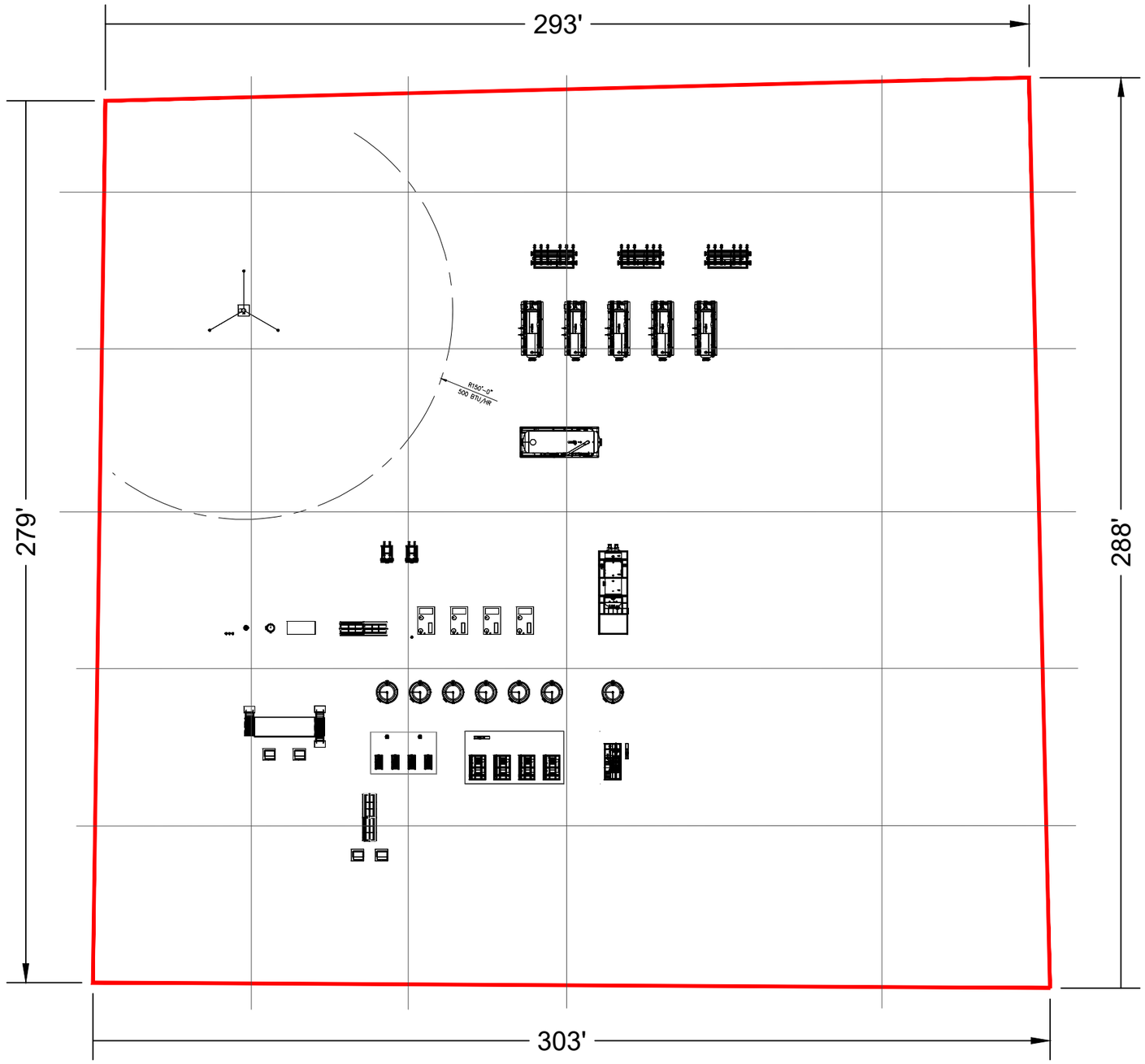


SAVED: 7/24/2025 12:43 PM PLOTTED: 7/24/2025 10:12 PM USERNAME: 1054397 FILENAME: XTO-BEUDI-9-0001.DWG

| DATE | REV | DESCRIPTION | BY | APPR | ENG |
|---|---|---|---|---|---|
| 07/24/2025 | 0 | ISSUED FOR CONSTRUCTION | DK | GP | MS |

ExxonMobil

**BEU DI-9**
**CVB**
FACILITY LAYOUT PLAN
WELLPAD FACILITY
DELWARE BASIN, TEXAS

| | | | |
|---|---|---|---|
| ENGINEER: | MAYANK SINGH | DATE: 07/24/2025 | SCALE: NONE |
| PROJ. MGR: | GREG POWER | DWG NO. XTO-BEUDI-9-0001 | REV. 0 |
| DRAFTED BY: | DIVANAPU KUMAR | | |
| DOC. TYPE: | - | CAD FILE NO. XTO-BEUDI-9-0001 | |

XTO ENERGY – An ExxonMobil Subsidiary \\inblcorexmofs01\1039697\1Project_Management\Project Folder\Tracker\Files\BEU DI-9 ARROW CVB\WIP\XTO-BEUDI-9-0001.dwg

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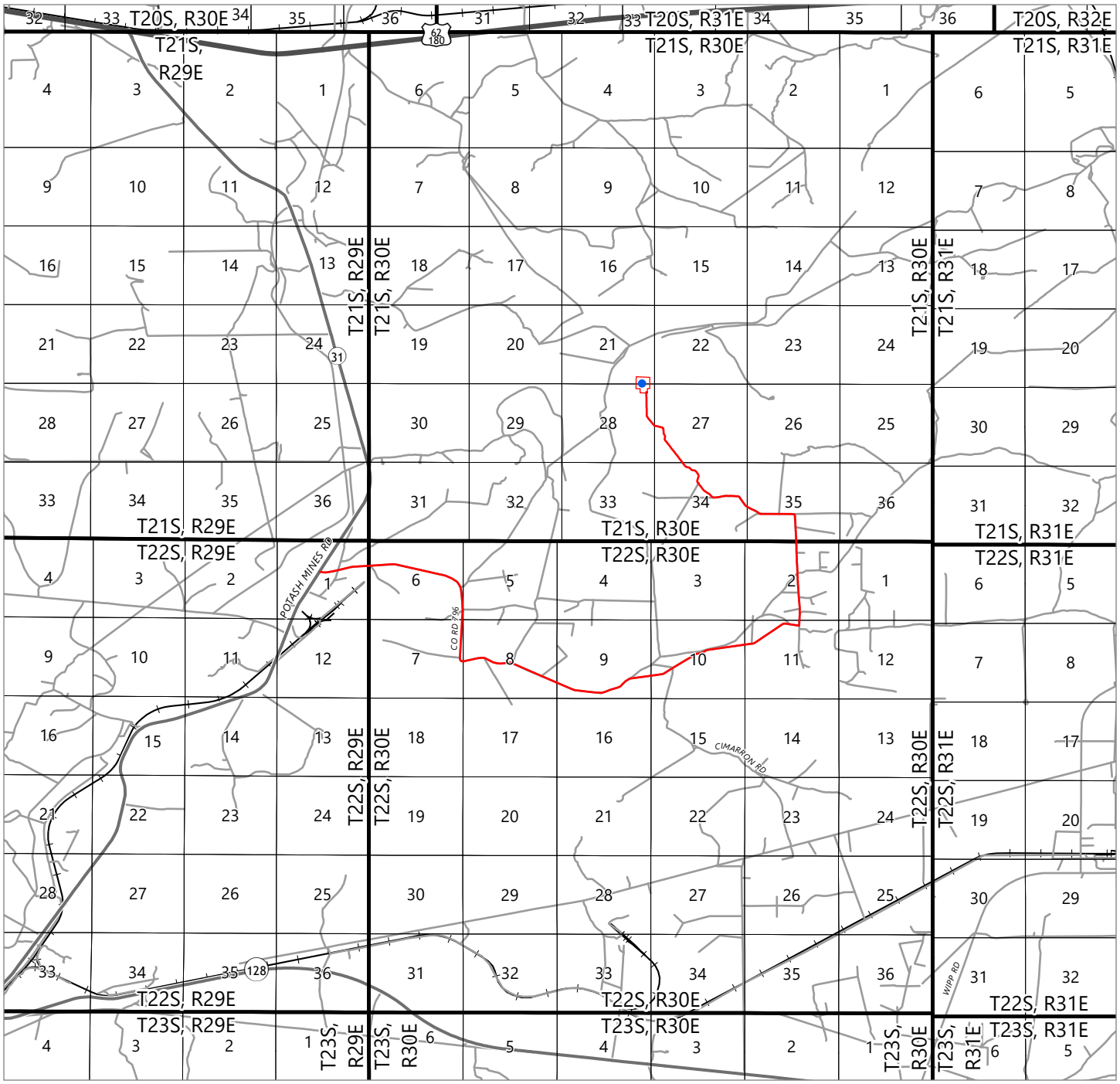


**DRIVING DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF POT ASH MINES ROAD (NM HWY 31)) AND CIMARRON ROAD, GO EAST ON CIMARRON ROAD FOR APPROX. 4.5 MILES TO A "Y" INTERSECTION. GO RIGHT (NORTHEAST) ON CIMARRON ROAD FOR APPROX. 2 MILES TO A "T" INTERSECTION. GO LEFT (NORTH) ON LEASE ROAD FOR APPROX. 1.4 MILES TO A "T" INTERSECTION. TURN LEFT (WEST) ON LEASE ROAD FOR APPROX. 0.3 MILES TO A "Y" INTERSECTION. TURN RIGHT (NORTHWEST) ON LEASE ROAD AND GO APPROX. 2.2 MILES ARRIVING AT THE LOCATION.

0 5,000 10,000 20,000
US Feet

N

**LEGEND**

- BIG EDDY UNIT DI 9 ARROW FED COM 115H WELL LOCATION
- EXISTING WELL PAD
- DRIVING ROUTE

Manhard CONSULTING
505 Pecan Street, Suite 201, Fort Worth, TX 76102
Ph: 972.972.4250 manhard.com
Texas Board of Professional Engineers & Land Surveyors Reg. No. F-10194754 (Surv), F-22053 (Eng)

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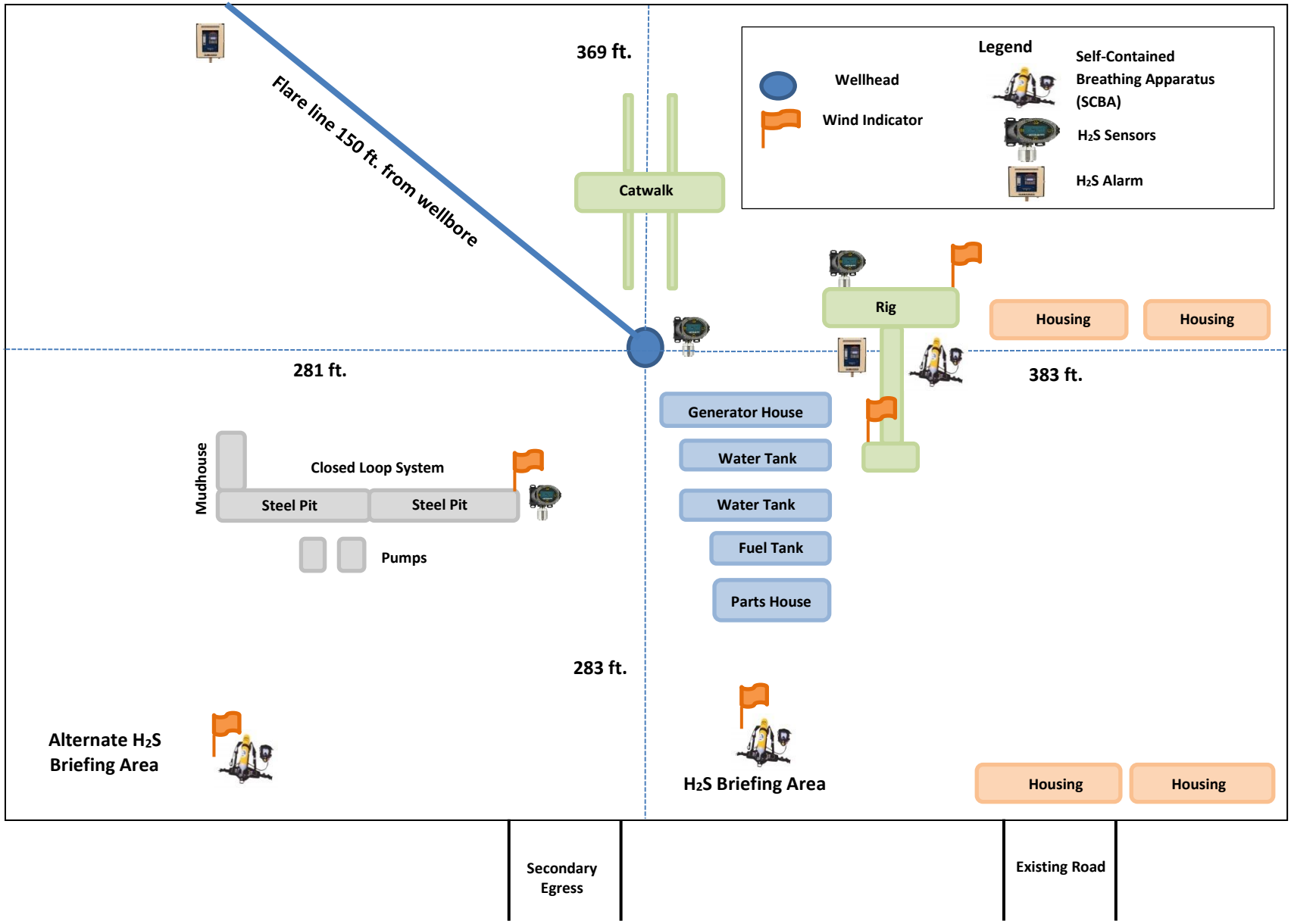
# A VICINITY MAP FOR XTO PERMIAN OPERATING, LLC.
# BIG EDDY UNIT DI 9 ARROW FED COM 115H

LOCATED 24 FEET FROM THE SOUTH LINE AND 713 FEET FROM THE EAST LINE OF SECTION 21, TOWNSHIP 21 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

| CHECKED BY: | DATE: | SCALE: | PROJECT NUMBER: |
|---|---|---|---|
| AI | 10/23/2025 | 1":10,000' | 618.013004.05-15 |
| DRAWN BY: | FIELD CREW: | REVISION NUMBER: | SHEET: |
| RE | RD | 0 | 2 OF 3 |

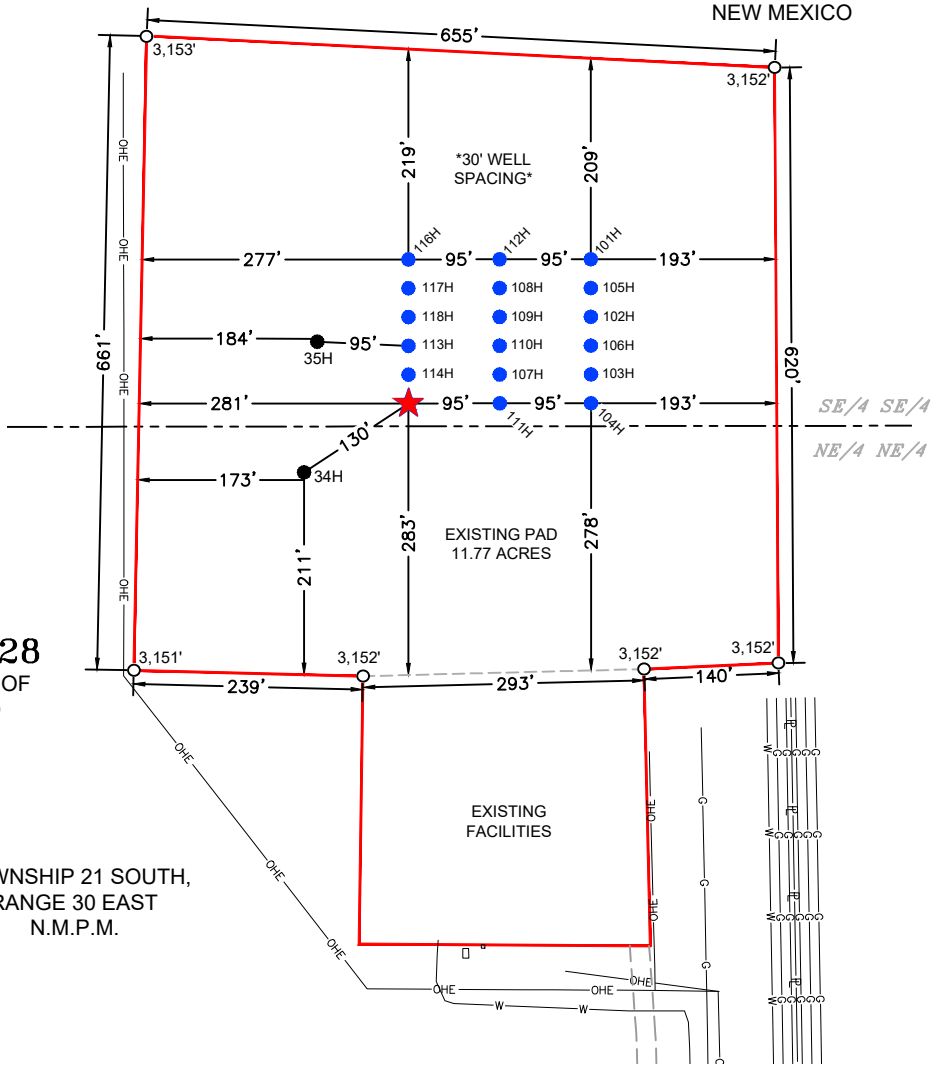
P:\618\013\XTO Energy - NM\004 Big Eddy Unit - Eddy Lea\05 - BEU D 9 - EDDY\GIS\DRWING DIRECTIONS\NM_WELLPLAT_PACKAGE\NM_WELLPLAT_PACKAGE.aprx

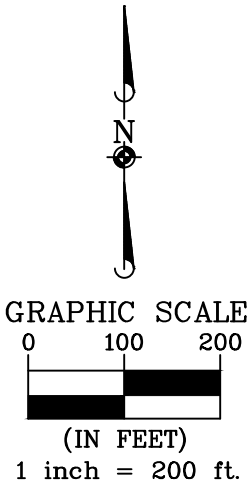
# Rig Layout Plat



## FEATURE WELL LOCATION DETAIL

BIG EDDY UNIT DI 9 ARROW FED COM 115H
24' FSL & 713' FEL
ELEV.= 3,152'
NAD 83 (NME)
Y=530,498.0
X=681,401.8
LAT.=32.457584°N
LONG.=103.879228°W
NAD 27 (NME)
Y=530,436.8
X=640,221.1
LAT.=32.457462°N
LONG.=103.878730°W




## SECTION 28
OWNER: STATE OF NEW MEXICO

TOWNSHIP 21 SOUTH,
RANGE 30 EAST
N.M.P.M.

### GENERAL NOTES

1. BEARINGS AND COORDINATES SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATES SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983.
2. LATITUDE AND LONGITUDE VALUES SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN DATA (NAD83).
3. REFER TO TOPOGRAPHICAL AND ACCESS ROAD MAP FOR PROPOSED ROAD LOCATION.

I,MARK DILLON HARP, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23786, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PREFORMED 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.

MARK DILLON HARP
NEW MEXICO PROFESSIONAL LAND SURVEYOR
NO. 23786




### LEGEND

- SECTION LINE
- EXISTING PAD
- EXISTING ROAD
- EXISTING OVERHEAD ELECTRIC
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING PIPELINE
- EXISTING FLOW LINE
- EXISTING FENCE
- FEATURE WELL LOCATION
- EXISTING WELL LOCATION
- PERMITTED WELL LOCATION
- X — DENOTES WELL LOCATION HAS BEEN DRILLED


Manhard CONSULTING
505 Pecan Street, Suite 201, Fort Worth, TX 76102
ph: 817.865.5344 manhard.com
Texas Board of Professional Engineers & Land Surveyors Reg. No. F-10194754 (Surv), F-22053 (Eng)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# A WELL SITE PLAN FOR:
# BIG EDDY UNIT DI 9 ARROW FED COM
# XTO PERMIAN OPERATING, LLC.

SITUATED IN SECTION 21, TOWNSHIP 21 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

| CHECKED BY: | DATE: | SCALE: | PROJECT NO.: |
|---|---|---|---|
| DB | 10/21/2025 | 1" = 200' | 618.013004.05-15 |
| DRAWN BY: | FIELD CREW: | REVISION NO.: | SHEET: |
| DN | RD | 1 | 1 OF 3 |

P:\618.013 XTO Energy - NM\004 Big Eddy Unit - Eddy Lea\.05 - BEU DI 9 - EDDY\Wells\-15 - 115H\DWG\PACKET\115H WELL SITE.dwg

# Surface Use Plan of Operations

## Big Eddy Unit DI 9 Arrow Fed Com

| Well Name | SHL STR | SHL Footages | BHL STR | BHL Footages |
|---|---|---|---|---|
| Big Eddy Unit DI 9 Arrow Fed Com 101H | 21 T21S R30E | 174' FSL, 523' FEL | 25 T21S R30E | 550' FNL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 102H | 21 T21S R30E | 114' FSL, 523' FEL | 25 T21S R30E | 1870' FNL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 103H | 21 T21S R30E | 54' FSL, 523' FEL | 25 T21S R30E | 2090' FSL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 104H | 21 T21S R30E | 24' FSL, 523' FEL | 25 T21S R30E | 770' FSL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 105H | 21 T21S R30E | 144' FSL, 523' FEL | 25 T21S R30E | 1430' FNL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 106H | 21 T21S R30E | 84' FSL, 523' FEL | 25 T21S R30E | 2530' FSL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 107H | 21 T21S R30E | 54' FSL, 618' FEL | 25 T21S R30E | 1210' FSL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 108H | 21 T21S R30E | 144' FSL, 618' FEL | 25 T21S R30E | 990' FNL, 280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 109H | 21 T21S R30E | 114' FSL, 618' FEL | 25 T21S R30E | 2310' FNL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 110H | 21 T21S R30E | 84' FSL, 618' FEL | 25 T21S R30E | 1550' FSL,280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 111H | 21 T21S R30E | 24' FSL, 618' FEL | 25 T21S R30E | 335' FSL, 50' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 112H | 21 T21S R30E | 174' FSL, 618' FEL | 25 T21S R30E | 660' FNL, 280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 113H | 21 T21S R30E | 84' FSL, 713' FEL | 25 T21S R30E | 1870' FNL, 280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 114H | 21 T21S R30E | 54' FSL, 713' FEL | 25 T21S R30E | 2090' FSL, 280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 115H | 21 T21S R30E | 24' FSL, 713' FEL | 25 T21S R30E | 770' FSL, 280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 116H | 21 T21S R30E | 174' FSL, 713' FEL | 25 T21S R30E | 660' FNL, 280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 117H | 21 T21S R30E | 144' FSL, 713' FEL | 25 T21S R30E | 1305' FNL, 280' FEL |
| Big Eddy Unit DI 9 Arrow Fed Com 118H | 21 T21S R30E | 114' FSL, 713' FEL | 25 T21S R30E | 2100' FNL, 280' FEL |

**Existing Roads (Section 1):**

Individual well specific vicinity maps, topographical & access road maps issued by the registered surveyor, that show & identify the proposed well sites and access routes to the proposed wells, as per the 43 CFR requirements have been attached with the individual APDs under SUPO section 1.

Below will be the specifications for the existing access roads, should they need maintenance –

- Road Width: All existing access roads will remain 30 feet wide
- Maximum Grade: Maintenance, if any, for the driving surface for all the existing access roads will be made using 6" rolled & compacted caliche
- Crown & Ditch Design: All the existing access roads will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. Ditches will be 1 foot deep with a 3:1 slope
- Turnouts: No new turnouts will be constructed during the maintenance of existing access roads
- Cattleguards: No new cattleguards will be constructed during the maintenance of existing access roads
- Major cuts and fills: No significant cuts & fills will be required for maintenance of existing access roads
- Type of surfacing material: Surface material for all existing access road maintenance will be trucked in from a native caliche pit located at: 32.406051, -103.901219
- Road Drainage Control Structures: The access roads will be maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along with access road route.
- Drainage control and Existing Road Access Erosion Control: The access road and associated drainage structures will be maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

**New or Reconstructed Access Roads (Section 2):**

No additional roads are requested for this development. There is no new surface disturbance.

**Location of Existing Wells (Section 3):**

A map including all existing wells within a one-mile radius of the proposed wells, as per the 43 CFR requirements, is attached under SUPO section 3.

**Location of Existing and/or Proposed Production Facilities (Section 4):**

No new surface disturbance is requested for this development.

1. Production Facilities - No additional production facilities are requested for this development. Production from the proposed wells will be routed to the existing Big Eddy Unit DI 9 Battery. Facility layout which describes the placement of the facility components on the existing battery with appropriate labels, as per the 43 CFR requirements, has been attached under SUPO section 4
2. Buried & Surface Flowlines - No additional flowlines are requested for this development. There is no new surface disturbance
3. Electrical Lines - No additional electrical lines are requested for this development. There is no new surface disturbance
4. Midstream Tie In - No additional midstream tie-in connections are requested for this development. There is no new surface disturbance.
5. Aboveground Structures. All permanent (on site six months or longer) above-ground structures constructed or installed on location and not subject to safety requirements will be painted earth-tone colors such as shale green that reduce the visual impacts of the built environment

**Location and Types of Water Supply (Section 5):**

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. Water composition depends on the mud type needed per formation to protect useable water. Fresh water is trucked to location for use in surface casing and cementing. All other water is brackish water coming from a third party (Texas Pacific Water Resources located at 27-25S-30E, Eddy city). Water is trucked from the 3rd party to the pit located at (32.365135, -103.867871) which will then be trucked to the drilling location. Anticipated water usage for drilling includes an estimated 50,000 barrels of water to drill a horizontal well in a combination of water and brine as detailed in the mud program in the drilling plans. These volumes are calculated for ~1.5bbls per foot of hole drilled with excess to accommodate any lost circulation or wash out that may occur. Actual water volumes used during operations will depend on the depth of the well, length of horizontal sections, and the losses that may occur during the operation. Temporary water flowlines will be permitted via ROW approval letter and proper grants as needed based on drilling and completion schedules as needed. Well completion is expected to require approximately 550,000 barrels of water per horizontal well. Actual water volumes used during operations depend on the depth of the well and length of horizontal sections.

**Construction Material (Section 6):**

- Source: 32.406051, -103.901219
- Character: Lifts of compacted caliche
- Intended use: Maintenance of existing facilities, well pad, and access roads

**Methods for Handling Waste (Section 7):**

- Cuttings: Drill cuttings will be held in roll-off style mud boxes and will be taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site
- Drilling Fluids. Drilling fluids will be contained in steel mud pits and will be taken to an NMOCD approved commercial disposal facility.
- Produced Fluids:
    - Water produced from the well during completions will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.
    - Oil produced during operations will be stored in tanks until sold.
- Garbage, Debris and Other Waste Materials: All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approved sanitary landfill. Immediately after drilling, all debris and other waste materials on and around the 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.
- Sewage: Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completions activities, or as required, the toilet holding tanks will be pumped and the contents thereof will be disposed in an approved sewage disposal facility. All state and local laws and regulations pertaining to the disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- Hazardous Materials:
    - All drilling wastes identified as hazardous substances by the Comprehensive Environmental Response Compensation Liability Act (CERCLA) removed from the location will be disposed of at a hazardous waste facility approved by the U.S. Environmental Protection Agency (EPA) and will not be reused at another drilling location
    - No hazardous substances or waste will be stored on the location after completion of the well.
    - Chemicals brought to location will be on the Toxic Substance Control Act (TSCA) approved inventory list
    - All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in the Notice to Lessees (NTL) 3A will be reported to the BLM Carlsbad Field Office. Major events will be reported verbally within 24 hours, followed by a written report within 15 days. “Other than Major Events” will be reported in writing within 15 days

**Ancillary Facilities (Section 8):**

- No ancillary facilities are requested for this development

**Well Site Layout (Section 9):**

- Certified well-site layouts for the individual wells, issued by the registered surveyor, have been attached under SUPO section 9 of the APD
- Rig layouts for individual wells, as per the 43 CFR requirements, have also been attached under SUPO section 9 of the individual APDs

**Plans for surface reclamation (Section 10):**

XTO Permian Operating, LLC., requests a variance from interim reclamation until all drilling and completion activities have been finished on the pad as this is a multi-well pad where drilling and completion will be consecutive with the other wells on the pad. Reseeding of the topsoil stockpile in place will maintain topsoil vitality until interim reclamation ensues. Once activities are completed, XTO Permian Operating, LLC., will coordinate interim reclamation with the appropriate BLM personnel or use the following plan:

Non-Commercial Well (Not Productive), Interim & Final Reclamation:

*Definition:* Reclamation includes disturbed areas where the original landform and/or a natural vegetative community will be restored, and it is anticipated the site will not be disturbed for future development.

*Reclamation Standards*:

The portions of the pad not essential to production facilities or space required for workover operations will be reclaimed and seeded as per BLM requirements for interim reclamation. All equipment and trash will be removed, and the surfacing material will be removed from the well pad and road and transported to the original caliche pit or used to maintain other roads. The location will then be ripped and seeded. The site will be free of State-or County-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds will be controlled.

- 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, head cutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.
- There is no existing vegetation at the existing Well Pad, Roads, and Pipelines.
- Reconstruction Method and Topsoil Redistribution: The original stockpiled 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.
- 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.

Seeding:

- Seedbed Preparation: 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. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.
- Seed BMP: If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4-6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting to break the soil crust and create seed germination micro-sites.
- Seed Method: Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used. If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.
- Weed Treatment Plan Description: Weed control for all phases will be using approved pesticides and herbicides according to applicable State, Federal and local laws.

- Monitoring Plan Description: Monitoring of invasive and noxious weeds will be visual and as needed. If it is determined additional methods are required to monitor invasive and noxious weeds, appropriate BLM authorities will be contacted with a plan of action for approval prior to implementation.
- Success Standards: 100% compliance with applicable regulations.
- Pit Closure Description: There will be no reserve pit as each well will be drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17.

**Surface Ownership (Section 11):**

The surface used for the Big Eddy Unit DI 9 Arrow Fed Com development is owned by the New Mexico State Land Office (NMSLO) & the Bureau of Land Management. The Drill Island, Well Pad, CVB and the flowlines are on the state land (E/2 of Sec 21 & NENE of Sec 28 in T21S-R30E). Existing Access Roads, MSO connection, OHE lines traverse through the state-owned tracts (E/2 of Sec 21 & NENE of Sec 28 in T21S - R30E) & federal lands (S/2 of Sec 27 & N/2 of Sec 34 in T21S – R30E)

**Other Information (Section 12):**

The XTO Permian Operating, LLC., representatives for ensuring compliance with the surface use plan, are listed below:
Scott Patterson
Surface Land Advisor
3617 N Big Spring St
Midland, Texas 79705
432-301-2471

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# PWD Data Report

02/18/2026

**APD ID:** 10400106264 **Submission Date:** 07/31/2025

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Well Type:** CONVENTIONAL GAS WELL **Well Work Type:** Drill

## Section 1 - General

**Would you like to address long-term produced water disposal?** NO

## Section 2 - Lined

**Would you like to utilize Lined Pit PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Other PWD Surface Owner Description:**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit**

**Pit liner description:**

**Pit liner manufacturers**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule**

**Lined pit reclamation description:**

**Lined pit reclamation**

**Leak detection system description:**

**Leak detection system**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Lined pit Monitor description:**

**Lined pit Monitor**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information**

## Section 3 - Unlined

**Would you like to utilize Unlined Pit PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD disturbance (acres):** **PWD surface owner:**

**Other PWD Surface Owner Description:**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule**

**Unlined pit reclamation description:**

**Unlined pit reclamation**

**Unlined pit Monitor description:**

**Unlined pit Monitor**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user**

**Estimated depth of the shallowest aquifer (feet):**

**Precipitated Solids Permit**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**State**

**Unlined Produced Water Pit Estimated**

**Unlined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information**

## Section 4 -

**Would you like to utilize Injection PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Other PWD Surface Owner Description:**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:** **Injection well name:**

**Assigned injection well API number?** **Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection**

**Underground Injection Control (UIC) Permit?**

**UIC Permit**

## Section 5 - Surface

**Would you like to utilize Surface Discharge PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Other PWD Surface Owner Description :**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

## Section 6 -

**Would you like to utilize Other PWD options?** N

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**PWD Surface Owner Description:**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type**

**Have other regulatory requirements been met?**

**Other regulatory requirements**

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Bond Info Data

02/18/2026

**APD ID:** 10400106264 **Submission Date:** 07/31/2025

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM **Well Number:** 115H

**Well Type:** CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Bond

**Federal/Indian APD:** FED

**BLM Bond number:** NMB106723860

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Sundry Print Report

10/23/2026

**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM

**Well Location:** T21S / R30E / SEC 21 / SESE / 32.457584 / -103.879228

**County or Parish/State:** EDDY / NM

**Well Number:** 115H

**Type of Well:** CONVENTIONAL GAS WELL

**Allottee or Tribe Name:**

**Lease Number:** NMNM130866

**Unit or CA Name:**

**Unit or CA Number:**

**US Well Number:**

**Operator:** XTO PERMIAN OPERATING LLC

## Notice of Intent

**Sundry ID:** 2923362

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 07/31/2026

**Time Sundry Submitted:** 10:47

**Date proposed operation will begin:** 08/14/2026

**Procedure Description:** BIG EDDY UNIT DI 9 ARROW FED COM 115H APD ID# 10400106264 SUNDRY LANGUAGE XTO PERMIAN OPERATING LLC. respectfully requests approval to make the following changes to the approved APD. Changes include SHL, KOP, FTP, LTP, BHL, Proposed Total Depth, Pool Name, Casing Design, Cement Program, Muds Circulation System. FROM: TO: SHL: 24' FSL & 713' FEL OF SECTION 21-T21S-R30E 6' FNL & 524' FEL OF SECTION 28-T21S-R30E KOP: 770' FSL & 330' FWL OF SECTION 27-T21S-R30E 985' FSL & 528' FEL OF SECTION 28-T21S-R30E FTP: 770' FSL & 330' FWL OF SECTION 27-T21S-R30E 424' FSL & 100' FWL OF SECTION 27-T21S-R30E LTP: 770' FSL & 330' FEL OF SECTION 25-T21S-R30E 335' FSL & 100' FEL OF SECTION 25-T21S-R30E BHL: 770' FSL & 280' FEL OF SECTION 25-T21S-R30E 335' FSL & 50' FEL OF SECTION 25-T21S-R30E The proposed total depth is changing from 28518’ MD/ 11354’ TVD to 26118’ MD/ 8514’ TVD. The Pool Name is changing from GOLDEN LANE; WOLFCAMP (GAS) to WC-015 G-08 S212915D; BONE SPRING. No New Surface disturbance. See attached drilling program for the updated casing design, cement program and the mud circulation system.

## NOI Attachments

**Procedure Description**

BEU_DI_9_Arrow_Fed_Com_115H_Sundry_Attachments_20260803080107.pdf



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**Well Name:** BIG EDDY UNIT DI 9 ARROW FED COM

**Well Location:** T21S / R30E / SEC 21 / SESE / 32.457584 / -103.879228

**County or Parish/State:** EDDY / NM

**Well Number:** 115H

**Type of Well:** CONVENTIONAL GAS WELL

**Allottee or Tribe Name:**

**Lease Number:** NMNM130866

**Unit or CA Name:**

**Unit or CA Number:**

**US Well Number:**

**Operator:** XTO PERMIAN OPERATING LLC

## Conditions of Approval

**Authorized**

Sundry_2923362_BEU_DI_9_Arrow_Fed_Com_115H_COAs_20261020164726.pdf

## Operator

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

**Operator Electronic Signature:** LAURA CHAPMAN

**Signed on:** AUG 03, 2026 08:01 AM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Regulatory Analyst

**Street Address:** 22777 SPRINGWOODS VILLAGE PARKWAY

**City:** SPRING **State:** TX

**Phone:** (346) 335-5969

**Email address:** LAURA.M.CHAPMAN@EXXONMOBIL.COM

## Field

**Representative Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

## BLM Point of Contact

**BLM POC Name:** CHRISTOPHER WALLS

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5752342234

**BLM POC Email Address:** CWALLS@BLM.GOV

**Disposition:** Approved

**Disposition Date:** 10/22/2026

**Signature:** Chris Walls



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Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

***SUBMIT IN TRIPLICATE*** *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.

2. Name of Operator

9. API Well No.
30-015-59139

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

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

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

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

Title

Signature

Date

**THE SPACE FOR FEDERAL OR STATE OFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

## Additional Information

### Additional Remarks

BHL: 770' FSL & 280' FEL OF SECTION 25-T21S-R30E 335' FSL & 50' FEL OF SECTION 25-T21S-R30E

The proposed total depth is changing from 28518 MD/ 11354 TVD to 26118 MD/ 8514 TVD.

The Pool Name is changing from GOLDEN LANE; WOLFCAMP (GAS) to WC-015 G-08 S212915D; BONE SPRING.

No New Surface disturbance.

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

### Location of Well

0. SHL: SESE / 24 FSL / 713 FEL / TWSP: 21S / RANGE: 30E / SECTION: 21 / LAT: 32.457584 / LONG: -103.879228 ( TVD: 0 feet, MD: 0 feet )

PPP: SWSW / 770 FSL / 330 FWL / TWSP: 21S / RANGE: 30E / SECTION: 27 / LAT: 32.445114 / LONG: -103.87585 ( TVD: 11354 feet, MD: 14002 feet )

BHL: SESE / 770 FSL / 280 FEL / TWSP: 21S / RANGE: 30E / SECTION: 25 / LAT: 32.445051 / LONG: -103.826473 ( TVD: 11354 feet, MD: 28518 feet )

CONFIDENTIAL

Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

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

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION

C-102
Revised July 9, 2024
Submit Electronically
via OCD Permitting

Submittal Type: ☐ Initial Submittal ☒ Amended Report ☐ As Drilled

## WELL LOCATION INFORMATION

| API Number | Pool Code | Pool Name |
|---|---|---|
| 30-015-59139 | 98053 | WC-015 G-08 S212915D; BONE SPRING |

| Property Code | Property Name | Well Number |
|---|---|---|
| 339537 | BIG EDDY UNIT DI 9 ARROW FED COM | 115H |

| OGRID No. | Operator Name | Ground Level Elevation |
|---|---|---|
| 373075 | XTO PERMIAN OPERATING, LLC. | 3152' |

Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal
Mineral Owner: ☒ State ☐ Fee ☐ Tribal ☒ Federal

### Surface Location

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| A | 28 | 21S | 30E | | 6 FNL | 524 FEL | 32.457500 | -103.878612 | EDDY |

### Bottom Hole Location

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 25 | 21S | 30E | | 335 FSL | 50 FEL | 32.443854 | -103.825729 | EDDY |

| Dedicated Acres | Infill or Defining Well | Defining Well API | Overlapping Spacing Unit (Y/N) | Consolidation Code |
|---|---|---|---|---|
| 1,920.00 | INFILL | BIG EDDY UNIT DI 9 ARROW FED COM 105H | N | C - Communitization |

Order Numbers: P-NSP
Well setbacks are under Common Ownership: ☐Yes ☐No ☒N/A

### Kick Off Point (KOP)

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 28 | 21S | 30E | | 985 FSL | 528 FEL | 32.445710 | -103.878631 | EDDY |

### First Take Point (FTP)

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 27 | 21S | 30E | | 424 FSL | 100 FWL | 32.444163 | -103.876596 | EDDY |

### Last Take Point (LTP)

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 25 | 21S | 30E | | 335 FSL | 100 FEL | 32.443854 | -103.825891 | EDDY |

| Unitized Area or Area of Uniform Interest | Spacing Unit Type | Ground Floor Elevation: |
|---|---|---|
| NMNM-070965X | ☒ Horizontal ☐ Vertical | 3184' |

### OPERATOR CERTIFICATIONS

*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral 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 order from the division.*

Laura Chapman — Signature
6/29/2026 — Date

Laura Chapman — Printed Name

laura.m.chapman@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.*




Signature and Seal of Professional Surveyor

23786 — Certificate Number
06-11-2026 — Date of Survey

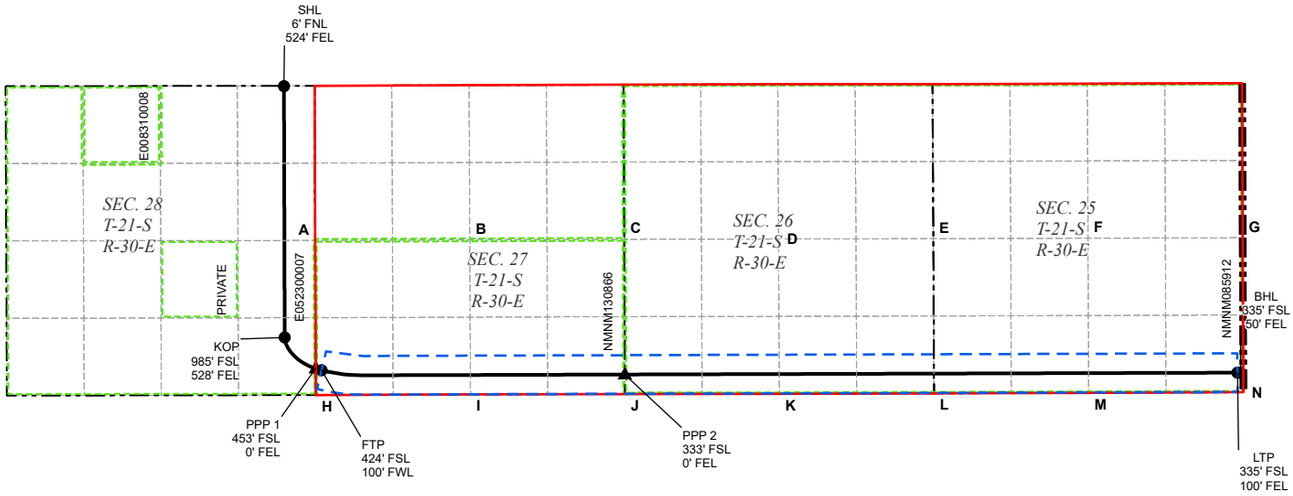
DN
618.013004.05-15

*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.*

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.




**LEGEND**

SECTION LINE
TOWNSHIP LINE
DEDICATED ACREAGE
330' BUFFER
MINERAL LEASE
WELLBORE
PPP
WELL

**WELL COORDINATE TABLE**

| WELL | NAD 83 NME X | NAD 83 NME Y | NAD 83 LAT | NAD 83 LON | NAD 27 NME X | NAD 27 NME Y | NAD 27 LAT | NAD 27 LON |
|---|---|---|---|---|---|---|---|---|
| SHL | 681,591.8 | 530,468.3 | 32.457500 | -103.878612 | 640,411.1 | 530,407.0 | 32.457378 | -103.878114 |
| KOP | 681,604.3 | 526,178.8 | 32.445710 | -103.878631 | 640,423.5 | 526,117.6 | 32.445587 | -103.878134 |
| FTP | 682,234.6 | 525,619.0 | 32.444163 | -103.876596 | 641,053.8 | 525,557.8 | 32.444041 | -103.876098 |
| LTP | 697,877.1 | 525,577.2 | 32.443854 | -103.825891 | 656,696.2 | 525,516.1 | 32.443732 | -103.825395 |
| BHL | 697,927.1 | 525,577.3 | 32.443854 | -103.825729 | 656,746.2 | 525,516.3 | 32.443732 | -103.825232 |
| PPP 1 | 682,134.5 | 525,647.1 | 32.444242 | -103.876920 | 640,953.6 | 525,585.9 | 32.444120 | -103.876422 |
| PPP 2 | 687,413.4 | 525,545.6 | 32.443900 | -103.859809 | 646,232.6 | 525,484.5 | 32.443778 | -103.859312 |

**CORNER COORDINATE TABLE**

| CORNER | NAD 83 NME X | NAD 83 NME Y | NAD 27 NME X | NAD 27 NME Y |
|---|---|---|---|---|
| A | 682,125.2 | 527,834.6 | 640,944.4 | 527,773.4 |
| B | 684,765.1 | 527,844.4 | 643,584.4 | 527,783.2 |
| C | 687,403.9 | 527,854.1 | 646,223.2 | 527,793.0 |
| D | 690,039.5 | 527,859.3 | 648,858.8 | 527,798.2 |
| E | 692,684.3 | 527,864.6 | 651,503.5 | 527,803.5 |
| F | 695,324.4 | 527,872.6 | 654,143.7 | 527,811.4 |
| G | 697,967.8 | 527,880.5 | 656,787.0 | 527,819.4 |
| H | 682,136.4 | 525,194.6 | 640,955.6 | 525,133.4 |
| I | 684,777.3 | 525,205.2 | 643,596.5 | 525,144.1 |
| J | 687,414.7 | 525,212.8 | 646,233.9 | 525,151.7 |
| K | 690,053.0 | 525,217.2 | 648,872.2 | 525,156.1 |
| L | 692,694.3 | 525,223.5 | 651,513.5 | 525,162.4 |
| M | 695,335.6 | 525,233.0 | 654,154.8 | 525,171.9 |
| N | 697,978.4 | 525,242.5 | 656,797.6 | 525,181.4 |

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

ExxonMobil
Big Eddy Unit DI 9 ARROW FED COM 115H
Projected TD: 26118' MD / 8514' TVD
SHL: 6' FNL & 524' FEL , Section 28, T21S, R30E
BHL: 335' FSL & 50' FEL , Section 25, T21S, R30E
EDDY County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

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

| Formation | Well Depth (TVD) | Water/Oil/Gas |
|---|---|---|
| Rustler | 187' | Water |
| Salado | 401' | Water |
| Top Salt | 501' | Water |
| MB-126 | 1034' | Water |
| Base of Salt | 3194' | Water |
| Delaware | 3484' | Water |
| Cherry Canyon | 4401' | Water/Oil/Gas |
| Brushy Canyon | 6047' | Water/Oil/Gas |
| Bone Spring Lm. | 7247' | Water/Oil/Gas |
| Lower Avalon | 7834' | Water/Oil/Gas |
| 1st Bone Spring Lime | 7994' | Water/Oil/Gas |
| 1st Bone Spring Sand | 8289' | Water/Oil/Gas |
| 1st Bone Spring Sand Landing | 8514' | Water/Oil/Gas |
| 2nd Bone Spring Lime | 8768' | Water/Oil/Gas |
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**Section 2 Summary:**

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

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 20" inch casing at 491' and circulating cement back to surface.

**3. Primary Casing Design**

**Primary Design:**

| Hole Size (in.) | MD | Casing TVD | OD Csg | Weight | Grade | Collar | New/Used | SF Burst | SF Collapse | SF Tension |
|---|---|---|---|---|---|---|---|---|---|---|
| 26 / 24" | 0' – 491' | 491' | 20" | 94 | J55 | BTC | New | 14.01 | 4.89 | 10.57 |
| 17.5" | 0' – 3294' | 3126' | 13-3/8" | 54.5 | J55 | BTC | New | 2.75 | 1.67 | 3.49 |
| 12.25" | 0' – 3394' | 3207' | 9-5/8" | 40 | P110-IC | BTC | New | 4.44 | 6.12 | 3.47 |
| 12.25" | 3394' – 9256' | 7958' | 9-5/8" | 40 | L80-IC | BTC | New | 2.90 | 3.91 | 2.52 |
| 8.75 / 8.5" | 0' – 26118' | 8514' | 5-1/2" | 20 | P110-ICY | Tenaris Wedge 441 | New | 1.18 | 3.34 | 3.09 |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Section 3 Summary:**

Exxon Mobil will keep casing fluid filled to meet BLM's collapse requirement.
The planned kick off point is located at: 9356' MD / 8036' TVD.

Contingency to run 6" OD, 26 lb/ft, P110-CY grade, Tenaris Wedge 461 production casing is in place. This casing string complies with all applicable industry standards and meets or exceeds the required casing design safety factors. Cement volumes will be optimized in accordance with the objectives outlined in Section 4: Cement Program.

**Wellhead:**

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

Wellhead will be installed by manufacturer's representatives.

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

**4. Cement Program**

**Primary Cementing**

| Hole Section | Slurry Type | No. Sacks | Density (ppg) | Yield (ft3/sack) | TOC (ft) | Casing Setting Depth (MD) | Excess (%) | Slurry Description |
|---|---|---|---|---|---|---|---|---|
| Surface 1 | Lead | 273 | 12.4 | 2.11 | 0 | 491 | 100% | Surface 1 Class C Lead Cement |
| Surface 1 | Tail | 679 | 14.8 | 1.33 | 191 | 491 | 100% | Surface 1 Class C Tail Cement |
| Intermediate 1 | Lead | 1545 | 12.9 | 2.02 | 0 | 3,294 | 50% | Intermediate 1 Class C Lead Cement |
| Intermediate 1 | Tail | 216 | 14.8 | 1.45 | 2994 | 3,294 | 50% | Intermediate 1 Class C Tail Cement |
| Intermediate 2 | Lead | | | | | | | |
| Intermediate 2 | Tail | 693 | 14.8 | 1.45 | 6047 | 9,256 | 0% | Intermediate 2 Class C Tail Cement |
| Production 1 | Lead | | | | | | | |
| Production 1 | Tail | 3807 | 13.2 | 1.44 | 8756 | 26,118 | 25% | Production 1 Class C Tail Cement |
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**Breadenhead Cementing**

| Casing | Slurry Type | No. Sacks | Density (ppg) | Yield (ft3/sack) | Cemented Interval | Excess (%) | Slurry Description |
|---|---|---|---|---|---|---|---|
| Intermediate 2 | Bradenhead Squeeze | 949 | 14.8 | 1.45 | 2794 - 6047' | 35% | Intermediate Class C Bradenhead Squeeze Cement |
| | | | | | | | |

**Section 4 Summary:**

XOM will comply with the R-111-Q requirements including (but not limited to):
1)Alignment with KPLA requirements per R-111-Q Figure D schematic above, leaving open annulus open for pressure monitoring during frac and utilizing new casing that meets API standards.
2)Contingency plans in place to divert fluids away from salt interval in event of production casing failure.
3)Intermediate 2 primary cement job with TOC within Delaware Mountain Group with 0% excess & below the minimum 500' from intermediate 1 casing shoe.
oIntermediate 2 bradenhead squeeze to be completed within 180 days after completions to tieback TOC to salt string at least 500ft but with top below Marker Bed 126.
4)Production cement to be tied back no less than 500ft inside previous casing shoe.

**5. Pressure Control Equipment**

**Section 5 Summary:**

Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of a minimum 5M Hydril and a minimum 10M triple Ram BOP.

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

No break testing will be done if the intermediate MASP is >4800 psi or if deepest intermediate casing point is set at >12000' TVD"

**Requested Variances**

4A) Offline Cementing Variance
XOM requests the option to perform offline cement and bradenhead jobs (if needed) SURFACE, INTERMEDIATE, and PRODUCTION casing strings where batch drilling is approved. XOM will ensure well is static with no pressure on the csg annulus, as with all other casing strings where batch drilling operations occur before moving off the rig. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence. The TA cap will also be installed when applicable per wellhead manufacturer's procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

5A) Break Test Variance
A break testing variance is requested to ONLY test broken pressure seals on the BOP equipment when moving from wellhead to wellhead for the intermediate hole sections which is in compliance with API Standard 53. Variance is requested only for intermediate hole sections where MASP <4800 psi and intermediate hole sections do not exceed 12,000' TVD.

5B) Flex Hose Variance
A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

5C) Diverter Variance
Operator request a variance to utilize a temporary blowout preventer equipment (Diverter) to drill 1st intermediate section. This temporary diverter consist of a minimum 2M Hydril. Once the casing is run and cemented, and the multi-bowl wellhead system is installed and tested, the full BOP system with Hydril and rams will be installed before continue drilling or entering into a hydrocarbon bearing interval.

8A) Open Hole Logging Variance
Open hole logging is not planned on this well.

10A) Spudder Rig Variance
XOM requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing.

10B) Batch Drilling Variance
XOM requests a variance to be able to batch drill this well. In doing so, XOM will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. XOM will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XOM will begin drilling the production hole on each of the wells.

**6. Proposed Mud Circulation System**

| INTERVAL | Hole Size | Mud Type | MW (ppg) | Viscosity (sec/qt) | Fluid (cc) | Comments |
|---|---|---|---|---|---|---|
| 0' – 491' | 26 / 24" | FW/Native | 8.3 - 8.7 | 35-40 | NC | Fresh Water or Native Water |
| 491' – 3294' | 17.5" | BDE/OBM or FW/Brine | 9.5 - 10 | 30-32 | NC | Fluid type will be based upon on well conditions. A fully saturated system will be used across the salt interval. |
| 3294' – 9256' | 12.25" | BDE/OBM or FW/Brine | 9.5 - 10 | 30-32 | NC | Fluid type will be based upon on well conditions. |
| 9256' – 26118' | 8.75 / 8.5" | OBM / Cut Brine | 9 - 9.5 | 50-60 | NC - 20 | OBM or Cut Brine depending on Well Conditions |
| | | | | | | |
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**Section 6 Summary:**

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

Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. An EDR (Electronic Drilling Recorder) will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

**7. Auxiliary Well Control and Monitoring Equipment**

**Section 7 Summary:**

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

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

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

**8. Logging, Coring and Testing Program**

**Section 8 Summary:**

Open hole logging is not planned on this well.

**9. Abnormal Pressures and Temperatures / Potential Hazards**

**Section 9 Summary:**

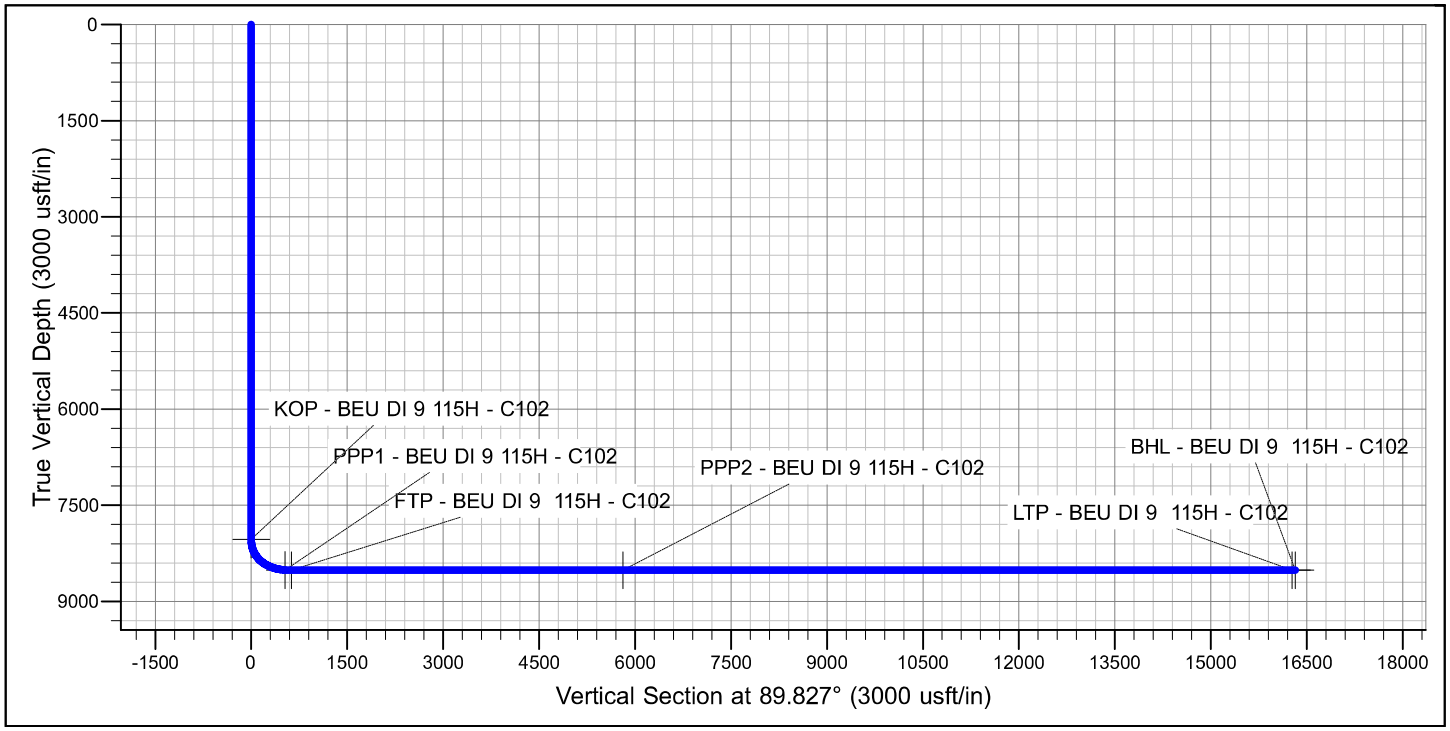
The estimated bottom hole temperature of 152F to 172F. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation is possible throughout the well.

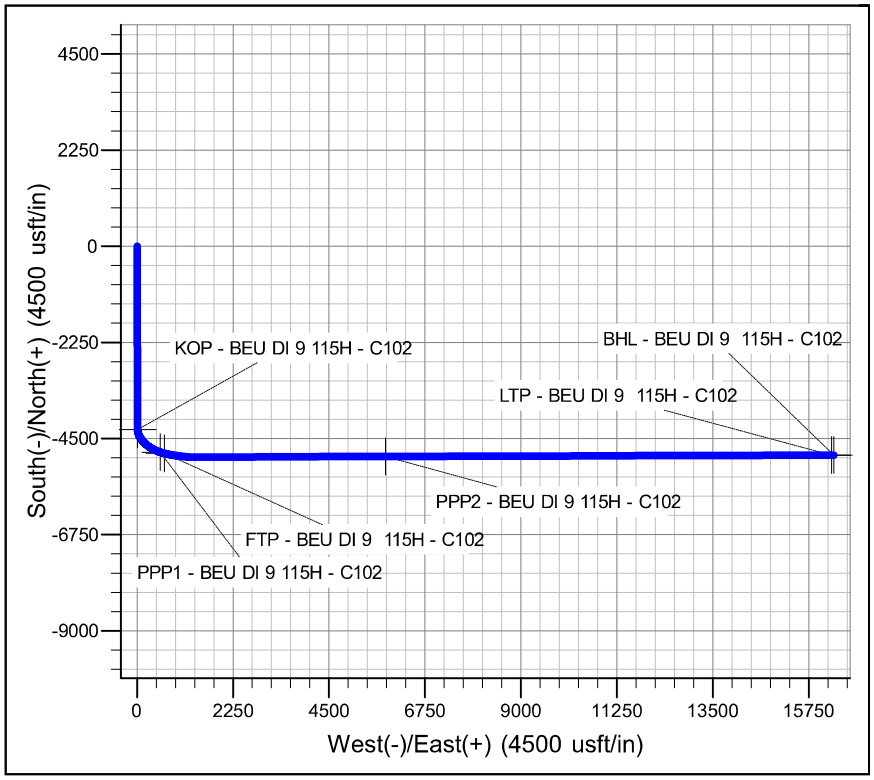
**10. Anticipated Starting Date and Duration of Operations**

**Section 10 Summary:**

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

Site: BEU DI 9 Arrow, Row 3 - Plans
Well: BEU DI 9 Arrow Fed Com 115H
Wellbore: OH
Design: Plan 0.1




FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---|---|---|
| 187.00 | 187.00 | Rustler |
| 401.00 | 401.00 | Salado |
| 501.00 | 501.00 | Top of Salt |
| 1034.00 | 1034.00 | MB 126 |
| 3194.00 | 3378.19 | Base Salt |
| 3484.00 | 3736.20 | Delaware/Lamar |
| 3561.00 | 3831.25 | Bell Canyon |
| 4401.00 | 4868.23 | Cherry Canyon |
| 6047.00 | 6900.22 | Brushy Canyon Ss. |
| 7247.00 | 8381.62 | Bone Spring Lm. |
| 7344.00 | 8501.36 | Avalon Ss. |
| 7694.00 | 8933.44 | Middle Avalon Carb. |
| 7834.00 | 9106.27 | Mid Avalon Shale |
| 7994.00 | 9303.79 | First Bone Spring Carb. |
| 8289.00 | 9699.52 | First Bone Spring Ss. |
| 8514.00 | 10374.77 | Landing Point Lower 1BSS |

# ROC

**Long Lead - BEU DI 9 (NAD 27 NME)**
**BEU DI 9 Arrow, Row 3 - Plans**
**BEU DI 9 Arrow Fed Com 115H**

**OH**

**Plan: Plan 0.1**

# Standard Planning Report

**16 June, 2026**

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**Project** Long Lead - BEU DI 9 (NAD 27 NME)

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

**Site** BEU DI 9 Arrow, Row 3 - Plans

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 530,556.99 usft | **Latitude:** | 32° 27' 28.046 N |
| **From:** | Map | **Easting:** | 640,410.96 usft | **Longitude:** | 103° 52' 41.206 W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | | |

**Well** BEU DI 9 Arrow Fed Com 115H

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 530,407.00 usft | **Latitude:** | 32° 27' 26.562 N |
| | **+E/-W** | 0.00 usft | **Easting:** | 640,411.10 usft | **Longitude:** | 103° 52' 41.212 W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,152.00 usft |
| **Grid Convergence:** | | 0.24 ° | | | | |

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2020 | 3/12/2026 | 6.15 | 59.91 | 47,109.37796441 |

**Design** Plan 0.1

**Audit Notes:**

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

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 89.827 |

**Plan Survey Tool Program** **Date** 6/16/2026

| | Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name | Remarks |
|---|---|---|---|---|---|
| 1 | 0.00 | 26,118.43 | Plan 0.1 (OH) | XOMR2_OWSG MWD+IFR1+ OWSG MWD + IFR1 + Multi-St | |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**Plan Sections**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,050.00 | 0.00 | 0.000 | 1,050.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,101.41 | 35.90 | 179.835 | 2,969.79 | -621.92 | 1.79 | 1.75 | 1.75 | 0.00 | 179.83 | |
| 9,356.13 | 35.90 | 179.835 | 8,036.40 | -4,289.47 | 12.38 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9,857.15 | 60.00 | 135.000 | 8,378.65 | -4,602.64 | 172.80 | 8.00 | 4.81 | -8.95 | -71.50 | |
| 10,374.77 | 90.00 | 105.000 | 8,514.00 | -4,838.47 | 600.04 | 8.00 | 5.80 | -5.80 | -49.11 | |
| 11,133.43 | 90.00 | 89.827 | 8,514.00 | -4,936.07 | 1,350.17 | 2.00 | 0.00 | -2.00 | -90.00 | |
| 26,068.43 | 90.00 | 89.827 | 8,514.00 | -4,890.90 | 16,285.10 | 0.00 | 0.00 | 0.00 | 0.00 | LTP - BEU DI 9 115H |
| 26,118.43 | 90.00 | 89.827 | 8,514.00 | -4,890.75 | 16,335.10 | 0.00 | 0.00 | 0.00 | 0.00 | BHL - BEU DI 9 115H |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**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 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.000 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 187.00 | 0.00 | 0.000 | 187.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Rustler** | | | | | | | | | |
| 200.00 | 0.00 | 0.000 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.000 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.000 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 401.00 | 0.00 | 0.000 | 401.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Salado** | | | | | | | | | |
| 500.00 | 0.00 | 0.000 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 501.00 | 0.00 | 0.000 | 501.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Top of Salt** | | | | | | | | | |
| 600.00 | 0.00 | 0.000 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.000 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.000 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.000 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 0.00 | 0.000 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,034.00 | 0.00 | 0.000 | 1,034.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **MB 126** | | | | | | | | | |
| 1,050.00 | 0.00 | 0.000 | 1,050.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 0.88 | 179.835 | 1,100.00 | -0.38 | 0.00 | 0.00 | 1.75 | 1.75 | 0.00 |
| 1,200.00 | 2.63 | 179.835 | 1,199.95 | -3.44 | 0.01 | 0.00 | 1.75 | 1.75 | 0.00 |
| 1,300.00 | 4.38 | 179.835 | 1,299.76 | -9.54 | 0.03 | 0.00 | 1.75 | 1.75 | 0.00 |
| 1,400.00 | 6.13 | 179.835 | 1,399.33 | -18.69 | 0.05 | 0.00 | 1.75 | 1.75 | 0.00 |
| 1,500.00 | 7.88 | 179.835 | 1,498.58 | -30.88 | 0.09 | 0.00 | 1.75 | 1.75 | 0.00 |
| 1,600.00 | 9.63 | 179.835 | 1,597.42 | -46.09 | 0.13 | -0.01 | 1.75 | 1.75 | 0.00 |
| 1,700.00 | 11.38 | 179.835 | 1,695.74 | -64.31 | 0.19 | -0.01 | 1.75 | 1.75 | 0.00 |
| 1,800.00 | 13.13 | 179.835 | 1,793.46 | -85.53 | 0.25 | -0.01 | 1.75 | 1.75 | 0.00 |
| 1,900.00 | 14.88 | 179.835 | 1,890.48 | -109.72 | 0.32 | -0.01 | 1.75 | 1.75 | 0.00 |
| 2,000.00 | 16.63 | 179.835 | 1,986.73 | -136.86 | 0.39 | -0.02 | 1.75 | 1.75 | 0.00 |
| 2,100.00 | 18.38 | 179.835 | 2,082.09 | -166.93 | 0.48 | -0.02 | 1.75 | 1.75 | 0.00 |
| 2,200.00 | 20.13 | 179.835 | 2,176.50 | -199.90 | 0.58 | -0.03 | 1.75 | 1.75 | 0.00 |
| 2,300.00 | 21.88 | 179.835 | 2,269.85 | -235.73 | 0.68 | -0.03 | 1.75 | 1.75 | 0.00 |
| 2,400.00 | 23.63 | 179.835 | 2,362.07 | -274.40 | 0.79 | -0.04 | 1.75 | 1.75 | 0.00 |
| 2,500.00 | 25.38 | 179.835 | 2,453.06 | -315.87 | 0.91 | -0.04 | 1.75 | 1.75 | 0.00 |
| 2,600.00 | 27.13 | 179.835 | 2,542.75 | -360.10 | 1.04 | -0.05 | 1.75 | 1.75 | 0.00 |
| 2,700.00 | 28.88 | 179.835 | 2,631.04 | -407.04 | 1.17 | -0.05 | 1.75 | 1.75 | 0.00 |
| 2,800.00 | 30.63 | 179.835 | 2,717.85 | -456.66 | 1.32 | -0.06 | 1.75 | 1.75 | 0.00 |
| 2,900.00 | 32.38 | 179.835 | 2,803.11 | -508.91 | 1.47 | -0.07 | 1.75 | 1.75 | 0.00 |
| 3,000.00 | 34.13 | 179.835 | 2,886.74 | -563.74 | 1.63 | -0.08 | 1.75 | 1.75 | 0.00 |
| 3,101.41 | 35.90 | 179.835 | 2,969.79 | -621.92 | 1.79 | -0.08 | 1.75 | 1.75 | 0.00 |
| 3,200.00 | 35.90 | 179.835 | 3,049.66 | -679.73 | 1.96 | -0.09 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 35.90 | 179.835 | 3,130.66 | -738.36 | 2.13 | -0.10 | 0.00 | 0.00 | 0.00 |
| 3,378.19 | 35.90 | 179.835 | 3,194.00 | -784.21 | 2.26 | -0.11 | 0.00 | 0.00 | 0.00 |
| **Base Salt** | | | | | | | | | |
| 3,400.00 | 35.90 | 179.835 | 3,211.67 | -797.00 | 2.30 | -0.11 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 35.90 | 179.835 | 3,292.67 | -855.64 | 2.47 | -0.11 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 35.90 | 179.835 | 3,373.67 | -914.27 | 2.64 | -0.12 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 35.90 | 179.835 | 3,454.68 | -972.91 | 2.81 | -0.13 | 0.00 | 0.00 | 0.00 |
| 3,736.20 | 35.90 | 179.835 | 3,484.00 | -994.14 | 2.87 | -0.13 | 0.00 | 0.00 | 0.00 |
| **Delaware/Lamar** | | | | | | | | | |
| 3,800.00 | 35.90 | 179.835 | 3,535.68 | -1,031.55 | 2.98 | -0.14 | 0.00 | 0.00 | 0.00 |
| 3,831.25 | 35.90 | 179.835 | 3,561.00 | -1,049.87 | 3.03 | -0.14 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| **Bell Canyon** | | | | | | | | | |
| 3,900.00 | 35.90 | 179.835 | 3,616.69 | -1,090.18 | 3.15 | -0.15 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 35.90 | 179.835 | 3,697.69 | -1,148.82 | 3.31 | -0.15 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 35.90 | 179.835 | 3,778.70 | -1,207.46 | 3.48 | -0.16 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 35.90 | 179.835 | 3,859.70 | -1,266.09 | 3.65 | -0.17 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 35.90 | 179.835 | 3,940.71 | -1,324.73 | 3.82 | -0.18 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 35.90 | 179.835 | 4,021.71 | -1,383.37 | 3.99 | -0.19 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 35.90 | 179.835 | 4,102.72 | -1,442.00 | 4.16 | -0.19 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 35.90 | 179.835 | 4,183.72 | -1,500.64 | 4.33 | -0.20 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 35.90 | 179.835 | 4,264.72 | -1,559.28 | 4.50 | -0.21 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 35.90 | 179.835 | 4,345.73 | -1,617.91 | 4.67 | -0.22 | 0.00 | 0.00 | 0.00 |
| 4,868.23 | 35.90 | 179.835 | 4,401.00 | -1,657.92 | 4.78 | -0.22 | 0.00 | 0.00 | 0.00 |
| **Cherry Canyon** | | | | | | | | | |
| 4,900.00 | 35.90 | 179.835 | 4,426.73 | -1,676.55 | 4.84 | -0.22 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 35.90 | 179.835 | 4,507.74 | -1,735.19 | 5.01 | -0.23 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 35.90 | 179.835 | 4,588.74 | -1,793.82 | 5.18 | -0.24 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 35.90 | 179.835 | 4,669.75 | -1,852.46 | 5.35 | -0.25 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 35.90 | 179.835 | 4,750.75 | -1,911.09 | 5.51 | -0.26 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 35.90 | 179.835 | 4,831.76 | -1,969.73 | 5.68 | -0.26 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 35.90 | 179.835 | 4,912.76 | -2,028.37 | 5.85 | -0.27 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 35.90 | 179.835 | 4,993.77 | -2,087.00 | 6.02 | -0.28 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 35.90 | 179.835 | 5,074.77 | -2,145.64 | 6.19 | -0.29 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 35.90 | 179.835 | 5,155.77 | -2,204.28 | 6.36 | -0.30 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 35.90 | 179.835 | 5,236.78 | -2,262.91 | 6.53 | -0.30 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 35.90 | 179.835 | 5,317.78 | -2,321.55 | 6.70 | -0.31 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 35.90 | 179.835 | 5,398.79 | -2,380.19 | 6.87 | -0.32 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 35.90 | 179.835 | 5,479.79 | -2,438.82 | 7.04 | -0.33 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 35.90 | 179.835 | 5,560.80 | -2,497.46 | 7.21 | -0.33 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 35.90 | 179.835 | 5,641.80 | -2,556.10 | 7.38 | -0.34 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 35.90 | 179.835 | 5,722.81 | -2,614.73 | 7.54 | -0.35 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 35.90 | 179.835 | 5,803.81 | -2,673.37 | 7.71 | -0.36 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 35.90 | 179.835 | 5,884.82 | -2,732.01 | 7.88 | -0.37 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 35.90 | 179.835 | 5,965.82 | -2,790.64 | 8.05 | -0.37 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 35.90 | 179.835 | 6,046.82 | -2,849.28 | 8.22 | -0.38 | 0.00 | 0.00 | 0.00 |
| 6,900.22 | 35.90 | 179.835 | 6,047.00 | -2,849.41 | 8.22 | -0.38 | 0.00 | 0.00 | 0.00 |
| **Brushy Canyon Ss.** | | | | | | | | | |
| 7,000.00 | 35.90 | 179.835 | 6,127.83 | -2,907.92 | 8.39 | -0.39 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 35.90 | 179.835 | 6,208.83 | -2,966.55 | 8.56 | -0.40 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 35.90 | 179.835 | 6,289.84 | -3,025.19 | 8.73 | -0.41 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 35.90 | 179.835 | 6,370.84 | -3,083.82 | 8.90 | -0.41 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 35.90 | 179.835 | 6,451.85 | -3,142.46 | 9.07 | -0.42 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 35.90 | 179.835 | 6,532.85 | -3,201.10 | 9.24 | -0.43 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 35.90 | 179.835 | 6,613.86 | -3,259.73 | 9.41 | -0.44 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 35.90 | 179.835 | 6,694.86 | -3,318.37 | 9.58 | -0.44 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 35.90 | 179.835 | 6,775.86 | -3,377.01 | 9.74 | -0.45 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 35.90 | 179.835 | 6,856.87 | -3,435.64 | 9.91 | -0.46 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 35.90 | 179.835 | 6,937.87 | -3,494.28 | 10.08 | -0.47 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 35.90 | 179.835 | 7,018.88 | -3,552.92 | 10.25 | -0.48 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 35.90 | 179.835 | 7,099.88 | -3,611.55 | 10.42 | -0.48 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 35.90 | 179.835 | 7,180.89 | -3,670.19 | 10.59 | -0.49 | 0.00 | 0.00 | 0.00 |
| 8,381.62 | 35.90 | 179.835 | 7,247.00 | -3,718.05 | 10.73 | -0.50 | 0.00 | 0.00 | 0.00 |
| **Bone Spring Lm.** | | | | | | | | | |
| 8,400.00 | 35.90 | 179.835 | 7,261.89 | -3,728.83 | 10.76 | -0.50 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 8,500.00 | 35.90 | 179.835 | 7,342.90 | -3,787.46 | 10.93 | -0.51 | 0.00 | 0.00 | 0.00 |
| 8,501.36 | 35.90 | 179.835 | 7,344.00 | -3,788.26 | 10.93 | -0.51 | 0.00 | 0.00 | 0.00 |
| **Avalon Ss.** | | | | | | | | | |
| 8,600.00 | 35.90 | 179.835 | 7,423.90 | -3,846.10 | 11.10 | -0.52 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 35.90 | 179.835 | 7,504.91 | -3,904.74 | 11.27 | -0.52 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 35.90 | 179.835 | 7,585.91 | -3,963.37 | 11.44 | -0.53 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 35.90 | 179.835 | 7,666.91 | -4,022.01 | 11.61 | -0.54 | 0.00 | 0.00 | 0.00 |
| 8,933.44 | 35.90 | 179.835 | 7,694.00 | -4,041.61 | 11.66 | -0.54 | 0.00 | 0.00 | 0.00 |
| **Middle Avalon Carb.** | | | | | | | | | |
| 9,000.00 | 35.90 | 179.835 | 7,747.92 | -4,080.64 | 11.77 | -0.55 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 35.90 | 179.835 | 7,828.92 | -4,139.28 | 11.94 | -0.55 | 0.00 | 0.00 | 0.00 |
| 9,106.27 | 35.90 | 179.835 | 7,834.00 | -4,142.96 | 11.95 | -0.55 | 0.00 | 0.00 | 0.00 |
| **Mid Avalon Shale** | | | | | | | | | |
| 9,200.00 | 35.90 | 179.835 | 7,909.93 | -4,197.92 | 12.11 | -0.56 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 35.90 | 179.835 | 7,990.93 | -4,256.55 | 12.28 | -0.57 | 0.00 | 0.00 | 0.00 |
| 9,303.79 | 35.90 | 179.835 | 7,994.00 | -4,258.77 | 12.29 | -0.57 | 0.00 | 0.00 | 0.00 |
| **First Bone Spring Carb.** | | | | | | | | | |
| 9,356.13 | 35.90 | 179.835 | 8,036.40 | -4,289.47 | 12.38 | -0.57 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 37.14 | 174.318 | 8,071.67 | -4,315.52 | 13.73 | 0.70 | 8.00 | 2.83 | -12.58 |
| 9,450.00 | 38.85 | 168.440 | 8,111.08 | -4,345.91 | 18.37 | 5.24 | 8.00 | 3.42 | -11.76 |
| 9,500.00 | 40.83 | 163.013 | 8,149.48 | -4,376.92 | 26.29 | 13.07 | 8.00 | 3.96 | -10.85 |
| 9,550.00 | 43.05 | 158.027 | 8,186.68 | -4,408.39 | 37.45 | 24.14 | 8.00 | 4.43 | -9.97 |
| 9,600.00 | 45.46 | 153.454 | 8,222.50 | -4,440.17 | 51.81 | 38.40 | 8.00 | 4.83 | -9.15 |
| 9,650.00 | 48.04 | 149.257 | 8,256.76 | -4,472.10 | 69.28 | 55.78 | 8.00 | 5.16 | -8.39 |
| 9,699.52 | 50.74 | 145.431 | 8,289.00 | -4,503.73 | 89.58 | 75.98 | 8.00 | 5.44 | -7.73 |
| **First Bone Spring Ss.** | | | | | | | | | |
| 9,700.00 | 50.76 | 145.396 | 8,289.31 | -4,504.03 | 89.79 | 76.19 | 8.00 | 5.57 | -7.42 |
| 9,750.00 | 53.60 | 141.828 | 8,319.97 | -4,535.80 | 113.23 | 99.54 | 8.00 | 5.68 | -7.13 |
| 9,800.00 | 56.54 | 138.517 | 8,348.59 | -4,567.26 | 139.49 | 125.70 | 8.00 | 5.88 | -6.62 |
| 9,850.00 | 59.56 | 135.426 | 8,375.05 | -4,598.25 | 168.45 | 154.57 | 8.00 | 6.04 | -6.18 |
| 9,857.15 | 60.00 | 135.000 | 8,378.65 | -4,602.64 | 172.80 | 158.90 | 8.00 | 6.12 | -5.96 |
| 9,900.00 | 62.28 | 132.073 | 8,399.34 | -4,628.48 | 200.01 | 186.03 | 8.00 | 5.31 | -6.83 |
| 9,950.00 | 65.01 | 128.810 | 8,421.54 | -4,657.52 | 234.11 | 220.04 | 8.00 | 5.46 | -6.53 |
| 10,000.00 | 67.81 | 125.691 | 8,441.55 | -4,685.23 | 270.58 | 256.43 | 8.00 | 5.60 | -6.24 |
| 10,050.00 | 70.66 | 122.694 | 8,459.28 | -4,711.49 | 309.25 | 295.02 | 8.00 | 5.71 | -5.99 |
| 10,100.00 | 73.56 | 119.802 | 8,474.64 | -4,736.16 | 349.92 | 335.62 | 8.00 | 5.81 | -5.78 |
| 10,150.00 | 76.50 | 116.996 | 8,487.56 | -4,759.12 | 392.41 | 378.03 | 8.00 | 5.88 | -5.61 |
| 10,200.00 | 79.48 | 114.258 | 8,497.96 | -4,780.26 | 436.49 | 422.06 | 8.00 | 5.94 | -5.48 |
| 10,250.00 | 82.47 | 111.572 | 8,505.81 | -4,799.48 | 481.97 | 467.48 | 8.00 | 5.99 | -5.37 |
| 10,300.00 | 85.48 | 108.924 | 8,511.05 | -4,816.69 | 528.61 | 514.07 | 8.00 | 6.02 | -5.30 |
| 10,350.00 | 88.50 | 106.297 | 8,513.68 | -4,831.79 | 576.19 | 561.60 | 8.00 | 6.04 | -5.25 |
| 10,374.77 | 90.00 | 105.000 | 8,514.00 | -4,838.47 | 600.04 | 585.43 | 8.00 | 6.05 | -5.24 |
| **Landing Point Lower 1BSS** | | | | | | | | | |
| 10,400.00 | 90.00 | 104.495 | 8,514.00 | -4,844.89 | 624.44 | 609.81 | 2.00 | 0.00 | -2.00 |
| 10,500.00 | 90.00 | 102.495 | 8,514.00 | -4,868.23 | 721.68 | 706.97 | 2.00 | 0.00 | -2.00 |
| 10,600.00 | 90.00 | 100.495 | 8,514.00 | -4,888.15 | 819.67 | 804.90 | 2.00 | 0.00 | -2.00 |
| 10,700.00 | 90.00 | 98.495 | 8,514.00 | -4,904.65 | 918.29 | 903.48 | 2.00 | 0.00 | -2.00 |
| 10,800.00 | 90.00 | 96.495 | 8,514.00 | -4,917.69 | 1,017.43 | 1,002.58 | 2.00 | 0.00 | -2.00 |
| 10,900.00 | 90.00 | 94.495 | 8,514.00 | -4,927.27 | 1,116.97 | 1,102.08 | 2.00 | 0.00 | -2.00 |
| 11,000.00 | 90.00 | 92.495 | 8,514.00 | -4,933.37 | 1,216.78 | 1,201.87 | 2.00 | 0.00 | -2.00 |
| 11,100.00 | 90.00 | 90.495 | 8,514.00 | -4,935.98 | 1,316.74 | 1,301.83 | 2.00 | 0.00 | -2.00 |
| 11,133.43 | 90.00 | 89.827 | 8,514.00 | -4,936.07 | 1,350.17 | 1,335.26 | 2.00 | 0.00 | -2.00 |
| 11,200.00 | 90.00 | 89.827 | 8,514.00 | -4,935.87 | 1,416.74 | 1,401.83 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 11,300.00 | 90.00 | 89.827 | 8,514.00 | -4,935.57 | 1,516.73 | 1,501.83 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 89.827 | 8,514.00 | -4,935.26 | 1,616.73 | 1,601.83 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 89.827 | 8,514.00 | -4,934.96 | 1,716.73 | 1,701.83 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 89.827 | 8,514.00 | -4,934.66 | 1,816.73 | 1,801.83 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 89.827 | 8,514.00 | -4,934.36 | 1,916.73 | 1,901.83 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 89.827 | 8,514.00 | -4,934.05 | 2,016.73 | 2,001.83 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 89.827 | 8,514.00 | -4,933.75 | 2,116.73 | 2,101.83 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 89.827 | 8,514.00 | -4,933.45 | 2,216.73 | 2,201.83 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 89.827 | 8,514.00 | -4,933.15 | 2,316.73 | 2,301.83 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 89.827 | 8,514.00 | -4,932.84 | 2,416.73 | 2,401.83 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 89.827 | 8,514.00 | -4,932.54 | 2,516.73 | 2,501.83 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 89.827 | 8,514.00 | -4,932.24 | 2,616.73 | 2,601.83 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 89.827 | 8,514.00 | -4,931.94 | 2,716.73 | 2,701.83 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 89.827 | 8,514.00 | -4,931.63 | 2,816.73 | 2,801.83 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 89.827 | 8,514.00 | -4,931.33 | 2,916.73 | 2,901.83 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 89.827 | 8,514.00 | -4,931.03 | 3,016.73 | 3,001.83 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 89.827 | 8,514.00 | -4,930.73 | 3,116.73 | 3,101.83 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 89.827 | 8,514.00 | -4,930.42 | 3,216.73 | 3,201.83 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 89.827 | 8,514.00 | -4,930.12 | 3,316.73 | 3,301.83 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 89.827 | 8,514.00 | -4,929.82 | 3,416.73 | 3,401.83 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 89.827 | 8,514.00 | -4,929.52 | 3,516.73 | 3,501.83 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 89.827 | 8,514.00 | -4,929.21 | 3,616.73 | 3,601.83 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 89.827 | 8,514.00 | -4,928.91 | 3,716.72 | 3,701.83 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 89.827 | 8,514.00 | -4,928.61 | 3,816.72 | 3,801.83 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 89.827 | 8,514.00 | -4,928.31 | 3,916.72 | 3,901.83 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 89.827 | 8,514.00 | -4,928.00 | 4,016.72 | 4,001.83 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 89.827 | 8,514.00 | -4,927.70 | 4,116.72 | 4,101.83 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 89.827 | 8,514.00 | -4,927.40 | 4,216.72 | 4,201.83 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 89.827 | 8,514.00 | -4,927.10 | 4,316.72 | 4,301.83 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 89.827 | 8,514.00 | -4,926.79 | 4,416.72 | 4,401.83 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 89.827 | 8,514.00 | -4,926.49 | 4,516.72 | 4,501.83 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 89.827 | 8,514.00 | -4,926.19 | 4,616.72 | 4,601.83 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 89.827 | 8,514.00 | -4,925.89 | 4,716.72 | 4,701.83 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 89.827 | 8,514.00 | -4,925.59 | 4,816.72 | 4,801.83 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 89.827 | 8,514.00 | -4,925.28 | 4,916.72 | 4,901.83 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 89.827 | 8,514.00 | -4,924.98 | 5,016.72 | 5,001.83 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 89.827 | 8,514.00 | -4,924.68 | 5,116.72 | 5,101.83 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 89.827 | 8,514.00 | -4,924.38 | 5,216.72 | 5,201.83 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 89.827 | 8,514.00 | -4,924.07 | 5,316.72 | 5,301.83 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 89.827 | 8,514.00 | -4,923.77 | 5,416.72 | 5,401.83 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 89.827 | 8,514.00 | -4,923.47 | 5,516.72 | 5,501.83 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 89.827 | 8,514.00 | -4,923.17 | 5,616.72 | 5,601.83 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 89.827 | 8,514.00 | -4,922.86 | 5,716.72 | 5,701.83 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.00 | 89.827 | 8,514.00 | -4,922.56 | 5,816.72 | 5,801.83 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 89.827 | 8,514.00 | -4,922.26 | 5,916.71 | 5,901.83 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 89.827 | 8,514.00 | -4,921.96 | 6,016.71 | 6,001.83 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 89.827 | 8,514.00 | -4,921.65 | 6,116.71 | 6,101.83 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 89.827 | 8,514.00 | -4,921.35 | 6,216.71 | 6,201.83 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 89.827 | 8,514.00 | -4,921.05 | 6,316.71 | 6,301.83 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 89.827 | 8,514.00 | -4,920.75 | 6,416.71 | 6,401.83 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 89.827 | 8,514.00 | -4,920.44 | 6,516.71 | 6,501.83 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.00 | 89.827 | 8,514.00 | -4,920.14 | 6,616.71 | 6,601.83 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.00 | 89.827 | 8,514.00 | -4,919.84 | 6,716.71 | 6,701.83 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 90.00 | 89.827 | 8,514.00 | -4,919.54 | 6,816.71 | 6,801.83 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 16,700.00 | 90.00 | 89.827 | 8,514.00 | -4,919.23 | 6,916.71 | 6,901.83 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 90.00 | 89.827 | 8,514.00 | -4,918.93 | 7,016.71 | 7,001.83 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 90.00 | 89.827 | 8,514.00 | -4,918.63 | 7,116.71 | 7,101.83 | 0.00 | 0.00 | 0.00 |
| 17,000.00 | 90.00 | 89.827 | 8,514.00 | -4,918.33 | 7,216.71 | 7,201.83 | 0.00 | 0.00 | 0.00 |
| 17,100.00 | 90.00 | 89.827 | 8,514.00 | -4,918.02 | 7,316.71 | 7,301.83 | 0.00 | 0.00 | 0.00 |
| 17,200.00 | 90.00 | 89.827 | 8,514.00 | -4,917.72 | 7,416.71 | 7,401.83 | 0.00 | 0.00 | 0.00 |
| 17,300.00 | 90.00 | 89.827 | 8,514.00 | -4,917.42 | 7,516.71 | 7,501.83 | 0.00 | 0.00 | 0.00 |
| 17,400.00 | 90.00 | 89.827 | 8,514.00 | -4,917.12 | 7,616.71 | 7,601.83 | 0.00 | 0.00 | 0.00 |
| 17,500.00 | 90.00 | 89.827 | 8,514.00 | -4,916.81 | 7,716.71 | 7,701.83 | 0.00 | 0.00 | 0.00 |
| 17,600.00 | 90.00 | 89.827 | 8,514.00 | -4,916.51 | 7,816.71 | 7,801.83 | 0.00 | 0.00 | 0.00 |
| 17,700.00 | 90.00 | 89.827 | 8,514.00 | -4,916.21 | 7,916.71 | 7,901.83 | 0.00 | 0.00 | 0.00 |
| 17,800.00 | 90.00 | 89.827 | 8,514.00 | -4,915.91 | 8,016.71 | 8,001.83 | 0.00 | 0.00 | 0.00 |
| 17,900.00 | 90.00 | 89.827 | 8,514.00 | -4,915.60 | 8,116.70 | 8,101.83 | 0.00 | 0.00 | 0.00 |
| 18,000.00 | 90.00 | 89.827 | 8,514.00 | -4,915.30 | 8,216.70 | 8,201.83 | 0.00 | 0.00 | 0.00 |
| 18,100.00 | 90.00 | 89.827 | 8,514.00 | -4,915.00 | 8,316.70 | 8,301.83 | 0.00 | 0.00 | 0.00 |
| 18,200.00 | 90.00 | 89.827 | 8,514.00 | -4,914.70 | 8,416.70 | 8,401.83 | 0.00 | 0.00 | 0.00 |
| 18,300.00 | 90.00 | 89.827 | 8,514.00 | -4,914.39 | 8,516.70 | 8,501.83 | 0.00 | 0.00 | 0.00 |
| 18,400.00 | 90.00 | 89.827 | 8,514.00 | -4,914.09 | 8,616.70 | 8,601.83 | 0.00 | 0.00 | 0.00 |
| 18,500.00 | 90.00 | 89.827 | 8,514.00 | -4,913.79 | 8,716.70 | 8,701.83 | 0.00 | 0.00 | 0.00 |
| 18,600.00 | 90.00 | 89.827 | 8,514.00 | -4,913.49 | 8,816.70 | 8,801.83 | 0.00 | 0.00 | 0.00 |
| 18,700.00 | 90.00 | 89.827 | 8,514.00 | -4,913.19 | 8,916.70 | 8,901.83 | 0.00 | 0.00 | 0.00 |
| 18,800.00 | 90.00 | 89.827 | 8,514.00 | -4,912.88 | 9,016.70 | 9,001.83 | 0.00 | 0.00 | 0.00 |
| 18,900.00 | 90.00 | 89.827 | 8,514.00 | -4,912.58 | 9,116.70 | 9,101.83 | 0.00 | 0.00 | 0.00 |
| 19,000.00 | 90.00 | 89.827 | 8,514.00 | -4,912.28 | 9,216.70 | 9,201.83 | 0.00 | 0.00 | 0.00 |
| 19,100.00 | 90.00 | 89.827 | 8,514.00 | -4,911.98 | 9,316.70 | 9,301.83 | 0.00 | 0.00 | 0.00 |
| 19,200.00 | 90.00 | 89.827 | 8,514.00 | -4,911.67 | 9,416.70 | 9,401.83 | 0.00 | 0.00 | 0.00 |
| 19,300.00 | 90.00 | 89.827 | 8,514.00 | -4,911.37 | 9,516.70 | 9,501.83 | 0.00 | 0.00 | 0.00 |
| 19,400.00 | 90.00 | 89.827 | 8,514.00 | -4,911.07 | 9,616.70 | 9,601.83 | 0.00 | 0.00 | 0.00 |
| 19,500.00 | 90.00 | 89.827 | 8,514.00 | -4,910.77 | 9,716.70 | 9,701.83 | 0.00 | 0.00 | 0.00 |
| 19,600.00 | 90.00 | 89.827 | 8,514.00 | -4,910.46 | 9,816.70 | 9,801.83 | 0.00 | 0.00 | 0.00 |
| 19,700.00 | 90.00 | 89.827 | 8,514.00 | -4,910.16 | 9,916.70 | 9,901.83 | 0.00 | 0.00 | 0.00 |
| 19,800.00 | 90.00 | 89.827 | 8,514.00 | -4,909.86 | 10,016.70 | 10,001.83 | 0.00 | 0.00 | 0.00 |
| 19,900.00 | 90.00 | 89.827 | 8,514.00 | -4,909.56 | 10,116.70 | 10,101.83 | 0.00 | 0.00 | 0.00 |
| 20,000.00 | 90.00 | 89.827 | 8,514.00 | -4,909.25 | 10,216.70 | 10,201.83 | 0.00 | 0.00 | 0.00 |
| 20,100.00 | 90.00 | 89.827 | 8,514.00 | -4,908.95 | 10,316.69 | 10,301.83 | 0.00 | 0.00 | 0.00 |
| 20,200.00 | 90.00 | 89.827 | 8,514.00 | -4,908.65 | 10,416.69 | 10,401.83 | 0.00 | 0.00 | 0.00 |
| 20,300.00 | 90.00 | 89.827 | 8,514.00 | -4,908.35 | 10,516.69 | 10,501.83 | 0.00 | 0.00 | 0.00 |
| 20,400.00 | 90.00 | 89.827 | 8,514.00 | -4,908.04 | 10,616.69 | 10,601.83 | 0.00 | 0.00 | 0.00 |
| 20,500.00 | 90.00 | 89.827 | 8,514.00 | -4,907.74 | 10,716.69 | 10,701.83 | 0.00 | 0.00 | 0.00 |
| 20,600.00 | 90.00 | 89.827 | 8,514.00 | -4,907.44 | 10,816.69 | 10,801.83 | 0.00 | 0.00 | 0.00 |
| 20,700.00 | 90.00 | 89.827 | 8,514.00 | -4,907.14 | 10,916.69 | 10,901.83 | 0.00 | 0.00 | 0.00 |
| 20,800.00 | 90.00 | 89.827 | 8,514.00 | -4,906.83 | 11,016.69 | 11,001.83 | 0.00 | 0.00 | 0.00 |
| 20,900.00 | 90.00 | 89.827 | 8,514.00 | -4,906.53 | 11,116.69 | 11,101.83 | 0.00 | 0.00 | 0.00 |
| 21,000.00 | 90.00 | 89.827 | 8,514.00 | -4,906.23 | 11,216.69 | 11,201.83 | 0.00 | 0.00 | 0.00 |
| 21,100.00 | 90.00 | 89.827 | 8,514.00 | -4,905.93 | 11,316.69 | 11,301.83 | 0.00 | 0.00 | 0.00 |
| 21,200.00 | 90.00 | 89.827 | 8,514.00 | -4,905.62 | 11,416.69 | 11,401.83 | 0.00 | 0.00 | 0.00 |
| 21,300.00 | 90.00 | 89.827 | 8,514.00 | -4,905.32 | 11,516.69 | 11,501.83 | 0.00 | 0.00 | 0.00 |
| 21,400.00 | 90.00 | 89.827 | 8,514.00 | -4,905.02 | 11,616.69 | 11,601.83 | 0.00 | 0.00 | 0.00 |
| 21,500.00 | 90.00 | 89.827 | 8,514.00 | -4,904.72 | 11,716.69 | 11,701.83 | 0.00 | 0.00 | 0.00 |
| 21,600.00 | 90.00 | 89.827 | 8,514.00 | -4,904.41 | 11,816.69 | 11,801.83 | 0.00 | 0.00 | 0.00 |
| 21,700.00 | 90.00 | 89.827 | 8,514.00 | -4,904.11 | 11,916.69 | 11,901.83 | 0.00 | 0.00 | 0.00 |
| 21,800.00 | 90.00 | 89.827 | 8,514.00 | -4,903.81 | 12,016.69 | 12,001.83 | 0.00 | 0.00 | 0.00 |
| 21,900.00 | 90.00 | 89.827 | 8,514.00 | -4,903.51 | 12,116.69 | 12,101.83 | 0.00 | 0.00 | 0.00 |
| 22,000.00 | 90.00 | 89.827 | 8,514.00 | -4,903.20 | 12,216.69 | 12,201.83 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 22,100.00 | 90.00 | 89.827 | 8,514.00 | -4,902.90 | 12,316.69 | 12,301.83 | 0.00 | 0.00 | 0.00 |
| 22,200.00 | 90.00 | 89.827 | 8,514.00 | -4,902.60 | 12,416.69 | 12,401.83 | 0.00 | 0.00 | 0.00 |
| 22,300.00 | 90.00 | 89.827 | 8,514.00 | -4,902.30 | 12,516.68 | 12,501.83 | 0.00 | 0.00 | 0.00 |
| 22,400.00 | 90.00 | 89.827 | 8,514.00 | -4,901.99 | 12,616.68 | 12,601.83 | 0.00 | 0.00 | 0.00 |
| 22,500.00 | 90.00 | 89.827 | 8,514.00 | -4,901.69 | 12,716.68 | 12,701.83 | 0.00 | 0.00 | 0.00 |
| 22,600.00 | 90.00 | 89.827 | 8,514.00 | -4,901.39 | 12,816.68 | 12,801.83 | 0.00 | 0.00 | 0.00 |
| 22,700.00 | 90.00 | 89.827 | 8,514.00 | -4,901.09 | 12,916.68 | 12,901.83 | 0.00 | 0.00 | 0.00 |
| 22,800.00 | 90.00 | 89.827 | 8,514.00 | -4,900.79 | 13,016.68 | 13,001.83 | 0.00 | 0.00 | 0.00 |
| 22,900.00 | 90.00 | 89.827 | 8,514.00 | -4,900.48 | 13,116.68 | 13,101.83 | 0.00 | 0.00 | 0.00 |
| 23,000.00 | 90.00 | 89.827 | 8,514.00 | -4,900.18 | 13,216.68 | 13,201.83 | 0.00 | 0.00 | 0.00 |
| 23,100.00 | 90.00 | 89.827 | 8,514.00 | -4,899.88 | 13,316.68 | 13,301.83 | 0.00 | 0.00 | 0.00 |
| 23,200.00 | 90.00 | 89.827 | 8,514.00 | -4,899.58 | 13,416.68 | 13,401.83 | 0.00 | 0.00 | 0.00 |
| 23,300.00 | 90.00 | 89.827 | 8,514.00 | -4,899.27 | 13,516.68 | 13,501.83 | 0.00 | 0.00 | 0.00 |
| 23,400.00 | 90.00 | 89.827 | 8,514.00 | -4,898.97 | 13,616.68 | 13,601.83 | 0.00 | 0.00 | 0.00 |
| 23,500.00 | 90.00 | 89.827 | 8,514.00 | -4,898.67 | 13,716.68 | 13,701.83 | 0.00 | 0.00 | 0.00 |
| 23,600.00 | 90.00 | 89.827 | 8,514.00 | -4,898.37 | 13,816.68 | 13,801.83 | 0.00 | 0.00 | 0.00 |
| 23,700.00 | 90.00 | 89.827 | 8,514.00 | -4,898.06 | 13,916.68 | 13,901.83 | 0.00 | 0.00 | 0.00 |
| 23,800.00 | 90.00 | 89.827 | 8,514.00 | -4,897.76 | 14,016.68 | 14,001.83 | 0.00 | 0.00 | 0.00 |
| 23,900.00 | 90.00 | 89.827 | 8,514.00 | -4,897.46 | 14,116.68 | 14,101.83 | 0.00 | 0.00 | 0.00 |
| 24,000.00 | 90.00 | 89.827 | 8,514.00 | -4,897.16 | 14,216.68 | 14,201.83 | 0.00 | 0.00 | 0.00 |
| 24,100.00 | 90.00 | 89.827 | 8,514.00 | -4,896.85 | 14,316.68 | 14,301.83 | 0.00 | 0.00 | 0.00 |
| 24,200.00 | 90.00 | 89.827 | 8,514.00 | -4,896.55 | 14,416.68 | 14,401.83 | 0.00 | 0.00 | 0.00 |
| 24,300.00 | 90.00 | 89.827 | 8,514.00 | -4,896.25 | 14,516.68 | 14,501.83 | 0.00 | 0.00 | 0.00 |
| 24,400.00 | 90.00 | 89.827 | 8,514.00 | -4,895.95 | 14,616.68 | 14,601.83 | 0.00 | 0.00 | 0.00 |
| 24,500.00 | 90.00 | 89.827 | 8,514.00 | -4,895.64 | 14,716.67 | 14,701.83 | 0.00 | 0.00 | 0.00 |
| 24,600.00 | 90.00 | 89.827 | 8,514.00 | -4,895.34 | 14,816.67 | 14,801.83 | 0.00 | 0.00 | 0.00 |
| 24,700.00 | 90.00 | 89.827 | 8,514.00 | -4,895.04 | 14,916.67 | 14,901.83 | 0.00 | 0.00 | 0.00 |
| 24,800.00 | 90.00 | 89.827 | 8,514.00 | -4,894.74 | 15,016.67 | 15,001.83 | 0.00 | 0.00 | 0.00 |
| 24,900.00 | 90.00 | 89.827 | 8,514.00 | -4,894.43 | 15,116.67 | 15,101.83 | 0.00 | 0.00 | 0.00 |
| 25,000.00 | 90.00 | 89.827 | 8,514.00 | -4,894.13 | 15,216.67 | 15,201.83 | 0.00 | 0.00 | 0.00 |
| 25,100.00 | 90.00 | 89.827 | 8,514.00 | -4,893.83 | 15,316.67 | 15,301.83 | 0.00 | 0.00 | 0.00 |
| 25,200.00 | 90.00 | 89.827 | 8,514.00 | -4,893.53 | 15,416.67 | 15,401.83 | 0.00 | 0.00 | 0.00 |
| 25,300.00 | 90.00 | 89.827 | 8,514.00 | -4,893.22 | 15,516.67 | 15,501.83 | 0.00 | 0.00 | 0.00 |
| 25,400.00 | 90.00 | 89.827 | 8,514.00 | -4,892.92 | 15,616.67 | 15,601.83 | 0.00 | 0.00 | 0.00 |
| 25,500.00 | 90.00 | 89.827 | 8,514.00 | -4,892.62 | 15,716.67 | 15,701.83 | 0.00 | 0.00 | 0.00 |
| 25,600.00 | 90.00 | 89.827 | 8,514.00 | -4,892.32 | 15,816.67 | 15,801.83 | 0.00 | 0.00 | 0.00 |
| 25,700.00 | 90.00 | 89.827 | 8,514.00 | -4,892.01 | 15,916.67 | 15,901.83 | 0.00 | 0.00 | 0.00 |
| 25,800.00 | 90.00 | 89.827 | 8,514.00 | -4,891.71 | 16,016.67 | 16,001.83 | 0.00 | 0.00 | 0.00 |
| 25,900.00 | 90.00 | 89.827 | 8,514.00 | -4,891.41 | 16,116.67 | 16,101.83 | 0.00 | 0.00 | 0.00 |
| 26,000.00 | 90.00 | 89.827 | 8,514.00 | -4,891.11 | 16,216.67 | 16,201.83 | 0.00 | 0.00 | 0.00 |
| 26,068.43 | 90.00 | 89.827 | 8,514.00 | -4,890.90 | 16,285.10 | 16,270.26 | 0.00 | 0.00 | 0.00 |
| 26,100.00 | 90.00 | 89.827 | 8,514.00 | -4,890.80 | 16,316.67 | 16,301.83 | 0.00 | 0.00 | 0.00 |
| 26,118.43 | 90.00 | 89.827 | 8,514.00 | -4,890.75 | 16,335.10 | 16,320.26 | 0.00 | 0.00 | 0.00 |

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.18 Single User Db | **Local Co-ordinate Reference:** | Well BEU DI 9 Arrow Fed Com 115H |
| **Company:** | ROC | **TVD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Project:** | Long Lead - BEU DI 9 (NAD 27 NME) | **MD Reference:** | PKB 32 @ 3184.00usft (32' RKB) |
| **Site:** | BEU DI 9 Arrow, Row 3 - Plans | **North Reference:** | Grid |
| **Well:** | BEU DI 9 Arrow Fed Com 115H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | OH | | |
| **Design:** | Plan 0.1 | | |

**Design Targets**

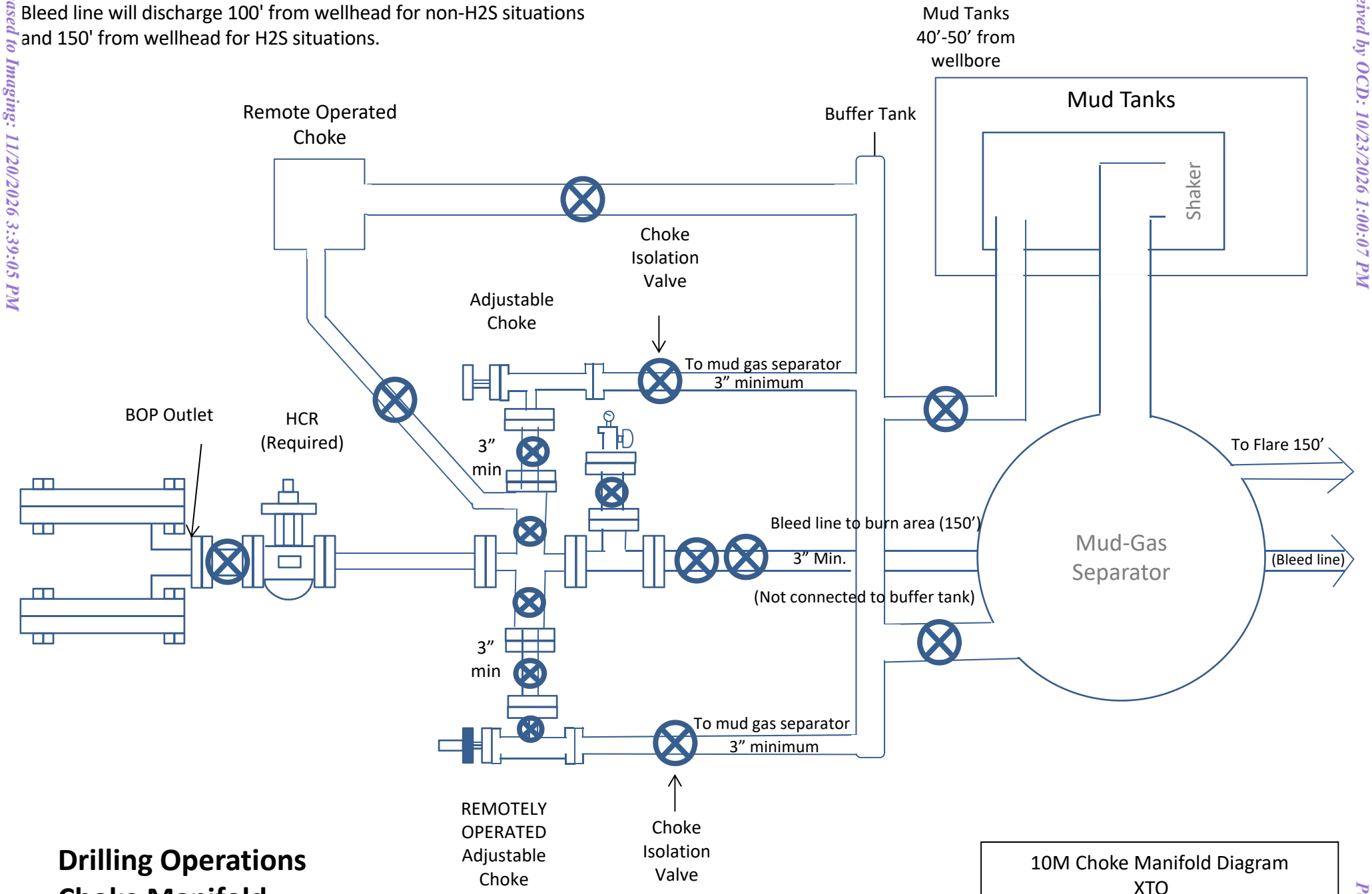
| Target Name<br>- hit/miss target<br>- Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| KOP - BEU DI 9 115H - (<br>- plan misses target center by 0.06usft at 9356.09usft MD (8036.37 TVD, -4289.44 N, 12.38 E)<br>- Point | 46.00 | 332.989 | 8,036.40 | -4,289.40 | 12.40 | 526,117.60 | 640,423.50 | 32° 26' 44.115 N | 103° 52' 41.281 W |
| PPP1 - BEU DI 9 115H -<br>- plan misses target center by 0.23usft at 10314.61usft MD (8512.09 TVD, -4821.32 N, 542.43 E)<br>- Point | 0.00 | 0.000 | 8,512.10 | -4,821.10 | 542.50 | 525,585.90 | 640,953.60 | 32° 26' 38.831 N | 103° 52' 35.121 W |
| FTP - BEU DI 9 115H - (<br>- plan misses target center by 0.34usft at 10418.76usft MD (8514.00 TVD, -4849.53 N, 642.62 E)<br>- Point | 0.00 | 0.000 | 8,514.00 | -4,849.20 | 642.70 | 525,557.80 | 641,053.80 | 32° 26' 38.548 N | 103° 52' 33.953 W |
| LTP - BEU DI 9 115H - (<br>- plan hits target center<br>- Point | 0.00 | 0.000 | 8,514.00 | -4,890.90 | 16,285.10 | 525,516.10 | 656,696.20 | 32° 26' 37.436 N | 103° 49' 31.420 W |
| PPP2 - BEU DI 9 115H -<br>- plan misses target center by 0.05usft at 15604.78usft MD (8514.00 TVD, -4922.55 N, 5821.50 E)<br>- Point | 0.00 | 0.000 | 8,514.00 | -4,922.50 | 5,821.50 | 525,484.50 | 646,232.60 | 32° 26' 37.599 N | 103° 51' 33.524 W |
| BHL - BEU DI 9 115H - (<br>- plan misses target center by 0.05usft at 26118.43usft MD (8514.00 TVD, -4890.75 N, 16335.10 E)<br>- Point | 0.00 | 0.000 | 8,514.00 | -4,890.70 | 16,335.10 | 525,516.30 | 656,746.20 | 32° 26' 37.436 N | 103° 49' 30.837 W |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 187.00 | 187.00 | Rustler | | | |
| 401.00 | 401.00 | Salado | | | |
| 501.00 | 501.00 | Top of Salt | | | |
| 1,034.00 | 1,034.00 | MB 126 | | | |
| 3,378.19 | 3,194.00 | Base Salt | | | |
| 3,736.20 | 3,484.00 | Delaware/Lamar | | | |
| 3,831.25 | 3,561.00 | Bell Canyon | | | |
| 4,868.23 | 4,401.00 | Cherry Canyon | | | |
| 6,900.22 | 6,047.00 | Brushy Canyon Ss. | | | |
| 8,381.62 | 7,247.00 | Bone Spring Lm. | | | |
| 8,501.36 | 7,344.00 | Avalon Ss. | | | |
| 8,933.44 | 7,694.00 | Middle Avalon Carb. | | | |
| 9,106.27 | 7,834.00 | Mid Avalon Shale | | | |
| 9,303.79 | 7,994.00 | First Bone Spring Carb. | | | |
| 9,699.52 | 8,289.00 | First Bone Spring Ss. | | | |
| 10,374.77 | 8,514.00 | Landing Point Lower 1BSS | | | |

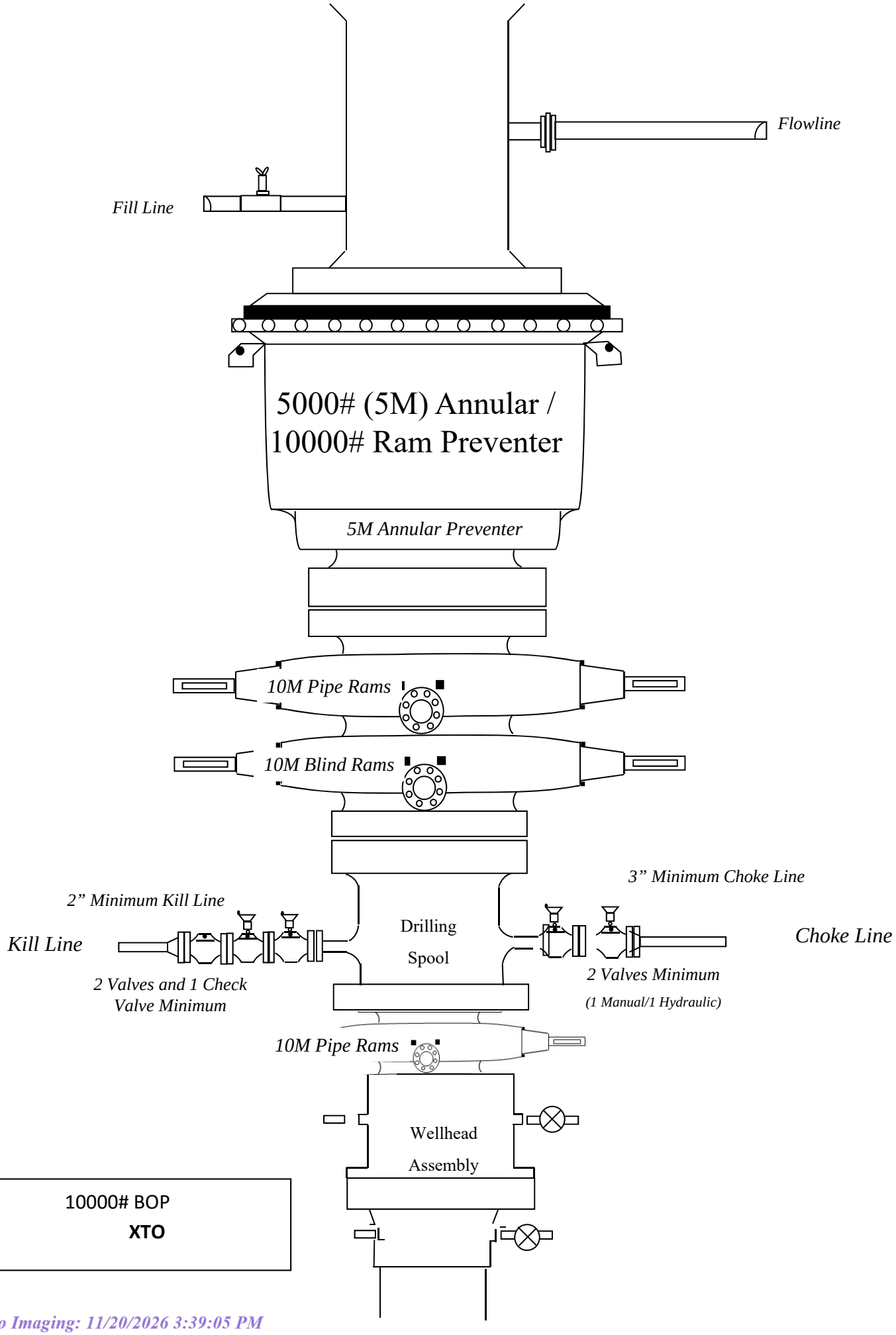
Released to Imaging: 11/20/2026 3:39:05 PM
Received by OCD: 10/23/2026 1:00:07 PM

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




**Drilling Operations**
**Choke Manifold**
**10M Service**

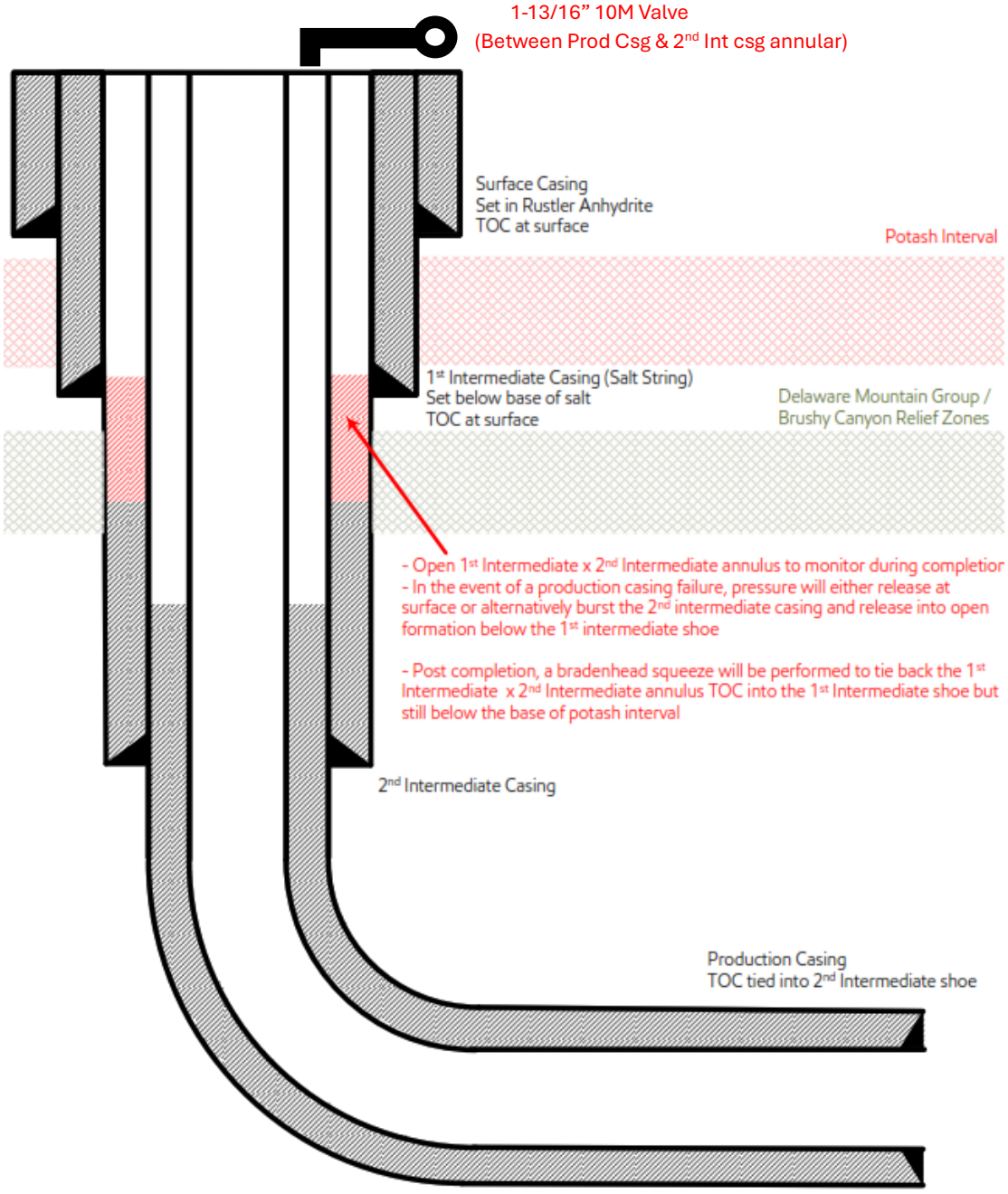
10M Choke Manifold Diagram
XTO




10000# BOP

**XTO**

# 4-String Design – Open 1st Int x 2nd Int Annulus (ICP 2 below relief Zone)




**[Figure D]** 4 String – Uncemented annulus between 1st and 2nd intermediate casing strings

Update May 2024:
XTO is aware of the R-111-Q update and will comply with these requirements including (but not limited to):

1) Alignment with KPLA requirements per schematic above, leaving open annulus open for pressure monitoring during frac and utilizing new casing that meets API standards.
2) Contingency plans in place to divert fluids away from salt interval in event of production casing failure.
3) **Intermediate 2 primary cement** job with TOC within Delaware Mountain Group with 0% excess & below the minimum 500' from intermediate 1 casing shoe.
    - **Intermediate 2 bradenhead squeeze** to be completed within 180 days after completions to tieback TOC to salt string at least 500ft but with top below Marker Bed 126.
4) Production cement to be tied back no less than 500ft inside previous casing shoe.

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

Exxon Mobil 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…"*. Exxon Mobil considers the break testing the BOPE is such a situation. Therefore, as per CFR Title 43 Part 3170, Exxon Mobil 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 Exxon Mobil 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.



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

| Component to be Pressure Tested | Pressure Test—Low Pressure[ac] psig (MPa) | Pressure Test—High Pressure[ac] | |
|---|---|---|---|
| | | Change Out of Component, Elastomer, or Ring Gasket | No Change Out of Component, Elastomer, or Ring Gasket |
| Annular preventer[b] | 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[bd] | 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[e] | 250 to 350 (1.72 to 2.41) | RWP of ram preventers or wellhead system, whichever is lower | ITP |
| Choke manifold—downstream of chokes[e] | 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 | |

[a] 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.

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

[c] 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.

[d] 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.

[e] 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.

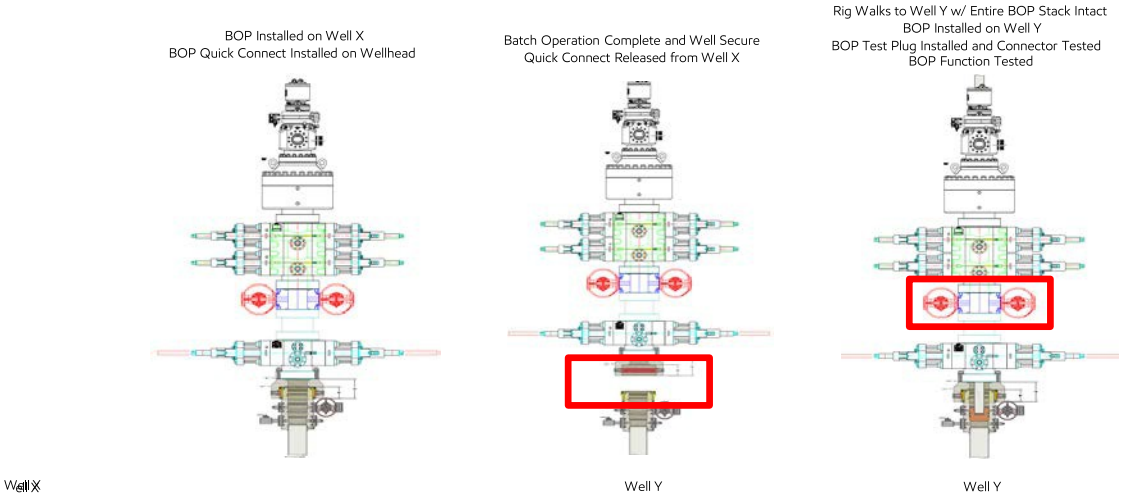
Exxon Mobil considers break testing and our current procedures meet the intent of CFR Title 43 Part 3170 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. Exxon Mobil internal standards requires complete BOPE tests more 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. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

**Procedures**

1. Exxon Mobil will use this document for 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. Exxon Mobil 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 intermediate hole section of the pad, and intermediate hole sections exceeding 12,000' TVD
    b. A Full BOP test will be required if the intermediate hole section being drilled has a BLM MASP over 4800 psi.
    c. 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. Connection between the HCV valve and choke line
    b. Connection between the BOP quick connect and the wellhead
4. The BOP will be lifted and removed from the wellhead by a hydraulic system
5. While transferring between wells, the BOPE will be secured by the hydraulic carrier or cradle.
6. The connections between the HCV valve - choke line and BOP quick connect - wellhead 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**

- Variance is requested only for intermediate hole sections where MASP <4800 psi and intermediate hole sections do not exceed 12,000' TVD
- 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.
- Any well control event while drilling require notification to the BLM Petroleum Engineer
- The BLM will be contacted 4 hours prior to BOPE tests.

Based on 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.

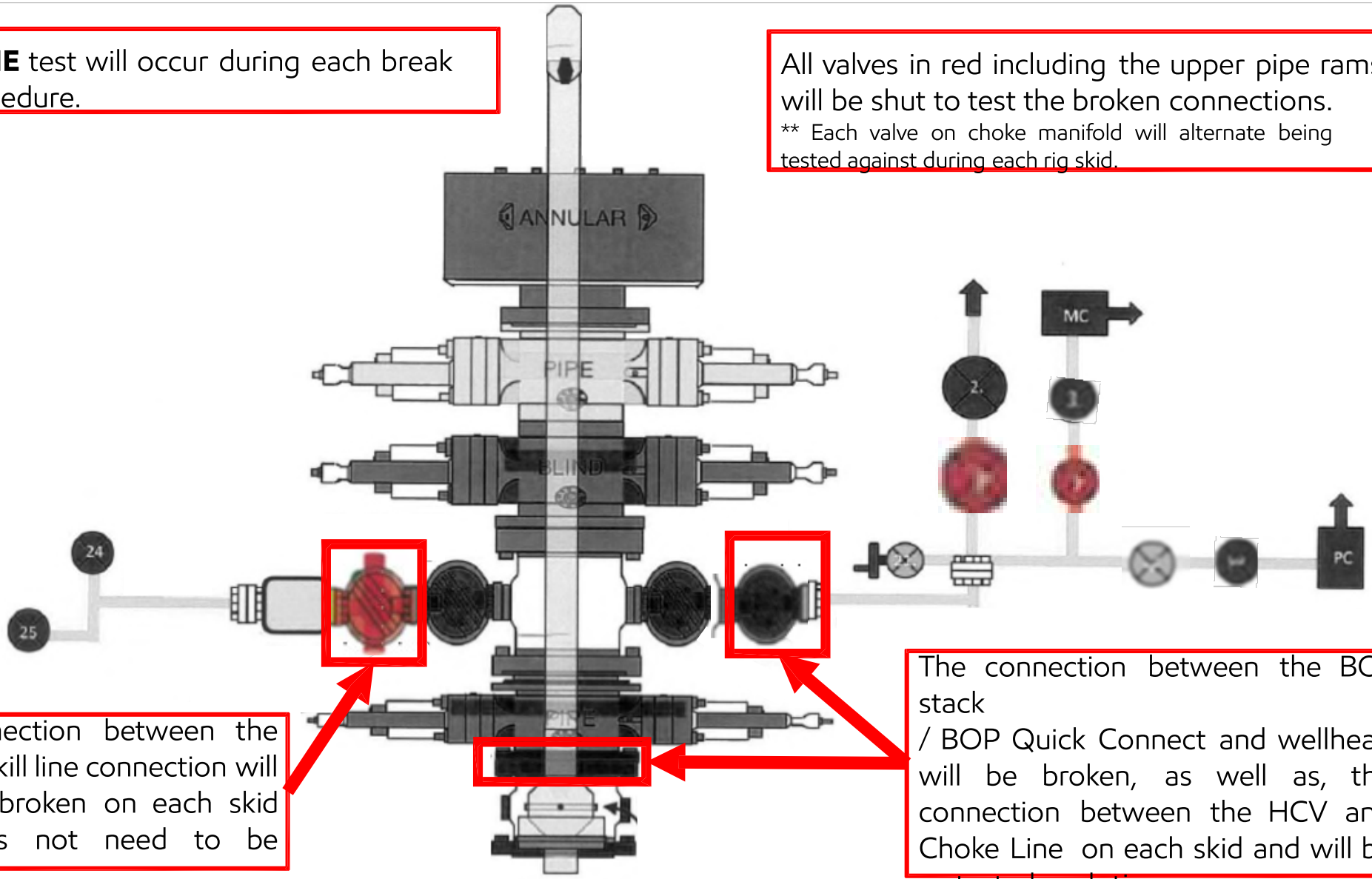
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 4800psi and/or intermediate hole sections exceeds 12,000' TVD

4. Full BOP test will be required prior to drilling the production hole.

Only **ONE** test will occur during each break test procedure.

All valves in red including the upper pipe rams will be shut to test the broken connections.

** Each valve on choke manifold will alternate being tested against during each rig skid.



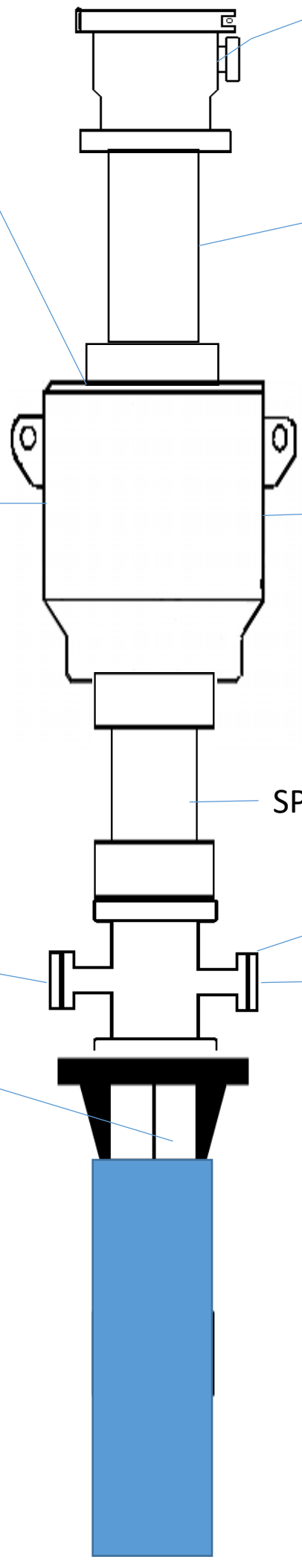

The connection between the HCV and kill line connection will **NOT** be broken on each skid and does not need to be retested.

The connection between the BOP stack / BOP Quick Connect and wellhead will be broken, as well as, the connection between the HCV and Choke Line on each skid and will be re-tested each time.

**FROM ROTARY TABLE TO ANNULAR**
~ 12-15’ (depending on rig)

**CENTER OF FLOWLINE FLANGE TO GROUND**
(~15’-16’ depending on rig)

**BELL NIPPLE WITH WELD ON FLANGE AND ROT. HEAD TO CENTER FLOWLINE FLANGE**



**21-1/4”**
**2000# DIVERTER**

**DIVERTER**

SPOOL

KILL VALVE

HCR VALVE

MUD CROSS

WELL HEAD ABOVE GROUND LEVEL

**BLACK GOLD®**

**GATES ENGINEERING & SERVICES NORTH AMERICA**
**7603 Prairie Oak Dr.**
**Houston, TX. 77086**

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**FAX: +1 (281) 602-4147**
**EMAIL: gesna.quality@gates.com**
**WEB: www.gates.com/oilandgas**

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. OSPINOS

**TITLE:** QUALITY ASSURANCE

**DATE:** 1/25/2024

H3-15716

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**

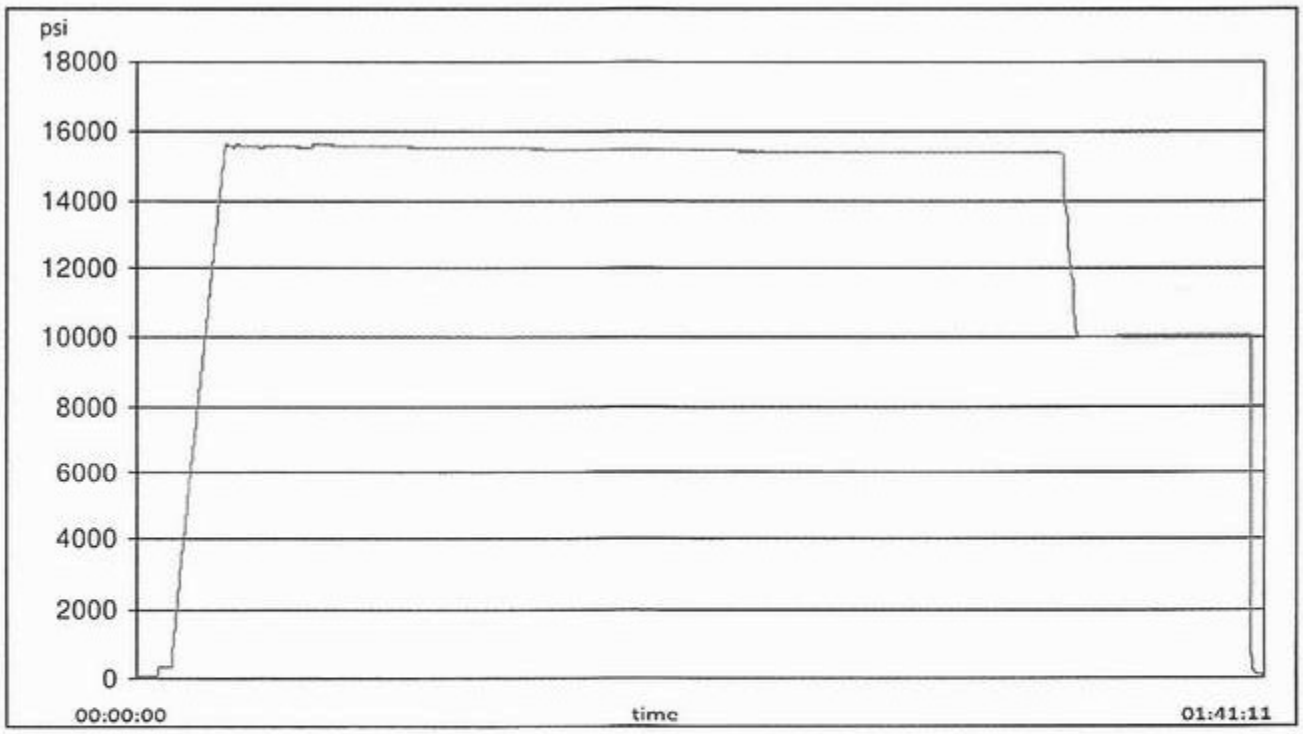
| | | |
|---|---|---|
| Test procedure: | GTS-04-053 | |
| Test pressure: | 15000.00 | psi |
| Test pressure hold: | 3600.00 | sec |
| Work pressure: | 10000.00 | psi |
| Work pressure hold: | 900.00 | sec |
| Length difference: | 0.00 | % |
| Length difference: | 0.00 | inch |

| | |
|---|---|
| Fitting 1: | 3.0 x 4-1/16 10K |
| Part number: | |
| Description: | |
| Fitting 2: | 3.0 x 4-1/16 10K |
| Part number: | |
| Description: | |

| | | |
|---|---|---|
| Length: | 45 | feet |

| | |
|---|---|
| Visual check: | |
| Pressure test result: | PASS |
| Length measurement result: | |

Test operator: Travis



H3-15/16

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# TEST REPORT

## GAUGE TRACEABILITY

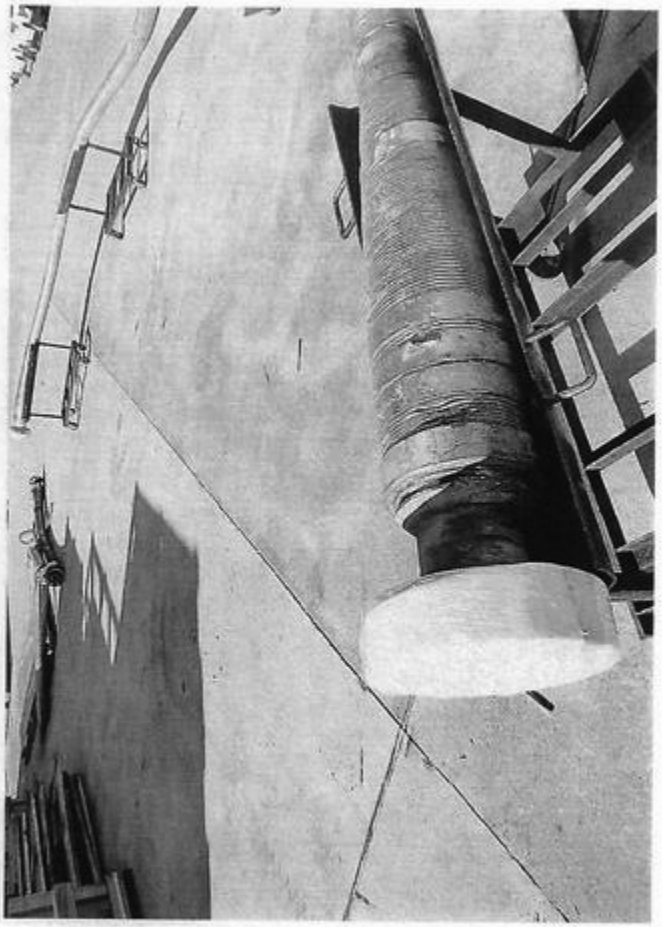
| Description | Serial number | Calibration date | Calibration due date |
|---|---|---|---|
| S-25-A-W | 110D3PHO | 2023-06-06 | 2024-06-06 |
| S-25-A-W | 110IQWDG | 2023-05-16 | 2024-05-16 |

Comment









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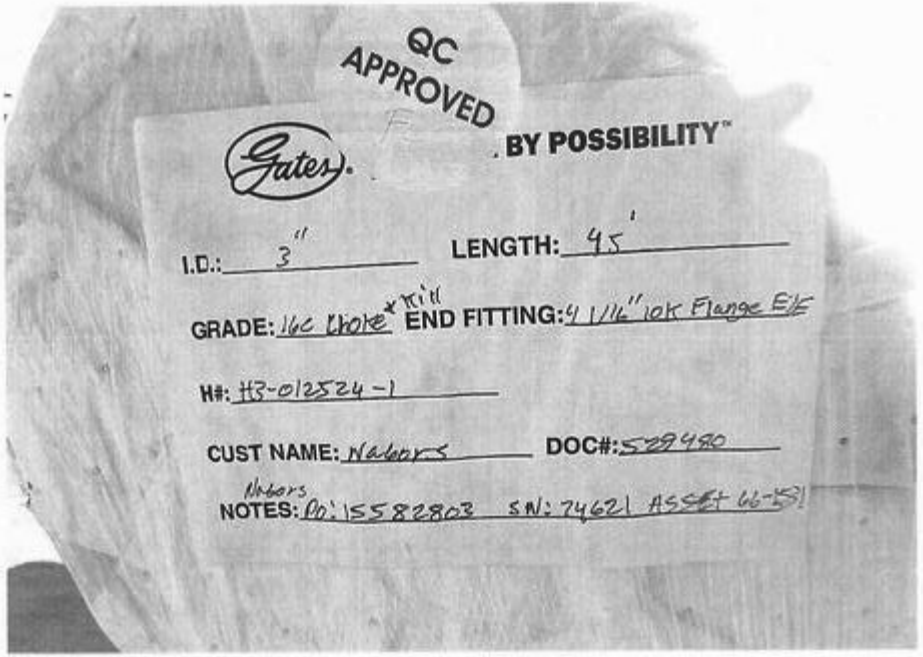




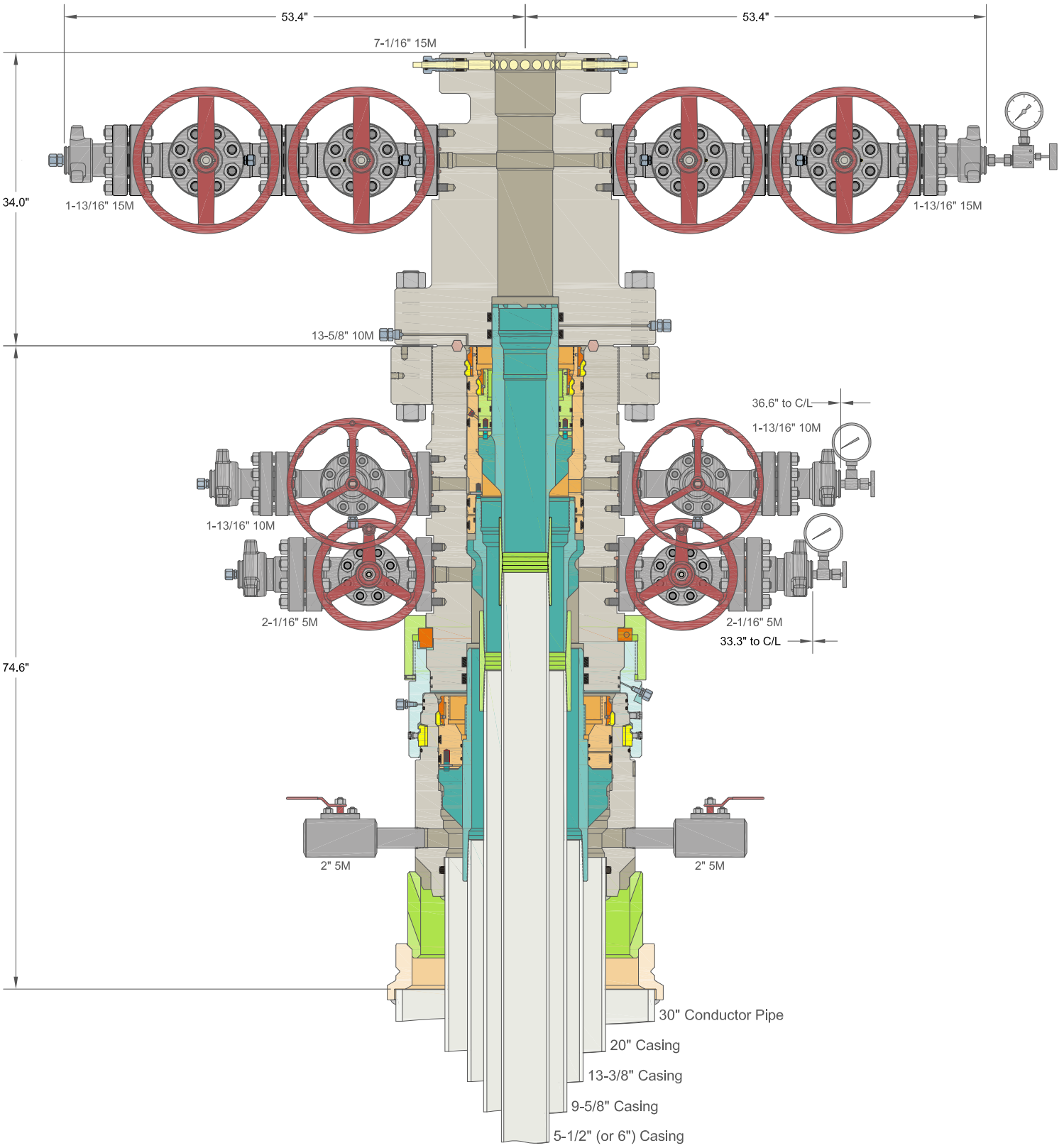


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ALL DIMENSIONS APPROXIMATE

| CACTUS WELLHEAD LLC | XTO ENERGY INC<br>DELAWARE BASIN | | |
|---|---|---|---|
| 30" x 20" x 13-3/8" x 9-5/8" x 5-1/2" (or 6") CRC / MBU-3T-CFL<br>With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head<br>And 13-3/8", 9-5/8" & 5-1/2" (or 6") Pin Bottom Casing Hangers | DRAWN | DLE | 25MAR24 |
| | APPRV | | |
| | DRAWING NO. | HBE0000801 | |

**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.

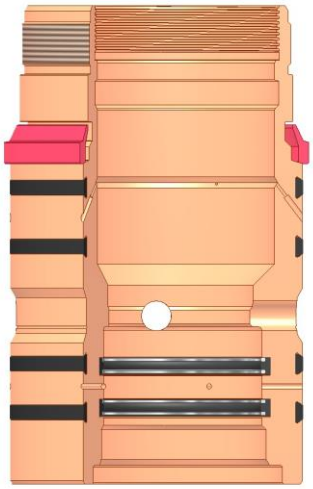
## 1. Cement Program

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

## 2. Offline Cementing Procedure

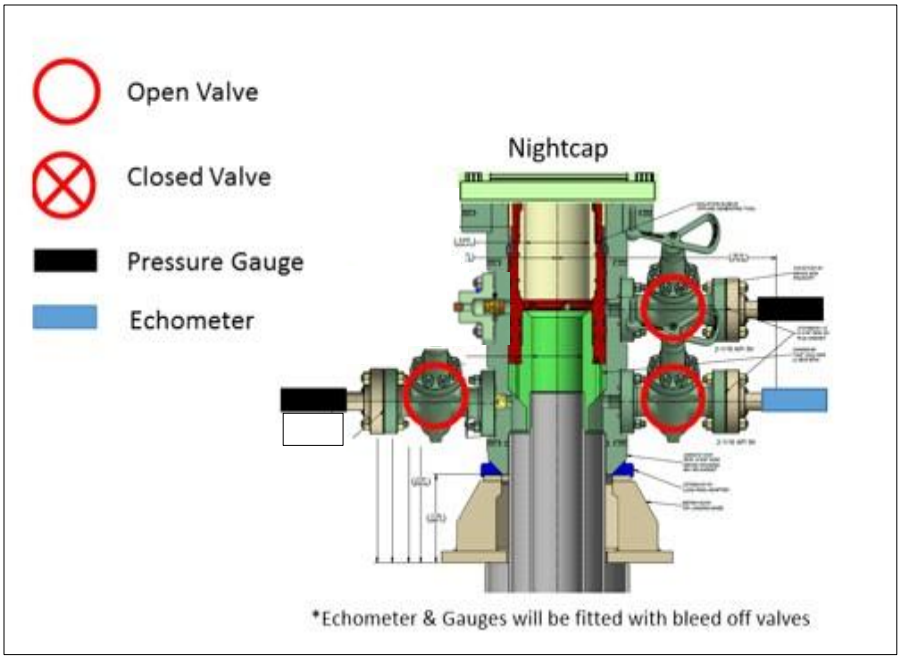
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

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 nippled 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

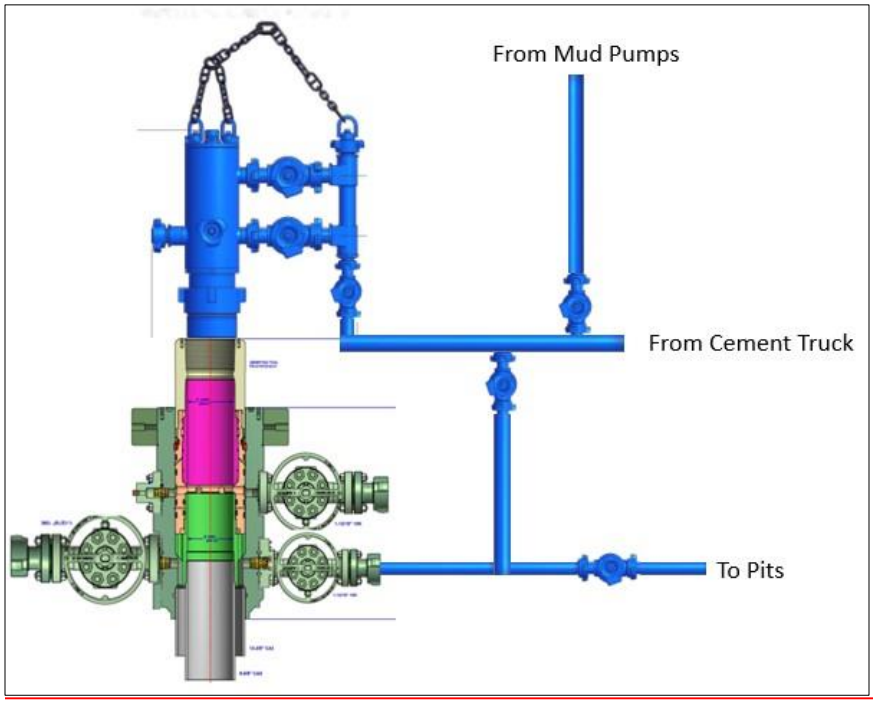
**XTO Permian Operating, LLC Offline Cementing Variance Request**




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 nippling 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 3rd 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.

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# Offline Production Cementing

Delaware Basin | 18 March 2025

Energy lives here™

# Variance Request for Offline Production Cementing

**Proposal**: allow wells that meet set criteria to perform production casing cement jobs offline, consistent with ExxonMobil's extensive experience safely and effectively cementing production casing strings offline in Texas

**Supporting Materials:**

- Criteria for offline production cementing
- Proposed procedure
- Process and equipment
- Barrier comparison


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# Criteria for Offline Cementing

The following conditions must be met to proceed with offline production cementing on Wolfcamp target formations or shallower:

a) *Casing hanger successfully landed in the wellhead*
b) *Ability to circulate overbalanced mud weight*
c) *Initiate offline cementing operations within 24hr of landing casing*
d) *All well control barriers test successfully and BLM notified of intent to perform offline production cementing prior to N/D BOP*
e) *No offset frac operations within 1 mile and within the same target horizon*
f) *Well Control certified ExxonMobil Operations Supervisor to be present during offline cementing operation to monitor returns*
g) *Drill ahead operations will not begin on next well until offline production cement operations have concluded*



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# Offline Cementing Procedure

*Trigger to reevaluate plan*

1. **Land production casing hanger** *If casing hanger cannot be landed, cementing will be performed online*
2. Flow check and **confirm the well is static on the casing and annulus**. *If flow is observed, cementing will be performed online*
3. **Lay down landing joint**
4. **Install and test pack-off assembly**
   a) Pressure test the seal assembly per wellhead provider's procedure to confirm integrity to 250 / 10,000psi
5. **Install back-pressure valve** (BPV, rated to 10,000psi) in hanger per wellhead provider's procedure
6. **Confirm the well is static**
   a) Flow indicates failure of hydrostatic barrier or mechanical barriers and underbalanced well conditions. *If flow is observed, cementing will be performed online*
   b) Notify BLM of intent to proceed with nipple down and offline cementing
7. With the well secured and BLM notified; **nipple down BOP and skid rig** to next well on pad
   *a) Note, verify offline cementing criteria is met before N/D BOP. If unable to meet criteria, cement job will be performed online*
8. **Install and test gate valve**
   a) Test connection between wellhead adapter seals against hanger neck and ring gasket to 250 / 10,000 psi for 5 minutes
9. **Remove BPV from casing**
10. **Rig up cement head and cementing lines**
11. **Perform production cement job** as per procedure
    a) Confirm flowpath and valve alignment; default routing to take returns from casing upper side outlet valves → offline cementing manifold → shakers / pits
    *b) If elevated gas or flow trend observed, reroute returns through choke manifold for ability to hold backpressure to maintain well control and route mud returns to MGS*
12. **Confirm well is static** and double floats are holding after cement job
    *a) If double floats do not hold, the well can be secured by closing gate valve or cement head or by holding and monitoring pressure at the cement truck while WOC*
13. **Rigdown surface equipment**
    a) Bleed any remaining line pressure and remove cement head
    b) Install BPV per wellhead providers recommended procedure
    c) Close upper casing side outlet valves, break and R/D offline cement lines
    d) Remove 10M gate valve and wellhead adapter
14. **Secure well**
    a) Install temporary abandonment cap

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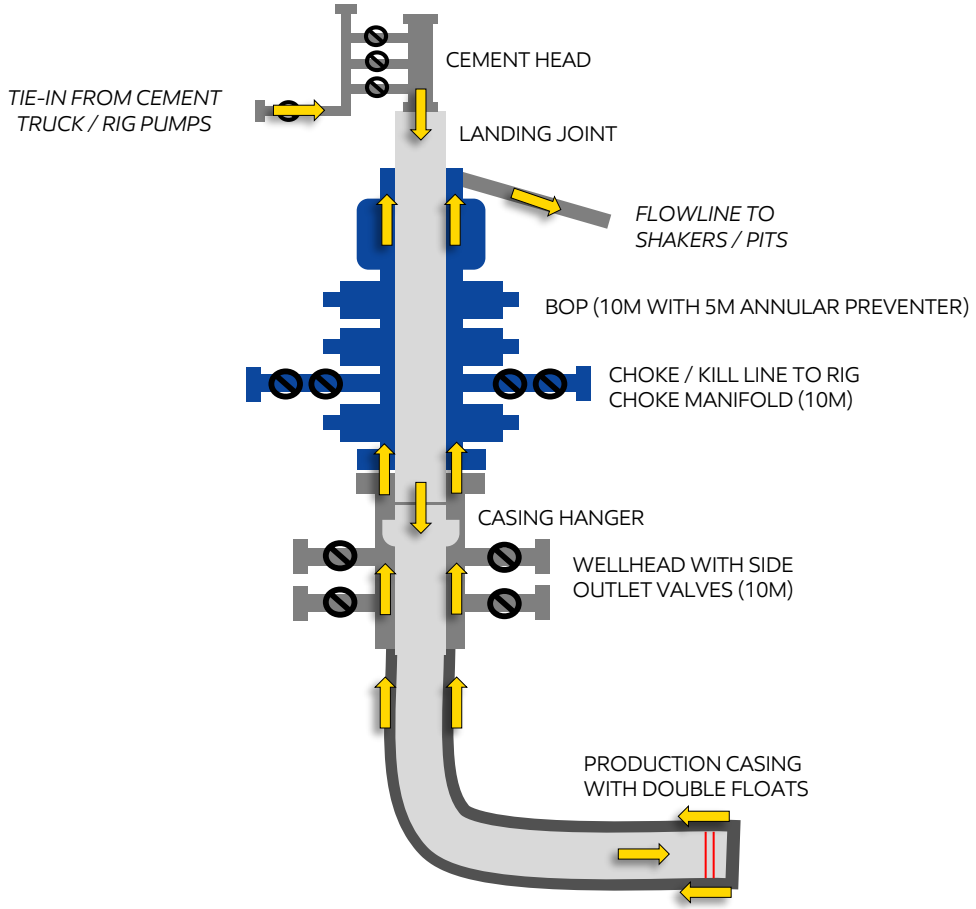
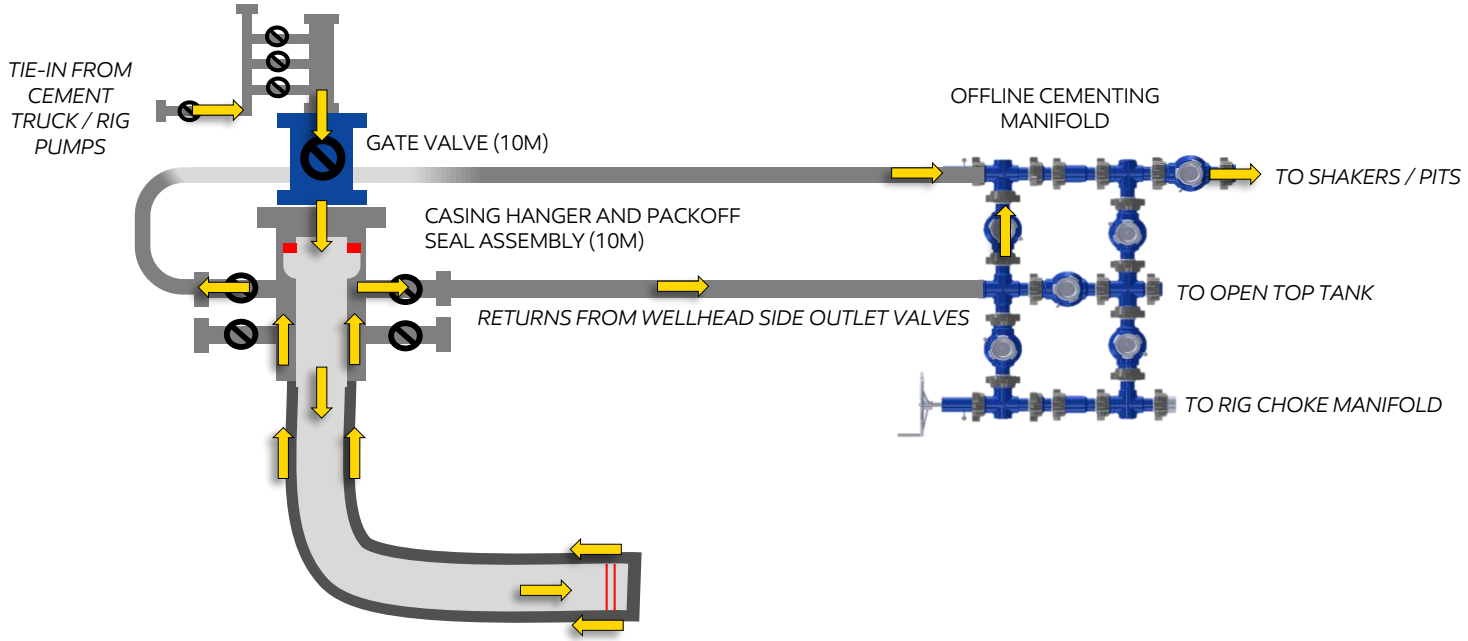
FLOWPATH WHILE CEMENTING

# Process and Equipment

## ONLINE CEMENTING




## OFFLINE CEMENTING




KEY DIFFERENCES

1. *Rig BOP replaced by gate valve and WH adaptor assembly* (10M rated)
2. *Addition of offline cementing manifold and high pressure iron* to direct fluid returns to rig active system and/or choke manifold
3. *Packoff annulus barrier in place* and tested prior to cementing operations (10M rated)
4. *Cement truck* performs cement job displacement (vs rig pumps)

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# Barrier Comparison

| | ONLINE | | OFFLINE (PROPOSED) | |
|---|---|---|---|---|
| | Casing | Annulus | Casing | Annulus |
| **N/D BOP & Skid Rig** | | | **1. Hydrostatic**<br>2. Double float valves<br>3. BPV | 1. Hydrostatic<br>2. Packoff |
| **Install Cement Head** | 1. Hydrostatic<br>2. Double float valves | 1. Hydrostatic<br>2. BOP (annular, VBR) | 1. Hydrostatic<br>2. Double float valves<br>**3. Gate valve** | 1. Hydrostatic<br>**2. Packoff**<br>3. Wellhead Adaptor |
| **Perform Cement Job** | 1. Double float valves<br>2. Cement Head | 1. Hydrostatic<br>2. BOP (annular, VBR) | 1. Double float valves<br>2. Cement Head<br>**3. Gate valve** | 1. Hydrostatic<br>**2. Packoff**<br>3. Wellhead Adaptor |
| **Remove Cement Head** | 1. Double float valves | 1. Hydrostatic<br>2. BOP (annular, VBR) | 1. Double float valves<br>**2. Gate valve** | 1. Hydrostatic<br>**2. Packoff**<br>3. Wellhead Adaptor |
| **N/D & Install TA Cap** | 1. Double float valves<br>2. BPV | 1. Hydrostatic<br>2. Packoff | 1. Double float valves<br>2. BPV | 1. Hydrostatic<br>2. Packoff |

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# Well Control Response Plan

The following well control response plan for offline cementing is the same as for online cementing.

1. **Pre-job design:** Cement job designed to define max pump rates to reduce ECD and avoid losses during cement job.
2. **Identify the influx / re-route return flow:** If an influx is observed, the cementing manifold would be re-routed to direct flow to the rig choke manifold (instead of the shakers). If gas was encountered or a kick was detected, continue pumping the job through the rig choke / gas buster while controlling annulus back pressure through the rig choke. Shut the well in once the job is finished (to ensure cement does not set up inside casing). Roles & responsibilities are as follows:
    - Onsite well site representative responsible for monitoring and helping to identify if an influx occurred with support from the rig crews.
    - Rig crew responsible for shutting in the well.
    - Onsite well site representative responsible for operating the rig choke manifold.
3. **Monitor pressure:** If well is shut-in, pressure monitored while cement is building compressive strength.
4. **Flow check:** Once sufficient time is allocated to build compressive strength, perform flow check.
5. **Shut-in:** If annulus pressure / flow is observed, shut-in the well at the casing valves.
6. **Kill the well:** Pump kill weight mud or cement (depending on well conditions) via bradenhead squeeze down the annulus using the rig pumps tied into the cementing manifold or the cement truck.
7. **Flow check:** Flow check the well to confirm static.



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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 nippled 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.

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Tenaris

# TenarisHydril Wedge 441®



| Coupling | Pipe Body |
|---|---|
| Grade: **P110-ICY** | Grade: **P110-ICY** |
| Body: **White** | 1st Band: **White** |
| 1st Band: **Pale Green** | 2nd Band: **Pale Green** |
| 2nd Band: **-** | 3rd Band: **Pale Green** |
| 3rd Band: **-** | 4th Band: **-** |
| | 5th Band: **-** |
| | 6th Band: **-** |

| | | | | | |
|---|---|---|---|---|---|
| **Outside Diameter** | 5.500 in. | **Wall Thickness** | 0.361 in. | **Grade** | P110-ICY |
| **Min. Wall Thickness** | 87.50 % | **Pipe Body Drift** | API Standard | **Type** | Casing |
| **Connection OD Option** | REGULAR | | | | |

## Pipe Body Data

| Geometry | | | | Performance | |
|---|---|---|---|---|---|
| **Nominal OD** | 5.500 in. | **Wall Thickness** | 0.361 in. | **Body Yield Strength** | 729 x1000 lb |
| **Nominal Weight** | 20.00 lb/ft | **Plain End Weight** | 19.83 lb/ft | **Min. Internal Yield Pressure** | 14,360 psi |
| **Drift** | 4.653 in. | **OD Tolerance** | API | **SMYS** | 125,000 psi |
| **Nominal ID** | 4.778 in. | | | **Collapse Pressure** | 12,300 psi |

## Connection Data

| Geometry | | Performance | | Make-Up Torques | |
|---|---|---|---|---|---|
| **Connection OD** | 5.852 in. | **Tension Efficiency** | 81.50 % | **Minimum** | 15,000 ft-lb |
| **Coupling Length** | 8.714 in. | **Joint Yield Strength** | 594 x1000 lb | **Optimum** | 16,000 ft-lb |
| **Connection ID** | 4.778 in. | **Internal Pressure Capacity** | 14,360 psi | **Maximum** | 19,200 ft-lb |
| **Make-up Loss** | 3.780 in. | **Compression Efficiency** | 81.50 % | | |
| **Threads per inch** | 3.40 | **Compression Strength** | 594 x1000 lb | **Operation Limit Torques** | |
| **Connection OD Option** | Regular | **Max. Allowable Bending** | 84.76 °/100 ft | **Operating Torque** | 36,000 ft-lb |
| | | **External Pressure Capacity** | 12,300 psi | **Yield Torque** | 42,000 ft-lb |
| | | | | **Buck-On** | |
| | | | | **Minimum** | 19,200 ft-lb |
| | | | | **Maximum** | 20,700 ft-lb |

## Notes

This connection is fully interchangeable with:
Wedge 441® - 5.5 in. - 0.304 (17.00) in. (lb/ft)
Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) / 0.415 (23.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

For the lastest performance data, always visit our website: www.tenaris.com
For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

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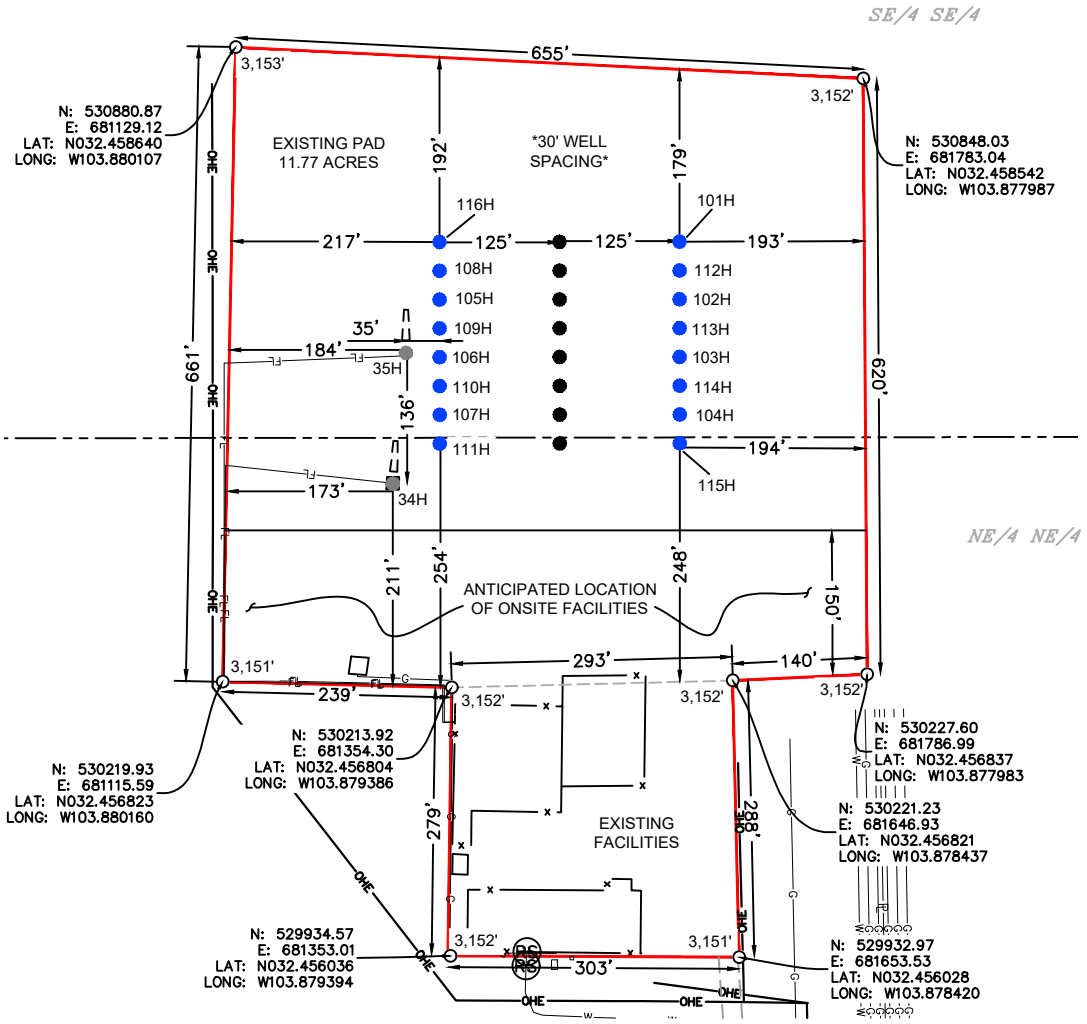
# SECTION 21
E/2 OWNER: STATE
OF NEW MEXICO

TOWNSHIP 21 SOUTH,
RANGE 30 EAST
N.M.P.M.

GRAPHIC SCALE
0 100 200
(IN FEET)
1 inch = 200 ft.

# SECTION 28
OWNER: STATE OF
NEW MEXICO




## LEGEND

- SECTION LINE
- EXISTING PAD
- TBD WELL LOCATION
- PERMITTED WELL LOCATION
- EXISTING WELL LOCATION
- X — DENOTES WELL LOCATION HAS BEEN DRILLED
- EXISTING ROAD
- OHE — OHE — EXISTING OVERHEAD ELECTRIC
- W — W — EXISTING WATER LINE
- G — G — EXISTING GAS LINE
- PL — PL — EXISTING PIPELINE
- FL — FL — EXISTING FLOW LINE

## GENERAL NOTES

1. BEARINGS AND COORDINATES SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATES SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983.
2. LATITUDE AND LONGITUDE VALUES SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN DATA (NAD83).
3. REFER TO TOPOGRAPHICAL AND ACCESS ROAD MAP FOR PROPOSED ROAD LOCATION.

I,MARK DILLON HARP, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23786, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PREFORMED 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.

MARK DILLON HARP
NEW MEXICO PROFESSIONAL LAND SURVEYOR
NO. 23786

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

ATWELL
817.897.5008 www.atwell.com
509 Pecan Street, Suite 200
Fort Worth, Texas 76102
TBPELS FIRM # 10193726 (Surveying) & # 12242 (Engineering)

## A WELL STIE PLAN FOR XTO PERMIAN OPERATING, LLC.
## BIG EDDY UNIT DI 9 EXISTING PAD

PAD CENTER IS LOCATED 66 FEET FROM THE SOUTH LINE AND 665 FEET FROM THE EAST LINE OF SECTION 21, TOWNSHIP 21 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

| CHECKED BY: | DATE: | SCALE: | PROJECT NO.: |
|---|---|---|---|
| AR | 5/28/2026 | 1" = 200' | 618.013004.05 |
| DRAWN BY: | FIELD CREW: | REVISION NO.: | SHEET: |
| AI | RD | 4 | 1 OF 1 |

P:\618.013 XTO Energy – NM\004 Big Eddy Unit – Eddy Lea\.05 – BEU DI 9 – EDDY\DWG\Exhibits\WELL SITE PLAN\BEU DI 9 WELL SITE PLAN.dwg

# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | XTO Permian Operating LLC |
| **WELL NAME & NO.:** | Big Eddy Unit DI 9 Arrow Fed Com 115H |
| **LOCATION:** | Sec 28-21S-30E-NMP |
| **COUNTY:** | Eddy County, New Mexico |

*Changes approved through engineering via **Sundry 2923362** on 10/19/2026. Any previous COAs not addressed within the updated COAs still apply.*

**Create COAs**

| $H_2S$ | Cave / Karst | Waste Prevention Rule |
|---|---|---|
| Not Reported | High | Waste Minimization Plan |

| Potash | R-111-Q Design |
|---|---|
| R-111-Q | 4-String: Open 1st Int x 2nd Annulus (ICP 2 below Relief Zone) |

| Wellhead | Casing | Cementing |
|---|---|---|
| Multibowl | 4-String Well | ☐ DV Tool ☑ Bradenhead ☑ Echometer |
| ☑ Flex Hose | ☐ Liner ☑ Fluid Filled ☐ Casing Clearance | ☑ Offline Cement ☐ Open Annulus ☐ Pilot Hole |
| ☑ Break Testing | | |

**Special Requirements**

☐ Capitan Reef ☐ Water Disposal ☐ COM ☑ Unit

***Operator has elected to have an alternate hole size for the surface (24" or 26").*** *Clearance requirements are met with both.* ***Production casing has two hole sizes (8.75" or 8.5") and 2 casing sizes (5.5" or 6").*** *Both hole sizes and casing requirements meet minimum standards.*

## A. HYDROGEN SULFIDE

Hydrogen Sulfide ($H_2S$) monitors shall be installed prior to drilling out the surface shoe. If $H_2S$ is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

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

**B. CASING**

1. The **20** inch surface casing shall be set at approximately **391** feet (a minimum of **70'** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. **Set depth adjusted per BLM geologist.**
    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 (including 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.

***1st Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.***

2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing is **cement to surface**. If cement does not circulate, see B.1.a, c-d above.
    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of cave/karst, Capitan Reef, or potash features.

***2nd Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.***

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126 (base of the McNutt Potash ore zone.)
    - Operator must verify top of cement per R-111-Q requirements. Submit results to the BLM. Operator shall use one of the approved methods for cement verification located in the **General Requirements, Section A.1**.
    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of cave/karst, Capitan Reef, or potash features.
    - **A monitored open annulus will be incorporated during completion by leaving the above annulus un-cemented and monitored.** Operator must follow **all** monitoring requirements listed within R-111-Q. Tieback shall be met within **180 days.**
    - Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM.**
    - A pressure monitoring device must be installed at surface on both the intermediate annulus and the production annulus for the life of the well.
    - During hydraulic fracturing operations, a pressure relief valve or appropriate venting system shall be installed **in all designed open annuli** in the event of a production casing failure.

- **In the event of a casing failure during completion,** the operator **must** contact the BLM engineer (575-706-2779) and inspection staff listed in the **General Requirements.**

4. The minimum required fill of cement behind the **5-1/2** inch or **6** inch production casing is **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126 (base of the McNutt Potash ore zone.)
    - Operator must verify top of cement per R-111-Q requirements. Submit results to the BLM. Operator shall use one of the approved methods for cement verification located in the **General Requirements, Section A.1**.
    - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of cave/karst, Capitan Reef, or potash features.

## C. PRESSURE CONTROL

1. 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 Diverter system is approved as a variance to drill the 1st intermediate casing section.**
    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.

2. 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).

3. Break testing has been approved for this well ONLY on those 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.)** If in the event break testing is not utilized, then a full BOPE test would be conducted.
    a. Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation. **BOPE Break Testing is NOT permitted to drill the production hole section.**

b. While in transfer between wells, BOPE shall be secured by the hydraulic carrier or cradle.
c. 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).
d. As a minimum, a full BOPE test shall be performed at 21-day intervals.
e. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**. 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.

## 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.

**Bradenhead Approval**

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 **on the surface, intermediate 1 and 2, and production strings**.

a. **First stage:** Operator will cement with intent to reach the top of the zone.
b. **Second stage:** Operator to squeeze and top-out. Cement to meet requirements listed for this casing string. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down **Deeper String X Shallow String** annulus. Submit results to the BLM. If cement does not tie back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

- Operator shall run a CBL from TD of the **deeper** casing to tieback requirements after the second stage BH to verify TOC.
- **Operator shall run Echo-meter to verify Cement Slurry/Fluid top in the annulus.** 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.
- No displacement fluid/wash out shall be utilized at the top of the cement slurry during second stage bradenhead when running Echo-meter if cement is required to surface.
- Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

**Offline Cementing**

Offline cementing has been approved for **all hole sections.** Contact the BLM prior to the commencement of any offline cementing procedure.

# GENERAL REQUIREMENTS

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

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

For multi-well pads, notifications for the following operations may be made together going from one well to the next. This does **NOT** apply to notifications for wells in the R111Q potash area:

- Casing run
- Offline cementing
- Break testing

**Contact Eddy County Inspection Staff:**

Email **BLM_NM_CFO_DrillingNotifications@BLM.GOV**; The inspector on call phone, 575-361-2822, will remain active as a secondary contact for notifications; calls only, text messages are not accepted at this number.

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 proposed to drill multiple wells utilizing a skid / walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
    b. When the operator proposes to set surface casing with Spudder Rig
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
        iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on swell.
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 always be operational 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 doghouse 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 & CEMENT**

1. The current acceptable methods of cement verification are as follows:
    i. Observing cement circulated to surface,
    ii. Cement Bond Log (CBL),
    iii. Temperature log within 8-10 hours after completing the cement job,
    iv. Echometer (if a second-stage bradenhead is being utilized and operator was granted approval prior to operations.)
2. 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.
3. 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.
4. 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.
5. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Well specific cement details must be onsite prior to pumping the cement for each casing string.
6. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
7. 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.
8. If hard band 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.

9. 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. (This 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 -our 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 because 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.

| Well Name | Well Number | US Well Number | Lease Number | Case Number | Operator |
|---|---|---|---|---|---|
| BIG EDDY UNIT DI 9 ARROW FED COM | 101H | 3001558976 | NMNM85912 | NMNM85912 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 102H | 3001558977 | NMNM85912 | NMNM85912 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 103H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 104H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 105H | | NMNM85912 | NMNM85912 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 106H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 107H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 108H | | NMNM85912 | NMNM85912 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 109H | | NMNM85912 | NMNM85912 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 110H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 111H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 112H | | NMNM85912 | NMNM85912 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 113H | | NMNM85912 | NMNM85912 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 114H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 115H | | NMNM130866 | NMNM130866 | XTO PERMIAN |
| BIG EDDY UNIT DI 9 ARROW FED COM | 116H | 3001558978 | NMNM85912 | NMNM85912 | XTO PERMIAN |



Released to Imaging: 11/20/2026 3:39:05 PM

## Notice of Intent

**Sundry ID:** 2939221

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 10/23/2026

**Time Sundry Submitted:** 10:48

**Date proposed operation will begin:** 10/23/2026

**Procedure Description:** XTO Permian Operating, LLC. respectfully requests to update the selected wells to include the revised break test variance COA language that has been modified to the following: 1. BOPE Break Testing is ONLY permitted for intermediate hole sections for MASP 4800psi. (Annular preventer must be tested to a minimum of 70% of annular RWP and shall be higher than the intermediate hole section MASP on initial full BOP test). 2. BOPE Break Testing is NOT permitted to drilling the production hole section. 3. Variance only pertains to the intermediate hole-sections where BLM MASP 4800 psi. 4. A full BOPE test is required prior to drilling the first intermediate hole section and intermediate hole sections exceeding 12,000' TVD (intermediate hole sections with MASP >4800psi will require 10M tests and will not be considered for break testing). 5. While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle. 6. Any well control event while drilling require notification to the BLM Petroleum Engineer (575-7062779) prior to the commencement of any BOPE Break Testing operations. 7. The BLM is to be contacted (575-3612822 Eddy County) 4 hours prior to BOPE tests. 8. As a minimum, a full BOPE test shall be performed at 21-day intervals. 9. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR 3172.10. If in the event break testing is not utilized, then a full BOPE test would be conducted. The updated Break Test Variance document is attached for your review.

## NOI Attachments

**Procedure Description**

BOP_Break_Test_Variance__Update_May_11___2026__20261023104449.pdf

## Conditions of Approval

**Specialist Review**

Break_Testing_Language_Adjustment_Sundry_2939221_20261023120800.pdf

## Operator

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

**Operator Electronic Signature:** LAURA CHAPMAN **Signed on:** OCT 23, 2026 10:48 AM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Regulatory Analyst

**Street Address:** 22777 SPRINGWOODS VILLAGE PARKWAY

**City:** SPRING **State:** TX

**Phone:** (346) 335-5969

**Email address:** LAURA.M.CHAPMAN@EXXONMOBIL.COM

## Field

**Representative Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

## BLM Point of Contact

**BLM POC Name:** ALLISON MORENCY **BLM POC Title:** Contractor WO

**BLM POC Phone:** 2029127157 **BLM POC Email Address:** amorency@blm.gov

**Disposition:** Approved **Disposition Date:** 10/23/2026

**Signature:** Allison Morency

CONFIDENTIAL

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

Exxon Mobil 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…"*. Exxon Mobil considers the break testing the BOPE is such a situation. Therefore, as per CFR Title 43 Part 3170, Exxon Mobil 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 Exxon Mobil 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[ac] psig (MPa) | Pressure Test—High Pressure[ac] | |
|---|---|---|---|
| | | Change Out of Component, Elastomer, or Ring Gasket | No Change Out of Component, Elastomer, or Ring Gasket |
| Annular preventer[b] | 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[bd] | 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[e] | 250 to 350 (1.72 to 2.41) | RWP of ram preventers or wellhead system, whichever is lower | ITP |
| Choke manifold—downstream of chokes[e] | 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 | |

[a] 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.

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

[c] 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.

[d] 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.

[e] 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.

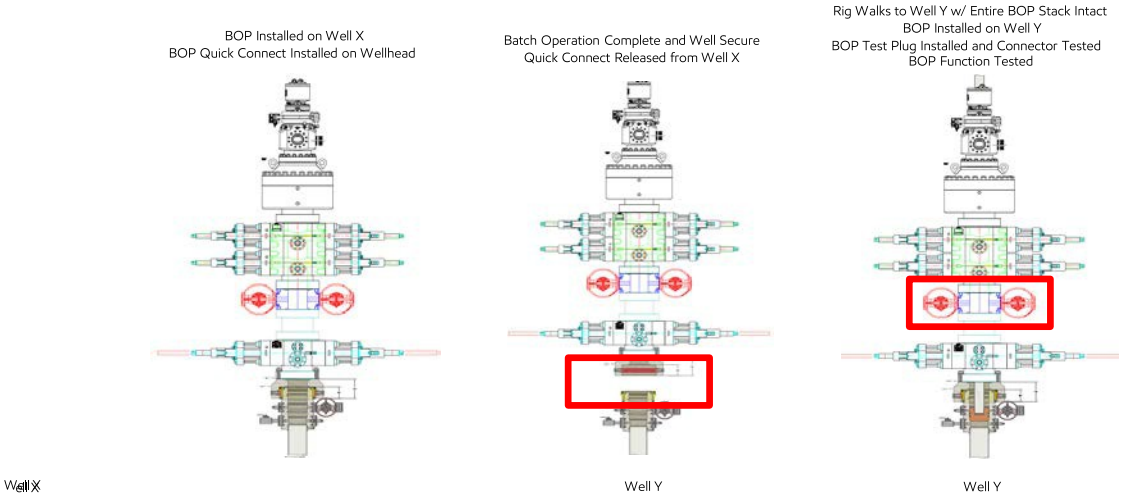
Exxon Mobil considers break testing and our current procedures meet the intent of CFR Title 43 Part 3170 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. Exxon Mobil internal standards requires complete BOPE tests more 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. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

**Procedures**

1. Exxon Mobil will use this document for 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. Exxon Mobil 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 intermediate hole section of the pad, and intermediate hole sections exceeding 12,000' TVD
    b. A Full BOP test will be required if the intermediate hole section being drilled has a BLM MASP over 4800 psi.
    c. 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. Connection between the HCV valve and choke line
    b. Connection between the BOP quick connect and the wellhead
4. The BOP will be lifted and removed from the wellhead by a hydraulic system
5. While transferring between wells, the BOPE will be secured by the hydraulic carrier or cradle.
6. The connections between the HCV valve - choke line and BOP quick connect - wellhead 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**

- Variance is requested only for intermediate hole sections where MASP <4800 psi and intermediate hole sections do not exceed 12,000' TVD
- 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.
- Any well control event while drilling require notification to the BLM Petroleum Engineer
- The BLM will be contacted 4 hours prior to BOPE tests.

Based on 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.

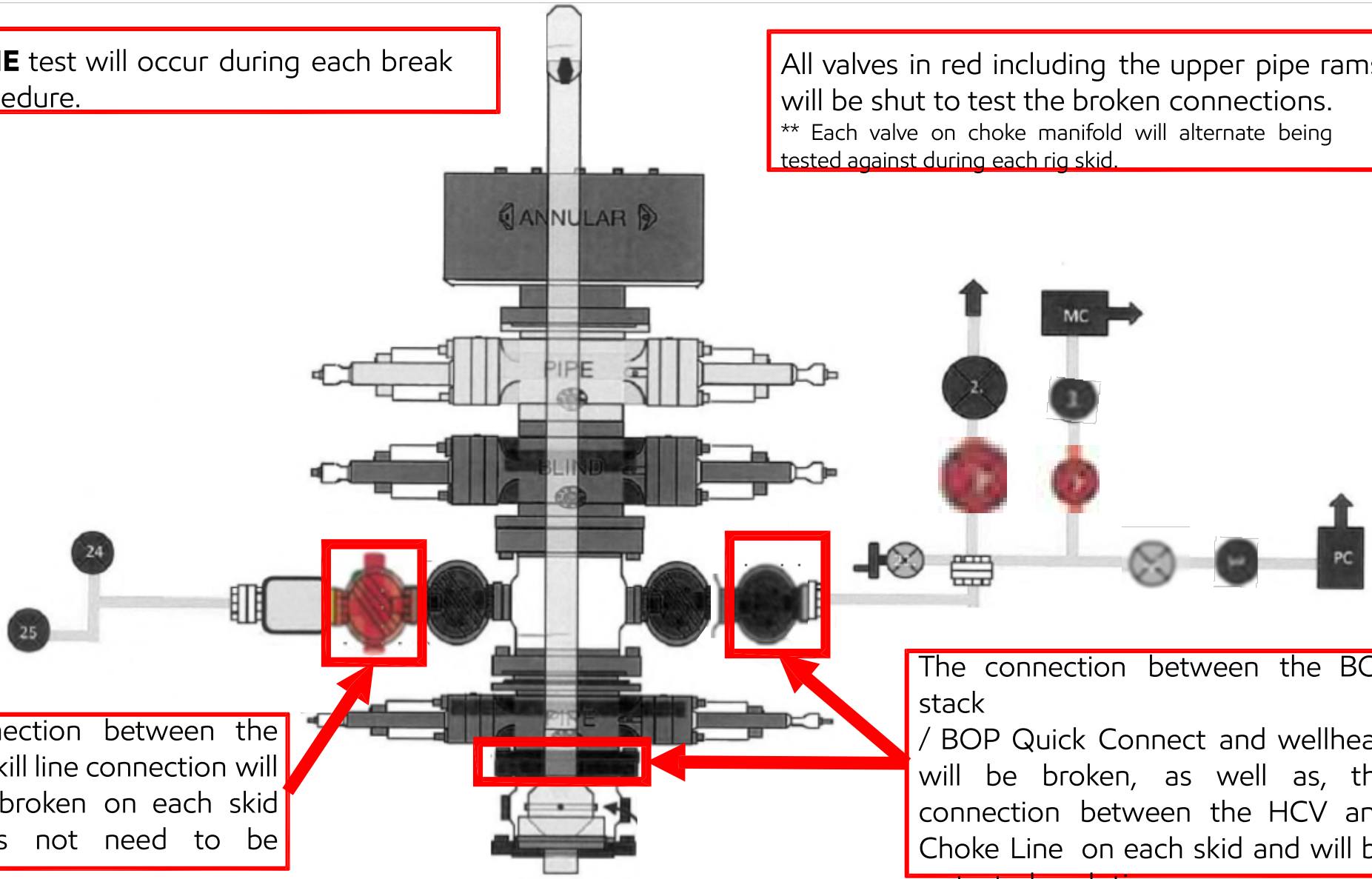
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 4800psi and/or intermediate hole sections exceeds 12,000' TVD

4. Full BOP test will be required prior to drilling the production hole.

Only **ONE** test will occur during each break test procedure.

All valves in red including the upper pipe rams will be shut to test the broken connections.

** Each valve on choke manifold will alternate being tested against during each rig skid.




The connection between the HCV and kill line connection will **NOT** be broken on each skid and does not need to be retested.

The connection between the BOP stack / BOP Quick Connect and wellhead will be broken, as well as, the connection between the HCV and Choke Line on each skid and will be re-tested each time.

# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | XTO Permian Operating LLC |
| **WELL NAME & NO.:** | Big Eddy Unit DI 9 Arrow Fed Com 101H<br>Big Eddy Unit DI 9 Arrow Fed Com 102H<br>Big Eddy Unit DI 9 Arrow Fed Com 103H<br>Big Eddy Unit DI 9 Arrow Fed Com 104H<br>Big Eddy Unit DI 9 Arrow Fed Com 105H<br>Big Eddy Unit DI 9 Arrow Fed Com 106H<br>Big Eddy Unit DI 9 Arrow Fed Com 107H<br>Big Eddy Unit DI 9 Arrow Fed Com 108H<br>Big Eddy Unit DI 9 Arrow Fed Com 109H<br>Big Eddy Unit DI 9 Arrow Fed Com 110H<br>Big Eddy Unit DI 9 Arrow Fed Com 111H<br>Big Eddy Unit DI 9 Arrow Fed Com 112H<br>Big Eddy Unit DI 9 Arrow Fed Com 113H<br>Big Eddy Unit DI 9 Arrow Fed Com 114H<br>Big Eddy Unit DI 9 Arrow Fed Com 115H<br>Big Eddy Unit DI 9 Arrow Fed Com 116H |
| **LOCATION:** | Sec 28-21S-30E-NMP |
| **COUNTY:** | Eddy County, New Mexico |

*Changes approved through engineering via **Sundry 2939221** on 10/19/2026. Any previous COAs not addressed within the updated COAs still apply.*

**The amendment to the COAs is for the break testing language:**

1. Break testing has been approved for this well ONLY on those intervals with an expected MASP under 4800 psi. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)** If in the event break testing is not utilized, then a full BOPE test would be conducted.
    a. **BOPE Break Testing is NOT permitted to drill the production hole section.**
    b. A full BOPE test is required prior to drilling the first intermediate hole section and intermediate hole sections exceeding 12,000' TVD (intermediate hole sections with MASP > 4800psi will require 10M tests and will not be considered for break testing).
    c. While in transfer between wells, BOPE shall be secured by the hydraulic carrier or cradle.
    d. 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).
    e. As a minimum, a full BOPE test shall be performed at 21-day intervals.
    f. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**. 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.

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



## ACKNOWLEDGMENTS

| | |
|---|---|
| Operator:<br>XTO PERMIAN OPERATING LLC.<br>3617 North Big Spring Street<br>MIDLAND, TX 79705 | OGRID:<br>373075 |
| | Action Number:<br>635691 |
| | Action Type:<br>[C-101] BLM - Federal/Indian Land Lease (Form 3160-3) |

**ACKNOWLEDGMENTS**

| | |
|---|---|
| ☑ | I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well. |

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



## CONDITIONS

| Operator: | OGRID: |
|---|---|
| XTO PERMIAN OPERATING LLC.<br>3617 North Big Spring Street<br>MIDLAND, TX 79705 | 373075 |
| | Action Number:<br>635691 |
| | Action Type:<br>[C-101] BLM - Federal/Indian Land Lease (Form 3160-3) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| lchapman | Cement is required to circulate on both surface and intermediate1 strings of casing. | 10/23/2026 |
| lchapman | If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing. | 10/23/2026 |
| ward.rikala | Notify the OCD 24 hours prior to casing & cement. | 10/26/2026 |
| ward.rikala | File As Drilled C-102 and a directional Survey with C-104 completion packet. | 10/26/2026 |
| 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. | 10/26/2026 |
| 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. | 10/26/2026 |
| ward.rikala | If the method of isolation was not by circulation, a CBL must be performed; if strata isolation is not achieved, then remediation will be required before further operations. | 10/26/2026 |
| ward.rikala | Operator must comply with all of the R-111-Q requirements. | 10/26/2026 |
| jeffrey.harrison | Out of compliance with Rule 19.15.5.9 Inactive Well List. Well cannot be produced until the operator is back in compliance. | 11/20/2026 |
| jeffrey.harrison | NSP required prior to production IF not included in an existing order OR not an infill to an appropriate defining well in the same pool and spacing unit. | 11/20/2026 |