



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

*Application for Permit to Drill*

**APD Package Report**

Date Printed:

APD ID:  
APD Received Date:  
Operator:

Well Status:  
Well Name:  
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: 2 file(s)
  - Casing Taperd String Specs: 2 file(s)
  - Casing Design Assumptions and Worksheet(s): 4 file(s)
  - Hydrogen sulfide drilling operations plan: 1 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 1 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)
  - 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
- Bond Report

- Bond Attachments
  - None

Form 3160-3  
(June 2015)FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No.  6. If Indian, Allottee or Tribe Name  7. If Unit or CA Agreement, Name and No.  8. Lease Name and Well No.
2. Name of Operator		9. API Well No. <div style="color: red; font-weight: bold;">30-015-57277</div>
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.<br>2. A Drilling Plan.<br>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).<br>5. Operator certification.<br>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.

(Continued on page 2)

\*(Instructions on page 2)



Approval Date: 06/17/2025

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

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

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

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

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

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

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

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

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

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

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

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

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

The BLM connects this information to a new evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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



## Additional Operator Remarks

### Location of Well

0. SHL: NWSE / 2450 FSL / 2237 FEL / TWSP: 22S / RANGE: 30E / SECTION: 17 / LAT: 32.39172 / LONG: -103.902204 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNE / 770 FNL / 2572 FEL / TWSP: 22S / RANGE: 30E / SECTION: 17 / LAT: 32.397375 / LONG: -103.903297 ( TVD: 9049 feet, MD: 9800 feet )

BHL: NENE / 770 FNL / 50 FEL / TWSP: 22S / RANGE: 30E / SECTION: 15 / LAT: 32.397292 / LONG: -103.860406 ( TVD: 9049 feet, MD: 22986 feet )

### BLM Point of Contact

Name: MARIAH HUGHES

Title: Land Law Examiner

Phone: (575) 234-5972

Email: mhughes@blm.gov

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### **Review and Appeal Rights**

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

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**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	XTO PERMIAN RESOURCES LLC
LEASE NO.:	NMNM070965O
COUNTY:	Eddy County, New Mexico

Wells:

**JAMES RANCH UNIT DI 11 EKALAKA #701H**

Surface Hole Location: 2,450' FSL & 2,267' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 335' FNL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #702H**

Surface Hole Location: 2,450' FSL & 2,237' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 770' FNL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #703H**

Surface Hole Location: 2,450' FSL & 2,207' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 1210' FNL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #704H**

Surface Hole Location: 2,450' FSL & 2,177' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 1650' FNL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #705H**

Surface Hole Location: 2,450' FSL & 2,069' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 2090' FNL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #706H**

Surface Hole Location: 2,220' FSL & 2,268' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 2530' FNL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #707H**

Surface Hole Location: 2,220' FSL & 2,237' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 2310' FNL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #708H**

Surface Hole Location: 2,220' FSL & 2,207' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 1,870' FSL & 50' FEL, Section 15, T. 22 S. R. 30 E.

**JAMES RANCH UNIT DI 11 EKALAKA #709H**

Surface Hole Location: 2,220' FSL & 2,178' FEL, Section 17, T. 22 S. R. 30 E.

Bottom Hole Location: 1,430' FSL & 50' FEL, Section 15, T. 22 S. R. 30 E.

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### 3. 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.

#### 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.

#### RANGELAND RESOURCES

##### 1.1.1. 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.

### 1.1.2. 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).

### 1.1.3. 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.

## NOXIOUS WEEDS

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

## LIGHT POLLUTION

### 1.1.4. 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.

### 1.1.5. 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).



#### 1.1.6. 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.

## 4. SPECIAL REQUIREMENTS

### WILDLIFE

#### 2.3.1 Lesser Prairie Chicken

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

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

##### 2.3.1.2 Timing Limitation Exceptions:

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

##### 2.3.1.3 Ground-level Abandoned Well Marker to avoid raptor perching:

Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at [BLM\\_NM\\_CFO\\_Construction\\_Reclamation@blm.gov](mailto:BLM_NM_CFO_Construction_Reclamation@blm.gov).

### SPECIAL STATUS PLANT SPECIES

### 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 2012 Secretarial 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 James Ranch Drill Island 8 Drill Island.

## 5. CONSTRUCTION REQUIREMENTS

### CONSTRUCTION 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](mailto: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.

### 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.

### 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.

### 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.

### WELL PAD & SURFACING

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

### EXCLOSURE FENCING (CELLARS & PITS)

The operator will install and maintain enclosure 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 enclosure fencing design, refer to BLM's Oil and Gas Gold Book, Enclosure 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.

### ON LEASE ACCESS ROAD

#### 3.1.1 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.

#### 3.1.2 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.

### 3.1.3 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.

### 3.1.4 Ditching

Ditching shall be required on both sides of the road.

### 3.1.5 Turnouts

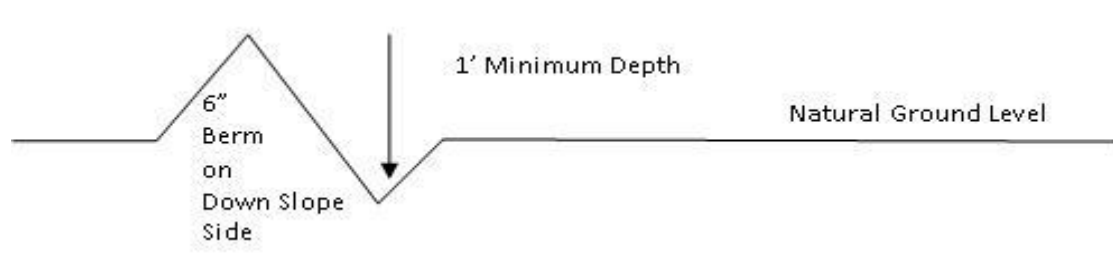
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### 3.7.6 Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing 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:

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

**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

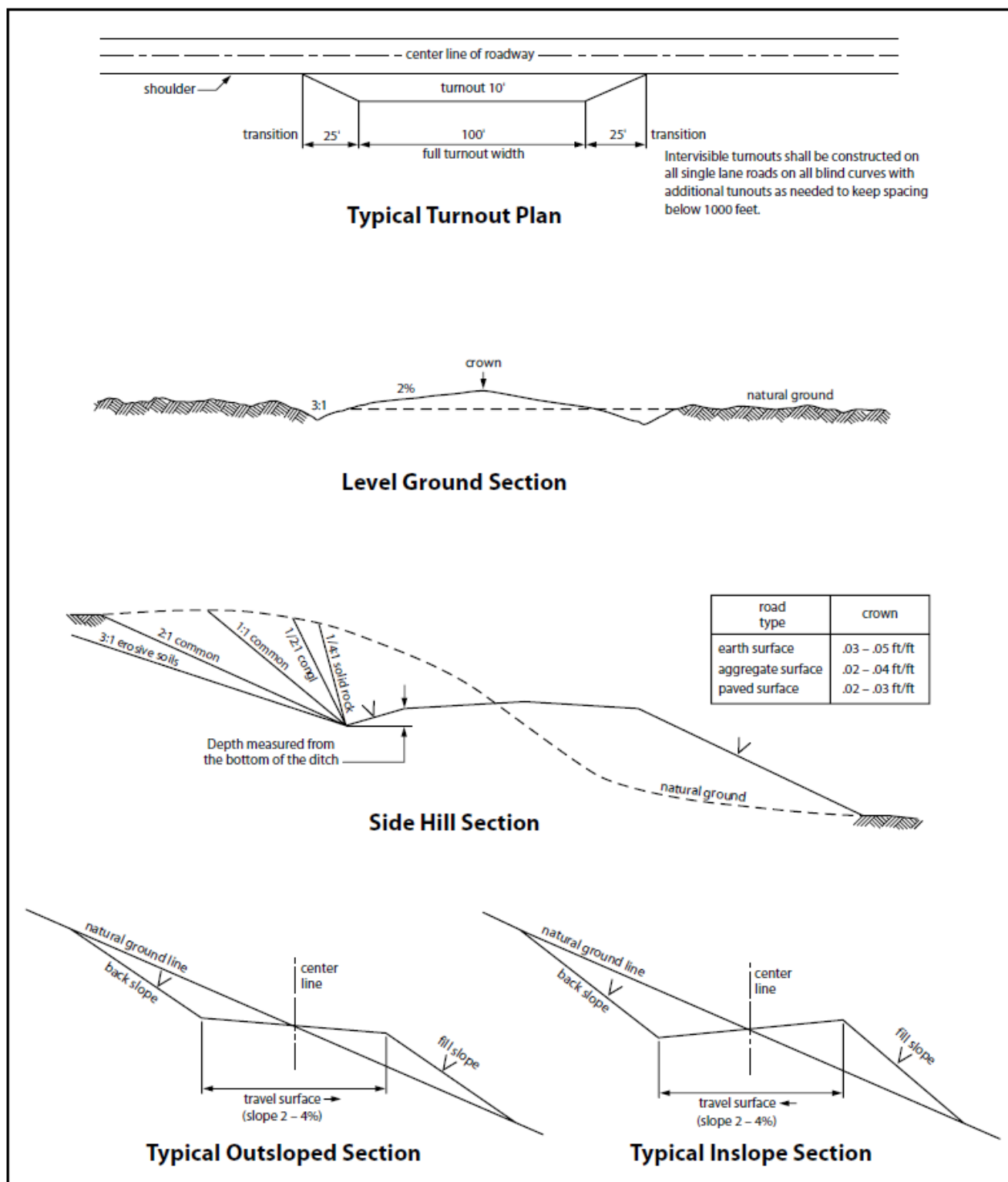


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## 7. PRODUCTION (POST DRILLING)

### 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.

## 8. 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/permittee 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:

<u>Species</u>	<u>lb/acre</u>
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

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b> XTO
<b>WELL NAME &amp; NO.:</b> JRU DI 11 Ekalaka 702H
<b>LOCATION:</b> Sec. 17, T. 22S, R.30
<b>COUNTY:</b> <span style="border: 1px solid black; padding: 2px 10px;">Eddy County, New Mexico</span>

Create COAs

<b>H<sub>2</sub>S</b>	<b>Cave / Karst</b>	<b>Waste Prevention Rule</b>
<span style="border: 1px solid black; padding: 2px 10px;">Not Reported</span>	<span style="border: 1px solid black; padding: 2px 10px;">High</span>	<span style="border: 1px solid black; padding: 2px 10px;">APD Submitted Prior to 06/10/24</span>
<b>Potash</b>	<b>R-111-Q Design</b>	
<span style="border: 1px solid black; padding: 2px 10px;">R-111-Q</span>	<span style="border: 1px solid black; padding: 2px 10px;">4-String: Engineered Weak Point</span>	
<b>Wellhead</b>	<b>Casing</b>	
<span style="border: 1px solid black; padding: 2px 10px;">Multibowl</span>	<span style="border: 1px solid black; padding: 2px 10px;">4-String Well</span>	
<input checked="" type="checkbox"/> Flex Hose <input checked="" type="checkbox"/> Break Testing	<input type="checkbox"/> Liner <input type="checkbox"/> Fluid Filled <input checked="" type="checkbox"/> Casing Clearance	
	<b>Cementing</b>	
	<input type="checkbox"/> DV Tool <input checked="" type="checkbox"/> Bradenhead <input checked="" type="checkbox"/> Echometer <input checked="" type="checkbox"/> Offline Cement <input checked="" type="checkbox"/> Open Annulus <input type="checkbox"/> Pilot Hole	
<b>Special Requirements</b>		
<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM <input checked="" type="checkbox"/> Unit

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

***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 **13-3/8** inch surface casing shall be set at approximately **677 ft** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater (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, or potash features**.
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. If cement does not circulate, contact the appropriate BLM office.
  - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry** due to the presence of **cave/karst, 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**.
- b. **Second stage:** Operator to squeeze and top-out. Cement to meet requirements listed for this casing string.

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, contact the appropriate BLM office shall be notified.

- Operator shall run a CBL from TD of the **Intermediate 2** casing to tieback requirements listed above 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 **the Engineered Weak Point and 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. If cement does not circulate, contact the appropriate BLM office.

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

### **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.

### **Casing Clearance**

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



## GENERAL REQUIREMENTS

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

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

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the 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

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

**B. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

### C. DRILLING MUD

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

### D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed

of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**Approved by Zota Stevens on 4/23/2025**

575-234-5998 / [zstevens@blm.gov](mailto:zstevens@blm.gov)



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

# Operator Certification Data Report

07/23/2025

## 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:

Signed on: 01/12/2024

Title:

Street Address:

City:

State:

Zip:

Phone:

Email address:

## Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:



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

## Application Data

07/23/2025

APD ID: 10400096149

Submission Date: 01/12/2024

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 11 EKALAKA

Well Number: 702H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

### Section 1 - General

APD ID: 10400096149

Tie to previous NOS? N

Submission Date: 01/12/2024

BLM Office: Carlsbad

User: JEAN COOPER

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM02951A

Lease Acres:

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM709650

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: JAMES RANCH UNIT DI 11 EKALAKA

Well Number: 702H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: WC-015 G-06  
S243119C

Pool Name: BONE SPRING



Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 11 EKALAKA

Well Number: 702H

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

Is the proposed well in a Helium production area? N

Use Existing Well Pad? N

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:  
JAMES RANCH UNIT DI 11  
EKALAKA

Number: A

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town:

Distance to nearest well: 30 FT

Distance to lease line: 2237 FT

Reservoir well spacing assigned acres Measurement: 400 Acres

Well plat: JAMES\_RANCH\_UNIT\_DI\_11\_EKALAKA\_702H\_C102\_20241024081100.pdf

Well work start Date: 08/13/2023

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	2450	FSL	2237	FEL	22S	30E	17	Aliquot NWSE	32.39172	-103.902204	EDD Y	NEW MEXI CO	NEW MEXI CO	S	STATE	3112			Y
KOP Leg #1	2450	FSL	2237	FEL	22S	30E	17	Aliquot NWSE	32.39172	-103.902204	EDD Y	NEW MEXI CO	NEW MEXI CO	S	STATE	-5392	8850	8504	Y

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H

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
PPP Leg #1-1	770	FNL	2572	FEL	22S	30E	17	Aliquot NWNE	32.397375	- 103.903297	EDD Y	NEW MEXICO	NEW MEXICO	S	STATE	- 5937	9800	9049	Y
EXIT Leg #1	770	FNL	100	FEL	22S	30E	15	Aliquot NENE	32.397292	- 103.860568	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 02951A	- 5937	22936	9049	Y
BHL Leg #1	770	FNL	50	FEL	22S	30E	15	Aliquot NENE	32.397292	- 103.860406	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 02951A	- 5937	22986	9049	Y

C-102  Sumbit electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONVERSION DIVISION	Revised July, 09 2024	
		Submittal Type:	<input checked="" type="checkbox"/> Initial Submittal
			<input type="checkbox"/> Amended Report
			<input type="checkbox"/> As Drilled

WELL LOCATION INFORMATION			
API Number <b>30-015-</b>	Pool Code <b>97975</b>	Pool Name <b>WC-015 G-06 S243119C; Bone Spring</b>	
Property Code	Property Name <b>JAMES RANCH UNIT DI 11 EKALAKA</b>	Well Number <b>702H</b>	
OGRID No. <b>373075</b>	Operator Name <b>XTO PERMIAN OPERATING, LLC.</b>	Ground Level Elevation <b>3,112'</b>	
Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	

Surface Hole Location									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
J	17	22S	30E		2,450 FSL	2,237 FEL	32.391720	-103.902204	EDDY

Bottom Hole Location									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	15	22S	30E		770 FNL	50 FEL	32.397292	-103.860406	EDDY


Dedicated Acres <b>400.00</b>	Infill or Defining Well <b>INFILL</b>	Defining Well API <b>30-015-49032</b>	Overlapping Spacing Unit (Y/N) <b>Y</b>	Consolidation Code <b>U</b>
Order Numbers. <b>R-279-C</b>			Well Setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
J	17	22S	30E		2,450 FSL	2,237 FEL	32.391720	-103.902204	EDDY

First Take Point (FTP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	17	22S	30E		770 FNL	2,572 FEL	32.397375	-103.903297	EDDY

Last Take Point (LTP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	15	22S	30E		770 FNL	100 FEL	32.397292	-103.860568	EDDY

Unitized Area of Area of Interest <b>NMNM-070965X</b>	Spacing Unit Type : <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Elevation <b>3,112'</b>
--	--	-----------------------------------

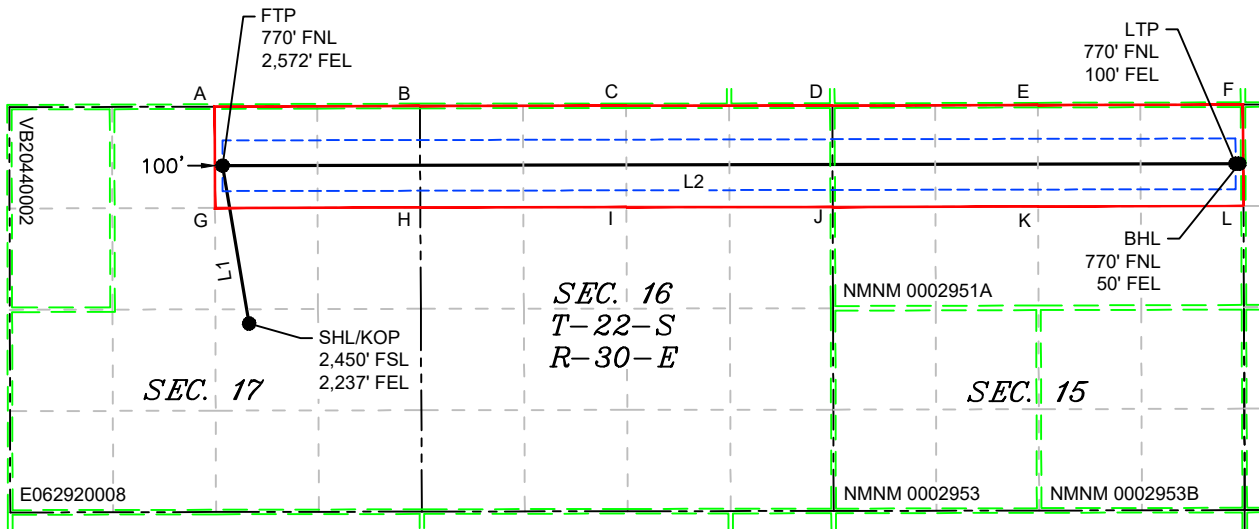
OPERATOR CERTIFICATIONS  <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or a voluntary pooling agreement or a compulsory pooling order of heretofore entered by the division.</i>  <i>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 information) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i>  <div>Srinivas Naveen10/24/2024</div> <div>SignatureDate</div> <div>Srinivas Naveen Laghuvarapu</div> <div>Printed Name</div> <div>srinivas.n.laghuvarapu@exxonmobil.com</div> <div>Email Address</div>	SURVEYOR CERTIFICATIONS  <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief</i>  <div></div> <div>Signature and Seal of Professional Surveyor</div> <div><div>MARK DILLON HARP 23786</div><div>23786</div><div>618.013002.07-02</div></div> <div>Certificate NumberDate of Survey</div> <div>10/23/2024</div> <div>DN</div>
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Note: No allowable will be assigned to this completion until all interest 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 a 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 then the First Take Point and Last Take Point) that is closest to any outer boundary of the tract.

Surveyor 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 in not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



LINE TABLE		
LINE	AZIMUTH	LENGTH
L1	350°27'33"	2,084.85'
L2	089°53'24"	13,238.30'

LEGEND

- SECTION LINE
- PROPOSED WELL BORE
- NEW MEXICO MINERAL LEASE
- 330' BUFFER
- ALLOCATION AREA

COORDINATE TABLE

SHL/KOP (NAD 83 NME)						SHL/KOP (NAD 27 NME)					
Y =	506,507.4	N	Y =	506,446.6	N	Y =	506,446.6	N	Y =	506,446.6	N
X =	674,411.7	E	X =	633,230.2	E	X =	633,230.2	E	X =	633,230.2	E
LAT. =	32.391720	°N	LAT. =	32.391597	°N	LAT. =	32.391597	°N	LAT. =	32.391597	°N
LONG. =	103.902204	°W	LONG. =	103.901708	°W	LONG. =	103.901708	°W	LONG. =	103.901708	°W
FTP (NAD 83 NME)			FTP (NAD 27 NME)			FTP (NAD 83 NME)			FTP (NAD 27 NME)		
Y =	508,563.4	N	Y =	508,502.6	N	Y =	508,563.4	N	Y =	508,502.6	N
X =	674,066.1	E	X =	632,884.7	E	X =	674,066.1	E	X =	632,884.7	E
LAT. =	32.397375	°N	LAT. =	32.397253	°N	LAT. =	32.397375	°N	LAT. =	32.397253	°N
LONG. =	103.903297	°W	LONG. =	103.902801	°W	LONG. =	103.903297	°W	LONG. =	103.902801	°W
LTP (NAD 83 NME)			LTP (NAD 27 NME)			LTP (NAD 83 NME)			LTP (NAD 27 NME)		
Y =	508,588.7	N	Y =	508,528.0	N	Y =	508,588.7	N	Y =	508,528.0	N
X =	687,254.4	E	X =	646,073.1	E	X =	687,254.4	E	X =	646,073.1	E
LAT. =	32.397292	°N	LAT. =	32.397169	°N	LAT. =	32.397292	°N	LAT. =	32.397169	°N
LONG. =	103.860568	°W	LONG. =	103.860073	°W	LONG. =	103.860568	°W	LONG. =	103.860073	°W
BHL (NAD 83 NME)			BHL (NAD 27 NME)			BHL (NAD 83 NME)			BHL (NAD 27 NME)		
Y =	508,588.8	N	Y =	508,528.1	N	Y =	508,588.8	N	Y =	508,528.1	N
X =	687,304.4	E	X =	646,123.1	E	X =	687,304.4	E	X =	646,123.1	E
LAT. =	32.397292	°N	LAT. =	32.397169	°N	LAT. =	32.397292	°N	LAT. =	32.397169	°N
LONG. =	103.860406	°W	LONG. =	103.859911	°W	LONG. =	103.860406	°W	LONG. =	103.859911	°W

CORNER COORDINATES (NAD 83 NME)

A - Y =	509,333.1	N	A - X =	673,963.4	E
B - Y =	509,341.7	N	B - X =	676,634.9	E
C - Y =	509,344.4	N	C - X =	679,319.8	E
D - Y =	509,345.5	N	D - X =	682,005.1	E
E - Y =	509,353.1	N	E - X =	684,679.9	E
F - Y =	509,358.9	N	F - X =	687,350.6	E
G - Y =	508,014.0	N	G - X =	673,968.0	E
H - Y =	508,021.7	N	H - X =	676,641.2	E
I - Y =	508,024.4	N	I - X =	679,325.1	E
J - Y =	508,026.3	N	J - X =	682,010.0	E
K - Y =	508,033.8	N	K - X =	684,684.3	E
L - Y =	508,040.3	N	L - X =	687,357.0	E

CORNER COORDINATES (NAD 27 NME)

A - Y =	509,272.2	N	A - X =	632,782.1	E
B - Y =	509,280.9	N	B - X =	635,453.5	E
C - Y =	509,283.5	N	C - X =	638,138.4	E
D - Y =	509,284.6	N	D - X =	640,823.8	E
E - Y =	509,292.3	N	E - X =	643,498.6	E
F - Y =	509,298.2	N	F - X =	646,169.4	E
G - Y =	507,953.1	N	G - X =	632,786.6	E
H - Y =	507,960.9	N	H - X =	635,459.8	E
I - Y =	507,963.6	N	I - X =	638,143.7	E
J - Y =	507,965.5	N	J - X =	640,828.6	E
K - Y =	507,973.0	N	K - X =	643,502.9	E
L - Y =	507,979.6	N	L - X =	646,175.7	E



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

# Drilling Plan Data Report

07/23/2025

APD ID: 10400096149

Submission Date: 01/12/2024

Highlighted data  
reflects the most  
recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 11 EKALAKA

Well Number: 702H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
15854292	QUATERNARY	3112	0	0	ALLUVIUM	USEABLE WATER	N
15854293	RUSTLER	3049	63	63	ANHYDRITE, SANDSTONE	USEABLE WATER	N
15854294	SALADO	2426	686	686	SALT	POTASH	N
15854295	BASE OF SALT	-81	3193	3193	SALT	POTASH	N
15854296	DELAWARE	-309	3421	3421	LIMESTONE, SANDSTONE	NATURAL GAS, OIL, OTHER : Produced water	N
15854297	BRUSHY CANYON	-2870	5982	5982	SANDSTONE	NATURAL GAS, OIL, OTHER : produced water	N
15854298	BONE SPRING	-4100	7212	7212	LIMESTONE, SANDSTONE	NATURAL GAS, OIL, OTHER : produced water	Y
15854299	BONE SPRING 1ST	-5055	8167	8167	LIMESTONE, SANDSTONE	NATURAL GAS, OIL, OTHER : produced water	Y
15854291	BONE SPRING 2ND	-5887	8999	8999	LIMESTONE, SANDSTONE	NATURAL GAS, OIL, OTHER : produced water	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 9049

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

**Requesting Variance?** YES

**Variance request:** A variance is requested to allow use of a flex hose: See Attached. XTO requests a variance to be able to batch drill this well if necessary. XTO request a break test variance: See Attached. XTO requests a variance to utilize a spudder rig: See Attached

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

**Choke Diagram Attachment:**

10MCM\_20250227091630.pdf

**BOP Diagram Attachment:**

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 11 EKALAKAWell Number: 702H

10MCM\_20250227091630.pdf

5M10M\_BOP\_20250227091639.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	661	0	661	3112	2451	661	J-55	54.5	BUTT	3.87	2.77	DRY	23.68	DRY	23.68
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3293	0	3293	3112	-181	3293	J-55	40	BUTT	2.57	1.76	DRY	4.78	DRY	4.78
3	INTERMEDIATE	8.75	7.625	NEW	API	Y	0	9860	0	9049	3112	-5937	9860	L-80	29.7	FJ	3.68	2.53	DRY	2.11	DRY	2.11
4	PRODUCTION	6.75	5.5	NEW	NON API	Y	0	22986	0	9049	3112	-5937	22986	P-110	20	OTHER - Talon HTQ/Freedom HTQ	2.36	1.05	DRY	5.41	DRY	5.41

Casing Attachments

Casing ID: 1StringSURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Ekalaka\_702H\_Csg\_20241028230506.pdf

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 11 EKALAKAWell Number: 702H

Casing Attachments

Casing ID: 2StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Ekalaka\_702H\_Csg\_20241028230422.pdf

Casing ID: 3StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Ekalaka\_702H\_Csg\_20241028230436.pdf

Casing Design Assumptions and Worksheet(s):

Ekalaka\_702H\_Csg\_20241028230453.pdf

Casing ID: 4StringPRODUCTION

Inspection Document:

Spec Document:

Freedom\_semi\_premium\_5.5\_production\_casing\_20240828105211.pdf  
Talon\_semiflush\_5.5\_production\_casing\_20240828105211.pdf

Tapered String Spec:

Ekalaka\_702H\_Csg\_20241028230401.pdf

Casing Design Assumptions and Worksheet(s):

Ekalaka\_702H\_Csg\_20241028230407.pdf

Section 4 - Cement



**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	661	260	1.87	12.9	486.2	100	EconoCem-HLTRRC	NA
SURFACE	Tail		0	661	300	1.35	14.8	405	100	Class C	2% CaCl
INTERMEDIATE	Lead		0	3293	1340	1.39	12.9	1862.6	100	Class C	NA
INTERMEDIATE	Tail		0	3293	130	1.35	14.8	175.5	100	Class C	2% CaCl
PRODUCTION	Lead		8400	8900	20	2.69	11.5	53.8	30	NeoCem	NA
PRODUCTION	Tail		8900	22986	1010	1.51	13.2	1525.1	30	VersaCem	NA
INTERMEDIATE	Lead		5982	9860	350	1.33	14.8	465.5	100	Class C	NA
INTERMEDIATE	Tail		3093	5982	360	1.35	14.8	486	100	Class C	NA

### Section 5 - Circulating Medium

**Mud System Type:** Closed**Will an air or gas system be Used?** NO**Description of the equipment for the circulating system in accordance with 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:** Spud with fresh water/native mud. Drill out from under surface casing with Saturated Salt solution. Saturated Salt mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

### Circulating Medium Table



**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H

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	661	WATER-BASED MUD	8.5	9							
661	3293	SALT SATURATED	10	10.5							Fully saturated salt across salado/salt.
3293	9860	OTHER : BDE/OBM	8.6	9.1							
9860	22986	OIL-BASED MUD	10	10.5							

### Section 6 - Test, Logging, Coring

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

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

Open hole logging will not be done on this well.

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

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

**Coring operation description for the well:**

No coring is planned for the well.

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4941

**Anticipated Surface Pressure:** 2950

**Anticipated Bottom Hole Temperature(F):** 175

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards**

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

**Hydrogen sulfide drilling operations**

XTO\_Energy\_H2S\_Plan\_Updated\_20240828085617.pdf

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H

## Section 8 - Other Information

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

JRU\_DI\_11\_Ekalaka\_702H\_DD\_20231207151547.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.

**Other proposed operations facets attachment:**

JRU\_DI\_11\_Ekalaka\_702H\_Cmt\_20240420232834.pdf

JRU\_DI\_11\_Ekalaka\_H2S\_DiaA\_20240828085902.pdf

JRU\_DI\_11\_Ekalaka\_MBS\_20240828085905.pdf

4\_String\_Wellbore\_diagram\_with\_pop\_valve\_and\_engineered\_weak\_point\_20240828085934.pdf

GCP\_JRU\_DI\_11\_Ekalaka\_20241024144442.pdf

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

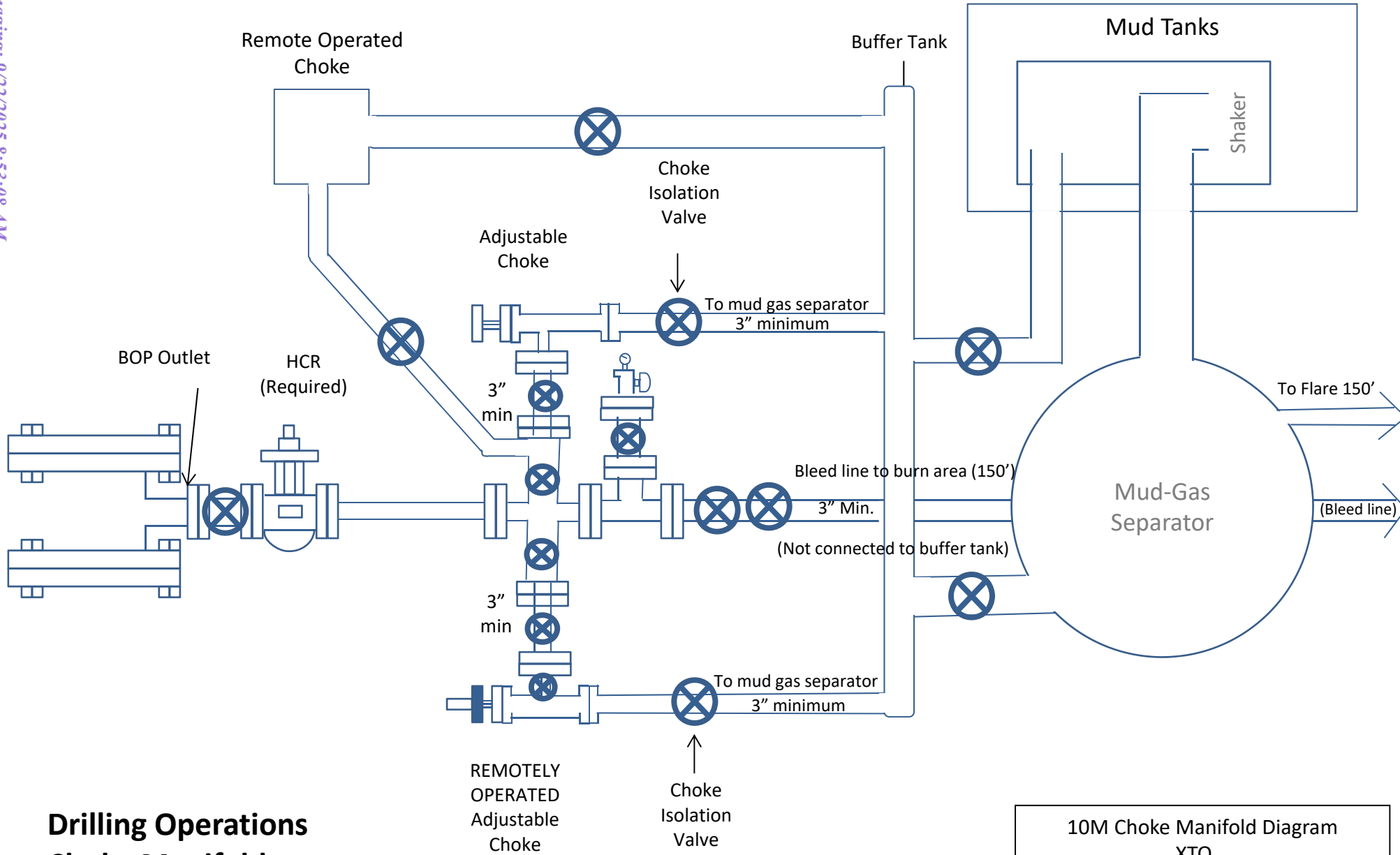
JRU\_DI\_11\_Ekalaka\_OLCV\_20231205041019.pdf

JRU\_DI\_11\_Ekalaka\_BOP\_BTV\_20240420042943.pdf

Spudder\_Rig\_Request\_20240828085830.pdf

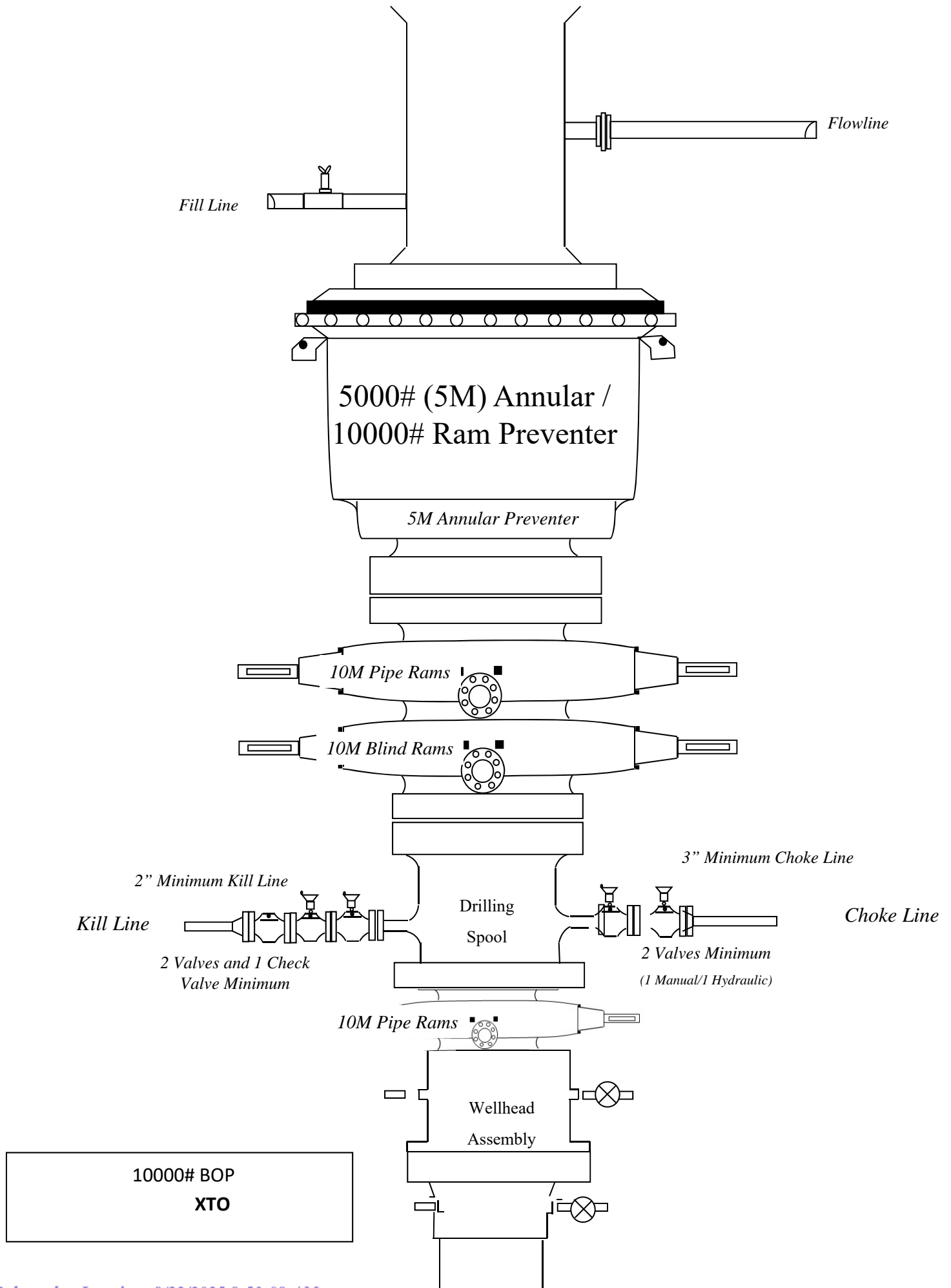
Flex\_Hose\_Updated\_20240828085831.pdf

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





U. S. Steel Tubular Products

5.500" 20.00lb/ft (0.361" Wall) P110 RY USS-FREEDOM HTQ<sup>®</sup>

11/8/2023 1:08:50 PM



MECHANICAL PROPERTIES	Pipe	USS-FREEDOM HTQ <sup>®</sup>		--
Minimum Yield Strength	110,000	--	psi	--
Maximum Yield Strength	125,000	--	psi	--
Minimum Tensile Strength	125,000	--	psi	--
DIMENSIONS	Pipe	USS-FREEDOM HTQ <sup>®</sup>		--
Outside Diameter	5.500	6.300	in.	--
Wall Thickness	0.361	--	in.	--
Inside Diameter	4.778	4.778	in.	--
Standard Drift	4.653	4.653	in.	--
Alternate Drift	--	--	in.	--
Nominal Linear Weight, T&C	20.00	--	lb/ft	--
Plain End Weight	19.83	--	lb/ft	--
SECTION AREA	Pipe	USS-FREEDOM HTQ <sup>®</sup>		--
Critical Area	5.828	5.828	sq. in.	--
Joint Efficiency	--	100.0	%	--
PERFORMANCE	Pipe	USS-FREEDOM HTQ <sup>®</sup>		--
Minimum Collapse Pressure	11,100	11,100	psi	--
Minimum Internal Yield Pressure	12,640	12,640	psi	--
Minimum Pipe Body Yield Strength	641,000	--	lb	--
Joint Strength	--	641,000	lb	--
Compression Rating	--	641,000	lb	--
Reference Length [4]	--	21,370	ft	--
Maximum Uniaxial Bend Rating [2]	--	91.7	deg/100 ft	--
MAKE-UP DATA	Pipe	USS-FREEDOM HTQ <sup>®</sup>		--
Make-Up Loss	--	4.13	in.	--
Minimum Make-Up Torque [3]	--	15,000	ft-lb	--
Maximum Make-Up Torque [3]	--	21,000	ft-lb	--
Maximum Operating Torque[3]	--	29,500	ft-lb	--

UNCONTROLLED

Notes

1.

Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
2.

Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3.

Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4.

Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.

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U. S. Steel Tubular Products  
460 Wildwood Forest Drive, Suite 300S  
Spring, Texas 77380

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



U. S. Steel Tubular Products

5.500" 20.00lb/ft (0.361" Wall) P110 RY USS-TALON HTQ™ RD

11/29/2021 4:16:04 PM

MECHANICAL PROPERTIES	Pipe	USS-TALON HTQ™ RD		[6]
Minimum Yield Strength	110,000	--	psi	--
Maximum Yield Strength	125,000	--	psi	--
Minimum Tensile Strength	125,000	--	psi	--
DIMENSIONS	Pipe	USS-TALON HTQ™ RD		--
Outside Diameter	5.500	5.900	in.	--
Wall Thickness	0.361	--	in.	--
Inside Diameter	4.778	4.778	in.	--
Standard Drift	4.653	4.653	in.	--
Alternate Drift	--	--	in.	--
Nominal Linear Weight, T&C	20.00	--	lb/ft	--
Plain End Weight	19.83	--	lb/ft	--
SECTION AREA	Pipe	USS-TALON HTQ™ RD		--
Critical Area	5.828	5.828	sq. in.	--
Joint Efficiency	--	100.0	%	[2]
PERFORMANCE	Pipe	USS-TALON HTQ™ RD		--
Minimum Collapse Pressure	11,100	11,100	psi	--
Minimum Internal Yield Pressure	12,640	12,640	psi	--
Minimum Pipe Body Yield Strength	641,000	--	lb	--
Joint Strength	--	641,000	lb	--
Compression Rating	--	641,000	lb	--
Reference Length	--	21,370	ft	[5]
Maximum Uniaxial Bend Rating	--	91.7	deg/100 ft	[3]
MAKE-UP DATA	Pipe	USS-TALON HTQ™ RD		--
Make-Up Loss	--	5.58	in.	--
Minimum Make-Up Torque	--	17,000	ft-lb	[4]
Maximum Make-Up Torque	--	20,000	ft-lb	[4]
Maximum Operating Torque	--	39,500	ft-lb	[4]

UNCONTROLLED

Notes

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

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U. S. Steel Tubular Products  
460 Wildwood Forest Drive, Suite 300S  
Spring, Texas 77380

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

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 661'	13.375	54.5	J-55	BTC	New	2.77	3.87	23.68
12.25	0' – 3293'	9.625	40	J-55	BTC	New	1.76	2.57	4.78
8.75	0' – 3393'	7.625	29.7	RY P-110	Flush Joint	New	3.48	3.53	1.91
8.75	3393' – 9860'	7.625	29.7	HC L-80	Flush Joint	New	2.53	3.68	2.11
6.75	0' – 9760'	5.5	20	RY P-110	Semi-Premium/Freedom HTQ	New	1.05	2.19	2.23
6.75	9760' - 22986'	5.5	20	RY P-110	Semi-Flush/Talon HTQ	New	1.05	2.36	5.41

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 661'	13.375	54.5	J-55	BTC	New	2.77	3.87	23.68
12.25	0' – 3293'	9.625	40	J-55	BTC	New	1.76	2.57	4.78
8.75	0' – 3393'	7.625	29.7	RY P-110	Flush Joint	New	3.48	3.53	1.91
8.75	3393' – 9860'	7.625	29.7	HC L-80	Flush Joint	New	2.53	3.68	2.11
6.75	0' – 9760'	5.5	20	RY P-110	Semi-Premium/Freedom HTQ	New	1.05	2.19	2.23
6.75	9760' - 22986'	5.5	20	RY P-110	Semi-Flush/Talon HTQ	New	1.05	2.36	5.41



Hole Size	Depth	Ob Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 661'	13.375	54.5	J-55	BTC	New	2.77	3.87	23.68
12.25	0' – 3293'	9.625	40	J-55	BTC	New	1.76	2.57	4.78
8.75	0' – 3393'	7.625	29.7	RY P-110	Flush Joint	New	3.48	3.53	1.91
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6.75	9760' - 22986'	5.5	20	RY P-110	Semi-Flush/Talon HTQ	New	1.05	2.36	5.41

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8.75	0' – 3393'	7.625	29.7	RY P-110	Flush Joint	New	3.48	3.53	1.91
8.75	3393' – 9860'	7.625	29.7	HC L-80	Flush Joint	New	2.53	3.68	2.11
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6.75	9760' - 22986'	5.5	20	RY P-110	Semi-Flush/Talon HTQ	New	1.05	2.36	5.41

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
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6.75	0' – 9760'	5.5	20	RY P-110	Semi-Premium/Freedom HTQ	New	1.05	2.19	2.23
6.75	9760' - 22986'	5.5	20	RY P-110	Semi-Flush/Talon HTQ	New	1.05	2.36	5.41



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

### Assumed 100 ppm ROE = 3000'

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

#### Emergency Procedures

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

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

#### Ignition of Gas source

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

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

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

#### Contacting Authorities

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

**CARLSBAD OFFICE – EDDY & LEA COUNTIES**

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

575-887-7329

**XTO PERSONNEL:**

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

**SHERIFF DEPARTMENTS:**

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

**NEW MEXICO STATE POLICE:**

575-392-5588

**FIRE DEPARTMENTS:**

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

**HOSPITALS:**

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

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

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

**For Eddy County:**

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



## **XTO Energy**

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

**JAMES RANCH UNIT DI 11 EKALAKA  
702H**

**OH**

**Plan: PERMIT**

## **Standard Planning Report**

**09 November, 2023**



Project: EDDY COUNTY, NM (NAD-27)  
Site: JAMES RANCH UNIT DI 11 EKALAKA  
Well: 702H  
Wellbore: OH  
Design: PERMIT

WELL DETAILS: 702H

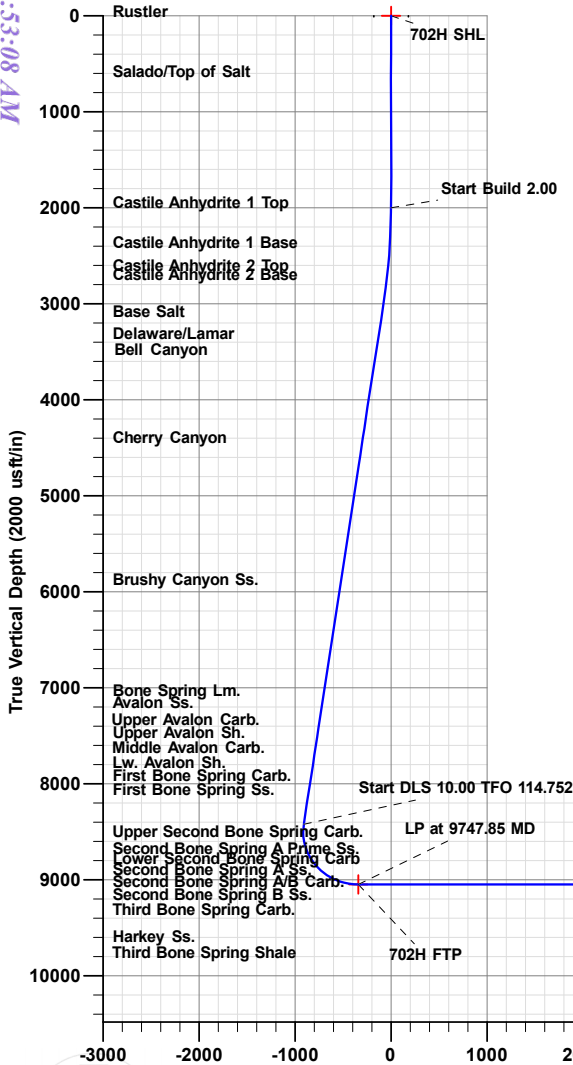
Rig Name:		TBD	
RKB = 32' @ 3144.00usft (TBD)		3112.00	
Ground Level:		3112.00	
+N/-S	+E/-W	Northing	Latitude
0.00	0.00	506446.60	32.3915972
		Easting	Longitude
		633230.20	-103.9017084

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.000	0.00	
3	2961.15	19.22	333.86	2943.22	143.40	-70.36	2.00	333.864	-70.08	
4	8764.79	19.22	333.86	8423.27	1858.85	-912.07	0.00	0.000	-908.50	
5	9747.85	90.00	89.89	9049.00	2056.00	-345.50	10.00	114.752	-341.55	702H FTP
6	22936.27	90.00	89.89	9049.00	2081.40	12842.90	0.00	0.000	12846.87	702H LTP
7	22986.27	90.00	89.89	9049.00	2081.50	12892.90	0.00	0.000	12896.87	702H BHL

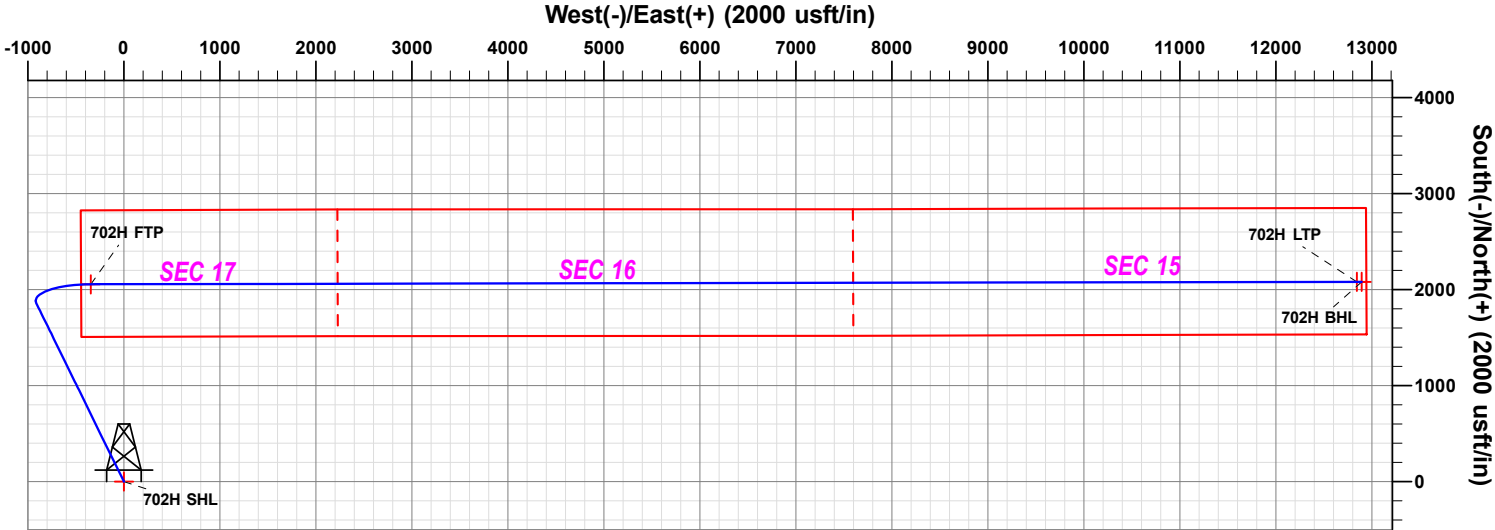
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
702H SHL	0.00	0.00	0.00	506446.60	633230.20	32.3915972	-103.9017084
702H BHL	9049.00	2081.50	12892.90	508528.10	646123.10	32.3971690	-103.8599107
702H FTP	9049.00	2056.00	-345.50	508502.60	632884.70	32.3972527	-103.9028009
702H LTP	9049.00	2081.40	12842.90	508528.00	646073.10	32.3971693	-103.8600727



FORMATION TOP DETAILS

TVDPath	Formation
63.00	Rustler
686.00	Salado/Top of Salt
2052.00	Castile Anhydrite 1 Top
2467.00	Castile Anhydrite 1 Base
2708.00	Castile Anhydrite 2 Top
2804.00	Castile Anhydrite 2 Base
3193.00	Base Salt
3421.00	Delaware/Lamar
3475.00	Bell Canyon
4497.00	Cherry Canyon
5982.00	Brushy Canyon Ss.
7212.00	Bone Spring Lm.
7260.00	Avalon Ss.
7494.00	Upper Avalon Carb.
7575.00	Upper Avalon Sh.
7653.00	Middle Avalon Carb.
7824.00	Lw. Avalon Sh.
8021.00	First Bone Spring Carb.
8167.00	First Bone Spring Ss.
8682.00	Upper Second Bone Spring Carb.
8782.00	Second Bone Spring A Prime Ss.
8907.00	Lower Second Bone Spring Carb.
8999.00	Second Bone Spring A Ss.
9049.00	Horizontal Landing Point



Vertical Section at 89.89° (2000 usft/in)

PROJECT DETAILS: EDDY COUNTY, NM (NAD-27)

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level

Plan: PERMIT (702H/OH)

Created By: Matthew May Date: 12:55, November 09 2023

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Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

KC 618.013002.07-02



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD-27)	<b>MD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Site:</b>	JAMES RANCH UNIT DI 11 EKALAKA	<b>North Reference:</b>	Grid
<b>Well:</b>	702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

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

Site		JAMES RANCH UNIT DI 11 EKALAKA			
Site Position:		Northing:	506,101.30 usft	Latitude:	32.3906505
From:	Map	Easting:	633,012.00 usft	Longitude:	-103.9024198
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.231

Well	702H					
Well Position	+N/-S	345.30 usft	Northing:	506,446.60 usft	Latitude:	32.3915973
	+E/-W	218.20 usft	Easting:	633,230.20 usft	Longitude:	-103.9017084
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,112.00 usft

<b>Wellbore</b>	OH				
-----------------	----	--	--	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/09/23	6.430	59.924	47,311

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

<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	89.89	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,961.15	19.22	333.86	2,943.22	143.40	-70.36	2.00	2.00	0.00	333.864	
8,764.79	19.22	333.86	8,423.27	1,858.85	-912.07	0.00	0.00	0.00	0.000	
9,747.85	90.00	89.89	9,049.00	2,056.00	-345.50	10.00	7.20	11.80	114.752	702H FTP
22,936.27	90.00	89.89	9,049.00	2,081.40	12,842.90	0.00	0.00	0.00	0.000	702H LTP
22,986.27	90.00	89.89	9,049.00	2,081.50	12,892.90	0.00	0.00	0.00	0.000	702H BHL



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD-27)	<b>MD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Site:</b>	JAMES RANCH UNIT DI 11 EKALAKA	<b>North Reference:</b>	Grid
<b>Well:</b>	702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>702H SHL</b>									
63.00	0.00	0.00	63.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Rustler</b>									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
686.00	0.00	0.00	686.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Salado/Top of Salt</b>									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,052.00	1.04	333.86	2,052.00	0.42	-0.21	-0.21	2.00	2.00	0.00
<b>Castile Anhydrite 1 Top</b>									
2,100.00	2.00	333.86	2,099.98	1.57	-0.77	-0.77	2.00	2.00	0.00
2,200.00	4.00	333.86	2,199.84	6.26	-3.07	-3.06	2.00	2.00	0.00
2,300.00	6.00	333.86	2,299.45	14.09	-6.91	-6.89	2.00	2.00	0.00
2,400.00	8.00	333.86	2,398.70	25.03	-12.28	-12.23	2.00	2.00	0.00
2,469.09	9.38	333.86	2,467.00	34.40	-16.88	-16.81	2.00	2.00	0.00
<b>Castile Anhydrite 1 Base</b>									
2,500.00	10.00	333.86	2,497.47	39.07	-19.17	-19.10	2.00	2.00	0.00
2,600.00	12.00	333.86	2,595.62	56.20	-27.58	-27.47	2.00	2.00	0.00
2,700.00	14.00	333.86	2,693.06	76.40	-37.48	-37.34	2.00	2.00	0.00
2,715.41	14.31	333.86	2,708.00	79.78	-39.14	-38.99	2.00	2.00	0.00
<b>Castile Anhydrite 2 Top</b>									
2,800.00	16.00	333.86	2,789.64	99.63	-48.88	-48.69	2.00	2.00	0.00
2,814.95	16.30	333.86	2,804.00	103.36	-50.72	-50.52	2.00	2.00	0.00
<b>Castile Anhydrite 2 Base</b>									
2,900.00	18.00	333.86	2,885.27	125.88	-61.76	-61.52	2.00	2.00	0.00
2,961.15	19.22	333.86	2,943.22	143.40	-70.36	-70.08	2.00	2.00	0.00
3,000.00	19.22	333.86	2,979.90	154.88	-75.99	-75.70	0.00	0.00	0.00
3,100.00	19.22	333.86	3,074.33	184.44	-90.50	-90.14	0.00	0.00	0.00
3,200.00	19.22	333.86	3,168.75	214.00	-105.00	-104.59	0.00	0.00	0.00
3,225.68	19.22	333.86	3,193.00	221.59	-108.72	-108.30	0.00	0.00	0.00
<b>Base Salt</b>									
3,300.00	19.22	333.86	3,263.18	243.55	-119.50	-119.04	0.00	0.00	0.00
3,400.00	19.22	333.86	3,357.60	273.11	-134.01	-133.48	0.00	0.00	0.00
3,467.14	19.22	333.86	3,421.00	292.96	-143.74	-143.18	0.00	0.00	0.00
<b>Delaware/Lamar</b>									



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD-27)	<b>MD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Site:</b>	JAMES RANCH UNIT DI 11 EKALAKA	<b>North Reference:</b>	Grid
<b>Well:</b>	702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,500.00	19.22	333.86	3,452.03	302.67	-148.51	-147.93	0.00	0.00	0.00
3,524.33	19.22	333.86	3,475.00	309.86	-152.04	-151.44	0.00	0.00	0.00
<b>Bell Canyon</b>									
3,600.00	19.22	333.86	3,546.45	332.23	-163.01	-162.37	0.00	0.00	0.00
3,700.00	19.22	333.86	3,640.87	361.79	-177.52	-176.82	0.00	0.00	0.00
3,800.00	19.22	333.86	3,735.30	391.35	-192.02	-191.27	0.00	0.00	0.00
3,900.00	19.22	333.86	3,829.72	420.90	-206.52	-205.71	0.00	0.00	0.00
4,000.00	19.22	333.86	3,924.15	450.46	-221.03	-220.16	0.00	0.00	0.00
4,100.00	19.22	333.86	4,018.57	480.02	-235.53	-234.61	0.00	0.00	0.00
4,200.00	19.22	333.86	4,113.00	509.58	-250.03	-249.05	0.00	0.00	0.00
4,300.00	19.22	333.86	4,207.42	539.14	-264.53	-263.50	0.00	0.00	0.00
4,400.00	19.22	333.86	4,301.85	568.70	-279.04	-277.95	0.00	0.00	0.00
4,500.00	19.22	333.86	4,396.27	598.25	-293.54	-292.39	0.00	0.00	0.00
4,600.00	19.22	333.86	4,490.69	627.81	-308.04	-306.84	0.00	0.00	0.00
4,606.68	19.22	333.86	4,497.00	629.79	-309.01	-307.80	0.00	0.00	0.00
<b>Cherry Canyon</b>									
4,700.00	19.22	333.86	4,585.12	657.37	-322.55	-321.28	0.00	0.00	0.00
4,800.00	19.22	333.86	4,679.54	686.93	-337.05	-335.73	0.00	0.00	0.00
4,900.00	19.22	333.86	4,773.97	716.49	-351.55	-350.18	0.00	0.00	0.00
5,000.00	19.22	333.86	4,868.39	746.04	-366.06	-364.62	0.00	0.00	0.00
5,100.00	19.22	333.86	4,962.82	775.60	-380.56	-379.07	0.00	0.00	0.00
5,200.00	19.22	333.86	5,057.24	805.16	-395.06	-393.52	0.00	0.00	0.00
5,300.00	19.22	333.86	5,151.67	834.72	-409.57	-407.96	0.00	0.00	0.00
5,400.00	19.22	333.86	5,246.09	864.28	-424.07	-422.41	0.00	0.00	0.00
5,500.00	19.22	333.86	5,340.51	893.84	-438.57	-436.86	0.00	0.00	0.00
5,600.00	19.22	333.86	5,434.94	923.39	-453.08	-451.30	0.00	0.00	0.00
5,700.00	19.22	333.86	5,529.36	952.95	-467.58	-465.75	0.00	0.00	0.00
5,800.00	19.22	333.86	5,623.79	982.51	-482.08	-480.19	0.00	0.00	0.00
5,900.00	19.22	333.86	5,718.21	1,012.07	-496.59	-494.64	0.00	0.00	0.00
6,000.00	19.22	333.86	5,812.64	1,041.63	-511.09	-509.09	0.00	0.00	0.00
6,100.00	19.22	333.86	5,907.06	1,071.18	-525.59	-523.53	0.00	0.00	0.00
6,179.36	19.22	333.86	5,982.00	1,094.64	-537.10	-535.00	0.00	0.00	0.00
<b>Brushy Canyon Ss.</b>									
6,200.00	19.22	333.86	6,001.49	1,100.74	-540.09	-537.98	0.00	0.00	0.00
6,300.00	19.22	333.86	6,095.91	1,130.30	-554.60	-552.43	0.00	0.00	0.00
6,400.00	19.22	333.86	6,190.33	1,159.86	-569.10	-566.87	0.00	0.00	0.00
6,500.00	19.22	333.86	6,284.76	1,189.42	-583.60	-581.32	0.00	0.00	0.00
6,600.00	19.22	333.86	6,379.18	1,218.98	-598.11	-595.77	0.00	0.00	0.00
6,700.00	19.22	333.86	6,473.61	1,248.53	-612.61	-610.21	0.00	0.00	0.00
6,800.00	19.22	333.86	6,568.03	1,278.09	-627.11	-624.66	0.00	0.00	0.00
6,900.00	19.22	333.86	6,662.46	1,307.65	-641.62	-639.10	0.00	0.00	0.00
7,000.00	19.22	333.86	6,756.88	1,337.21	-656.12	-653.55	0.00	0.00	0.00
7,100.00	19.22	333.86	6,851.30	1,366.77	-670.62	-668.00	0.00	0.00	0.00
7,200.00	19.22	333.86	6,945.73	1,396.32	-685.13	-682.44	0.00	0.00	0.00
7,300.00	19.22	333.86	7,040.15	1,425.88	-699.63	-696.89	0.00	0.00	0.00
7,400.00	19.22	333.86	7,134.58	1,455.44	-714.13	-711.34	0.00	0.00	0.00
7,481.99	19.22	333.86	7,212.00	1,479.68	-726.02	-723.18	0.00	0.00	0.00
<b>Bone Spring Lm.</b>									
7,500.00	19.22	333.86	7,229.00	1,485.00	-728.64	-725.78	0.00	0.00	0.00
7,532.83	19.22	333.86	7,260.00	1,494.70	-733.40	-730.53	0.00	0.00	0.00
<b>Avalon Ss.</b>									
7,600.00	19.22	333.86	7,323.43	1,514.56	-743.14	-740.23	0.00	0.00	0.00
7,700.00	19.22	333.86	7,417.85	1,544.12	-757.64	-754.68	0.00	0.00	0.00



## Planning Report

**Database:** EDM 5000.1.13 Single User Db  
**Company:** XTO Energy  
**Project:** EDDY COUNTY, NM (NAD-27)  
**Site:** JAMES RANCH UNIT DI 11 EKALAKA  
**Well:** 702H  
**Wellbore:** OH  
**Design:** PERMIT

**Local Co-ordinate Reference:** Well 702H  
**TVD Reference:** RKB = 32' @ 3144.00usft (TBD)  
**MD Reference:** RKB = 32' @ 3144.00usft (TBD)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

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)
7,780.65	19.22	333.86	7,494.00	1,567.95	-769.34	-766.33	0.00	0.00	0.00
<b>Upper Avalon Carb.</b>									
7,800.00	19.22	333.86	7,512.28	1,573.67	-772.14	-769.12	0.00	0.00	0.00
7,866.43	19.22	333.86	7,575.00	1,593.31	-781.78	-778.72	0.00	0.00	0.00
<b>Upper Avalon Sh.</b>									
7,900.00	19.22	333.86	7,606.70	1,603.23	-786.65	-783.57	0.00	0.00	0.00
7,949.03	19.22	333.86	7,653.00	1,617.73	-793.76	-790.65	0.00	0.00	0.00
<b>Middle Avalon Carb.</b>									
8,000.00	19.22	333.86	7,701.12	1,632.79	-801.15	-798.01	0.00	0.00	0.00
8,100.00	19.22	333.86	7,795.55	1,662.35	-815.65	-812.46	0.00	0.00	0.00
8,130.13	19.22	333.86	7,824.00	1,671.25	-820.02	-816.81	0.00	0.00	0.00
<b>Lw. Avalon Sh.</b>									
8,200.00	19.22	333.86	7,889.97	1,691.91	-830.16	-826.91	0.00	0.00	0.00
8,300.00	19.22	333.86	7,984.40	1,721.47	-844.66	-841.35	0.00	0.00	0.00
8,338.76	19.22	333.86	8,021.00	1,732.92	-850.28	-846.95	0.00	0.00	0.00
<b>First Bone Spring Carb.</b>									
8,400.00	19.22	333.86	8,078.82	1,751.02	-859.16	-855.80	0.00	0.00	0.00
8,493.38	19.22	333.86	8,167.00	1,778.63	-872.71	-869.29	0.00	0.00	0.00
<b>First Bone Spring Ss.</b>									
8,500.00	19.22	333.86	8,173.25	1,780.58	-873.67	-870.25	0.00	0.00	0.00
8,600.00	19.22	333.86	8,267.67	1,810.14	-888.17	-884.69	0.00	0.00	0.00
8,700.00	19.22	333.86	8,362.10	1,839.70	-902.67	-899.14	0.00	0.00	0.00
8,764.79	19.22	333.86	8,423.27	1,858.85	-912.07	-908.50	0.00	0.00	0.00
8,800.00	18.02	344.25	8,456.65	1,869.30	-916.10	-912.51	10.00	-3.41	29.49
8,850.00	17.40	0.61	8,504.31	1,884.23	-918.12	-914.50	10.00	-1.25	32.72
8,900.00	18.14	16.87	8,551.95	1,899.16	-915.78	-912.14	10.00	1.48	32.51
8,950.00	20.09	30.97	8,599.22	1,913.98	-909.10	-905.43	10.00	3.91	28.20
9,000.00	22.96	42.18	8,645.75	1,928.58	-898.13	-894.42	10.00	5.72	22.43
9,039.78	25.68	49.23	8,682.00	1,939.97	-886.39	-882.66	10.00	6.85	17.72
<b>Upper Second Bone Spring Carb.</b>									
9,050.00	26.43	50.81	8,691.18	1,942.85	-882.95	-879.22	10.00	7.32	15.50
9,100.00	30.31	57.48	8,735.18	1,956.67	-863.67	-859.91	10.00	7.75	13.32
9,150.00	34.45	62.71	8,777.40	1,969.95	-840.45	-836.67	10.00	8.29	10.47
9,155.59	34.93	63.23	8,782.00	1,971.39	-837.62	-833.83	10.00	8.51	9.23
<b>Second Bone Spring A Prime Ss.</b>									
9,200.00	38.77	66.93	8,817.54	1,982.57	-813.46	-809.65	10.00	8.66	8.34
9,250.00	43.22	70.41	8,855.27	1,994.45	-782.91	-779.08	10.00	8.90	6.97
9,300.00	47.76	73.36	8,890.31	2,005.50	-749.02	-745.17	10.00	9.08	5.89
9,325.40	50.09	74.70	8,907.00	2,010.77	-730.61	-726.75	10.00	9.18	5.26
<b>Lower Second Bone Spring Carb</b>									
9,350.00	52.36	75.91	8,922.40	2,015.63	-712.06	-708.19	10.00	9.24	4.92
9,400.00	57.02	78.16	8,951.30	2,024.76	-672.31	-668.42	10.00	9.30	4.50
9,450.00	61.70	80.18	8,976.77	2,032.82	-630.07	-626.16	10.00	9.38	4.04
9,500.00	66.42	82.03	8,998.64	2,039.76	-585.66	-581.74	10.00	9.43	3.70
9,500.90	66.51	82.06	8,999.00	2,039.87	-584.84	-580.92	10.00	9.45	3.56
<b>Second Bone Spring A Ss.</b>									
9,550.00	71.16	83.75	9,016.73	2,045.51	-539.42	-535.49	10.00	9.47	3.44
9,600.00	75.91	85.38	9,030.90	2,050.05	-491.70	-487.76	10.00	9.50	3.25
9,650.00	80.67	86.94	9,041.05	2,053.32	-442.87	-438.92	10.00	9.52	3.12
9,700.00	85.43	88.46	9,047.09	2,055.31	-393.29	-389.34	10.00	9.54	3.04
9,747.85	90.00	89.89	9,049.00	2,056.00	-345.50	-341.55	10.00	9.54	3.00
<b>Horizontal Landing Point - 702H FTP</b>									
9,800.00	90.00	89.89	9,049.00	2,056.10	-293.35	-289.40	0.00	0.00	0.00



## Planning Report

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**Project:** EDDY COUNTY, NM (NAD-27)  
**Site:** JAMES RANCH UNIT DI 11 EKALAKA  
**Well:** 702H  
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Planned Survey									
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9,900.00	90.00	89.89	9,049.00	2,056.29	-193.35	-189.40	0.00	0.00	0.00
10,000.00	90.00	89.89	9,049.00	2,056.49	-93.35	-89.40	0.00	0.00	0.00
10,100.00	90.00	89.89	9,049.00	2,056.68	6.65	10.60	0.00	0.00	0.00
10,200.00	90.00	89.89	9,049.00	2,056.87	106.65	110.60	0.00	0.00	0.00
10,300.00	90.00	89.89	9,049.00	2,057.06	206.65	210.60	0.00	0.00	0.00
10,400.00	90.00	89.89	9,049.00	2,057.26	306.65	310.60	0.00	0.00	0.00
10,500.00	90.00	89.89	9,049.00	2,057.45	406.65	410.60	0.00	0.00	0.00
10,600.00	90.00	89.89	9,049.00	2,057.64	506.65	510.60	0.00	0.00	0.00
10,700.00	90.00	89.89	9,049.00	2,057.83	606.65	610.60	0.00	0.00	0.00
10,800.00	90.00	89.89	9,049.00	2,058.03	706.65	710.60	0.00	0.00	0.00
10,900.00	90.00	89.89	9,049.00	2,058.22	806.65	810.60	0.00	0.00	0.00
11,000.00	90.00	89.89	9,049.00	2,058.41	906.65	910.60	0.00	0.00	0.00
11,100.00	90.00	89.89	9,049.00	2,058.60	1,006.65	1,010.60	0.00	0.00	0.00
11,200.00	90.00	89.89	9,049.00	2,058.80	1,106.65	1,110.60	0.00	0.00	0.00
11,300.00	90.00	89.89	9,049.00	2,058.99	1,206.65	1,210.60	0.00	0.00	0.00
11,400.00	90.00	89.89	9,049.00	2,059.18	1,306.65	1,310.60	0.00	0.00	0.00
11,500.00	90.00	89.89	9,049.00	2,059.38	1,406.65	1,410.60	0.00	0.00	0.00
11,600.00	90.00	89.89	9,049.00	2,059.57	1,506.65	1,510.60	0.00	0.00	0.00
11,700.00	90.00	89.89	9,049.00	2,059.76	1,606.65	1,610.60	0.00	0.00	0.00
11,800.00	90.00	89.89	9,049.00	2,059.95	1,706.65	1,710.60	0.00	0.00	0.00
11,900.00	90.00	89.89	9,049.00	2,060.15	1,806.65	1,810.60	0.00	0.00	0.00
12,000.00	90.00	89.89	9,049.00	2,060.34	1,906.65	1,910.60	0.00	0.00	0.00
12,100.00	90.00	89.89	9,049.00	2,060.53	2,006.65	2,010.60	0.00	0.00	0.00
12,200.00	90.00	89.89	9,049.00	2,060.72	2,106.65	2,110.60	0.00	0.00	0.00
12,300.00	90.00	89.89	9,049.00	2,060.92	2,206.65	2,210.60	0.00	0.00	0.00
12,400.00	90.00	89.89	9,049.00	2,061.11	2,306.65	2,310.60	0.00	0.00	0.00
12,500.00	90.00	89.89	9,049.00	2,061.30	2,406.65	2,410.60	0.00	0.00	0.00
12,600.00	90.00	89.89	9,049.00	2,061.49	2,506.65	2,510.60	0.00	0.00	0.00
12,700.00	90.00	89.89	9,049.00	2,061.69	2,606.65	2,610.60	0.00	0.00	0.00
12,800.00	90.00	89.89	9,049.00	2,061.88	2,706.65	2,710.60	0.00	0.00	0.00
12,900.00	90.00	89.89	9,049.00	2,062.07	2,806.65	2,810.60	0.00	0.00	0.00
13,000.00	90.00	89.89	9,049.00	2,062.26	2,906.65	2,910.60	0.00	0.00	0.00
13,100.00	90.00	89.89	9,049.00	2,062.46	3,006.65	3,010.60	0.00	0.00	0.00
13,200.00	90.00	89.89	9,049.00	2,062.65	3,106.65	3,110.60	0.00	0.00	0.00
13,300.00	90.00	89.89	9,049.00	2,062.84	3,206.65	3,210.60	0.00	0.00	0.00
13,400.00	90.00	89.89	9,049.00	2,063.03	3,306.65	3,310.60	0.00	0.00	0.00
13,500.00	90.00	89.89	9,049.00	2,063.23	3,406.65	3,410.60	0.00	0.00	0.00
13,600.00	90.00	89.89	9,049.00	2,063.42	3,506.65	3,510.60	0.00	0.00	0.00
13,700.00	90.00	89.89	9,049.00	2,063.61	3,606.65	3,610.60	0.00	0.00	0.00
13,800.00	90.00	89.89	9,049.00	2,063.81	3,706.65	3,710.60	0.00	0.00	0.00
13,900.00	90.00	89.89	9,049.00	2,064.00	3,806.65	3,810.60	0.00	0.00	0.00
14,000.00	90.00	89.89	9,049.00	2,064.19	3,906.65	3,910.60	0.00	0.00	0.00
14,100.00	90.00	89.89	9,049.00	2,064.38	4,006.65	4,010.60	0.00	0.00	0.00
14,200.00	90.00	89.89	9,049.00	2,064.58	4,106.65	4,110.60	0.00	0.00	0.00
14,300.00	90.00	89.89	9,049.00	2,064.77	4,206.65	4,210.60	0.00	0.00	0.00
14,400.00	90.00	89.89	9,049.00	2,064.96	4,306.64	4,310.60	0.00	0.00	0.00
14,500.00	90.00	89.89	9,049.00	2,065.15	4,406.64	4,410.60	0.00	0.00	0.00
14,600.00	90.00	89.89	9,049.00	2,065.35	4,506.64	4,510.60	0.00	0.00	0.00
14,700.00	90.00	89.89	9,049.00	2,065.54	4,606.64	4,610.60	0.00	0.00	0.00
14,800.00	90.00	89.89	9,049.00	2,065.73	4,706.64	4,710.60	0.00	0.00	0.00
14,900.00	90.00	89.89	9,049.00	2,065.92	4,806.64	4,810.60	0.00	0.00	0.00
15,000.00	90.00	89.89	9,049.00	2,066.12	4,906.64	4,910.60	0.00	0.00	0.00
15,100.00	90.00	89.89	9,049.00	2,066.31	5,006.64	5,010.60	0.00	0.00	0.00
15,200.00	90.00	89.89	9,049.00	2,066.50	5,106.64	5,110.60	0.00	0.00	0.00





## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD-27)	<b>MD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Site:</b>	JAMES RANCH UNIT DI 11 EKALAKA	<b>North Reference:</b>	Grid
<b>Well:</b>	702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,300.00	90.00	89.89	9,049.00	2,066.69	5,206.64	5,210.60	0.00	0.00	0.00
15,400.00	90.00	89.89	9,049.00	2,066.89	5,306.64	5,310.60	0.00	0.00	0.00
15,500.00	90.00	89.89	9,049.00	2,067.08	5,406.64	5,410.60	0.00	0.00	0.00
15,600.00	90.00	89.89	9,049.00	2,067.27	5,506.64	5,510.60	0.00	0.00	0.00
15,700.00	90.00	89.89	9,049.00	2,067.47	5,606.64	5,610.60	0.00	0.00	0.00
15,800.00	90.00	89.89	9,049.00	2,067.66	5,706.64	5,710.60	0.00	0.00	0.00
15,900.00	90.00	89.89	9,049.00	2,067.85	5,806.64	5,810.60	0.00	0.00	0.00
16,000.00	90.00	89.89	9,049.00	2,068.04	5,906.64	5,910.60	0.00	0.00	0.00
16,100.00	90.00	89.89	9,049.00	2,068.24	6,006.64	6,010.60	0.00	0.00	0.00
16,200.00	90.00	89.89	9,049.00	2,068.43	6,106.64	6,110.60	0.00	0.00	0.00
16,300.00	90.00	89.89	9,049.00	2,068.62	6,206.64	6,210.60	0.00	0.00	0.00
16,400.00	90.00	89.89	9,049.00	2,068.81	6,306.64	6,310.60	0.00	0.00	0.00
16,500.00	90.00	89.89	9,049.00	2,069.01	6,406.64	6,410.60	0.00	0.00	0.00
16,600.00	90.00	89.89	9,049.00	2,069.20	6,506.64	6,510.60	0.00	0.00	0.00
16,700.00	90.00	89.89	9,049.00	2,069.39	6,606.64	6,610.60	0.00	0.00	0.00
16,800.00	90.00	89.89	9,049.00	2,069.58	6,706.64	6,710.60	0.00	0.00	0.00
16,900.00	90.00	89.89	9,049.00	2,069.78	6,806.64	6,810.60	0.00	0.00	0.00
17,000.00	90.00	89.89	9,049.00	2,069.97	6,906.64	6,910.60	0.00	0.00	0.00
17,100.00	90.00	89.89	9,049.00	2,070.16	7,006.64	7,010.60	0.00	0.00	0.00
17,200.00	90.00	89.89	9,049.00	2,070.35	7,106.64	7,110.60	0.00	0.00	0.00
17,300.00	90.00	89.89	9,049.00	2,070.55	7,206.64	7,210.60	0.00	0.00	0.00
17,400.00	90.00	89.89	9,049.00	2,070.74	7,306.64	7,310.60	0.00	0.00	0.00
17,500.00	90.00	89.89	9,049.00	2,070.93	7,406.64	7,410.60	0.00	0.00	0.00
17,600.00	90.00	89.89	9,049.00	2,071.12	7,506.64	7,510.60	0.00	0.00	0.00
17,700.00	90.00	89.89	9,049.00	2,071.32	7,606.64	7,610.60	0.00	0.00	0.00
17,800.00	90.00	89.89	9,049.00	2,071.51	7,706.64	7,710.60	0.00	0.00	0.00
17,900.00	90.00	89.89	9,049.00	2,071.70	7,806.64	7,810.60	0.00	0.00	0.00
18,000.00	90.00	89.89	9,049.00	2,071.90	7,906.64	7,910.60	0.00	0.00	0.00
18,100.00	90.00	89.89	9,049.00	2,072.09	8,006.64	8,010.60	0.00	0.00	0.00
18,200.00	90.00	89.89	9,049.00	2,072.28	8,106.64	8,110.60	0.00	0.00	0.00
18,300.00	90.00	89.89	9,049.00	2,072.47	8,206.64	8,210.60	0.00	0.00	0.00
18,400.00	90.00	89.89	9,049.00	2,072.67	8,306.64	8,310.60	0.00	0.00	0.00
18,500.00	90.00	89.89	9,049.00	2,072.86	8,406.64	8,410.60	0.00	0.00	0.00
18,600.00	90.00	89.89	9,049.00	2,073.05	8,506.64	8,510.60	0.00	0.00	0.00
18,700.00	90.00	89.89	9,049.00	2,073.24	8,606.64	8,610.60	0.00	0.00	0.00
18,800.00	90.00	89.89	9,049.00	2,073.44	8,706.64	8,710.60	0.00	0.00	0.00
18,900.00	90.00	89.89	9,049.00	2,073.63	8,806.64	8,810.60	0.00	0.00	0.00
19,000.00	90.00	89.89	9,049.00	2,073.82	8,906.64	8,910.60	0.00	0.00	0.00
19,100.00	90.00	89.89	9,049.00	2,074.01	9,006.64	9,010.60	0.00	0.00	0.00
19,200.00	90.00	89.89	9,049.00	2,074.21	9,106.64	9,110.60	0.00	0.00	0.00
19,300.00	90.00	89.89	9,049.00	2,074.40	9,206.64	9,210.60	0.00	0.00	0.00
19,400.00	90.00	89.89	9,049.00	2,074.59	9,306.64	9,310.60	0.00	0.00	0.00
19,500.00	90.00	89.89	9,049.00	2,074.78	9,406.64	9,410.60	0.00	0.00	0.00
19,600.00	90.00	89.89	9,049.00	2,074.98	9,506.64	9,510.60	0.00	0.00	0.00
19,700.00	90.00	89.89	9,049.00	2,075.17	9,606.64	9,610.60	0.00	0.00	0.00
19,800.00	90.00	89.89	9,049.00	2,075.36	9,706.64	9,710.60	0.00	0.00	0.00
19,900.00	90.00	89.89	9,049.00	2,075.56	9,806.63	9,810.60	0.00	0.00	0.00
20,000.00	90.00	89.89	9,049.00	2,075.75	9,906.63	9,910.60	0.00	0.00	0.00
20,100.00	90.00	89.89	9,049.00	2,075.94	10,006.63	10,010.60	0.00	0.00	0.00
20,200.00	90.00	89.89	9,049.00	2,076.13	10,106.63	10,110.60	0.00	0.00	0.00
20,300.00	90.00	89.89	9,049.00	2,076.33	10,206.63	10,210.60	0.00	0.00	0.00
20,400.00	90.00	89.89	9,049.00	2,076.52	10,306.63	10,310.60	0.00	0.00	0.00
20,500.00	90.00	89.89	9,049.00	2,076.71	10,406.63	10,410.60	0.00	0.00	0.00
20,600.00	90.00	89.89	9,049.00	2,076.90	10,506.63	10,510.60	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD-27)	<b>MD Reference:</b>	RKB = 32' @ 3144.00usft (TBD)
<b>Site:</b>	JAMES RANCH UNIT DI 11 EKALAKA	<b>North Reference:</b>	Grid
<b>Well:</b>	702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
20,700.00	90.00	89.89	9,049.00	2,077.10	10,606.63	10,610.60	0.00	0.00	0.00	
20,800.00	90.00	89.89	9,049.00	2,077.29	10,706.63	10,710.60	0.00	0.00	0.00	
20,900.00	90.00	89.89	9,049.00	2,077.48	10,806.63	10,810.60	0.00	0.00	0.00	
21,000.00	90.00	89.89	9,049.00	2,077.67	10,906.63	10,910.60	0.00	0.00	0.00	
21,100.00	90.00	89.89	9,049.00	2,077.87	11,006.63	11,010.60	0.00	0.00	0.00	
21,200.00	90.00	89.89	9,049.00	2,078.06	11,106.63	11,110.60	0.00	0.00	0.00	
21,300.00	90.00	89.89	9,049.00	2,078.25	11,206.63	11,210.60	0.00	0.00	0.00	
21,400.00	90.00	89.89	9,049.00	2,078.44	11,306.63	11,310.60	0.00	0.00	0.00	
21,500.00	90.00	89.89	9,049.00	2,078.64	11,406.63	11,410.60	0.00	0.00	0.00	
21,600.00	90.00	89.89	9,049.00	2,078.83	11,506.63	11,510.60	0.00	0.00	0.00	
21,700.00	90.00	89.89	9,049.00	2,079.02	11,606.63	11,610.60	0.00	0.00	0.00	
21,800.00	90.00	89.89	9,049.00	2,079.22	11,706.63	11,710.60	0.00	0.00	0.00	
21,900.00	90.00	89.89	9,049.00	2,079.41	11,806.63	11,810.60	0.00	0.00	0.00	
22,000.00	90.00	89.89	9,049.00	2,079.60	11,906.63	11,910.60	0.00	0.00	0.00	
22,100.00	90.00	89.89	9,049.00	2,079.79	12,006.63	12,010.60	0.00	0.00	0.00	
22,200.00	90.00	89.89	9,049.00	2,079.99	12,106.63	12,110.60	0.00	0.00	0.00	
22,300.00	90.00	89.89	9,049.00	2,080.18	12,206.63	12,210.60	0.00	0.00	0.00	
22,400.00	90.00	89.89	9,049.00	2,080.37	12,306.63	12,310.60	0.00	0.00	0.00	
22,500.00	90.00	89.89	9,049.00	2,080.56	12,406.63	12,410.60	0.00	0.00	0.00	
22,600.00	90.00	89.89	9,049.00	2,080.76	12,506.63	12,510.60	0.00	0.00	0.00	
22,700.00	90.00	89.89	9,049.00	2,080.95	12,606.63	12,610.60	0.00	0.00	0.00	
22,800.00	90.00	89.89	9,049.00	2,081.14	12,706.63	12,710.60	0.00	0.00	0.00	
22,900.00	90.00	89.89	9,049.00	2,081.33	12,806.63	12,810.60	0.00	0.00	0.00	
22,936.27	90.00	89.89	9,049.00	2,081.40	12,842.90	12,846.87	0.00	0.00	0.00	
702H LTP										
22,986.27	90.00	89.89	9,049.00	2,081.50	12,892.90	12,896.87	0.00	0.00	0.00	
702H BHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
702H SHL - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	506,446.60	633,230.20	32.3915973	-103.9017084	
702H BHL - plan hits target center - Point	0.00	0.00	9,049.00	2,081.50	12,892.90	508,528.10	646,123.10	32.3971690	-103.8599107	
702H FTP - plan hits target center - Point	0.00	0.00	9,049.00	2,056.00	-345.50	508,502.60	632,884.70	32.3972527	-103.9028009	
702H LTP - plan hits target center - Point	0.00	0.00	9,049.00	2,081.40	12,842.90	508,528.00	646,073.10	32.3971693	-103.8600727	





## Planning Report

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<b>Site:</b>	JAMES RANCH UNIT DI 11 EKALAKA	<b>North Reference:</b>	Grid
<b>Well:</b>	702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

## Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
63.00	63.00	Rustler			
686.00	686.00	Salado/Top of Salt			
2,052.00	2,052.00	Castile Anhydrite 1 Top			
2,469.09	2,467.00	Castile Anhydrite 1 Base			
2,715.41	2,708.00	Castile Anhydrite 2 Top			
2,814.95	2,804.00	Castile Anhydrite 2 Base			
3,225.68	3,193.00	Base Salt			
3,467.14	3,421.00	Delaware/Lamar			
3,524.33	3,475.00	Bell Canyon			
4,606.68	4,497.00	Cherry Canyon			
6,179.36	5,982.00	Brushy Canyon Ss.			
7,481.99	7,212.00	Bone Spring Lm.			
7,532.83	7,260.00	Avalon Ss.			
7,780.65	7,494.00	Upper Avalon Carb.			
7,866.43	7,575.00	Upper Avalon Sh.			
7,949.03	7,653.00	Middle Avalon Carb.			
8,130.13	7,824.00	Lw. Avalon Sh.			
8,338.76	8,021.00	First Bone Spring Carb.			
8,493.38	8,167.00	First Bone Spring Ss.			
9,039.78	8,682.00	Upper Second Bone Spring Carb.			
9,155.59	8,782.00	Second Bone Spring A Prime Ss.			
9,325.40	8,907.00	Lower Second Bone Spring Carb			
9,500.90	8,999.00	Second Bone Spring A Ss.			
9,747.85	9,049.00	Horizontal Landing Point			

## **Cement Variance Request**

### **Intermediate Casing:**

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (5982') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to 3093'. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

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

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

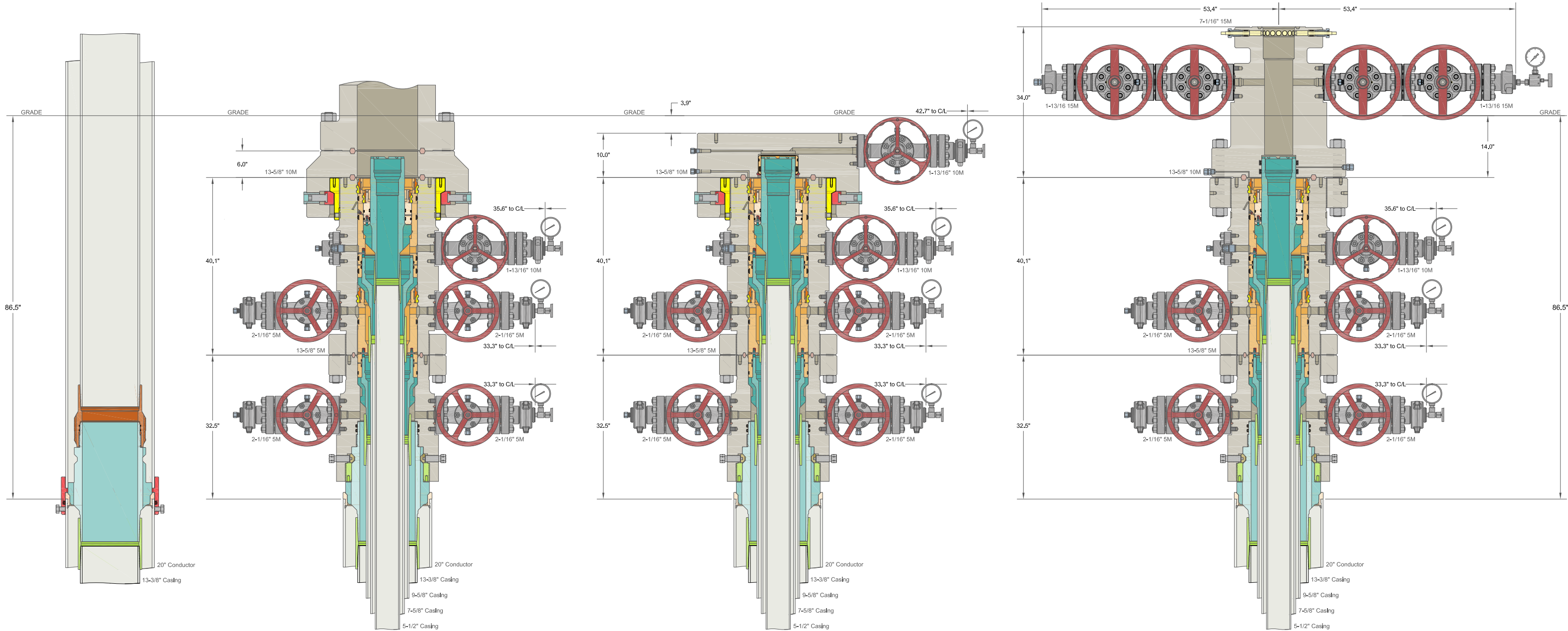
XTO requests to pump an Optional Lead if well conditions dictate in an attempt to bring cement to surface. If cement reaches the desired height, the BLM will be notified and the second stage bradenhead squeeze and subsequent TOC verification will be negated.

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

### **Production Casing:**

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



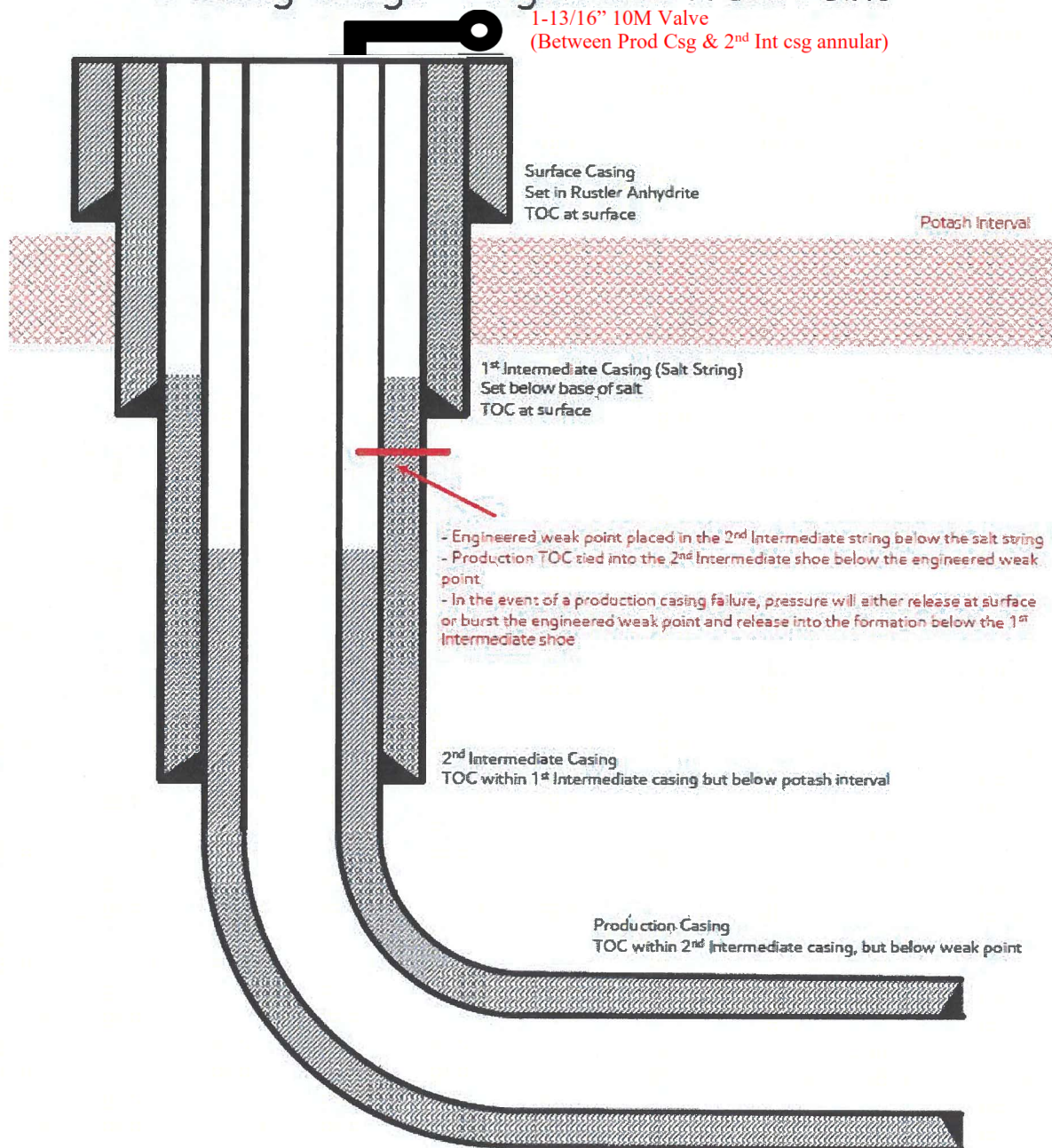


INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PERMISSIBLE ONLY AS PROVIDED BY CONTRACT OR AS EXPRESSLY AUTHORIZED BY CACTUS WELLHEAD, LLC.

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	



## 4-String Design – Engineered Weak Point



[Figure F] 4 String – 2<sup>nd</sup> Intermediate casing engineered weak point

31592723\_v1

Update May 2024:

XTO is aware of the R111-Q update and will comply with these requirements including (but not limited to):

- 1) Alignment with KPLA requirements per schematic above, leaving open annulus for pressure monitoring during frac and utilizing new casing that meets API standards
- 2) Contingency plans in place to divert formation fluids away from salt interval in event of production casing failure
- 3) Bradenhead squeeze to be completed within 180 days to tie back 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

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:** 10/21/2024

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

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

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

Well Name	API	ULST R	Footages	Anticipate d Oil BBL/D	3 yr Anticipate d Decline oil BBL/D	Anticipate d Gas MCF/D	3 yr anticipate d decline Gas MCF/D	Anticipate d Produced Water BBL/D	3 yr anticipate d decline Water BBL/D
JAMES RANCH UNIT DI 11 Ekalaka 701H	TB D	17 T22S R30E	2450 FSL, 2267 FEL	1500	200	2250	500	3750	450
JAMES RANCH UNIT DI 11 Ekalaka 702H	TBD	17 T22S R30E	2450 FSL, 2237 FEL	1500	200	2250	500	3750	450
JAMES RANCH UNIT DI 11 Ekalaka 703H	TBD	17 T22S R30E	2450 FSL, 2207 FEL	1500	200	2250	500	3750	450
JAMES RANCH UNIT DI 11 Ekalaka 704H	TBD	17 T22S R30E	2450 FSL, 2177 FEL	1500	200	2250	500	3750	450
JAMES RANCH UNIT DI 11 Ekalaka 705H	TBD	17 T22S R30E	2450 FSL, 2069 FEL	1500	200	2250	500	3750	450

JAMES RANCH UNIT DI 11 Ekalaka 706H	TBD	17 T22S R30E	2220 FSL, 2267 FEL	1500	200	2250	500	3750	450
JAMES RANCH UNIT DI 11 Ekalaka 707H	TBD	17 T22S R30E	2220 FSL, 2237 FEL	1500	200	2250	500	3750	450
JAMES RANCH UNIT DI 11 Ekalaka 708H	TBD	17 T22S R30E	2220 FSL, 2207 FEL	1500	200	2250	500	3750	450
JAMES RANCH UNIT DI 11 Ekalaka 709H	TBD	17 T22S R30E	2220 FSL, 2177 FEL	1500	200	2250	500	3750	450

**IV. Central Delivery Point Name:** \_\_\_\_\_ James Ranch Unit DI 11 Battery \_\_\_\_\_ [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
JAMES RANCH UNIT DI 11 Ekalaka 701H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 702H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 703H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 704H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 705H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 706H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 707H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 708H	TBD	TBD	TBD	TBD	TBD	TBD
JAMES RANCH UNIT DI 11 Ekalaka 709H	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.

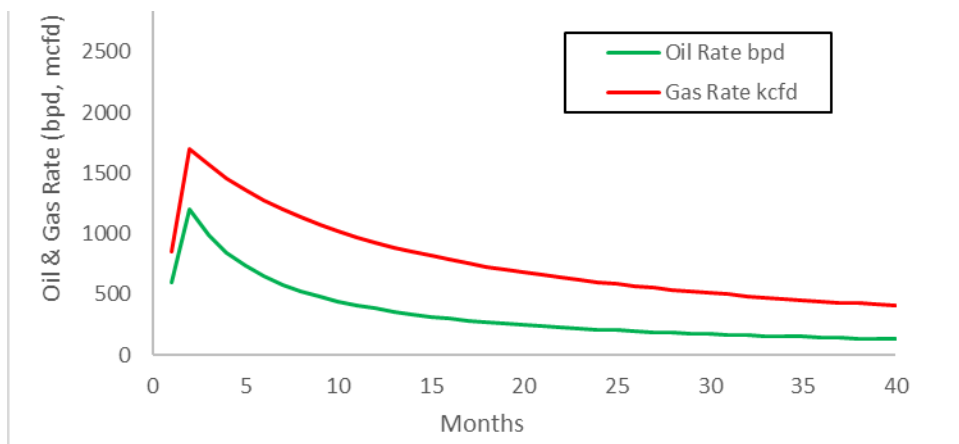
2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural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

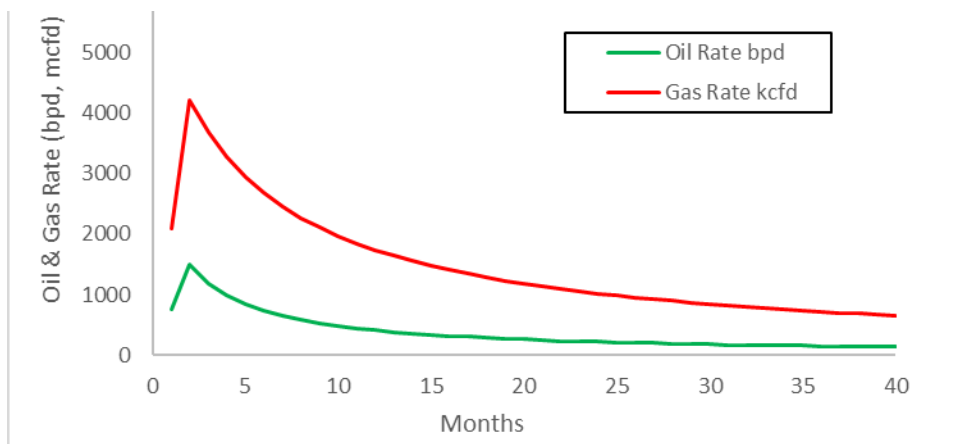
Signature: <i>Srinivas Naveen</i>
Printed Name: Srinivas Naveen Laghuvarapu
Title: Regulatory Analyst
E-mail Address: Srinivas.n.laghuvarapu@exxonmobil.com
Date: 10/21/2024
Phone: +91-7780442850
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:

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

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

#### VIII. Best Management Practices during Maintenance

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

**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.

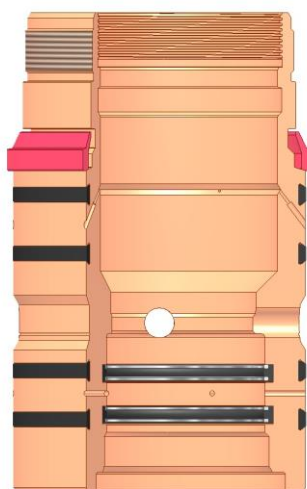
**1. Cement Program**

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

**2. Offline Cementing Procedure**

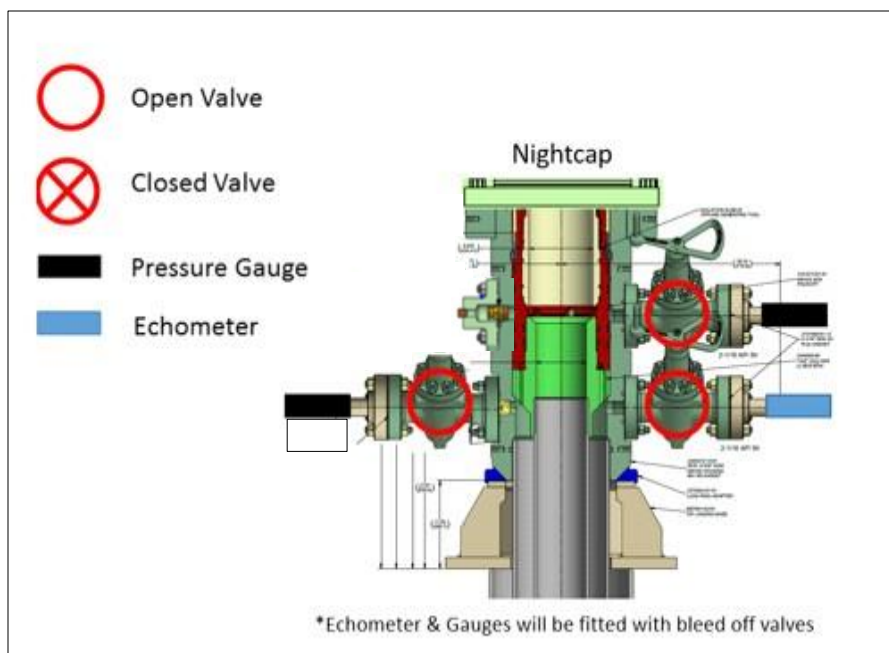
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

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 nippedled down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



Annular packoff with both external and internal seals

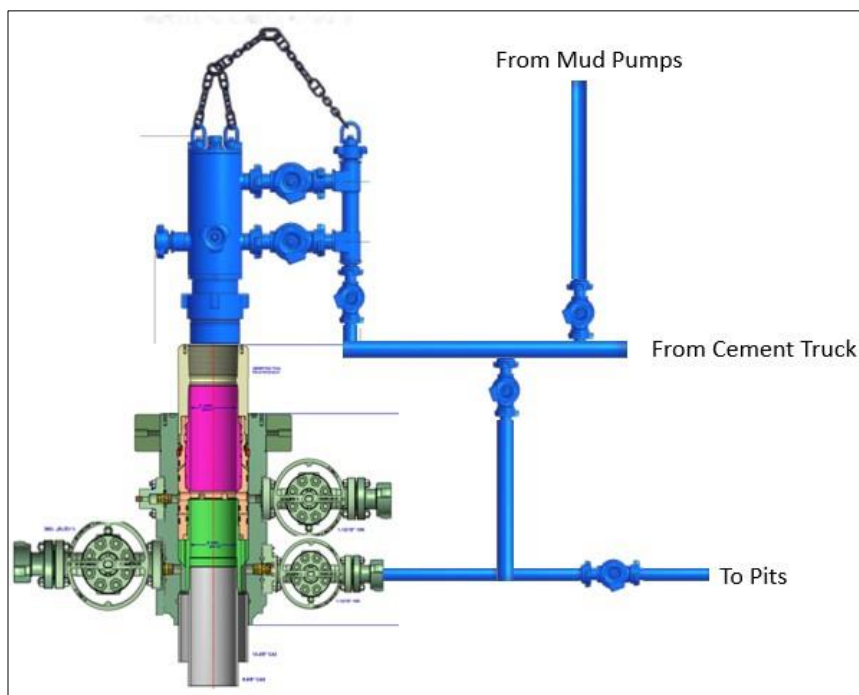
## XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

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



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

Wellhead diagram during offline cementing operations

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

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

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

**Background**

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

**Supporting Documentation**

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



Figure 1: Winch System attached to BOP Stack

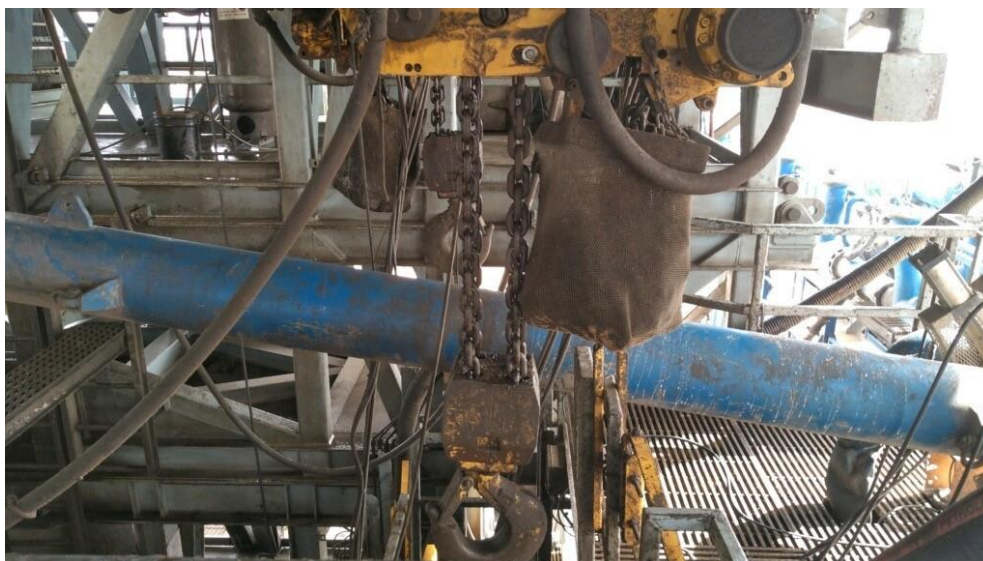


Figure 2: BOP Winch System

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

62

API STANDARD 53

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

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

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

No visible leaks.

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

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

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

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

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

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

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

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

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

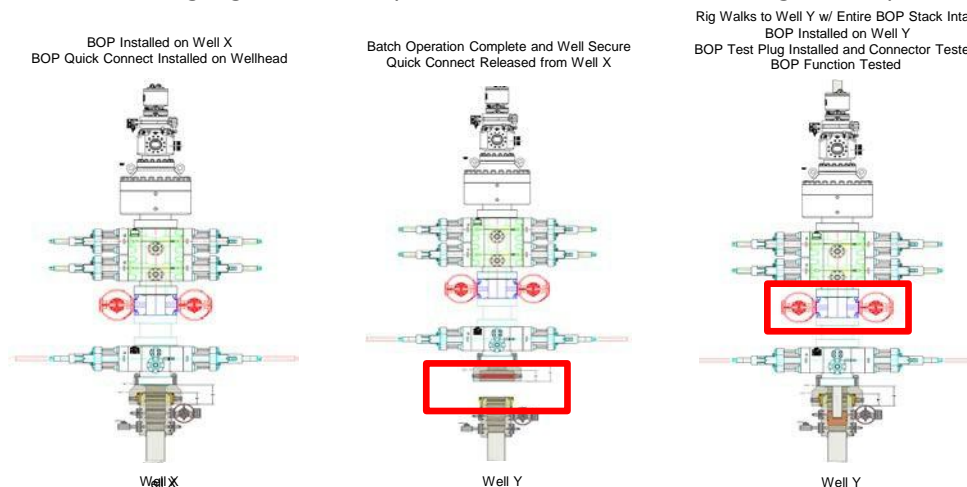
### **Procedures**

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



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

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



### Summary

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

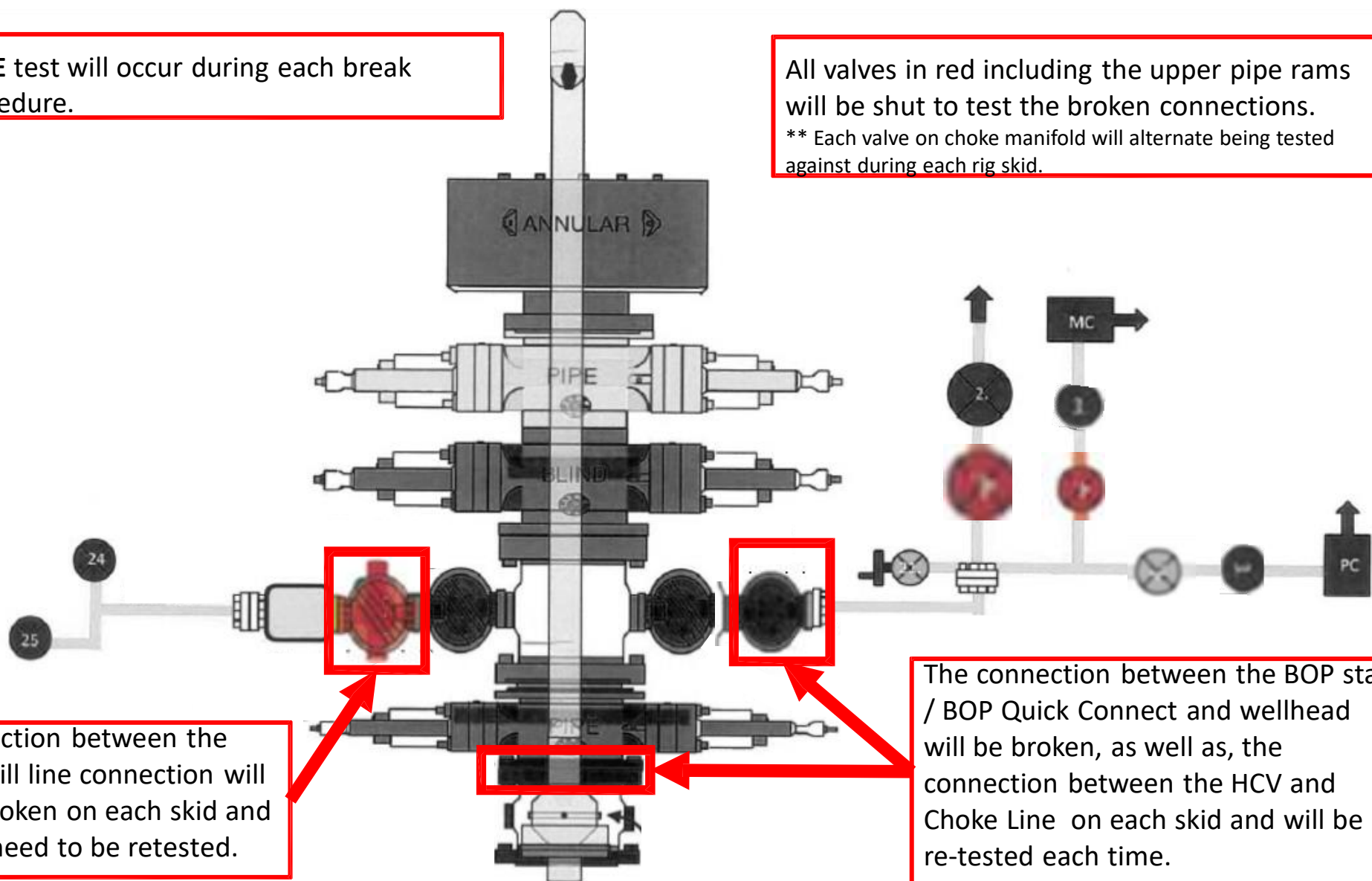
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met:

1. After a full BOP test is conducted on the first well on the pad.
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
4. Full BOP test will be required prior to drilling the production hole.

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.

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

Description of Operations:

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

**BLACK GOLD®**

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

**PHONE: +1 (281) 602-4100****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. OSMOS***TITLE:****QUALITY ASSURANCE****DATE:****1/25/2024**





H3-15/16

1/25/2024 11:48:06 AM

# TEST REPORT

**CUSTOMER**

Company: Nabors Industries Inc.

Production description: 74621/66-1531

Sales order #: 529480

Customer reference: FG1213

**TEST OBJECT**

Serial number: H3-012524-1

Lot number:

Description: 74621/66-1531

Hose ID: 3" 16C CK

Part number:

**TEST INFORMATION**

Test procedure: GTS-04-053

Test pressure: 15000.00 psi

Test pressure hold: 3600.00 sec

Work pressure: 10000.00 psi

Work pressure hold: 900.00 sec

Length difference: 0.00 %

Length difference: 0.00 inch

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

Part number:

Description:

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

Part number:

Description:

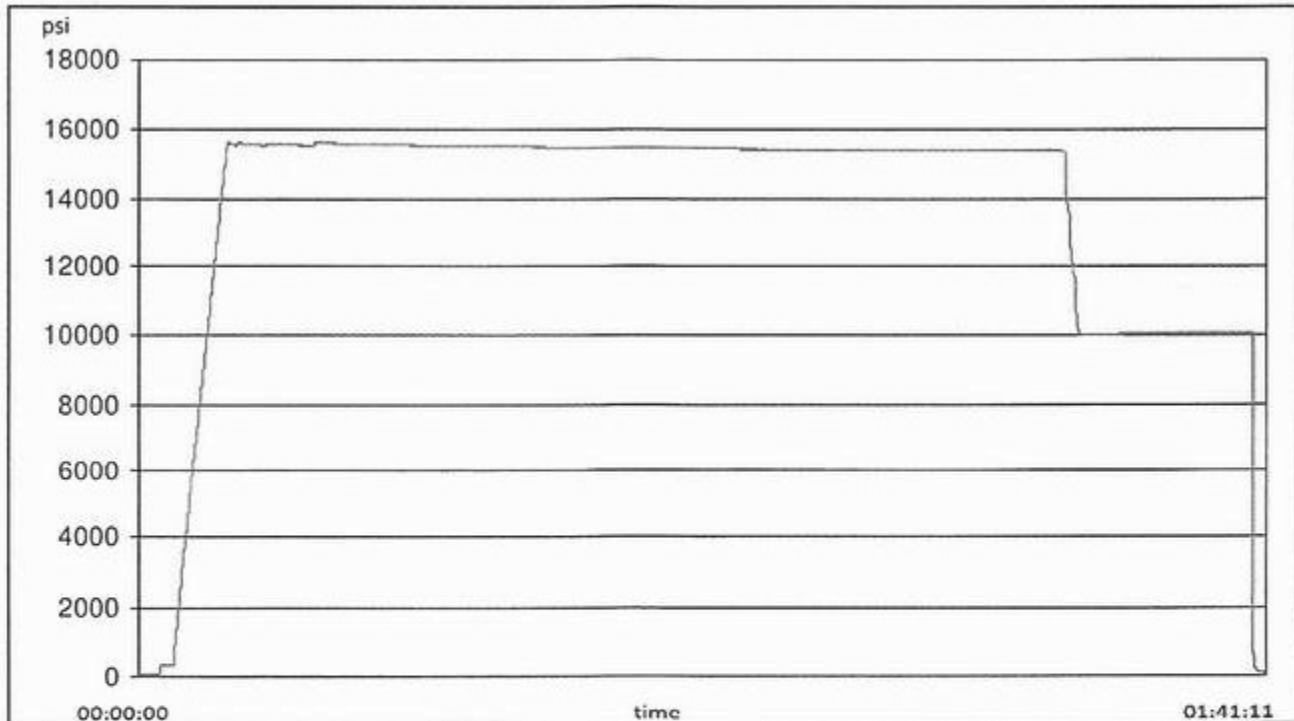
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





H3-15/16

1/25/2024 11:48:06 AM

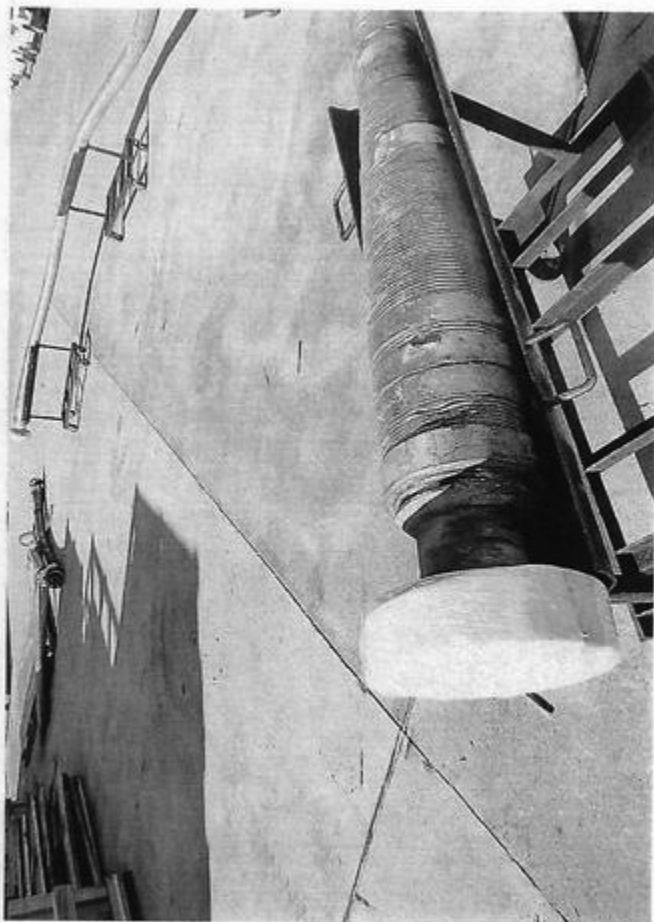
# TEST REPORT

## GAUGE TRACEABILITY

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

**Comment**

--









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

## SUPO Data Report

07/23/2025

**APD ID:** 10400096149**Submission Date:** 01/12/2024

Highlighted data  
reflects the most  
recent changes

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H[Show Final Text](#)**Well Type:** OIL WELL**Well Work Type:** Drill

### Section 1 - Existing Roads

**Will existing roads be used?** YES**Existing Road Map:**

JRU\_DI\_11\_Ekalaka\_702H\_Road\_20231207151652.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:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H

JRU\_DI\_11\_Ekalaka\_1Mile\_20231205051215.pdf

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

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

**Estimated Production Facilities description:** Production Facilities. No additional production facilities are necessary for the James Ranch Unit DI 11 wells. Once drilled and completed, the wells will flow to the JRU DI 11 battery located in Section 16-T22S-R30E NMPM, Eddy County, New Mexico as previously permitted. Flowlines. No additional flowlines are required for this project. No additional surface disturbance is needed. Midstream Tie-In. No MSO Tie-In is required for this project. No additional surface disturbance is needed. Disposal Facilities. Produced water will be piped from location to a disposal facility as needed. Once wells are drilled and completed, a 3160-5 sundry notification will be submitted to BLM in compliance with Onshore Order 7. Flare. No flare is required for this project. No additional surface disturbance is needed. Aboveground Structures. All permanent (on site six months or longer) aboveground 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. Containment Berms. Containment berms will be constructed completely around any production facilities designed to hold fluids. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 1 times the capacity of the largest tank and away from cut or fill areas. Electrical. No additional electrical is required for this well. No additional surface disturbance is needed.

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source type:** OTHER**Describe type:** Fresh Water; Section 13-T17S-R33E, Eddy County, New Mexico

<b>Water source use type:</b>	DUST CONTROL
	SURFACE CASING
	INTERMEDIATE/PRODUCTION CASING
	STIMULATION

**Source latitude:****Source longitude:****Source datum:****City:**

<b>Water source permit type:</b>	PRIVATE CONTRACT
----------------------------------	------------------

<b>Water source transport method:</b>	PIPELINE
---------------------------------------	----------

**Source land ownership:** COMMERCIAL**Source transportation land ownership:** FEDERAL

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**Water source volume (barrels):** 2000000**Source volume (acre-feet):** 257.78619266**Source volume (gal):** 84000000**Water source type:** OTHER**Describe type:** Fresh Water; Section 21-T23S-R30E, Eddy County, New Mexico.**Water source use type:**  
DUST CONTROL  
SURFACE CASING  
INTERMEDIATE/PRODUCTION  
CASING  
STIMULATION**Source latitude:****Source longitude:****Source datum:****City:****Water source permit type:** PRIVATE CONTRACT**Water source transport method:** PIPELINE**Source land ownership:** COMMERCIAL**Source transportation land ownership:** FEDERAL**Water source volume (barrels):** 2000000**Source volume (acre-feet):** 257.78619266**Source volume (gal):** 84000000**Water source type:** OTHER**Describe type:** Fresh Water; Section 21-T23S-R30E, Eddy County, New Mexico.**Water source use type:**  
DUST CONTROL  
SURFACE CASING  
INTERMEDIATE/PRODUCTION  
CASING  
STIMULATION**Source latitude:****Source longitude:****Source datum:****City:****Water source permit type:** PRIVATE CONTRACT**Water source transport method:** PIPELINE**Source land ownership:** COMMERCIAL

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**Source transportation land ownership:** FEDERAL**Water source volume (barrels):** 2000000**Source volume (acre-feet):** 257.78619266**Water source and transportation**

JRU\_DI\_11\_Ekalaka\_702H\_Wtr\_20231207151752.pdf

**Water source comments:** The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from a 3rd party vendor and hauled to the existing frac pit in Section 7 by transport truck using the existing and proposed roads depicted in the attached exhibits. No water well will be drilled on the location. Water for drilling, completion and dust control will be purchased from the following company: Rockhouse Water Water for drilling, completion and dust control will be supplied by Rockhouse Water for sale to XTO Permian Operating, LLC. from Section 13-T17S-R33E, Eddy County, New Mexico. In the event that Rockhouse Water does not have the appropriate water for XTO at time of drilling and completion from this location, then XTO water will come from with the location of the water being in Section 21-T23S-R30E, Eddy County, New Mexico. Anticipated water usage for drilling includes an estimated 35,000 barrels of water to drill a horizontal well in a combination of fresh water and brine as detailed in the mud program in the drilling plans. These volumes are calculated for ~1.5bbbls 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 330,000 barrels of water per horizontal well. Actual water volumes used during operations will 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:****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:**



**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H

## Section 6 - Construction Materials

**Using any construction materials:** NO**Construction Materials description:****Construction Materials source location**

## Section 7 - Methods for Handling

**Waste type:** DRILLING**Waste content description:** Cuttings**Amount of waste:** 2100 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:** R360 Environmental Solutions 4507 W Carlsbad Hwy, Hobbs, NM 88240.**Waste type:** GARBAGE**Waste content 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 approve 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.**Amount of waste:** 250 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 approve 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:****Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL**Disposal type description:****Disposal location description:** A licensed 3rd party contractor to haul and dispose of human waste.**Waste type:** SEWAGE**Waste content description:** Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of 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.

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**Amount of waste:** 250 gallons**Waste disposal frequency :** Weekly

**Safe containment description:** Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of 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.

**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 of human waste.**Waste type:** DRILLING**Waste content description:** FLUID**Amount of waste:** 500 barrels**Waste disposal frequency :** One Time Only**Safe containment description:** Steel Mud Boxes**Safe containmant attachment:****Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL**Disposal type description:****Disposal location description:** R360 Environmental Solutions 4507 W Carlsbad Hwy, Hobbs, NM 88240.

### Reserve Pit

**Reserve Pit being used?** NO**Temporary disposal of produced water into reserve pit?** NO**Reserve pit length (ft.)** **Reserve pit width (ft.)****Reserve pit depth (ft.)** **Reserve pit volume (cu. yd.)****Is at least 50% of the reserve pit in cut?****Reserve pit liner****Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** NO**Are you storing cuttings on location?** Y

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H

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

**Cuttings area length (ft.)****Cuttings area width (ft.)****Cuttings area depth (ft.)****Cuttings area volume (cu. yd.)****Is at least 50% of the cuttings area in cut?****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:**

RL\_\_\_702H\_20250227092803.pdf

JRU\_DI\_11\_EKA\_702H\_WELL\_02\_10\_2025\_20250227092803.pdf

**Comments:** Multi-well pad.

## Section 10 - Plans for Surface

**Type of disturbance:** No New Surface Disturbance **Multiple Well Pad Name:** JAMES RANCH UNIT DI 11 EKALAKA**Multiple Well Pad Number:** A**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 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 gulying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: JAMES RANCH UNIT DI 11 EKALAKA

Well Number: 702H

<b>Well pad proposed disturbance (acres):</b>	<b>Well pad interim reclamation (acres): 0</b>	<b>Well pad long term disturbance (acres): 0</b>
<b>Road proposed disturbance (acres):</b>	<b>Road interim reclamation (acres): 0</b>	<b>Road long term disturbance (acres): 0</b>
<b>Powerline proposed disturbance (acres):</b>	<b>Powerline interim reclamation (acres): 0</b>	<b>Powerline long term disturbance (acres): 0</b>
<b>Pipeline proposed disturbance (acres):</b>	<b>Pipeline interim reclamation (acres): 0</b>	<b>Pipeline long term disturbance (acres): 0</b>
<b>Other proposed disturbance (acres):</b>	<b>Other interim reclamation (acres): 0</b>	<b>Other long term disturbance (acres): 0</b>
<b>Total proposed disturbance: 0</b>	<b>Total interim reclamation: 0</b>	<b>Total long term disturbance: 0</b>

**Disturbance Comments:**

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

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

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

**Existing Vegetation at the well pad:** Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.

**Existing Vegetation at the well pad**

**Existing Vegetation Community at the road:** Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.

**Existing Vegetation Community at the road**

**Existing Vegetation Community at the pipeline:** Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.

**Existing Vegetation Community at the pipeline**

**Existing Vegetation Community at other disturbances:** Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.

**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:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**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:** Robert**Last Name:** Bartels**Phone:** (406)478-3617**Email:** robert.e.bartels@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:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**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:** 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:** TRANSMISSION LINE**Describe:****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:** JAMES RANCH UNIT DI 11 EKALAKA

**Well Number:** 702H

**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:**

**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:** FLOWLINE

**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:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**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:**

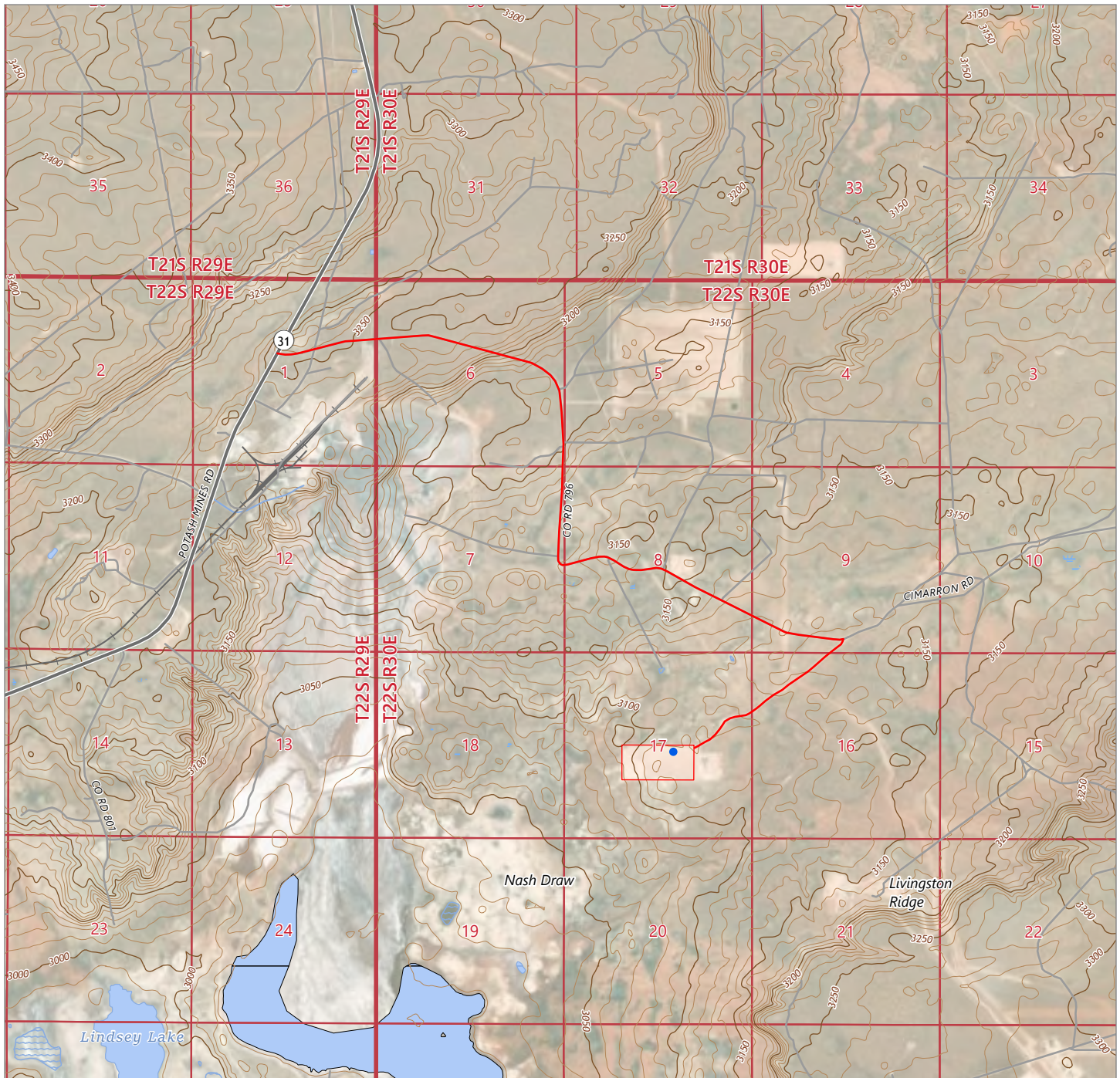
## Section 12 - Other

**Right of Way needed?** Y**Use APD as ROW?** Y**ROW Type(s):** 281001 ROW - ROADS,285003 ROW – POWER TRANS,288100 ROW – O&G Pipeline,288101 ROW – O&G Facility Sites,289001 ROW- O&G Well Pad,FLPMA (Powerline)**ROW****SUPO Additional Information:** SUPO written for all wells in section/project area.**Use a previously conducted onsite?** Y**Previous Onsite information:** The XTO Permian Operating, LLC. representatives and BLM NRS were on location for onsite on 01/21/2019**Other SUPO**

JRU\_DI\_11\_Ekalaka\_SUPO\_20240420022113\_20241011034139.pdf

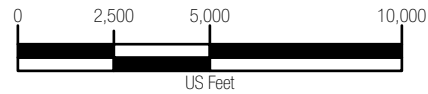






#### DRIVING DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF POT ASH MINES ROAD (NM HWY 31)) AND CIMARRON ROAD, GO SOUTHEAST ON CIMARRON ROAD FOR APPROX. 4.2 MILES. TURN RIGHT (SOUTHWEST) ON LEASE ROAD AND GO APPROX. 1.0 MILES ARRIVING AT THE LOCATION.



#### LEGEND

- JRU DI 11 EKALAKA 702H WELL LOCATION
- PROPOSED WELL PAD
- DRIVING ROUTE



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-21732 (Eng)

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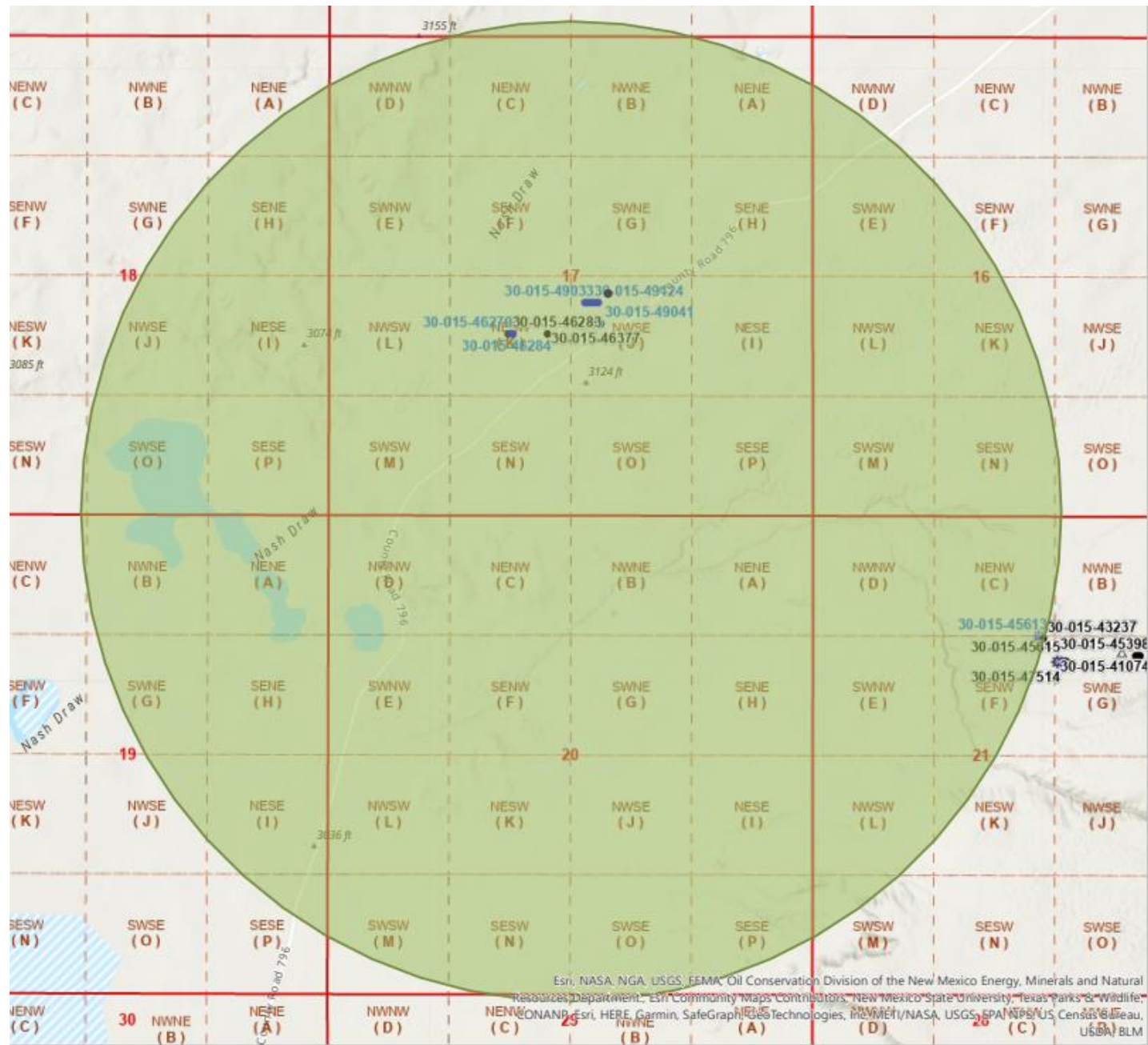
#### A TOPOGRAPHICAL AND ACCESS ROAD MAP FOR XTO PERMIAN OPERATING, LLC. JRU DI 11 EKALAKA 702H

LOCATED 2450 FEET FROM THE SOUTH LINE AND 2237 FEET FROM THE EAST LINE OF  
SECTION 17, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

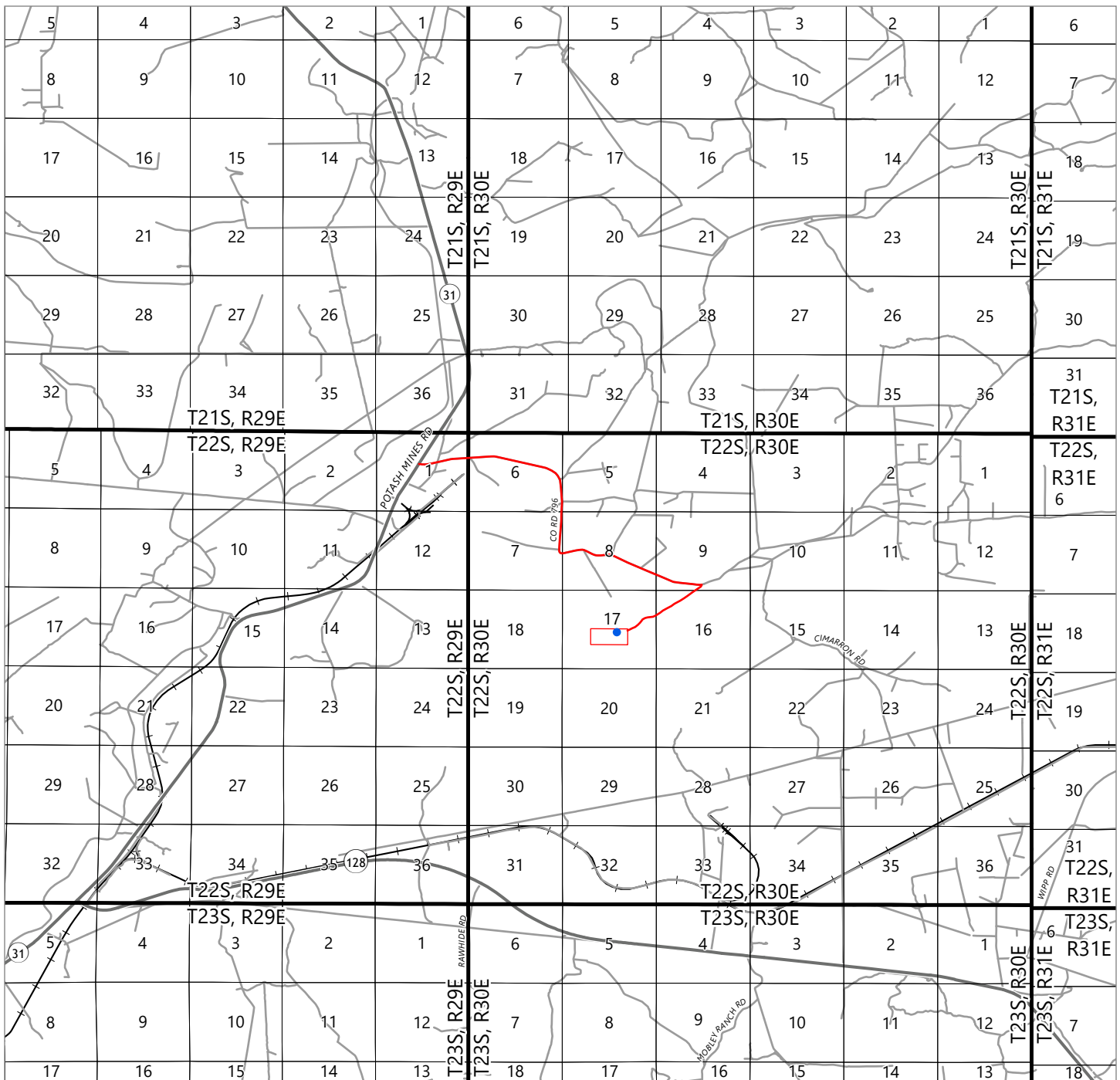
CHECKED BY:	AR	DATE:	9/19/2023	SCALE:	1"=5,000'	PROJECT NUMBER:	618.013002.07-02
DRAWN BY:	AI	FIELD CREW:	RD	REVISION NUMBER:	0	SHEET:	3 OF 3



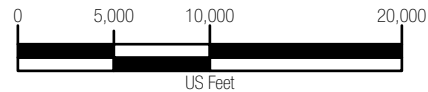
## 1 Mile Radius Map



JRU DI 11 EKALAKA

**DRIVING DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF POT ASH MINES ROAD (NM HWY 31) AND CIMARRON ROAD, GO SOUTHEAST ON CIMARRON ROAD FOR APPROX. 4.2 MILES. TURN RIGHT (SOUTHWEST) ON LEASE ROAD AND GO APPROX. 1.0 MILES ARRIVING AT THE LOCATION.

**LEGEND**

- JRU DI 11 EKALAKA 702H WELL LOCATION
- PROPOSED WELL PAD
- DRIVING ROUTE



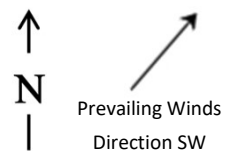
505 Pecan Street, Suite 201, Fort Worth, TX 76102  
 Ph: 972.972.4250 manhard.com  
 Texas Board of Professional Engineers & Land  
 Surveyors Reg. No. F-10194754 (Surv), F-21732 (Eng)

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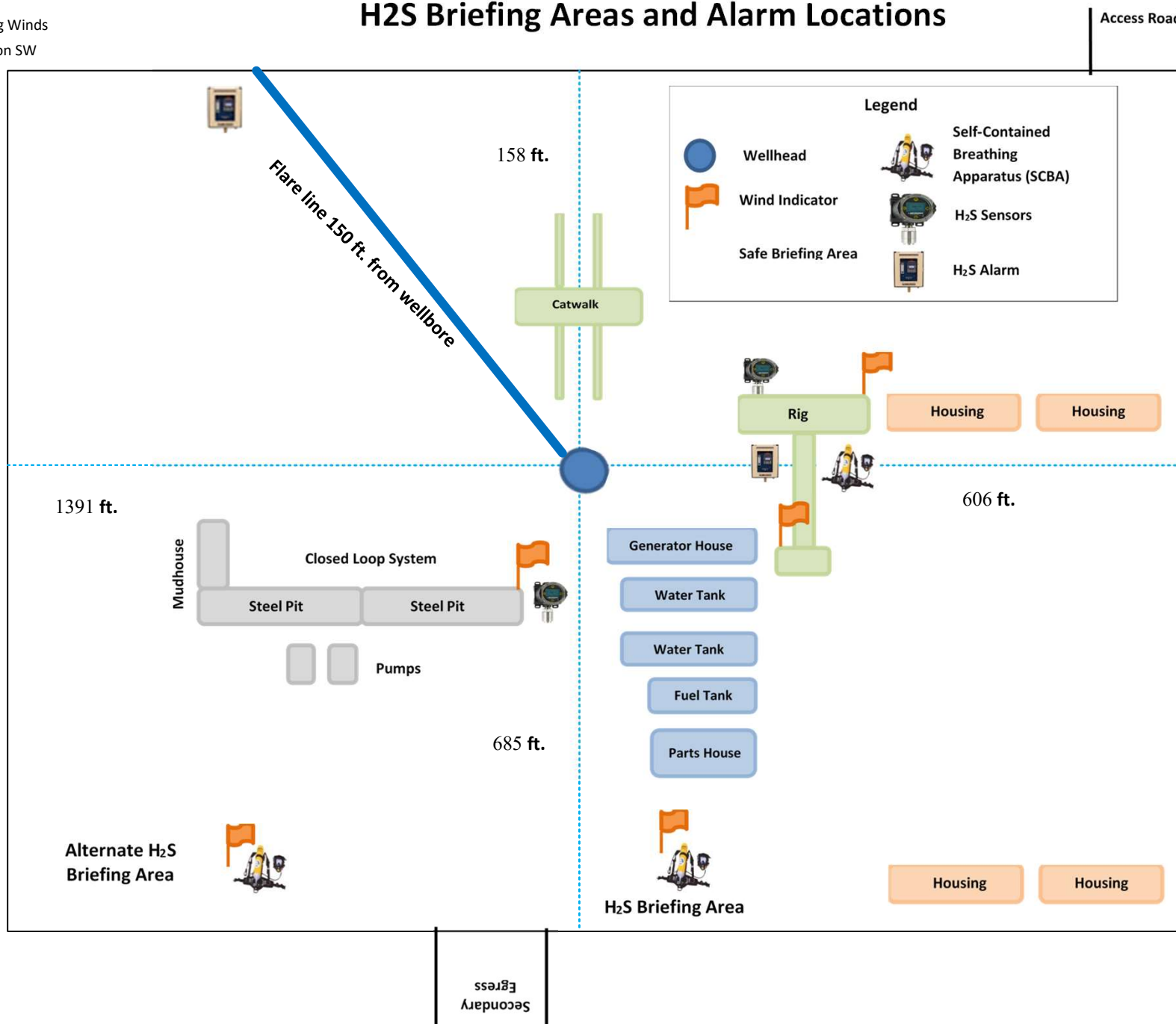
**A VICINITY MAP FOR XTO PERMIAN OPERATING, LLC.  
 JRU DI 11 EKALAKA 702H**

LOCATED 2450 FEET FROM THE SOUTH LINE AND 2237 FEET FROM THE EAST LINE OF  
 SECTION 17, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

CHECKED BY:	AR	DATE:	9/19/2023	SCALE:	1"=10,000'	PROJECT NUMBER:	618.013002.07-02
DRAWN BY:	AI	FIELD CREW:	RD	REVISION NUMBER:	0	SHEET:	2 OF 3

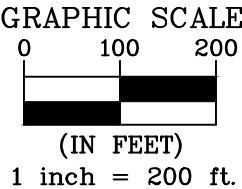


## H2S Briefing Areas and Alarm Locations



LEGEND

- SECTION LINE
- EXISTING WELL PAD
- EXISTING OVERHEAD ELECTRIC
- EXISTING ROAD
- PERMITTED EKALAKA WELL LOCATION
- PERMITTED WHITLASH WELL LOCATION
- TBD WELL LOCATION
- Denotes Well Location Has Been Drilled



DRIVING DIRECTION TO LOCATION

FROM THE INTERSECTION OF POT ASH MINES ROAD (NM HWY 31) AND CIMARRON ROAD, GO SOUTHEAST ON CIMARRON ROAD FOR APPROX. 4.2 MILES. TURN RIGHT (SOUTHWEST) ON LEASE ROAD FOR APPROX. 1.0 MILES ARRIVING AT THE 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 PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

MARK DILLON HARP  
NEW MEXICO PROFESSIONAL LAND SURVEYOR  
NO. 23786



505 Pecan Street, Ste 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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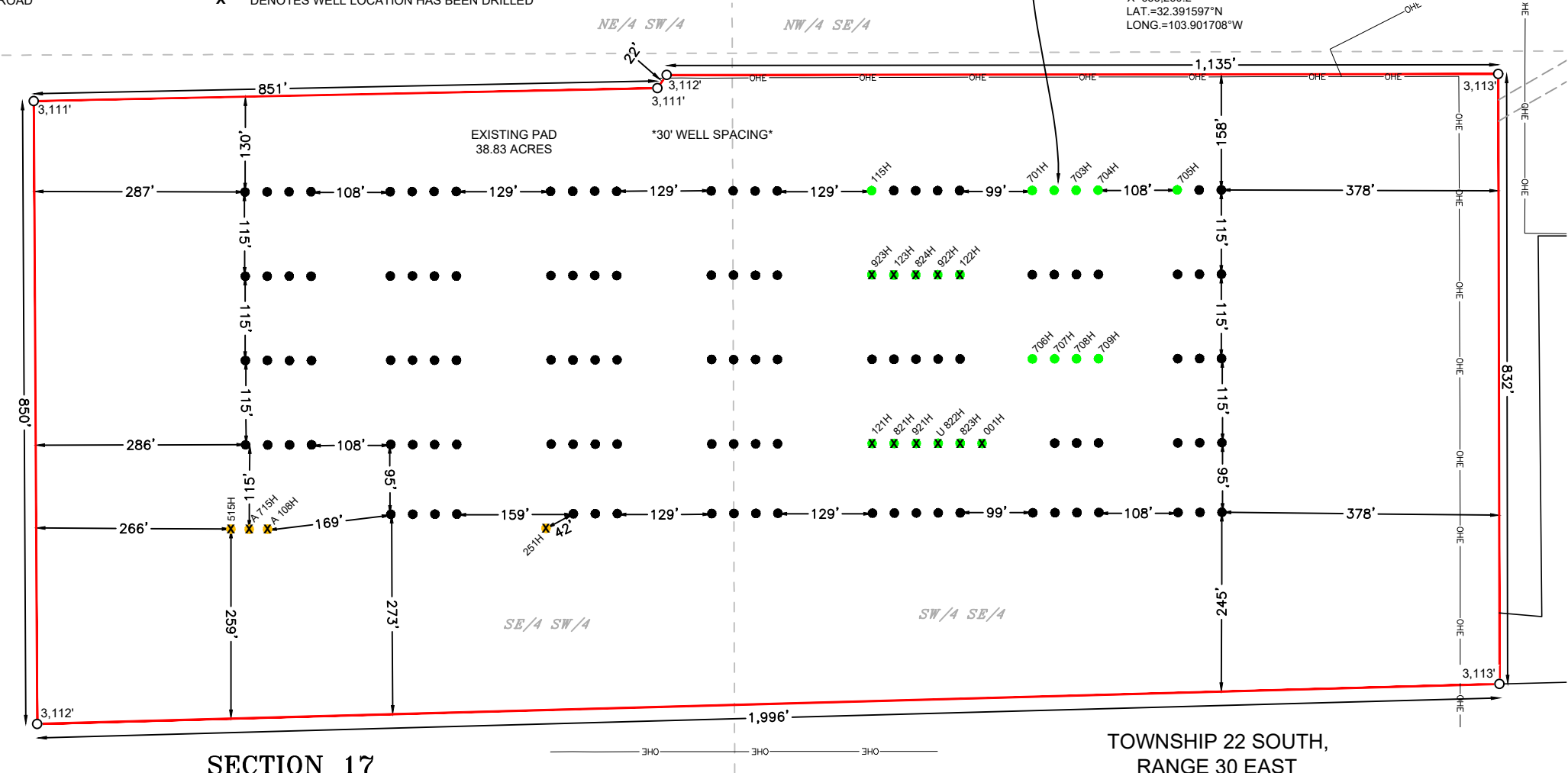
SECTION 17  
OWNER: STATE OF NEW MEXICO

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.

CHECKED BY: DB	DATE: 2/10/2025	SCALE: 1" = 200'	PROJECT NO.: 618.013002.07-02	DRAWN BY: YH	FIELD CREW: RD	REVISION NO.: 1	SHEET: 1 OF 1
-------------------	--------------------	---------------------	----------------------------------	-----------------	-------------------	--------------------	------------------

JAMES RANCH UNIT DI 11 EKALAKA 702H  
ELEV. = 3,112'  
NAD 83 (NME)  
Y=506,507.4  
X=674,411.7  
LAT.=32.391720°N  
LONG.=103.902204°W  
NAD 27 (NME)  
Y=506,446.6  
X=633,230.2  
LAT.=32.391597°N  
LONG.=103.901708°W



TOWNSHIP 22 SOUTH,  
RANGE 30 EAST  
N.M.P.M.

A WELL SITE PLAN FOR:  
XTO PERMIAN OPERATING, LLC.  
JRU DI 11 EKALAKA

JAMES RANCH UNIT DI 11 EKALAKA 702H LOCATED 2,450 FEET FROM THE SOUTH LINE AND 2,237 FEET FROM THE EAST LINE OF SECTION 17, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

## Well Site Locations

The James Ranch Unit DI 11 Program will develop economic quantities of oil and gas in the James Ranch Unit with multiple primary formations targeted. Well locations are determined based on cross-section variations and details. Locations will be selected to minimize the likelihood of encountering faults and/or drilling hazards while still targeting suitably productive zones.

If drilling results in an unproductive well, the well will be plugged and abandoned as soon as practical after the conclusion of production testing. Productive wells may be shut-in temporarily for BLM authorization for production activities and facilities.

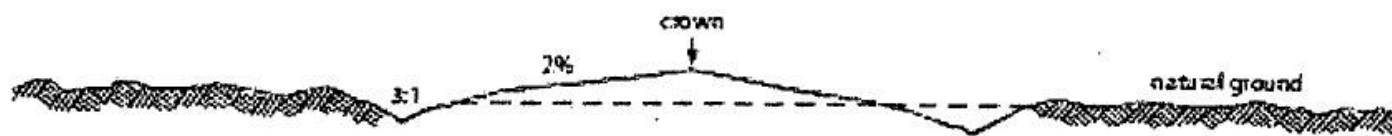
## Surface Use Plan

### 1. Existing Roads

- A. The James Ranch Unit DI 11 is accessed from the intersection of Potash Mines Road (State Rd. 31) and Cimarron Road. Go East on Cimarron Road approximately 4.2 miles to and arriving at the proposed road, the location is to the Southwest. Transportation Plan identifying existing roads that will be used to access the project area is included from FSC, Inc's marked as, 'Vicinity Map.'
- B. There are existing access roads to the proposed James Ranch Unit 11 well locations. All equipment and vehicles will be confined to the routes shown on the Vicinity Map as provided by FSC, Inc. Maintenance of the access roads will continue until abandonment and reclamation of the well pads is completed.

### 2. New or Upgraded Access Roads

- A. **New Roads.** There are no new roads necessary to access the James Ranch Unit DI 11 location.
- B. **Well Pads.** The well pads selected for development will determine which existing roads will be upgraded and which new roads will be built. The lease flow diagram shows the location of proposed roads that will need to be constructed to access the well pads.
- C. **Anticipated Traffic.** After well completion, travel to each well site will included one lease operator truck and two oil trucks per day until the Central Tank Battery is completed. Upon completion of the Central Tank Battery, one lease operator truck will continue to travel to each well site to monitor the working order of the wells and to check well equipment for proper operation. Two oil trucks will continue to travel to the Central Tank Battery only for oil hauling. Additional traffic will include one maintenance truck periodically throughout the year for pad upkeep and weed removal. Well service trips will include only the traffic necessary to work on the wells or provide chemical treatments periodically and as needed throughout the year.
- D. **Routing.** All equipment and vehicles will be confined to the travel routes laid out in the vicinity map provided by FSC, Inc. unless otherwise approved by the BLM and applied for by XTO Permian Operating, LLC.
- E. **Road Dimensions.** The maximum width of the driving surface of new roads will be 30 feet. The roads will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.



**Level Ground Section**



- F. **Surface Material.** Surface material will be native caliche. The average grade of all roads will be approximately 3%.
- G. **Fence Cuts:** No.
- H. **Fences:** No.
- I. **Cattle Guards:** No.
- J. **Turnouts:** No.
- K. **Culverts:** No.
- L. **Cuts and Fills:** Not significant.
- M. **Topsoil.** Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil that was stripped will be spread along the edge of the road and within the ditch. The topsoil will be seeded with the proper seed mix designated by the BLM.
- N. **Maintenance.** The access road will be constructed and 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.
- O. **Drainage.** The access road and associated drainage structures will be constructed and 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.

### 3. Location of Existing Wells

- A. See attached 1-mile radius well map.

### 4. Ancillary Facilities

- A. **Ancillary Facilities.** No off-pad ancillary facilities are planned during the exploration phase including, but not limited to: campsites, airstrips or staging areas.

### 5. Location of Proposed Production Facilities

- **Production Facilities.** No additional production facilities are necessary for the James Ranch Unit DI 11 wells. Once drilled and completed, the wells will flow to the JRU DI 11 battery located in Section 16-T22S-R30E NMPM, Eddy County, New Mexico as previously permitted.
- **Flowlines.** No additional flowlines are required for this project. No additional surface disturbance is needed.
- **Midstream Tie-In.** No MSO Tie-In is required for this project. No additional surface disturbance is needed.
- **Disposal Facilities.** Produced water will be piped from location to a disposal facility as needed. Once wells are drilled and completed, a 3160-5 sundry notification will be submitted to BLM in compliance with Onshore Order 7.
- **Flare.** No flare is required for this project. No additional surface disturbance is needed.
- **Aboveground Structures.** All permanent (on site six months or longer) aboveground 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.
- **Containment Berms.** Containment berms will be constructed completely around any production facilities designed to hold fluids. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.
- **Electrical.** No additional electrical is required for this well. No additional surface disturbance is needed.

### 6. Location and Types of Water Supply

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from a 3<sup>rd</sup> party vendor and hauled to the existing frac pit in Section 7 by transport truck using the existing and proposed roads depicted in the attached exhibits. No water well will be drilled on the location.

Water for drilling, completion and dust control will be purchased from the following company:  
Rockhouse Water

Water for drilling, completion and dust control will be supplied by Rockhouse Water for sale to XTO Permian Operating, LLC. from Section 13-T17S-R33E, Eddy County, New Mexico. In the event that Rockhouse Water does not have the appropriate water for XTO at time of drilling and completion from this location, then XTO water will come from with the location of the water being in Section 21-T23S-R30E, Eddy County, New Mexico.

Anticipated water usage for drilling includes an estimated 35,000 barrels of water to drill a horizontal well in a combination of fresh 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 330,000 barrels of water per horizontal well. Actual water volumes used during operations will depend on the depth of the well and length of horizontal sections.

## 7. Construction Activities

- Construction, reclamation, and/or routine maintenance will not be conducted during periods when the soil conditions for construction could lead to impacts to the surrounding environment, or when watershed damage is likely to occur as a result of these activities.
- Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. No construction materials will be removed from federal lands without prior approval from the appropriate surface management agency. All roads and well pads will be constructed of 6" rolled and compacted caliche.

## 8. Methods for Handling Waste

- **Cuttings.** The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site.
- **Drilling Fluids.** These will be contained in steel mud pits and then taken to a NMOCD approved commercial disposal facility.
- **Produced Fluids.** Water produced from the well during completion will be held temporarily in steel tanks and then taken to a NMOCD approved commercial disposal facility. Oil produced during operations will be stored in tanks until sold.
- **Sewage.** Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of 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.
- **Garbage 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.

- **Debris.** Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash cage will be cleaned and removed from the well location. No potential adverse materials or substances will be left on location.
- **Hazardous Materials.**
  - i. All drilling wastes identified as hazardous substances by the Comprehensive Environmental Response Compensation Liability Act (CERCLA) removed from the location and not reused at another drilling location will be disposed of at a hazardous waste facility approved by the U.S. Environmental Protection Agency (EPA).
  - ii. XTO Permian Operating, LLC. and its contractors will comply with all applicable Federal, State and local laws and regulations, existing or hereafter enacted promulgated, with regard to any hazardous material, as defined in this paragraph, that will be used, produced, transported or stored on the oil and gas lease. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the CERCLA of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulation. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the RCRA of 1976, as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous material also includes any nuclear or nuclear by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101 (14) U.S.C. 9601 (14) nor does the term include natural gas.
  - iii. No hazardous substances or wastes will be stored on the location after completion of the well.
  - iv. Chemicals brought to location will be on the Toxic Substance Control Act (TSCA) approved inventory list.
  - v. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in 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.

## 9. Well Site Layout

- A. **Rig Plat Diagrams:** There is 1 well pad in the James Ranch Unit DI 11 anticipated. This will allow enough space for cuts and fills and storm water control. Interim reclamation of these pads is anticipated after the drilling and completion of all wells on the pad. The well pad is anticipated to be: 520ftx625ft to support a minimum of 5 wells initially prior to constructing the rest of the wells anticipated for the drill island.
- B. **Closed-Loop System:** 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.
- C. **V-Door Orientation:** This well was staked with a V-Door orientation North.
- D. A 600' x 600' area has been staked and flagged around the drill island. A plat for the well has been attached.
- E. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad and topsoil storage areas).

## 10. Plans for Surface Reclamation:

XTO Permian Operating, LLC. requests a variance from interim reclamation until all drilling and completion activities have been finished on the pads as these are multi-well pads where drilling and completion will be consecutive with the other wells on the pad. Reseeding of the topsoil stockpile in place will occur to 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 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. (See Interim Reclamation plats attached).

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

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.

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

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.

*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.
- 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 Application. 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.

**11. Surface Ownership.**

- A. The James Ranch Unit DI 11 surface project area is 100% of the surface is under the administrative jurisdiction of the New Mexico State Land Office.
- B. The surface is multiple-use with the primary uses of the region for grazing and for the production of oil and gas.

## 12. Other Information

### Drill Island

- **Drill Island.** The proposed drill island is requested as use for oil and gas operations inside of the Secretary's Order of Potash Area (SOPA). The island requested will be used for surface hole locations for wells productive of oil and gas with no surface hole planned outside of the boundary of the onsitied and approved drill island. The total penetrable space of the drill island is: 1392'x630'. The well pad associated with the drill island is 1993'x930', overlapping the drillable area of 1392'x630', and will be used for well locations for wells productive of oil and gas with no surface hole planned outside of the boundary of the approved drill island.

James Ranch Unit DI 11 Centerpoint: 2675' FEL & 2295' FSL, Sec. 17-22S-30E, NMPM, Eddy County, New Mexico

The total size of the drill island is anticipated to be to: 1392'x630' or 20.14 acres.

The total size of the well pad, including drill island space, will be: 1993'x930' or 42.55 acres.

A current detailed plat of the drill island is attached depicting the anticipated wells on the island. Shallow and deep designation areas were determined post-onsite based on ¼ mile or ½ mile from the edge of the drill island to existing mine workings as depicted in BLM shape files.

It was determined during the onsite that no surface disturbance will be associated off of the drill island to the North. However, pad overlap (not well penetrations) can extend over the South, West, and Eastern portions of the drill island for best management practices and to maximize the use of the drill island for oil and gas development. This area is anticipated to be 300' off of the drill island for drilling, completion, and long-term maintenance operations and corridors, including flowlines and OHE, to prevent infrastructure placement on the drill island.

Topsoil will be stored in a 200'x1993' space along the South of the drill island and will be used for reclamation projects with approval of the BLM via 3160-5 sundry notice prior to being removed from stockpile.

- **Well Sites.** One (1) 1993'x930' well pad has been staked on the drill island, known as James Ranch Unit DI 11. Surveys of the drill island location have been completed by FSC, Inc., a registered professional land surveyor and are attached to this application. Center stake surveys with access roads have been completed on State lands with Jeffery Robertson, Bureau of Land Management Natural Resource Specialist, and the following individuals: Jim Rutley, Bureau of Land Management Geologist and Kyle Rybacki, Bureau of Land Management Cave/Karst specialist, in attendance. Well pads are allowed to fall off of the proposed edge of the drill island 300' to the South, West, and East while surface holes must remain on the drill island.
  - The wellbore paths will not leave the 1392'x630' drill island until the salt zone is cased and protected pursuant to NMOCD Order R-111-P.
  - A full list of XTO Permian Operating, LLC wells anticipated to be located on James Ranch Unit DI 11 is attached.
  - Approval of the drill island does not constitute approval to drill. An APD must be submitted and approved for each well located on the drill island prior to any surface disturbance or drilling activity.
- **Cultural Resources – Archaeology:** A third party archaeologist has conducted an archaeological survey of the drill island and surrounding area. A copy of the report has been submitted to the BLM.
- **Dwellings and Structures.** There are no dwellings or structures within 2 miles of this location.

### Soils and Vegetation

- **Environmental Setting.** Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.
- **Traffic.** No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. The access road will be constructed and 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 the access road route.
- **Water.** There is no permanent or live water in the immediate or within the project area.

### 13. Bond Coverage

Bond Coverage is Nationwide. Bond Number: COB000050

### Operator's Representatives:

The XTO Permian Operating, LLC. representatives for ensuring compliance of the surface use plan are listed below:

#### Surface:

Robert Bartels  
Execution Planner  
XTO Energy, Inc  
3104 E. Greene St  
Carlsbad, NM 88220  
406 478-3617  
robert.e.bartels@exxonmobil.com



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

## PWD Data Report

07/23/2025

**APD ID:** 10400096149

**Submission Date:** 01/12/2024

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA

**Well Number:** 702H

**Well Type:** OIL 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:**

**Describe 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:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**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:****Describe 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:** JAMES RANCH UNIT DI 11 EKALAKA**Well Number:** 702H**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:** JAMES RANCH UNIT DI 11 EKALAKA

**Well Number:** 702H

## 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**



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

## Bond Info Data

07/23/2025

**APD ID:** 10400096149

**Submission Date:** 01/12/2024

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** JAMES RANCH UNIT DI 11 EKALAKA

**Well Number:** 702H

**Well Type:** OIL WELL

**Well Work Type:** Drill

### Bond

**Federal/Indian APD:** FED

**BLM Bond number:** COB000050

**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:**

<b>Well Name:</b> JAMES RANCH UNIT DI 11 EKALAKA	<b>Well Location:</b> T22S / R30E / SEC 17 / NWSE / 32.39172 / -103.902204	<b>County or Parish/State:</b> EDDY / NM
<b>Well Number:</b> 702H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM02951A	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b> NMNM70965O
<b>US Well Number:</b>	<b>Operator:</b> XTO PERMIAN OPERATING LLC	

Notice of Intent

**Sundry ID:** 2865016

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 07/23/2025

**Time Sundry Submitted:** 06:35

**Date proposed operation will begin:** 07/30/2025

**Procedure Description:** 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, and dedicated acreage, Formation TVD, Casing Design, Cementing Program, Mud Program. APD ID-10400096149. FROM: TO: SHL: 2450' FSL & 2237' FEL OF SECTION 17-T22S-R30E 2220' FSL & 2427' FEL OF SECTION 17-T22S-R30E KOP: 2450' FSL & 2237' FEL OF SECTION 17-T22S-R30E 1780' FNL & 2060' FWL OF SECTION 17-T22S-R30E FTP: 770' FNL & 2572' FEL OF SECTION 17-T22S-R30E 1780' FNL & 2574' FEL OF SECTION 17-T22S-R30E LTP: 770' FNL & 100' FEL OF SECTION 15-T22S-R30E 1781' FNL & 101' FEL OF SECTION 15-T22S-R30E BHL: 770' FNL & 50' FEL OF SECTION 15-T22S-R30E 1781' FNL & 51' FEL OF SECTION 15-T22S-R30E The proposed total depth is changing from 22986' MD; 9049' TVD to 22919' MD; 9073' TVD. The pool is changing from WC-015 G-06 S243119C; BONE SPRING to WILDCAT G-07 S223021G; BONE SPRING. The Dedicated acreage is changing from 400.00 to 800.00 There is no new surface disturbance. See attached drilling program for the Updated formation, casing design, cement program and the mud circulation system.

NOI Attachments

Procedure Description

- James\_Ranch\_Unit\_DI\_11\_Ekalaka\_702H\_Sundry\_Change\_attachement\_20250903125242.pdf
- James\_Ranch\_Unit\_DI\_11\_Ekalaka\_702H\_Sundry\_Change\_attachement\_20250723182719.pdf

Received by OCD: 9/12/2025 8:40:37 AM

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Well Name: JAMES RANCH UNIT DI 11 EKALAKA	Well Location: T22S / R30E / SEC 17 / NWSE / 32.39172 / -103.902204	County or Parish/State: EDDY / NM
Well Number: 702H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM02951A	Unit or CA Name:	Unit or CA Number: NMNM70965O
US Well Number:	Operator: XTO PERMIAN OPERATING LLC	

Conditions of Approval

Additional

JRU\_DI\_11\_Ekalaka\_702H\_COA\_20250911084859.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: VISHAL RAJAN	Signed on: SEP 03, 2025 12:52 PM
Name: XTO PERMIAN OPERATING LLC	
Title: Regulatory Clerk	
Street Address: 6401 HOLIDAY HILL ROAD BLDG 5	
City: MIDLAND	State: TX
Phone: (432) 620-6704	
Email address: VISHAL.RAJAN@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: 09/11/2025
Signature: Chris Walls	

Form 3160-5  
(June 2019)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.

NMNM02951A

6. If Indian, Allottee or Tribe Name

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

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

XTO PERMIAN OPERATING LLC

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

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

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

NMNM70965O

8. Well Name and No.

JAMES RANCH UNIT DI 11 EKALAKA/702H

9. API Well No.

10. Field and Pool or Exploratory Area

WC-015 G-06 S243119C/BONE SPRING

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

SEC 17/T22S/R30E/NMP

11. Country or Parish, State

EDDY/NM

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

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

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

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, and dedicated acreage, Formation TVD, Casing Design, Cementing Program, Mud Program.  
APD ID-10400096149.

FROM: TO:

SHL: 2450' FSL &amp; 2237' FEL OF SECTION 17-T22S-R30E 2220' FSL &amp; 2427' FEL OF SECTION 17-T22S-R30E

KOP: 2450' FSL &amp; 2237' FEL OF SECTION 17-T22S-R30E 1780' FNL &amp; 2060' FWL OF SECTION 17-T22S-R30E

FTP: 770' FNL &amp; 2572' FEL OF SECTION 17-T22S-R30E 1780' FNL &amp; 2574' FEL OF SECTION 17-T22S-R30E

LTP: 770' FNL &amp; 100' FEL OF SECTION 15-T22S-R30E 1781' FNL &amp; 101' FEL OF SECTION 15-T22S-R30E

BHL: 770' FNL &amp; 50' FEL OF SECTION 15-T22S-R30E 1781' FNL &amp; 51' FEL OF SECTION 15-T22S-R30E

The proposed total depth is changing from 22986 MD; 9049 TVD to 22919 MD; 9073 TVD.

Continued on page 3 additional information

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

VISHAL RAJAN / Ph: (432) 620-6704

Regulatory Clerk

Title

(Electronic Submission)  
Signature

Date

09/03/2025

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

Approved by

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

Petroleum Engineer

Title

Date

09/11/2025

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

Office CARLSBAD

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

(Instructions on page 2)



## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

## Additional Information

### Additional Remarks

The pool is changing from WC-015 G-06 S243119C; BONE SPRING to WILDCAT G-07 S223021G; BONE SPRING.

The Dedicated acreage is changing from 400.00 to 800.00

There is no new surface disturbance.

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

### Location of Well

0. SHL: NWSE / 2450 FSL / 2237 FEL / TWSP: 22S / RANGE: 30E / SECTION: 17 / LAT: 32.39172 / LONG: -103.902204 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNE / 770 FNL / 2572 FEL / TWSP: 22S / RANGE: 30E / SECTION: 17 / LAT: 32.397375 / LONG: -103.903297 ( TVD: 9049 feet, MD: 9800 feet )

BHL: NENE / 770 FNL / 50 FEL / TWSP: 22S / RANGE: 30E / SECTION: 15 / LAT: 32.397292 / LONG: -103.860406 ( TVD: 9049 feet, MD: 22986 feet )

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b> XTO
<b>WELL NAME &amp; NO.:</b> James Ranch Unit DI Ekalaka 702H
<b>LOCATION:</b> 17-22S-30E-NMP
<b>COUNTY:</b> <span style="border: 1px solid black; padding: 2px 10px;">Eddy County, New Mexico</span>

*Changes approved through engineering via **Sundry 2865016** on 7/24/2025. Any previous COAs not addressed within the updated COAs still apply.*

**Create COAs**

<b>H<sub>2</sub>S</b> <span style="border: 1px solid black; padding: 2px 10px;">Not Reported</span>	<b>Cave / Karst</b> <span style="border: 1px solid black; padding: 2px 10px;">High</span>	<b>Waste Prevention Rule</b> <span style="border: 1px solid black; padding: 2px 10px;">Waste Minimization Plan</span>
<b>Potash</b> <span style="border: 1px solid black; padding: 2px 10px;">R-111-Q</span>	<b>R-111-Q Design</b> <span style="border: 1px solid black; padding: 2px 10px;">4-String: Open 1st Int x 2nd Annulus (ICP 2 below Relief Zone)</span>	
<b>Wellhead</b> <span style="border: 1px solid black; padding: 2px 10px;">Multibowl</span>  <input checked="" type="checkbox"/> Flex Hose <input checked="" type="checkbox"/> Break Testing	<div style="text-align: center; padding-bottom: 5px;"> <b>Casing</b>  <span style="border: 1px solid black; padding: 2px 10px;">4-String Well</span> </div> <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Liner           <input type="checkbox"/> Fluid Filled           <input checked="" type="checkbox"/> Casing Clearance         </div>	
	<div style="text-align: center; padding-bottom: 5px;"> <b>Cementing</b> </div> <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> DV Tool           <input checked="" type="checkbox"/> Bradenhead           <input checked="" type="checkbox"/> Echometer  <input checked="" type="checkbox"/> Offline Cement           <input type="checkbox"/> Open Annulus           <input type="checkbox"/> Pilot Hole         </div>	
<b>Special Requirements</b>		
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Capitan Reef           <input type="checkbox"/> Water Disposal           <input type="checkbox"/> COM           <input checked="" type="checkbox"/> Unit         </div>		

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

***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 **13-3/8** inch surface casing shall be set at approximately **662** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater (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.
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. If cement does not circulate, contact the appropriate BLM office.
  - **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 0%. 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. **Excess calculates to 33%. Additional cement maybe required.**

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

- Operator shall run a CBL from TD of the **Surface** casing to tieback requirements listed above 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. If cement does not circulate, contact the appropriate BLM office.
  - **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. 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 drilling 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. **(This is not necessary for secondary recovery unit wells)**

### **Offline Cementing**

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

### **Casing Clearance**

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



## GENERAL REQUIREMENTS

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

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

### Contact Eddy County Petroleum Engineering Inspection Staff:

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or

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

## **B. PRESSURE CONTROL**

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

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

open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

### **C. DRILLING MUD**

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

### **D. WASTE MATERIAL AND FLUIDS**

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

**Approved by Zota Stevens on 7/24/2025**

575-234-5998 / zstevens@blm.gov

Santa Fe Main Office Phone: (505) 476-3441 General Information Phone: (505) 629-6116  Online Phone Directory Visit: <a href="https://www.emnrd.nm.gov/ocd/contact-us/">https://www.emnrd.nm.gov/ocd/contact-us/</a>	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:	<input type="checkbox"/> Initial Submittal
			<input checked="" type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

WELL LOCATION INFORMATION

API Number <b>30-015-57277</b>	Pool Code <b>97905</b>	Pool Name <b>WILDCAT G-07 S223021G; BONE SPRING</b>
Property Code <b>331690</b>	Property Name <b>JAMES RANCH UNIT DI 11 EKALAKA</b>	Well Number <b>702H</b>
OGRID No. <b>373075</b>	Operator Name <b>XTO PERMIAN OPERATING, LLC.</b>	Ground Level Elevation <b>3111'</b>
Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
J	17	22S	30E		2,220 FSL	2,427 FEL	32.391089	-103.902818	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	15	22S	30E		1,781 FNL	51 FEL	32.394515	-103.860405	EDDY

Dedicated Acres <b>800.00</b>	Infill or Defining Well <b>INFILL</b>	Defining Well API <b>30-015-49033</b>	Overlapping Spacing Unit (Y/N) <b>Y</b>	Consolidation Code <b>U</b>
Order Numbers: <b>R-279-C</b>			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
F	17	22S	30E		1,780 FNL	2,060 FWL	32.394603	-103.905616	EDDY



First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
G	17	22S	30E		1,780 FNL	2,574 FEL	32.394599	-103.903299	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	15	22S	30E		1,781 FNL	101 FEL	32.394516	-103.860567	EDDY

Unitized Area or Area of Uniform Interest <b>NMNM-070965X</b>	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation: <b>3111'</b>
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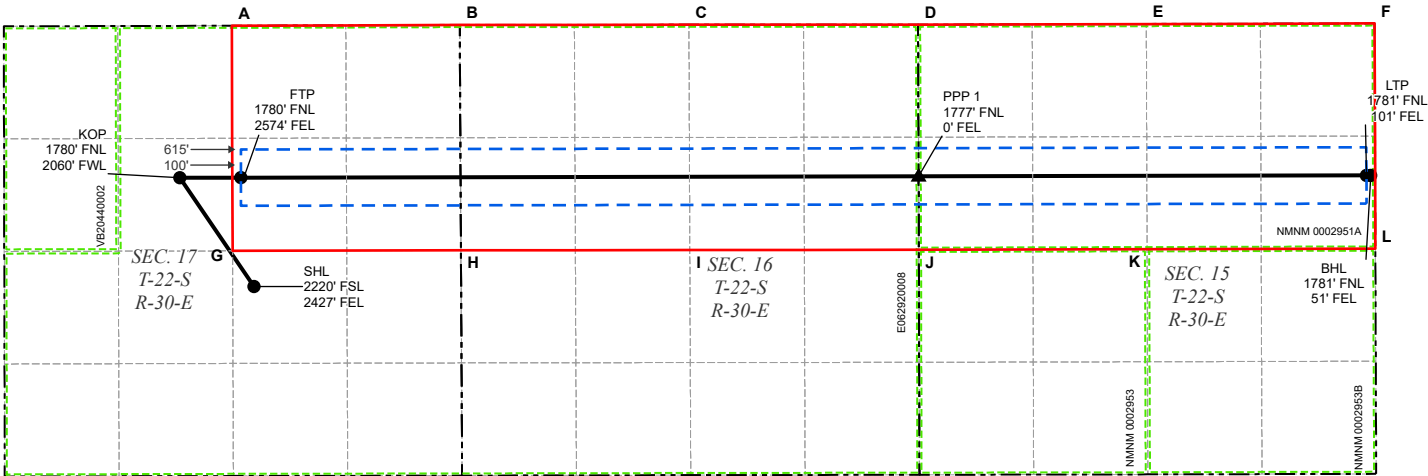
<div>OPERATOR CERTIFICATIONS</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land 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.</div> <div>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.</div> <div><div>Vishal Rajan</div><div>Signature</div><div>7/23/2025</div><div>Date</div></div> <div><div>Vishal Rajan</div><div>Printed Name</div></div> <div><div>vishal.rajan@exxonmobil.com</div><div>Email Address</div></div>	<div>SURVEYOR CERTIFICATIONS</div> <div>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.</div> <div><div></div><div>Signature and Seal of Professional Surveyor</div></div> <div><div>23786</div><div>Certificate Number</div><div>07-21-2025</div><div>Date of Survey</div></div> <div><div></div><div>DN</div><div>618.013002.07-02</div></div>
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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	674,223.1	506,277.1	32.391089	-103.902818	633,041.6	506,216.3	32.390966	-103.902322
KOP	673,354.3	507,551.9	32.394603	-103.905616	632,172.9	507,491.1	32.394480	-103.905120
FTP	674,069.6	507,553.4	32.394599	-103.903299	632,888.2	507,492.6	32.394476	-103.902803
LTP	687,259.3	507,578.7	32.394516	-103.860567	646,077.9	507,518.0	32.394393	-103.860071
BHL	687,309.3	507,578.8	32.394515	-103.860405	646,127.9	507,518.1	32.394393	-103.859909
PPP 1	682,011.7	507,568.6	32.394550	-103.877568	640,830.3	507,507.8	32.394428	-103.877073

CORNER COORDINATE TABLE				
CORNER	NAD 83 NME X	NAD 83 NME Y	NAD 27 NME X	NAD 27 NME Y
A	673,963.4	509,333.1	632,782.1	509,272.3
B	676,634.8	509,341.8	635,453.5	509,280.9
C	679,319.9	509,344.4	638,138.5	509,283.5
D	682,005.1	509,345.5	640,823.8	509,284.6
E	684,680.0	509,353.2	643,498.7	509,292.4
F	687,354.5	509,359.8	646,173.2	509,299.1
G	673,972.4	506,694.5	632,791.0	506,633.7
H	676,647.6	506,701.7	635,466.2	506,640.9
I	679,330.5	506,704.4	638,149.1	506,643.6
J	682,014.9	506,707.1	640,833.4	506,646.3
K	684,688.8	506,714.5	643,507.5	506,653.8
L	687,363.8	506,721.9	646,182.4	506,661.2

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

ExxonMobil  
James Ranch Unit DI 11 Ekalaka 702H  
Projected TD: 22919' MD / 9073' TVD  
SHL: 2220' FSL & 2427' FEL , Section 17, T22S, R30E  
BHL: 1781' FNL & 51' FEL , Section 15, T22S, 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	64'	Water
Salado/Top of Salt	687'	Water
MB 126	1183'	Water
Base Salt	3183'	Water
Delaware/Lamar	3422'	Water
Cherry Canyon	4469'	Water/Oil/Gas
Brushy Canyon Ss.	5968'	Water/Oil/Gas
Bone Spring Lm.	7188'	Water/Oil/Gas
Avalon Ss.	7283'	Water/Oil/Gas
Avalon Mid	7803'	Water/Oil/Gas
First Bone Spring Carb.	8003'	Water/Oil/Gas
First Bone Spring Ss.	8233'	Water/Oil/Gas
Upper Second Bone Spring Carb.	8683'	Water/Oil/Gas
Second Bone Spring A Prime Ss.	8763'	Water/Oil/Gas
Second Bone Spring A Ss.	9033'	Water/Oil/Gas
Horizontal Landing Point	9073'	Water/Oil/Gas
Second Bone Spring A/B Carb.	9163'	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 662' 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' – 662'	662'	13-3/8"	54.5	J55	BTC	New	13.49	7.88	6.50
12.25"	0' – 3283'	3225'	9-5/8"	40	J55	BTC	New	3.94	3.68	3.22
8.75"	0' – 3383'	3320'	7-5/8"	29.7	P110-ICY	Tenaris Wedge 511	New	6.19	10.23	3.53
8.75"	3383' – 8435'	8207'	7-5/8"	29.7	L80-IC	Tenaris Wedge 511	New	3.37	5.65	2.55
6.75"	0' – 8335'	8107'	5-1/2"	20	P110-ICY	TPN	New	1.18	3.50	2.89
6.75"	8335' – 22919'	9073'	5-1/2"	20	P110-ICY	Tenaris Wedge 441	New	1.18	3.13	3.02

**Section 3 Summary:**

XTO will keep casing fluid filled to meet BLM's collapse requirement.  
The planned kick off point is located at: 8585' MD / 8357' 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 (ft <sup>3</sup> /sack)	TOC (ft)	Casing Setting Depth	Excess (%)	Slurry Description
Surface 1	Lead	238	12.4	2.11	0	662	100%	Surface 1 Class C Lead Cement
Surface 1	Tail	313	14.8	1.33	362	662	100%	Surface 1 Class C Tail Cement
Intermediate 1	Lead	694	12.9	2.02	0	3,283	50%	Intermediate 1 Class C Lead Cement
Intermediate 1	Tail	97	14.8	1.45	2983	3,283	50%	Intermediate 1 Class C Tail Cement
Intermediate 2	Lead							
Intermediate 2	Tail	171	14.8	1.45	5968	8,435	0%	Intermediate 2 Class C Tail Cement
Production 1	Lead							
Production 1	Tail	1057	13.2	1.44	7935	22,919	25%	Production 1 Class C Tail Cement
Remedial Cementing								
Casing	Slurry Type	No. Sacks	Density (ppg)	Yield (ft <sup>3</sup> /sack)	Cemented Interval	Excess (%)	Slurry Description	
Intermediate 2	Bradenhead Squeeze	298	14.8	1.45	2783 – 5968'	35%	Intermediate Class C Bradenhead Squeeze Cement	

**Section 4 Summary:**

\*Bradenhead Squeeze 2nd Stage Offline

**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

**Requested Variances****4A) Offline Cementing Variance**

XOM requests the option to offline cement and remediate (if needed) surface, intermediate, and any production casing strings with MASP <5M where batch drilling is approved and if unplanned remediation is needed. 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. The maximum anticipated surface pressure is less than 4800psi and the deepest intermediate casing point does not penetrate the Wolfcamp Formation.

**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.

**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	Viscosity	Fluid Loss	Comments
			(ppg)	(sec/qt)	(cc)	
0' – 662'	17.5"	FW/Native	8.3 – 8.7	35-40	NC	Fresh Water or Native Water
662' – 3283'	12.25"	BDE/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.
3283' – 8435'	8.75"	BDE/OBM or FW/Brine	9.5 – 10	30-32	NC	
8435' – 22919'	6.75"	OBM/Cut Brine	9 – 9.6	50-60	NC – 20	OBM or Cut Brine depending on Well Conditions

**Section 6 Summary:**

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

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 157F to 177F. 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.

Project: JRU DI 11 Ekalaka - Eddy Co. NAD27 NME  
Site: JRU DI 11 Ekalaka - Plans  
Well: James Ranch Unit DI 11 Ekalaka 702H  
Wellbore: OH  
Design: Plan 0

WELL DETAILS: James Ranch Unit DI 11 Ekalaka 702H

Ground Elevation: 3111.00  
RKB Elevation: RKB 32 @ 3143.00usft (32' RKB)  
Rig Name: 32' RKB

Northing 506216.30      Easting 633041.60      Latitude 32° 23' 27.479 N      Longitude 103° 54' 8.361 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - JRU DI 11 Ekalaka 702H	9073.00	1301.80	13086.30	507518.10	646127.90	32° 23' 39.813 N	103° 51' 35.675 W
FTP - JRU DI 11 Ekalaka 702H	9073.00	1276.30	-153.40	507492.60	632888.20	32° 23' 40.115 N	103° 54' 10.090 W
LTP - JRU DI 11 Ekalaka 702H	9073.00	1301.70	13036.30	507518.00	646077.90	32° 23' 39.815 N	103° 51' 36.258 W

SECTION DETAILS

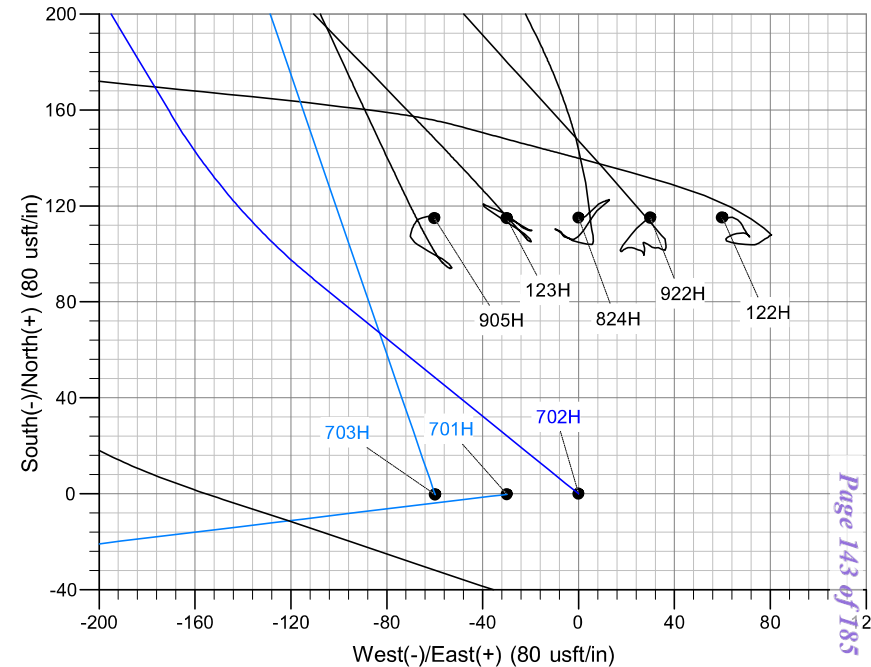
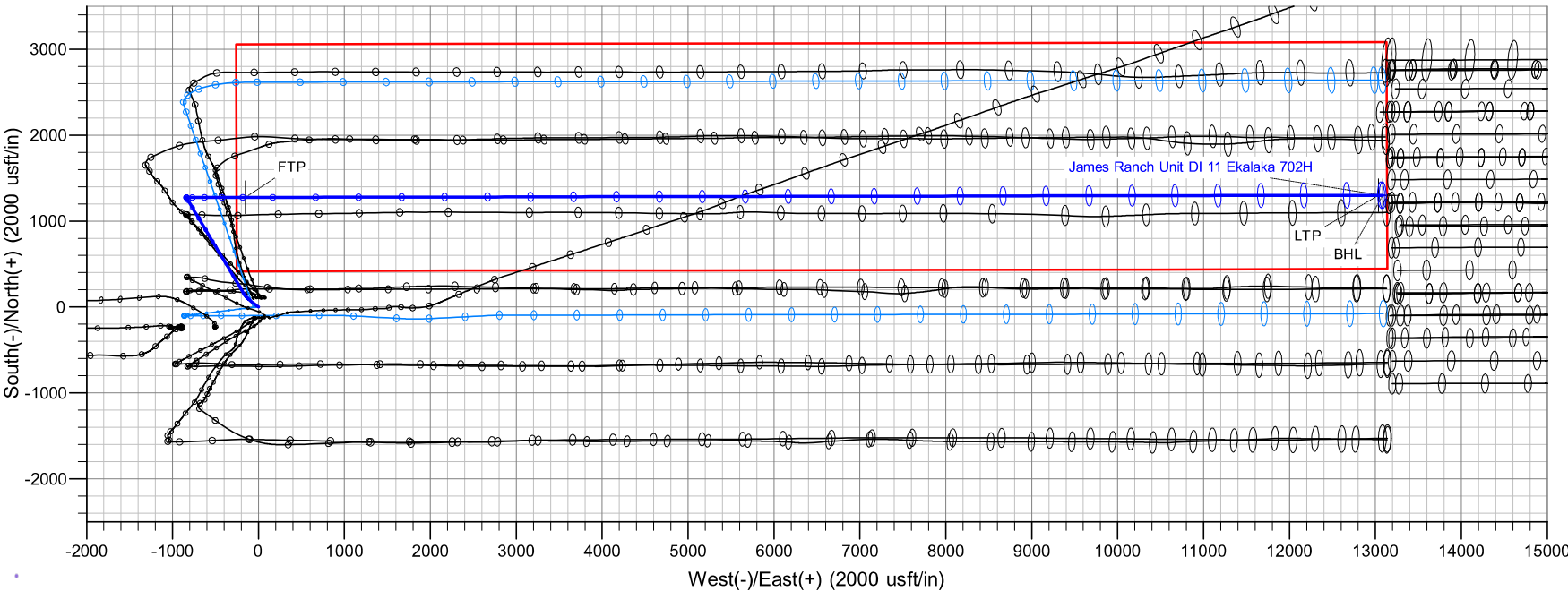
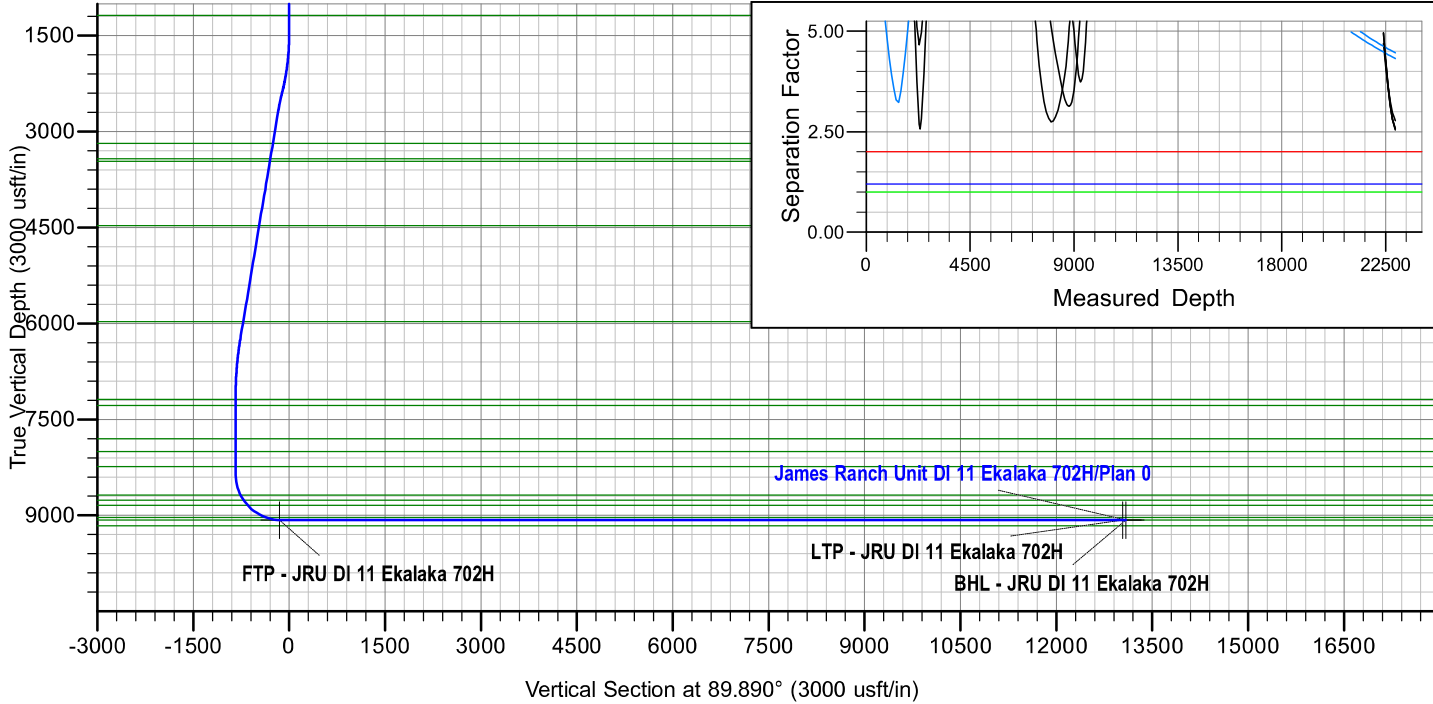
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.00	0.000	1500.00	0.00	0.00	0.00	0.00	0.00	
2400.00	18.00	309.000	2385.27	88.24	-108.97	2.00	309.00	-108.80	
2708.85	18.00	329.081	2679.29	159.28	-170.63	2.00	99.53	-170.33	
6462.96	18.00	329.081	6249.60	1154.66	-766.80	0.00	0.00	-764.59	
7363.10	0.00	0.000	7135.00	1274.98	-838.87	2.00	180.00	-836.42	
8584.90	0.00	0.000	8356.80	1274.98	-838.87	0.00	0.00	-836.42	
9709.90	90.00	89.890	9073.00	1276.36	-122.68	8.00	89.89	-120.22	
22868.90	90.00	89.890	9073.00	1301.70	13036.30	0.00	0.00	13038.78	LTP - JRU DI 11 Ekalaka 702H
22918.90	90.00	89.890	9073.00	1301.80	13086.30	0.00	0.00	13088.78	BHL - JRU DI 11 Ekalaka 702H

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
64.00	64.00	Rustler
687.00	687.00	Salado/Top of Salt
1183.00	1183.00	MB 126
3183.00	3238.50	Base Salt
3422.00	3489.80	Delaware/Lamar
3463.00	3532.91	Bell Canyon
4469.00	4590.70	Cherry Canyon
5968.00	6166.86	Brushy Canyon Ss.
7188.00	7416.10	Bone Spring Lm.
7283.00	7511.10	Avalon Ss.
7803.00	8031.10	Avalon Mid
8003.00	8231.10	First Bone Spring Carb.
8233.00	8461.10	First Bone Spring Ss.
8683.00	8923.58	Upper Second Bone Spring Carb.
8763.00	9016.80	Second Bone Spring A Prime Ss.
8843.00	9119.33	Lower Second Bone Spring Carb
9033.00	9469.41	Second Bone Spring A Ss.
9073.00	9709.90	Horizontal Landing Point



Azimuths to Grid North  
True North: -0.23°  
Magnetic North: 7.68°  
  
Magnetic Field  
Strength: 48859.5nT  
Dip Angle: 60.34°  
Date: 12/31/2009  
Model: IGRF200510



# ROC

JRU DI 11 Ekalaka - Eddy Co. NAD27 NME

JRU DI 11 Ekalaka - Plans

James Ranch Unit DI 11 Ekalaka 702H

OH

Plan: Plan 0

## Standard Planning Report

21 July, 2025

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well James Ranch Unit DI 11 Ekalaka 702H
Company:	ROC	TVD Reference:	RKB 32 @ 3143.00usft (32' RKB)
Project:	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	MD Reference:	RKB 32 @ 3143.00usft (32' RKB)
Site:	JRU DI 11 Ekalaka - Plans	North Reference:	Grid
Well:	James Ranch Unit DI 11 Ekalaka 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

Project	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	JRU DI 11 Ekalaka - Plans		
Site Position:		Northing:	506,216.10 usft
From:	Map	Easting:	633,011.70 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 23' 27.478 N
		Longitude:	103° 54' 8.709 W

Well	James Ranch Unit DI 11 Ekalaka 702H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	
Grid Convergence:	0.23 °		
		Latitude:	32° 23' 27.479 N
		Longitude:	103° 54' 8.361 W
		Ground Level:	3,111.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.91	60.34	48,859.46543854

Design	Plan 0				
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	89.890	

Plan Survey Tool Program	Date	7/18/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	22,918.66 Plan 0 (OH)	XOMR2_OWSG MWD+IFR		
			OWSG MWD + IFR1 + Mult		

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well James Ranch Unit DI 11 Ekalaka 702H
Company:	ROC	TVD Reference:	RKB 32 @ 3143.00usft (32' RKB)
Project:	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	MD Reference:	RKB 32 @ 3143.00usft (32' RKB)
Site:	JRU DI 11 Ekalaka - Plans	North Reference:	Grid
Well:	James Ranch Unit DI 11 Ekalaka 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

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	
1,500.00	0.00	0.000	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	18.00	309.000	2,385.27	88.24	-108.97	2.00	2.00	0.00	309.00	
2,708.85	18.00	329.081	2,679.29	159.28	-170.63	2.00	0.00	6.50	99.53	
6,462.96	18.00	329.081	6,249.60	1,154.66	-766.80	0.00	0.00	0.00	0.00	
7,363.10	0.00	0.000	7,135.00	1,274.98	-838.87	2.00	-2.00	0.00	180.00	
8,584.90	0.00	0.000	8,356.80	1,274.98	-838.87	0.00	0.00	0.00	0.00	
9,709.90	90.00	89.890	9,073.00	1,276.36	-122.68	8.00	8.00	0.00	89.89	
22,868.90	90.00	89.890	9,073.00	1,301.70	13,036.30	0.00	0.00	0.00	0.00	LTP - JRU DI 11 Ek
22,918.90	90.00	89.890	9,073.00	1,301.80	13,086.30	0.00	0.00	0.00	0.00	BHL - JRU DI 11 Ek



## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well James Ranch Unit DI 11 Ekalaka 702H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Project:</b>	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	<b>MD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Site:</b>	JRU DI 11 Ekalaka - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	James Ranch Unit DI 11 Ekalaka 702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0		

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
64.00	0.00	0.000	64.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Rustler</b>									
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
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
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
687.00	0.00	0.000	687.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Salado/Top of Salt</b>									
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
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,183.00	0.00	0.000	1,183.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>MB 126</b>									
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.000	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.000	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.000	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	2.00	309.000	1,599.98	1.10	-1.36	-1.35	2.00	2.00	0.00
1,700.00	4.00	309.000	1,699.84	4.39	-5.42	-5.41	2.00	2.00	0.00
1,800.00	6.00	309.000	1,799.45	9.88	-12.20	-12.18	2.00	2.00	0.00
1,900.00	8.00	309.000	1,898.70	17.55	-21.67	-21.63	2.00	2.00	0.00
2,000.00	10.00	309.000	1,997.47	27.39	-33.82	-33.77	2.00	2.00	0.00
2,100.00	12.00	309.000	2,095.62	39.40	-48.65	-48.58	2.00	2.00	0.00
2,200.00	14.00	309.000	2,193.06	53.55	-66.13	-66.03	2.00	2.00	0.00
2,300.00	16.00	309.000	2,289.64	69.84	-86.25	-86.11	2.00	2.00	0.00
2,400.00	18.00	309.000	2,385.27	88.24	-108.97	-108.80	2.00	2.00	0.00
2,500.00	17.77	315.473	2,480.44	108.85	-131.68	-131.47	2.00	-0.23	6.47
2,600.00	17.77	322.030	2,575.68	131.76	-151.77	-151.52	2.00	-0.01	6.56
2,708.85	18.00	329.081	2,679.29	159.28	-170.63	-170.33	2.00	0.22	6.48
2,800.00	18.00	329.081	2,765.97	183.45	-185.11	-184.76	0.00	0.00	0.00
2,900.00	18.00	329.081	2,861.08	209.97	-200.99	-200.59	0.00	0.00	0.00
3,000.00	18.00	329.081	2,956.18	236.48	-216.87	-216.42	0.00	0.00	0.00
3,100.00	18.00	329.081	3,051.28	262.99	-232.75	-232.25	0.00	0.00	0.00
3,200.00	18.00	329.081	3,146.39	289.51	-248.63	-248.08	0.00	0.00	0.00
3,238.50	18.00	329.081	3,183.00	299.71	-254.74	-254.17	0.00	0.00	0.00
<b>Base Salt</b>									
3,300.00	18.00	329.081	3,241.49	316.02	-264.51	-263.90	0.00	0.00	0.00
3,400.00	18.00	329.081	3,336.60	342.54	-280.39	-279.73	0.00	0.00	0.00
3,489.80	18.00	329.081	3,422.00	366.35	-294.65	-293.95	0.00	0.00	0.00
<b>Delaware/Lamar</b>									
3,500.00	18.00	329.081	3,431.70	369.05	-296.27	-295.56	0.00	0.00	0.00
3,532.91	18.00	329.081	3,463.00	377.78	-301.50	-300.77	0.00	0.00	0.00
<b>Bell Canyon</b>									
3,600.00	18.00	329.081	3,526.81	395.56	-312.15	-311.39	0.00	0.00	0.00
3,700.00	18.00	329.081	3,621.91	422.08	-328.03	-327.22	0.00	0.00	0.00
3,800.00	18.00	329.081	3,717.01	448.59	-343.91	-343.05	0.00	0.00	0.00
3,900.00	18.00	329.081	3,812.12	475.11	-359.79	-358.88	0.00	0.00	0.00
4,000.00	18.00	329.081	3,907.22	501.62	-375.68	-374.71	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well James Ranch Unit DI 11 Ekalaka 702H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Project:</b>	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	<b>MD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Site:</b>	JRU DI 11 Ekalaka - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	James Ranch Unit DI 11 Ekalaka 702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0		

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)
4,100.00	18.00	329.081	4,002.33	528.14	-391.56	-390.54	0.00	0.00	0.00
4,200.00	18.00	329.081	4,097.43	554.65	-407.44	-406.37	0.00	0.00	0.00
4,300.00	18.00	329.081	4,192.54	581.16	-423.32	-422.20	0.00	0.00	0.00
4,400.00	18.00	329.081	4,287.64	607.68	-439.20	-438.03	0.00	0.00	0.00
4,500.00	18.00	329.081	4,382.74	634.19	-455.08	-453.86	0.00	0.00	0.00
4,590.70	18.00	329.081	4,469.00	658.24	-469.48	-468.22	0.00	0.00	0.00
<b>Cherry Canyon</b>									
4,600.00	18.00	329.081	4,477.85	660.71	-470.96	-469.69	0.00	0.00	0.00
4,700.00	18.00	329.081	4,572.95	687.22	-486.84	-485.52	0.00	0.00	0.00
4,800.00	18.00	329.081	4,668.06	713.74	-502.72	-501.35	0.00	0.00	0.00
4,900.00	18.00	329.081	4,763.16	740.25	-518.60	-517.18	0.00	0.00	0.00
5,000.00	18.00	329.081	4,858.26	766.76	-534.48	-533.01	0.00	0.00	0.00
5,100.00	18.00	329.081	4,953.37	793.28	-550.36	-548.84	0.00	0.00	0.00
5,200.00	18.00	329.081	5,048.47	819.79	-566.24	-564.67	0.00	0.00	0.00
5,300.00	18.00	329.081	5,143.58	846.31	-582.12	-580.50	0.00	0.00	0.00
5,400.00	18.00	329.081	5,238.68	872.82	-598.00	-596.32	0.00	0.00	0.00
5,500.00	18.00	329.081	5,333.79	899.33	-613.88	-612.15	0.00	0.00	0.00
5,600.00	18.00	329.081	5,428.89	925.85	-629.76	-627.98	0.00	0.00	0.00
5,700.00	18.00	329.081	5,523.99	952.36	-645.64	-643.81	0.00	0.00	0.00
5,800.00	18.00	329.081	5,619.10	978.88	-661.52	-659.64	0.00	0.00	0.00
5,900.00	18.00	329.081	5,714.20	1,005.39	-677.40	-675.47	0.00	0.00	0.00
6,000.00	18.00	329.081	5,809.31	1,031.91	-693.28	-691.30	0.00	0.00	0.00
6,100.00	18.00	329.081	5,904.41	1,058.42	-709.16	-707.13	0.00	0.00	0.00
6,166.86	18.00	329.081	5,968.00	1,076.15	-719.78	-717.72	0.00	0.00	0.00
<b>Brushy Canyon Ss.</b>									
6,200.00	18.00	329.081	5,999.51	1,084.93	-725.05	-722.96	0.00	0.00	0.00
6,300.00	18.00	329.081	6,094.62	1,111.45	-740.93	-738.79	0.00	0.00	0.00
6,400.00	18.00	329.081	6,189.72	1,137.96	-756.81	-754.62	0.00	0.00	0.00
6,462.96	18.00	329.081	6,249.60	1,154.66	-766.80	-764.59	0.00	0.00	0.00
6,500.00	17.26	329.081	6,284.90	1,164.28	-772.57	-770.33	2.00	-2.00	0.00
6,600.00	15.26	329.081	6,380.89	1,188.30	-786.96	-784.67	2.00	-2.00	0.00
6,700.00	13.26	329.081	6,477.81	1,209.44	-799.62	-797.29	2.00	-2.00	0.00
6,800.00	11.26	329.081	6,575.52	1,227.66	-810.53	-808.17	2.00	-2.00	0.00
6,900.00	9.26	329.081	6,673.92	1,242.94	-819.68	-817.29	2.00	-2.00	0.00
7,000.00	7.26	329.081	6,772.87	1,255.27	-827.06	-824.65	2.00	-2.00	0.00
7,100.00	5.26	329.081	6,872.27	1,264.62	-832.67	-830.24	2.00	-2.00	0.00
7,200.00	3.26	329.081	6,971.99	1,271.00	-836.49	-834.04	2.00	-2.00	0.00
7,300.00	1.26	329.081	7,071.91	1,274.38	-838.51	-836.07	2.00	-2.00	0.00
7,363.10	0.00	0.000	7,135.00	1,274.98	-838.87	-836.42	2.00	-2.00	0.00
7,400.00	0.00	0.000	7,171.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
7,416.10	0.00	0.000	7,188.00	1,274.98	-838.87	-836.42	0.00	0.00	0.00
<b>Bone Spring Lm.</b>									
7,500.00	0.00	0.000	7,271.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
7,511.10	0.00	0.000	7,283.00	1,274.98	-838.87	-836.42	0.00	0.00	0.00
<b>Avalon Ss.</b>									
7,600.00	0.00	0.000	7,371.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
7,700.00	0.00	0.000	7,471.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
7,800.00	0.00	0.000	7,571.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
7,900.00	0.00	0.000	7,671.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
8,000.00	0.00	0.000	7,771.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
8,031.10	0.00	0.000	7,803.00	1,274.98	-838.87	-836.42	0.00	0.00	0.00
<b>Avalon Mid</b>									
8,100.00	0.00	0.000	7,871.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00

## Planning Report

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<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Project:</b>	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	<b>MD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Site:</b>	JRU DI 11 Ekalaka - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	James Ranch Unit DI 11 Ekalaka 702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0		

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)
8,200.00	0.00	0.000	7,971.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
8,231.10	0.00	0.000	8,003.00	1,274.98	-838.87	-836.42	0.00	0.00	0.00
<b>First Bone Spring Carb.</b>									
8,300.00	0.00	0.000	8,071.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
8,400.00	0.00	0.000	8,171.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
8,461.10	0.00	0.000	8,233.00	1,274.98	-838.87	-836.42	0.00	0.00	0.00
<b>First Bone Spring Ss.</b>									
8,500.00	0.00	0.000	8,271.90	1,274.98	-838.87	-836.42	0.00	0.00	0.00
8,584.90	0.00	0.000	8,356.80	1,274.98	-838.87	-836.42	0.00	0.00	0.00
8,600.00	1.21	89.890	8,371.90	1,274.98	-838.71	-836.26	8.00	8.00	0.00
8,650.00	5.21	89.890	8,421.81	1,274.99	-835.91	-833.47	8.00	8.00	0.00
8,700.00	9.21	89.890	8,471.41	1,275.00	-829.64	-827.19	8.00	8.00	0.00
8,750.00	13.21	89.890	8,520.44	1,275.02	-819.93	-817.48	8.00	8.00	0.00
8,800.00	17.21	89.890	8,568.68	1,275.04	-806.81	-804.36	8.00	8.00	0.00
8,850.00	21.21	89.890	8,615.89	1,275.07	-790.37	-787.92	8.00	8.00	0.00
8,900.00	25.21	89.890	8,661.84	1,275.11	-770.67	-768.22	8.00	8.00	0.00
8,923.58	27.09	89.890	8,683.00	1,275.13	-760.27	-757.83	8.00	8.00	0.00
<b>Upper Second Bone Spring Carb.</b>									
8,950.00	29.21	89.890	8,706.29	1,275.16	-747.81	-745.36	8.00	8.00	0.00
9,000.00	33.21	89.890	8,749.05	1,275.21	-721.91	-719.46	8.00	8.00	0.00
9,016.80	34.55	89.890	8,763.00	1,275.22	-712.54	-710.09	8.00	8.00	0.00
<b>Second Bone Spring A Prime Ss.</b>									
9,050.00	37.21	89.890	8,789.89	1,275.26	-693.09	-690.64	8.00	8.00	0.00
9,100.00	41.21	89.890	8,828.63	1,275.32	-661.49	-659.04	8.00	8.00	0.00
9,119.33	42.75	89.890	8,843.00	1,275.35	-648.56	-646.11	8.00	8.00	0.00
<b>Lower Second Bone Spring Carb</b>									
9,150.00	45.21	89.890	8,865.07	1,275.39	-627.26	-624.81	8.00	8.00	0.00
9,200.00	49.21	89.890	8,899.03	1,275.46	-590.58	-588.13	8.00	8.00	0.00
9,250.00	53.21	89.890	8,930.34	1,275.53	-551.61	-549.16	8.00	8.00	0.00
9,300.00	57.21	89.890	8,958.87	1,275.61	-510.56	-508.11	8.00	8.00	0.00
9,350.00	61.21	89.890	8,984.46	1,275.69	-467.62	-465.17	8.00	8.00	0.00
9,400.00	65.21	89.890	9,006.99	1,275.78	-422.99	-420.54	8.00	8.00	0.00
9,450.00	69.21	89.890	9,026.36	1,275.87	-376.91	-374.46	8.00	8.00	0.00
9,469.41	70.76	89.890	9,033.00	1,275.90	-358.67	-356.22	8.00	8.00	0.00
<b>Second Bone Spring A Ss.</b>									
9,500.00	73.21	89.890	9,042.46	1,275.96	-329.58	-327.13	8.00	8.00	0.00
9,550.00	77.21	89.890	9,055.22	1,276.05	-281.25	-278.80	8.00	8.00	0.00
9,600.00	81.21	89.890	9,064.58	1,276.15	-232.14	-229.69	8.00	8.00	0.00
9,650.00	85.21	89.890	9,070.50	1,276.24	-182.51	-180.06	8.00	8.00	0.00
9,700.00	89.21	89.890	9,072.93	1,276.34	-132.58	-130.12	8.00	8.00	0.00
9,709.90	90.00	89.890	9,073.00	1,276.36	-122.68	-120.22	8.00	8.00	0.00
<b>Horizontal Landing Point</b>									
9,800.00	90.00	89.890	9,073.00	1,276.53	-32.58	-30.13	0.00	0.00	0.00
9,900.00	90.00	89.890	9,073.00	1,276.73	67.42	69.87	0.00	0.00	0.00
10,000.00	90.00	89.890	9,073.00	1,276.92	167.42	169.87	0.00	0.00	0.00
10,100.00	90.00	89.890	9,073.00	1,277.11	267.42	269.87	0.00	0.00	0.00
10,200.00	90.00	89.890	9,073.00	1,277.30	367.42	369.87	0.00	0.00	0.00
10,300.00	90.00	89.890	9,073.00	1,277.50	467.42	469.87	0.00	0.00	0.00
10,400.00	90.00	89.890	9,073.00	1,277.69	567.42	569.87	0.00	0.00	0.00
10,500.00	90.00	89.890	9,073.00	1,277.88	667.42	669.87	0.00	0.00	0.00
10,600.00	90.00	89.890	9,073.00	1,278.07	767.42	769.87	0.00	0.00	0.00
10,700.00	90.00	89.890	9,073.00	1,278.27	867.42	869.87	0.00	0.00	0.00
10,800.00	90.00	89.890	9,073.00	1,278.46	967.42	969.87	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well James Ranch Unit DI 11 Ekalaka 702H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Project:</b>	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	<b>MD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Site:</b>	JRU DI 11 Ekalaka - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	James Ranch Unit DI 11 Ekalaka 702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0		

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)	
10,900.00	90.00	89.890	9,073.00	1,278.65	1,067.42	1,069.87	0.00	0.00	0.00	
11,000.00	90.00	89.890	9,073.00	1,278.84	1,167.42	1,169.87	0.00	0.00	0.00	
11,100.00	90.00	89.890	9,073.00	1,279.04	1,267.42	1,269.87	0.00	0.00	0.00	
11,200.00	90.00	89.890	9,073.00	1,279.23	1,367.42	1,369.87	0.00	0.00	0.00	
11,300.00	90.00	89.890	9,073.00	1,279.42	1,467.42	1,469.87	0.00	0.00	0.00	
11,400.00	90.00	89.890	9,073.00	1,279.61	1,567.42	1,569.87	0.00	0.00	0.00	
11,500.00	90.00	89.890	9,073.00	1,279.81	1,667.42	1,669.87	0.00	0.00	0.00	
11,600.00	90.00	89.890	9,073.00	1,280.00	1,767.42	1,769.87	0.00	0.00	0.00	
11,700.00	90.00	89.890	9,073.00	1,280.19	1,867.42	1,869.87	0.00	0.00	0.00	
11,800.00	90.00	89.890	9,073.00	1,280.38	1,967.42	1,969.87	0.00	0.00	0.00	
11,900.00	90.00	89.890	9,073.00	1,280.58	2,067.42	2,069.87	0.00	0.00	0.00	
12,000.00	90.00	89.890	9,073.00	1,280.77	2,167.42	2,169.87	0.00	0.00	0.00	
12,100.00	90.00	89.890	9,073.00	1,280.96	2,267.42	2,269.87	0.00	0.00	0.00	
12,200.00	90.00	89.890	9,073.00	1,281.15	2,367.42	2,369.87	0.00	0.00	0.00	
12,300.00	90.00	89.890	9,073.00	1,281.35	2,467.42	2,469.87	0.00	0.00	0.00	
12,400.00	90.00	89.890	9,073.00	1,281.54	2,567.42	2,569.87	0.00	0.00	0.00	
12,500.00	90.00	89.890	9,073.00	1,281.73	2,667.42	2,669.87	0.00	0.00	0.00	
12,600.00	90.00	89.890	9,073.00	1,281.92	2,767.42	2,769.87	0.00	0.00	0.00	
12,700.00	90.00	89.890	9,073.00	1,282.12	2,867.42	2,869.87	0.00	0.00	0.00	
12,800.00	90.00	89.890	9,073.00	1,282.31	2,967.42	2,969.87	0.00	0.00	0.00	
12,900.00	90.00	89.890	9,073.00	1,282.50	3,067.42	3,069.87	0.00	0.00	0.00	
13,000.00	90.00	89.890	9,073.00	1,282.70	3,167.42	3,169.87	0.00	0.00	0.00	
13,100.00	90.00	89.890	9,073.00	1,282.89	3,267.42	3,269.87	0.00	0.00	0.00	
13,200.00	90.00	89.890	9,073.00	1,283.08	3,367.42	3,369.87	0.00	0.00	0.00	
13,300.00	90.00	89.890	9,073.00	1,283.27	3,467.42	3,469.87	0.00	0.00	0.00	
13,400.00	90.00	89.890	9,073.00	1,283.47	3,567.42	3,569.87	0.00	0.00	0.00	
13,500.00	90.00	89.890	9,073.00	1,283.66	3,667.42	3,669.87	0.00	0.00	0.00	
13,600.00	90.00	89.890	9,073.00	1,283.85	3,767.42	3,769.87	0.00	0.00	0.00	
13,700.00	90.00	89.890	9,073.00	1,284.04	3,867.42	3,869.87	0.00	0.00	0.00	
13,800.00	90.00	89.890	9,073.00	1,284.24	3,967.42	3,969.87	0.00	0.00	0.00	
13,900.00	90.00	89.890	9,073.00	1,284.43	4,067.42	4,069.87	0.00	0.00	0.00	
14,000.00	90.00	89.890	9,073.00	1,284.62	4,167.42	4,169.87	0.00	0.00	0.00	
14,100.00	90.00	89.890	9,073.00	1,284.81	4,267.42	4,269.87	0.00	0.00	0.00	
14,200.00	90.00	89.890	9,073.00	1,285.01	4,367.42	4,369.87	0.00	0.00	0.00	
14,300.00	90.00	89.890	9,073.00	1,285.20	4,467.42	4,469.87	0.00	0.00	0.00	
14,400.00	90.00	89.890	9,073.00	1,285.39	4,567.42	4,569.87	0.00	0.00	0.00	
14,500.00	90.00	89.890	9,073.00	1,285.58	4,667.42	4,669.87	0.00	0.00	0.00	
14,600.00	90.00	89.890	9,073.00	1,285.78	4,767.42	4,769.87	0.00	0.00	0.00	
14,700.00	90.00	89.890	9,073.00	1,285.97	4,867.42	4,869.87	0.00	0.00	0.00	
14,800.00	90.00	89.890	9,073.00	1,286.16	4,967.41	4,969.87	0.00	0.00	0.00	
14,900.00	90.00	89.890	9,073.00	1,286.35	5,067.41	5,069.87	0.00	0.00	0.00	
15,000.00	90.00	89.890	9,073.00	1,286.55	5,167.41	5,169.87	0.00	0.00	0.00	
15,100.00	90.00	89.890	9,073.00	1,286.74	5,267.41	5,269.87	0.00	0.00	0.00	
15,200.00	90.00	89.890	9,073.00	1,286.93	5,367.41	5,369.87	0.00	0.00	0.00	
15,300.00	90.00	89.890	9,073.00	1,287.12	5,467.41	5,469.87	0.00	0.00	0.00	
15,400.00	90.00	89.890	9,073.00	1,287.32	5,567.41	5,569.87	0.00	0.00	0.00	
15,500.00	90.00	89.890	9,073.00	1,287.51	5,667.41	5,669.87	0.00	0.00	0.00	
15,600.00	90.00	89.890	9,073.00	1,287.70	5,767.41	5,769.87	0.00	0.00	0.00	
15,700.00	90.00	89.890	9,073.00	1,287.89	5,867.41	5,869.87	0.00	0.00	0.00	
15,800.00	90.00	89.890	9,073.00	1,288.09	5,967.41	5,969.87	0.00	0.00	0.00	
15,900.00	90.00	89.890	9,073.00	1,288.28	6,067.41	6,069.87	0.00	0.00	0.00	
16,000.00	90.00	89.890	9,073.00	1,288.47	6,167.41	6,169.87	0.00	0.00	0.00	
16,100.00	90.00	89.890	9,073.00	1,288.66	6,267.41	6,269.87	0.00	0.00	0.00	
16,200.00	90.00	89.890	9,073.00	1,288.86	6,367.41	6,369.87	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well James Ranch Unit DI 11 Ekalaka 702H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Project:</b>	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	<b>MD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Site:</b>	JRU DI 11 Ekalaka - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	James Ranch Unit DI 11 Ekalaka 702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0		

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)	
16,300.00	90.00	89.890	9,073.00	1,289.05	6,467.41	6,469.87	0.00	0.00	0.00	
16,400.00	90.00	89.890	9,073.00	1,289.24	6,567.41	6,569.87	0.00	0.00	0.00	
16,500.00	90.00	89.890	9,073.00	1,289.44	6,667.41	6,669.87	0.00	0.00	0.00	
16,600.00	90.00	89.890	9,073.00	1,289.63	6,767.41	6,769.87	0.00	0.00	0.00	
16,700.00	90.00	89.890	9,073.00	1,289.82	6,867.41	6,869.87	0.00	0.00	0.00	
16,800.00	90.00	89.890	9,073.00	1,290.01	6,967.41	6,969.87	0.00	0.00	0.00	
16,900.00	90.00	89.890	9,073.00	1,290.21	7,067.41	7,069.87	0.00	0.00	0.00	
17,000.00	90.00	89.890	9,073.00	1,290.40	7,167.41	7,169.87	0.00	0.00	0.00	
17,100.00	90.00	89.890	9,073.00	1,290.59	7,267.41	7,269.87	0.00	0.00	0.00	
17,200.00	90.00	89.890	9,073.00	1,290.78	7,367.41	7,369.87	0.00	0.00	0.00	
17,300.00	90.00	89.890	9,073.00	1,290.98	7,467.41	7,469.87	0.00	0.00	0.00	
17,400.00	90.00	89.890	9,073.00	1,291.17	7,567.41	7,569.87	0.00	0.00	0.00	
17,500.00	90.00	89.890	9,073.00	1,291.36	7,667.41	7,669.87	0.00	0.00	0.00	
17,600.00	90.00	89.890	9,073.00	1,291.55	7,767.41	7,769.87	0.00	0.00	0.00	
17,700.00	90.00	89.890	9,073.00	1,291.75	7,867.41	7,869.88	0.00	0.00	0.00	
17,800.00	90.00	89.890	9,073.00	1,291.94	7,967.41	7,969.88	0.00	0.00	0.00	
17,900.00	90.00	89.890	9,073.00	1,292.13	8,067.41	8,069.88	0.00	0.00	0.00	
18,000.00	90.00	89.890	9,073.00	1,292.32	8,167.41	8,169.88	0.00	0.00	0.00	
18,100.00	90.00	89.890	9,073.00	1,292.52	8,267.41	8,269.88	0.00	0.00	0.00	
18,200.00	90.00	89.890	9,073.00	1,292.71	8,367.41	8,369.88	0.00	0.00	0.00	
18,300.00	90.00	89.890	9,073.00	1,292.90	8,467.41	8,469.88	0.00	0.00	0.00	
18,400.00	90.00	89.890	9,073.00	1,293.09	8,567.41	8,569.88	0.00	0.00	0.00	
18,500.00	90.00	89.890	9,073.00	1,293.29	8,667.41	8,669.88	0.00	0.00	0.00	
18,600.00	90.00	89.890	9,073.00	1,293.48	8,767.41	8,769.88	0.00	0.00	0.00	
18,700.00	90.00	89.890	9,073.00	1,293.67	8,867.41	8,869.88	0.00	0.00	0.00	
18,800.00	90.00	89.890	9,073.00	1,293.86	8,967.41	8,969.88	0.00	0.00	0.00	
18,900.00	90.00	89.890	9,073.00	1,294.06	9,067.41	9,069.88	0.00	0.00	0.00	
19,000.00	90.00	89.890	9,073.00	1,294.25	9,167.41	9,169.88	0.00	0.00	0.00	
19,100.00	90.00	89.890	9,073.00	1,294.44	9,267.41	9,269.88	0.00	0.00	0.00	
19,200.00	90.00	89.890	9,073.00	1,294.63	9,367.41	9,369.88	0.00	0.00	0.00	
19,300.00	90.00	89.890	9,073.00	1,294.83	9,467.41	9,469.88	0.00	0.00	0.00	
19,400.00	90.00	89.890	9,073.00	1,295.02	9,567.41	9,569.88	0.00	0.00	0.00	
19,500.00	90.00	89.890	9,073.00	1,295.21	9,667.41	9,669.88	0.00	0.00	0.00	
19,600.00	90.00	89.890	9,073.00	1,295.40	9,767.41	9,769.88	0.00	0.00	0.00	
19,700.00	90.00	89.890	9,073.00	1,295.60	9,867.41	9,869.88	0.00	0.00	0.00	
19,800.00	90.00	89.890	9,073.00	1,295.79	9,967.41	9,969.88	0.00	0.00	0.00	
19,900.00	90.00	89.890	9,073.00	1,295.98	10,067.41	10,069.88	0.00	0.00	0.00	
20,000.00	90.00	89.890	9,073.00	1,296.18	10,167.41	10,169.88	0.00	0.00	0.00	
20,100.00	90.00	89.890	9,073.00	1,296.37	10,267.41	10,269.88	0.00	0.00	0.00	
20,200.00	90.00	89.890	9,073.00	1,296.56	10,367.40	10,369.88	0.00	0.00	0.00	
20,300.00	90.00	89.890	9,073.00	1,296.75	10,467.40	10,469.88	0.00	0.00	0.00	
20,400.00	90.00	89.890	9,073.00	1,296.95	10,567.40	10,569.88	0.00	0.00	0.00	
20,500.00	90.00	89.890	9,073.00	1,297.14	10,667.40	10,669.88	0.00	0.00	0.00	
20,600.00	90.00	89.890	9,073.00	1,297.33	10,767.40	10,769.88	0.00	0.00	0.00	
20,700.00	90.00	89.890	9,073.00	1,297.52	10,867.40	10,869.88	0.00	0.00	0.00	
20,800.00	90.00	89.890	9,073.00	1,297.72	10,967.40	10,969.88	0.00	0.00	0.00	
20,900.00	90.00	89.890	9,073.00	1,297.91	11,067.40	11,069.88	0.00	0.00	0.00	
21,000.00	90.00	89.890	9,073.00	1,298.10	11,167.40	11,169.88	0.00	0.00	0.00	
21,100.00	90.00	89.890	9,073.00	1,298.29	11,267.40	11,269.88	0.00	0.00	0.00	
21,200.00	90.00	89.890	9,073.00	1,298.49	11,367.40	11,369.88	0.00	0.00	0.00	
21,300.00	90.00	89.890	9,073.00	1,298.68	11,467.40	11,469.88	0.00	0.00	0.00	
21,400.00	90.00	89.890	9,073.00	1,298.87	11,567.40	11,569.88	0.00	0.00	0.00	
21,500.00	90.00	89.890	9,073.00	1,299.06	11,667.40	11,669.88	0.00	0.00	0.00	
21,600.00	90.00	89.890	9,073.00	1,299.26	11,767.40	11,769.88	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well James Ranch Unit DI 11 Ekalaka 702H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Project:</b>	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	<b>MD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Site:</b>	JRU DI 11 Ekalaka - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	James Ranch Unit DI 11 Ekalaka 702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0		

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)	
21,700.00	90.00	89.890	9,073.00	1,299.45	11,867.40	11,869.88	0.00	0.00	0.00	
21,800.00	90.00	89.890	9,073.00	1,299.64	11,967.40	11,969.88	0.00	0.00	0.00	
21,900.00	90.00	89.890	9,073.00	1,299.83	12,067.40	12,069.88	0.00	0.00	0.00	
22,000.00	90.00	89.890	9,073.00	1,300.03	12,167.40	12,169.88	0.00	0.00	0.00	
22,100.00	90.00	89.890	9,073.00	1,300.22	12,267.40	12,269.88	0.00	0.00	0.00	
22,200.00	90.00	89.890	9,073.00	1,300.41	12,367.40	12,369.88	0.00	0.00	0.00	
22,300.00	90.00	89.890	9,073.00	1,300.60	12,467.40	12,469.88	0.00	0.00	0.00	
22,400.00	90.00	89.890	9,073.00	1,300.80	12,567.40	12,569.88	0.00	0.00	0.00	
22,500.00	90.00	89.890	9,073.00	1,300.99	12,667.40	12,669.88	0.00	0.00	0.00	
22,600.00	90.00	89.890	9,073.00	1,301.18	12,767.40	12,769.88	0.00	0.00	0.00	
22,700.00	90.00	89.890	9,073.00	1,301.37	12,867.40	12,869.88	0.00	0.00	0.00	
22,800.00	90.00	89.890	9,073.00	1,301.57	12,967.40	12,969.88	0.00	0.00	0.00	
22,868.90	90.00	89.890	9,073.00	1,301.70	13,036.30	13,038.78	0.00	0.00	0.00	
22,900.00	90.00	89.890	9,073.00	1,301.76	13,067.40	13,069.88	0.00	0.00	0.00	
22,918.90	90.00	89.890	9,073.00	1,301.80	13,086.30	13,088.78	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
LTP - JRU DI 11 Ekalaka - plan hits target center - Point	0.00	0.000	9,073.00	1,301.70	13,036.30	507,518.00	646,077.90	32° 23' 39.815 N	103° 51' 36.258 W	
BHL - JRU DI 11 Ekalaka - plan hits target center - Point	0.00	0.000	9,073.00	1,301.80	13,086.30	507,518.10	646,127.90	32° 23' 39.813 N	103° 51' 35.675 W	
FTP - JRU DI 11 Ekalaka - plan misses target center by 0.66usft at 9679.20usft MD (9072.34 TVD, 1276.30 N, -153.37 E) - Point	0.00	0.000	9,073.00	1,276.30	-153.40	507,492.60	632,888.20	32° 23' 40.115 N	103° 54' 10.090 W	

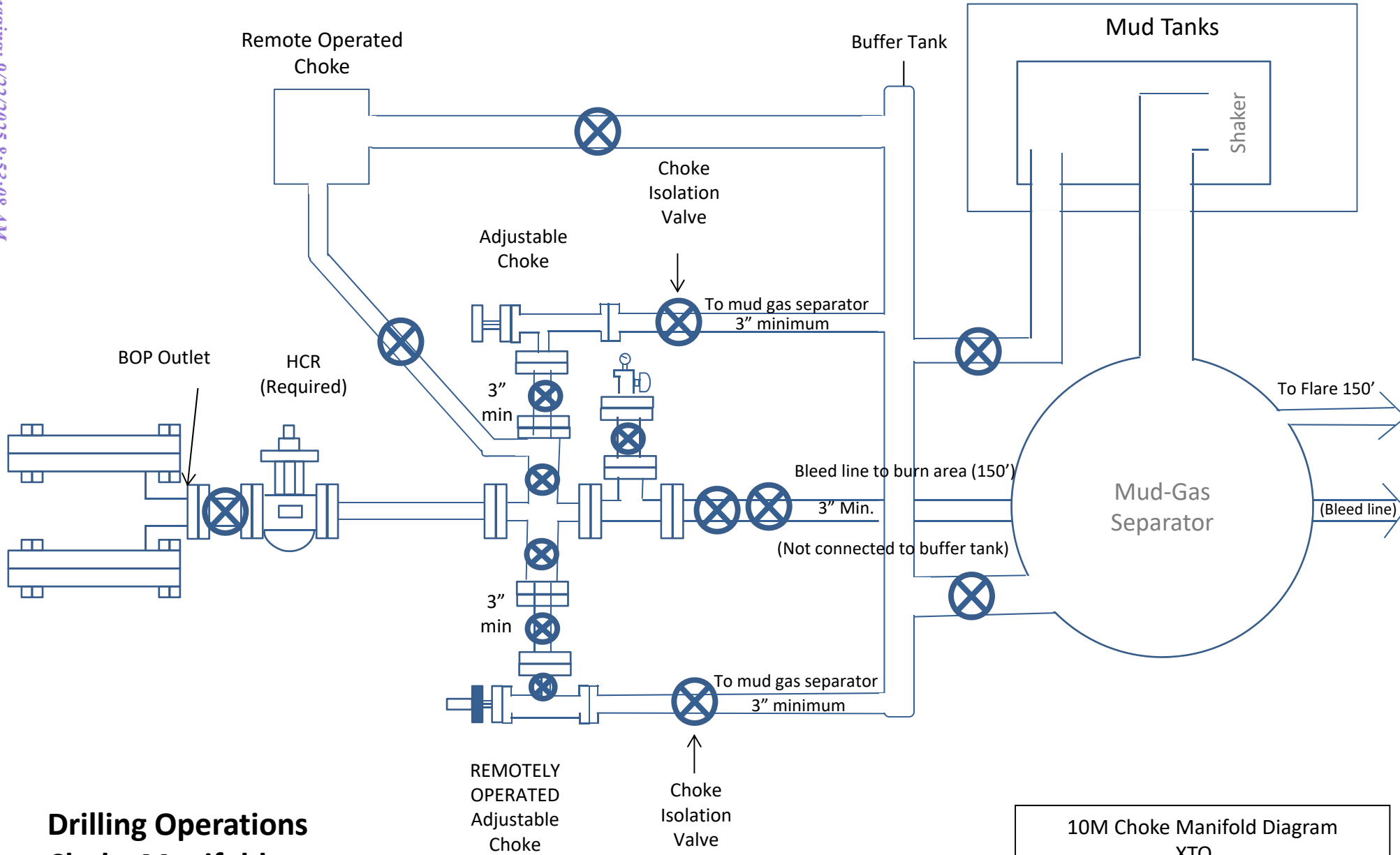
## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well James Ranch Unit DI 11 Ekalaka 702H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Project:</b>	JRU DI 11 Ekalaka - Eddy Co. NAD27 NME	<b>MD Reference:</b>	RKB 32 @ 3143.00usft (32' RKB)
<b>Site:</b>	JRU DI 11 Ekalaka - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	James Ranch Unit DI 11 Ekalaka 702H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0		

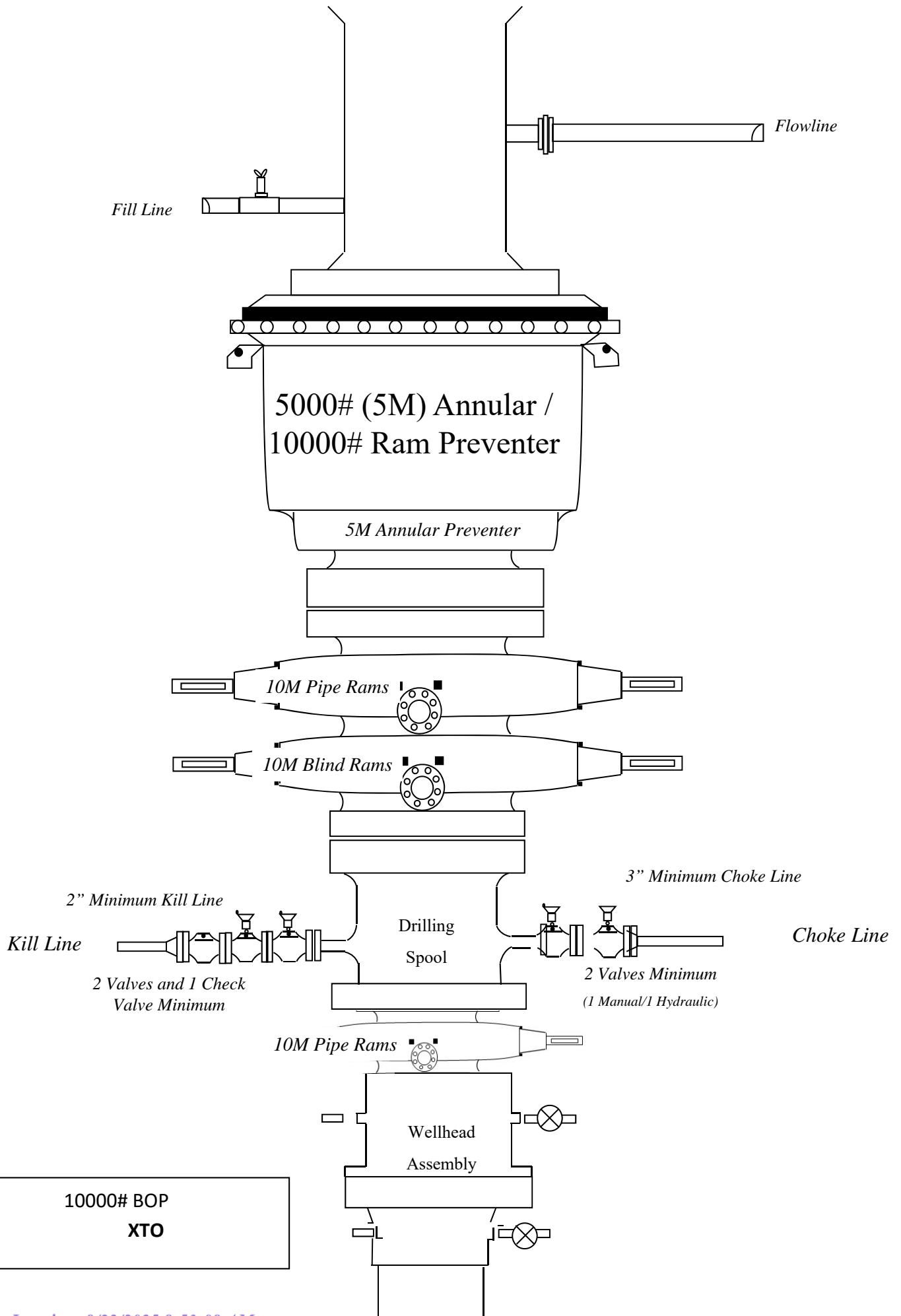
Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
64.00	64.00	Rustler				
687.00	687.00	Salado/Top of Salt				
1,183.00	1,183.00	MB 126				
3,238.50	3,183.00	Base Salt				
3,489.80	3,422.00	Delaware/Lamar				
3,532.91	3,463.00	Bell Canyon				
4,590.70	4,469.00	Cherry Canyon				
6,166.86	5,968.00	Brushy Canyon Ss.				
7,416.10	7,188.00	Bone Spring Lm.				
7,511.10	7,283.00	Avalon Ss.				
8,031.10	7,803.00	Avalon Mid				
8,231.10	8,003.00	First Bone Spring Carb.				
8,461.10	8,233.00	First Bone Spring Ss.				
8,923.58	8,683.00	Upper Second Bone Spring Carb.				
9,016.80	8,763.00	Second Bone Spring A Prime Ss.				
9,119.33	8,843.00	Lower Second Bone Spring Carb				
9,469.41	9,033.00	Second Bone Spring A Ss.				
9,709.90	9,073.00	Horizontal Landing Point				

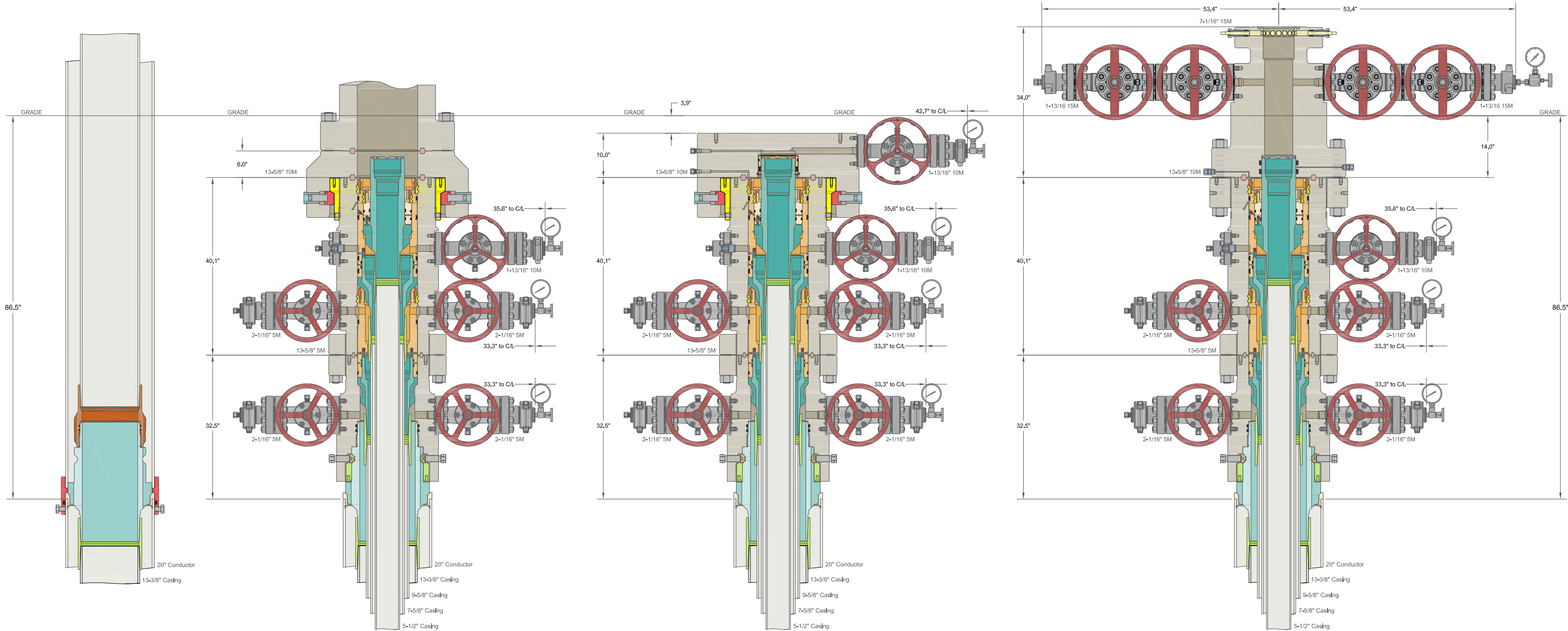


Bleed line will discharge 100' from wellhead for non-H2S situations and 150' from wellhead for H2S situations.



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

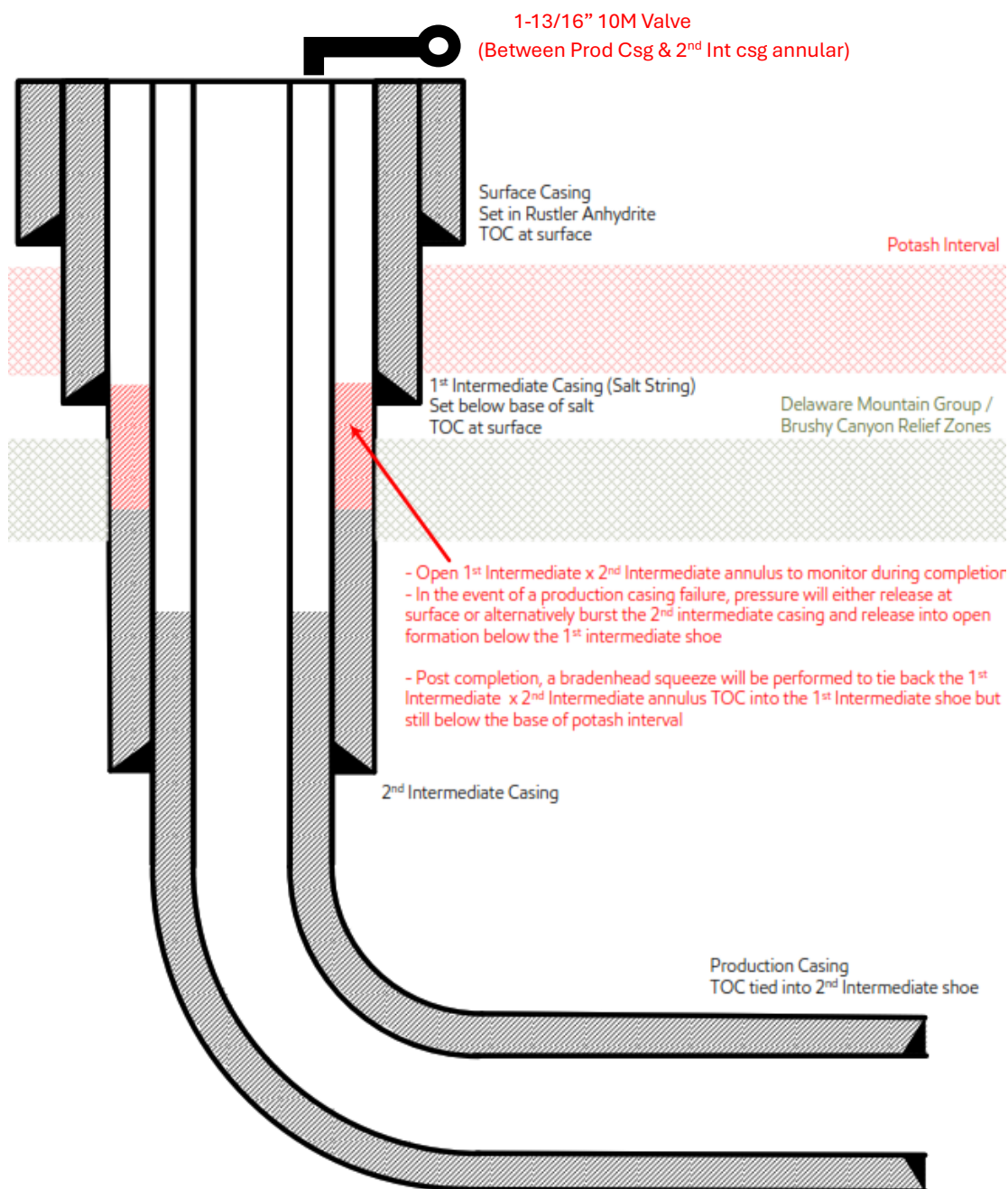




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ALL DIMENSIONS APPROXIMATE			
CACTUS WELLHEAD LLC			
(20") x 13-3/8" x 9-5/8" x 7-5/8" x 5-1/2" MBU-4T-CFL-R-DBLO With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And Drilling & Skid Configurations			
XTO ENERGY INC DELAWARE BASIN			
DRAWN	VJK	31MAR22	
APPRV			
DRAWING NO.		SDT-3301	

## 4-String Design – Open 1<sup>st</sup> Int x 2<sup>nd</sup> 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)

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

**Background**

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

**Supporting Documentation**

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

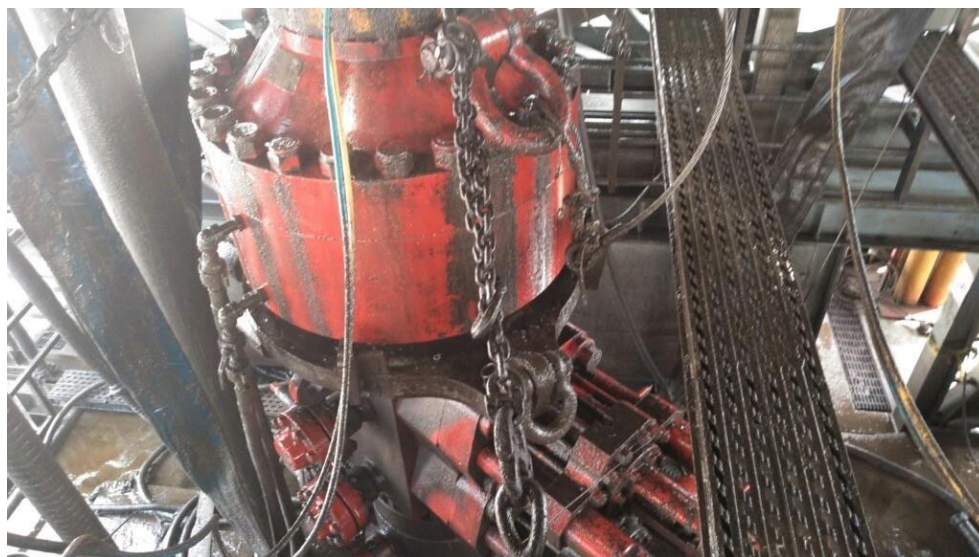


Figure 1: Winch System attached to BOP Stack





Figure 2: BOP Winch System

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

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API STANDARD 53

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

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

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

No visible leaks.

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

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

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

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

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

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

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

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

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

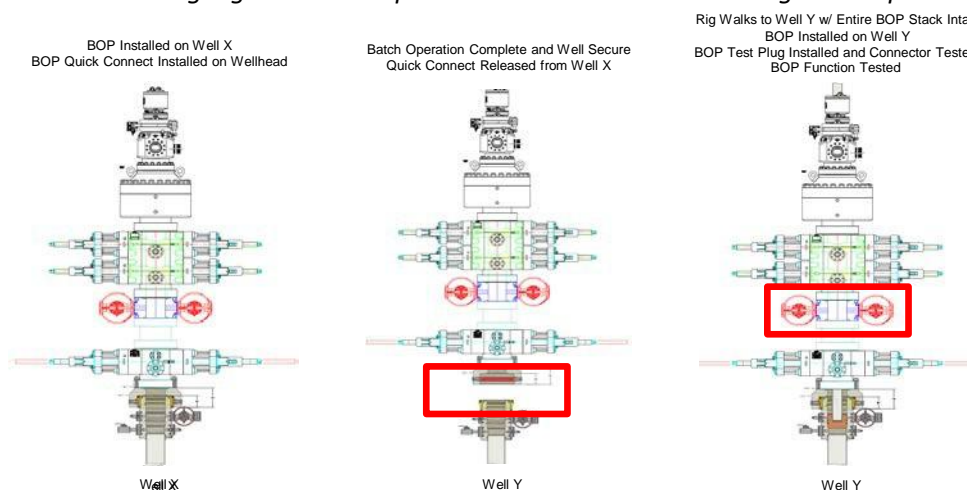
### **Procedures**

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



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

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



### Summary

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

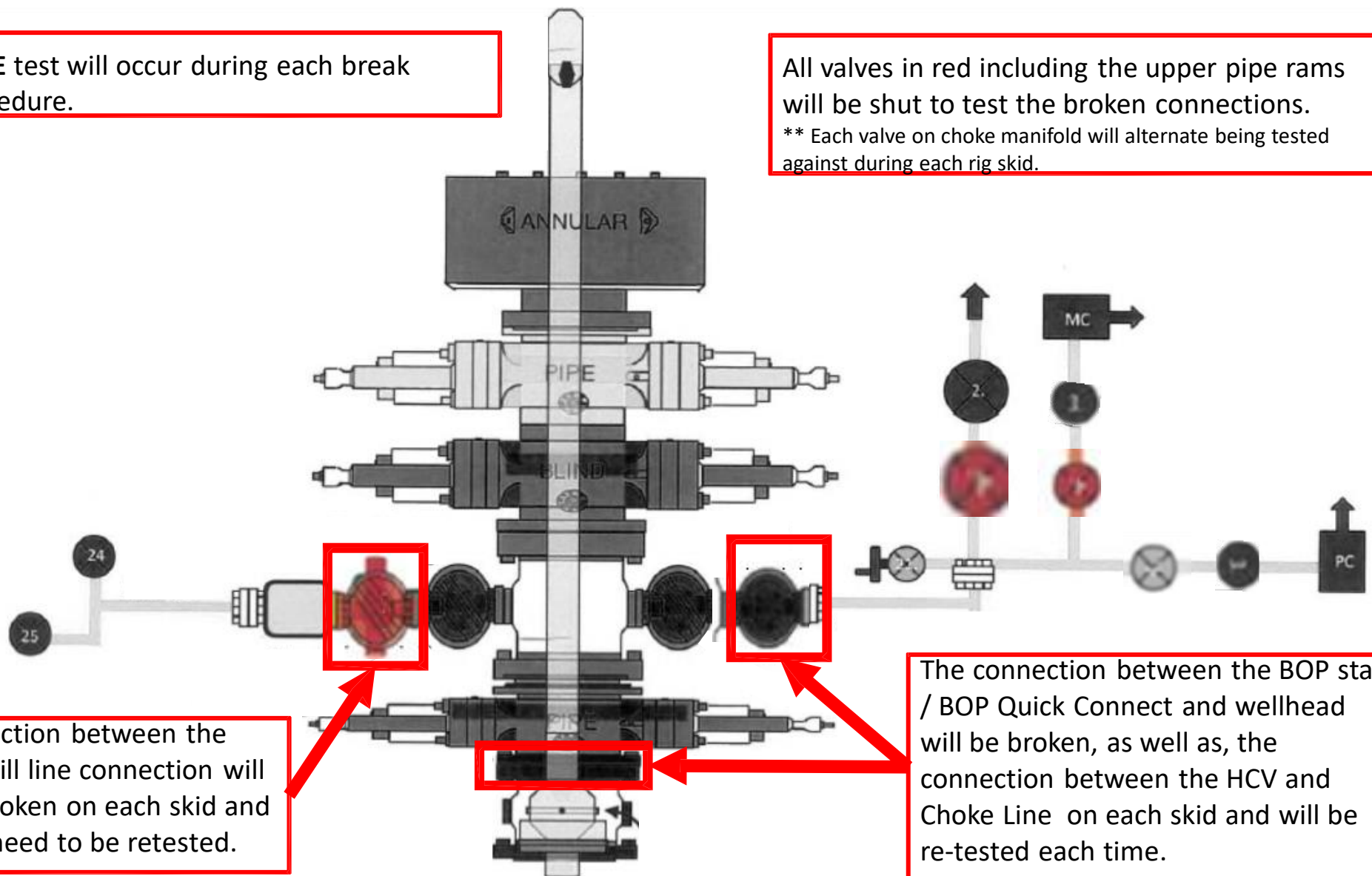
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met:

1. After a full BOP test is conducted on the first well on the pad.
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
4. Full BOP test will be required prior to drilling the production hole.

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.

**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.

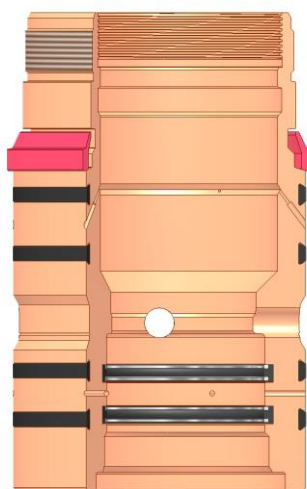
**1. Cement Program**

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 nippedled down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



Annular packoff with both external and internal seals

## XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

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

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

Wellhead diagram during offline cementing operations

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





# 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



# 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*

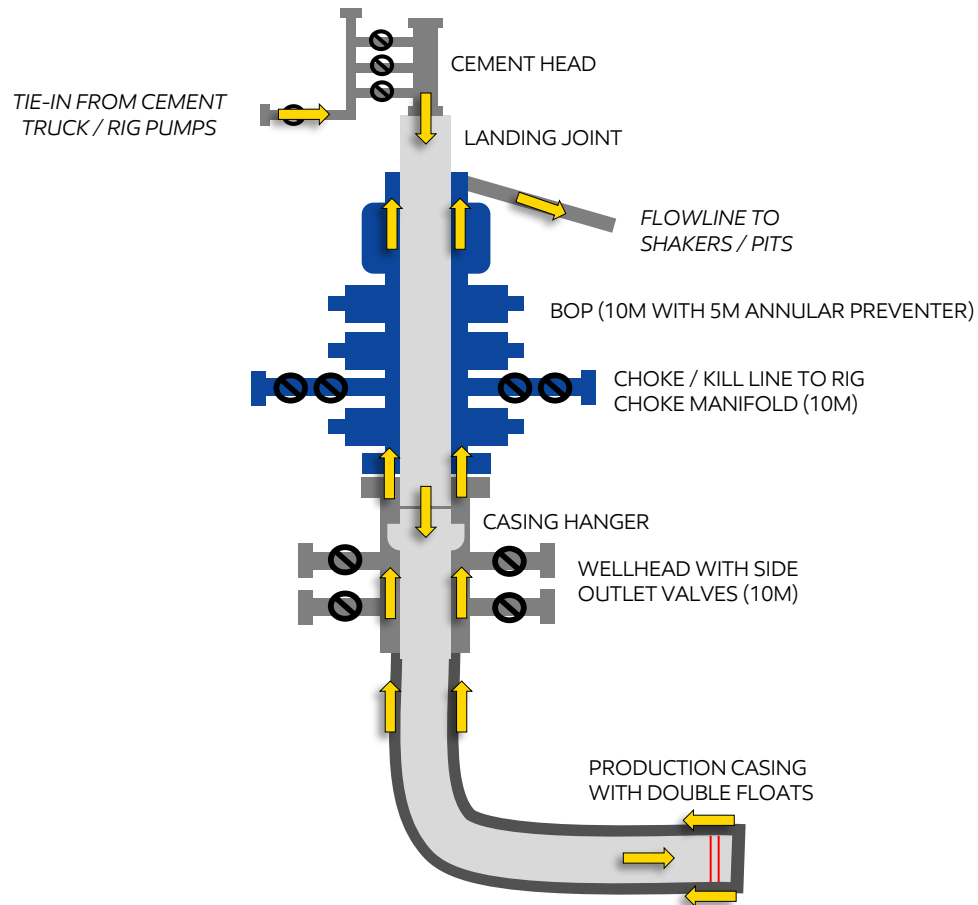


# Offline Cementing Procedure

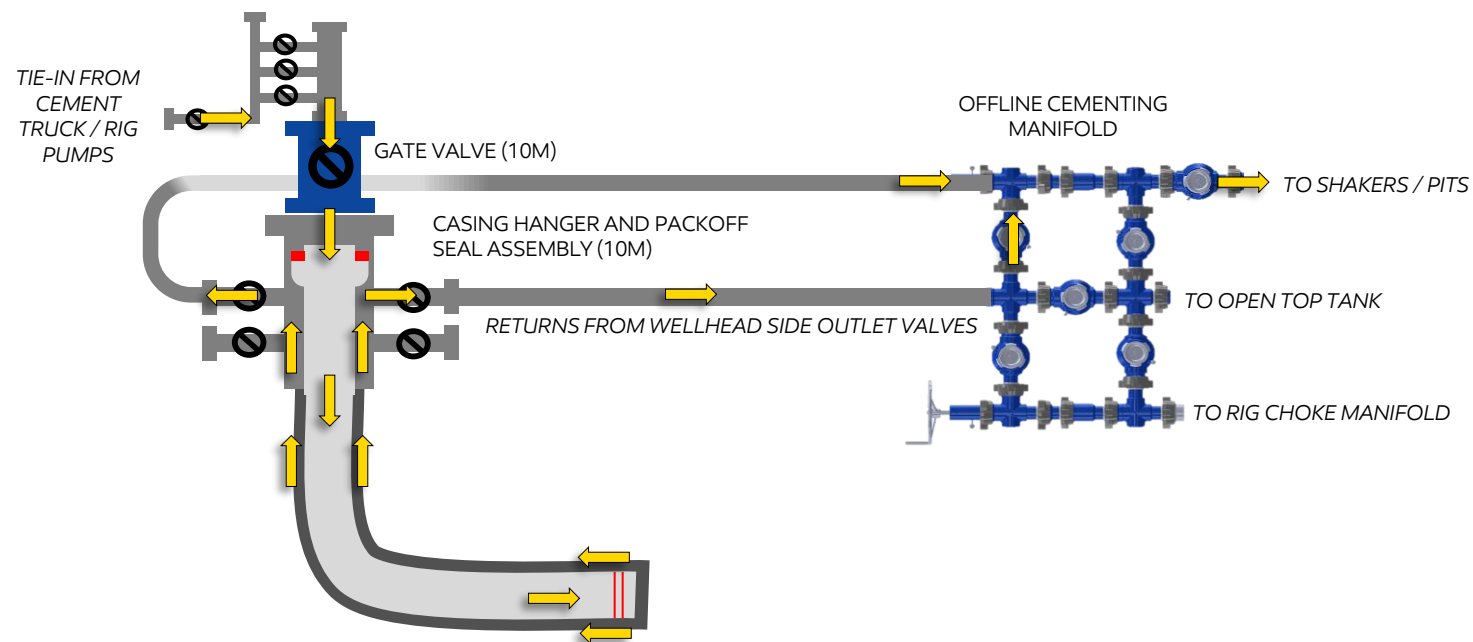
1. **Land production casing hanger** *If casing hanger cannot be landed, cementing will be performed online*
2. Flow check and **confirm the well is static on the casing and annulus.** *If flow is observed, cementing will be performed online*
3. **Lay down landing joint**
4. **Install and test pack-off 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

# 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)

# Barrier Comparison

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

# 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.

**ExxonMobil**

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

Description of Operations:

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



**BLACK GOLD®**

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

**PHONE: +1 (281) 602-4100****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. Cismos***TITLE:****QUALITY ASSURANCE****DATE:****1/25/2024**



H3-15/16

1/25/2024 11:48:06 AM

# TEST REPORT

**CUSTOMER**

Company: Nabors Industries Inc.

Production description: 74621/66-1531

Sales order #: 529480

Customer reference: FG1213

**TEST OBJECT**

Serial number: H3-012524-1

Lot number:

Description: 74621/66-1531

Hose ID: 3" 16C CK

Part number:

**TEST INFORMATION**

Test procedure: GTS-04-053

Test pressure: 15000.00 psi

Test pressure hold: 3600.00 sec

Work pressure: 10000.00 psi

Work pressure hold: 900.00 sec

Length difference: 0.00 %

Length difference: 0.00 inch

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

Part number:

Description:

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

Part number:

Description:

Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





H3-15/16

1/25/2024 11:48:06 AM

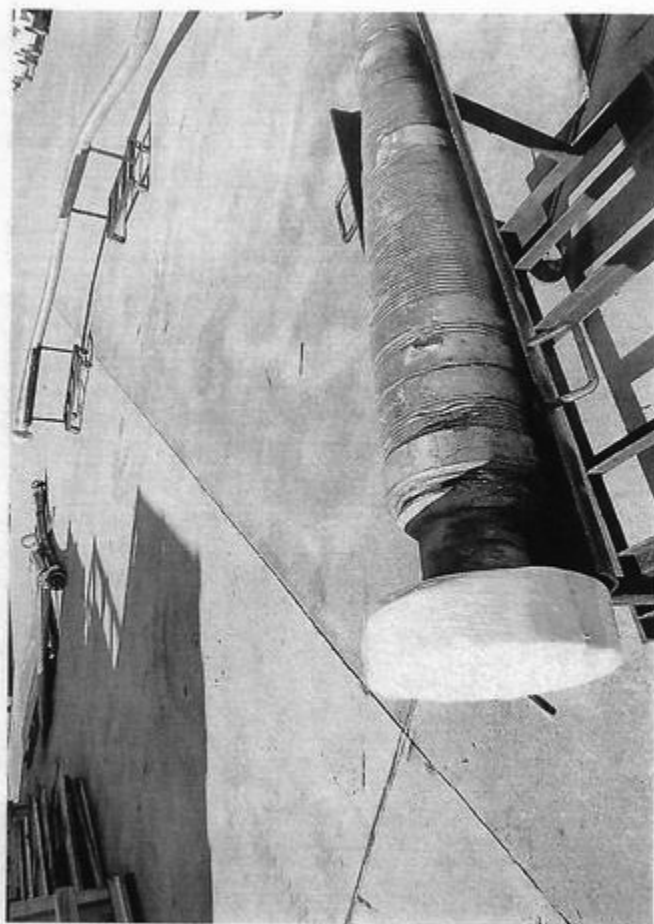
# TEST REPORT

## GAUGE TRACEABILITY

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

**Comment**

--









TPN™



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: -

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

Pipe Body Data

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

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.300 in.	Tension Efficiency	100 %	Minimum	21,100 ft-lb
Coupling Length	8.408 in.	Joint Yield Strength	729 x1000 lb	Optimum	22,600 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	14,360 psi	Maximum	24,100 ft-lb
Make-up Loss	4.204 in.	Compression Efficiency	100 %		
Threads per inch	5	Compression Strength	729 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	104 °/100 ft	Operating Torque	29,300 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	32,500 ft-lb

Notes

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PI-0/CII-3



# 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 %	Operation Limit Torques	
Threads per inch	3.40	Compression Strength	594 x1000 lb	Operating Torque	36,000 ft-lb
Connection OD Option	Regular	Max. Allowable Bending	84.76 °/100 ft	Yield Torque	42,000 ft-lb
		External Pressure Capacity	12,300 psi	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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# 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 %	Operation Limit Torques	
Connection OD Option	Regular	Compression Strength	504 x1000 lb	Operating Torque	35,000 ft-lb
		Max. Allowable Bending	29.33 °/100 ft	Yield Torque	52,000 ft-lb
		External Pressure Capacity	5900 psi		

### Notes

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# 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 %	Operation Limit Torques	
Connection OD Option	Regular	Compression Strength	788 x1000 lb	Operating Torque	55,000 ft-lb
		Max. Allowable Bending	45.83 °/100 ft	Yield Torque	82,000 ft-lb
		External Pressure Capacity	7360 psi		

Notes

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

General Information  
Phone: (505) 629-6116

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

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

ACKNOWLEDGMENTS

Action 505570

ACKNOWLEDGMENTS

Operator:  XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID:  373075
	Action Number:  505570
	Action Type:  [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	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

Action 505570

**CONDITIONS**

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 505570
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
vrajan	Cement is required to circulate on both surface and intermediate1 strings of casing.	9/12/2025
vrajan	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	9/12/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	9/22/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	9/22/2025
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	9/22/2025
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	9/22/2025
ward.rikala	Operator must comply with all of the R-111-Q requirements.	9/22/2025