

Well Name: CORRAL 23-35 FED COM	Well Location: T25S / R29E / SEC 23 / NWNW / 32.121707 / -103.96296	County or Parish/State: EDDY / NM
Well Number: 105H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM120895	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: XTO ENERGY INCORPORATED	

Notice of Intent

Sundry ID: 2859902

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 06/25/2025	Time Sundry Submitted: 12:42
Date proposed operation will begin: 07/02/2025	

**Procedure Description:** XTO Energy Inc. respectfully requests approval to make the following changes to the approved APD. Changes include KOP, FTP, LTP, BHL, Proposed total depth, Formation, Casing Design, Cement Program & Mud Circulation System. APD ID 10400098913; Well API: 30-015-56703 FROM: TO: KOP: 387' FNL & 238' FWL OF SECTION 23-T25S-R29E 330' FNL & 725' FWL OF SECTION 23-T25S-R29E FTP: 330' FNL & 540' FWL OF SECTION 23-T25S-R29E 330' FNL & 725' FWL OF SECTION 23-T25S-R29E LTP: 330' FSL & 540' FWL OF SECTION 35-T25S-R29E 330' FSL & 725' FWL OF SECTION 35-T25S-R29E BHL: 50' FSL & 540' FWL OF SECTION 35-T25S-R29E 50' FSL & 725' FWL OF SECTION 35-T25S-R29E The proposed total depth is changing from 27295' MD; 11204' TVD to 26498' MD; 11227' TVD. 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

Corral\_23\_35\_Fed\_Com\_105H\_Sundry\_Change\_Attachments\_20250625123941.pdf

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Conditions of Approval

Additional

252923\_Corral\_23\_35\_Fed\_Com\_105H\_07\_07\_2025\_20250707141442.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: JUN 25, 2025 12:42 PM
Name: XTO ENERGY INCORPORATED	
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: 07/11/2025
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.

NMNM120895

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 ENERGY INCORPORATED

3a. Address 15948 US HWY 77, ARDMORE, OK 73401

3b. Phone No. (include area code)  
(325) 338-833910. Field and Pool or Exploratory Area  
PURPLE SAGE/WOLFCAMP(GAS)4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
SEC 23/T25S/R29E/NMP11. 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 Energy Inc. respectfully requests approval to make the following changes to the approved APD. Changes include KOP, FTP, LTP, BHL, Proposed total depth, Formation, Casing Design, Cement Program & Mud Circulation System.  
APD ID 10400098913; Well API: 30-015-56703

FROM: TO:

KOP: 387' FNL & 238' FWL OF SECTION 23-T25S-R29E 330' FNL & 725' FWL OF SECTION 23-T25S-R29E  
FTP: 330' FNL & 540' FWL OF SECTION 23-T25S-R29E 330' FNL & 725' FWL OF SECTION 23-T25S-R29E  
LTP: 330' FSL & 540' FWL OF SECTION 35-T25S-R29E 330' FSL & 725' FWL OF SECTION 35-T25S-R29E  
BHL: 50' FSL & 540' FWL OF SECTION 35-T25S-R29E 50' FSL & 725' FWL OF SECTION 35-T25S-R29E

The proposed total depth is changing from 27295 MD; 11204 TVD to 26498 MD; 11227 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	Title Regulatory Clerk
Signature (Electronic Submission)	Date 06/25/2025

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

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 07/11/2025
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

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: NWNW / 387 FNL / 238 FWL / TWSP: 25S / RANGE: 29E / SECTION: 23 / LAT: 32.121707 / LONG: -103.96296 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNW / 330 FNL / 540 FWL / TWSP: 25S / RANGE: 29E / SECTION: 23 / LAT: 32.121862 / LONG: -103.961987 ( TVD: 11204 feet, MD: 11800 feet )

PPP: NWNW / 0 FSL / 536 FWL / TWSP: 25S / RANGE: 29E / SECTION: 26 / LAT: 32.10817 / LONG: -103.96195 ( TVD: 11204 feet, MD: 16800 feet )

BHL: SWSW / 50 FSL / 540 FWL / TWSP: 25S / RANGE: 29E / SECTION: 35 / LAT: 32.07911 / LONG: -103.961873 ( TVD: 11204 feet, MD: 27295 feet )

CONFIDENTIAL

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	XTO Energy Incorporated
<b>WELL NAME &amp; NO.:</b>	Corral 23-35 Fed Com 105H
<b>LOCATION:</b>	Section 23, T.25S., R.29E.
<b>COUNTY:</b>	Eddy County

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Wellhead Variance	<input type="radio"/> Diverter		
Other	<input type="checkbox"/> 4 String	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Open Annulus
Cementing	<input checked="" type="checkbox"/> Contingency Cement Squeeze	<input type="checkbox"/> EchoMeter	<input type="checkbox"/> Primary Cement Squeeze
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry		
Special Requirements Variance	<input checked="" type="checkbox"/> Break Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

**Possibility of water flows in the Rustler**

**Possibility of lost circulation in the Salado, Castile, and Delaware**

**Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.**

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet 43 CFR part 3170 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

**B. CASING**

1. The **9-5/8** inch surface casing shall be set at approximately **750** 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. The surface hole shall be **12-1/4** inch in diameter.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Operator has proposed to pump down 9-5/8" X 7-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 7-5/8" casing to surface after the second stage BH to verify TOC.**

**Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.**

**If cement does not reach surface, the next casing string must come to surface. Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Excess cement calculates to 22% - additional cement may be needed.**



### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR 3172** must be followed.

### D. SPECIAL REQUIREMENT (S)

#### Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 2.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.



**E. SPECIAL REQUIREMENT (S)****BOPE Break Testing Variance**

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

**Offline Cementing**

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

## GENERAL REQUIREMENTS

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

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

☒ Eddy County

**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

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,

(575) 689-5981

- 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.

JS 7/7/2025

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 <b>OIL CONSERVATION DIVISION</b>	C-102 Revised July 9, 2024 Submit Electronically via OCD Permit ng	
		Submittal Type:	Initial Submittal
			<input checked="" type="checkbox"/> Amended Report
		As Drilled	

WELL LOCATION INFORMATION

API Number <b>30-015-</b>	Pool Code <b>98220</b>	Pool Name <b>PURPLE SAGE; WOLFCAMP (GAS)</b>
Property Code	Property Name <b>CORRAL 23-35 FED COM</b>	Well Number <b>105H</b>
OGRID No. <b>05380</b>	Operator Name <b>XTO ENERGY, INC.</b>	Ground Level Elevation <b>3100'</b>
Surface Owner:    State    Fee    Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner:    State    Fee    Tribal <input checked="" type="checkbox"/> Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>D</b>	<b>23</b>	<b>25S</b>	<b>29E</b>		<b>387 FNL</b>	<b>238 FWL</b>	<b>32.121707</b>	<b>-103.962960</b>	<b>EDDY</b>

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>M</b>	<b>35</b>	<b>25S</b>	<b>29E</b>		<b>50 FSL</b>	<b>725 FWL</b>	<b>32.079110</b>	<b>-103.961275</b>	<b>EDDY</b>

Dedicated Acres <b>1,920.00</b>	Infill or Defining Well <b>INFILL</b>	Defining Well API	Overlapping Spacing Unit (Y/N) <b>Y</b>	Consolidation Code <b>C</b>
Order Numbers:			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes    No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>D</b>	<b>23</b>	<b>25S</b>	<b>29E</b>		<b>330 FNL</b>	<b>725 FWL</b>	<b>32.121862</b>	<b>-103.961389</b>	<b>EDDY</b>


First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>D</b>	<b>23</b>	<b>25S</b>	<b>29E</b>		<b>330 FNL</b>	<b>725 FWL</b>	<b>32.121862</b>	<b>-103.961389</b>	<b>EDDY</b>

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>M</b>	<b>35</b>	<b>25S</b>	<b>29E</b>		<b>330 FSL</b>	<b>725 FWL</b>	<b>32.079880</b>	<b>-103.961274</b>	<b>EDDY</b>

Unitized Area or Area of Uniform Interest	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal    Vertical	Ground Floor Elevation: <b>3100'</b>
---	--	---

<div>OPERATOR CERTIFICATIONS</div> <div><p><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 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.</i></p><p><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 formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i></p></div> <div><div>Vishal Rajan</div><div>Signature</div><div>6/25/2025</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><p><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></p></div> <div><div></div><div>Signature and Seal of Professional Surveyor</div></div> <div><div>23786</div><div>Certificate Number</div><div>05-29-2025</div><div>Date of Survey</div></div> <div><div>DB</div><div>618.013013.11-28</div></div>
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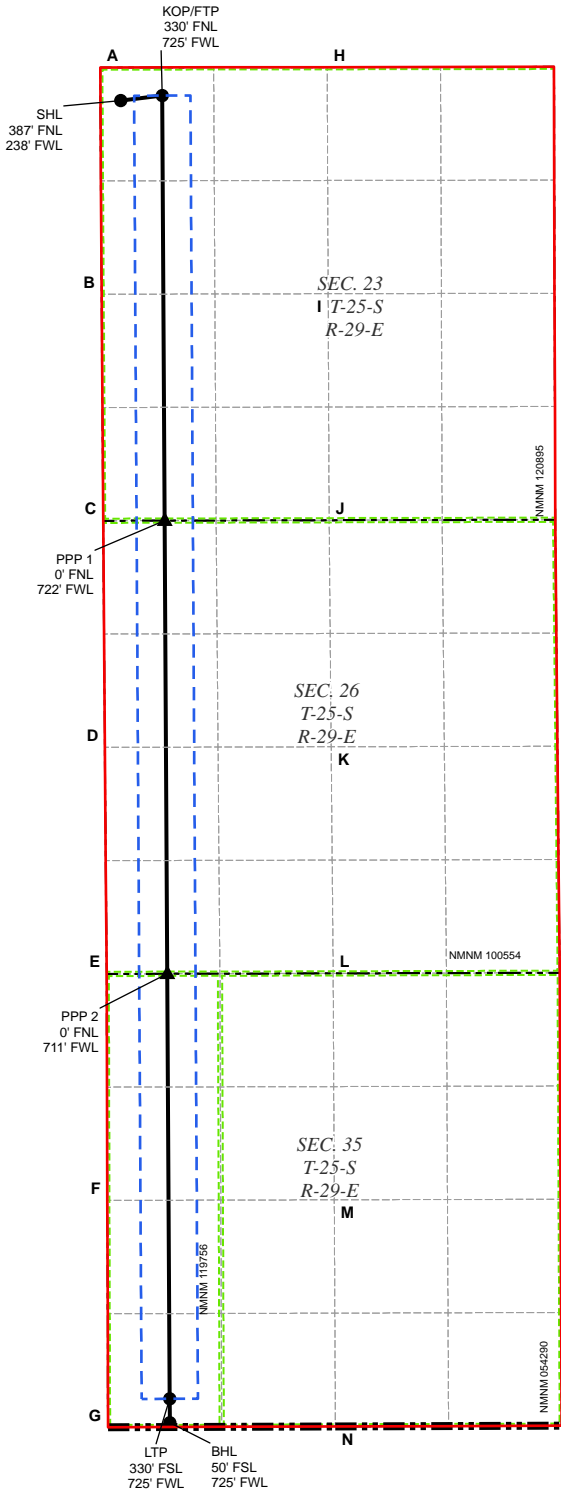
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



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
- 330' BUFFER
- PPP
- TOWNSHIP LINE
- MINERAL LEASE
- WELL
- ALLOCATION AREA
- WELLBORE

WELL COORDINATE TABLE								
WELL	NAD 83 N1/4 X	NAD 83 N1/4 Y	NAD 83 LAT	NAD 83 LON	NAD 27 N1/4 X	NAD 27 N1/4 Y	NAD 27 LAT	NAD 27 LON
SHL	665,997.2	408,210.0	32,121,707	-103,962,960	614,812.9	408,151.5	32,121,582	-103,962,474
KOP/FTP	666,483.5	408,268.2	32,121,862	-103,961,389	615,299.1	408,209.7	32,121,737	-103,960,903
LTP	666,571.6	392,996.2	32,079,880	-103,961,274	615,386.8	392,938.1	32,079,755	-103,960,790
BHL	666,572.4	392,716.2	32,079,110	-103,961,275	615,387.6	392,688.1	32,078,985	-103,960,790
PPP 1	666,512.2	403,287.3	32,108,170	-103,961,352	615,327.7	403,229.0	32,108,045	-103,960,866
PPP 2	666,542.8	397,977.2	32,093,573	-103,961,312	615,368.2	397,919.0	32,093,448	-103,960,827

CORNER COORDINATE TABLE				
CORNER	NAD 83 N1/4 X	NAD 83 N1/4 Y	NAD 27 N1/4 X	NAD 27 N1/4 Y
A	665,756.5	408,597.0	614,572.1	408,538.6
B	665,772.5	405,940.6	614,588.1	405,882.2
C	665,790.6	403,285.5	614,606.1	403,227.2
D	665,811.0	400,630.4	614,626.5	400,572.1
E	665,832.0	397,975.7	614,647.4	397,917.5
F	665,839.8	395,321.4	614,655.1	395,263.3
G	665,847.5	392,663.9	614,662.8	392,605.8
H	668,415.9	408,601.3	617,231.5	408,542.8
I	668,427.5	405,946.2	617,243.1	405,887.7
J	668,439.2	403,292.2	617,254.6	403,233.9
K	668,462.7	400,636.9	617,278.1	400,578.6
L	668,486.3	397,981.3	617,301.7	397,923.1
M	668,499.3	395,328.1	617,314.6	395,269.9
N	668,512.4	392,672.3	617,327.5	392,614.2

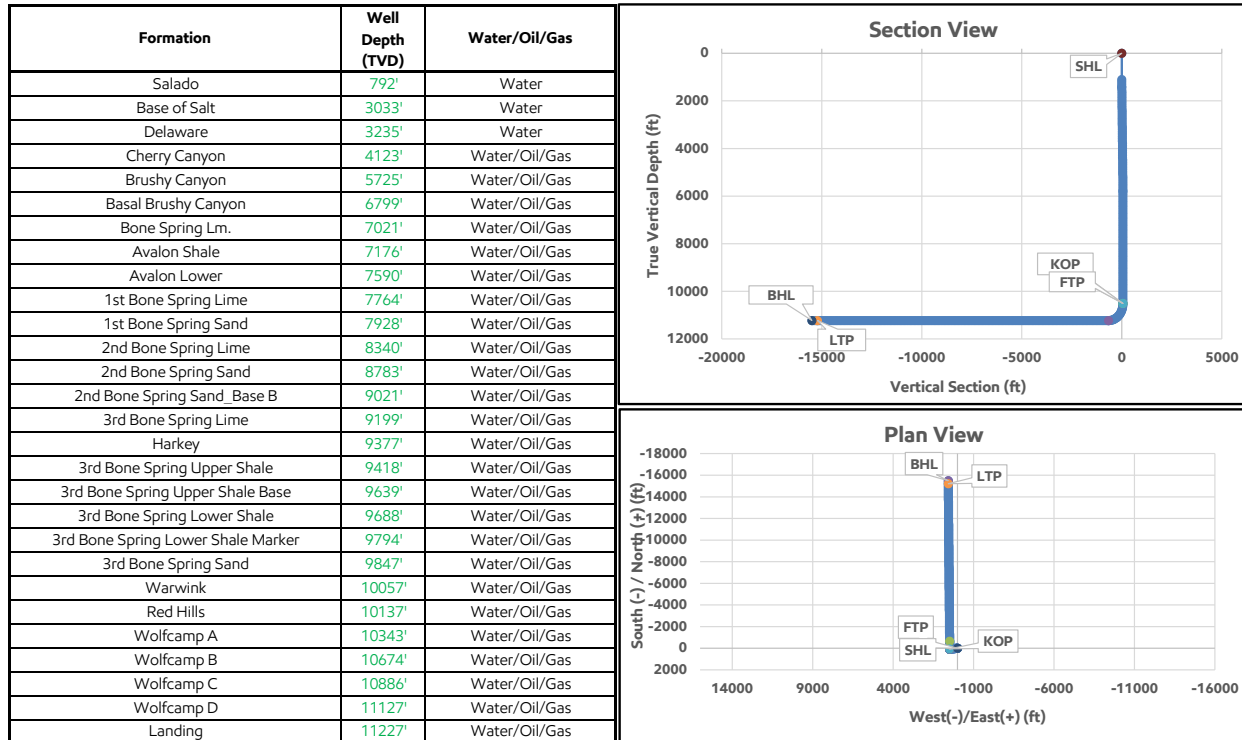
DRILLING PLAN: BLM COMPLIANCE  
(Supplement to BLM 3160-3)

ExxonMobil  
Corral 23-35 Fed Com 105H  
Projected TD: 26498' MD / 11227' TVD  
SHL: 387' FNL & 238' FWL , Section 23, T25S, R29E  
BHL: 50' FSL & 725' FWL , Section 35, T25S, R29E  
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



	Inclination (°)	Azimuth (°)	True Vertical Depth (ft)	Y Offset (ft)	X Offset (ft)
SHL	0	0	0	0	0
KOP	0	0	10511	58	486
LP	90	180	11227	-658	490
FTP	0	0	10510	58	486
LTP	90	180	11227	-15213	574
BHL	90	180	11227	-15493	576

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 9-5/8" inch casing at 767' 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
12.25"	0' – 767'	767'	9-5/8"	40	J55	BTC	New	16.78	15.47	5.58
8.75"	0' – 4000'	3983'	7-5/8"	29.7	P110-ICY	Tenaris Wedge 511	New	6.00	8.53	2.98
8.75"	4000' – 10387'	10361'	7-5/8"	29.7	L80-IC	Tenaris Wedge 511	New	1.84	4.28	2.12
6.75"	0' – 10287'	10261'	5-1/2"	20	P110-CY	TPN	New	1.18	2.50	2.23
6.75"	10287' – 26498'	11227'	5-1/2"	20	P110-ICY	Tenaris Wedge 441	New	1.34	2.53	2.60

**Section 3 Summary:**

XTO will keep casing fluid filled to meet BLM's collapse requirement.  
The planned kick off point is located at: 10537' MD / 10511' TVD.

**Wellhead:**

A multi-bowl wellhead system will be utilized. The well design chosen is: 3-String Slim Non-Potash

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 (MD)	Excess (%)	Slurry Description
Surface 1	Lead	139	12.4	2.11	0	767	100%	Surface 1 Class C Lead Cement
Surface 1	Tail	141	14.8	1.33	467	767	100%	Surface 1 Class C Tail Cement
Intermediate 1	Lead							
Intermediate 1	Tail	436	14.8	1.45	5725	10,387	35%	Intermediate 1 Class C Tail Cement
Production 1	Lead							
Production 1	Tail	1175	13.2	1.44	9887	26,498	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 1	Bradenhead Squeeze	536	14.8	1.45	0 - 5725'	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 and intermediate casing strings 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) Flex Hose Variance**

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

**5B) 10M Annular Variance**

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

**8A) Open Hole Logging Variance**

Open hole logging will not be done on this well.

**10A) Spudder Rig Variance**

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

**10B) Batch Drilling Variance**

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

**6. Proposed Mud Circulation System**

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)	Comments
0' – 767'	12.25"	FW/Native	8.3 - 8.7	35-40	NC	Fresh Water or Native Water
767' – 10387'	8.75"	BDE/OBM or FW/Brine	9.5 - 10	30-32	NC	Fluid type will be based upon on well conditions. A fully saturated system will be used across the salt interval.
10387' – 26498'	6.75"	OBM	9.5 - 12.5	50-60	NC - 20	

**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 9-5/8" casing.

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

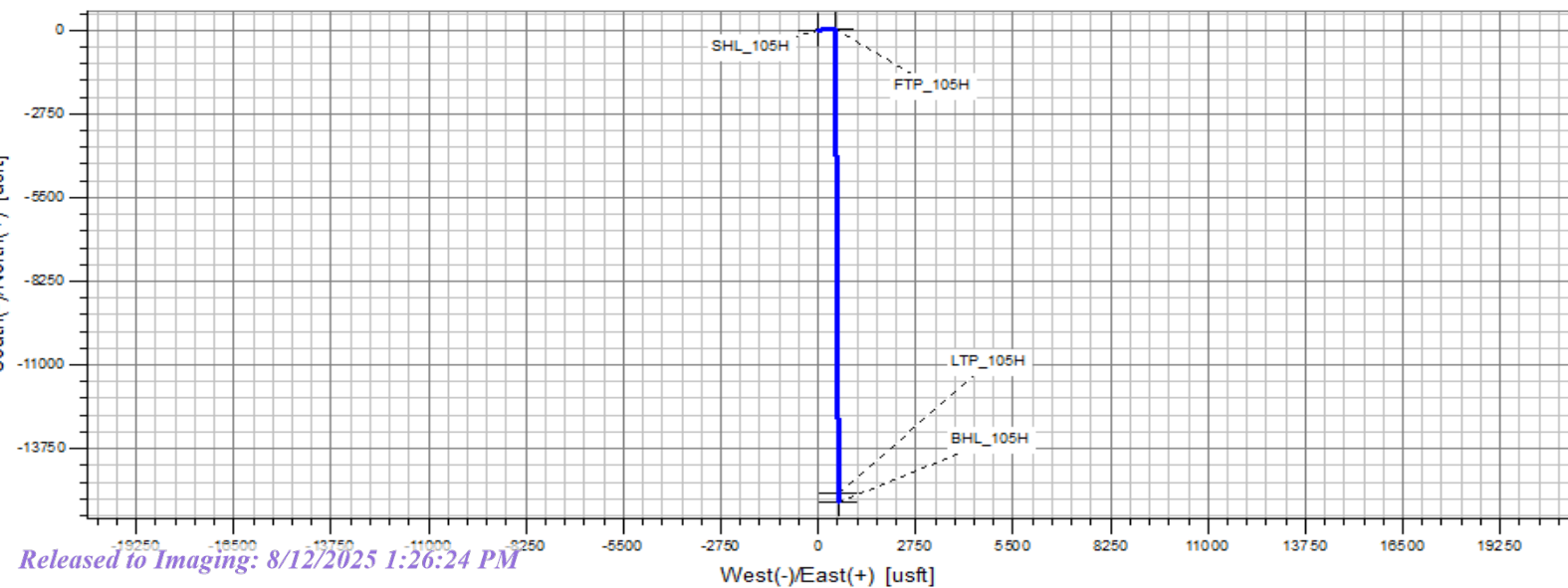
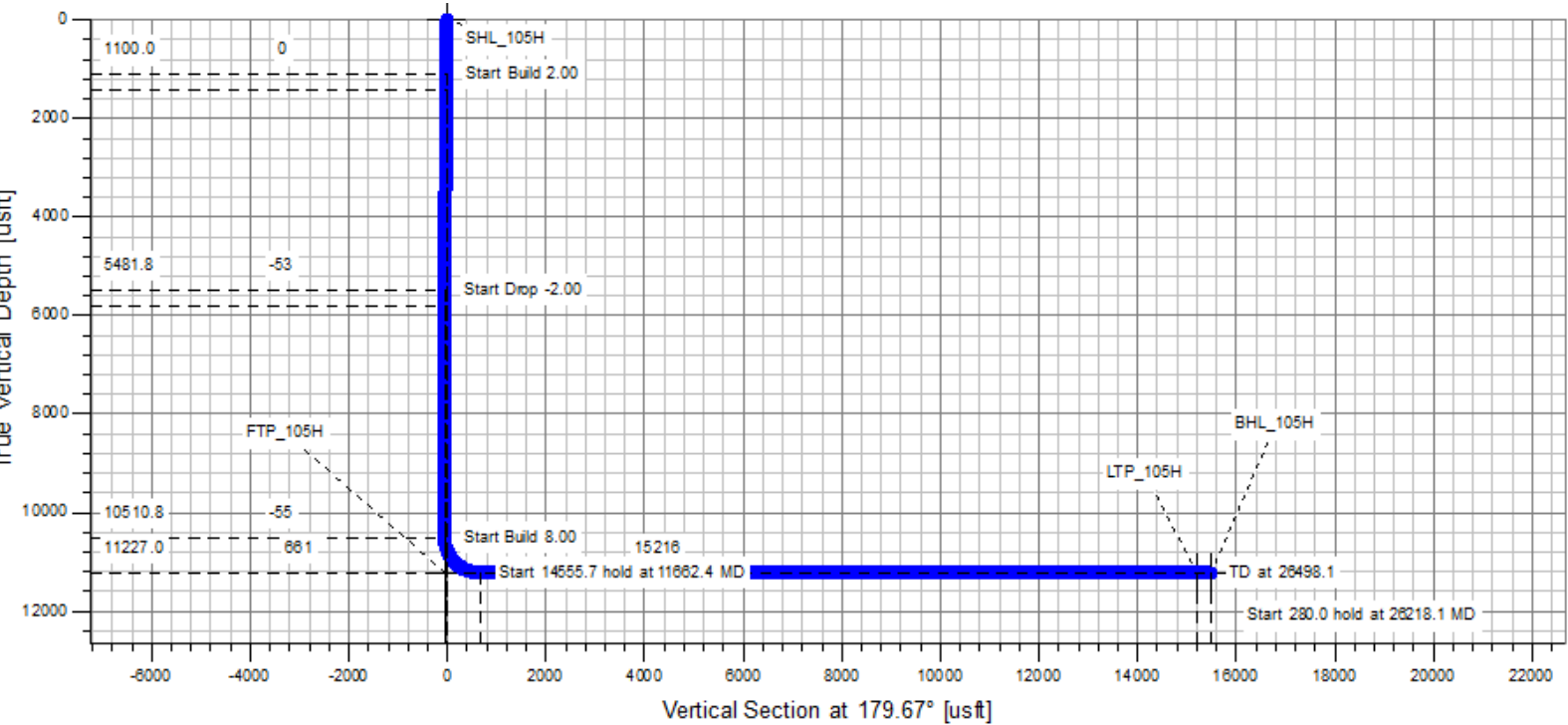
Open hole logging will not be done on this well.

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

The estimated bottom hole temperature of 176F to 196F. 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.



Formation	TVDSS (feet)	TVD (feet)
Salado	2,340'	792'
Base of Salt	99'	3,033'
Delaware	-103'	3,235'
Cherry Canyon	-991'	4,123'
Brushy Canyon	-2,593'	5,725'
Basal Brushy Canyon	-3,667'	6,799'
Bone Spring Lm.	-3,889'	7,021'
Avalon Shale	-4,044'	7,176'
Avalon Lower	-4,458'	7,590'
1st Bone Spring Lime	-4,632'	7,764'
1st Bone Spring Sand	-4,796'	7,928'
2nd Bone Spring Lime	-5,208'	8,340'
2nd Bone Spring Sand	-5,651'	8,783'
2nd Bone Spring Sand Base B	-5,889'	9,021'
3rd Bone Spring Lime	-6,067'	9,199'
Harkey	-6,245'	9,377'
3rd Bone Spring Upper Shale	-6,286'	9,418'
3rd Bone Spring Upper Shale Base	-6,507'	9,639'
3rd Bone Spring Lower Shale	-6,556'	9,688'
3rd Bone Spring Lower Shale Marker	-6,662'	9,794'
3rd Bone Spring Sand	-6,715'	9,847'
Warwink	-6,925'	10,057'
Red Hills	-7,005'	10,137'
Wolfcamp	-7,070'	10,202'
Wolfcamp X	-7,096'	10,228'
Wolfcamp Y	-7,145'	10,277'
Wolfcamp A	-7,211'	10,343'
Wolfcamp B	-7,542'	10,674'
Wolfcamp C	-7,754'	10,886'
Wolfcamp D	-7,995'	11,127'
Landing	-8,095'	11,227'

## **Long Lead\_Well Planning**

**Corral 23**

**Corral 23-35 Fed Com 105H**

**Corral 23-35 Fed Com 105H**

**OH**

**Plan: Plan 1**

## **Standard Planning Report**

**21 April, 2025**



Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Corral 23-35 Fed Com 105H
Company:	Long Lead_Well Planning	TVD Reference:	RKB (+32) @ 3132.0usft
Project:	Corral 23	MD Reference:	RKB (+32) @ 3132.0usft
Site:	Corral 23-35 Fed Com 105H	North Reference:	Grid
Well:	Corral 23-35 Fed Com 105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Project	Corral 23		
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	Corral 23-35 Fed Com 105H				
Site Position:		Northing:	408,151.50 usft	Latitude:	32° 7' 17.694 N
From:	Map	Easting:	614,812.90 usft	Longitude:	103° 57' 44.905 W
Position Uncertainty:	3.0 usft	Slot Radius:	13-3/16 "		

Well	Corral 23-35 Fed Com 105H					
Well Position	+N/-S	0.0 usft	Northing:	408,151.50 usft	Latitude:	32° 7' 17.694 N
	+E/-W	0.0 usft	Easting:	614,812.90 usft	Longitude:	103° 57' 44.905 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,100.0 usft
Grid Convergence:		0.20 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/21/2025	6.26	59.62	46,995.91099989

Design	Plan 1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.67

Plan Survey Tool Program	Date	4/21/2025		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	26,498.0	Plan 1 (OH)	XOM_R2OWSG MWD+IFR1+OWSG MWD + IFR1 + Multi-St

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Corral 23-35 Fed Com 105H
Company:	Long Lead_Well Planning	TVD Reference:	RKB (+32) @ 3132.0usft
Project:	Corral 23	MD Reference:	RKB (+32) @ 3132.0usft
Site:	Corral 23-35 Fed Com 105H	North Reference:	Grid
Well:	Corral 23-35 Fed Com 105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,418.9	6.38	83.17	1,418.2	2.1	17.6	2.00	2.00	0.00	83.17	
5,507.7	6.38	83.17	5,481.8	56.1	468.6	0.00	0.00	0.00	0.00	
5,826.6	0.00	0.00	5,800.0	58.2	486.2	2.00	-2.00	0.00	180.00	
10,537.4	0.00	0.00	10,510.8	58.2	486.2	0.00	0.00	0.00	0.00	
11,662.4	90.00	179.67	11,227.0	-658.0	490.3	8.00	8.00	0.00	179.67	
26,218.1	90.00	179.67	11,227.0	-15,213.4	574.2	0.00	0.00	0.00	0.00	LTP_105H
26,498.0	90.00	179.67	11,227.0	-15,493.4	575.8	0.00	0.00	0.00	0.00	BHL_105H

## Planning Report

Database: EDM 5000.18 Single User Db  
 Company: Long Lead\_Well Planning  
 Project: Corral 23  
 Site: Corral 23-35 Fed Com 105H  
 Well: Corral 23-35 Fed Com 105H  
 Wellbore: OH  
 Design: Plan 1

Local Co-ordinate Reference: Well Corral 23-35 Fed Com 105H  
 TVD Reference: RKB (+32) @ 3132.0usft  
 MD Reference: RKB (+32) @ 3132.0usft  
 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>SHL_105H</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
792.0	0.00	0.00	792.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Salado</b>									
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	2.00	83.17	1,200.0	0.2	1.7	-0.2	2.00	2.00	0.00
1,300.0	4.00	83.17	1,299.8	0.8	6.9	-0.8	2.00	2.00	0.00
1,400.0	6.00	83.17	1,399.5	1.9	15.6	-1.8	2.00	2.00	0.00
1,418.9	6.38	83.17	1,418.2	2.1	17.6	-2.0	2.00	2.00	0.00
1,500.0	6.38	83.17	1,498.8	3.2	26.6	-3.0	0.00	0.00	0.00
1,600.0	6.38	83.17	1,598.2	4.5	37.6	-4.3	0.00	0.00	0.00
1,700.0	6.38	83.17	1,697.6	5.8	48.6	-5.5	0.00	0.00	0.00
1,800.0	6.38	83.17	1,797.0	7.1	59.6	-6.8	0.00	0.00	0.00
1,900.0	6.38	83.17	1,896.4	8.5	70.7	-8.1	0.00	0.00	0.00
2,000.0	6.38	83.17	1,995.7	9.8	81.7	-9.3	0.00	0.00	0.00
2,100.0	6.38	83.17	2,095.1	11.1	92.7	-10.6	0.00	0.00	0.00
2,200.0	6.38	83.17	2,194.5	12.4	103.8	-11.8	0.00	0.00	0.00
2,300.0	6.38	83.17	2,293.9	13.7	114.8	-13.1	0.00	0.00	0.00
2,400.0	6.38	83.17	2,393.3	15.1	125.8	-14.3	0.00	0.00	0.00
2,500.0	6.38	83.17	2,492.7	16.4	136.8	-15.6	0.00	0.00	0.00
2,600.0	6.38	83.17	2,592.0	17.7	147.9	-16.8	0.00	0.00	0.00
2,700.0	6.38	83.17	2,691.4	19.0	158.9	-18.1	0.00	0.00	0.00
2,800.0	6.38	83.17	2,790.8	20.3	169.9	-19.4	0.00	0.00	0.00
2,900.0	6.38	83.17	2,890.2	21.7	181.0	-20.6	0.00	0.00	0.00
3,000.0	6.38	83.17	2,989.6	23.0	192.0	-21.9	0.00	0.00	0.00
3,043.7	6.38	83.17	3,033.0	23.6	196.8	-22.4	0.00	0.00	0.00
<b>Base of Salt</b>									
3,100.0	6.38	83.17	3,088.9	24.3	203.0	-23.1	0.00	0.00	0.00
3,200.0	6.38	83.17	3,188.3	25.6	214.1	-24.4	0.00	0.00	0.00
3,247.0	6.38	83.17	3,235.0	26.2	219.2	-25.0	0.00	0.00	0.00
<b>Delaware</b>									
3,300.0	6.38	83.17	3,287.7	26.9	225.1	-25.6	0.00	0.00	0.00
3,400.0	6.38	83.17	3,387.1	28.3	236.1	-26.9	0.00	0.00	0.00
3,500.0	6.38	83.17	3,486.5	29.6	247.1	-28.2	0.00	0.00	0.00
3,600.0	6.38	83.17	3,585.8	30.9	258.2	-29.4	0.00	0.00	0.00
3,700.0	6.38	83.17	3,685.2	32.2	269.2	-30.7	0.00	0.00	0.00
3,800.0	6.38	83.17	3,784.6	33.5	280.2	-31.9	0.00	0.00	0.00
3,900.0	6.38	83.17	3,884.0	34.9	291.3	-33.2	0.00	0.00	0.00
4,000.0	6.38	83.17	3,983.4	36.2	302.3	-34.4	0.00	0.00	0.00
4,100.0	6.38	83.17	4,082.7	37.5	313.3	-35.7	0.00	0.00	0.00
4,140.5	6.38	83.17	4,123.0	38.0	317.8	-36.2	0.00	0.00	0.00
<b>Cherry Canyon</b>									
4,200.0	6.38	83.17	4,182.1	38.8	324.4	-37.0	0.00	0.00	0.00
4,300.0	6.38	83.17	4,281.5	40.1	335.4	-38.2	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Corral 23-35 Fed Com 105H
<b>Company:</b>	Long Lead_Well Planning	<b>TVD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Project:</b>	Corral 23	<b>MD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Site:</b>	Corral 23-35 Fed Com 105H	<b>North Reference:</b>	Grid
<b>Well:</b>	Corral 23-35 Fed Com 105H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.0	6.38	83.17	4,380.9	41.5	346.4	-39.5	0.00	0.00	0.00
4,500.0	6.38	83.17	4,480.3	42.8	357.4	-40.7	0.00	0.00	0.00
4,600.0	6.38	83.17	4,579.7	44.1	368.5	-42.0	0.00	0.00	0.00
4,700.0	6.38	83.17	4,679.0	45.4	379.5	-43.2	0.00	0.00	0.00
4,800.0	6.38	83.17	4,778.4	46.7	390.5	-44.5	0.00	0.00	0.00
4,900.0	6.38	83.17	4,877.8	48.1	401.6	-45.8	0.00	0.00	0.00
5,000.0	6.38	83.17	4,977.2	49.4	412.6	-47.0	0.00	0.00	0.00
5,100.0	6.38	83.17	5,076.6	50.7	423.6	-48.3	0.00	0.00	0.00
5,200.0	6.38	83.17	5,175.9	52.0	434.7	-49.5	0.00	0.00	0.00
5,300.0	6.38	83.17	5,275.3	53.3	445.7	-50.8	0.00	0.00	0.00
5,400.0	6.38	83.17	5,374.7	54.7	456.7	-52.0	0.00	0.00	0.00
5,500.0	6.38	83.17	5,474.1	56.0	467.7	-53.3	0.00	0.00	0.00
5,507.7	6.38	83.17	5,481.8	56.1	468.6	-53.4	0.00	0.00	0.00
5,600.0	4.53	83.17	5,573.6	57.1	477.3	-54.4	2.00	-2.00	0.00
5,700.0	2.53	83.17	5,673.4	57.9	483.4	-55.1	2.00	-2.00	0.00
5,751.6	1.50	83.17	5,725.0	58.1	485.2	-55.3	2.00	-2.00	0.00
Brushy Canyon									
5,800.0	0.53	83.17	5,773.4	58.2	486.1	-55.4	2.00	-2.00	0.00
5,826.6	0.00	0.00	5,800.0	58.2	486.2	-55.4	2.00	-2.00	0.00
5,900.0	0.00	0.00	5,873.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,973.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,100.0	0.00	0.00	6,073.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,173.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,273.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,373.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,473.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,573.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,673.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,773.4	58.2	486.2	-55.4	0.00	0.00	0.00
6,825.6	0.00	0.00	6,799.0	58.2	486.2	-55.4	0.00	0.00	0.00
Basal Brushy Canyon									
6,900.0	0.00	0.00	6,873.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,973.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,047.6	0.00	0.00	7,021.0	58.2	486.2	-55.4	0.00	0.00	0.00
Bone Spring Lm.									
7,100.0	0.00	0.00	7,073.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,200.0	0.00	0.00	7,173.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,202.6	0.00	0.00	7,176.0	58.2	486.2	-55.4	0.00	0.00	0.00
Avalon Shale									
7,300.0	0.00	0.00	7,273.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,373.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,500.0	0.00	0.00	7,473.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,573.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,616.6	0.00	0.00	7,590.0	58.2	486.2	-55.4	0.00	0.00	0.00
Avalon Lower									
7,700.0	0.00	0.00	7,673.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,790.6	0.00	0.00	7,764.0	58.2	486.2	-55.4	0.00	0.00	0.00
1st Bone Spring Lime									
7,800.0	0.00	0.00	7,773.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,900.0	0.00	0.00	7,873.4	58.2	486.2	-55.4	0.00	0.00	0.00
7,954.6	0.00	0.00	7,928.0	58.2	486.2	-55.4	0.00	0.00	0.00
1st Bone Spring Sand									
8,000.0	0.00	0.00	7,973.4	58.2	486.2	-55.4	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Corral 23-35 Fed Com 105H
<b>Company:</b>	Long Lead_Well Planning	<b>TVD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Project:</b>	Corral 23	<b>MD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Site:</b>	Corral 23-35 Fed Com 105H	<b>North Reference:</b>	Grid
<b>Well:</b>	Corral 23-35 Fed Com 105H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,100.0	0.00	0.00	8,073.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,200.0	0.00	0.00	8,173.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,300.0	0.00	0.00	8,273.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,366.6	0.00	0.00	8,340.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>2nd Bone Spring Lime</b>									
8,400.0	0.00	0.00	8,373.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,500.0	0.00	0.00	8,473.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,600.0	0.00	0.00	8,573.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,700.0	0.00	0.00	8,673.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,800.0	0.00	0.00	8,773.4	58.2	486.2	-55.4	0.00	0.00	0.00
8,809.6	0.00	0.00	8,783.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>2nd Bone Spring Sand</b>									
8,900.0	0.00	0.00	8,873.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,000.0	0.00	0.00	8,973.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,047.6	0.00	0.00	9,021.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>2nd Bone Spring Sand_Base B</b>									
9,100.0	0.00	0.00	9,073.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,200.0	0.00	0.00	9,173.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,225.6	0.00	0.00	9,199.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>3rd Bone Spring Lime</b>									
9,300.0	0.00	0.00	9,273.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,400.0	0.00	0.00	9,373.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,403.6	0.00	0.00	9,377.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>Harkey</b>									
9,444.6	0.00	0.00	9,418.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>3rd Bone Spring Upper Shale</b>									
9,500.0	0.00	0.00	9,473.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,600.0	0.00	0.00	9,573.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,665.6	0.00	0.00	9,639.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>3rd Bone Spring Upper Shale Base</b>									
9,700.0	0.00	0.00	9,673.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,714.6	0.00	0.00	9,688.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>3rd Bone Spring Lower Shale</b>									
9,800.0	0.00	0.00	9,773.4	58.2	486.2	-55.4	0.00	0.00	0.00
9,820.6	0.00	0.00	9,794.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>3rd Bone Spring Lower Shale Marker</b>									
9,873.6	0.00	0.00	9,847.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>3rd Bone Spring Sand</b>									
9,900.0	0.00	0.00	9,873.4	58.2	486.2	-55.4	0.00	0.00	0.00
10,000.0	0.00	0.00	9,973.4	58.2	486.2	-55.4	0.00	0.00	0.00
10,083.6	0.00	0.00	10,057.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>Warwink</b>									
10,100.0	0.00	0.00	10,073.4	58.2	486.2	-55.4	0.00	0.00	0.00
10,163.6	0.00	0.00	10,137.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>Red Hills</b>									
10,200.0	0.00	0.00	10,173.4	58.2	486.2	-55.4	0.00	0.00	0.00
10,228.6	0.00	0.00	10,202.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>Wolfcamp</b>									
10,254.6	0.00	0.00	10,228.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>Wolfcamp X</b>									
10,300.0	0.00	0.00	10,273.4	58.2	486.2	-55.4	0.00	0.00	0.00
10,303.6	0.00	0.00	10,277.0	58.2	486.2	-55.4	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Corral 23-35 Fed Com 105H
<b>Company:</b>	Long Lead_Well Planning	<b>TVD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Project:</b>	Corral 23	<b>MD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Site:</b>	Corral 23-35 Fed Com 105H	<b>North Reference:</b>	Grid
<b>Well:</b>	Corral 23-35 Fed Com 105H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>Wolfcamp Y</b>									
10,369.6	0.00	0.00	10,343.0	58.2	486.2	-55.4	0.00	0.00	0.00
<b>Wolfcamp A</b>									
10,400.0	0.00	0.00	10,373.4	58.2	486.2	-55.4	0.00	0.00	0.00
10,500.0	0.00	0.00	10,473.4	58.2	486.2	-55.4	0.00	0.00	0.00
10,537.4	0.00	0.00	10,510.8	58.2	486.2	-55.4	0.00	0.00	0.00
10,600.0	5.01	179.67	10,573.3	55.5	486.2	-52.7	8.00	8.00	0.00
10,700.0	13.01	179.67	10,672.0	39.8	486.3	-37.0	8.00	8.00	0.00
10,702.1	13.17	179.67	10,674.0	39.4	486.3	-36.6	8.00	8.00	0.00
<b>Wolfcamp B</b>									
10,800.0	21.01	179.67	10,767.5	10.6	486.5	-7.8	8.00	8.00	0.00
10,900.0	29.01	179.67	10,858.1	-31.6	486.7	34.4	8.00	8.00	0.00
10,932.3	31.59	179.67	10,886.0	-47.9	486.8	50.7	8.00	8.00	0.00
<b>Wolfcamp C</b>									
11,000.0	37.01	179.67	10,941.9	-86.1	487.0	88.9	8.00	8.00	0.00
11,100.0	45.01	179.67	11,017.3	-151.6	487.4	154.4	8.00	8.00	0.00
<b>FTP_105H</b>									
11,200.0	53.01	179.67	11,082.8	-227.0	487.8	229.8	8.00	8.00	0.00
11,279.4	59.36	179.67	11,127.0	-293.0	488.2	295.8	8.00	8.00	0.00
<b>Wolfcamp D</b>									
11,300.0	61.01	179.67	11,137.2	-310.8	488.3	313.6	8.00	8.00	0.00
11,400.0	69.01	179.67	11,179.5	-401.4	488.8	404.2	8.00	8.00	0.00
11,500.0	77.01	179.67	11,208.7	-497.0	489.4	499.8	8.00	8.00	0.00
11,600.0	85.01	179.67	11,224.3	-595.6	490.0	598.5	8.00	8.00	0.00
11,662.4	90.00	179.67	11,227.0	-658.0	490.3	660.8	8.00	8.00	0.00
<b>Landing</b>									
11,700.0	90.00	179.67	11,227.0	-695.6	490.5	698.4	0.00	0.00	0.00
11,800.0	90.00	179.67	11,227.0	-795.6	491.1	798.4	0.00	0.00	0.00
11,900.0	90.00	179.67	11,227.0	-895.6	491.7	898.4	0.00	0.00	0.00
12,000.0	90.00	179.67	11,227.0	-995.6	492.3	998.4	0.00	0.00	0.00
12,100.0	90.00	179.67	11,227.0	-1,095.6	492.8	1,098.4	0.00	0.00	0.00
12,200.0	90.00	179.67	11,227.0	-1,195.6	493.4	1,198.4	0.00	0.00	0.00
12,300.0	90.00	179.67	11,227.0	-1,295.6	494.0	1,298.4	0.00	0.00	0.00
12,400.0	90.00	179.67	11,227.0	-1,395.6	494.6	1,398.4	0.00	0.00	0.00
12,500.0	90.00	179.67	11,227.0	-1,495.5	495.1	1,498.4	0.00	0.00	0.00
12,600.0	90.00	179.67	11,227.0	-1,595.5	495.7	1,598.4	0.00	0.00	0.00
12,700.0	90.00	179.67	11,227.0	-1,695.5	496.3	1,698.4	0.00	0.00	0.00
12,800.0	90.00	179.67	11,227.0	-1,795.5	496.9	1,798.4	0.00	0.00	0.00
12,900.0	90.00	179.67	11,227.0	-1,895.5	497.5	1,898.4	0.00	0.00	0.00
13,000.0	90.00	179.67	11,227.0	-1,995.5	498.0	1,998.4	0.00	0.00	0.00
13,100.0	90.00	179.67	11,227.0	-2,095.5	498.6	2,098.4	0.00	0.00	0.00
13,200.0	90.00	179.67	11,227.0	-2,195.5	499.2	2,198.4	0.00	0.00	0.00
13,300.0	90.00	179.67	11,227.0	-2,295.5	499.8	2,298.4	0.00	0.00	0.00
13,400.0	90.00	179.67	11,227.0	-2,395.5	500.3	2,398.4	0.00	0.00	0.00
13,500.0	90.00	179.67	11,227.0	-2,495.5	500.9	2,498.4	0.00	0.00	0.00
13,600.0	90.00	179.67	11,227.0	-2,595.5	501.5	2,598.4	0.00	0.00	0.00
13,700.0	90.00	179.67	11,227.0	-2,695.5	502.1	2,698.4	0.00	0.00	0.00
13,800.0	90.00	179.67	11,227.0	-2,795.5	502.6	2,798.4	0.00	0.00	0.00
13,900.0	90.00	179.67	11,227.0	-2,895.5	503.2	2,898.4	0.00	0.00	0.00
14,000.0	90.00	179.67	11,227.0	-2,995.5	503.8	2,998.4	0.00	0.00	0.00
14,100.0	90.00	179.67	11,227.0	-3,095.5	504.4	3,098.4	0.00	0.00	0.00
14,200.0	90.00	179.67	11,227.0	-3,195.5	504.9	3,198.4	0.00	0.00	0.00
14,300.0	90.00	179.67	11,227.0	-3,295.5	505.5	3,298.4	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Corral 23-35 Fed Com 105H
<b>Company:</b>	Long Lead_Well Planning	<b>TVD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Project:</b>	Corral 23	<b>MD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Site:</b>	Corral 23-35 Fed Com 105H	<b>North Reference:</b>	Grid
<b>Well:</b>	Corral 23-35 Fed Com 105H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,400.0	90.00	179.67	11,227.0	-3,395.5	506.1	3,398.4	0.00	0.00	0.00
14,500.0	90.00	179.67	11,227.0	-3,495.5	506.7	3,498.4	0.00	0.00	0.00
14,600.0	90.00	179.67	11,227.0	-3,595.5	507.2	3,598.4	0.00	0.00	0.00
14,700.0	90.00	179.67	11,227.0	-3,695.5	507.8	3,698.4	0.00	0.00	0.00
14,800.0	90.00	179.67	11,227.0	-3,795.5	508.4	3,798.4	0.00	0.00	0.00
14,900.0	90.00	179.67	11,227.0	-3,895.5	509.0	3,898.4	0.00	0.00	0.00
15,000.0	90.00	179.67	11,227.0	-3,995.5	509.5	3,998.4	0.00	0.00	0.00
15,100.0	90.00	179.67	11,227.0	-4,095.5	510.1	4,098.4	0.00	0.00	0.00
15,200.0	90.00	179.67	11,227.0	-4,195.5	510.7	4,198.4	0.00	0.00	0.00
15,300.0	90.00	179.67	11,227.0	-4,295.5	511.3	4,298.4	0.00	0.00	0.00
15,400.0	90.00	179.67	11,227.0	-4,395.5	511.9	4,398.4	0.00	0.00	0.00
15,500.0	90.00	179.67	11,227.0	-4,495.5	512.4	4,498.4	0.00	0.00	0.00
15,600.0	90.00	179.67	11,227.0	-4,595.5	513.0	4,598.4	0.00	0.00	0.00
15,700.0	90.00	179.67	11,227.0	-4,695.5	513.6	4,698.4	0.00	0.00	0.00
15,800.0	90.00	179.67	11,227.0	-4,795.5	514.2	4,798.4	0.00	0.00	0.00
15,900.0	90.00	179.67	11,227.0	-4,895.5	514.7	4,898.4	0.00	0.00	0.00
16,000.0	90.00	179.67	11,227.0	-4,995.5	515.3	4,998.4	0.00	0.00	0.00
16,100.0	90.00	179.67	11,227.0	-5,095.5	515.9	5,098.4	0.00	0.00	0.00
16,200.0	90.00	179.67	11,227.0	-5,195.5	516.5	5,198.4	0.00	0.00	0.00
16,300.0	90.00	179.67	11,227.0	-5,295.5	517.0	5,298.4	0.00	0.00	0.00
16,400.0	90.00	179.67	11,227.0	-5,395.5	517.6	5,398.4	0.00	0.00	0.00
16,500.0	90.00	179.67	11,227.0	-5,495.5	518.2	5,498.4	0.00	0.00	0.00
16,600.0	90.00	179.67	11,227.0	-5,595.5	518.8	5,598.4	0.00	0.00	0.00
16,700.0	90.00	179.67	11,227.0	-5,695.5	519.3	5,698.4	0.00	0.00	0.00
16,800.0	90.00	179.67	11,227.0	-5,795.5	519.9	5,798.4	0.00	0.00	0.00
16,900.0	90.00	179.67	11,227.0	-5,895.5	520.5	5,898.4	0.00	0.00	0.00
17,000.0	90.00	179.67	11,227.0	-5,995.5	521.1	5,998.4	0.00	0.00	0.00
17,100.0	90.00	179.67	11,227.0	-6,095.5	521.6	6,098.4	0.00	0.00	0.00
17,200.0	90.00	179.67	11,227.0	-6,195.5	522.2	6,198.4	0.00	0.00	0.00
17,300.0	90.00	179.67	11,227.0	-6,295.5	522.8	6,298.4	0.00	0.00	0.00
17,400.0	90.00	179.67	11,227.0	-6,395.5	523.4	6,398.4	0.00	0.00	0.00
17,500.0	90.00	179.67	11,227.0	-6,495.5	523.9	6,498.4	0.00	0.00	0.00
17,600.0	90.00	179.67	11,227.0	-6,595.5	524.5	6,598.4	0.00	0.00	0.00
17,700.0	90.00	179.67	11,227.0	-6,695.5	525.1	6,698.4	0.00	0.00	0.00
17,800.0	90.00	179.67	11,227.0	-6,795.5	525.7	6,798.4	0.00	0.00	0.00
17,900.0	90.00	179.67	11,227.0	-6,895.5	526.3	6,898.4	0.00	0.00	0.00
18,000.0	90.00	179.67	11,227.0	-6,995.5	526.8	6,998.4	0.00	0.00	0.00
18,100.0	90.00	179.67	11,227.0	-7,095.5	527.4	7,098.4	0.00	0.00	0.00
18,200.0	90.00	179.67	11,227.0	-7,195.5	528.0	7,198.4	0.00	0.00	0.00
18,300.0	90.00	179.67	11,227.0	-7,295.5	528.6	7,298.4	0.00	0.00	0.00
18,400.0	90.00	179.67	11,227.0	-7,395.5	529.1	7,398.4	0.00	0.00	0.00
18,500.0	90.00	179.67	11,227.0	-7,495.4	529.7	7,498.4	0.00	0.00	0.00
18,600.0	90.00	179.67	11,227.0	-7,595.4	530.3	7,598.4	0.00	0.00	0.00
18,700.0	90.00	179.67	11,227.0	-7,695.4	530.9	7,698.4	0.00	0.00	0.00
18,800.0	90.00	179.67	11,227.0	-7,795.4	531.4	7,798.4	0.00	0.00	0.00
18,900.0	90.00	179.67	11,227.0	-7,895.4	532.0	7,898.4	0.00	0.00	0.00
19,000.0	90.00	179.67	11,227.0	-7,995.4	532.6	7,998.4	0.00	0.00	0.00
19,100.0	90.00	179.67	11,227.0	-8,095.4	533.2	8,098.4	0.00	0.00	0.00
19,200.0	90.00	179.67	11,227.0	-8,195.4	533.7	8,198.4	0.00	0.00	0.00
19,300.0	90.00	179.67	11,227.0	-8,295.4	534.3	8,298.4	0.00	0.00	0.00
19,400.0	90.00	179.67	11,227.0	-8,395.4	534.9	8,398.4	0.00	0.00	0.00
19,500.0	90.00	179.67	11,227.0	-8,495.4	535.5	8,498.4	0.00	0.00	0.00
19,600.0	90.00	179.67	11,227.0	-8,595.4	536.0	8,598.4	0.00	0.00	0.00
19,700.0	90.00	179.67	11,227.0	-8,695.4	536.6	8,698.4	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Corral 23-35 Fed Com 105H
<b>Company:</b>	Long Lead_Well Planning	<b>TVD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Project:</b>	Corral 23	<b>MD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Site:</b>	Corral 23-35 Fed Com 105H	<b>North Reference:</b>	Grid
<b>Well:</b>	Corral 23-35 Fed Com 105H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,800.0	90.00	179.67	11,227.0	-8,795.4	537.2	8,798.4	0.00	0.00	0.00
19,900.0	90.00	179.67	11,227.0	-8,895.4	537.8	8,898.4	0.00	0.00	0.00
20,000.0	90.00	179.67	11,227.0	-8,995.4	538.3	8,998.4	0.00	0.00	0.00
20,100.0	90.00	179.67	11,227.0	-9,095.4	538.9	9,098.4	0.00	0.00	0.00
20,200.0	90.00	179.67	11,227.0	-9,195.4	539.5	9,198.4	0.00	0.00	0.00
20,300.0	90.00	179.67	11,227.0	-9,295.4	540.1	9,298.4	0.00	0.00	0.00
20,400.0	90.00	179.67	11,227.0	-9,395.4	540.6	9,398.4	0.00	0.00	0.00
20,500.0	90.00	179.67	11,227.0	-9,495.4	541.2	9,498.4	0.00	0.00	0.00
20,600.0	90.00	179.67	11,227.0	-9,595.4	541.8	9,598.4	0.00	0.00	0.00
20,700.0	90.00	179.67	11,227.0	-9,695.4	542.4	9,698.4	0.00	0.00	0.00
20,800.0	90.00	179.67	11,227.0	-9,795.4	543.0	9,798.4	0.00	0.00	0.00
20,900.0	90.00	179.67	11,227.0	-9,895.4	543.5	9,898.4	0.00	0.00	0.00
21,000.0	90.00	179.67	11,227.0	-9,995.4	544.1	9,998.4	0.00	0.00	0.00
21,100.0	90.00	179.67	11,227.0	-10,095.4	544.7	10,098.4	0.00	0.00	0.00
21,200.0	90.00	179.67	11,227.0	-10,195.4	545.3	10,198.4	0.00	0.00	0.00
21,300.0	90.00	179.67	11,227.0	-10,295.4	545.8	10,298.4	0.00	0.00	0.00
21,400.0	90.00	179.67	11,227.0	-10,395.4	546.4	10,398.4	0.00	0.00	0.00
21,500.0	90.00	179.67	11,227.0	-10,495.4	547.0	10,498.4	0.00	0.00	0.00
21,600.0	90.00	179.67	11,227.0	-10,595.4	547.6	10,598.4	0.00	0.00	0.00
21,700.0	90.00	179.67	11,227.0	-10,695.4	548.1	10,698.4	0.00	0.00	0.00
21,800.0	90.00	179.67	11,227.0	-10,795.4	548.7	10,798.4	0.00	0.00	0.00
21,900.0	90.00	179.67	11,227.0	-10,895.4	549.3	10,898.4	0.00	0.00	0.00
22,000.0	90.00	179.67	11,227.0	-10,995.4	549.9	10,998.4	0.00	0.00	0.00
22,100.0	90.00	179.67	11,227.0	-11,095.4	550.4	11,098.4	0.00	0.00	0.00
22,200.0	90.00	179.67	11,227.0	-11,195.4	551.0	11,198.4	0.00	0.00	0.00
22,300.0	90.00	179.67	11,227.0	-11,295.4	551.6	11,298.4	0.00	0.00	0.00
22,400.0	90.00	179.67	11,227.0	-11,395.4	552.2	11,398.4	0.00	0.00	0.00
22,500.0	90.00	179.67	11,227.0	-11,495.4	552.7	11,498.4	0.00	0.00	0.00
22,600.0	90.00	179.67	11,227.0	-11,595.4	553.3	11,598.4	0.00	0.00	0.00
22,700.0	90.00	179.67	11,227.0	-11,695.4	553.9	11,698.4	0.00	0.00	0.00
22,800.0	90.00	179.67	11,227.0	-11,795.4	554.5	11,798.4	0.00	0.00	0.00
22,900.0	90.00	179.67	11,227.0	-11,895.4	555.0	11,898.4	0.00	0.00	0.00
23,000.0	90.00	179.67	11,227.0	-11,995.4	555.6	11,998.4	0.00	0.00	0.00
23,100.0	90.00	179.67	11,227.0	-12,095.4	556.2	12,098.4	0.00	0.00	0.00
23,200.0	90.00	179.67	11,227.0	-12,195.4	556.8	12,198.4	0.00	0.00	0.00
23,300.0	90.00	179.67	11,227.0	-12,295.4	557.4	12,298.4	0.00	0.00	0.00
23,400.0	90.00	179.67	11,227.0	-12,395.4	557.9	12,398.4	0.00	0.00	0.00
23,500.0	90.00	179.67	11,227.0	-12,495.4	558.5	12,498.4	0.00	0.00	0.00
23,600.0	90.00	179.67	11,227.0	-12,595.4	559.1	12,598.4	0.00	0.00	0.00
23,700.0	90.00	179.67	11,227.0	-12,695.4	559.7	12,698.4	0.00	0.00	0.00
23,800.0	90.00	179.67	11,227.0	-12,795.4	560.2	12,798.4	0.00	0.00	0.00
23,900.0	90.00	179.67	11,227.0	-12,895.4	560.8	12,898.4	0.00	0.00	0.00
24,000.0	90.00	179.67	11,227.0	-12,995.4	561.4	12,998.4	0.00	0.00	0.00
24,100.0	90.00	179.67	11,227.0	-13,095.4	562.0	13,098.4	0.00	0.00	0.00
24,200.0	90.00	179.67	11,227.0	-13,195.4	562.5	13,198.4	0.00	0.00	0.00
24,300.0	90.00	179.67	11,227.0	-13,295.4	563.1	13,298.4	0.00	0.00	0.00
24,400.0	90.00	179.67	11,227.0	-13,395.4	563.7	13,398.4	0.00	0.00	0.00
24,500.0	90.00	179.67	11,227.0	-13,495.3	564.3	13,498.4	0.00	0.00	0.00
24,600.0	90.00	179.67	11,227.0	-13,595.3	564.8	13,598.4	0.00	0.00	0.00
24,700.0	90.00	179.67	11,227.0	-13,695.3	565.4	13,698.4	0.00	0.00	0.00
24,800.0	90.00	179.67	11,227.0	-13,795.3	566.0	13,798.4	0.00	0.00	0.00
24,900.0	90.00	179.67	11,227.0	-13,895.3	566.6	13,898.4	0.00	0.00	0.00
25,000.0	90.00	179.67	11,227.0	-13,995.3	567.1	13,998.4	0.00	0.00	0.00
25,100.0	90.00	179.67	11,227.0	-14,095.3	567.7	14,098.4	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Corral 23-35 Fed Com 105H
Company:	Long Lead_Well Planning	TVD Reference:	RKB (+32) @ 3132.0usft
Project:	Corral 23	MD Reference:	RKB (+32) @ 3132.0usft
Site:	Corral 23-35 Fed Com 105H	North Reference:	Grid
Well:	Corral 23-35 Fed Com 105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
25,200.0	90.00	179.67	11,227.0	-14,195.3	568.3	14,198.4	0.00	0.00	0.00	
25,300.0	90.00	179.67	11,227.0	-14,295.3	568.9	14,298.4	0.00	0.00	0.00	
25,400.0	90.00	179.67	11,227.0	-14,395.3	569.4	14,398.4	0.00	0.00	0.00	
25,500.0	90.00	179.67	11,227.0	-14,495.3	570.0	14,498.4	0.00	0.00	0.00	
25,600.0	90.00	179.67	11,227.0	-14,595.3	570.6	14,598.4	0.00	0.00	0.00	
25,700.0	90.00	179.67	11,227.0	-14,695.3	571.2	14,698.4	0.00	0.00	0.00	
25,800.0	90.00	179.67	11,227.0	-14,795.3	571.8	14,798.4	0.00	0.00	0.00	
25,900.0	90.00	179.67	11,227.0	-14,895.3	572.3	14,898.4	0.00	0.00	0.00	
26,000.0	90.00	179.67	11,227.0	-14,995.3	572.9	14,998.4	0.00	0.00	0.00	
26,100.0	90.00	179.67	11,227.0	-15,095.3	573.5	15,098.4	0.00	0.00	0.00	
26,200.0	90.00	179.67	11,227.0	-15,195.3	574.1	15,198.4	0.00	0.00	0.00	
26,218.1	90.00	179.67	11,227.0	-15,213.4	574.2	15,216.5	0.00	0.00	0.00	
LTP_105H										
26,300.0	90.00	179.67	11,227.0	-15,295.3	574.6	15,298.4	0.00	0.00	0.00	
26,400.0	90.00	179.67	11,227.0	-15,395.3	575.2	15,398.4	0.00	0.00	0.00	
26,498.0	90.00	179.67	11,227.0	-15,493.4	575.8	15,496.4	0.00	0.00	0.00	
BHL_105H										

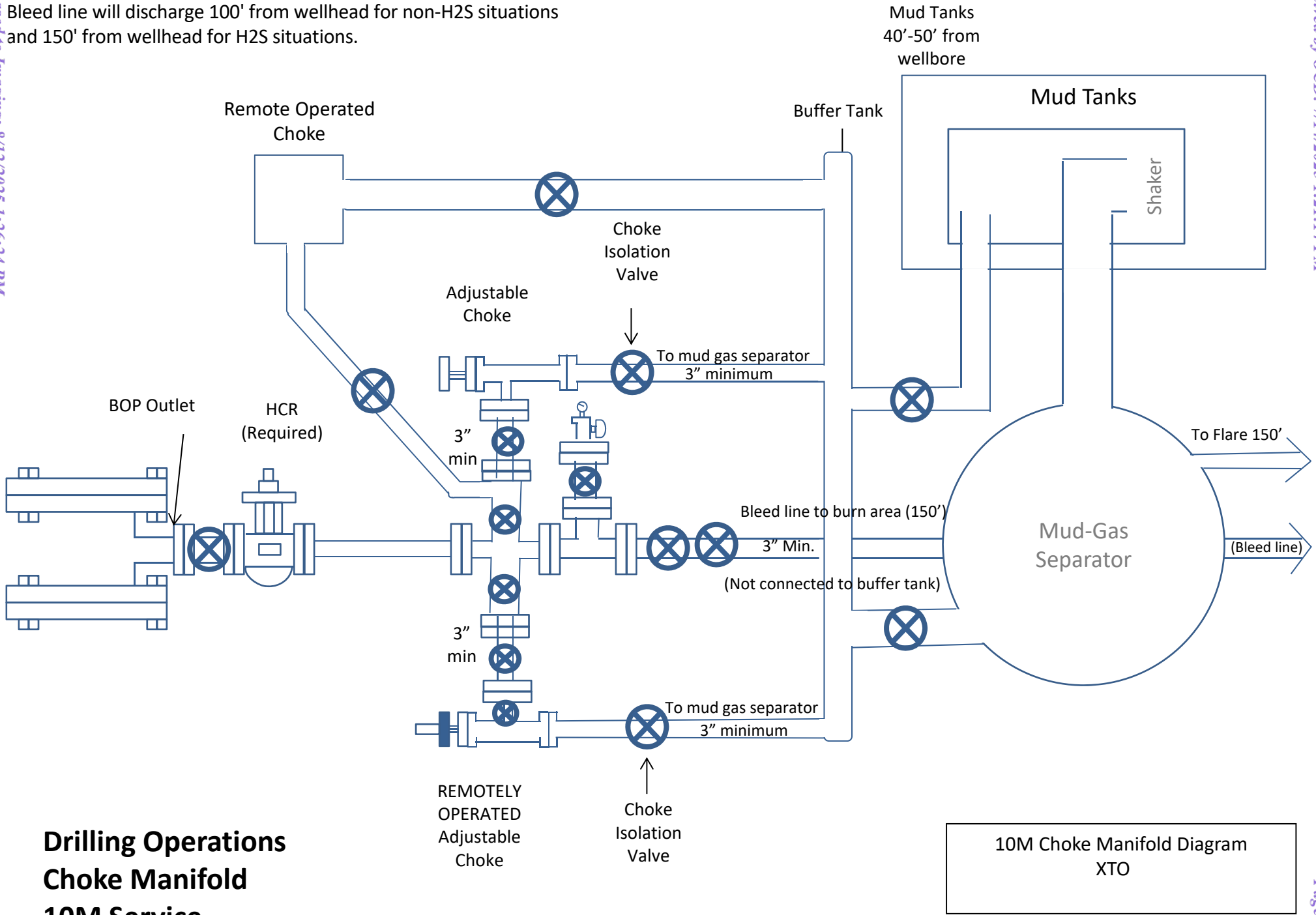
Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
SHL_105H	0.00	0.00	0.0	0.0	0.0	408,151.50	614,812.90	32° 7' 17.694 N	103° 57' 44.905 W	
- plan hits target center										
- Point										
FTP_105H	0.00	0.00	11,227.0	58.2	486.2	408,209.70	615,299.10	32° 7' 18.254 N	103° 57' 39.249 W	
- plan misses target center by 296.7usft at 11100.0usft MD (11017.3 TVD, -151.6 N, 487.4 E)										
- Point										
LTP_105H	0.00	0.00	11,227.0	-15,213.4	573.9	392,938.10	615,386.80	32° 4' 47.117 N	103° 57' 38.843 W	
- plan misses target center by 0.3usft at 26218.1usft MD (11227.0 TVD, -15213.4 N, 574.2 E)										
- Point										
BHL_105H	0.00	0.00	11,227.0	-15,493.4	574.7	392,658.10	615,387.60	32° 4' 44.346 N	103° 57' 38.845 W	
- plan misses target center by 1.1usft at 26498.0usft MD (11227.0 TVD, -15493.4 N, 575.8 E)										
- Point										

## Planning Report

<b>Database:</b>	EDM 5000.18 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Corral 23-35 Fed Com 105H
<b>Company:</b>	Long Lead_Well Planning	<b>TVD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Project:</b>	Corral 23	<b>MD Reference:</b>	RKB (+32) @ 3132.0usft
<b>Site:</b>	Corral 23-35 Fed Com 105H	<b>North Reference:</b>	Grid
<b>Well:</b>	Corral 23-35 Fed Com 105H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

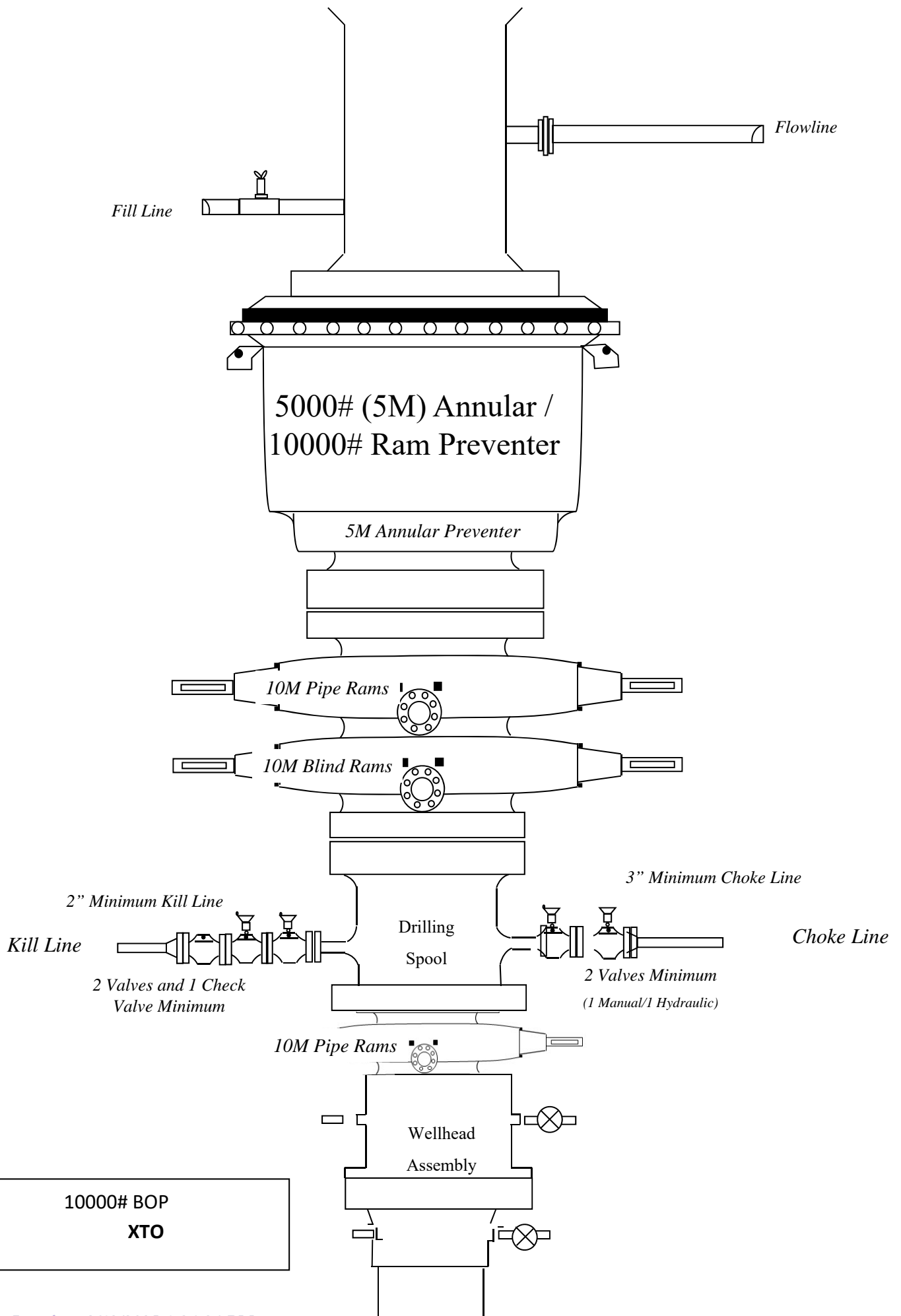
Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
792.0	792.0	Salado				
3,043.7	3,033.0	Base of Salt				
3,247.0	3,235.0	Delaware				
4,140.5	4,123.0	Cherry Canyon				
5,751.6	5,725.0	Brushy Canyon				
6,825.6	6,799.0	Basal Brushy Canyon				
7,047.6	7,021.0	Bone Spring Lm.				
7,202.6	7,176.0	Avalon Shale				
7,616.6	7,590.0	Avalon Lower				
7,790.6	7,764.0	1st Bone Spring Lime				
7,954.6	7,928.0	1st Bone Spring Sand				
8,366.6	8,340.0	2nd Bone Spring Lime				
8,809.6	8,783.0	2nd Bone Spring Sand				
9,047.6	9,021.0	2nd Bone Spring Sand_Base B				
9,225.6	9,199.0	3rd Bone Spring Lime				
9,403.6	9,377.0	Harkey				
9,444.6	9,418.0	3rd Bone Spring Upper Shale				
9,665.6	9,639.0	3rd Bone Spring Upper Shale Base				
9,714.6	9,688.0	3rd Bone Spring Lower Shale				
9,820.6	9,794.0	3rd Bone Spring Lower Shale Marker				
9,873.6	9,847.0	3rd Bone Spring Sand				
10,083.6	10,057.0	Warwink				
10,163.6	10,137.0	Red Hills				
10,228.6	10,202.0	Wolfcamp				
10,254.6	10,228.0	Wolfcamp X				
10,303.6	10,277.0	Wolfcamp Y				
10,369.6	10,343.0	Wolfcamp A				
10,702.1	10,674.0	Wolfcamp B				
10,932.3	10,886.0	Wolfcamp C				
11,279.4	11,127.0	Wolfcamp D				
11,662.4	11,227.0	Landing				

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





# CACTUS WELLHEAD LLC

DRAWN	VJK	31MAR22
APPRV		

DRAWING NO. HBE0000479

20" x 9-5/8" x 7-5/8" x 5-1/2" MBU-T-CFL-R-DBLO Wellhead  
With 11" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head  
And 9-5/8", 7-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers

## 10,000 PSI Annular BOP Variance Request

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

### 1. Component and Preventer Compatibility Tables

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

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

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



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

VBR = Variable Bore Ram

## 2. Well Control Procedures

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

### General Procedure While Drilling

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

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

#### General Procedure While Tripping

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

#### General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

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

**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.

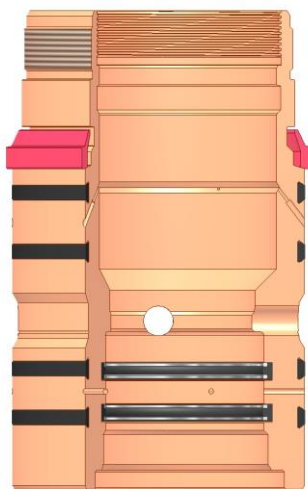
**1. Cement Program**

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

**2. Offline Cementing Procedure**

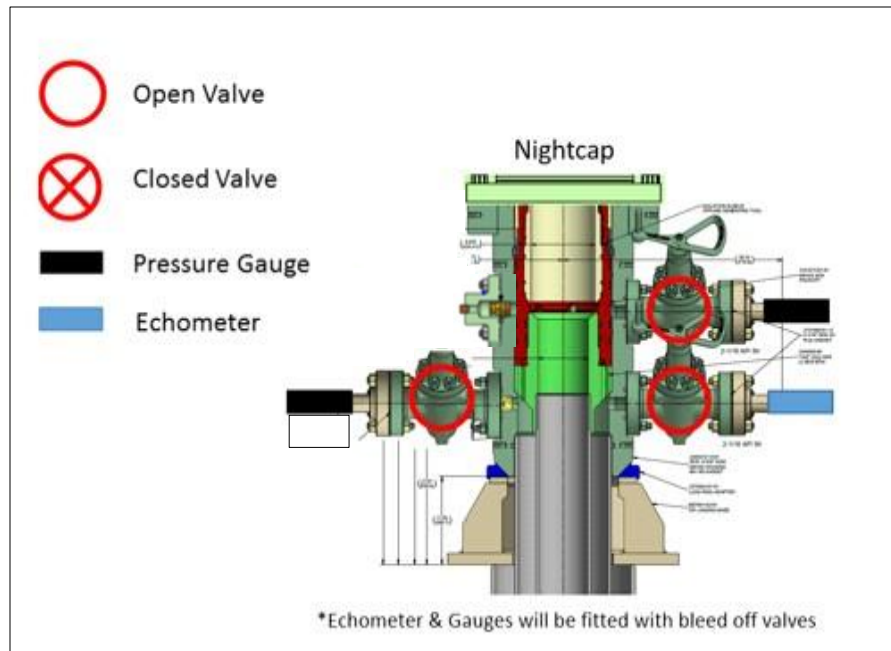
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

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.



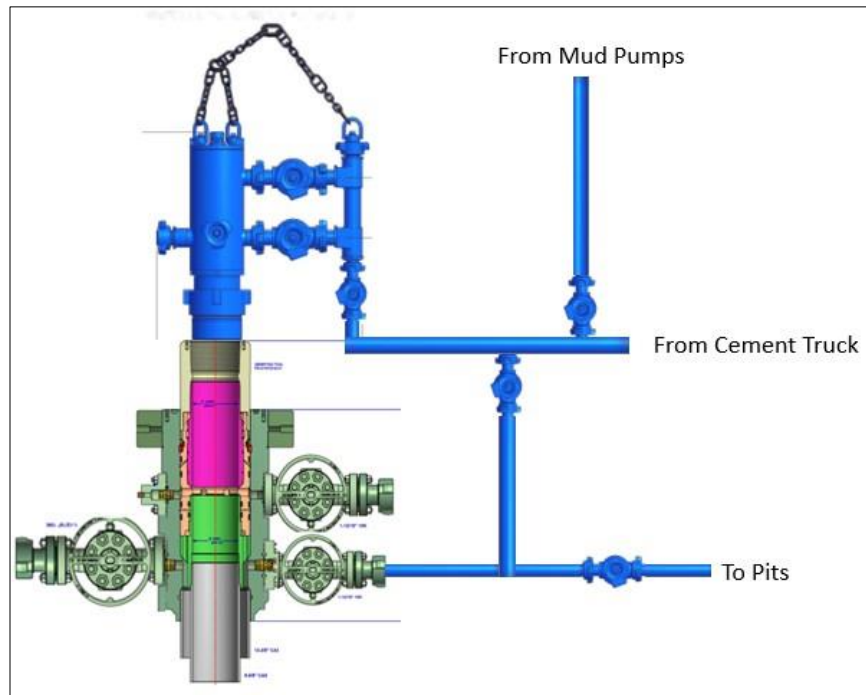
Annular packoff with both external and internal seals

## 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.

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:

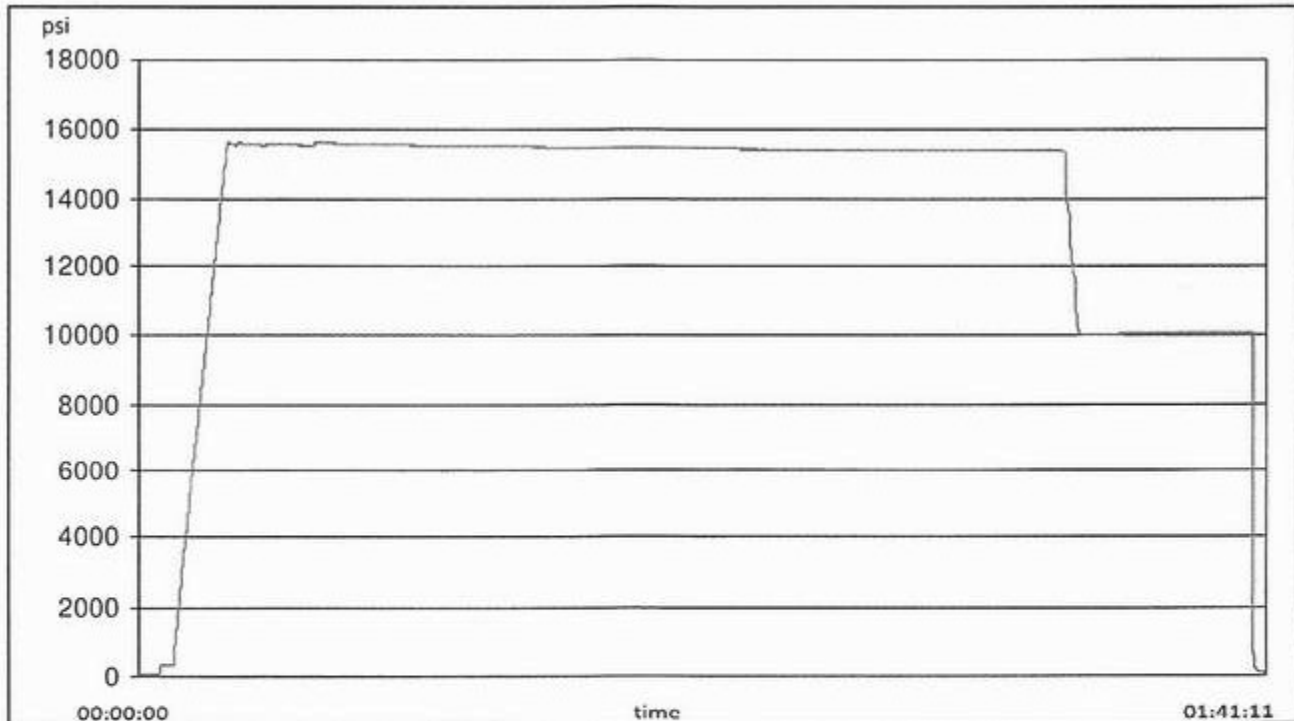
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





H3-15/16

1/25/2024 11:48:06 AM

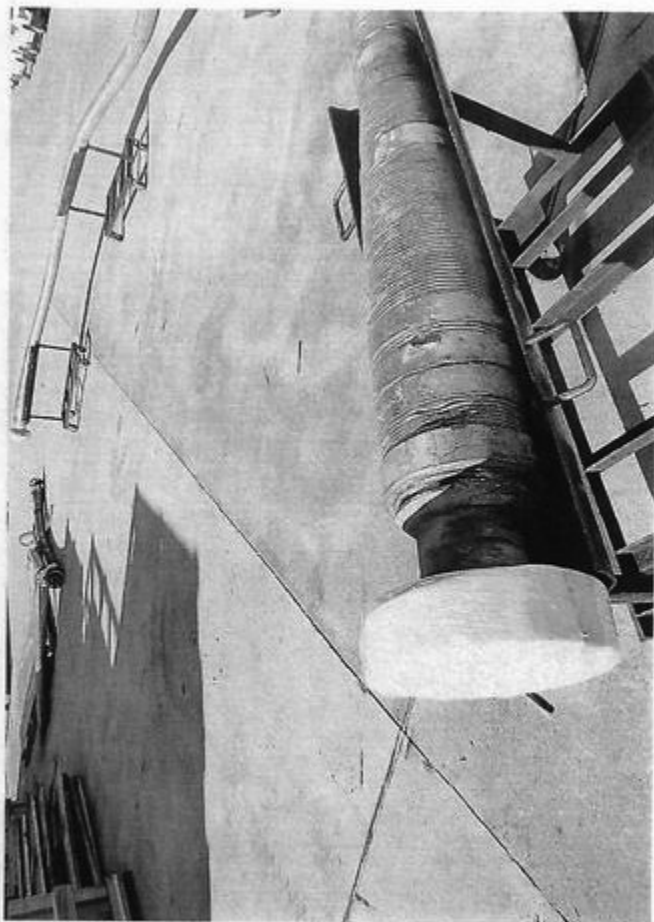
# TEST REPORT

## 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**

--









# 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

For the latest performance data, always visit our website: [www.tenaris.com](http://www.tenaris.com)  
For further information on concepts indicated in this datasheet, download the Datasheet Manual from [www.tenaris.com](http://www.tenaris.com)

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TPN™



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

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

Pipe Body Data

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

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.300 in.	Tension Efficiency	100 %	Minimum	13,860 ft-lb
Coupling Length	8.408 in.	Joint Yield Strength	641 x1000 lb	Optimum	15,400 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	12,640 psi	Maximum	16,940 ft-lb
Make-up Loss	4.204 in.	Compression Efficiency	100 %		
Threads per inch	5	Compression Strength	641 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	92 °/100 ft	Operating Torque	26,350 ft-lb
		External Pressure Capacity	11,100 psi	Yield Torque	29,300 ft-lb

Notes

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PI/CIII



# 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/ocd/contact-us>

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

CONDITIONS

Action 484602

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  484602
	Action Type:  [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	8/12/2025