

Well Name: POKER LAKE UNIT 20-17 BD	Well Location: T25S / R30E / SEC 20 / NESW / 32.112217 / -103.905823	County or Parish/State: EDDY / NM
Well Number: 202H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMLC064894	Unit or CA Name: POKER LAKE UNIT	Unit or CA Number: NMNM71016X
US Well Number: 3001556755	Operator: XTO PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2868157

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 08/12/2025

Time Sundry Submitted: 01:44

Date proposed operation will begin: 08/26/2025

Procedure Description: Poker Lake Unit 20-17 BD 202H XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include KOP, FTP, LTP, BHL, Proposed Total Depth, Pool, and Dedicated Acreage. FROM: TO: KOP: 1433' FSL & 1934' FWL OF SECTION 20-T25S-R30E 260' FSL & 1256' FWL OF SECTION 20-T25S-R30E FTP: 100' FSL & 800' FWL OF SECTION 20-T25S-R30E 260' FSL & 1256' FWL OF SECTION 20-T25S-R30E LTP: 100' FNL & 800' FWL OF SECTION 17-T25S-R30E 2559' FSL & 1679' FWL OF SECTION 8-T25S-R30E BHL: 10' FNL & 800' FWL OF SECTION 17-T25S-R30E 2649' FSL & 1679' FWL OF SECTION 8-T25S-R30E The proposed total depth is changing FROM 20938' MD; 9437' TVD TO 22341' MD; 9387' TVD. Pool code is changing FROM Corral Canyon, Bone Spring (13354) TO Corral Canyon; Bone Spring, South (13354). Dedicated Acreage is changing FROM 320 Acres TO 720 Acres. There is no new surface disturbance.

NOI Attachments

Procedure Description

- POKER_LAKE_UNIT_20_17_BD_202H_Sundry_Docs_20250903113938.pdf
- POKER_LAKE_UNIT_20_17_BD_202H_Sundry_Docs_20250812134202.pdf

Received by OCD: 9/12/2025 10:58:07 AM

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Well Name: POKER LAKE UNIT 20-17 BD	Well Location: T25S / R30E / SEC 20 / NESW / 32.112217 / -103.905823	County or Parish/State: EDDY / NM
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US Well Number: 3001556755	Operator: XTO PERMIAN OPERATING LLC	

Conditions of Approval

Additional
PLU_20_17_BD_202H_COA_20250911070718.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: SAMANTHA WEIS	Signed on: SEP 03, 2025 11:40 AM
Name: XTO PERMIAN OPERATING LLC	
Title: Permitting Advisor	
Street Address: 22777 SPRINGWOODS VILLAGE PARKWAY	
City: SPRING	State: TX
Phone: (832) 625-7361	
Email address: SAMANTHA.R.BARTNIK@EXXONMOBIL.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: CWALLS@BLM.GOV
Disposition: Approved	Disposition Date: 09/11/2025
Signature: Chris Walls	

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM 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.

1. Type of Well ☐ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No.
2. Name of Operator		6. If Indian, Allottee or Tribe Name
3a. Address	3b. Phone No. (include area code)	7. If Unit of CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		8. Well Name and No.
		9. API Well No.
		10. Field and Pool or Exploratory Area
		11. Country or Parish, State

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

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

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

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

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect 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

260 FSL & 1256 FWL OF SECTION 20-T25S-R30E

LTP: 100 FNL & 800 FWL OF SECTION 17-T25S-R30E 2559 FSL & 1679 FWL OF SECTION 8-T25S-R30E

BHL: 10 FNL & 800 FWL OF SECTION 17-T25S-R30E 2649 FSL & 1679 FWL OF SECTION 8-T25S-R30E

The proposed total depth is changing FROM 20938 MD; 9437 TVD TO 22341 MD; 9387 TVD.

Pool code is changing FROM Corral Canyon, Bone Spring (13354) TO Corral Canyon; Bone Spring, South (13354).

Dedicated Acreage is changing FROM 320 Acres TO 720 Acres.

There is no new surface disturbance.

Location of Well

0. SHL: NESW / 1433 FSL / 1934 FWL / TWSP: 25S / RANGE: 30E / SECTION: 20 / LAT: 32.112217 / LONG: -103.905823 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 100 FSL / 800 FWL / TWSP: 25S / RANGE: 30E / SECTION: 20 / LAT: 32.108528 / LONG: -103.909484 (TVD: 9437 feet, MD: 10500 feet)

BHL: NWNW / 10 FSL / 800 FWL / TWSP: 25S / RANGE: 30E / SECTION: 17 / LAT: 32.137443 / LONG: -103.909513 (TVD: 9437 feet, MD: 20938 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: XTO
WELL NAME & NO.: Poker Lake Unit 20-17 BD 202H
LOCATION: 20-25S-30E-NMP
COUNTY: Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2868157** on 9/11/2025. Any previous COAs not addressed within the updated COAs still apply.*

Create COAs

H₂S Present	Cave / Karst Low	Waste Prevention Rule Waste Minimization Plan
Potash None	R-111-Q Design 	
Wellhead Multibowl ☒ Flex Hose ☒ Break Testing	Casing 3-String Well ☐ Liner ☐ Fluid Filled ☒ Casing Clearance	
	Cementing ☐ DV Tool ☒ Bradenhead ☒ Echometer ☒ Offline Cement ☐ Open Annulus ☐ Pilot Hole	
Special Requirements ☐ Capitan Reef ☐ Water Disposal ☐ COM ☒ Unit		

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H₂S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation(s). As a result, the Hydrogen Sulfide area must meet all requirements from 43 CFR 3176, 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 **922** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the

- cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater (including lead cement.)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **7-5/8** inch Intermediate casing is **cement to surface**. If cement does not circulate, see B.1.a, c-d above.

Bradenhead Squeeze: Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

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

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

- Operator shall run a CBL from TD of the **Surface** casing to tieback requirements listed above after the second stage BH to verify TOC.
 - **Operator shall run Echo-meter to verify Cement Slurry/Fluid top in the annulus.** Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out.
 - Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.
 - No displacement fluid/wash out shall be utilized at the top of the cement slurry during second stage bradenhead when running Echo-meter if cement is required to surface.
 - Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is at least **200 feet** into previous casing string. Operator shall provide method of verification. **Excess calculates to 24%. Additional cement maybe required.**
- If cement does not circulate to surface on this casing, the next string must come to surface.

C. PRESSURE CONTROL

1. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.
2. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
3. Break testing has been approved for this well ONLY on those intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)** If in the event break testing is not utilized, then a full BOPE test would be conducted.
 - a. Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation. **BOPE Break Testing is NOT permitted to drilling the production hole section.**
 - b. While in transfer between wells, BOPE shall be secured by the hydraulic carrier or cradle.
 - c. A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
 - d. As a minimum, a full BOPE test shall be performed at 21-day intervals.
 - e. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**. Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.

D. SPECIAL REQUIREMENT(S)

Unit Wells:

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination:

A commercial well determination shall be submitted after production has been established for at least six months. **(This is not necessary for secondary recovery unit wells)**

Offline Cementing

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

Casing Clearance

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

GENERAL REQUIREMENTS

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

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

Contact Eddy County Petroleum Engineering Inspection Staff:

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

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

A. CASING

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

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

B. PRESSURE CONTROL

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

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

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

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

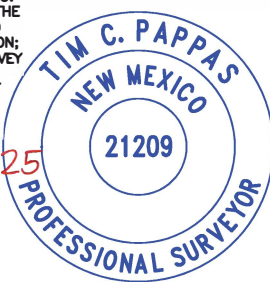
Approved by Zota Stevens on 9/11/2025
575-234-5998 / zstevens@blm.gov

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	☐ Initial Submittal
			☒ Amended Report
		☐ As Drilled	

WELL LOCATION INFORMATION			
API Number 30-015-56755	Pool Code 13354	Pool Name CORRAL CANYON; BONE SPRING, SOUTH	
Property Code	Property Name POKER LAKE UNIT 20-17 BD	Well Number 202H	
ORGID No. 373075	Operator Name XTO PERMIAN OPERATING, LLC.	Ground Level Elevation 3,174'	
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal	

Surface Location									
UL K	Section 20	Township 25 S	Range 30 E	Lot	Ft. from N/S 1,433' FSL	Ft. from E/W 1,934' FWL	Latitude 32.112217	Longitude -103.905823	County EDDY
Bottom Hole Location									
UL K	Section 8	Township 25 S	Range 30 E	Lot	Ft. from N/S 2,649' FSL	Ft. from E/W 1,679' FWL	Latitude 32.144780	Longitude -103.906672	County EDDY
Dedicated Acres 720	Infill or Defining Well DEFINING	Defining Well API	Overlapping Spacing Unit (Y/N) N		Consolidation Code U				
Order Numbers. N/A					Well setbacks are under Common Ownership: ☐ Yes ☒ No				

Kick Off Point (KOP)									
UL M	Section 20	Township 25 S	Range 30 E	Lot	Ft. from N/S 260' FSL	Ft. from E/W 1,256' FWL	Latitude 32.108978	Longitude -103.908011	County EDDY
First Take Point (FTP)									
UL M	Section 20	Township 25 S	Range 30 E	Lot	Ft. from N/S 260' FSL	Ft. from E/W 1,256' FWL	Latitude 32.108978	Longitude -103.908011	County EDDY
Last Take Point (LTP)									
UL K	Section 8	Township 25 S	Range 30 E	Lot	Ft. from N/S 2,559' FSL	Ft. from E/W 1,679' FWL	Latitude 32.144533	Longitude -103.906672	County EDDY
Unitized Area or Area of Uniform Interest NMNM105422430					Spacing Unit Type ☒ Horizontal ☐ Vertical		Ground Floor Elevation: 3,174'		

OPERATOR CERTIFICATIONS		SURVEYOR CERTIFICATIONS	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling form the division. Samantha Weis8/7/2025 SignatureDate Samantha Weis Printed Name samantha.r.bartnik@exxonmobil.com Email Address		I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. 6 August 2025 TIM C. PAPPAS REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF NEW MEXICO NO. 21209  Signature and Seal of Professional Surveyor Certificate Number 21209 Date of Survey 08/06/2025	

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.



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DATE:	8-6-2025	PROJECT NO:	2024060274
DRAWN BY:	LM	SCALE:	
CHECKED BY:	WL	SHEET:	1 OF 2
FIELD CREW:	IR	REVISION:	NO

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or a 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 the 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
- PROPOSED WELLBORE
- NEW MEXICO MINERAL LEASE LINE
- 330' BUFFER
- DEDICATED ACREAGE
- CORRAL CANYON; BONE SPRING, SOUTH POOL (13354)

LINE TABLE

LINE	AZIMUTH	LENGTH
L1	209° 40'25"	1,359.22'
L2	08° 37'56"	716.32'
L3	06° 59'58"	163.27'
L4	03° 54'06"	149.97'
L5	01° 03'51"	131.69'
L6	359° 44'18"	7,794.83'
L7	03° 25'11"	244.13'
L8	10° 45'07"	244.12'
L9	18° 03'09"	244.13'
L10	18° 00'31"	244.12'
L11	10° 40'40"	244.12'
L12	03° 22'21"	244.14'
L13	359° 44'04"	2,648.22'

COORDINATE TABLE

SHL (NAD 83 NME)				KOP/FTP (NAD 83 NME)			
Y =	404,823.2	N		Y =	403,642.3	N	
X =	673,699.5	E		X =	673,026.6	E	
LAT. =	32.112217	"N		LAT. =	32.108978	"N	
LONG. =	103.905823	"W		LONG. =	103.908011	"W	
LTP (NAD 83 NME)				BHL (NAD 83 NME)			
Y =	416,578.2	N		Y =	416,668.2	N	
X =	673,390.0	E		X =	673,389.6	E	
LAT. =	32.144533	"N		LAT. =	32.144780	"N	
LONG. =	103.906672	"W		LONG. =	103.906672	"W	
P1 (NAD 83 NME)				P2 (NAD 83 NME)			
Y =	404,350.5	N		Y =	404,512.5	N	
X =	673,134.1	E		X =	673,154.0	E	
LAT. =	32.110923	"N		LAT. =	32.111368	"N	
LONG. =	103.907655	"W		LONG. =	103.907589	"W	
P3 (NAD 83 NME)				P4 (NAD 83 NME)			
Y =	404,662.1	N		Y =	404,793.8	N	
X =	673,164.2	E		X =	673,166.7	E	
LAT. =	32.111790	"N		LAT. =	32.112142	"N	
LONG. =	103.907554	"W		LONG. =	103.907544	"W	
P5 (NAD 83 NME)				P6 (NAD 83 NME)			
Y =	412,588.6	N		Y =	412,832.2	N	
X =	673,131.1	E		X =	673,145.6	E	
LAT. =	32.133569	"N		LAT. =	32.134238	"N	
LONG. =	103.907560	"W		LONG. =	103.907510	"W	
P7 (NAD 83 NME)				P8 (NAD 83 NME)			
Y =	413,072.1	N		Y =	413,304.2	N	
X =	673,191.2	E		X =	673,266.8	E	
LAT. =	32.134897	"N		LAT. =	32.135534	"N	
LONG. =	103.907359	"W		LONG. =	103.907112	"W	
P9 (NAD 83 NME)				P10 (NAD 83 NME)			
Y =	413,536.4	N		Y =	413,776.3	N	
X =	673,342.3	E		X =	673,387.5	E	
LAT. =	32.136172	"N		LAT. =	32.136831	"N	
LONG. =	103.906865	"W		LONG. =	103.906716	"W	
P11 (NAD 83 NME)							
Y =	414,020.0	N					
X =	673,401.9	E					
LAT. =	32.137501	"N					
LONG. =	10.906666	"W					
SHL (NAD 27 NME)				KOP/FTP (NAD 27 NME)			
Y =	404,764.8	N		Y =	403,584.0	N	
X =	632,514.7	E		X =	631,841.7	E	
LAT. =	32.112092	"N		LAT. =	32.108853	"N	
LONG. =	103.905340	"W		LONG. =	103.907528	"W	
LTP (NAD 27 NME)				BHL (NAD 27 NME)			
Y =	416,519.5	N		Y =	416,609.5	N	
X =	632,205.6	E		X =	632,205.2	E	
LAT. =	32.144408	"N		LAT. =	32.144655	"N	
LONG. =	103.906187	"W		LONG. =	103.906188	"W	
P1 (NAD 27 NME)				P2 (NAD 27 NME)			
Y =	404,292.1	N		Y =	404,454.1	N	
X =	631,949.3	E		X =	631,969.2	E	
LAT. =	32.110798	"N		LAT. =	32.111243	"N	
LONG. =	103.907172	"W		LONG. =	103.907105	"W	
P3 (NAD 27 NME)				P4 (NAD 27 NME)			
Y =	404,603.7	N		Y =	404,735.4	N	
X =	631,979.4	E		X =	631,981.9	E	
LAT. =	32.111655	"N		LAT. =	32.112017	"N	
LONG. =	103.907071	"W		LONG. =	103.907061	"W	
P5 (NAD 27 NME)				P6 (NAD 27 NME)			
Y =	412,530.0	N		Y =	412,773.6	N	
X =	631,946.5	E		X =	631,961.0	E	
LAT. =	32.133444	"N		LAT. =	32.134113	"N	
LONG. =	103.907075	"W		LONG. =	103.907025	"W	
P7 (NAD 27 NME)				P8 (NAD 27 NME)			
Y =	413,013.5	N		Y =	413,245.6	N	
X =	632,006.6	E		X =	632,082.3	E	
LAT. =	32.134772	"N		LAT. =	32.135410	"N	
LONG. =	103.906875	"W		LONG. =	103.906628	"W	
P9 (NAD 27 NME)				P10 (NAD 27 NME)			
Y =	413,477.8	N		Y =	413,717.7	N	
X =	632,157.8	E		X =	632,203.0	E	
LAT. =	32.136047	"N		LAT. =	32.136706	"N	
LONG. =	103.906381	"W		LONG. =	103.906232	"W	
P11 (NAD 27 NME)							
Y =	413,961.4	N					
X =	632,217.4	E					
LAT. =	32.137376	"N					
LONG. =	103.906182	"W					
PPP #1 (NAD 83 NME)				PPP #1 (NAD 27 NME)			
Y =	408,700.0	N		Y =	408,641.5	N	
X =	673,148.8	E		X =	631,964.1	E	
LAT. =	32.122879	"N		LAT. =	32.122754	"N	
LONG. =	103.907552	"W		LONG. =	103.907068	"W	
PPP #2 (NAD 83 NME)				PPP #2 (NAD 27 NME)			
Y =	414,019.4	N		Y =	413,960.8	N	
X =	673,401.9	E		X =	632,217.4	E	
LAT. =	32.137499	"N		LAT. =	32.137374	"N	
LONG. =	103.906667	"W		LONG. =	103.906182	"W	

CORNER COORDINATES (NAD83 NME)							
A - Y =	403,398.9	N	A - X =	674,444.4	E		
B - Y =	406,057.8	N	B - X =	674,435.7	E		
C - Y =	408,716.9	N	C - X =	674,426.9	E		
D - Y =	411,375.4	N	D - X =	674,407.3	E		
E - Y =	414,034.7	N	E - X =	674,387.7	E		
F - Y =	416,694.9	N	F - X =	674,383.2	E		
G - Y =	403,383.2	N	G - X =	673,108.1	E		
H - Y =	406,041.4	N	H - X =	673,098.4	E		
I - Y =	408,699.2	N	I - X =	673,088.1	E		
J - Y =	411,356.4	N	J - X =	673,071.3	E		
K - Y =	414,014.0	N	K - X =	673,054.3	E		
L - Y =	416,672.4	N	L - X =	673,047.0	E		
CORNER COORDINATES (NAD27 NME)							
A - Y =	403,340.6	N	A - X =	633,259.5	E		
B - Y =	405,999.4	N	B - X =	633,250.9	E		
C - Y =	408,658.4	N	C - X =	633,242.2	E		
D - Y =	411,316.9	N	D - X =	633,222.7	E		
E - Y =	413,976.1	N	E - X =	633,203.2	E		
F - Y =	416,636.2	N	F - X =	633,198.7	E		
G - Y =	403,324.9	N	G - X =	631,923.2	E		
H - Y =	405,983.0	N	H - X =	631,913.6	E		
I - Y =	408,640.7	N	I - X =	631,903.4	E		
J - Y =	411,297.9	N	J - X =	631,886.7	E		
K - Y =	413,955.4	N	K - X =	631,869.8	E		
L - Y =	416,613.7	N	L - X =	631,862.6	E		



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DATE: 8-6-2025 PROJECT NO: 2024060274
DRAWN BY: LM SCALE: 1" = 2,000'
CHECKED BY: WL SHEET: 2 OF 2
FIELD CREW: IR REVISION: NO

Eddy County, NM

A. Quaternary

[illegible]

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 922' 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' – 922'	922'	9-5/8"	40	J55	BTC	New	13.97	12.88	5.33
8.75"	0' – 4000'	3902'	7-5/8"	29.7	P110-ICY	Tenaris Wedge 511	New	6.02	8.71	3.45
8.75"	4000' – 8711'	8521'	7-5/8"	29.7	L80-IC	Tenaris Wedge 511	New	3.34	6.03	2.49
6.75"	0' – 8611'	8421'	5-1/2"	20	P110-ICY	Tenaris Wedge 441	New	1.34	3.37	2.94
6.75"	8611' – 22341'	9387'	5-1/2"	20	P110-CY	Tenaris Wedge 441	New	1.18	2.73	2.71

Section 3 Summary:

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

The planned kick off point is located at: 8861' MD / 8671' 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 (ft3/sack)	TOC (ft)	Casing Setting Depth (MD)	Excess (%)	Slurry Description
Surface 1	Lead	185	12.4	2.11	0	922	100%	Surface 1 Class C Lead Cement
Surface 1	Tail	141	14.8	1.33	622	922	100%	Surface 1 Class C Tail Cement
Intermediate 1	Lead							
Intermediate 1	Tail	207	14.8	1.45	6502	8,711	35%	Intermediate 1 Class C Tail Cement
Production 1	Lead							
Production 1	Tail	995	13.2	1.44	8211	22,341	25%	Production 1 Class C Tail Cement
Bradenhead Cementing								
Casing	Slurry Type	No. Sacks	Density (ppg)	Yield (ft3/sack)	Cemented Interval	Excess (%)	Slurry Description	
Intermediate 1	Bradenhead Squeeze	608	14.8	1.45	0 - 6502'	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.

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

Requested Variances

4A) Offline Cementing Variance

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

5A) Break Test Variance

A break testing variance is requested to ONLY test broken pressure seals on the BOP equipment when moving from wellhead to wellhead for the intermediate hole sections which is in compliance with API Standard 53. The maximum anticipated surface pressure is less than 4800psi and the deepest intermediate casing point does not penetrate the Wolfcamp Formation.

5B) Flex Hose Variance

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

8A) Open Hole Logging Variance

Open hole logging will not be done on this well.

10A) Spudder Rig Variance

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

10B) Batch Drilling Variance

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

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/gt)	Fluid Loss (cc)	Comments
0' - 922'	12.25"	FW/Native	8.3 - 8.7	35-40	NC	Fresh Water or Native Water
922' - 8711'	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.
8711' - 22341'	6.75"	OBM	9 - 9.6	50-60	NC - 20	OBM or Cut Brine depending on Well Conditions

Section 6 Summary:

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

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:**

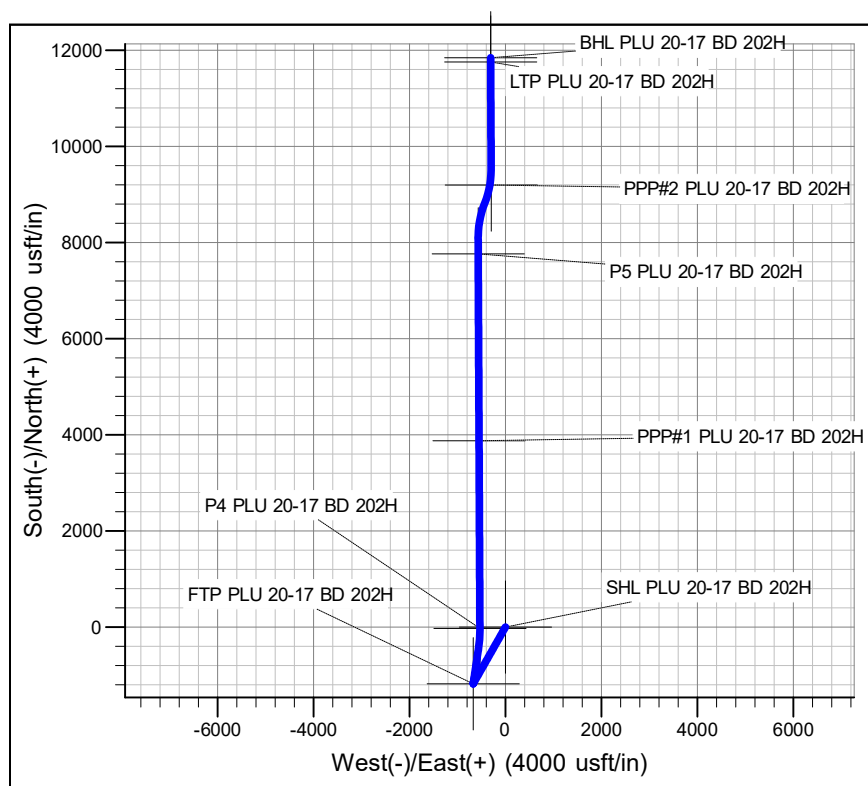
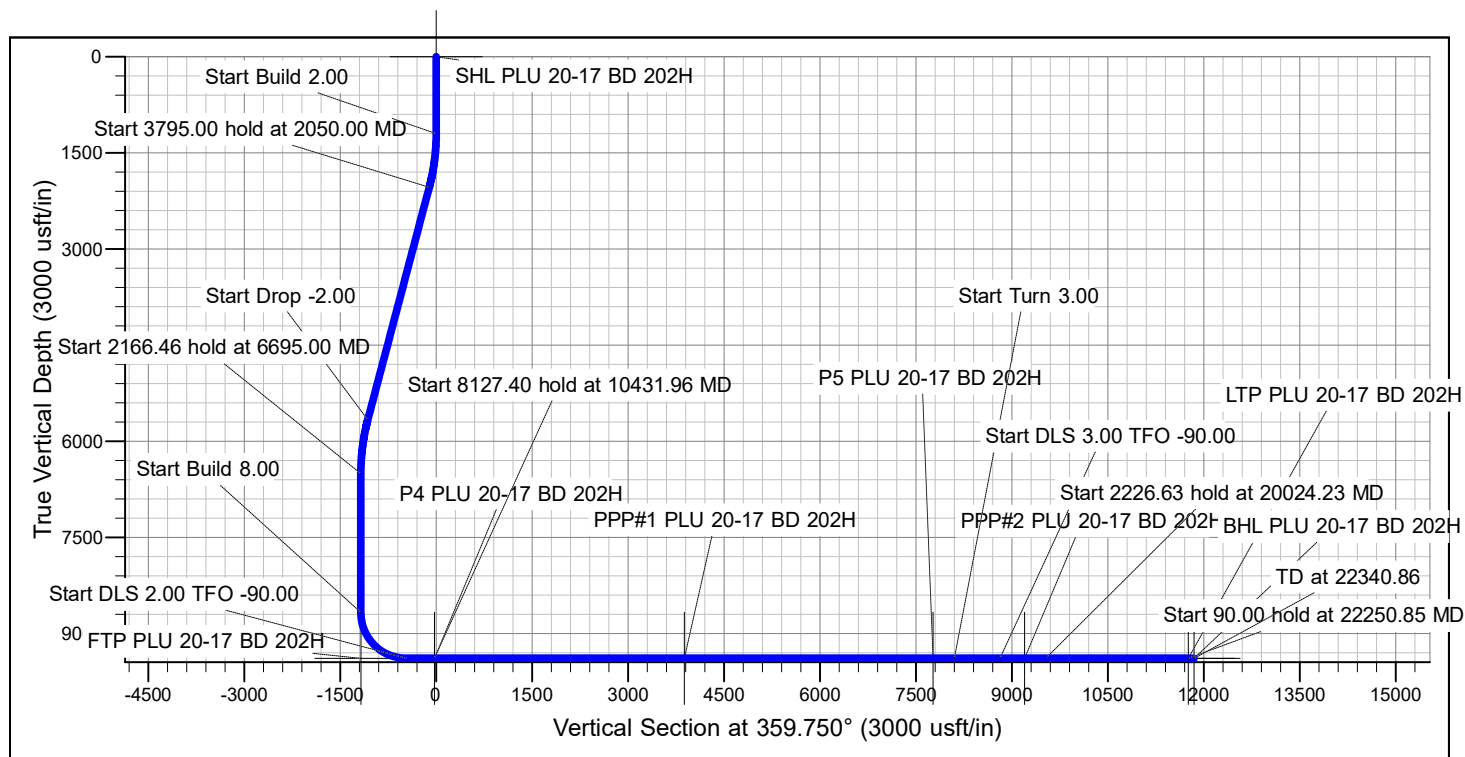
The estimated bottom hole temperature of 159F to 179F. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation is possible throughout the well.

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

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



Site: Poker Lake Unit 20-8/17 BD
Well: Poker Lake Unit 20-17 BD 202H
Wellbore: OH
Design: Plan 0



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
725.06	725.06	Rustler
946.64	946.64	Salado
3173.87	3238.21	Base of Salt
3632.54	3717.83	Delaware
4530.64	4656.97	Cherry Canyon
6501.99	6692.65	Brushy Canyon
7333.97	7524.63	Basal Brushy Canyon
7727.73	7918.39	Bone Spring Lm.
7859.38	8050.04	Avalon
8245.34	8436.00	Lower Avalon
8350.81	8541.47	1st Bone Spring Sand
8716.70	8907.39	2nd Bone Spring Shale
8851.71	9044.35	2nd Bone Spring Lime
9011.53	9216.56	2nd Bone Spring Sand
9387.00	9986.46	2nd Bone Spring Sand Lower Landing

ROC

Long Lead - Poker Lake Unit 20-8/17 BD

Poker Lake Unit 20-8/17 BD

Poker Lake Unit 20-17 BD 202H

OH

Plan: Plan 0

Standard Planning Report

08 August, 2025

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Poker Lake Unit 20-17 BD 202H	
Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)	
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)	
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid	
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature	
Wellbore:	OH			
Design:	Plan 0			

Project	Long Lead - Poker Lake Unit 20-8/17 BD				
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	Poker Lake Unit 20-8/17 BD				
Site Position:		Northing:	404,765.20 usft	Latitude:	32° 6' 43.534 N
From:	Map	Easting:	632,484.70 usft	Longitude:	103° 54' 19.571 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well	Poker Lake Unit 20-17 BD 202H					
Well Position	+N/-S	0.00 usft	Northing:	404,764.80 usft	Latitude:	32° 6' 43.529 N
	+E/-W	0.00 usft	Easting:	632,514.70 usft	Longitude:	103° 54' 19.222 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,174.00 usft
Grid Convergence:		0.23 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	6/18/2025	6.22	59.62	46,978.98881973

Design	Plan 0				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.750	

Plan Survey Tool Program	Date	8/8/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	22,340.86 Plan 0 (OH)	XOMR2_OWSG MWD+IFR1+		
			OWSG MWD + IFR1 + Multi-SI		

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Poker Lake Unit 20-17 BD 202H
Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,050.00	17.00	209.670	2,037.58	-108.77	-61.96	2.00	2.00	0.00	209.67	
5,845.00	17.00	209.670	5,666.76	-1,072.84	-611.20	0.00	0.00	0.00	0.00	
6,695.00	0.00	0.000	6,504.34	-1,181.61	-673.16	2.00	-2.00	0.00	180.00	
8,861.46	0.00	0.000	8,670.80	-1,181.61	-673.16	0.00	0.00	0.00	0.00	
9,986.46	90.00	8.650	9,387.00	-473.56	-565.44	8.00	8.00	0.00	8.65	
10,431.96	90.00	359.740	9,387.00	-29.70	-532.89	2.00	0.00	-2.00	-90.00	
18,559.36	90.00	359.740	9,387.00	8,097.62	-569.77	0.00	0.00	0.00	0.00	
19,291.73	90.00	21.711	9,387.00	8,812.79	-434.31	3.00	0.00	3.00	90.00	
20,024.23	90.00	359.736	9,387.00	9,528.09	-298.84	3.00	0.00	-3.00	-90.00	
22,250.85	90.00	359.736	9,387.00	11,754.70	-309.10	0.00	0.00	0.00	0.00	LTP PLU 20-17 BD 202H
22,340.86	90.00	359.736	9,387.00	11,844.70	-309.51	0.00	0.00	0.00	0.00	BHL PLU 20-17 BD 202H

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Poker Lake Unit 20-17 BD 202H
Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	2.00	209.670	1,299.98	-1.52	-0.86	-1.51	2.00	2.00	0.00
1,400.00	4.00	209.670	1,399.84	-6.06	-3.45	-6.05	2.00	2.00	0.00
1,500.00	6.00	209.670	1,499.45	-13.64	-7.77	-13.60	2.00	2.00	0.00
1,600.00	8.00	209.670	1,598.70	-24.22	-13.80	-24.16	2.00	2.00	0.00
1,700.00	10.00	209.670	1,697.47	-37.82	-21.54	-37.72	2.00	2.00	0.00
1,800.00	12.00	209.670	1,795.62	-54.39	-30.99	-54.26	2.00	2.00	0.00
1,900.00	14.00	209.670	1,893.06	-73.94	-42.12	-73.76	2.00	2.00	0.00
2,000.00	16.00	209.670	1,989.64	-96.43	-54.93	-96.19	2.00	2.00	0.00
2,050.00	17.00	209.670	2,037.58	-108.77	-61.96	-108.49	2.00	2.00	0.00
2,100.00	17.00	209.670	2,085.40	-121.47	-69.20	-121.16	0.00	0.00	0.00
2,200.00	17.00	209.670	2,181.03	-146.87	-83.67	-146.51	0.00	0.00	0.00
2,300.00	17.00	209.670	2,276.66	-172.28	-98.14	-171.85	0.00	0.00	0.00
2,400.00	17.00	209.670	2,372.29	-197.68	-112.62	-197.19	0.00	0.00	0.00
2,500.00	17.00	209.670	2,467.92	-223.08	-127.09	-222.53	0.00	0.00	0.00
2,600.00	17.00	209.670	2,563.55	-248.49	-141.56	-247.87	0.00	0.00	0.00
2,700.00	17.00	209.670	2,659.18	-273.89	-156.03	-273.21	0.00	0.00	0.00
2,800.00	17.00	209.670	2,754.81	-299.30	-170.51	-298.55	0.00	0.00	0.00
2,900.00	17.00	209.670	2,850.44	-324.70	-184.98	-323.89	0.00	0.00	0.00
3,000.00	17.00	209.670	2,946.07	-350.10	-199.45	-349.23	0.00	0.00	0.00
3,100.00	17.00	209.670	3,041.70	-375.51	-213.92	-374.57	0.00	0.00	0.00
3,200.00	17.00	209.670	3,137.33	-400.91	-228.40	-399.91	0.00	0.00	0.00
3,300.00	17.00	209.670	3,232.96	-426.31	-242.87	-425.25	0.00	0.00	0.00
3,400.00	17.00	209.670	3,328.59	-451.72	-257.34	-450.59	0.00	0.00	0.00
3,500.00	17.00	209.670	3,424.23	-477.12	-271.81	-475.93	0.00	0.00	0.00
3,600.00	17.00	209.670	3,519.86	-502.53	-286.29	-501.27	0.00	0.00	0.00
3,700.00	17.00	209.670	3,615.49	-527.93	-300.76	-526.61	0.00	0.00	0.00
3,800.00	17.00	209.670	3,711.12	-553.33	-315.23	-551.95	0.00	0.00	0.00
3,900.00	17.00	209.670	3,806.75	-578.74	-329.70	-577.29	0.00	0.00	0.00
4,000.00	17.00	209.670	3,902.38	-604.14	-344.18	-602.63	0.00	0.00	0.00
4,100.00	17.00	209.670	3,998.01	-629.55	-358.65	-627.97	0.00	0.00	0.00
4,200.00	17.00	209.670	4,093.64	-654.95	-373.12	-653.32	0.00	0.00	0.00
4,300.00	17.00	209.670	4,189.27	-680.35	-387.59	-678.66	0.00	0.00	0.00
4,400.00	17.00	209.670	4,284.90	-705.76	-402.07	-704.00	0.00	0.00	0.00
4,500.00	17.00	209.670	4,380.53	-731.16	-416.54	-729.34	0.00	0.00	0.00
4,600.00	17.00	209.670	4,476.16	-756.57	-431.01	-754.68	0.00	0.00	0.00
4,700.00	17.00	209.670	4,571.79	-781.97	-445.48	-780.02	0.00	0.00	0.00
4,800.00	17.00	209.670	4,667.42	-807.37	-459.96	-805.36	0.00	0.00	0.00
4,900.00	17.00	209.670	4,763.05	-832.78	-474.43	-830.70	0.00	0.00	0.00
5,000.00	17.00	209.670	4,858.68	-858.18	-488.90	-856.04	0.00	0.00	0.00
5,100.00	17.00	209.670	4,954.31	-883.58	-503.37	-881.38	0.00	0.00	0.00
5,200.00	17.00	209.670	5,049.94	-908.99	-517.85	-906.72	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Poker Lake Unit 20-17 BD 202H
Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	17.00	209.670	5,145.57	-934.39	-532.32	-932.06	0.00	0.00	0.00
5,400.00	17.00	209.670	5,241.20	-959.80	-546.79	-957.40	0.00	0.00	0.00
5,500.00	17.00	209.670	5,336.83	-985.20	-561.27	-982.74	0.00	0.00	0.00
5,600.00	17.00	209.670	5,432.47	-1,010.60	-575.74	-1,008.08	0.00	0.00	0.00
5,700.00	17.00	209.670	5,528.10	-1,036.01	-590.21	-1,033.42	0.00	0.00	0.00
5,800.00	17.00	209.670	5,623.73	-1,061.41	-604.68	-1,058.76	0.00	0.00	0.00
5,845.00	17.00	209.670	5,666.76	-1,072.84	-611.20	-1,070.17	0.00	0.00	0.00
5,900.00	15.90	209.670	5,719.51	-1,086.38	-618.90	-1,083.67	2.00	-2.00	0.00
6,000.00	13.90	209.670	5,816.14	-1,108.72	-631.63	-1,105.95	2.00	-2.00	0.00
6,100.00	11.90	209.670	5,913.61	-1,128.11	-642.68	-1,125.30	2.00	-2.00	0.00
6,200.00	9.90	209.670	6,011.80	-1,144.54	-652.04	-1,141.69	2.00	-2.00	0.00
6,300.00	7.90	209.670	6,110.59	-1,157.99	-659.70	-1,155.10	2.00	-2.00	0.00
6,400.00	5.90	209.670	6,209.86	-1,168.42	-665.65	-1,165.51	2.00	-2.00	0.00
6,500.00	3.90	209.670	6,309.49	-1,175.85	-669.87	-1,172.91	2.00	-2.00	0.00
6,600.00	1.90	209.670	6,409.36	-1,180.24	-672.38	-1,177.30	2.00	-2.00	0.00
6,695.00	0.00	0.000	6,504.34	-1,181.61	-673.16	-1,178.66	2.00	-2.00	0.00
6,700.00	0.00	0.000	6,509.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
6,800.00	0.00	0.000	6,609.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
6,900.00	0.00	0.000	6,709.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,000.00	0.00	0.000	6,809.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,100.00	0.00	0.000	6,909.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,200.00	0.00	0.000	7,009.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,300.00	0.00	0.000	7,109.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,400.00	0.00	0.000	7,209.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,500.00	0.00	0.000	7,309.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,600.00	0.00	0.000	7,409.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,700.00	0.00	0.000	7,509.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,800.00	0.00	0.000	7,609.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
7,900.00	0.00	0.000	7,709.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,000.00	0.00	0.000	7,809.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,100.00	0.00	0.000	7,909.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,200.00	0.00	0.000	8,009.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,300.00	0.00	0.000	8,109.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,400.00	0.00	0.000	8,209.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,500.00	0.00	0.000	8,309.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,600.00	0.00	0.000	8,409.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,700.00	0.00	0.000	8,509.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,800.00	0.00	0.000	8,609.34	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,861.46	0.00	0.000	8,670.80	-1,181.61	-673.16	-1,178.66	0.00	0.00	0.00
8,900.00	3.08	8.650	8,709.32	-1,180.58	-673.00	-1,177.64	8.00	8.00	0.00
9,000.00	11.08	8.650	8,808.48	-1,168.40	-671.15	-1,165.46	8.00	8.00	0.00
9,100.00	19.08	8.650	8,904.96	-1,142.70	-667.24	-1,139.78	8.00	8.00	0.00
9,200.00	27.08	8.650	8,996.88	-1,103.97	-661.35	-1,101.07	8.00	8.00	0.00
9,300.00	35.08	8.650	9,082.45	-1,052.97	-653.59	-1,050.11	8.00	8.00	0.00
9,400.00	43.08	8.650	9,160.01	-990.69	-644.11	-987.87	8.00	8.00	0.00
9,500.00	51.08	8.650	9,228.05	-918.35	-633.11	-915.58	8.00	8.00	0.00
9,600.00	59.08	8.650	9,285.24	-837.35	-620.79	-834.63	8.00	8.00	0.00
9,700.00	67.08	8.650	9,330.47	-749.27	-607.39	-746.61	8.00	8.00	0.00
9,800.00	75.08	8.650	9,362.86	-655.82	-593.17	-653.23	8.00	8.00	0.00
9,900.00	83.08	8.650	9,381.79	-558.83	-578.42	-556.30	8.00	8.00	0.00
9,986.46	90.00	8.650	9,387.00	-473.56	-565.44	-471.09	8.00	8.00	0.00
10,000.00	90.00	8.379	9,387.00	-460.17	-563.44	-457.70	2.00	0.00	-2.00
10,100.00	90.00	6.379	9,387.00	-361.00	-550.60	-358.59	2.00	0.00	-2.00
10,200.00	90.00	4.379	9,387.00	-261.44	-541.22	-259.08	2.00	0.00	-2.00

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Poker Lake Unit 20-17 BD 202H
Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.00	90.00	2.379	9,387.00	-161.62	-535.33	-159.29	2.00	0.00	-2.00
10,400.00	90.00	0.379	9,387.00	-61.66	-532.92	-59.33	2.00	0.00	-2.00
10,431.96	90.00	359.740	9,387.00	-29.70	-532.89	-27.37	2.00	0.00	-2.00
10,500.00	90.00	359.740	9,387.00	38.34	-533.20	40.67	0.00	0.00	0.00
10,600.00	90.00	359.740	9,387.00	138.34	-533.65	140.67	0.00	0.00	0.00
10,700.00	90.00	359.740	9,387.00	238.34	-534.10	240.67	0.00	0.00	0.00
10,800.00	90.00	359.740	9,387.00	338.34	-534.56	340.67	0.00	0.00	0.00
10,900.00	90.00	359.740	9,387.00	438.34	-535.01	440.67	0.00	0.00	0.00
11,000.00	90.00	359.740	9,387.00	538.34	-535.47	540.67	0.00	0.00	0.00
11,100.00	90.00	359.740	9,387.00	638.34	-535.92	640.67	0.00	0.00	0.00
11,200.00	90.00	359.740	9,387.00	738.34	-536.37	740.67	0.00	0.00	0.00
11,300.00	90.00	359.740	9,387.00	838.33	-536.83	840.67	0.00	0.00	0.00
11,400.00	90.00	359.740	9,387.00	938.33	-537.28	940.67	0.00	0.00	0.00
11,500.00	90.00	359.740	9,387.00	1,038.33	-537.73	1,040.67	0.00	0.00	0.00
11,600.00	90.00	359.740	9,387.00	1,138.33	-538.19	1,140.67	0.00	0.00	0.00
11,700.00	90.00	359.740	9,387.00	1,238.33	-538.64	1,240.67	0.00	0.00	0.00
11,800.00	90.00	359.740	9,387.00	1,338.33	-539.10	1,340.67	0.00	0.00	0.00
11,900.00	90.00	359.740	9,387.00	1,438.33	-539.55	1,440.67	0.00	0.00	0.00
12,000.00	90.00	359.740	9,387.00	1,538.33	-540.00	1,540.67	0.00	0.00	0.00
12,100.00	90.00	359.740	9,387.00	1,638.33	-540.46	1,640.67	0.00	0.00	0.00
12,200.00	90.00	359.740	9,387.00	1,738.32	-540.91	1,740.67	0.00	0.00	0.00
12,300.00	90.00	359.740	9,387.00	1,838.32	-541.36	1,840.67	0.00	0.00	0.00
12,400.00	90.00	359.740	9,387.00	1,938.32	-541.82	1,940.67	0.00	0.00	0.00
12,500.00	90.00	359.740	9,387.00	2,038.32	-542.27	2,040.67	0.00	0.00	0.00
12,600.00	90.00	359.740	9,387.00	2,138.32	-542.73	2,140.67	0.00	0.00	0.00
12,700.00	90.00	359.740	9,387.00	2,238.32	-543.18	2,240.67	0.00	0.00	0.00
12,800.00	90.00	359.740	9,387.00	2,338.32	-543.63	2,340.67	0.00	0.00	0.00
12,900.00	90.00	359.740	9,387.00	2,438.32	-544.09	2,440.67	0.00	0.00	0.00
13,000.00	90.00	359.740	9,387.00	2,538.32	-544.54	2,540.67	0.00	0.00	0.00
13,100.00	90.00	359.740	9,387.00	2,638.32	-544.99	2,640.67	0.00	0.00	0.00
13,200.00	90.00	359.740	9,387.00	2,738.31	-545.45	2,740.67	0.00	0.00	0.00
13,300.00	90.00	359.740	9,387.00	2,838.31	-545.90	2,840.67	0.00	0.00	0.00
13,400.00	90.00	359.740	9,387.00	2,938.31	-546.36	2,940.67	0.00	0.00	0.00
13,500.00	90.00	359.740	9,387.00	3,038.31	-546.81	3,040.67	0.00	0.00	0.00
13,600.00	90.00	359.740	9,387.00	3,138.31	-547.26	3,140.67	0.00	0.00	0.00
13,700.00	90.00	359.740	9,387.00	3,238.31	-547.72	3,240.67	0.00	0.00	0.00
13,800.00	90.00	359.740	9,387.00	3,338.31	-548.17	3,340.67	0.00	0.00	0.00
13,900.00	90.00	359.740	9,387.00	3,438.31	-548.63	3,440.67	0.00	0.00	0.00
14,000.00	90.00	359.740	9,387.00	3,538.31	-549.08	3,540.67	0.00	0.00	0.00
14,100.00	90.00	359.740	9,387.00	3,638.31	-549.53	3,640.67	0.00	0.00	0.00
14,200.00	90.00	359.740	9,387.00	3,738.30	-549.99	3,740.67	0.00	0.00	0.00
14,300.00	90.00	359.740	9,387.00	3,838.30	-550.44	3,840.67	0.00	0.00	0.00
14,400.00	90.00	359.740	9,387.00	3,938.30	-550.89	3,940.67	0.00	0.00	0.00
14,500.00	90.00	359.740	9,387.00	4,038.30	-551.35	4,040.67	0.00	0.00	0.00
14,600.00	90.00	359.740	9,387.00	4,138.30	-551.80	4,140.67	0.00	0.00	0.00
14,700.00	90.00	359.740	9,387.00	4,238.30	-552.26	4,240.67	0.00	0.00	0.00
14,800.00	90.00	359.740	9,387.00	4,338.30	-552.71	4,340.67	0.00	0.00	0.00
14,900.00	90.00	359.740	9,387.00	4,438.30	-553.16	4,440.67	0.00	0.00	0.00
15,000.00	90.00	359.740	9,387.00	4,538.30	-553.62	4,540.67	0.00	0.00	0.00
15,100.00	90.00	359.740	9,387.00	4,638.30	-554.07	4,640.67	0.00	0.00	0.00
15,200.00	90.00	359.740	9,387.00	4,738.29	-554.52	4,740.67	0.00	0.00	0.00
15,300.00	90.00	359.740	9,387.00	4,838.29	-554.98	4,840.67	0.00	0.00	0.00
15,400.00	90.00	359.740	9,387.00	4,938.29	-555.43	4,940.67	0.00	0.00	0.00
15,500.00	90.00	359.740	9,387.00	5,038.29	-555.89	5,040.67	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Poker Lake Unit 20-17 BD 202H
Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,600.00	90.00	359.740	9,387.00	5,138.29	-556.34	5,140.67	0.00	0.00	0.00	
15,700.00	90.00	359.740	9,387.00	5,238.29	-556.79	5,240.67	0.00	0.00	0.00	
15,800.00	90.00	359.740	9,387.00	5,338.29	-557.25	5,340.67	0.00	0.00	0.00	
15,900.00	90.00	359.740	9,387.00	5,438.29	-557.70	5,440.67	0.00	0.00	0.00	
16,000.00	90.00	359.740	9,387.00	5,538.29	-558.15	5,540.67	0.00	0.00	0.00	
16,100.00	90.00	359.740	9,387.00	5,638.28	-558.61	5,640.67	0.00	0.00	0.00	
16,200.00	90.00	359.740	9,387.00	5,738.28	-559.06	5,740.67	0.00	0.00	0.00	
16,300.00	90.00	359.740	9,387.00	5,838.28	-559.52	5,840.67	0.00	0.00	0.00	
16,400.00	90.00	359.740	9,387.00	5,938.28	-559.97	5,940.67	0.00	0.00	0.00	
16,500.00	90.00	359.740	9,387.00	6,038.28	-560.42	6,040.67	0.00	0.00	0.00	
16,600.00	90.00	359.740	9,387.00	6,138.28	-560.88	6,140.67	0.00	0.00	0.00	
16,700.00	90.00	359.740	9,387.00	6,238.28	-561.33	6,240.67	0.00	0.00	0.00	
16,800.00	90.00	359.740	9,387.00	6,338.28	-561.79	6,340.67	0.00	0.00	0.00	
16,900.00	90.00	359.740	9,387.00	6,438.28	-562.24	6,440.67	0.00	0.00	0.00	
17,000.00	90.00	359.740	9,387.00	6,538.28	-562.69	6,540.67	0.00	0.00	0.00	
17,100.00	90.00	359.740	9,387.00	6,638.27	-563.15	6,640.67	0.00	0.00	0.00	
17,200.00	90.00	359.740	9,387.00	6,738.27	-563.60	6,740.67	0.00	0.00	0.00	
17,300.00	90.00	359.740	9,387.00	6,838.27	-564.05	6,840.67	0.00	0.00	0.00	
17,400.00	90.00	359.740	9,387.00	6,938.27	-564.51	6,940.67	0.00	0.00	0.00	
17,500.00	90.00	359.740	9,387.00	7,038.27	-564.96	7,040.67	0.00	0.00	0.00	
17,600.00	90.00	359.740	9,387.00	7,138.27	-565.42	7,140.67	0.00	0.00	0.00	
17,700.00	90.00	359.740	9,387.00	7,238.27	-565.87	7,240.67	0.00	0.00	0.00	
17,800.00	90.00	359.740	9,387.00	7,338.27	-566.32	7,340.67	0.00	0.00	0.00	
17,900.00	90.00	359.740	9,387.00	7,438.27	-566.78	7,440.67	0.00	0.00	0.00	
18,000.00	90.00	359.740	9,387.00	7,538.27	-567.23	7,540.67	0.00	0.00	0.00	
18,100.00	90.00	359.740	9,387.00	7,638.26	-567.68	7,640.67	0.00	0.00	0.00	
18,200.00	90.00	359.740	9,387.00	7,738.26	-568.14	7,740.67	0.00	0.00	0.00	
18,300.00	90.00	359.740	9,387.00	7,838.26	-568.59	7,840.67	0.00	0.00	0.00	
18,400.00	90.00	359.740	9,387.00	7,938.26	-569.05	7,940.67	0.00	0.00	0.00	
18,500.00	90.00	359.740	9,387.00	8,038.26	-569.50	8,040.67	0.00	0.00	0.00	
18,559.36	90.00	359.740	9,387.00	8,097.62	-569.77	8,100.03	0.00	0.00	0.00	
18,600.00	90.00	0.959	9,387.00	8,138.26	-569.52	8,140.67	3.00	0.00	3.00	
18,700.00	90.00	3.959	9,387.00	8,238.15	-565.23	8,240.54	3.00	0.00	3.00	
18,800.00	90.00	6.959	9,387.00	8,337.69	-555.72	8,340.03	3.00	0.00	3.00	
18,900.00	90.00	9.959	9,387.00	8,436.59	-541.01	8,438.87	3.00	0.00	3.00	
19,000.00	90.00	12.959	9,387.00	8,534.59	-521.14	8,536.78	3.00	0.00	3.00	
19,100.00	90.00	15.959	9,387.00	8,631.41	-496.18	8,633.49	3.00	0.00	3.00	
19,200.00	90.00	18.959	9,387.00	8,726.79	-466.18	8,728.74	3.00	0.00	3.00	
19,291.73	90.00	21.711	9,387.00	8,812.79	-434.31	8,814.60	3.00	0.00	3.00	
19,300.00	90.00	21.463	9,387.00	8,820.48	-431.26	8,822.28	3.00	0.00	-3.00	
19,400.00	90.00	18.463	9,387.00	8,914.46	-397.13	8,916.11	3.00	0.00	-3.00	
19,500.00	90.00	15.463	9,387.00	9,010.10	-367.95	9,011.62	3.00	0.00	-3.00	
19,600.00	90.00	12.463	9,387.00	9,107.14	-343.83	9,108.55	3.00	0.00	-3.00	
19,700.00	90.00	9.463	9,387.00	9,205.30	-324.81	9,206.63	3.00	0.00	-3.00	
19,800.00	90.00	6.463	9,387.00	9,304.33	-310.96	9,305.59	3.00	0.00	-3.00	
19,900.00	90.00	3.463	9,387.00	9,403.94	-302.31	9,405.17	3.00	0.00	-3.00	
20,000.00	90.00	0.463	9,387.00	9,503.87	-298.89	9,505.08	3.00	0.00	-3.00	
20,024.23	90.00	359.736	9,387.00	9,528.09	-298.84	9,529.31	3.00	0.00	-3.00	
20,100.00	90.00	359.736	9,387.00	9,603.87	-299.19	9,605.08	0.00	0.00	0.00	
20,200.00	90.00	359.736	9,387.00	9,703.87	-299.65	9,705.08	0.00	0.00	0.00	
20,300.00	90.00	359.736	9,387.00	9,803.87	-300.11	9,805.08	0.00	0.00	0.00	
20,400.00	90.00	359.736	9,387.00	9,903.87	-300.57	9,905.08	0.00	0.00	0.00	
20,500.00	90.00	359.736	9,387.00	10,003.86	-301.04	10,005.08	0.00	0.00	0.00	
20,600.00	90.00	359.736	9,387.00	10,103.86	-301.50	10,105.08	0.00	0.00	0.00	

Planning Report

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Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

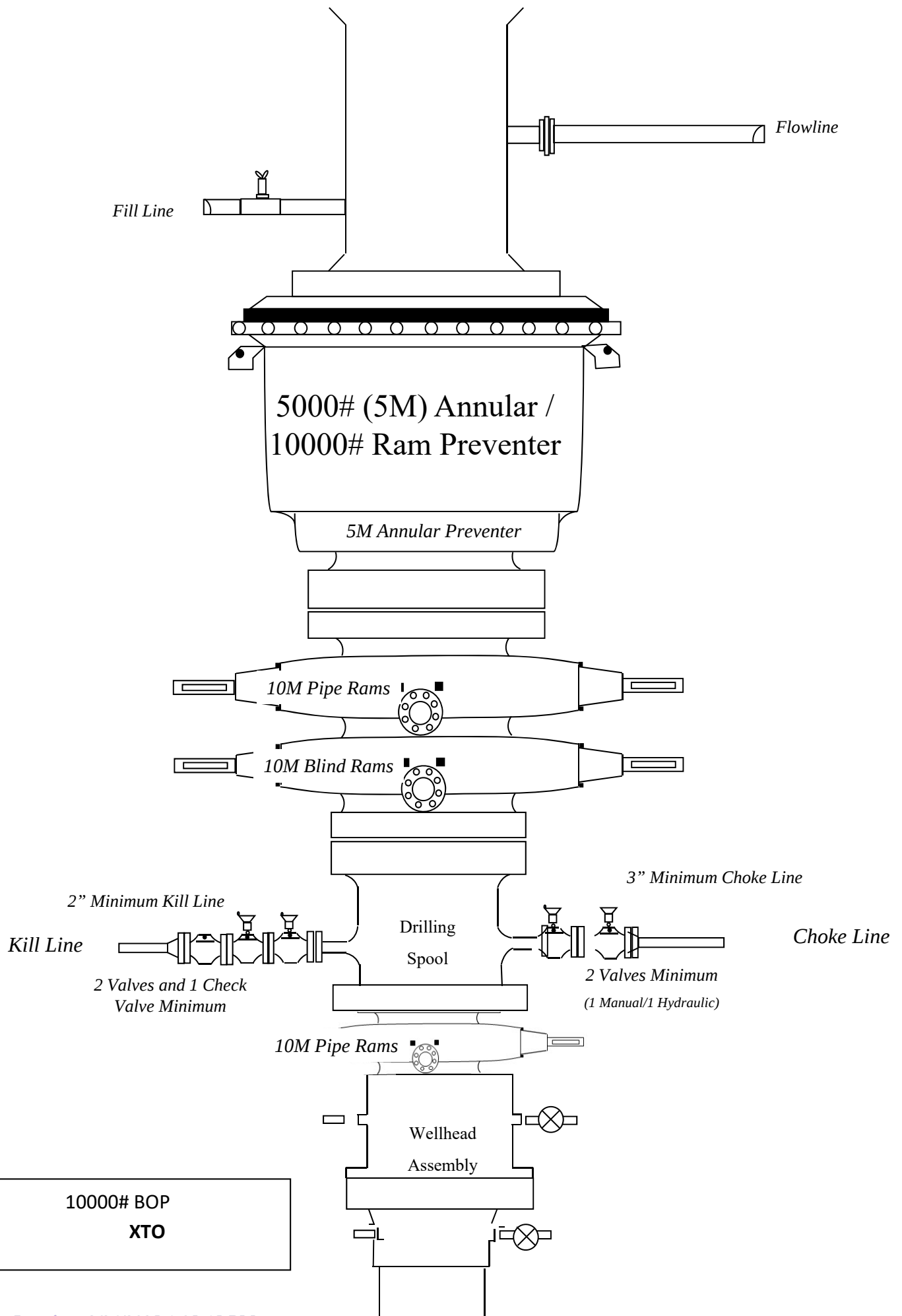
Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
20,700.00	90.00	359.736	9,387.00	10,203.86	-301.96	10,205.08	0.00	0.00	0.00	
20,800.00	90.00	359.736	9,387.00	10,303.86	-302.42	10,305.08	0.00	0.00	0.00	
20,900.00	90.00	359.736	9,387.00	10,403.86	-302.88	10,405.08	0.00	0.00	0.00	
21,000.00	90.00	359.736	9,387.00	10,503.86	-303.34	10,505.08	0.00	0.00	0.00	
21,100.00	90.00	359.736	9,387.00	10,603.86	-303.80	10,605.08	0.00	0.00	0.00	
21,200.00	90.00	359.736	9,387.00	10,703.86	-304.26	10,705.08	0.00	0.00	0.00	
21,300.00	90.00	359.736	9,387.00	10,803.86	-304.72	10,805.08	0.00	0.00	0.00	
21,400.00	90.00	359.736	9,387.00	10,903.85	-305.18	10,905.08	0.00	0.00	0.00	
21,500.00	90.00	359.736	9,387.00	11,003.85	-305.64	11,005.08	0.00	0.00	0.00	
21,600.00	90.00	359.736	9,387.00	11,103.85	-306.10	11,105.08	0.00	0.00	0.00	
21,700.00	90.00	359.736	9,387.00	11,203.85	-306.56	11,205.08	0.00	0.00	0.00	
21,800.00	90.00	359.736	9,387.00	11,303.85	-307.02	11,305.08	0.00	0.00	0.00	
21,900.00	90.00	359.736	9,387.00	11,403.85	-307.48	11,405.08	0.00	0.00	0.00	
22,000.00	90.00	359.736	9,387.00	11,503.85	-307.94	11,505.08	0.00	0.00	0.00	
22,100.00	90.00	359.736	9,387.00	11,603.85	-308.41	11,605.08	0.00	0.00	0.00	
22,200.00	90.00	359.736	9,387.00	11,703.85	-308.87	11,705.08	0.00	0.00	0.00	
22,250.85	90.00	359.736	9,387.00	11,754.70	-309.10	11,755.94	0.00	0.00	0.00	
22,300.00	90.00	359.736	9,387.00	11,803.85	-309.33	11,805.08	0.00	0.00	0.00	
22,340.86	90.00	359.736	9,387.00	11,844.70	-309.51	11,845.94	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
SHL PLU 20-17 BD 202I - plan hits target center - Rectangle (sides W20.00 H20.00 D0.00)	0.00	0.000	0.00	0.00	0.00	404,764.80	632,514.70	32° 6' 43.529 N	103° 54' 19.222 W	
PPP#2 PLU 20-17 BD 2I - plan misses target center by 28.68usft at 19696.10usft MD (9387.00 TVD, 9201.46 N, -325.46 E) - Point	0.00	0.000	9,387.00	9,196.00	-297.30	413,960.80	632,217.40	32° 8' 14.547 N	103° 54' 22.255 W	
P4 PLU 20-17 BD 202H - plan misses target center by 0.09usft at 10432.26usft MD (9387.00 TVD, -29.40 N, -532.89 E) - Point	0.00	0.000	9,387.00	-29.40	-532.80	404,735.40	631,981.90	32° 6' 43.259 N	103° 54' 25.418 W	
LTP PLU 20-17 BD 202I - plan hits target center - Point	0.00	0.000	9,387.00	11,754.70	-309.10	416,519.50	632,205.60	32° 8' 39.869 N	103° 54' 22.274 W	
P5 PLU 20-17 BD 202H - plan misses target center by 0.06usft at 18226.94usft MD (9387.00 TVD, 7765.20 N, -568.26 E) - Point	0.00	0.000	9,387.00	7,765.20	-568.20	412,530.00	631,946.50	32° 8' 0.398 N	103° 54' 25.471 W	
BHL PLU 20-17 BD 202I - plan misses target center by 0.01usft at 22340.86usft MD (9387.00 TVD, 11844.70 N, -309.51 E) - Point	0.00	0.000	9,387.00	11,844.70	-309.50	416,609.50	632,205.20	32° 8' 40.760 N	103° 54' 22.275 W	
FTP PLU 20-17 BD 202I - plan misses target center by 296.35usft at 9413.75usft MD (9169.96 TVD, -981.31 N, -642.69 E) - Point	0.00	0.000	9,387.00	-1,180.80	-673.00	403,584.00	631,841.70	32° 6' 31.870 N	103° 54' 27.101 W	
PPP#1 PLU 20-17 BD 2I - plan misses target center by 0.01usft at 14338.40usft MD (9387.00 TVD, 3876.70 N, -550.61 E) - Point	0.00	0.000	9,387.00	3,876.70	-550.60	408,641.50	631,964.10	32° 7' 21.916 N	103° 54' 25.446 W	

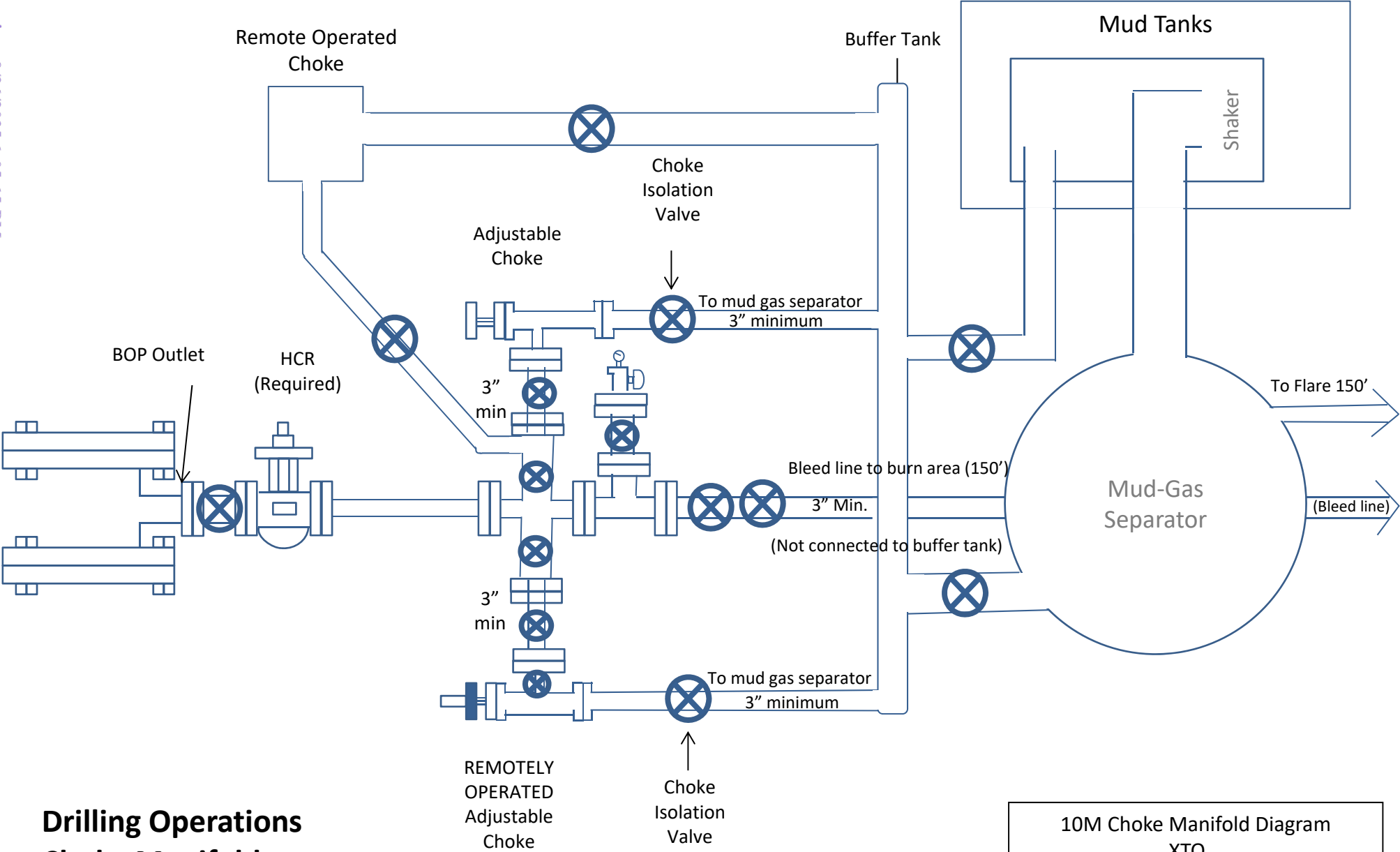
Planning Report

Database:	EDM 5000.18 Single User Db	Local Co-ordinate Reference:	Well Poker Lake Unit 20-17 BD 202H
Company:	ROC	TVD Reference:	RKB32' @ 3206.00usft (TBD)
Project:	Long Lead - Poker Lake Unit 20-8/17 BD	MD Reference:	RKB32' @ 3206.00usft (TBD)
Site:	Poker Lake Unit 20-8/17 BD	North Reference:	Grid
Well:	Poker Lake Unit 20-17 BD 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
725.06	725.06	Rustler				
946.64	946.64	Salado				
3,238.21	3,173.87	Base of Salt				
3,717.83	3,632.54	Delaware				
4,656.97	4,530.64	Cherry Canyon				
6,692.65	6,501.99	Brushy Canyon				
7,524.63	7,333.97	Basal Brushy Canyon				
7,918.39	7,727.73	Bone Spring Lm.				
8,050.04	7,859.38	Avalon				
8,436.00	8,245.34	Lower Avalon				
8,541.47	8,350.81	1st Bone Spring Sand				
8,907.39	8,716.70	2nd Bone Spring Shale				
9,044.35	8,851.71	2nd Bone Spring Lime				
9,216.56	9,011.53	2nd Bone Spring Sand				
9,986.46	9,387.00	2rd Bone Spring Sand Lower 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



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

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

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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	328	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 441®



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

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

Pipe Body Data

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

Connection Data

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

Notes

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

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TenarisHydril Wedge 441®



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

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

Pipe Body Data

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

Connection Data

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

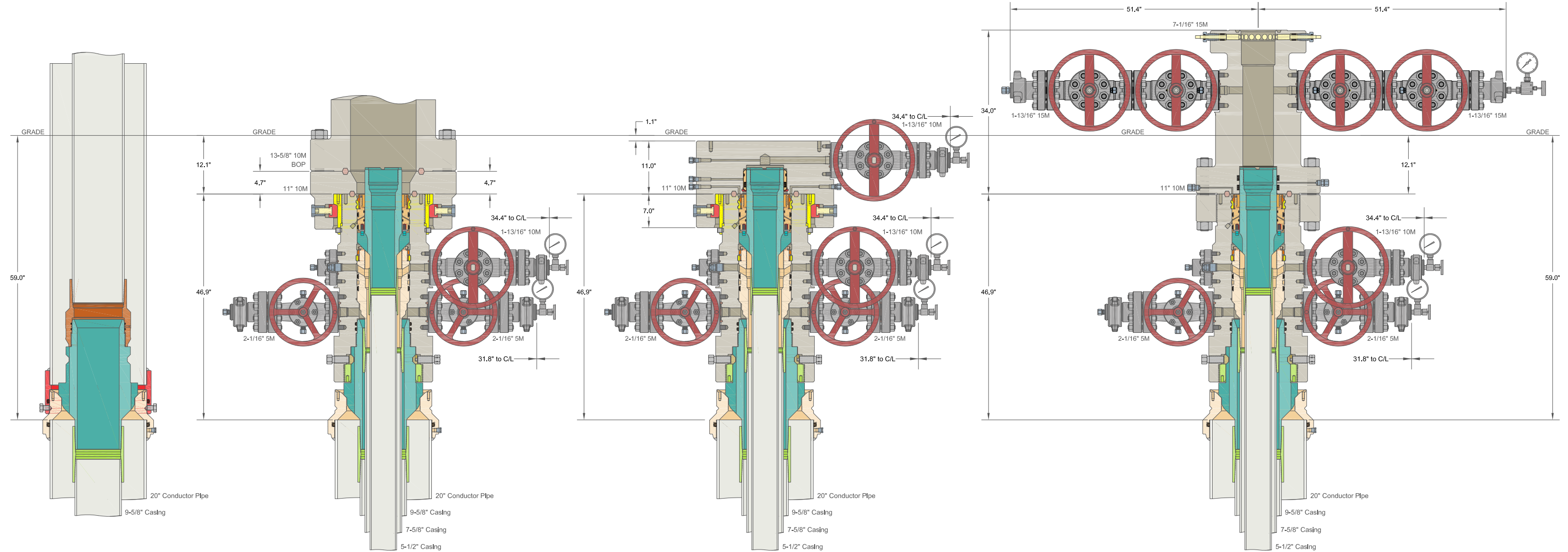
Notes

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

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ALL DIMENSIONS APPROXIMATE			
CACTUS WELLHEAD LLC			
XTO ENERGY INC DELAWARE BASIN			
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		DRAWN	VJK
		APPRV	31MAR22
		DRAWING NO. HBE0000479	

XTO Permian Operating, LLC. states that we will not introduce any additives that contain PFAS chemicals in the completion or recompletion of the well and will meet the certification requirement.

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.

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

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

Background

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

Supporting Documentation

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



Figure 1: Winch System attached to BOP Stack

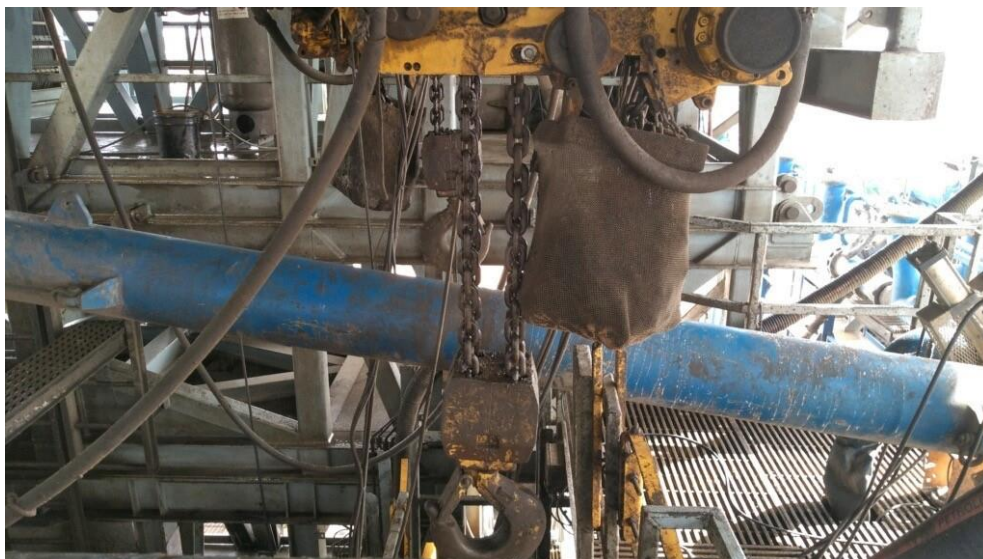


Figure 2: BOP Winch System

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

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API STANDARD 53

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

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

^a Pressure test evaluation periods shall be a minimum of five minutes.

No visible leaks.

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

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

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

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

^e Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

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

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

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

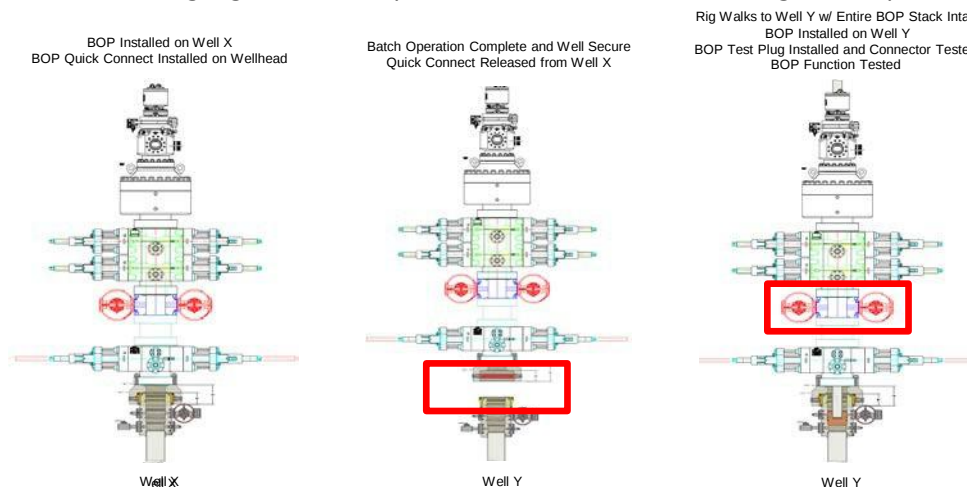
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

Procedures

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

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

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



Summary

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

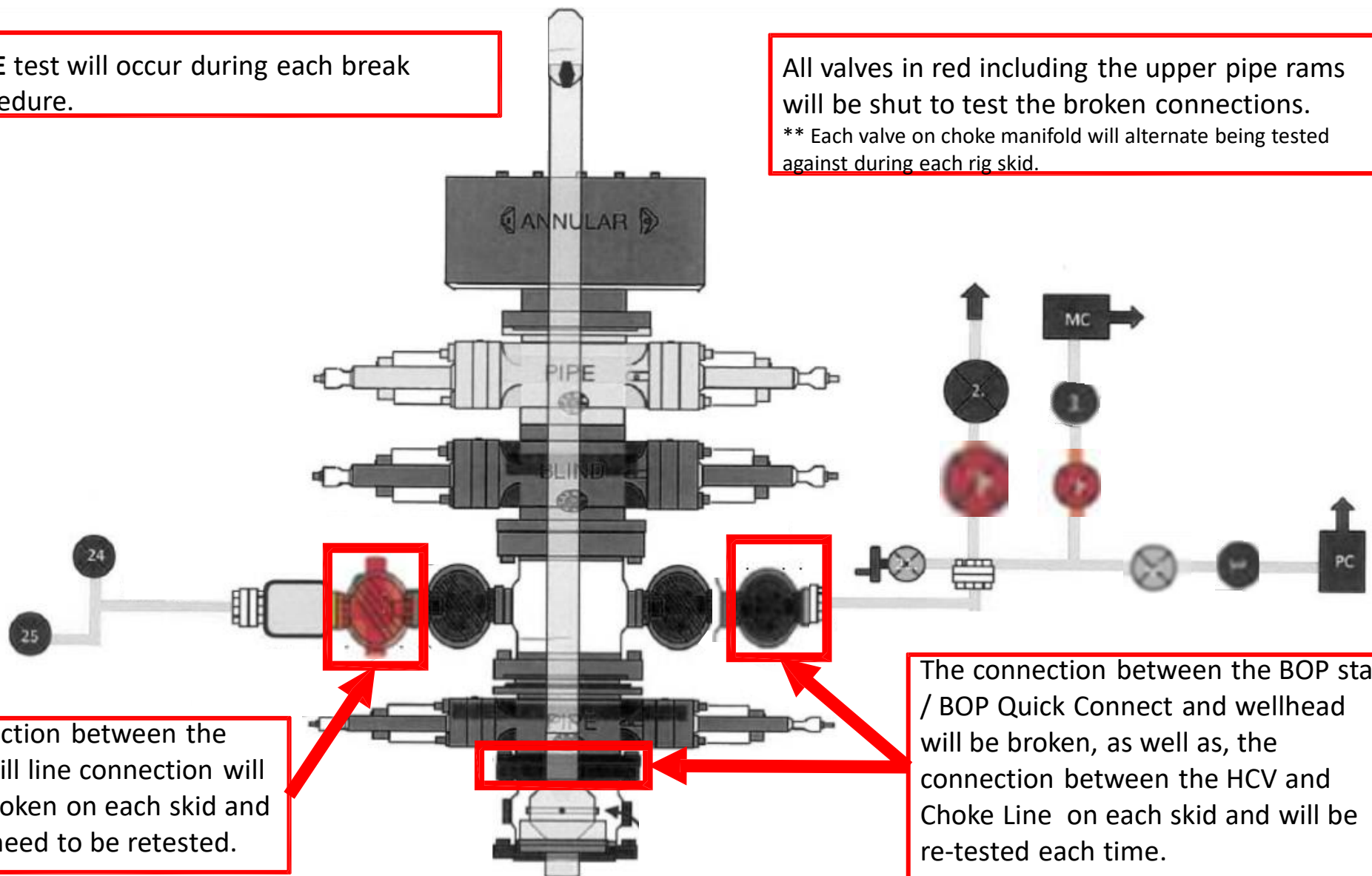
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

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

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

All valves in red including the upper pipe rams will be shut to test the broken connections.
** Each valve on choke manifold will alternate being tested against during each rig skid.



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

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

**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:

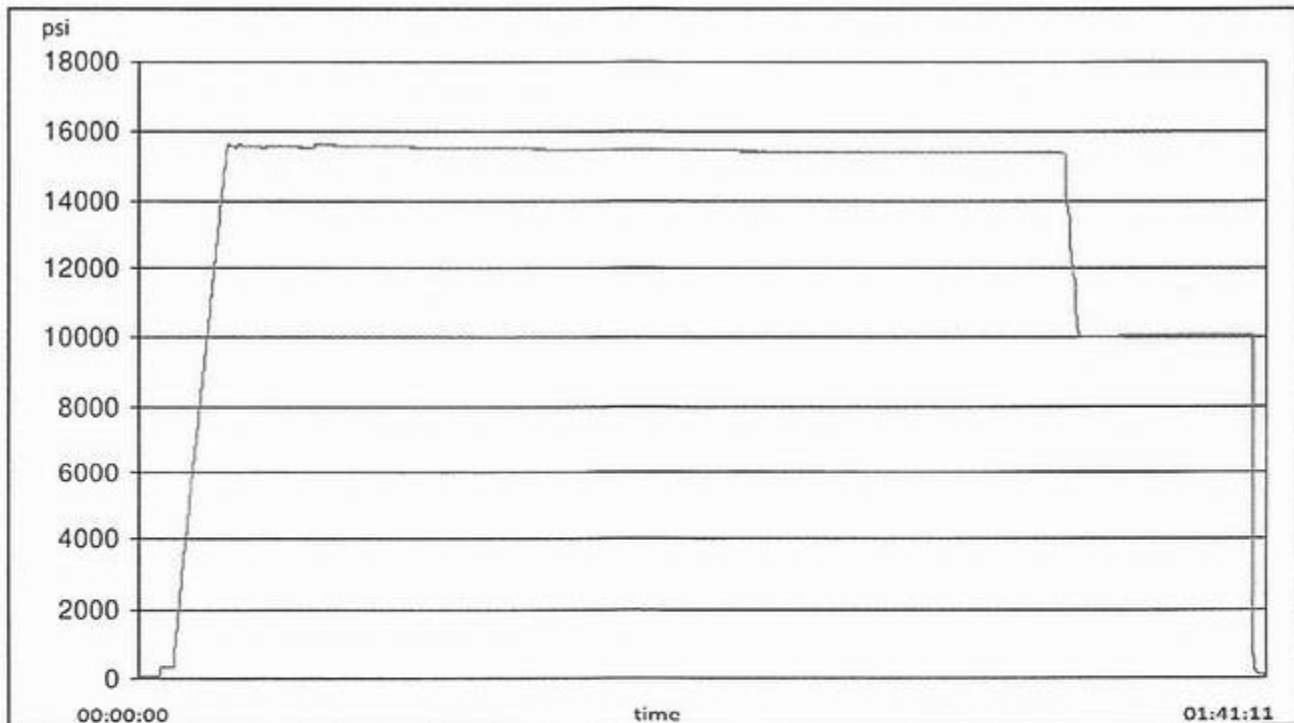
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





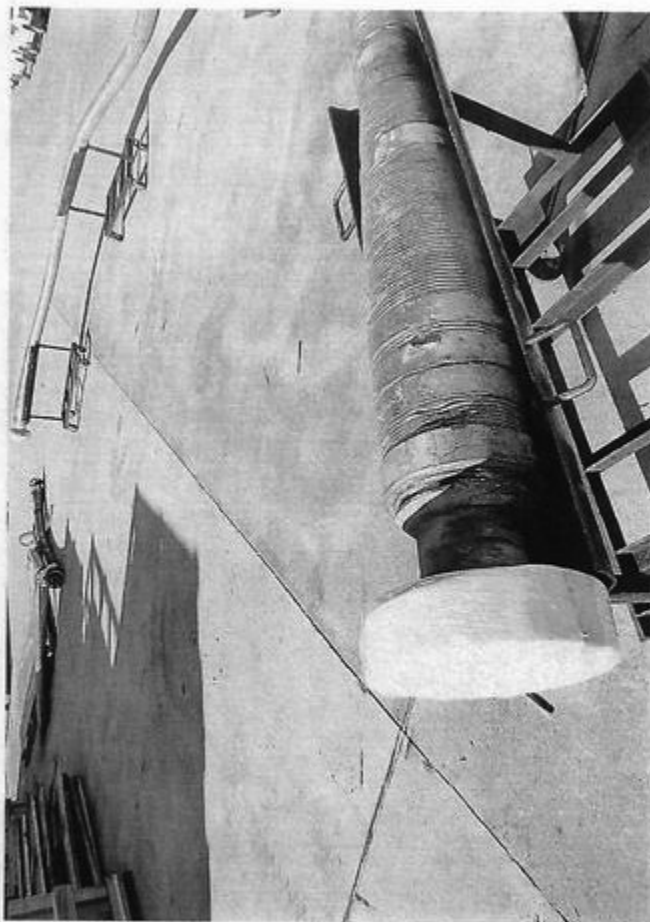
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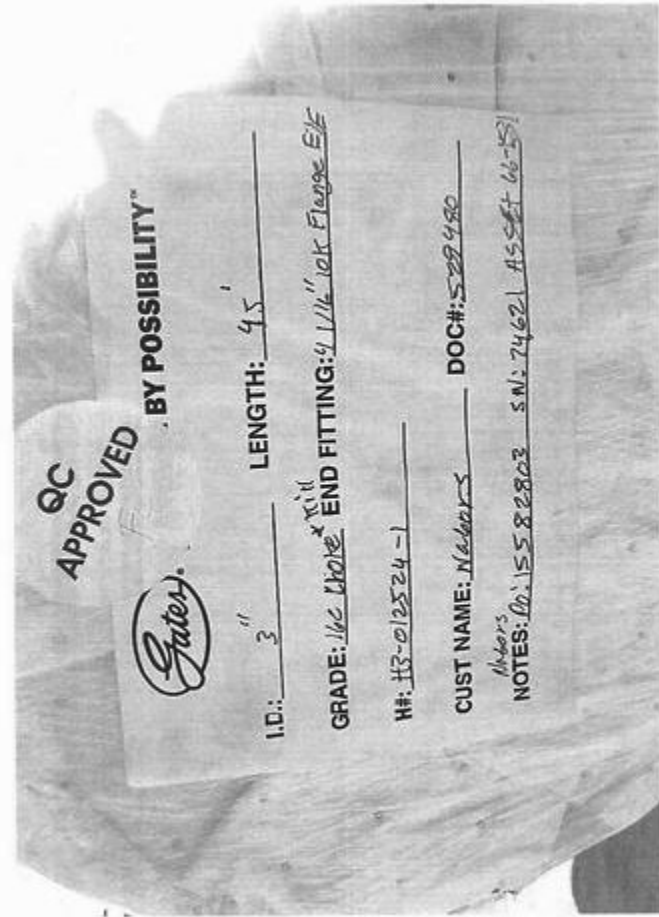
TEST REPORT

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

Comment

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XTO Permian Operating, LLC Offline Cementing Variance Request

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

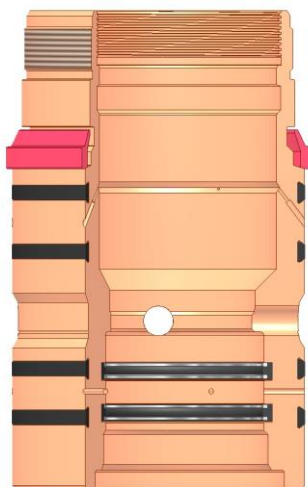
1. Cement Program

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

2. Offline Cementing Procedure

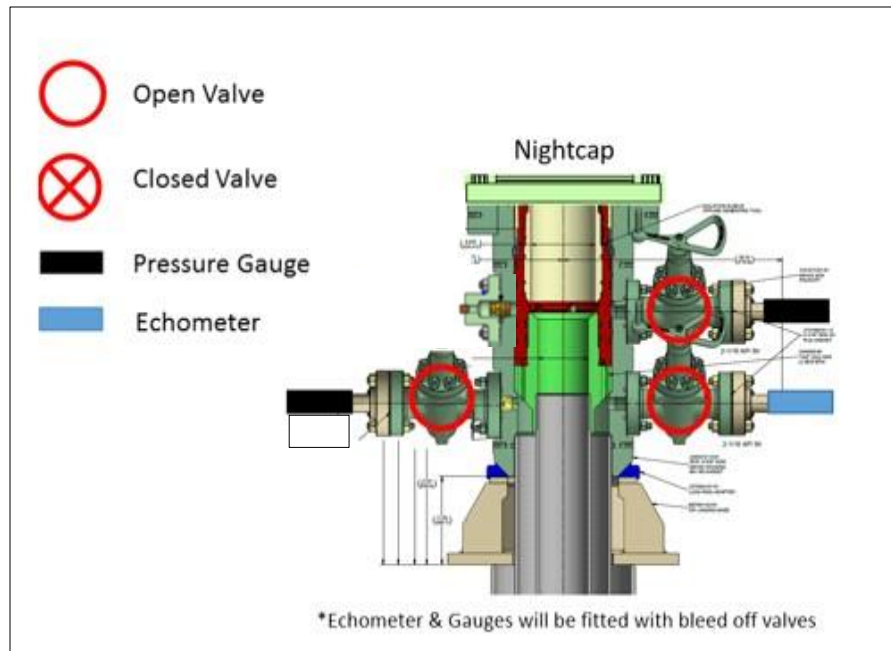
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

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



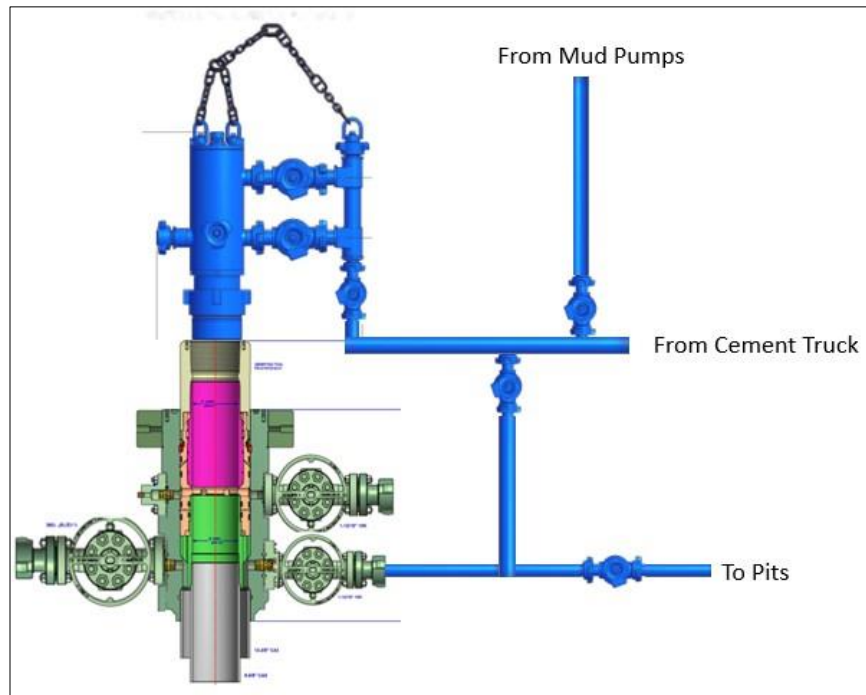
Annular packoff with both external and internal seals

XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

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

XTO Permian Operating, LLC Offline Cementing Variance Request

Wellhead diagram during offline cementing operations

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



Offline Production Cementing

Delaware Basin | 18 March 2025

Energy lives here™

Variance Request for Offline Production Cementing

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

Supporting Materials:

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

Criteria for Offline Cementing

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

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

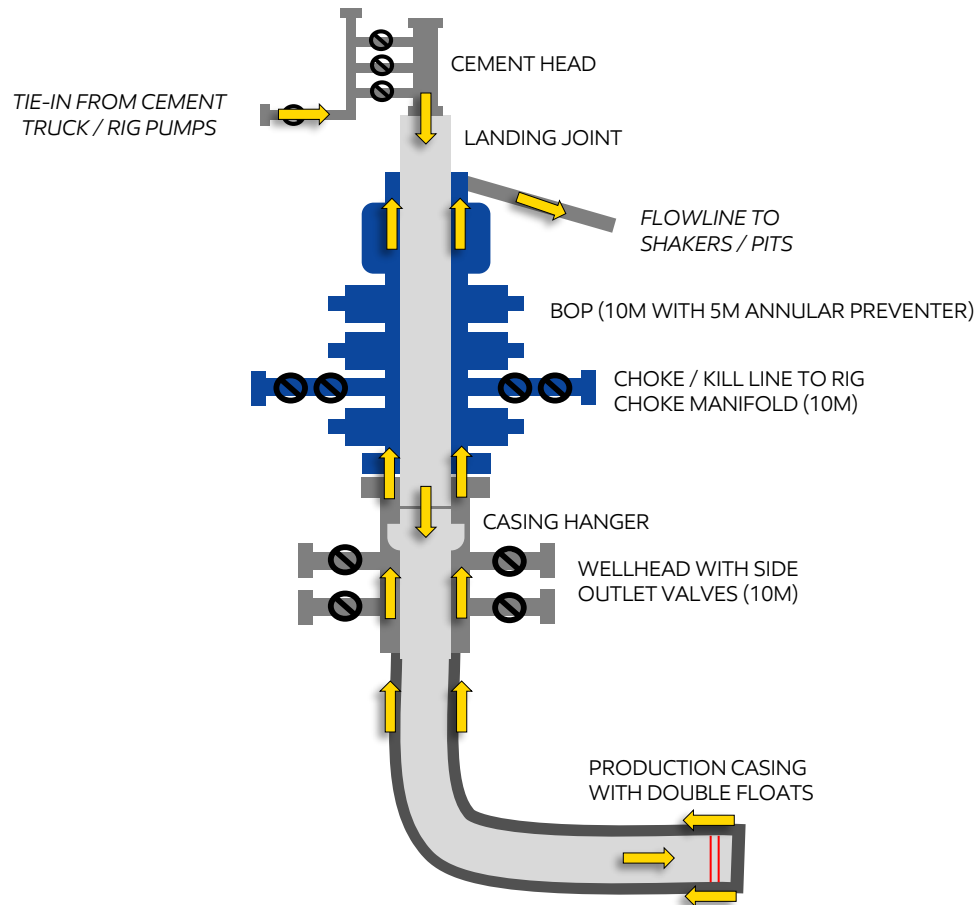
Offline Cementing Procedure

 Trigger to reevaluate plan

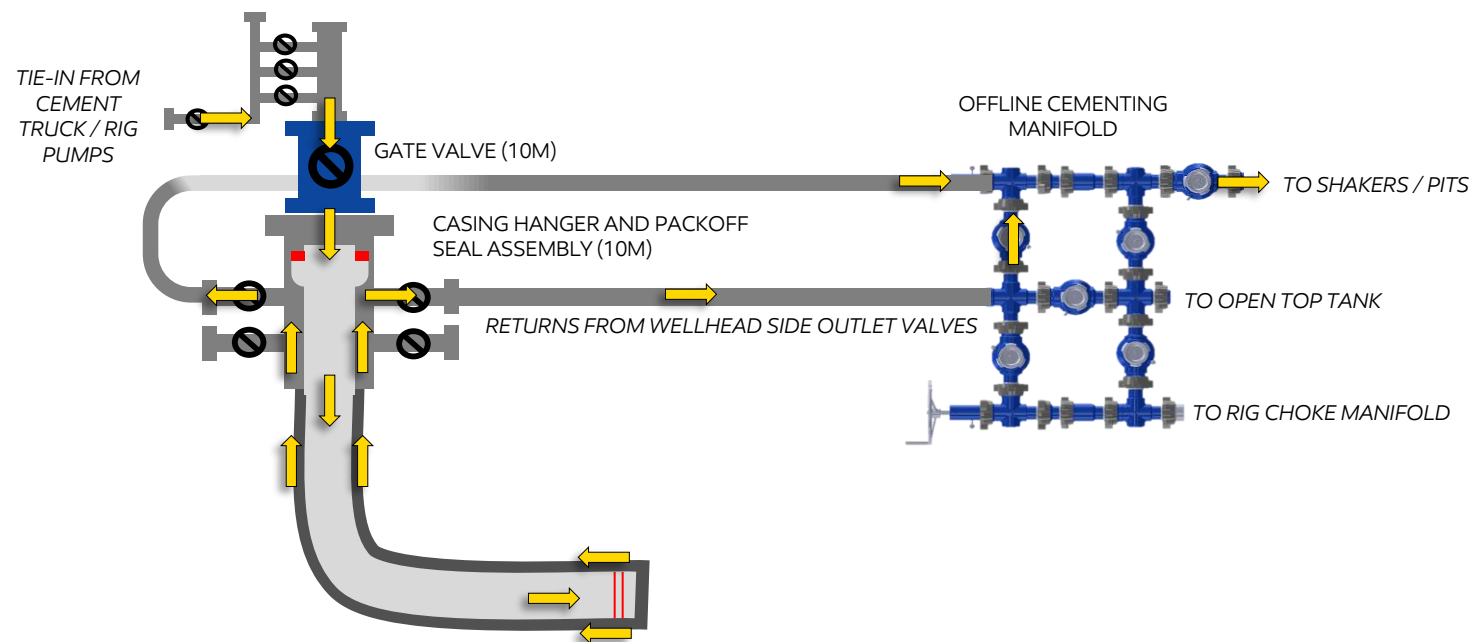
1. **Land production casing hanger** *If casing hanger cannot be landed, cementing will be performed online*
2. Flow check and **confirm the well is static on the casing and annulus.** *If flow is observed, cementing will be performed online*
3. **Lay down landing joint**
4. **Install and test pack-off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

Process and Equipment

ONLINE CEMENTING



OFFLINE CEMENTING



KEY DIFFERENCES

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

Barrier Comparison

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

Well Control Response Plan

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

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

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Energy, Minerals and Natural Resources
Oil Conservation Division
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CONDITIONS

Action 505678

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 505678
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	9/26/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	9/26/2025