

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

<b>Well Name:</b> POKER LAKE UNIT 21 DTD	<b>Well Location:</b> T24S / R30E / SEC 21 / NENW / 32.209385 / -103.887622	<b>County or Parish/State:</b> EDDY / NM
<b>Well Number:</b> 105H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMLC068430	<b>Unit or CA Name:</b> POKER LAKE UNIT	<b>Unit or CA Number:</b> NMNM71016X
<b>US Well Number:</b> 3001553215	<b>Operator:</b> XTO PERMIAN OPERATING LLC	

## Notice of Intent

**Sundry ID:** 2784391

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 04/10/2024

**Time Sundry Submitted:** 02:46

**Date proposed operation will begin:** 04/30/2024

**Procedure Description:** XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, FTP, LTP, BHL, Casing sizes, Cement, Proposed total Depth, and formation (Pool). FROM: TO: SHL: 396' FNL & 2246' FWL OF SECTION 21-T24S-R30E 396' FNL & 2247' FWL OF SECTION 21-T24S-R30E FTP: 386' FNL & 2436' FEL OF SECTION 21-T24S-R30E 100' FNL & 2338' FEL OF SECTION 21-T24S-R30E LTP: 330' FNL & 2296' FEL OF SECTION 33-T23S-R30E 2539' FNL & 2334' FEL OF SECTION 33-T24S-R30E BHL: 200' FNL & 2295' FEL OF SECTION 33-T23S-R30E 2629' FNL & 2335' FEL OF SECTION 33-T24S-R30E The proposed total depth is changing from 32629' MD; 10917' TVD (Wolfcamp) to 23229' MD; 10129' TVD (Bone Spring 3 Shale). A saturated salt brine will be utilized while drilling through the salt formations. See attached Drilling Plan for updated cement and casing program. Attachments: C-102, Drilling Plan, Directional Plan, MBS, BOP Variance and Well Control Plan.

## NOI Attachments

### Procedure Description

PLU\_21\_DTD\_105H\_Sundry\_Attachments\_20240718143131.pdf

**Well Name:** POKER LAKE UNIT 21  
DTD

**Well Location:** T24S / R30E / SEC 21 /  
NENW / 32.209385 / -103.887622

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

**Well Number:** 105H

**Type of Well:** CONVENTIONAL GAS  
WELL

**Allottee or Tribe Name:**

**Lease Number:** NMLC068430

**Unit or CA Name:** POKER LAKE UNIT

**Unit or CA Number:**  
NMNM71016X

**US Well Number:** 3001553215

**Operator:** XTO PERMIAN OPERATING  
LLC

## Conditions of Approval

### Additional

Poker\_Lake\_Unit\_21\_DTD\_105H\_COA\_20240904145744.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:** TERRA SEBASTIAN

**Signed on:** JUL 18, 2024 02:31 PM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Regulatory Advisor

**Street Address:** 6401 HOLIDAY HILL ROAD SUITE 200

**City:** MIDLAND

**State:** TX

**Phone:** (432) 999-3107

**Email address:** TERRA.B.SEBASTIAN@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:** 09/04/2024

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

5. Lease Serial No. NMLC068430

6. If Indian, Allottee or Tribe Name

SUNDRY NOTICES AND REPORTS ON WELLS  
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

2. Name of Operator XTO PERMIAN OPERATING LLC

3a. Address 6401 HOLIDAY HILL ROAD BLDG 5, MIDLAND, 3b. Phone No. (include area code) (432) 683-2277

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 21/T24S/R30E/NMP

7. If Unit of CA/Agreement, Name and/or No. POKER LAKE UNIT/NMNM71016X

8. Well Name and No. POKER LAKE UNIT 21 DTD/105H

9. API Well No. 3001553215

10. Field and Pool or Exploratory Area PURPLE SAGE/WOLFCAMP

11. Country or Parish, State EDDY/NM

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

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

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or 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.)

XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, FTP, LTP, BHL, Casing sizes, Cement, Proposed total Depth, and formation (Pool).

FROM: TO:  
SHL: 396' FNL & 2246' FWL OF SECTION 21-T24S-R30E 396' FNL & 2247' FWL OF SECTION 21-T24S-R30E  
FTP: 386' FNL & 2436' FEL OF SECTION 21-T24S-R30E 100' FNL & 2338' FEL OF SECTION 21-T24S-R30E  
LTP: 330' FNL & 2296' FEL OF SECTION 33-T23S-R30E 2539' FNL & 2334' FEL OF SECTION 33-T24S-R30E  
BHL: 200' FNL & 2295' FEL OF SECTION 33-T23S-R30E 2629' FNL & 2335' FEL OF SECTION 33-T24S-R30E

The proposed total depth is changing from 32629 MD; 10917 TVD (Wolfcamp) to 23229 MD; 10129 TVD (Bone Spring 3 Shale).

A saturated salt brine will be utilized while drilling through the salt formations.

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) TERRA SEBASTIAN / Ph: (432) 999-3107

Regulatory Advisor

Signature (Electronic Submission)

Date 07/18/2024

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

Petroleum Engineer

Date 09/04/2024

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

Office CARLSBAD

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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



## Additional Information

### Additional Remarks

See attached Drilling Plan for updated cement and casing program.

Attachments: C-102, Drilling Plan, Directional Plan, MBS, BOP Variance and Well Control Plan.

### Location of Well

0. SHL: NENW / 396 FNL / 2246 FWL / TWSP: 24S / RANGE: 30E / SECTION: 21 / LAT: 32.209385 / LONG: -103.887622 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNE / 386 FNL / 2436 FEL / TWSP: 24S / RANGE: 30E / SECTION: 21 / LAT: 32.209416 / LONG: -103.885463 ( TVD: 10917 feet, MD: 11288 feet )

BHL: NWNE / 200 FNL / 2295 FEL / TWSP: 23S / RANGE: 30E / SECTION: 33 / LAT: 32.268079 / LONG: -103.885013 ( TVD: 10917 feet, MD: 32629 feet )

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b> XTO <b>LEASE NO.:</b> NMLC068430 <b>LOCATION:</b> Sec. 21, T.24 S, R 30 E <b>COUNTY:</b> <span style="border: 1px solid black; padding: 2px;">Eddy County, New Mexico ▼</span>
<b>WELL NAME &amp; NO.:</b> Poker Lake Unit 21 DTD 105H <b>SURFACE HOLE FOOTAGE:</b> 396'/N & 2247'/W <b>BOTTOM HOLE FOOTAGE:</b> 2629'/N & 2335'/E

Changes approved through engineering via **Sundry 2784391** on 9-4-2024 \_\_\_\_\_. Any previous COAs not addressed within the updated COAs still apply.

COA

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

### A. HYDROGEN SULFIDE

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

### B. CASING

1. The 13-3/8 inch surface casing shall be set at approximately **932** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be

- notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:  
Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.
- a. **First stage:** Operator will cement with intent to reach the top of the **Brushy Canyon at 6265'**
  - b. **Second stage:** Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified.

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

- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

**Operator has proposed to pump down Intermediate 1 X Intermediate 2 annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the Intermediate 2 casing to tieback requirements listed above after the second stage BH to verify TOC.** Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

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

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

## C. PRESSURE CONTROL

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

## D. SPECIAL REQUIREMENT (S)

### Unit Wells

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

### Commercial Well Determination

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

### BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

### **Offline Cementing**

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

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

### **Casing Clearance**

String does not meet 0.422" clearance requirement per 43 CFR 3172. Cement tieback requirement increased 100' for 2nd Intermediate casing tieback. Operator may contact approving engineer to discuss changing casing set depth or grade to meet clearance requirement.



## GENERAL REQUIREMENTS

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

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

### Contact Eddy County Petroleum Engineering Inspection Staff:

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

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

### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

## **B. PRESSURE CONTROL**

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

requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

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

open. (only applies to single stage cement jobs, prior to the cement setting up.)

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

#### **C. DRILLING MUD**

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

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

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be

disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**Approved by Zota Stevens on 9/4/2024**  
575-234-5998 / [zstevens@blm.gov](mailto:zstevens@blm.gov)



District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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



## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-015-53215</b>	<sup>2</sup> Pool Code <b>97753</b>	<sup>3</sup> Pool Name <b>WILDCAT S243006B;LWR BONE SPRING</b>
<sup>4</sup> Property Code <b>333571</b>	<sup>5</sup> Property Name <b>POKER LAKE UNIT 21 DTD</b>	<sup>6</sup> Well Number <b>105H</b>
<sup>7</sup> OGRID No. <b>373075</b>	<sup>8</sup> Operator Name <b>XTO PERMIAN OPERATING, LLC.</b>	<sup>9</sup> Elevation <b>3,342'</b>

<sup>10</sup> Surface Location

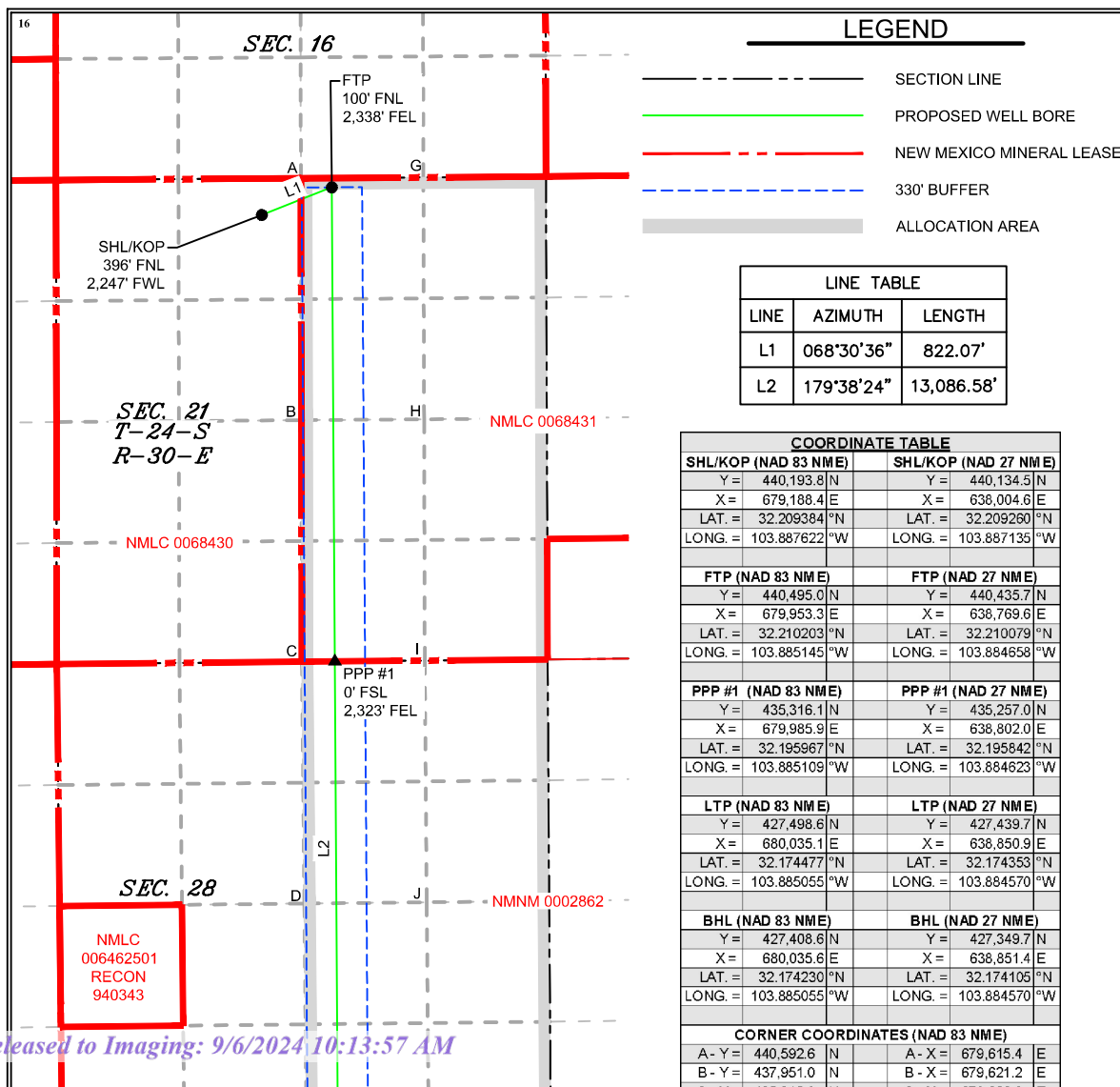
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>C</b>	<b>21</b>	<b>24S</b>	<b>30E</b>		<b>396</b>	<b>NORTH</b>	<b>2,247</b>	<b>WEST</b>	<b>EDDY</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>G</b>	<b>33</b>	<b>24S</b>	<b>30E</b>		<b>2,629</b>	<b>NORTH</b>	<b>2,335</b>	<b>EAST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>800.00</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
------------------------------------------------	-------------------------------	----------------------------------	-------------------------

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.

<sup>17</sup> OPERATOR CERTIFICATION

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.

Emily Rivera 7/15/2024  
Signature Date

Emily Rivera  
Printed Name

emily.a.rivera@exxonmobil.com  
E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION

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.

7/11/2024

Date of Survey

Signature and Seal of  
Professional Surveyor:

Intent ☒ As Drilled ☐

API # 30-15-		
Operator Name: XTO PERMAIN OPERATING, LLC.	Property Name: POKER LAKE UNIT 21 DTD	Well Number 105H

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

## First Take Point (FTP)

UL B	Section 21	Township 24S	Range 30E	Lot	Feet 100	From N/S NORTH	Feet 2,338	From E/W EAST	County EDDY
Latitude 32.210203					Longitude -103.885145				NAD 83

## Last Take Point (LTP)

UL G	Section 33	Township 24S	Range 30E	Lot	Feet 2,539	From N/S NORTH	Feet 2,334	From E/W EAST	County EDDY
Latitude 32.174477					Longitude -103.885055				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

XTO Energy Inc.

POKER LAKE UNIT 21 DTD 105H

Projected TD: 23108' MD / 10246' TVD

SHL: 396' FNL & 2247' FWL , Section 21, T24S, R30E

BHL: 2629' FNL & 2335' FEL , Section 33, T23S, R30E

EDDY County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	929'	Water
Top of Salt	1332'	Water
Base of Salt	3525'	Water
Delaware	3719'	Water
Brushy Canyon	6265'	Water/Oil/Gas
Bone Spring	7589'	Water
Avalon	8282'	Water/Oil/Gas
1st Bone Spring	8298'	Water/Oil/Gas
2nd Bone Spring	8883'	Water/Oil/Gas
3rd Bone Spring	9709'	Water/Oil/Gas
Target/Land Curve	10246'	Water/Oil/Gas

\*\*\* Hydrocarbons @ Brushy Canyon

\*\*\* Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13.375 inch casing @ 1307' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9.625 inch casing at 3625' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 7.625 inch casing at 9330' and cementing to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 23108 MD/TD and 5.5 inch production casing will be set at TD and cemented back up to 2nd intermediate (estimated TOC 9030 feet) per Potash regulations.

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 1307'	13.375	54.5	J-55	BTC	New	3.18	1.98	12.76
12.25	0' – 3625'	9.625	40	J-55	BTC	New	1.78	3.14	4.34
8.75	0' – 3725'	7.625	29.7	RY P-110	Flush Joint	New	2.97	3.14	2.01
8.75	3725' – 9330'	7.625	29.7	HC L-80	Flush Joint	New	2.16	3.65	2.44
6.75	0' – 9230'	5.5	20	RY P-110	Semi-Premium	New	1.05	2.27	2.13
6.75	9230' - 23108'	5.5	20	RY P-110	Semi-Flush	New	1.05	2.04	5.49

· Production casing meets the clearance requirements as tapered string crosses over before encountering the intermediate shoe, per Onshore Order 2.3.B.1

· XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface and intermediate 1 casing per this Sundry

· 9.625 Collapse analyzed using 50% evacuation based on regional experience.

· 7.625 Collapse analyzed using 50% evacuation based on regional experience.

· 5.5 Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

· XTO requests the option to use 5" BTC Float equipment for the the production casing

**Wellhead:**

*Permanent Wellhead – Multibowl System*

A. Starting Head: 20" 10M top flange x 13-3/8" bottom

B. Tubing Head: 13-5/8" 10M bottom flange x 7-1/16" 15M top

flange

· Wellhead will be installed by manufacturer's representatives.

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

#### 4. Cement Program

**Surface Casing: 13.375, 54.5 New BTC, J-55 casing to be set at +/- 1307'**

Optional Lead: 1050 sxs EconoCem-HLTRRC (mixed at 12.8 ppg, 1.33 ft<sup>3</sup>/sx, 10.13 gal/sx water)  
 Tail: 310 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
 Top of Cement: Surface  
 Compressives: 12-hr = 250 psi 24 hr = 500 psi

Due to the high probability of not getting cement to surface during conventional top-out jobs in the area, ~10-20 ppb gravel will be added on the backside of the 1" to get cement to surface, if required.

**1st Intermediate Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 3625'**

Lead: 750 sxs Class C (mixed at 14.8 ppg, 2.06 ft<sup>3</sup>/sx, 10.13 gal/sx water)  
 Tail: 60 sxs Class C + 2% CaCl (mixed at 15.6 ppg, 2.06 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
 Top of Cement: Surface  
 Compressives: 12-hr = 900 psi 24 hr = 1500 psi

**2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 9330'**

1st Stage

Optional Lead: 140 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)  
 TOC: 3325  
 Tail: 320 sxs Class C (mixed at 14.8 ppg, 1.27 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
 TOC: Brushy Canyon @ 6265  
 Compressives: 12-hr = 900 psi 24 hr = 1150 psi

2nd Stage - bradenhead contingency

Tail: 150 sxs Class C (mixed at 14.8 ppg, 2.77 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
 Top of Cement: 3325  
 Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6265') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface.

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

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

**Production Casing: 5.5, 20 New Semi-Flush, RY P-110 casing to be set at +/- 23108'**

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 9030 feet  
 Tail: 850 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 9613 feet  
 Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

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

## 5. Pressure Control Equipment

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

All BOP testing will be done by an independent service company. Annular pressure tests will be conducted to at least 50% of the rated working pressure. When nipping up on the 13.375, 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each week

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

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per Cactus recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. We will request permission to **ONLY** retest broken pressure seals if the following conditions are met: 1. After a full BOP test is conducted on the first well on the pad 2. When skidding to drill an intermediate section that does not penetrate into the Wolfcamp.



**6. Proposed Mud Circulation System**

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 1307'	17.5	FW/Native	8.4-8.9	35-40	NC
1307' - 3625'	12.25	Saturated brine for salt interval / Direct Emulsion	10 - 10.5	30-32	NC
3625' to 9330'	8.75	BDE/OBM or Brine	9- 9.5	30-32	NC
9330' to 23108'	6.75	OBM	10.2-10.7	50-60	NC - 20

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

Spud with fresh water/native mud. Drill out from under surface casing with Saturated Salt solution. Saturated Salt mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system."

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

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 13.375 casing.

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

Open hole logging will not be done on this well.

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

None Anticipated. BHT of 165 to 185 F is anticipated. 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 could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 5434 psi.

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

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

Well Plan Report - Poker Lake Unit 21 DTD South 105H

Measured Depth: 23108.43 ft  
TVD RKB: 10246.00 ft  
Location  
Cartographic Reference System: New Mexico East - NAD 27  
Northing: 440134.50 ft  
Easting: 638004.60 ft  
RKB: 3374.00 ft  
Ground Level: 3342.00 ft  
North Reference: Grid  
Convergence Angle: 0.24 Deg

Plan Sections

Poker Lake Unit 21 DTD South 105H									
Measured		TVD		X Offset		Build		Turn	
Depth	Inclination	Depth	RKB	Y Offset	(ft)	Rate	(Deg/100ft)	Rate	(Deg/100ft)
(ft)	(Deg)	(ft)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100.00	0.00	1100.00	1100.00	0.00	0.00	0.00	0.00	0.00	0.00
1712.78	12.26	1708.11	1708.11	23.92	60.75	2.00	0.00	0.00	2.00
4970.80	12.26	4891.89	4891.89	277.28	704.25	0.00	0.00	0.00	0.00
5583.57	0.00	5500.00	5500.00	301.20	765.00	-2.00	0.00	0.00	2.00
9613.37	0.00	9529.80	9529.80	301.20	765.00	0.00	0.00	0.00	0.00
10738.37	90.00	10246.00	10246.00	-414.98	769.47	8.00	0.00	0.00	8.00
23018.61	90.00	10246.00	10246.00	-12694.98	846.20	0.00	0.00	0.00	0.00
23108.43	90.00	10246.00	10246.00	-12784.80	846.77	0.00	0.00	0.00	0.00

Position Uncertainty

Poker Lake Unit 21 DTD South 105H									
Measured		TVD		Lateral		Vertical		Magnitude	
Depth	Inclination	Depth	RKB	Y Offset	(ft)	X Offset	(ft)	Semi-major	Semi-minor
(ft)	(Deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)

Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	Error	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.751	0.000	0.220	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	1.259	0.000	0.627	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	1.698	0.000	0.986	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.347	0.000	2.108	0.000	1.344	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.374	0.000	2.503	0.000	1.701	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.406	0.000	2.888	0.000	2.059	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.443	0.000	3.267	0.000	2.417	2.417	128.190	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.485	0.000	3.642	0.000	2.775	2.775	128.423	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.531	0.000	4.014	0.000	3.133	3.133	128.602	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.581	0.000	4.384	0.000	3.491	3.491	128.744	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.634	0.000	4.752	0.000	3.849	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	68.509	1199.980	5.087	0.000	4.430	0.000	2.690	0.000	5.218	0.000	4.277	4.277	-44.191	MWD+IFR1+MS
1300.000	4.000	68.509	1299.838	5.851	0.000	4.805	0.000	2.750	0.000	5.885	0.000	4.775	4.775	-30.511	MWD+IFR1+MS
1400.000	6.000	68.509	1399.452	6.539	0.000	5.178	0.000	2.816	0.000	6.560	0.000	5.177	5.177	-23.228	MWD+IFR1+MS
1500.000	8.000	68.509	1498.702	7.172	0.000	5.550	0.000	2.889	0.000	7.208	0.000	5.547	5.547	-19.221	MWD+IFR1+MS
1600.000	10.000	68.509	1597.465	7.761	0.000	5.922	0.000	2.971	0.000	7.823	0.000	5.907	5.907	-16.779	MWD+IFR1+MS
1700.000	12.000	68.509	1695.623	8.315	0.000	6.294	0.000	3.066	0.000	8.409	0.000	6.264	6.264	-15.154	MWD+IFR1+MS
1712.776	12.256	68.509	1708.114	8.344	0.000	6.338	0.000	3.069	0.000	8.445	0.000	6.308	6.308	-15.168	MWD+IFR1+MS
1800.000	12.256	68.509	1793.350	8.574	0.000	6.645	0.000	3.136	0.000	8.671	0.000	6.616	6.616	-15.110	MWD+IFR1+MS
1900.000	12.256	68.509	1891.071	8.857	0.000	7.018	0.000	3.218	0.000	8.950	0.000	6.986	6.986	-14.668	MWD+IFR1+MS
2000.000	12.256	68.509	1988.792	9.150	0.000	7.394	0.000	3.304	0.000	9.239	0.000	7.360	7.360	-14.152	MWD+IFR1+MS
2100.000	12.256	68.509	2086.513	9.450	0.000	7.771	0.000	3.392	0.000	9.535	0.000	7.734	7.734	-13.640	MWD+IFR1+MS
2200.000	12.256	68.509	2184.234	9.756	0.000	8.149	0.000	3.484	0.000	9.837	0.000	8.109	8.109	-13.133	MWD+IFR1+MS
2300.000	12.256	68.509	2281.956	10.068	0.000	8.528	0.000	3.578	0.000	10.144	0.000	8.484	8.484	-12.629	MWD+IFR1+MS
2400.000	12.256	68.509	2379.677	10.385	0.000	8.906	0.000	3.674	0.000	10.457	0.000	8.860	8.860	-12.130	MWD+IFR1+MS
2500.000	12.256	68.509	2477.398	10.707	0.000	9.285	0.000	3.773	0.000	10.773	0.000	9.237	9.237	-11.636	MWD+IFR1+MS
2600.000	12.256	68.509	2575.119	11.033	0.000	9.665	0.000	3.874	0.000	11.095	0.000	9.614	9.614	-11.145	MWD+IFR1+MS
2700.000	12.256	68.509	2672.840	11.363	0.000	10.045	0.000	3.977	0.000	11.419	0.000	9.991	9.991	-10.659	MWD+IFR1+MS
2800.000	12.256	68.509	2770.561	11.697	0.000	10.425	0.000	4.083	0.000	11.748	0.000	10.368	10.368	-10.177	MWD+IFR1+MS
2900.000	12.256	68.509	2868.282	12.034	0.000	10.805	0.000	4.190	0.000	12.079	0.000	10.746	10.746	-9.699	MWD+IFR1+MS

3000.000	12.256	68.509	2966.003	12.374	0.000	11.185	0.000	4.299	0.000	0.000	12.414	11.124	-9.226	MWD+IFR1+MS
3100.000	12.256	68.509	3063.724	12.717	0.000	11.566	0.000	4.409	0.000	0.000	12.751	11.502	-8.756	MWD+IFR1+MS
3200.000	12.256	68.509	3161.445	13.062	0.000	11.947	0.000	4.522	0.000	0.000	13.091	11.881	-8.291	MWD+IFR1+MS
3300.000	12.256	68.509	3259.166	13.410	0.000	12.328	0.000	4.636	0.000	0.000	13.433	12.260	-7.829	MWD+IFR1+MS
3400.000	12.256	68.509	3356.887	13.760	0.000	12.709	0.000	4.752	0.000	0.000	13.777	12.639	-7.372	MWD+IFR1+MS
3500.000	12.256	68.509	3454.608	14.112	0.000	13.090	0.000	4.869	0.000	0.000	14.123	13.018	-6.919	MWD+IFR1+MS
3600.000	12.256	68.509	3552.329	14.466	0.000	13.472	0.000	4.988	0.000	0.000	14.470	13.397	-6.469	MWD+IFR1+MS
3700.000	12.256	68.509	3650.050	14.821	0.000	13.853	0.000	5.108	0.000	0.000	14.820	13.777	-6.023	MWD+IFR1+MS
3800.000	12.256	68.509	3747.771	15.179	0.000	14.235	0.000	5.230	0.000	0.000	15.171	14.156	-5.581	MWD+IFR1+MS
3900.000	12.256	68.509	3845.493	15.537	0.000	14.617	0.000	5.354	0.000	0.000	15.524	14.536	-5.142	MWD+IFR1+MS
4000.000	12.256	68.509	3943.214	15.898	0.000	14.999	0.000	5.479	0.000	0.000	15.877	14.916	-4.707	MWD+IFR1+MS
4100.000	12.256	68.509	4040.935	16.259	0.000	15.380	0.000	5.605	0.000	0.000	16.233	15.296	-4.275	MWD+IFR1+MS
4200.000	12.256	68.509	4138.656	16.622	0.000	15.762	0.000	5.733	0.000	0.000	16.589	15.676	-3.846	MWD+IFR1+MS
4300.000	12.256	68.509	4236.377	16.986	0.000	16.144	0.000	5.863	0.000	0.000	16.946	16.057	-3.421	MWD+IFR1+MS
4400.000	12.256	68.509	4334.098	17.351	0.000	16.527	0.000	5.994	0.000	0.000	17.305	16.437	-2.999	MWD+IFR1+MS
4500.000	12.256	68.509	4431.819	17.717	0.000	16.909	0.000	6.127	0.000	0.000	17.664	16.818	-2.579	MWD+IFR1+MS
4600.000	12.256	68.509	4529.540	18.084	0.000	17.291	0.000	6.261	0.000	0.000	18.025	17.199	-2.162	MWD+IFR1+MS
4700.000	12.256	68.509	4627.261	18.452	0.000	17.673	0.000	6.397	0.000	0.000	18.386	17.579	-1.749	MWD+IFR1+MS
4800.000	12.256	68.509	4724.982	18.821	0.000	18.056	0.000	6.534	0.000	0.000	18.748	17.960	-1.337	MWD+IFR1+MS
4900.000	12.256	68.509	4822.703	19.190	0.000	18.438	0.000	6.674	0.000	0.000	19.111	18.341	-0.928	MWD+IFR1+MS
4970.796	12.256	68.509	4891.886	19.449	0.000	18.705	0.000	6.773	0.000	0.000	19.363	18.610	-0.827	MWD+IFR1+MS
5000.000	11.671	68.509	4920.455	19.565	0.000	18.814	0.000	6.814	0.000	0.000	19.465	18.720	-0.853	MWD+IFR1+MS
5100.000	9.671	68.509	5018.721	19.997	0.000	19.186	0.000	6.959	0.000	0.000	19.870	19.093	-1.436	MWD+IFR1+MS
5200.000	7.671	68.509	5117.573	20.477	0.000	19.558	0.000	7.105	0.000	0.000	20.350	19.461	-2.425	MWD+IFR1+MS
5300.000	5.671	68.509	5216.891	20.923	0.000	19.922	0.000	7.242	0.000	0.000	20.821	19.821	-3.178	MWD+IFR1+MS
5400.000	3.671	68.509	5316.553	21.335	0.000	20.280	0.000	7.372	0.000	0.000	21.284	20.174	-3.759	MWD+IFR1+MS
5500.000	1.671	68.509	5416.440	21.712	0.000	20.631	0.000	7.496	0.000	0.000	21.738	20.520	-4.206	MWD+IFR1+MS
5583.572	0.000	0.000	5500.000	20.831	0.000	22.024	0.000	7.596	0.000	0.000	22.035	20.819	-5.409	MWD+IFR1+MS
5600.000	0.000	0.000	5516.428	20.886	0.000	22.075	0.000	7.616	0.000	0.000	22.085	20.875	-5.417	MWD+IFR1+MS
5700.000	0.000	0.000	5616.428	21.223	0.000	22.383	0.000	7.736	0.000	0.000	22.394	21.212	-5.530	MWD+IFR1+MS
5800.000	0.000	0.000	5716.428	21.566	0.000	22.699	0.000	7.858	0.000	0.000	22.711	21.553	-5.907	MWD+IFR1+MS
5900.000	0.000	0.000	5816.428	21.910	0.000	23.016	0.000	7.982	0.000	0.000	23.029	21.896	-6.289	MWD+IFR1+MS
6000.000	0.000	0.000	5916.428	22.254	0.000	23.334	0.000	8.109	0.000	0.000	23.349	22.238	-6.675	MWD+IFR1+MS

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6100.000	0.000	0.000	6016.428	22.598	0.000	23.653	0.000	8.239	0.000	0.000	23.669	22.581	-7.066	MWD+IFR1+MS
6200.000	0.000	0.000	6116.428	22.943	0.000	23.973	0.000	8.371	0.000	0.000	23.991	22.925	-7.462	MWD+IFR1+MS
6300.000	0.000	0.000	6216.428	23.289	0.000	24.295	0.000	8.505	0.000	0.000	24.314	23.269	-7.862	MWD+IFR1+MS
6400.000	0.000	0.000	6316.428	23.634	0.000	24.617	0.000	8.642	0.000	0.000	24.638	23.613	-8.266	MWD+IFR1+MS
6500.000	0.000	0.000	6416.428	23.980	0.000	24.941	0.000	8.782	0.000	0.000	24.963	23.957	-8.675	MWD+IFR1+MS
6600.000	0.000	0.000	6516.428	24.327	0.000	25.265	0.000	8.924	0.000	0.000	25.289	24.302	-9.088	MWD+IFR1+MS
6700.000	0.000	0.000	6616.428	24.674	0.000	25.590	0.000	9.069	0.000	0.000	25.616	24.647	-9.506	MWD+IFR1+MS
6800.000	0.000	0.000	6716.428	25.021	0.000	25.916	0.000	9.216	0.000	0.000	25.944	24.992	-9.927	MWD+IFR1+MS
6900.000	0.000	0.000	6816.428	25.368	0.000	26.243	0.000	9.366	0.000	0.000	26.273	25.338	-10.352	MWD+IFR1+MS
7000.000	0.000	0.000	6916.428	25.716	0.000	26.571	0.000	9.519	0.000	0.000	26.603	25.683	-10.781	MWD+IFR1+MS
7100.000	0.000	0.000	7016.428	26.064	0.000	26.900	0.000	9.675	0.000	0.000	26.933	26.029	-11.214	MWD+IFR1+MS
7200.000	0.000	0.000	7116.428	26.413	0.000	27.229	0.000	9.833	0.000	0.000	27.265	26.376	-11.650	MWD+IFR1+MS
7300.000	0.000	0.000	7216.428	26.761	0.000	27.559	0.000	9.994	0.000	0.000	27.597	26.722	-12.090	MWD+IFR1+MS
7400.000	0.000	0.000	7316.428	27.110	0.000	27.890	0.000	10.158	0.000	0.000	27.930	27.069	-12.532	MWD+IFR1+MS
7500.000	0.000	0.000	7416.428	27.459	0.000	28.221	0.000	10.325	0.000	0.000	28.263	27.416	-12.978	MWD+IFR1+MS
7600.000	0.000	0.000	7516.428	27.808	0.000	28.553	0.000	10.494	0.000	0.000	28.598	27.763	-13.426	MWD+IFR1+MS
7700.000	0.000	0.000	7616.428	28.158	0.000	28.886	0.000	10.667	0.000	0.000	28.933	28.110	-13.877	MWD+IFR1+MS
7800.000	0.000	0.000	7716.428	28.508	0.000	29.219	0.000	10.842	0.000	0.000	29.268	28.457	-14.330	MWD+IFR1+MS
7900.000	0.000	0.000	7816.428	28.858	0.000	29.553	0.000	11.020	0.000	0.000	29.605	28.805	-14.786	MWD+IFR1+MS
8000.000	0.000	0.000	7916.428	29.208	0.000	29.888	0.000	11.201	0.000	0.000	29.942	29.153	-15.243	MWD+IFR1+MS
8100.000	0.000	0.000	8016.428	29.558	0.000	30.223	0.000	11.385	0.000	0.000	30.279	29.501	-15.702	MWD+IFR1+MS
8200.000	0.000	0.000	8116.428	29.909	0.000	30.558	0.000	11.572	0.000	0.000	30.617	29.849	-16.163	MWD+IFR1+MS
8300.000	0.000	0.000	8216.428	30.260	0.000	30.894	0.000	11.762	0.000	0.000	30.956	30.197	-16.625	MWD+IFR1+MS
8400.000	0.000	0.000	8316.428	30.611	0.000	31.231	0.000	11.954	0.000	0.000	31.295	30.545	-17.087	MWD+IFR1+MS
8500.000	0.000	0.000	8416.428	30.962	0.000	31.568	0.000	12.150	0.000	0.000	31.635	30.894	-17.551	MWD+IFR1+MS
8600.000	0.000	0.000	8516.428	31.313	0.000	31.905	0.000	12.349	0.000	0.000	31.975	31.242	-18.015	MWD+IFR1+MS
8700.000	0.000	0.000	8616.428	31.665	0.000	32.243	0.000	12.550	0.000	0.000	32.316	31.591	-18.480	MWD+IFR1+MS
8800.000	0.000	0.000	8716.428	32.016	0.000	32.582	0.000	12.755	0.000	0.000	32.657	31.940	-18.944	MWD+IFR1+MS
8900.000	0.000	0.000	8816.428	32.368	0.000	32.921	0.000	12.963	0.000	0.000	32.998	32.289	-19.409	MWD+IFR1+MS
9000.000	0.000	0.000	8916.428	32.720	0.000	33.260	0.000	13.173	0.000	0.000	33.340	32.638	-19.873	MWD+IFR1+MS
9100.000	0.000	0.000	9016.428	33.072	0.000	33.600	0.000	13.387	0.000	0.000	33.683	32.987	-20.336	MWD+IFR1+MS
9200.000	0.000	0.000	9116.428	33.424	0.000	33.940	0.000	13.603	0.000	0.000	34.026	33.337	-20.798	MWD+IFR1+MS
9300.000	0.000	0.000	9216.428	33.777	0.000	34.280	0.000	13.823	0.000	0.000	34.369	33.686	-21.260	MWD+IFR1+MS



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9400.000	0.000	0.000	9316.428	34.129	0.000	34.621	0.000	14.046	0.000	0.000	34.713	34.035	-21.720	MWD+IFR1+MS
9500.000	0.000	0.000	9416.428	34.482	0.000	34.962	0.000	14.272	0.000	0.000	35.057	34.385	-22.178	MWD+IFR1+MS
9600.000	0.000	0.000	9516.428	34.834	0.000	35.303	0.000	14.500	0.000	0.000	35.401	34.735	-22.634	MWD+IFR1+MS
9613.372	0.000	0.000	9529.800	34.881	0.000	35.348	0.000	14.531	0.000	0.000	35.446	34.781	-22.655	MWD+IFR1+MS
9700.000	6.930	179.642	9616.217	35.001	0.000	35.629	-0.000	14.736	0.000	0.000	35.760	35.197	-29.292	MWD+IFR1+MS
9800.000	14.930	179.642	9714.323	35.474	0.000	35.931	-0.000	15.052	0.000	0.000	36.738	35.822	109.710	MWD+IFR1+MS
9900.000	22.930	179.642	9808.837	35.553	0.000	36.218	-0.000	15.558	0.000	0.000	38.003	36.145	100.891	MWD+IFR1+MS
10000.000	30.930	179.642	9897.921	35.129	0.000	36.486	-0.000	16.306	0.000	0.000	39.118	36.420	98.493	MWD+IFR1+MS
10100.000	38.930	179.642	9979.839	34.275	0.000	36.733	-0.000	17.324	0.000	0.000	40.046	36.666	97.556	MWD+IFR1+MS
10200.000	46.930	179.642	10052.998	33.091	0.000	36.957	-0.000	18.602	0.000	0.000	40.779	36.886	97.217	MWD+IFR1+MS
10300.000	54.930	179.642	10115.974	31.706	0.000	37.157	-0.000	20.101	0.000	0.000	41.323	37.079	97.218	MWD+IFR1+MS
10400.000	62.930	179.642	10167.540	30.282	0.000	37.332	-0.000	21.764	0.000	0.000	41.694	37.245	97.460	MWD+IFR1+MS
10500.000	70.930	179.642	10206.693	29.012	0.000	37.482	-0.000	23.530	0.000	0.000	41.919	37.383	97.892	MWD+IFR1+MS
10600.000	78.930	179.642	10232.672	28.101	0.000	37.604	-0.000	25.334	0.000	0.000	42.032	37.491	98.467	MWD+IFR1+MS
10700.000	86.930	179.642	10244.970	27.743	0.000	37.699	-0.000	27.116	0.000	0.000	42.076	37.570	99.122	MWD+IFR1+MS
10738.372	90.000	179.642	10245.997	27.291	0.000	37.725	-0.000	27.291	0.000	0.000	42.085	37.590	99.362	MWD+IFR1+MS
10800.000	90.000	179.642	10245.997	27.423	0.000	37.768	-0.000	27.423	0.000	0.000	42.097	37.622	99.763	MWD+IFR1+MS
10900.000	90.000	179.642	10245.997	27.615	0.000	37.853	-0.000	27.615	0.000	0.000	42.119	37.688	100.454	MWD+IFR1+MS
11000.000	90.000	179.642	10245.997	27.831	0.000	37.955	-0.000	27.831	0.000	0.000	42.143	37.770	101.199	MWD+IFR1+MS
11100.000	90.000	179.642	10245.997	28.066	0.000	38.072	-0.000	28.066	0.000	0.000	42.170	37.864	101.999	MWD+IFR1+MS
11200.000	90.000	179.642	10245.997	28.322	0.000	38.204	-0.000	28.322	0.000	0.000	42.199	37.972	102.864	MWD+IFR1+MS
11300.000	90.000	179.642	10245.997	28.596	0.000	38.351	-0.000	28.596	0.000	0.000	42.232	38.091	103.804	MWD+IFR1+MS
11400.000	90.000	179.642	10245.997	28.890	0.000	38.513	-0.000	28.890	0.000	0.000	42.268	38.222	104.828	MWD+IFR1+MS
11500.000	90.000	179.642	10245.997	29.201	0.000	38.689	-0.000	29.201	0.000	0.000	42.309	38.363	105.951	MWD+IFR1+MS
11600.000	90.000	179.642	10245.997	29.530	0.000	38.880	-0.000	29.530	0.000	0.000	42.354	38.515	107.184	MWD+IFR1+MS
11700.000	90.000	179.642	10245.997	29.876	0.000	39.084	-0.000	29.876	0.000	0.000	42.405	38.676	108.544	MWD+IFR1+MS
11800.000	90.000	179.642	10245.997	30.239	0.000	39.302	-0.000	30.239	0.000	0.000	42.462	38.845	110.047	MWD+IFR1+MS
11900.000	90.000	179.642	10245.997	30.617	0.000	39.534	-0.000	30.617	0.000	0.000	42.526	39.021	111.710	MWD+IFR1+MS
12000.000	90.000	179.642	10245.997	31.011	0.000	39.780	-0.000	31.011	0.000	0.000	42.599	39.202	113.551	MWD+IFR1+MS
12100.000	90.000	179.642	10245.997	31.419	0.000	40.038	-0.000	31.419	0.000	0.000	42.682	39.387	115.586	MWD+IFR1+MS
12200.000	90.000	179.642	10245.997	31.841	0.000	40.310	-0.000	31.841	0.000	0.000	42.777	39.573	117.826	MWD+IFR1+MS
12300.000	90.000	179.642	10245.997	32.277	0.000	40.594	-0.000	32.277	0.000	0.000	42.885	39.759	120.275	MWD+IFR1+MS
12400.000	90.000	179.642	10245.997	32.726	0.000	40.890	-0.000	32.726	0.000	0.000	43.009	39.942	122.927	MWD+IFR1+MS

12500.000	90.000	179.642	10245.997	33.188	0.000	41.199	-0.000	33.188	0.000	0.000	43.151	40.121	125.760	MWD+IFR1+MS
12600.000	90.000	179.642	10245.997	33.661	0.000	41.519	-0.000	33.661	0.000	0.000	43.312	40.292	128.737	MWD+IFR1+MS
12700.000	90.000	179.642	10245.997	34.146	0.000	41.851	-0.000	34.146	0.000	0.000	43.494	40.453	131.803	MWD+IFR1+MS
12800.000	90.000	179.642	10245.997	34.642	0.000	42.194	-0.000	34.642	0.000	0.000	43.699	40.604	134.894	MWD+IFR1+MS
12900.000	90.000	179.642	10245.997	35.148	0.000	42.548	-0.000	35.148	0.000	0.000	43.928	40.744	-42.060	MWD+IFR1+MS
13000.000	90.000	179.642	10245.997	35.665	0.000	42.913	-0.000	35.665	0.000	0.000	44.179	40.872	-39.120	MWD+IFR1+MS
13100.000	90.000	179.642	10245.997	36.191	0.000	43.288	-0.000	36.191	0.000	0.000	44.453	40.988	-36.338	MWD+IFR1+MS
13200.000	90.000	179.642	10245.997	36.726	0.000	43.674	-0.000	36.726	0.000	0.000	44.749	41.093	-33.747	MWD+IFR1+MS
13300.000	90.000	179.642	10245.997	37.270	0.000	44.069	-0.000	37.270	0.000	0.000	45.065	41.188	-31.364	MWD+IFR1+MS
13400.000	90.000	179.642	10245.997	37.823	0.000	44.475	-0.000	37.823	0.000	0.000	45.400	41.275	-29.194	MWD+IFR1+MS
13500.000	90.000	179.642	10245.997	38.384	0.000	44.889	-0.000	38.384	0.000	0.000	45.753	41.353	-27.229	MWD+IFR1+MS
13600.000	90.000	179.642	10245.997	38.952	0.000	45.313	-0.000	38.952	0.000	0.000	46.122	41.425	-25.458	MWD+IFR1+MS
13700.000	90.000	179.642	10245.997	39.528	0.000	45.745	-0.000	39.528	0.000	0.000	46.506	41.492	-23.863	MWD+IFR1+MS
13800.000	90.000	179.642	10245.997	40.111	0.000	46.187	-0.000	40.111	0.000	0.000	46.905	41.554	-22.428	MWD+IFR1+MS
13900.000	90.000	179.642	10245.997	40.701	0.000	46.636	-0.000	40.701	0.000	0.000	47.316	41.611	-21.136	MWD+IFR1+MS
14000.000	90.000	179.642	10245.997	41.297	0.000	47.094	-0.000	41.297	0.000	0.000	47.739	41.665	-19.970	MWD+IFR1+MS
14100.000	90.000	179.642	10245.997	41.899	0.000	47.560	-0.000	41.899	0.000	0.000	48.174	41.717	-18.916	MWD+IFR1+MS
14200.000	90.000	179.642	10245.997	42.508	0.000	48.033	-0.000	42.508	0.000	0.000	48.619	41.766	-17.961	MWD+IFR1+MS
14300.000	90.000	179.642	10245.997	43.122	0.000	48.514	-0.000	43.122	0.000	0.000	49.075	41.813	-17.093	MWD+IFR1+MS
14400.000	90.000	179.642	10245.997	43.741	0.000	49.002	-0.000	43.741	0.000	0.000	49.540	41.858	-16.302	MWD+IFR1+MS
14500.000	90.000	179.642	10245.997	44.366	0.000	49.497	-0.000	44.366	0.000	0.000	50.014	41.902	-15.578	MWD+IFR1+MS
14600.000	90.000	179.642	10245.997	44.996	0.000	49.999	-0.000	44.996	0.000	0.000	50.496	41.945	-14.915	MWD+IFR1+MS
14700.000	90.000	179.642	10245.997	45.631	0.000	50.508	-0.000	45.631	0.000	0.000	50.987	41.987	-14.306	MWD+IFR1+MS
14800.000	90.000	179.642	10245.997	46.270	0.000	51.023	-0.000	46.270	0.000	0.000	51.485	42.028	-13.744	MWD+IFR1+MS
14900.000	90.000	179.642	10245.997	46.913	0.000	51.544	-0.000	46.913	0.000	0.000	51.991	42.068	-13.225	MWD+IFR1+MS
15000.000	90.000	179.642	10245.997	47.561	0.000	52.071	-0.000	47.561	0.000	0.000	52.504	42.108	-12.744	MWD+IFR1+MS
15100.000	90.000	179.642	10245.997	48.213	0.000	52.604	-0.000	48.213	0.000	0.000	53.024	42.147	-12.297	MWD+IFR1+MS
15200.000	90.000	179.642	10245.997	48.869	0.000	53.143	-0.000	48.869	0.000	0.000	53.550	42.186	-11.881	MWD+IFR1+MS
15300.000	90.000	179.642	10245.997	49.529	0.000	53.688	-0.000	49.529	0.000	0.000	54.083	42.225	-11.492	MWD+IFR1+MS
15400.000	90.000	179.642	10245.997	50.192	0.000	54.237	-0.000	50.192	0.000	0.000	54.621	42.264	-11.129	MWD+IFR1+MS
15500.000	90.000	179.642	10245.997	50.859	0.000	54.792	-0.000	50.859	0.000	0.000	55.166	42.303	-10.789	MWD+IFR1+MS
15600.000	90.000	179.642	10245.997	51.529	0.000	55.352	-0.000	51.529	0.000	0.000	55.716	42.342	-10.470	MWD+IFR1+MS
15700.000	90.000	179.642	10245.997	52.202	0.000	55.917	-0.000	52.202	0.000	0.000	56.271	42.381	-10.170	MWD+IFR1+MS

15800.000	90.000	179.642	10245.997	52.878	0.000	56.486	-0.000	52.878	0.000	56.832	42.419	-9.887	MWD+IFR1+MS
15900.000	90.000	179.642	10245.997	53.557	0.000	57.060	-0.000	53.557	0.000	57.398	42.458	-9.621	MWD+IFR1+MS
16000.000	90.000	179.642	10245.997	54.239	0.000	57.639	-0.000	54.239	0.000	57.969	42.497	-9.369	MWD+IFR1+MS
16100.000	90.000	179.642	10245.997	54.924	0.000	58.222	-0.000	54.924	0.000	58.544	42.537	-9.130	MWD+IFR1+MS
16200.000	90.000	179.642	10245.997	55.612	0.000	58.809	-0.000	55.612	0.000	59.124	42.576	-8.904	MWD+IFR1+MS
16300.000	90.000	179.642	10245.997	56.302	0.000	59.400	-0.000	56.302	0.000	59.708	42.616	-8.689	MWD+IFR1+MS
16400.000	90.000	179.642	10245.997	56.994	0.000	59.995	-0.000	56.994	0.000	60.297	42.656	-8.485	MWD+IFR1+MS
16500.000	90.000	179.642	10245.997	57.689	0.000	60.594	-0.000	57.689	0.000	60.889	42.696	-8.291	MWD+IFR1+MS
16600.000	90.000	179.642	10245.997	58.386	0.000	61.196	-0.000	58.386	0.000	61.486	42.736	-8.106	MWD+IFR1+MS
16700.000	90.000	179.642	10245.997	59.085	0.000	61.803	-0.000	59.085	0.000	62.086	42.777	-7.930	MWD+IFR1+MS
16800.000	90.000	179.642	10245.997	59.787	0.000	62.412	-0.000	59.787	0.000	62.691	42.818	-7.762	MWD+IFR1+MS
16900.000	90.000	179.642	10245.997	60.490	0.000	63.025	-0.000	60.490	0.000	63.298	42.860	-7.601	MWD+IFR1+MS
17000.000	90.000	179.642	10245.997	61.196	0.000	63.642	-0.000	61.196	0.000	63.910	42.901	-7.447	MWD+IFR1+MS
17100.000	90.000	179.642	10245.997	61.903	0.000	64.261	-0.000	61.903	0.000	64.524	42.943	-7.299	MWD+IFR1+MS
17200.000	90.000	179.642	10245.997	62.612	0.000	64.884	-0.000	62.612	0.000	65.142	42.986	-7.158	MWD+IFR1+MS
17300.000	90.000	179.642	10245.997	63.323	0.000	65.510	-0.000	63.323	0.000	65.764	43.029	-7.022	MWD+IFR1+MS
17400.000	90.000	179.642	10245.997	64.036	0.000	66.139	-0.000	64.036	0.000	66.388	43.072	-6.892	MWD+IFR1+MS
17500.000	90.000	179.642	10245.997	64.750	0.000	66.770	-0.000	64.750	0.000	67.015	43.115	-6.767	MWD+IFR1+MS
17600.000	90.000	179.642	10245.997	65.466	0.000	67.405	-0.000	65.466	0.000	67.646	43.159	-6.647	MWD+IFR1+MS
17700.000	90.000	179.642	10245.997	66.184	0.000	68.042	-0.000	66.184	0.000	68.279	43.204	-6.531	MWD+IFR1+MS
17800.000	90.000	179.642	10245.997	66.903	0.000	68.681	-0.000	66.903	0.000	68.915	43.248	-6.419	MWD+IFR1+MS
17900.000	90.000	179.642	10245.997	67.623	0.000	69.324	-0.000	67.623	0.000	69.553	43.293	-6.312	MWD+IFR1+MS
18000.000	90.000	179.642	10245.997	68.345	0.000	69.968	-0.000	68.345	0.000	70.194	43.339	-6.208	MWD+IFR1+MS
18100.000	90.000	179.642	10245.997	69.069	0.000	70.615	-0.000	69.069	0.000	70.838	43.385	-6.108	MWD+IFR1+MS
18200.000	90.000	179.642	10245.997	69.793	0.000	71.265	-0.000	69.793	0.000	71.484	43.431	-6.012	MWD+IFR1+MS
18300.000	90.000	179.642	10245.997	70.519	0.000	71.917	-0.000	70.519	0.000	72.133	43.478	-5.918	MWD+IFR1+MS
18400.000	90.000	179.642	10245.997	71.246	0.000	72.571	-0.000	71.246	0.000	72.783	43.525	-5.828	MWD+IFR1+MS
18500.000	90.000	179.642	10245.997	71.975	0.000	73.227	-0.000	71.975	0.000	73.436	43.573	-5.741	MWD+IFR1+MS
18600.000	90.000	179.642	10245.997	72.704	0.000	73.885	-0.000	72.704	0.000	74.092	43.621	-5.656	MWD+IFR1+MS
18700.000	90.000	179.642	10245.997	73.435	0.000	74.545	-0.000	73.435	0.000	74.749	43.669	-5.574	MWD+IFR1+MS
18800.000	90.000	179.642	10245.997	74.167	0.000	75.208	-0.000	74.167	0.000	75.409	43.718	-5.495	MWD+IFR1+MS
18900.000	90.000	179.642	10245.997	74.900	0.000	75.872	-0.000	74.900	0.000	76.070	43.767	-5.418	MWD+IFR1+MS
19000.000	90.000	179.642	10245.997	75.634	0.000	76.538	-0.000	75.634	0.000	76.734	43.817	-5.343	MWD+IFR1+MS

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Well Plan Report

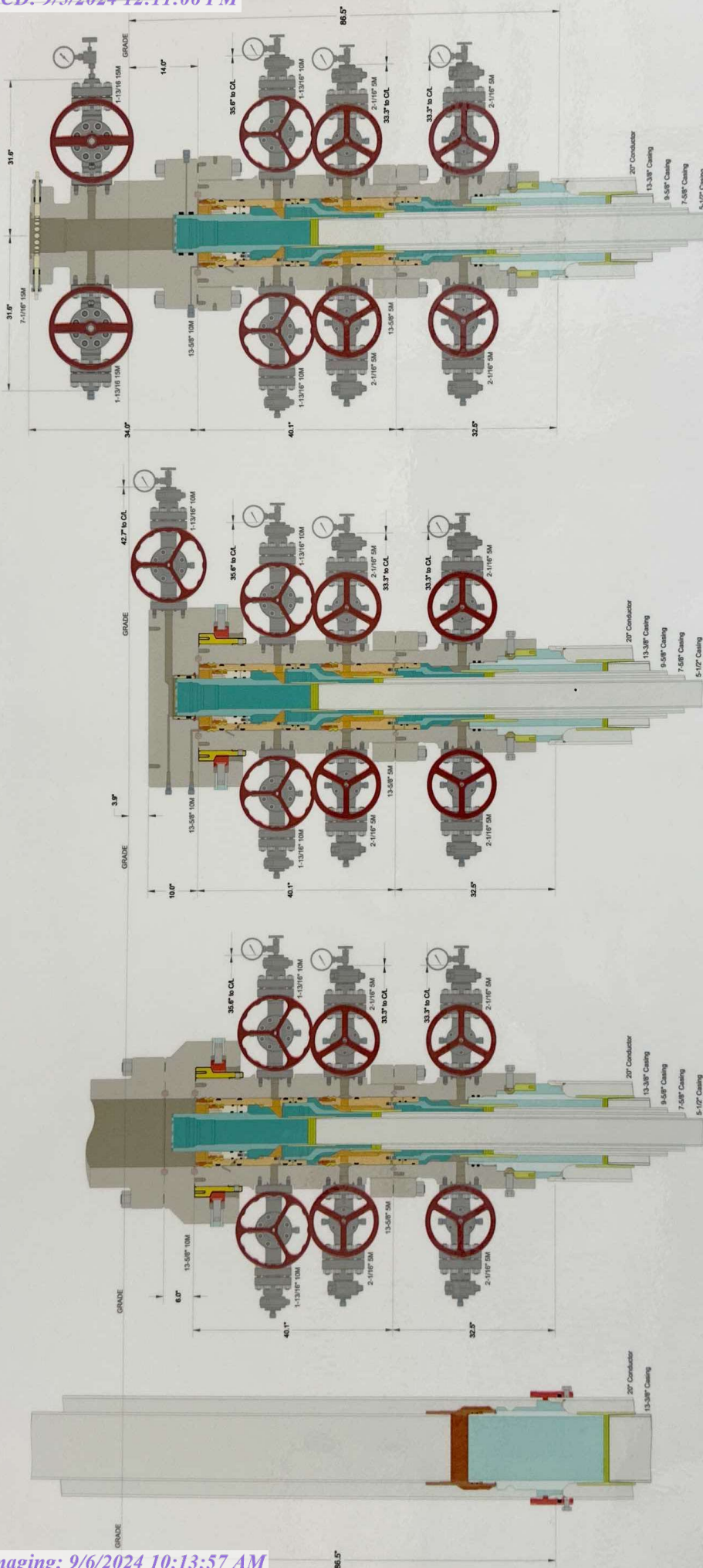
19100.000	90.000	179.642	10245.997	76.369	0.000	77.206	-0.000	76.369	0.000	0.000	77.399	43.867	-5.271	MWD+IFR1+MS
19200.000	90.000	179.642	10245.997	77.105	0.000	77.876	-0.000	77.105	0.000	0.000	78.066	43.917	-5.201	MWD+IFR1+MS
19300.000	90.000	179.642	10245.997	77.841	0.000	78.547	-0.000	77.841	0.000	0.000	78.735	43.968	-5.132	MWD+IFR1+MS
19400.000	90.000	179.642	10245.997	78.579	0.000	79.221	-0.000	78.579	0.000	0.000	79.406	44.020	-5.066	MWD+IFR1+MS
19500.000	90.000	179.642	10245.997	79.318	0.000	79.896	-0.000	79.318	0.000	0.000	80.079	44.072	-5.002	MWD+IFR1+MS
19600.000	90.000	179.642	10245.997	80.057	0.000	80.572	-0.000	80.057	0.000	0.000	80.753	44.124	-4.939	MWD+IFR1+MS
19700.000	90.000	179.642	10245.997	80.798	0.000	81.250	-0.000	80.798	0.000	0.000	81.429	44.177	-4.878	MWD+IFR1+MS
19800.000	90.000	179.642	10245.997	81.539	0.000	81.930	-0.000	81.539	0.000	0.000	82.106	44.230	-4.819	MWD+IFR1+MS
19900.000	90.000	179.642	10245.997	82.281	0.000	82.611	-0.000	82.281	0.000	0.000	82.785	44.283	-4.761	MWD+IFR1+MS
20000.000	90.000	179.642	10245.997	83.024	0.000	83.294	-0.000	83.024	0.000	0.000	83.466	44.337	-4.704	MWD+IFR1+MS
20100.000	90.000	179.642	10245.997	83.768	0.000	83.978	-0.000	83.768	0.000	0.000	84.148	44.392	-4.650	MWD+IFR1+MS
20200.000	90.000	179.642	10245.997	84.512	0.000	84.663	-0.000	84.512	0.000	0.000	84.831	44.447	-4.596	MWD+IFR1+MS
20300.000	90.000	179.642	10245.997	85.257	0.000	85.350	-0.000	85.257	0.000	0.000	85.516	44.502	-4.544	MWD+IFR1+MS
20400.000	90.000	179.642	10245.997	86.003	0.000	86.038	-0.000	86.003	0.000	0.000	86.203	44.558	-4.493	MWD+IFR1+MS
20500.000	90.000	179.642	10245.997	86.749	0.000	86.728	-0.000	86.749	0.000	0.000	86.890	44.614	-4.444	MWD+IFR1+MS
20600.000	90.000	179.642	10245.997	87.497	0.000	87.418	-0.000	87.497	0.000	0.000	87.579	44.670	-4.395	MWD+IFR1+MS
20700.000	90.000	179.642	10245.997	88.244	0.000	88.110	-0.000	88.244	0.000	0.000	88.269	44.727	-4.348	MWD+IFR1+MS
20800.000	90.000	179.642	10245.997	88.993	0.000	88.804	-0.000	88.993	0.000	0.000	88.961	44.785	-4.302	MWD+IFR1+MS
20900.000	90.000	179.642	10245.997	89.742	0.000	89.498	-0.000	89.742	0.000	0.000	89.653	44.843	-4.257	MWD+IFR1+MS
21000.000	90.000	179.642	10245.997	90.491	0.000	90.193	-0.000	90.491	0.000	0.000	90.347	44.901	-4.213	MWD+IFR1+MS
21100.000	90.000	179.642	10245.997	91.242	0.000	90.890	-0.000	91.242	0.000	0.000	91.042	44.960	-4.170	MWD+IFR1+MS
21200.000	90.000	179.642	10245.997	91.993	0.000	91.588	-0.000	91.993	0.000	0.000	91.738	45.019	-4.128	MWD+IFR1+MS
21300.000	90.000	179.642	10245.997	92.744	0.000	92.287	-0.000	92.744	0.000	0.000	92.436	45.078	-4.086	MWD+IFR1+MS
21400.000	90.000	179.642	10245.997	93.496	0.000	92.986	-0.000	93.496	0.000	0.000	93.134	45.138	-4.046	MWD+IFR1+MS
21500.000	90.000	179.642	10245.997	94.248	0.000	93.687	-0.000	94.248	0.000	0.000	93.833	45.199	-4.007	MWD+IFR1+MS
21600.000	90.000	179.642	10245.997	95.001	0.000	94.389	-0.000	95.001	0.000	0.000	94.534	45.259	-3.968	MWD+IFR1+MS
21700.000	90.000	179.642	10245.997	95.755	0.000	95.092	-0.000	95.755	0.000	0.000	95.235	45.321	-3.931	MWD+IFR1+MS
21800.000	90.000	179.642	10245.997	96.509	0.000	95.796	-0.000	96.509	0.000	0.000	95.938	45.382	-3.894	MWD+IFR1+MS
21900.000	90.000	179.642	10245.997	97.263	0.000	96.501	-0.000	97.263	0.000	0.000	96.641	45.444	-3.858	MWD+IFR1+MS
22000.000	90.000	179.642	10245.997	98.018	0.000	97.206	-0.000	98.018	0.000	0.000	97.345	45.507	-3.822	MWD+IFR1+MS
22100.000	90.000	179.642	10245.997	98.774	0.000	97.913	-0.000	98.774	0.000	0.000	98.051	45.570	-3.787	MWD+IFR1+MS
22200.000	90.000	179.642	10245.997	99.530	0.000	98.620	-0.000	99.530	0.000	0.000	98.757	45.633	-3.753	MWD+IFR1+MS
22300.000	90.000	179.642	10245.997	100.286	0.000	99.329	-0.000	100.286	0.000	0.000	99.464	45.697	-3.720	MWD+IFR1+MS

22400.000	90.000	179.642	10245.997	101.043	0.000	100.038	-0.000	101.043	0.000	0.000	100.172	45.761	-3.688	MWD+IFR1+MS
22500.000	90.000	179.642	10245.997	101.800	0.000	100.748	-0.000	101.800	0.000	0.000	100.881	45.826	-3.655	MWD+IFR1+MS
22600.000	90.000	179.642	10245.997	102.558	0.000	101.459	-0.000	102.558	0.000	0.000	101.590	45.891	-3.624	MWD+IFR1+MS
22700.000	90.000	179.642	10245.997	103.316	0.000	102.170	-0.000	103.316	0.000	0.000	102.301	45.956	-3.593	MWD+IFR1+MS
22800.000	90.000	179.642	10245.997	104.074	0.000	102.883	-0.000	104.074	0.000	0.000	103.012	46.022	-3.563	MWD+IFR1+MS
22900.000	90.000	179.642	10245.997	104.833	0.000	103.596	-0.000	104.833	0.000	0.000	103.724	46.088	-3.533	MWD+IFR1+MS
23000.000	90.000	179.642	10245.997	105.592	0.000	104.310	-0.000	105.592	0.000	0.000	104.437	46.154	-3.504	MWD+IFR1+MS
23018.605	90.000	179.642	10245.997	105.733	0.000	104.442	-0.000	105.733	0.000	0.000	104.569	46.167	-3.499	MWD+IFR1+MS
23108.433	90.000	179.642	10245.997	106.414	0.000	105.083	-0.000	106.414	0.000	0.000	105.209	46.227	-3.474	MWD+IFR1+MS

Poker Lake Unit 21 DTD South 105H

Plan Targets		Measured Depth				Grid Northing		Grid Easting		TVD MSL	Target Shape	
Target Name		(ft)		(ft)		(ft)		(ft)		(ft)		
FTP 9		10498.04		440435.70		638769.60		6872.00		RECTANGLE		
SHL 26		11554.92		440098.26		637517.04		6750.00		RECTANGLE		
LTP 9		23018.43		427439.70		638850.90		6872.00		RECTANGLE		
BHL 9		23108.43		427349.70		638851.40		6872.00		RECTANGLE		





ALL DIMENSIONS APPROXIMATE

XTO ENERGY INC  
DELAWARE BASIN

DRAWN DLE 10SEP21  
APPRV

DRAWING NO. SDT-3301

### CACTUS WELLHEAD LLC

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

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U. S. Steel Tubular Products

11/8/2023 1:08:50 PM

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



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

UNCONTROLLED

Notes

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

Legal Notice

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U. S. Steel Tubular Products

11/29/2021 4:16:04 PM

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

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

UNCONTROLLED

Notes

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

Legal Notice

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### 10,000 PSI Annular BOP Variance Request

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

#### 1. Component and Preventer Compatibility Tables

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

8-1/2" Production Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

## 2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per 43.CFR.3172 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

### General Procedure While Drilling

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

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

#### General Procedure While Tripping

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

#### General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

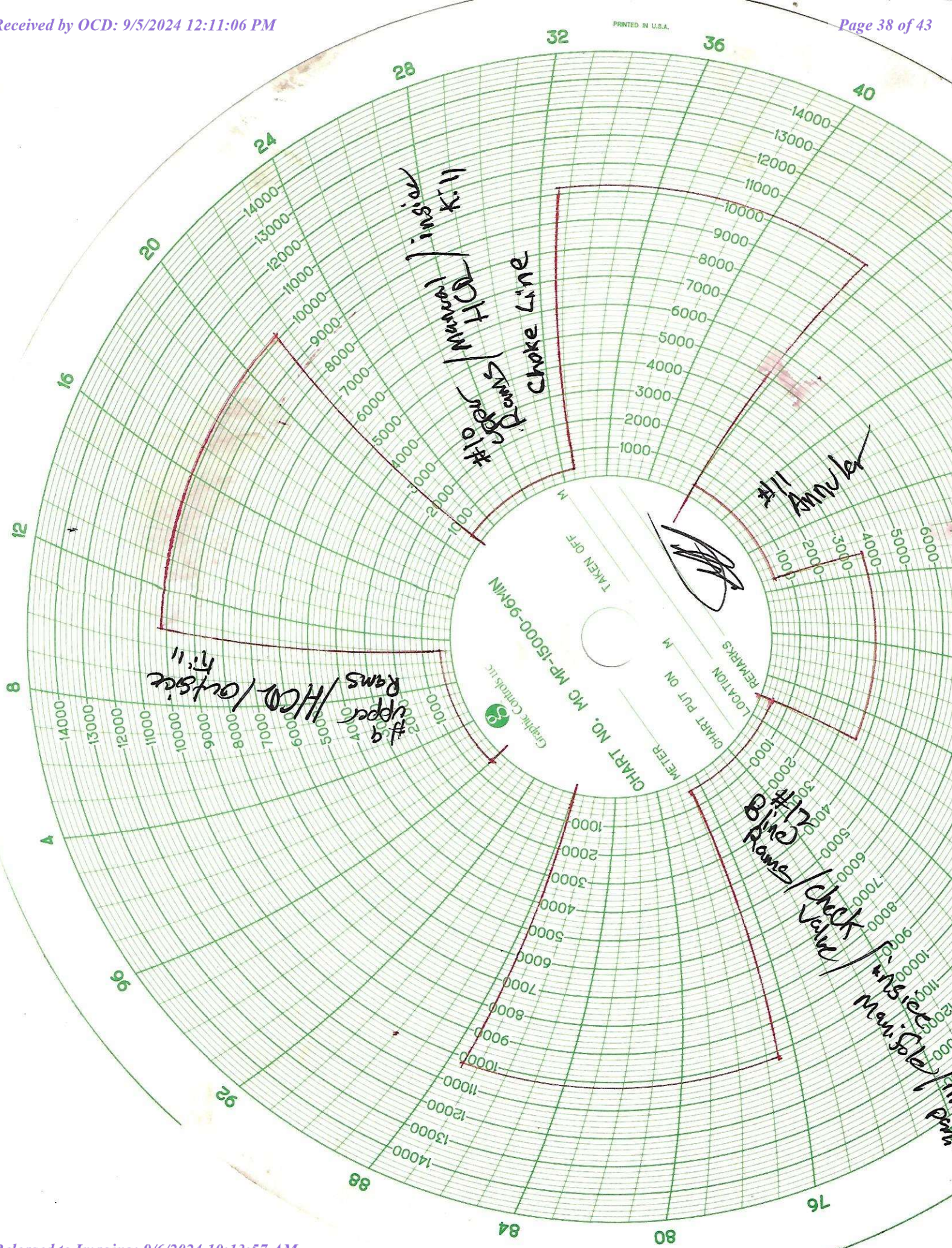
1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
  - a. SICP
  - b. Pit gain
  - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

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

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









Lone Star Hydrostatic LLC  
940-241-3365

Company: XTO

Well Name: 3RU017

Rig: Nobors

K-34

Date: 6-25-24

San tooth #805\*

## ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

No: 367, 368

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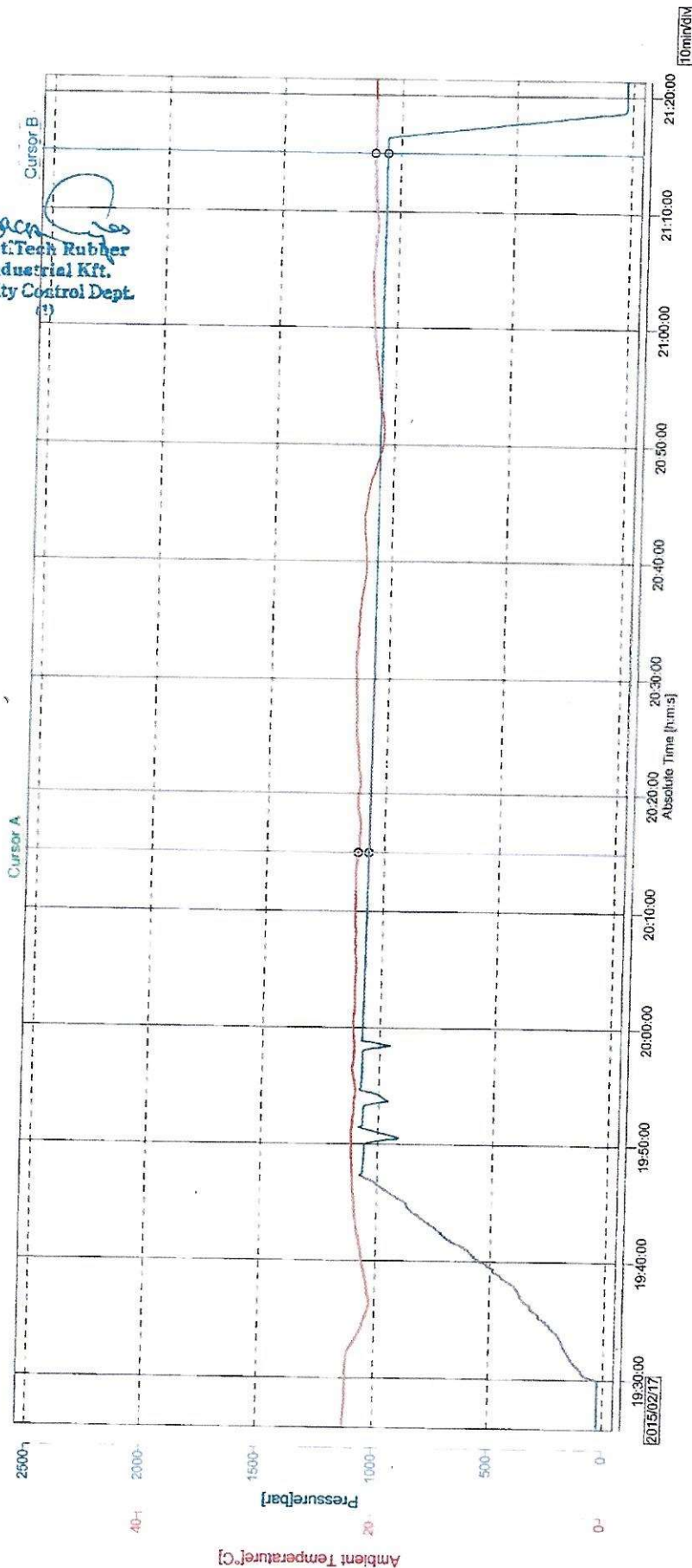
File Name : 002459\_69594.69595.GEV, ..., 002470\_69594.69595.GEV  
File Message : 69594.69595  
Device Type : GX10  
Serial No. : S5P606400  
Data Count : 1388

Sampling Int. : 5.000 sec  
Start Time : 2015/02/17 19:25:45.000  
Stop Time : 2015/02/17 21:21:20.000

Print Group : Press-Temp  
Print Range : 2015/02/17 19:25:45.000 - 2015/02/17 21:21:20.000  
Comment :

Data No.	Cursor A	Cursor B	Difference
591	2015/02/17 20:15:00.000	2015/02/17 21:15:00.000	01:00:00.000
Absolute Time	2015/02/17 20:15:00.000	2015/02/17 21:15:00.000	01:00:00.000
Tag Comment	Value A	Value B	Value B-A
Pressure[bar]	1066.74	1055.91	-10.83
Ambient Temperature[°C]	22.24	22.24	0.00

Yoon  
Cont. Tech Rubber  
Industrial Kft.  
Quality Control Dept.





ContiTech

 CONTITECH RUBBER  
Industrial Kft.

No: QC-DB-145 / 2015

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QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 367	
PURCHASER: ContiTech Oil & Marine Corp.				P.O. N°: 4500503260	
CONTITECH RUBBER order N°: 540093		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 69594		NOMINAL / ACTUAL LENGTH: 13,72 m / 13,75 m			
W.P. 68,9 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature  See attachment. ( 1 page )					
COUPLINGS Type		Serial N°		Quality	
3" coupling with		3595 3602		AISI 4130	
4 1/16" 10K API Swivel Flange end				AISI 4130	
Hub				AISI 4130	
				Heat N°	
				A0551X	
				059624	
				A0334X	
NOT DESIGNED FOR WELL TESTING				API Spec 16 C	
Tag No.: ASSET # 66 – 1281				Temperature rate:"B"	
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:		Inspector		Quality Control	
18. February 2015.				ContiTech Rubber Industrial Kft. Quality Control Dept. (1)	



## Hose Inspection Report

ContiTech Oil &amp; Marine

Customer	Customer Reference #	COM Reference #	COM Inspector	Date of Inspection
Nabors	15293178	1219965	A Jaimes	01/09/2020

Hose Manufacturer	Contitech Rubber Industrial
-------------------	-----------------------------

Hose Serial #	69594 (66-1281)	Date of Manufacture	02/2015
Hose I.D.	3"	Working Pressure	10000PSI
Hose Type	Choke and Kill	Test Pressure	15000PSI
Manufacturing Standard	API 16C		

## Connections

End A: 4.1/16" 10Kpsi API Spec 17D Swivel Flange	End B: 4-1/16" 10kpsi API Spec 17 D SV Swivel Flange
• No damage	• No damage
Material: Carbon Steel	Material: Carbon Steel
Seal Face: BX155	Seal Face: BX155
Length Before Hydro Test: 45 FT	Length After Hydro test: 45 FT

**Conclusion:** The hose passed the external inspection with minor damage to the outer armor. Internal video inspection showed no damage to the inner liner. The hose passed the hydrostatic pressure test by holding a pressure of 15,000PSI for 60 minutes. **Hose #69594 (66-1281) is suitable for continued service.**

**Recommendations:** In general, the hose should be inspected on a regular on-going basis. The frequency and degree of the inspection should as a minimum follow these guidelines:

Visual inspection: Every 3 to 6 months (or during installation/removal)  
 Annual: In-situ pressure test (in addition to the 3 to 6 monthly inspections)  
 Initial 5 years service: Major inspection  
 2nd Major inspection: Following subsequent 3 year life cycle  
 (Detailed description of test regime available upon request, QCP 206-2)

**\*\*NOTE:** There are a number of critical elements in the hose that cannot be thoroughly checked through standard inspection techniques. Away from dissecting the hose body, the best way to evaluate the condition of the hose is through review of the operating conditions recorded during the hose service life, in particular maximums and peak conditions.

External Damage Pre – Hydro test	
Approx. Distance from End A	4'
Width	10"
Length	2"
Depth	To hose body
Notes	Broken armor



Issued By: Alejandro Jaimes  
 Date: 1/10/2020

Checked By: Roger Suarez  
 Date: 1/10/2020

Page 1 of 1  
 QF97

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Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 381000

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 381000
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	9/6/2024