

OCD - HOBBS
06/02/2020
RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

| | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------|
| 1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. |
| 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other | | 6. If Indian, Allottee or Tribe Name |
| 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 7. If Unit or CA Agreement, Name and No. |
| | | 8. Lease Name and Well No. [328261] |
| 2. Name of Operator [373075] | | 9. API Well No. 30-025-47227 |
| 3a. Address | 3b. Phone No. (include area code) | 10. Field and Pool, or Exploratory [53560] XXXXXXXX |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone | | 11. Sec., T. R. M. or Blk. and Survey or Area |
| 14. Distance in miles and direction from nearest town or post office* | | 12. County or Parish |
| | | 13. State |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) | 16. No of acres in lease | 17. Spacing Unit dedicated to this well |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. | 19. Proposed Depth | 20. BLM/BIA Bond No. in file |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) | 22. Approximate date work will start* | 23. Estimated duration |
| 24. Attachments | | |

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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

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

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

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

GCP Rec 06/02/2020

SL

(Continued on page 2)

APPROVED WITH CONDITIONS
Approval Date: 12/23/2019

KZ
06/05/2020

*(Instructions on page 2)

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

| | |
|------------------------------|-----------------------------------------------------------|
| OPERATOR'S NAME: | XTO Permian Operating, LLC. |
| LEASE NO.: | NMNM-033955 |
| WELL NAME & NO.: | Big Eddy Unit DI BB Jaba 103H |
| SURFACE HOLE FOOTAGE: | 0270' FSL & 0610' FWL |
| BOTTOM HOLE FOOTAGE: | 1980' FNL & 0050 FWL Sec. 30, T.20 S., R.32 E. |
| LOCATION: | Section 22, T.20 S., R.32 E., NMPM |
| COUNTY: | Lea County, New Mexico |

COA

| | | | |
|----------------------|---------------------------------------------------|--------------------------------------------------|------------------------------------------|
| H2S | <input checked="" type="radio"/> Yes | <input type="radio"/> No | |
| Potash | <input type="radio"/> None | <input type="radio"/> Secretary | <input checked="" type="radio"/> R-111-P |
| Cave/Karst Potential | <input checked="" type="radio"/> Low | <input type="radio"/> Medium | <input type="radio"/> High |
| Cave/Karst Potential | <input type="radio"/> Critical | | |
| Variance | <input type="radio"/> None | <input checked="" type="radio"/> Flex Hose | <input type="radio"/> Other |
| Wellhead | <input type="radio"/> Conventional | <input checked="" type="radio"/> Multibowl | <input type="radio"/> Both |
| Other | <input checked="" type="checkbox"/> 4 String Area | <input checked="" type="checkbox"/> Capitan Reef | <input type="checkbox"/> WIPP |
| Other | <input checked="" type="checkbox"/> Fluid Filled | <input type="checkbox"/> Cement Squeeze | <input type="checkbox"/> Pilot Hole |
| Special Requirements | <input type="checkbox"/> Water Disposal | <input type="checkbox"/> COM | <input checked="" type="checkbox"/> Unit |

A. HYDROGEN SULFIDE

1. Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

R-111-P Potash

Capitan Reef

Possibility of water flows in the Artesia Group and Salado.

Possibility of lost circulation in the Rustler, Artesia Group, and Capitan Reef.

Abnormal pressures expected to be encountered at the Base of the 3rd Bone Springs/Top of the Wolfcamp

B. CASING

1. The **18-5/8** inch surface casing shall be set at approximately **1177** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - 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 **24 hours in the Potash Area** 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 **13-3/8** inch 1st intermediate casing, which shall be set at approximately **2800** feet, is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.

9-5/8'' 2nd Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

- b. Second stage above DV tool:
- Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Capitan Reef and potash.**
- ❖ In R111 Potash 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.
- ❖ In Capitan Reef 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.
4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
- Cement should tie-back at least **50 feet** on top of Capitan Reef top (top estimated at 3,248'). If cement does not circulate see B.1.a, c-d above.

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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
3. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8'' 1st intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 1st intermediate casing shoe shall be **3000 (3M)** 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 OOGO2.III.A.2.i 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.

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)

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

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
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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, 2) until cement has been in place at least 24 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. 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.
4. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
5. 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.

6. 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.
7. Whenever a casing string is cemented in the R-111-P 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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
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.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - b. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer.

- c. 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.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. 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.
- f. 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.
- g. 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 Onshore Order No. 2.

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.

JAM 120519



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

Operator Certification Data Report

02/12/2020

Operator Certification

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

NAME: Stephanie Rabadue

Signed on: 06/15/2018

Title: Regulatory Coordinator

Street Address: 500 W. Illinois St, Ste 100

City: Midland

State: TX

Zip: 79701

Phone: (432)620-6714

Email address: stephanie_rabadue@xtoenergy.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:



APD ID: 10400046300

Submission Date: 08/22/2019

Highlighted data
reflects the most
recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400046300

Tie to previous NOS? N

Submission Date: 08/22/2019

BLM Office: CARLSBAD

User: Stephanie Rabadue

Title: Regulatory Coordinator

Federal/Indian APD: FED

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

Lease number: NMNM033955

Lease Acres: 1280

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM068294X

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: XTO PERMIAN OPERATING LLC

Operator letter of designation:

Operator Info

Operator Organization Name: XTO PERMIAN OPERATING LLC

Operator Address: 6401 Holiday Hill Road, Bldg 5

Zip: 79707

Operator PO Box:

Operator City: Midland

State: TX

Operator Phone: (432)682-8873

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: GATUNA CANYON; Pool Name:
BONE SPRING

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

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

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

Is the proposed well in a Helium production area? N

Use Existing Well Pad? Y

New surface disturbance? N

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: BEU BB Number: 1

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: DELINEATION

Describe sub-type:

Distance to town: 24.38 Miles

Distance to nearest well: 30 FT

Distance to lease line: 270 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: BEU_BB_Jabba_103H_C102_20190821165736.pdf

Well work start Date: 05/01/2019

Duration: 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

Reference Datum: GROUND LEVEL

| Wellbore | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD | Will this well produce from this lease? |
|--------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|----------|---------------|--------|-------------|-------------|------------|----------------|-----------|--------|-------|-----------------------------------------|
| SHL Leg #1 | 270 | FSL | 610 | FW L | 20S | 32E | 22 | Aliquot SWS W | 32.5522 | - 103.7606 77 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 033955 | 353 0 | 0 | 0 | N |
| KOP Leg #1 | 270 | FSL | 610 | FW L | 20S | 32E | 22 | Aliquot SWS W | 32.5522 | - 103.7606 77 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 033955 | 153 0 | 200 0 | 200 0 | N |
| PPP Leg #1-1 | 198 0 | FNL | 330 | FW L | 20S | 32E | 28 | Aliquot SENW | 32.54787 | - 103.7755 3 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMLC0 065752 A | - 625 6 | 128 00 | 978 6 | Y |

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

| Wellbore | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD | Will this well produce from this lease? |
|--------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|-----------|--------------|--------|------------|------------|------------|--------------|-----------|-------|------|-----------------------------------------|
| PPP Leg #1-2 | 1980 | FNL | 100 | FEL | 20S | 32E | 28 | Aliquot SWNE | 32.546018 | - 103.762985 | EDDY | NEW MEXICO | NEW MEXICO | F | NMLC0065750A | - 6196 | 10150 | 9726 | Y |
| PPP Leg #1-3 | 330 | FNL | 1980 | FWL | 20S | 32E | 27 | Aliquot NENE | 32.5504 | - 103.76189 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM015024 | 730 | 2800 | 2800 | N |
| EXIT Leg #1 | 1980 | FNL | 100 | FWL | 20S | 32E | 30 | Lot 2 | 32.546115 | - 103.813833 | LEA | NEW MEXICO | NEW MEXICO | F | NMLC0065751A | - 6138 | 26138 | 9668 | Y |
| BHL Leg #1 | 1980 | FNL | 50 | FWL | 20S | 32E | 30 | Lot 2 | 32.546116 | - 103.813995 | LEA | NEW MEXICO | NEW MEXICO | F | NMLC0065751A | - 6138 | 26188 | 9668 | Y |



APD ID: 10400046300

Submission Date: 08/22/2019

Highlighted data
reflects the most
recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|--------------|-----------------|-----------|---------------------|----------------|------------------|---------------------------------------------|---------------------|
| 520923 | PERMIAN | 3530 | 0 | 0 | OTHER : Alluvium | NONE | N |
| 520914 | RUSTLER | 2578 | 952 | 952 | SILTSTONE | USEABLE WATER | N |
| 520915 | TOP SALT | 2303 | 1227 | 1227 | SALT | OTHER, POTASH | N |
| 520916 | BASE OF SALT | 958 | 2572 | 2572 | SALT | OTHER, POTASH | N |
| 520932 | CAPITAN REEF | 305 | 3225 | 3225 | LIMESTONE | USEABLE WATER | N |
| 520912 | DELAWARE | -1189 | 4719 | 4719 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 520930 | BRUSHY CANYON | -2649 | 6179 | 6179 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 520913 | BONE SPRING | -4192 | 7722 | 7722 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 520928 | BONE SPRING 1ST | -5272 | 8802 | 8802 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 520927 | BONE SPRING 2ND | -5586 | 9116 | 9116 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | Y |

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M

Rating Depth: 1177

Equipment: The blow out preventer equipment (BOP) for this well consists of a 21-1/4 minimum 2M Hydril and a 21-1/4 minimum 2M Double Ram BOP.

Requesting Variance? YES

Variance request: 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 manufacturers 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. Permanent Wellhead GE RSH Multibowl System A. Starting Head: 13-5/8 5M top flange x 13-3/8 SOW bottom B. Tubing Head: 13-5/8 5M bottom flange x 7-1/16 10M top flange Wellhead will be installed by manufacturers representatives. Manufacturer will monitor welding process to ensure appropriate temperature of seal. Operator will test the 9-5/8" casing per BLM Onshore Order 2 Wellhead Manufacturer representative will not be present for BOP test plug installation

Testing Procedure: All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up, the BOP test will be limited to 2,000 psi. All BOP tests will include a low

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

pressure test as per BLM regulations. The 2M BOP diagram is attached. Blind rams will be function tested each trip, pipe rams will be function tested each day.

Choke Diagram Attachment:

BEU_BB_2MCM_20190816053523.pdf

BOP Diagram Attachment:

BEU_BB_2MBOP_20191204062718.pdf

Pressure Rating (PSI): 3M

Rating Depth: 9668

Equipment: The blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP.

Requesting Variance? YES

Variance request: 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 to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint. Permanent Wellhead – GE RSH Multibowl System A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange Wellhead will be installed by manufacturer's representatives. Manufacturer will monitor welding process to ensure appropriate temperature of seal. Operator will test the 9-5/8" casing per BLM Onshore Order 2 Wellhead Manufacturer representative will not be present for BOP test plug installation

Testing Procedure: All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up, the BOP test will be limited to 3,000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M BOP diagram is attached. Blind rams will be function tested each trip, pipe rams will be function tested each day.

Choke Diagram Attachment:

BEU_BB_3MCM_20190816053551.pdf

BOP Diagram Attachment:

BEU_BB_3MBOP_20190816053558.pdf

Section 3 - Casing

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|-----------|--------------|-----------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|-----------------------------|-------|--------|------------|-------------|----------|---------------|----------|--------------|---------|
| 1 | SURFACE | 24 | 18.625 | NEW | API | N | 0 | 1177 | 0 | 1177 | 3530 | 2353 | 1177 | H-40 | 87.5 | ST&C | 1.17 | 2 | DRY | 5.43 | DRY | 5.43 |
| 2 | INTERMEDIATE | 17.5 | 13.375 | NEW | API | N | 0 | 2672 | 0 | 2672 | | 858 | 2672 | J-55 | 68 | ST&C | 2.36 | 3.01 | DRY | 3.71 | DRY | 3.71 |
| 3 | INTERMEDIATE | 12.25 | 9.625 | NEW | API | N | 0 | 4819 | 0 | 4819 | | -1289 | 4819 | J-55 | 40 | LT&C | 3.77 | 2.37 | DRY | 3.77 | DRY | 3.77 |

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|-----------|----------------|-----------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|-----------------------------|-----------|--------|------------|-------------|----------|---------------|----------|--------------|---------|
| 4 | PRODUCTI ON | 8.75 | 5.5 | NEW | API | N | 0 | 25933 | 0 | 9655 | | -6125 | 25933 | P- 110 | 17 | BUTT | 1.64 | 1.12 | DRY | 2.03 | DRY | 2.03 |

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BEU_BB_Jabba_103H_Csg_20190821165338.pdf

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BEU_BB_Jabba_103H_Csg_20190821165350.pdf

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

Casing Attachments

Casing ID: 3 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BEU_BB_Jabba_103H_Csg_20190821165316.pdf

Casing ID: 4 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BEU_BB_Jabba_103H_Csg_20190821165415.pdf

Section 4 - Cement

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|--------------|-----------|------------------|--------|-----------|--------------|-------|---------|--------|---------|-----------------|-----------|
| SURFACE | Lead | | 0 | 1177 | 1170 | 1.87 | 12.9 | 2187.9 | 100 | EconoCem-HLTRRC | None |
| SURFACE | Tail | | | | 550 | 1.35 | 14.8 | 742.5 | 100 | HalCem-C | 2% CaCl |
| INTERMEDIATE | Lead | | 0 | 2672 | 1760 | 1.87 | 12.9 | 3291.2 | 100 | EconoCem-HLTRRC | None |
| INTERMEDIATE | Tail | | | | 300 | 1.35 | 14.8 | 405 | 100 | HalCem-C | 2% CaCl |
| INTERMEDIATE | Lead | 2722 | 0 | 2722 | 530 | 1.88 | 12.9 | 996.4 | 100 | Halcem-C | 2% CaCl |

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|--------------|-----------|------------------|--------|-----------|--------------|-------|---------|--------|---------|-------------|-----------|
| INTERMEDIATE | Tail | | | | 230 | 1.33 | 14.8 | 305.9 | 100 | Halcem-C | 2% CaCl |
| INTERMEDIATE | Lead | 2722 | 4819 | 2722 | 740 | 1.88 | 12.9 | 1391.2 | 100 | Halcem-C | 2% CaCl |
| INTERMEDIATE | Tail | | | | 230 | 1.33 | 14.8 | 305.9 | 100 | Halcem-C | 2% CaCl |
| PRODUCTION | Lead | | 0 | 26188 | 800 | 2.69 | 10.5 | 2152 | 30 | NeoCem | none |
| PRODUCTION | Tail | | | | 3530 | 1.61 | 13.2 | 5683.3 | 30 | VersaCem | None |

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: The necessary mud products for weight addition and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized: A Pason or Totco will be used to detect changes in loss or gain of mud volume.

Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|-------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0 | 1177 | OTHER : FW/Native | 8.4 | 8.8 | | | | | | | 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 |

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|------------------------------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4819 | 9668 | OTHER : OBM / Cut Brine / Polymer | 8.7 | 9 | | | | | | | 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 |
| 1177 | 2672 | OTHER : Brine/Gel Sweeps | 9.8 | 10.2 | | | | | | | 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 |
| 2672 | 4819 | OTHER : FW/Cut Brine / Poly-Sweeps | 8.7 | 9.4 | | | | | | | 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 |

Section 6 - Test, Logging, Coring

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

Open hole logging to include Density/Neutron/PE/Dual Laterlog/Spectral Gamma from kick-off point to intermediate casing shoe.

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

CEMENT BOND LOG,COMPENSATED NEUTRON LOG,DIRECTIONAL SURVEY,GAMMA RAY LOG,

Coring operation description for the well:

No coring will take place on this well.

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4373

Anticipated Surface Pressure: 2222

Anticipated Bottom Hole Temperature(F): 160

Anticipated abnormal pressures, temperatures, or potential geologic hazards? YES

Describe:

Potential loss of circulation through the Capitan Reef.

Contingency Plans geohazards description:

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

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

BEU_BB_H2S_Dia_20190821070715.pdf

BEU_BB_H2S_Plan_20190821070722.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BEU_BB_Jabba_103H_DD_20190821165645.pdf

Other proposed operations facets description:

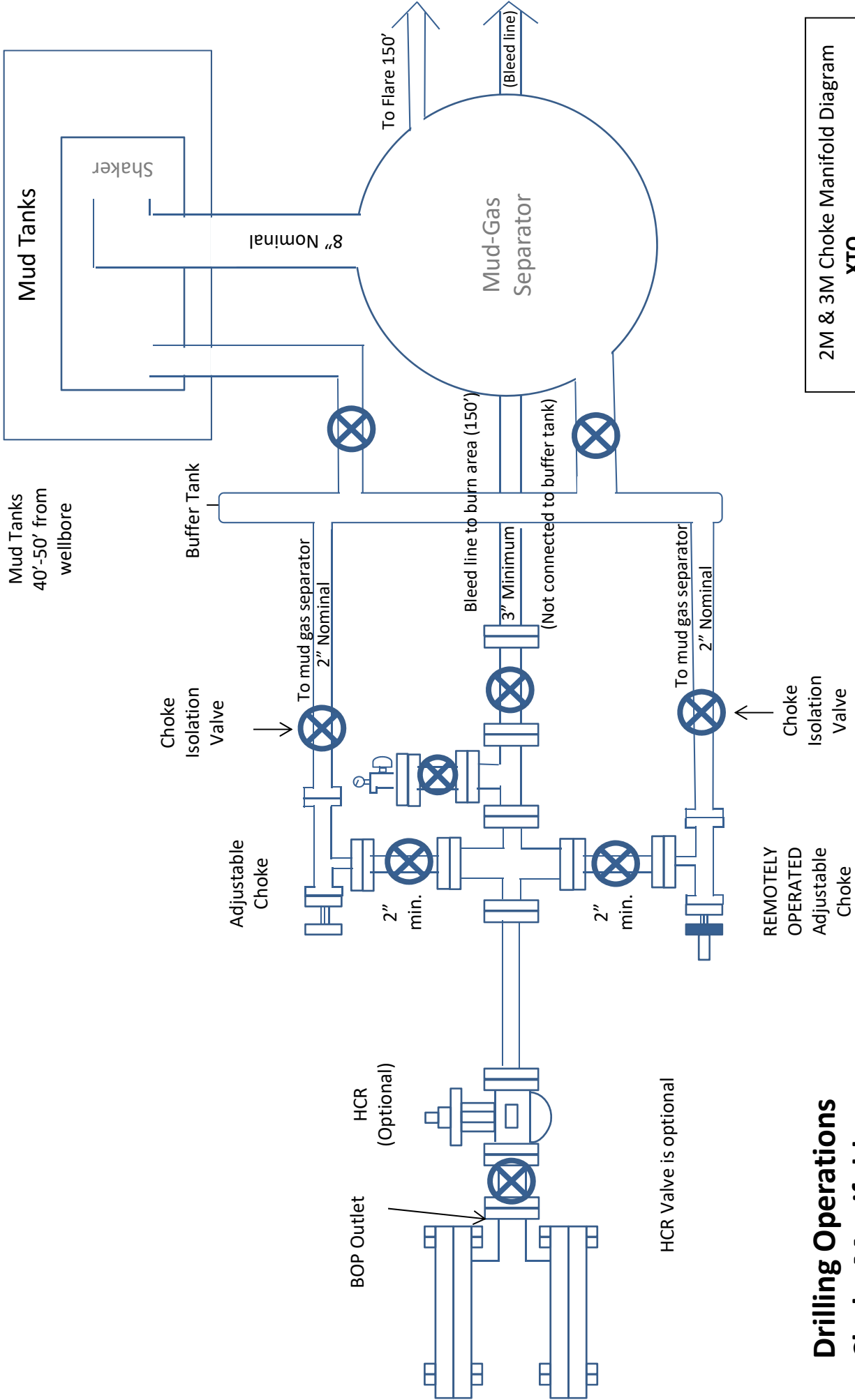
Other proposed operations facets attachment:

BEU_BB_Jabba_103H_GCP_20190821165655.pdf

Other Variance attachment:

BEU_BB_FH_20190821070830.pdf

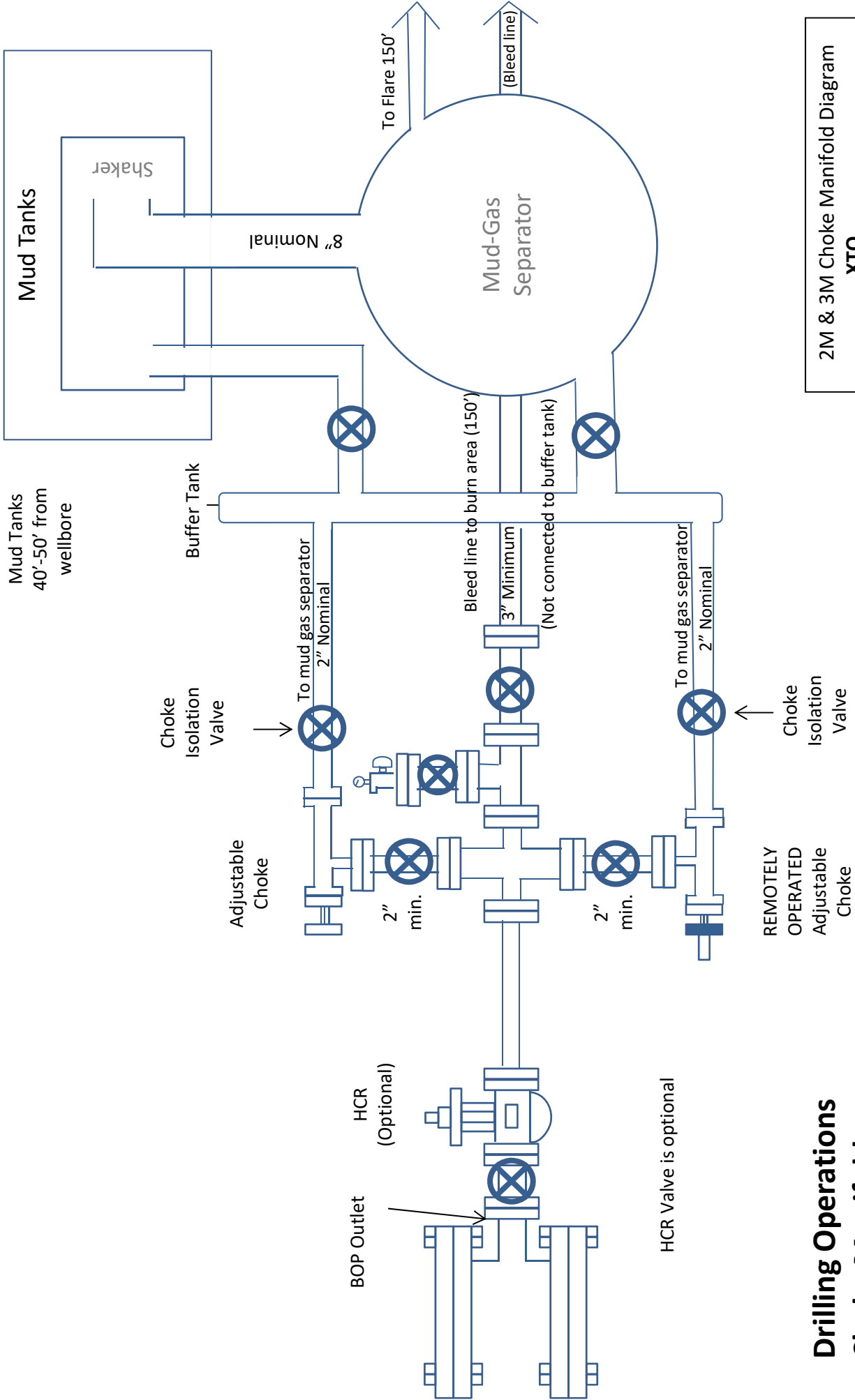
BEU_BB_MBS_20190821070837.pdf



2M & 3M Choke Manifold Diagram
XTO

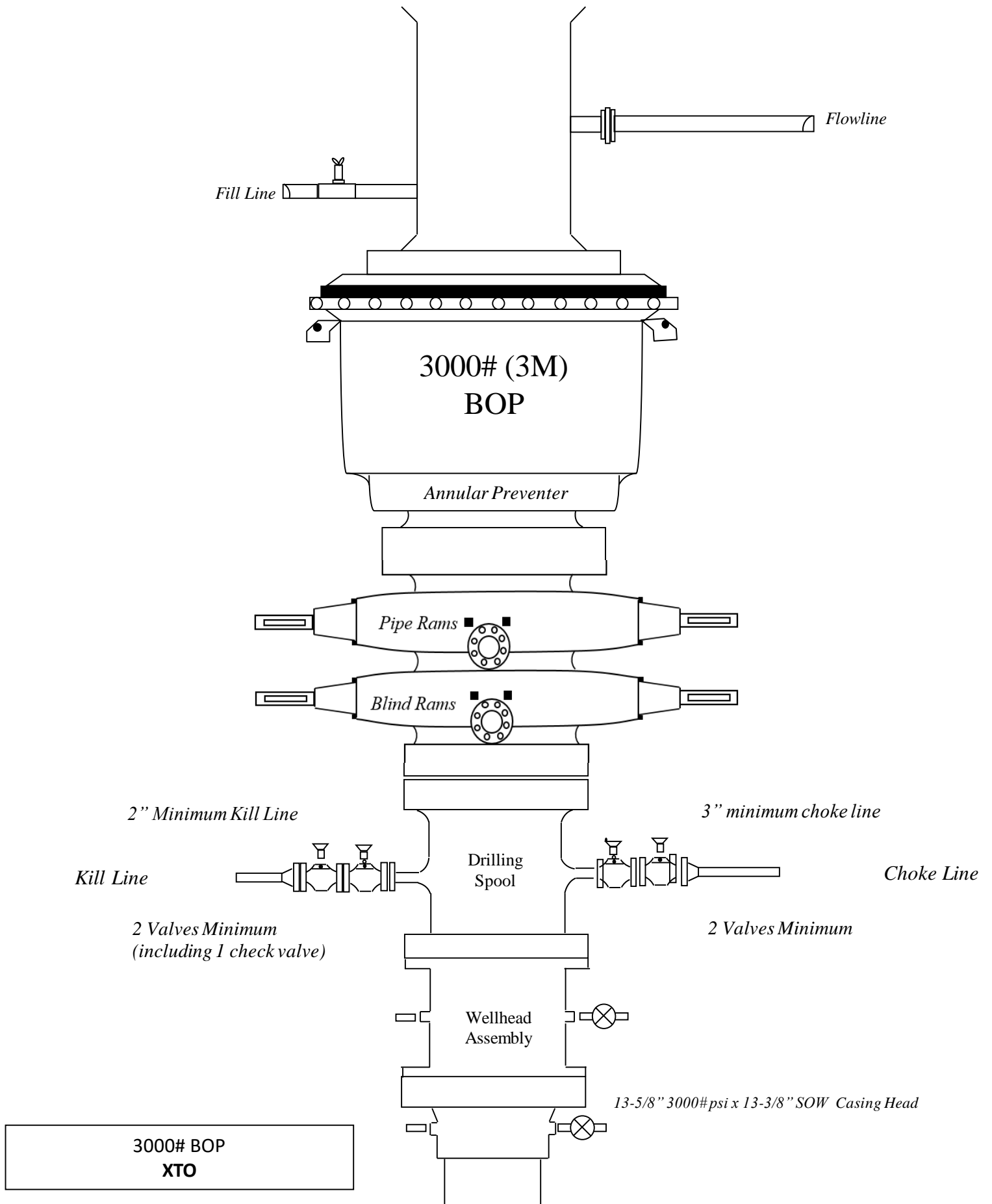
Drilling Operations Choke Manifold 2M & 3M Service

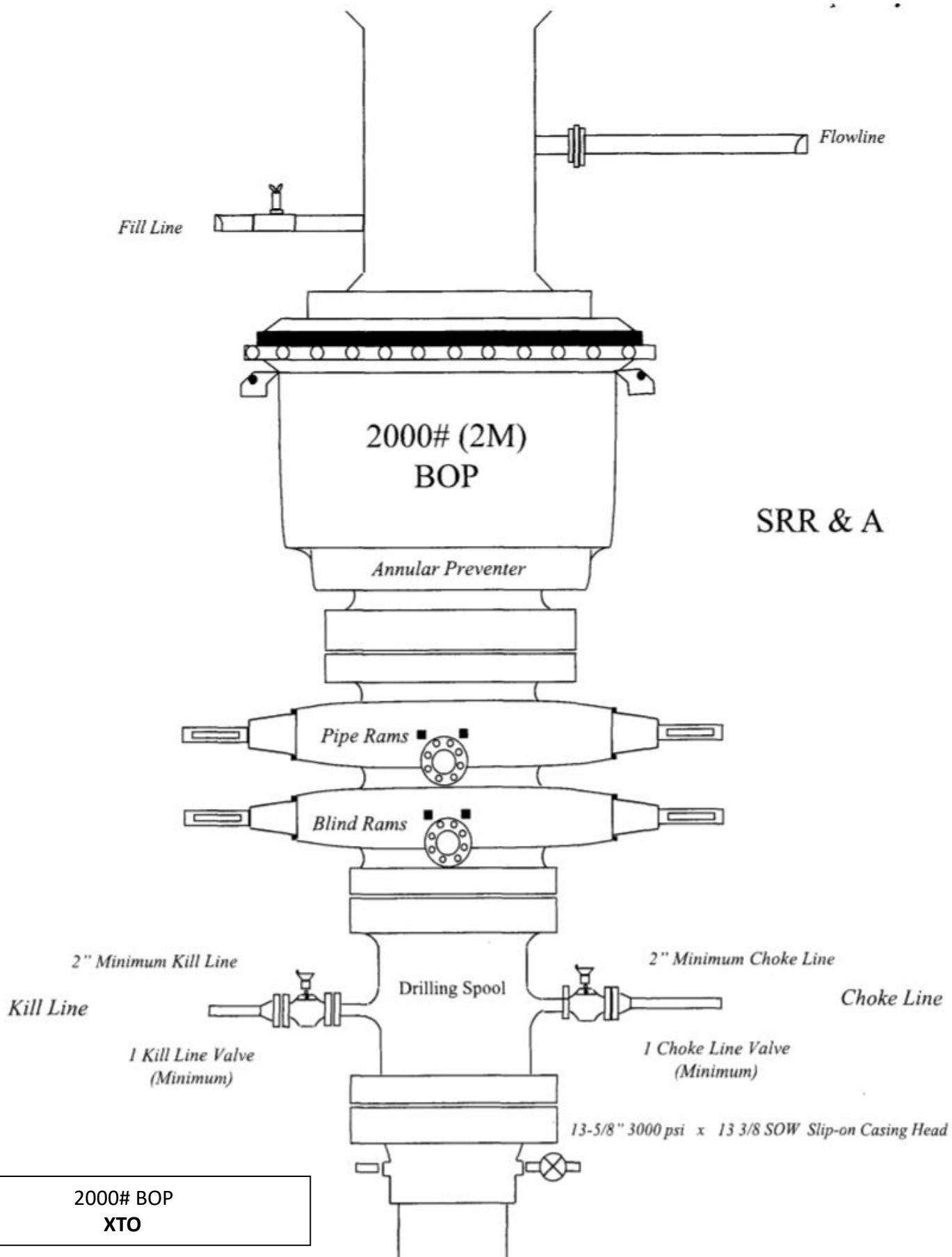
HCR Valve is optional



2M & 3M Choke Manifold Diagram
XTO

Drilling Operations
Choke Manifold
2M & 3M Service





Casing Design

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-------------|---------|--------|--------|-------|----------|----------|-------------|------------|
| 24" | 0' – 1177' | 18-5/8" | 87.5 | STC | H-40 | New | 2.00 | 1.17 | 5.43 |
| 17-1/2" | 0' – 2672' | 13-3/8" | 68 | STC | J-55 | New | 3.01 | 2.36 | 3.71 |
| 12-1/4" | 0' – 4819' | 9-5/8" | 40 | LTC | J-55 | New | 2.37 | 3.77 | 3.77 |
| 8-3/4" | 0' – 25969' | 5-1/2" | 17 | BTC | P-110 | New | 1.12 | 1.64 | 2.04 |

- XTO requests to not utilize centralizers in the curve and lateral
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:*Temporary Wellhead*

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

Casing Design

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-------------|---------|--------|--------|-------|----------|----------|-------------|------------|
| 24" | 0' – 1177' | 18-5/8" | 87.5 | STC | H-40 | New | 2.00 | 1.17 | 5.43 |
| 17-1/2" | 0' – 2672' | 13-3/8" | 68 | STC | J-55 | New | 3.01 | 2.36 | 3.71 |
| 12-1/4" | 0' – 4819' | 9-5/8" | 40 | LTC | J-55 | New | 2.37 | 3.77 | 3.77 |
| 8-3/4" | 0' – 25846' | 5-1/2" | 17 | BTC | P-110 | New | 1.12 | 1.64 | 2.04 |

- XTO requests to not utilize centralizers in the curve and lateral
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:*Temporary Wellhead*

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

Casing Design

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-------------|---------|--------|--------|-------|----------|----------|-------------|------------|
| 24" | 0' – 1177' | 18-5/8" | 87.5 | STC | H-40 | New | 2.00 | 1.17 | 5.43 |
| 17-1/2" | 0' – 2672' | 13-3/8" | 68 | STC | J-55 | New | 3.01 | 2.36 | 3.71 |
| 12-1/4" | 0' – 4819' | 9-5/8" | 40 | LTC | J-55 | New | 2.37 | 3.77 | 3.77 |
| 8-3/4" | 0' – 25933' | 5-1/2" | 17 | BTC | P-110 | New | 1.12 | 1.64 | 2.04 |

- XTO requests to not utilize centralizers in the curve and lateral
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:

Temporary Wellhead

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

Casing Design

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-------------|---------|--------|--------|-------|----------|----------|-------------|------------|
| 24" | 0' – 1177' | 18-5/8" | 87.5 | STC | H-40 | New | 2.00 | 1.17 | 5.43 |
| 17-1/2" | 0' – 2672' | 13-3/8" | 68 | STC | J-55 | New | 3.01 | 2.36 | 3.71 |
| 12-1/4" | 0' – 4819' | 9-5/8" | 40 | LTC | J-55 | New | 2.37 | 3.77 | 3.77 |
| 8-3/4" | 0' – 26188' | 5-1/2" | 17 | BTC | P-110 | New | 1.12 | 1.64 | 2.03 |

- XTO requests to not utilize centralizers in the curve and lateral
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:

Temporary Wellhead

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

Casing Design

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-------------|---------|--------|--------|-------|----------|----------|-------------|------------|
| 24" | 0' – 1177' | 18-5/8" | 87.5 | STC | H-40 | New | 2.00 | 1.17 | 5.43 |
| 17-1/2" | 0' – 2672' | 13-3/8" | 68 | STC | J-55 | New | 3.01 | 2.36 | 3.71 |
| 12-1/4" | 0' – 4819' | 9-5/8" | 40 | LTC | J-55 | New | 2.37 | 3.77 | 3.77 |
| 8-3/4" | 0' – 26188' | 5-1/2" | 17 | BTC | P-110 | New | 1.12 | 1.64 | 2.03 |

- XTO requests to not utilize centralizers in the curve and lateral
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:

Temporary Wellhead

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

Casing Design

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-------------|---------|--------|--------|-------|----------|----------|-------------|------------|
| 24" | 0' – 1177' | 18-5/8" | 87.5 | STC | H-40 | New | 2.00 | 1.17 | 5.43 |
| 17-1/2" | 0' – 2672' | 13-3/8" | 68 | STC | J-55 | New | 3.01 | 2.36 | 3.71 |
| 12-1/4" | 0' – 4819' | 9-5/8" | 40 | LTC | J-55 | New | 2.37 | 3.77 | 3.77 |
| 8-3/4" | 0' – 26188' | 5-1/2" | 17 | BTC | P-110 | New | 1.12 | 1.64 | 2.03 |

- XTO requests to not utilize centralizers in the curve and lateral
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:

Temporary Wellhead

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

Casing Design

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|-----------|-------------|---------|--------|--------|-------|----------|-------------|----------------|---------------|
| 24" | 0' – 1177' | 18-5/8" | 87.5 | STC | H-40 | New | 2.00 | 1.17 | 5.43 |
| 17-1/2" | 0' – 2672' | 13-3/8" | 68 | STC | J-55 | New | 3.01 | 2.36 | 3.71 |
| 12-1/4" | 0' – 4819' | 9-5/8" | 40 | LTC | J-55 | New | 2.37 | 3.77 | 3.77 |
| 8-3/4" | 0' – 26188' | 5-1/2" | 17 | BTC | P-110 | New | 1.12 | 1.64 | 2.03 |

- XTO requests to not utilize centralizers in the curve and lateral
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:*Temporary Wellhead*

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

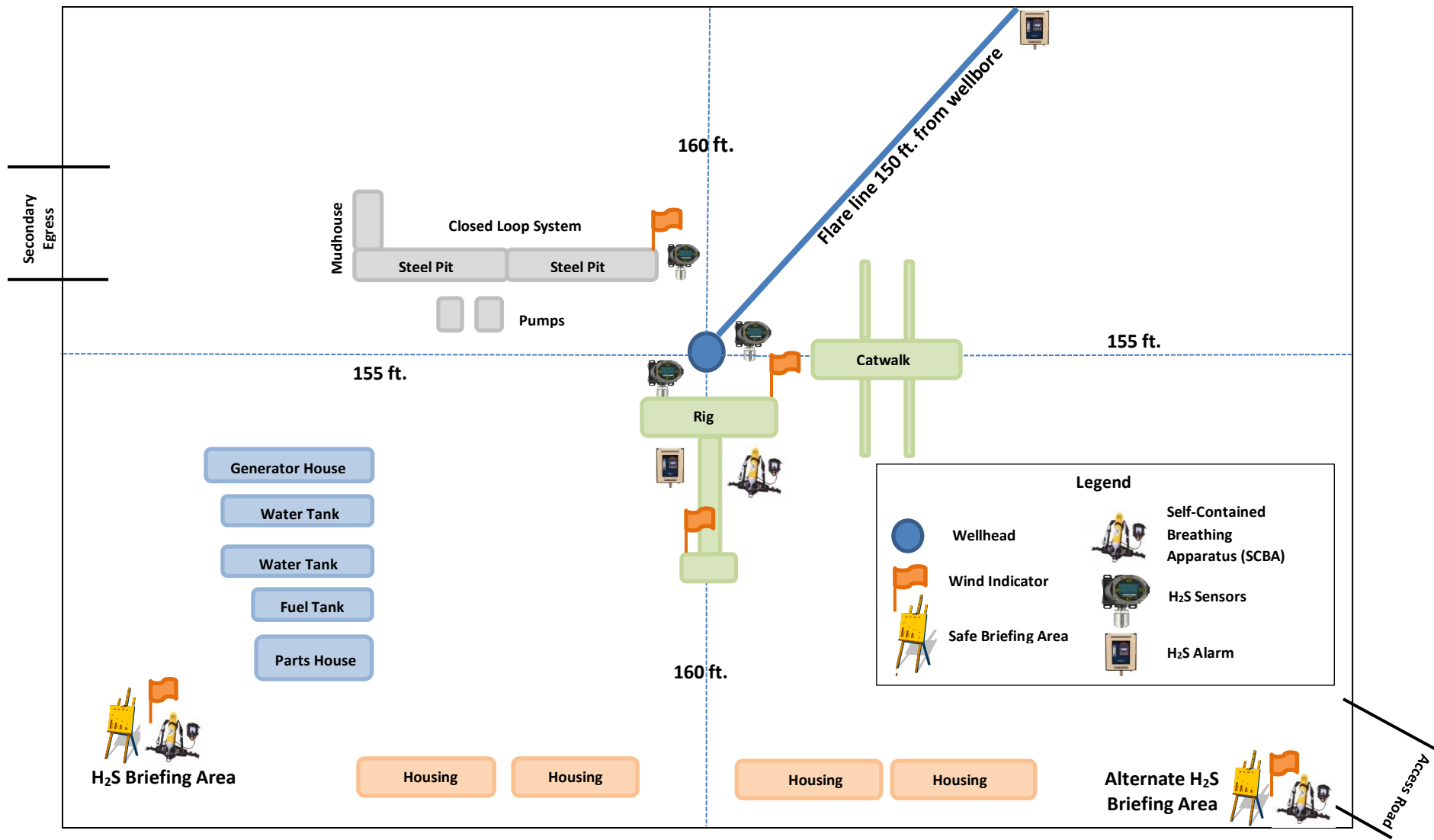
B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation



↗
Prevailing Winds
Direction SW

H2S Briefing Areas and Alarm Locations





HYDROGEN SULFIDE (H₂S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - o Detection of H₂S, and
 - o Measures for protection against the gas,
 - o Equipment used for protection and emergency response.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H₂S and SO₂

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

Contacting Authorities

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

CARLSBAD OFFICE – EDDY & LEA COUNTIES

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

575-887-7329

XTO PERSONNEL:

| | |
|----------------------------------------|--------------|
| Kendall Decker, Drilling Manager | 903-521-6477 |
| Milton Turman, Drilling Superintendent | 817-524-5107 |
| Jeff Raines, Construction Foreman | 432-557-3159 |
| Toady Sanders, EH & S Manager | 903-520-1601 |
| Wes McSpadden, Production Foreman | 575-441-1147 |

SHERIFF DEPARTMENTS:

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

NEW MEXICO STATE POLICE:

575-392-5588

FIRE DEPARTMENTS:

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

HOSPITALS:

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

AGENT NOTIFICATIONS:

For Lea County:

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

For Eddy County:

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



XTO Energy

**Lea County, NM (NAD-27)
Big Eddy Unit DI BB JABBA
#103H**

OH

Plan: PERMIT

Standard Planning Report

30 July, 2019



Project: Lea County, NM (NAD-27)
Site: Big Eddy Unit DI BB JABBA
Well: #103H
Wellbore: OH
Design: PERMIT

WELL DETAILS: #103H

Rig Name:
RKB = 25' @ 3555.00usft
Ground Level: 3530.00
Easting 676603.20
Latitude 32.5520801
Longitude -103.7601791

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec |
|-----|----------|-------|--------|---------|----------|-----------|-------|--------|----------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 2000.00 | 0.00 | 0.00 | 2000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 2849.23 | 16.98 | 183.34 | 2836.85 | -124.74 | -7.29 | 2.00 | 183.34 | 7.64 |
| 4 | 9574.92 | 16.98 | 183.34 | 9269.18 | -2086.07 | -121.86 | 0.00 | 0.00 | 127.69 |
| 5 | 10469.53 | 90.51 | 269.84 | 9807.00 | -2253.20 | -699.10 | 10.00 | 86.50 | 705.39 |
| 6 | 26138.70 | 90.51 | 269.84 | 9668.44 | -2297.66 | -16367.60 | 0.00 | 0.00 | 16373.95 |
| 7 | 26188.71 | 90.51 | 269.84 | 9668.00 | -2297.80 | -16417.60 | 0.00 | 0.00 | 16423.95 |

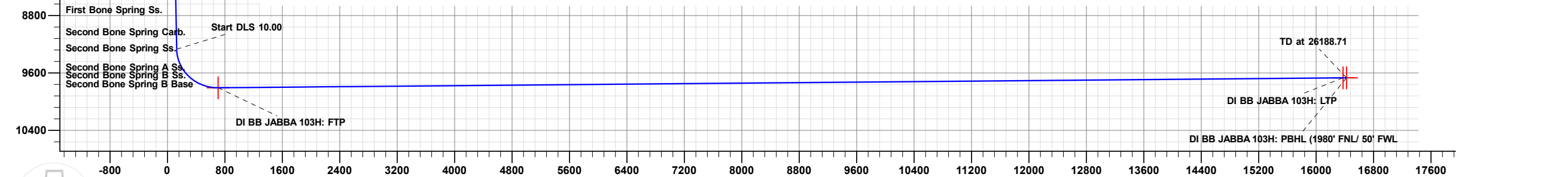
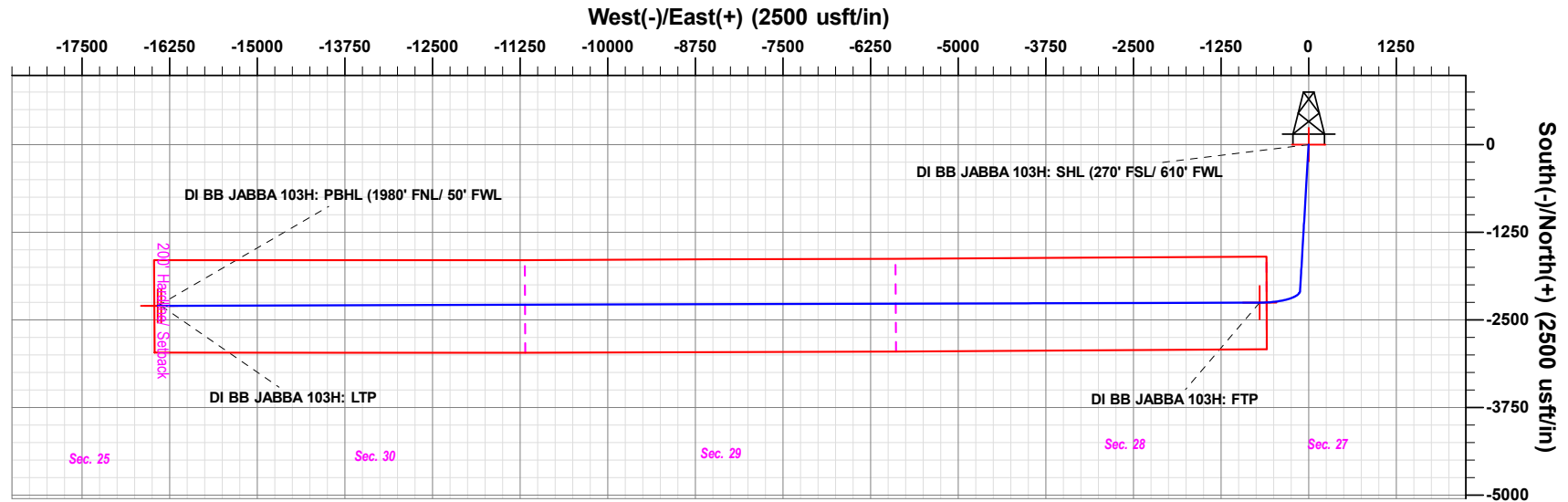
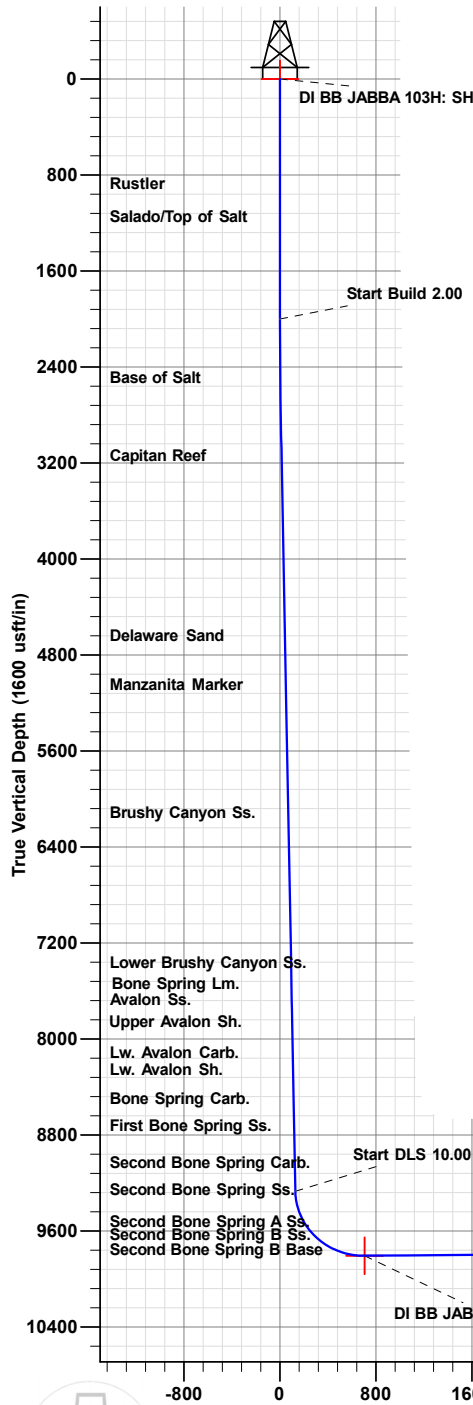
DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---------------------------------------------|---------|----------|-----------|-----------|-----------|------------|--------------|-------|
| DI BB JABBA 103H: SHL (270' FSL/ 610' FWL) | 0.00 | 0.00 | 0.00 | 565034.10 | 676603.20 | 32.5520801 | -103.7601791 | Point |
| DI BB JABBA 103H: PBHL (1980' FNL/ 50' FWL) | 9668.00 | -2297.80 | -16417.60 | 562736.30 | 660185.60 | 32.5459956 | -103.8134958 | Point |
| DI BB JABBA 103H: LTP | 9668.44 | -2297.90 | -16367.60 | 562736.20 | 660235.60 | 32.5459947 | -103.8133335 | Point |
| DI BB JABBA 103H: FTP | 9807.00 | -2253.20 | -699.10 | 562780.90 | 675904.10 | 32.5458970 | -103.7624871 | Point |

PROJECT DETAILS: Lea County, NM (NAD-27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

FORMATION TOP DETAILS

| TVDPath | Formation |
|---------|--------------------------|
| 955.00 | Rustler |
| 1230.00 | Salado/Top of Salt |
| 2575.00 | Base of Salt |
| 3228.00 | Capitan Reef |
| 4722.00 | Delaware Sand |
| 5128.00 | Manzanita Marker |
| 6200.00 | Brushy Canyon Ss. |
| 7449.00 | Lower Brushy Canyon Ss. |
| 7725.00 | Bone Spring Lm. |
| 7866.00 | Avalon Ss. |
| 7951.00 | Upper Avalon Sh. |
| 8203.00 | Lw. Avalon Carb. |
| 8342.00 | Lw. Avalon Sh. |
| 8581.00 | Bone Spring Carb. |
| 8805.00 | First Bone Spring Ss. |
| 9119.00 | Second Bone Spring Carb. |
| 9343.00 | Second Bone Spring Ss. |
| 9607.00 | Second Bone Spring A Ss. |
| 9715.00 | Second Bone Spring B Ss. |



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Prototype are at the sole risk and responsibility of the user.

Vertical Section at 269.84° (1600 usft/in)

Plan: PERMIT (#103H/OH)

Created By: Matthew May Date: 14:30, July 30 2019



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

| | | | |
|--------------------|--------------------------------------|----------------------|----------------|
| Project | Lea County, NM (NAD-27) | | |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 (NADCON CONUS) | | |
| Map Zone: | New Mexico East 3001 | | |

| | | | | | |
|-----------------------|-----------|---------------------------|-----------------|-------------------|--------------|
| Site | | Big Eddy Unit DI BB JABBA | | | |
| Site Position: | | Northing: | 565,234.10 usft | Latitude: | 32.5526298 |
| From: | Map | Easting: | 676,602.40 usft | Longitude: | -103.7601782 |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13-3/16 " | Grid Convergence: | 0.31 ° |

| Well | #103H | | | | | |
|----------------------|-------|--------------|---------------------|-----------------|---------------|---------------|
| Well Position | +N/-S | -200.00 usft | Northing: | 565,034.10 usft | Latitude: | 32.5520801 |
| | +E/-W | 0.80 usft | Easting: | 676,603.20 usft | Longitude: | -103.7601791 |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 3,530.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 07/23/19 | 6.84 | 60.31 | 47,895 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | PERMIT | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 269.84 |

| | | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|------------------|
| Plan Sections | | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,849.23 | 16.98 | 183.34 | 2,836.85 | -124.74 | -7.29 | 2.00 | 2.00 | 0.00 | 183.34 | |
| 9,574.92 | 16.98 | 183.34 | 9,269.18 | -2,086.07 | -121.86 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 10,469.53 | 90.51 | 269.84 | 9,807.00 | -2,253.20 | -699.10 | 10.00 | 8.22 | 9.67 | 86.50 | DI BB JABBA 103H |
| 26,138.71 | 90.51 | 269.84 | 9,668.44 | -2,297.66 | -16,367.60 | 0.00 | 0.00 | 0.00 | 0.00 | DI BB JABBA 103H |
| 26,188.71 | 90.51 | 269.84 | 9,668.00 | -2,297.80 | -16,417.60 | 0.00 | 0.00 | 0.00 | 0.00 | DI BB JABBA 103H |



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 955.00 | 0.00 | 0.00 | 955.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rustler | | | | | | | | | |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 0.00 | 0.00 | 1,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,230.00 | 0.00 | 0.00 | 1,230.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Salado/Top of Salt | | | | | | | | | |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 0.00 | 0.00 | 1,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 0.00 | 0.00 | 1,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 0.00 | 0.00 | 1,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 0.00 | 0.00 | 1,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 0.00 | 0.00 | 1,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 2.00 | 183.34 | 2,099.98 | -1.74 | -0.10 | 0.11 | 2.00 | 2.00 | 0.00 |
| 2,200.00 | 4.00 | 183.34 | 2,199.84 | -6.97 | -0.41 | 0.43 | 2.00 | 2.00 | 0.00 |
| 2,300.00 | 6.00 | 183.34 | 2,299.45 | -15.67 | -0.92 | 0.96 | 2.00 | 2.00 | 0.00 |
| 2,400.00 | 8.00 | 183.34 | 2,398.70 | -27.83 | -1.63 | 1.70 | 2.00 | 2.00 | 0.00 |
| 2,500.00 | 10.00 | 183.34 | 2,497.47 | -43.45 | -2.54 | 2.66 | 2.00 | 2.00 | 0.00 |
| 2,578.93 | 11.58 | 183.34 | 2,575.00 | -58.20 | -3.40 | 3.56 | 2.00 | 2.00 | 0.00 |
| Base of Salt | | | | | | | | | |
| 2,600.00 | 12.00 | 183.34 | 2,595.62 | -62.50 | -3.65 | 3.83 | 2.00 | 2.00 | 0.00 |
| 2,700.00 | 14.00 | 183.34 | 2,693.06 | -84.95 | -4.96 | 5.20 | 2.00 | 2.00 | 0.00 |
| 2,800.00 | 16.00 | 183.34 | 2,789.64 | -110.79 | -6.47 | 6.78 | 2.00 | 2.00 | 0.00 |
| 2,849.23 | 16.98 | 183.34 | 2,836.85 | -124.74 | -7.29 | 7.64 | 2.00 | 2.00 | 0.00 |
| 2,900.00 | 16.98 | 183.34 | 2,885.40 | -139.55 | -8.15 | 8.54 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 16.98 | 183.34 | 2,981.04 | -168.71 | -9.86 | 10.33 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 16.98 | 183.34 | 3,076.68 | -197.87 | -11.56 | 12.11 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 16.98 | 183.34 | 3,172.32 | -227.03 | -13.26 | 13.90 | 0.00 | 0.00 | 0.00 |
| 3,258.22 | 16.98 | 183.34 | 3,228.00 | -244.01 | -14.25 | 14.94 | 0.00 | 0.00 | 0.00 |
| Capitan Reef | | | | | | | | | |
| 3,300.00 | 16.98 | 183.34 | 3,267.96 | -256.19 | -14.97 | 15.68 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 16.98 | 183.34 | 3,363.59 | -285.35 | -16.67 | 17.47 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 16.98 | 183.34 | 3,459.23 | -314.52 | -18.37 | 19.25 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 16.98 | 183.34 | 3,554.87 | -343.68 | -20.08 | 21.04 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 16.98 | 183.34 | 3,650.51 | -372.84 | -21.78 | 22.82 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 16.98 | 183.34 | 3,746.15 | -402.00 | -23.48 | 24.61 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 16.98 | 183.34 | 3,841.79 | -431.16 | -25.19 | 26.39 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 16.98 | 183.34 | 3,937.42 | -460.32 | -26.89 | 28.18 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 16.98 | 183.34 | 4,033.06 | -489.49 | -28.59 | 29.96 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 16.98 | 183.34 | 4,128.70 | -518.65 | -30.30 | 31.75 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 16.98 | 183.34 | 4,224.34 | -547.81 | -32.00 | 33.53 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 16.98 | 183.34 | 4,319.98 | -576.97 | -33.70 | 35.32 | 0.00 | 0.00 | 0.00 |



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|--------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,500.00 | 16.98 | 183.34 | 4,415.62 | -606.13 | -35.41 | 37.10 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 16.98 | 183.34 | 4,511.25 | -635.30 | -37.11 | 38.89 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 16.98 | 183.34 | 4,606.89 | -664.46 | -38.82 | 40.67 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 16.98 | 183.34 | 4,702.53 | -693.62 | -40.52 | 42.46 | 0.00 | 0.00 | 0.00 |
| 4,820.36 | 16.98 | 183.34 | 4,722.00 | -699.56 | -40.87 | 42.82 | 0.00 | 0.00 | 0.00 |
| Delaware Sand | | | | | | | | | |
| 4,900.00 | 16.98 | 183.34 | 4,798.17 | -722.78 | -42.22 | 44.24 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 16.98 | 183.34 | 4,893.81 | -751.94 | -43.93 | 46.03 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 16.98 | 183.34 | 4,989.45 | -781.10 | -45.63 | 47.81 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 16.98 | 183.34 | 5,085.08 | -810.27 | -47.33 | 49.60 | 0.00 | 0.00 | 0.00 |
| 5,244.87 | 16.98 | 183.34 | 5,128.00 | -823.35 | -48.10 | 50.40 | 0.00 | 0.00 | 0.00 |
| Manzanita Marker | | | | | | | | | |
| 5,300.00 | 16.98 | 183.34 | 5,180.72 | -839.43 | -49.04 | 51.38 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 16.98 | 183.34 | 5,276.36 | -868.59 | -50.74 | 53.17 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 16.98 | 183.34 | 5,372.00 | -897.75 | -52.44 | 54.95 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 16.98 | 183.34 | 5,467.64 | -926.91 | -54.15 | 56.74 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 16.98 | 183.34 | 5,563.28 | -956.07 | -55.85 | 58.52 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 16.98 | 183.34 | 5,658.91 | -985.24 | -57.55 | 60.31 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 16.98 | 183.34 | 5,754.55 | -1,014.40 | -59.26 | 62.09 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 16.98 | 183.34 | 5,850.19 | -1,043.56 | -60.96 | 63.88 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 16.98 | 183.34 | 5,945.83 | -1,072.72 | -62.66 | 65.66 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 16.98 | 183.34 | 6,041.47 | -1,101.88 | -64.37 | 67.45 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 16.98 | 183.34 | 6,137.11 | -1,131.05 | -66.07 | 69.23 | 0.00 | 0.00 | 0.00 |
| 6,365.76 | 16.98 | 183.34 | 6,200.00 | -1,150.22 | -67.19 | 70.40 | 0.00 | 0.00 | 0.00 |
| Brushy Canyon Ss. | | | | | | | | | |
| 6,400.00 | 16.98 | 183.34 | 6,232.74 | -1,160.21 | -67.78 | 71.02 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 16.98 | 183.34 | 6,328.38 | -1,189.37 | -69.48 | 72.80 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 16.98 | 183.34 | 6,424.02 | -1,218.53 | -71.18 | 74.58 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 16.98 | 183.34 | 6,519.66 | -1,247.69 | -72.89 | 76.37 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 16.98 | 183.34 | 6,615.30 | -1,276.85 | -74.59 | 78.15 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 16.98 | 183.34 | 6,710.94 | -1,306.02 | -76.29 | 79.94 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 16.98 | 183.34 | 6,806.57 | -1,335.18 | -78.00 | 81.72 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 16.98 | 183.34 | 6,902.21 | -1,364.34 | -79.70 | 83.51 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 16.98 | 183.34 | 6,997.85 | -1,393.50 | -81.40 | 85.29 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 16.98 | 183.34 | 7,093.49 | -1,422.66 | -83.11 | 87.08 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 16.98 | 183.34 | 7,189.13 | -1,451.82 | -84.81 | 88.86 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 16.98 | 183.34 | 7,284.77 | -1,480.99 | -86.51 | 90.65 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 16.98 | 183.34 | 7,380.40 | -1,510.15 | -88.22 | 92.43 | 0.00 | 0.00 | 0.00 |
| 7,671.72 | 16.98 | 183.34 | 7,449.00 | -1,531.06 | -89.44 | 93.71 | 0.00 | 0.00 | 0.00 |
| Lower Brushy Canyon Ss. | | | | | | | | | |
| 7,700.00 | 16.98 | 183.34 | 7,476.04 | -1,539.31 | -89.92 | 94.22 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 16.98 | 183.34 | 7,571.68 | -1,568.47 | -91.62 | 96.00 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 16.98 | 183.34 | 7,667.32 | -1,597.63 | -93.33 | 97.79 | 0.00 | 0.00 | 0.00 |
| 7,960.31 | 16.98 | 183.34 | 7,725.00 | -1,615.22 | -94.36 | 98.87 | 0.00 | 0.00 | 0.00 |
| Bone Spring Lm. | | | | | | | | | |
| 8,000.00 | 16.98 | 183.34 | 7,762.96 | -1,626.80 | -95.03 | 99.57 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 16.98 | 183.34 | 7,858.60 | -1,655.96 | -96.74 | 101.36 | 0.00 | 0.00 | 0.00 |
| 8,107.74 | 16.98 | 183.34 | 7,866.00 | -1,658.22 | -96.87 | 101.50 | 0.00 | 0.00 | 0.00 |
| Avalon Ss. | | | | | | | | | |
| 8,196.62 | 16.98 | 183.34 | 7,951.00 | -1,684.13 | -98.38 | 103.08 | 0.00 | 0.00 | 0.00 |
| Upper Avalon Sh. | | | | | | | | | |
| 8,200.00 | 16.98 | 183.34 | 7,954.23 | -1,685.12 | -98.44 | 103.14 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 16.98 | 183.34 | 8,049.87 | -1,714.28 | -100.14 | 104.93 | 0.00 | 0.00 | 0.00 |



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 8,400.00 | 16.98 | 183.34 | 8,145.51 | -1,743.44 | -101.85 | 106.71 | 0.00 | 0.00 | 0.00 |
| 8,460.11 | 16.98 | 183.34 | 8,203.00 | -1,760.97 | -102.87 | 107.79 | 0.00 | 0.00 | 0.00 |
| Lw. Avalon Carb. | | | | | | | | | |
| 8,500.00 | 16.98 | 183.34 | 8,241.15 | -1,772.60 | -103.55 | 108.50 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 16.98 | 183.34 | 8,336.79 | -1,801.77 | -105.25 | 110.28 | 0.00 | 0.00 | 0.00 |
| 8,605.45 | 16.98 | 183.34 | 8,342.00 | -1,803.36 | -105.35 | 110.38 | 0.00 | 0.00 | 0.00 |
| Lw. Avalon Sh. | | | | | | | | | |
| 8,700.00 | 16.98 | 183.34 | 8,432.43 | -1,830.93 | -106.96 | 112.07 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 16.98 | 183.34 | 8,528.06 | -1,860.09 | -108.66 | 113.85 | 0.00 | 0.00 | 0.00 |
| 8,855.35 | 16.98 | 183.34 | 8,581.00 | -1,876.23 | -109.60 | 114.84 | 0.00 | 0.00 | 0.00 |
| Bone Spring Carb. | | | | | | | | | |
| 8,900.00 | 16.98 | 183.34 | 8,623.70 | -1,889.25 | -110.36 | 115.64 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 16.98 | 183.34 | 8,719.34 | -1,918.41 | -112.07 | 117.42 | 0.00 | 0.00 | 0.00 |
| 9,089.57 | 16.98 | 183.34 | 8,805.00 | -1,944.53 | -113.59 | 119.02 | 0.00 | 0.00 | 0.00 |
| First Bone Spring Ss. | | | | | | | | | |
| 9,100.00 | 16.98 | 183.34 | 8,814.98 | -1,947.57 | -113.77 | 119.21 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 16.98 | 183.34 | 8,910.62 | -1,976.74 | -115.47 | 120.99 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 16.98 | 183.34 | 9,006.26 | -2,005.90 | -117.18 | 122.78 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 16.98 | 183.34 | 9,101.89 | -2,035.06 | -118.88 | 124.56 | 0.00 | 0.00 | 0.00 |
| 9,417.89 | 16.98 | 183.34 | 9,119.00 | -2,040.28 | -119.19 | 124.88 | 0.00 | 0.00 | 0.00 |
| Second Bone Spring Carb. | | | | | | | | | |
| 9,500.00 | 16.98 | 183.34 | 9,197.53 | -2,064.22 | -120.58 | 126.35 | 0.00 | 0.00 | 0.00 |
| 9,574.92 | 16.98 | 183.34 | 9,269.18 | -2,086.07 | -121.86 | 127.69 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 17.31 | 191.78 | 9,293.15 | -2,093.38 | -122.84 | 128.68 | 10.00 | 1.31 | 33.65 |
| 9,650.00 | 18.94 | 207.03 | 9,340.70 | -2,107.90 | -128.05 | 133.93 | 10.00 | 3.25 | 30.50 |
| 9,652.44 | 19.05 | 207.70 | 9,343.00 | -2,108.61 | -128.41 | 134.30 | 10.00 | 4.44 | 27.52 |
| Second Bone Spring Ss. | | | | | | | | | |
| 9,700.00 | 21.59 | 219.32 | 9,387.62 | -2,122.26 | -137.57 | 143.50 | 10.00 | 5.35 | 24.41 |
| 9,750.00 | 24.95 | 228.74 | 9,433.56 | -2,136.34 | -151.34 | 157.30 | 10.00 | 6.70 | 18.85 |
| 9,800.00 | 28.75 | 235.94 | 9,478.17 | -2,150.04 | -169.24 | 175.24 | 10.00 | 7.62 | 14.39 |
| 9,850.00 | 32.86 | 241.52 | 9,521.12 | -2,163.25 | -191.14 | 197.18 | 10.00 | 8.21 | 11.18 |
| 9,900.00 | 37.16 | 245.97 | 9,562.07 | -2,175.87 | -216.87 | 222.94 | 10.00 | 8.61 | 8.89 |
| 9,950.00 | 41.60 | 249.60 | 9,600.71 | -2,187.81 | -246.24 | 252.34 | 10.00 | 8.88 | 7.27 |
| 9,958.46 | 42.36 | 250.15 | 9,607.00 | -2,189.76 | -251.55 | 257.66 | 10.00 | 9.00 | 6.52 |
| Second Bone Spring A Ss. | | | | | | | | | |
| 10,000.00 | 46.13 | 252.65 | 9,636.76 | -2,198.98 | -279.02 | 285.16 | 10.00 | 9.08 | 6.00 |
| 10,050.00 | 50.74 | 255.26 | 9,669.92 | -2,209.29 | -314.96 | 321.13 | 10.00 | 9.21 | 5.22 |
| 10,100.00 | 55.39 | 257.54 | 9,699.96 | -2,218.66 | -353.80 | 359.99 | 10.00 | 9.31 | 4.57 |
| 10,127.38 | 57.96 | 258.68 | 9,715.00 | -2,223.37 | -376.18 | 382.39 | 10.00 | 9.37 | 4.18 |
| Second Bone Spring B Ss. | | | | | | | | | |
| 10,150.00 | 60.09 | 259.58 | 9,726.64 | -2,227.02 | -395.23 | 401.45 | 10.00 | 9.40 | 3.97 |
| 10,200.00 | 64.81 | 261.44 | 9,749.77 | -2,234.32 | -438.94 | 445.18 | 10.00 | 9.44 | 3.71 |
| 10,250.00 | 69.55 | 263.16 | 9,769.16 | -2,240.48 | -484.60 | 490.85 | 10.00 | 9.49 | 3.44 |
| 10,300.00 | 74.31 | 264.77 | 9,784.66 | -2,245.47 | -531.85 | 538.12 | 10.00 | 9.52 | 3.23 |
| 10,350.00 | 79.08 | 266.31 | 9,796.17 | -2,249.24 | -580.35 | 586.63 | 10.00 | 9.54 | 3.08 |
| 10,400.00 | 83.86 | 267.80 | 9,803.58 | -2,251.77 | -629.71 | 636.00 | 10.00 | 9.56 | 2.98 |
| 10,450.00 | 88.64 | 269.27 | 9,806.85 | -2,253.05 | -679.57 | 685.86 | 10.00 | 9.56 | 2.93 |
| 10,469.53 | 90.51 | 269.84 | 9,807.00 | -2,253.20 | -699.10 | 705.39 | 10.00 | 9.57 | 2.92 |
| 10,500.00 | 90.51 | 269.84 | 9,806.73 | -2,253.29 | -729.57 | 735.86 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.51 | 269.84 | 9,805.85 | -2,253.57 | -829.57 | 835.86 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.51 | 269.84 | 9,804.96 | -2,253.85 | -929.56 | 935.85 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.51 | 269.84 | 9,804.08 | -2,254.14 | -1,029.56 | 1,035.85 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.51 | 269.84 | 9,803.19 | -2,254.42 | -1,129.55 | 1,135.84 | 0.00 | 0.00 | 0.00 |



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

| Planned Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 11,000.00 | 90.51 | 269.84 | 9,802.31 | -2,254.71 | -1,229.55 | 1,235.84 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.51 | 269.84 | 9,801.43 | -2,254.99 | -1,329.54 | 1,335.84 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.51 | 269.84 | 9,800.54 | -2,255.27 | -1,429.54 | 1,435.83 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.51 | 269.84 | 9,799.66 | -2,255.56 | -1,529.54 | 1,535.83 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.51 | 269.84 | 9,798.77 | -2,255.84 | -1,629.53 | 1,635.82 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.51 | 269.84 | 9,797.89 | -2,256.12 | -1,729.53 | 1,735.82 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.51 | 269.84 | 9,797.00 | -2,256.41 | -1,829.52 | 1,835.82 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.51 | 269.84 | 9,796.12 | -2,256.69 | -1,929.52 | 1,935.81 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.51 | 269.84 | 9,795.24 | -2,256.97 | -2,029.51 | 2,035.81 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.51 | 269.84 | 9,794.35 | -2,257.26 | -2,129.51 | 2,135.81 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.51 | 269.84 | 9,793.47 | -2,257.54 | -2,229.51 | 2,235.80 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.51 | 269.84 | 9,792.58 | -2,257.83 | -2,329.50 | 2,335.80 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.51 | 269.84 | 9,791.70 | -2,258.11 | -2,429.50 | 2,435.79 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.51 | 269.84 | 9,790.81 | -2,258.39 | -2,529.49 | 2,535.79 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.51 | 269.84 | 9,789.93 | -2,258.68 | -2,629.49 | 2,635.79 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.51 | 269.84 | 9,789.05 | -2,258.96 | -2,729.48 | 2,735.78 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.51 | 269.84 | 9,788.16 | -2,259.24 | -2,829.48 | 2,835.78 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.51 | 269.84 | 9,787.28 | -2,259.53 | -2,929.48 | 2,935.77 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.51 | 269.84 | 9,786.39 | -2,259.81 | -3,029.47 | 3,035.77 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.51 | 269.84 | 9,785.51 | -2,260.10 | -3,129.47 | 3,135.77 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.51 | 269.84 | 9,784.62 | -2,260.38 | -3,229.46 | 3,235.76 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.51 | 269.84 | 9,783.74 | -2,260.66 | -3,329.46 | 3,335.76 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.51 | 269.84 | 9,782.86 | -2,260.95 | -3,429.45 | 3,435.75 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.51 | 269.84 | 9,781.97 | -2,261.23 | -3,529.45 | 3,535.75 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.51 | 269.84 | 9,781.09 | -2,261.51 | -3,629.45 | 3,635.75 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.51 | 269.84 | 9,780.20 | -2,261.80 | -3,729.44 | 3,735.74 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.51 | 269.84 | 9,779.32 | -2,262.08 | -3,829.44 | 3,835.74 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.51 | 269.84 | 9,778.43 | -2,262.37 | -3,929.43 | 3,935.73 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.51 | 269.84 | 9,777.55 | -2,262.65 | -4,029.43 | 4,035.73 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.51 | 269.84 | 9,776.67 | -2,262.93 | -4,129.42 | 4,135.73 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.51 | 269.84 | 9,775.78 | -2,263.22 | -4,229.42 | 4,235.72 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.51 | 269.84 | 9,774.90 | -2,263.50 | -4,329.42 | 4,335.72 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.51 | 269.84 | 9,774.01 | -2,263.78 | -4,429.41 | 4,435.72 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.51 | 269.84 | 9,773.13 | -2,264.07 | -4,529.41 | 4,535.71 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.51 | 269.84 | 9,772.24 | -2,264.35 | -4,629.40 | 4,635.71 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.51 | 269.84 | 9,771.36 | -2,264.64 | -4,729.40 | 4,735.70 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.51 | 269.84 | 9,770.48 | -2,264.92 | -4,829.39 | 4,835.70 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.51 | 269.84 | 9,769.59 | -2,265.20 | -4,929.39 | 4,935.70 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.51 | 269.84 | 9,768.71 | -2,265.49 | -5,029.39 | 5,035.69 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.51 | 269.84 | 9,767.82 | -2,265.77 | -5,129.38 | 5,135.69 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.51 | 269.84 | 9,766.94 | -2,266.05 | -5,229.38 | 5,235.68 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.51 | 269.84 | 9,766.05 | -2,266.34 | -5,329.37 | 5,335.68 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.51 | 269.84 | 9,765.17 | -2,266.62 | -5,429.37 | 5,435.68 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.51 | 269.84 | 9,764.29 | -2,266.91 | -5,529.36 | 5,535.67 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.51 | 269.84 | 9,763.40 | -2,267.19 | -5,629.36 | 5,635.67 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.51 | 269.84 | 9,762.52 | -2,267.47 | -5,729.35 | 5,735.66 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.51 | 269.84 | 9,761.63 | -2,267.76 | -5,829.35 | 5,835.66 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.51 | 269.84 | 9,760.75 | -2,268.04 | -5,929.35 | 5,935.66 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.51 | 269.84 | 9,759.86 | -2,268.32 | -6,029.34 | 6,035.65 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.51 | 269.84 | 9,758.98 | -2,268.61 | -6,129.34 | 6,135.65 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.51 | 269.84 | 9,758.10 | -2,268.89 | -6,229.33 | 6,235.64 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.51 | 269.84 | 9,757.21 | -2,269.18 | -6,329.33 | 6,335.64 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.51 | 269.84 | 9,756.33 | -2,269.46 | -6,429.32 | 6,435.64 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.51 | 269.84 | 9,755.44 | -2,269.74 | -6,529.32 | 6,535.63 | 0.00 | 0.00 | 0.00 |



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

| Planned Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 16,400.00 | 90.51 | 269.84 | 9,754.56 | -2,270.03 | -6,629.32 | 6,635.63 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.51 | 269.84 | 9,753.67 | -2,270.31 | -6,729.31 | 6,735.63 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 90.51 | 269.84 | 9,752.79 | -2,270.59 | -6,829.31 | 6,835.62 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 90.51 | 269.84 | 9,751.91 | -2,270.88 | -6,929.30 | 6,935.62 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 90.51 | 269.84 | 9,751.02 | -2,271.16 | -7,029.30 | 7,035.61 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 90.51 | 269.84 | 9,750.14 | -2,271.45 | -7,129.29 | 7,135.61 | 0.00 | 0.00 | 0.00 |
| 17,000.00 | 90.51 | 269.84 | 9,749.25 | -2,271.73 | -7,229.29 | 7,235.61 | 0.00 | 0.00 | 0.00 |
| 17,100.00 | 90.51 | 269.84 | 9,748.37 | -2,272.01 | -7,329.29 | 7,335.60 | 0.00 | 0.00 | 0.00 |
| 17,200.00 | 90.51 | 269.84 | 9,747.48 | -2,272.30 | -7,429.28 | 7,435.60 | 0.00 | 0.00 | 0.00 |
| 17,300.00 | 90.51 | 269.84 | 9,746.60 | -2,272.58 | -7,529.28 | 7,535.59 | 0.00 | 0.00 | 0.00 |
| 17,400.00 | 90.51 | 269.84 | 9,745.72 | -2,272.86 | -7,629.27 | 7,635.59 | 0.00 | 0.00 | 0.00 |
| 17,500.00 | 90.51 | 269.84 | 9,744.83 | -2,273.15 | -7,729.27 | 7,735.59 | 0.00 | 0.00 | 0.00 |
| 17,600.00 | 90.51 | 269.84 | 9,743.95 | -2,273.43 | -7,829.26 | 7,835.58 | 0.00 | 0.00 | 0.00 |
| 17,700.00 | 90.51 | 269.84 | 9,743.06 | -2,273.72 | -7,929.26 | 7,935.58 | 0.00 | 0.00 | 0.00 |
| 17,800.00 | 90.51 | 269.84 | 9,742.18 | -2,274.00 | -8,029.26 | 8,035.57 | 0.00 | 0.00 | 0.00 |
| 17,900.00 | 90.51 | 269.84 | 9,741.29 | -2,274.28 | -8,129.25 | 8,135.57 | 0.00 | 0.00 | 0.00 |
| 18,000.00 | 90.51 | 269.84 | 9,740.41 | -2,274.57 | -8,229.25 | 8,235.57 | 0.00 | 0.00 | 0.00 |
| 18,100.00 | 90.51 | 269.84 | 9,739.53 | -2,274.85 | -8,329.24 | 8,335.56 | 0.00 | 0.00 | 0.00 |
| 18,200.00 | 90.51 | 269.84 | 9,738.64 | -2,275.13 | -8,429.24 | 8,435.56 | 0.00 | 0.00 | 0.00 |
| 18,300.00 | 90.51 | 269.84 | 9,737.76 | -2,275.42 | -8,529.23 | 8,535.56 | 0.00 | 0.00 | 0.00 |
| 18,400.00 | 90.51 | 269.84 | 9,736.87 | -2,275.70 | -8,629.23 | 8,635.55 | 0.00 | 0.00 | 0.00 |
| 18,500.00 | 90.51 | 269.84 | 9,735.99 | -2,275.98 | -8,729.23 | 8,735.55 | 0.00 | 0.00 | 0.00 |
| 18,600.00 | 90.51 | 269.84 | 9,735.10 | -2,276.27 | -8,829.22 | 8,835.54 | 0.00 | 0.00 | 0.00 |
| 18,700.00 | 90.51 | 269.84 | 9,734.22 | -2,276.55 | -8,929.22 | 8,935.54 | 0.00 | 0.00 | 0.00 |
| 18,800.00 | 90.51 | 269.84 | 9,733.34 | -2,276.84 | -9,029.21 | 9,035.54 | 0.00 | 0.00 | 0.00 |
| 18,900.00 | 90.51 | 269.84 | 9,732.45 | -2,277.12 | -9,129.21 | 9,135.53 | 0.00 | 0.00 | 0.00 |
| 19,000.00 | 90.51 | 269.84 | 9,731.57 | -2,277.40 | -9,229.20 | 9,235.53 | 0.00 | 0.00 | 0.00 |
| 19,100.00 | 90.51 | 269.84 | 9,730.68 | -2,277.69 | -9,329.20 | 9,335.52 | 0.00 | 0.00 | 0.00 |
| 19,200.00 | 90.51 | 269.84 | 9,729.80 | -2,277.97 | -9,429.20 | 9,435.52 | 0.00 | 0.00 | 0.00 |
| 19,300.00 | 90.51 | 269.84 | 9,728.91 | -2,278.25 | -9,529.19 | 9,535.52 | 0.00 | 0.00 | 0.00 |
| 19,400.00 | 90.51 | 269.84 | 9,728.03 | -2,278.54 | -9,629.19 | 9,635.51 | 0.00 | 0.00 | 0.00 |
| 19,500.00 | 90.51 | 269.84 | 9,727.15 | -2,278.82 | -9,729.18 | 9,735.51 | 0.00 | 0.00 | 0.00 |
| 19,600.00 | 90.51 | 269.84 | 9,726.26 | -2,279.11 | -9,829.18 | 9,835.50 | 0.00 | 0.00 | 0.00 |
| 19,700.00 | 90.51 | 269.84 | 9,725.38 | -2,279.39 | -9,929.17 | 9,935.50 | 0.00 | 0.00 | 0.00 |
| 19,800.00 | 90.51 | 269.84 | 9,724.49 | -2,279.67 | -10,029.17 | 10,035.50 | 0.00 | 0.00 | 0.00 |
| 19,900.00 | 90.51 | 269.84 | 9,723.61 | -2,279.96 | -10,129.17 | 10,135.49 | 0.00 | 0.00 | 0.00 |
| 20,000.00 | 90.51 | 269.84 | 9,722.73 | -2,280.24 | -10,229.16 | 10,235.49 | 0.00 | 0.00 | 0.00 |
| 20,100.00 | 90.51 | 269.84 | 9,721.84 | -2,280.52 | -10,329.16 | 10,335.48 | 0.00 | 0.00 | 0.00 |
| 20,200.00 | 90.51 | 269.84 | 9,720.96 | -2,280.81 | -10,429.15 | 10,435.48 | 0.00 | 0.00 | 0.00 |
| 20,300.00 | 90.51 | 269.84 | 9,720.07 | -2,281.09 | -10,529.15 | 10,535.48 | 0.00 | 0.00 | 0.00 |
| 20,400.00 | 90.51 | 269.84 | 9,719.19 | -2,281.38 | -10,629.14 | 10,635.47 | 0.00 | 0.00 | 0.00 |
| 20,500.00 | 90.51 | 269.84 | 9,718.30 | -2,281.66 | -10,729.14 | 10,735.47 | 0.00 | 0.00 | 0.00 |
| 20,600.00 | 90.51 | 269.84 | 9,717.42 | -2,281.94 | -10,829.14 | 10,835.47 | 0.00 | 0.00 | 0.00 |
| 20,700.00 | 90.51 | 269.84 | 9,716.54 | -2,282.23 | -10,929.13 | 10,935.46 | 0.00 | 0.00 | 0.00 |
| 20,800.00 | 90.51 | 269.84 | 9,715.65 | -2,282.51 | -11,029.13 | 11,035.46 | 0.00 | 0.00 | 0.00 |
| 20,900.00 | 90.51 | 269.84 | 9,714.77 | -2,282.79 | -11,129.12 | 11,135.45 | 0.00 | 0.00 | 0.00 |
| 21,000.00 | 90.51 | 269.84 | 9,713.88 | -2,283.08 | -11,229.12 | 11,235.45 | 0.00 | 0.00 | 0.00 |
| 21,100.00 | 90.51 | 269.84 | 9,713.00 | -2,283.36 | -11,329.11 | 11,335.45 | 0.00 | 0.00 | 0.00 |
| 21,200.00 | 90.51 | 269.84 | 9,712.11 | -2,283.65 | -11,429.11 | 11,435.44 | 0.00 | 0.00 | 0.00 |
| 21,300.00 | 90.51 | 269.84 | 9,711.23 | -2,283.93 | -11,529.10 | 11,535.44 | 0.00 | 0.00 | 0.00 |
| 21,400.00 | 90.51 | 269.84 | 9,710.35 | -2,284.21 | -11,629.10 | 11,635.43 | 0.00 | 0.00 | 0.00 |
| 21,500.00 | 90.51 | 269.84 | 9,709.46 | -2,284.50 | -11,729.10 | 11,735.43 | 0.00 | 0.00 | 0.00 |
| 21,600.00 | 90.51 | 269.84 | 9,708.58 | -2,284.78 | -11,829.09 | 11,835.43 | 0.00 | 0.00 | 0.00 |
| 21,700.00 | 90.51 | 269.84 | 9,707.69 | -2,285.06 | -11,929.09 | 11,935.42 | 0.00 | 0.00 | 0.00 |



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 21,800.00 | 90.51 | 269.84 | 9,706.81 | -2,285.35 | -12,029.08 | 12,035.42 | 0.00 | 0.00 | 0.00 |
| 21,900.00 | 90.51 | 269.84 | 9,705.92 | -2,285.63 | -12,129.08 | 12,135.41 | 0.00 | 0.00 | 0.00 |
| 22,000.00 | 90.51 | 269.84 | 9,705.04 | -2,285.92 | -12,229.07 | 12,235.41 | 0.00 | 0.00 | 0.00 |
| 22,100.00 | 90.51 | 269.84 | 9,704.16 | -2,286.20 | -12,329.07 | 12,335.41 | 0.00 | 0.00 | 0.00 |
| 22,200.00 | 90.51 | 269.84 | 9,703.27 | -2,286.48 | -12,429.07 | 12,435.40 | 0.00 | 0.00 | 0.00 |
| 22,300.00 | 90.51 | 269.84 | 9,702.39 | -2,286.77 | -12,529.06 | 12,535.40 | 0.00 | 0.00 | 0.00 |
| 22,400.00 | 90.51 | 269.84 | 9,701.50 | -2,287.05 | -12,629.06 | 12,635.39 | 0.00 | 0.00 | 0.00 |
| 22,500.00 | 90.51 | 269.84 | 9,700.62 | -2,287.33 | -12,729.05 | 12,735.39 | 0.00 | 0.00 | 0.00 |
| 22,600.00 | 90.51 | 269.84 | 9,699.73 | -2,287.62 | -12,829.05 | 12,835.39 | 0.00 | 0.00 | 0.00 |
| 22,700.00 | 90.51 | 269.84 | 9,698.85 | -2,287.90 | -12,929.04 | 12,935.38 | 0.00 | 0.00 | 0.00 |
| 22,800.00 | 90.51 | 269.84 | 9,697.97 | -2,288.19 | -13,029.04 | 13,035.38 | 0.00 | 0.00 | 0.00 |
| 22,900.00 | 90.51 | 269.84 | 9,697.08 | -2,288.47 | -13,129.04 | 13,135.38 | 0.00 | 0.00 | 0.00 |
| 23,000.00 | 90.51 | 269.84 | 9,696.20 | -2,288.75 | -13,229.03 | 13,235.37 | 0.00 | 0.00 | 0.00 |
| 23,100.00 | 90.51 | 269.84 | 9,695.31 | -2,289.04 | -13,329.03 | 13,335.37 | 0.00 | 0.00 | 0.00 |
| 23,200.00 | 90.51 | 269.84 | 9,694.43 | -2,289.32 | -13,429.02 | 13,435.36 | 0.00 | 0.00 | 0.00 |
| 23,300.00 | 90.51 | 269.84 | 9,693.54 | -2,289.60 | -13,529.02 | 13,535.36 | 0.00 | 0.00 | 0.00 |
| 23,400.00 | 90.51 | 269.84 | 9,692.66 | -2,289.89 | -13,629.01 | 13,635.36 | 0.00 | 0.00 | 0.00 |
| 23,500.00 | 90.51 | 269.84 | 9,691.78 | -2,290.17 | -13,729.01 | 13,735.35 | 0.00 | 0.00 | 0.00 |
| 23,600.00 | 90.51 | 269.84 | 9,690.89 | -2,290.46 | -13,829.01 | 13,835.35 | 0.00 | 0.00 | 0.00 |
| 23,700.00 | 90.51 | 269.84 | 9,690.01 | -2,290.74 | -13,929.00 | 13,935.34 | 0.00 | 0.00 | 0.00 |
| 23,800.00 | 90.51 | 269.84 | 9,689.12 | -2,291.02 | -14,029.00 | 14,035.34 | 0.00 | 0.00 | 0.00 |
| 23,900.00 | 90.51 | 269.84 | 9,688.24 | -2,291.31 | -14,128.99 | 14,135.34 | 0.00 | 0.00 | 0.00 |
| 24,000.00 | 90.51 | 269.84 | 9,687.35 | -2,291.59 | -14,228.99 | 14,235.33 | 0.00 | 0.00 | 0.00 |
| 24,100.00 | 90.51 | 269.84 | 9,686.47 | -2,291.87 | -14,328.98 | 14,335.33 | 0.00 | 0.00 | 0.00 |
| 24,200.00 | 90.51 | 269.84 | 9,685.59 | -2,292.16 | -14,428.98 | 14,435.32 | 0.00 | 0.00 | 0.00 |
| 24,300.00 | 90.51 | 269.84 | 9,684.70 | -2,292.44 | -14,528.98 | 14,535.32 | 0.00 | 0.00 | 0.00 |
| 24,400.00 | 90.51 | 269.84 | 9,683.82 | -2,292.72 | -14,628.97 | 14,635.32 | 0.00 | 0.00 | 0.00 |
| 24,500.00 | 90.51 | 269.84 | 9,682.93 | -2,293.01 | -14,728.97 | 14,735.31 | 0.00 | 0.00 | 0.00 |
| 24,600.00 | 90.51 | 269.84 | 9,682.05 | -2,293.29 | -14,828.96 | 14,835.31 | 0.00 | 0.00 | 0.00 |
| 24,700.00 | 90.51 | 269.84 | 9,681.16 | -2,293.58 | -14,928.96 | 14,935.30 | 0.00 | 0.00 | 0.00 |
| 24,800.00 | 90.51 | 269.84 | 9,680.28 | -2,293.86 | -15,028.95 | 15,035.30 | 0.00 | 0.00 | 0.00 |
| 24,900.00 | 90.51 | 269.84 | 9,679.40 | -2,294.14 | -15,128.95 | 15,135.30 | 0.00 | 0.00 | 0.00 |
| 25,000.00 | 90.51 | 269.84 | 9,678.51 | -2,294.43 | -15,228.95 | 15,235.29 | 0.00 | 0.00 | 0.00 |
| 25,100.00 | 90.51 | 269.84 | 9,677.63 | -2,294.71 | -15,328.94 | 15,335.29 | 0.00 | 0.00 | 0.00 |
| 25,200.00 | 90.51 | 269.84 | 9,676.74 | -2,294.99 | -15,428.94 | 15,435.29 | 0.00 | 0.00 | 0.00 |
| 25,300.00 | 90.51 | 269.84 | 9,675.86 | -2,295.28 | -15,528.93 | 15,535.28 | 0.00 | 0.00 | 0.00 |
| 25,400.00 | 90.51 | 269.84 | 9,674.97 | -2,295.56 | -15,628.93 | 15,635.28 | 0.00 | 0.00 | 0.00 |
| 25,500.00 | 90.51 | 269.84 | 9,674.09 | -2,295.85 | -15,728.92 | 15,735.27 | 0.00 | 0.00 | 0.00 |
| 25,600.00 | 90.51 | 269.84 | 9,673.21 | -2,296.13 | -15,828.92 | 15,835.27 | 0.00 | 0.00 | 0.00 |
| 25,700.00 | 90.51 | 269.84 | 9,672.32 | -2,296.41 | -15,928.92 | 15,935.27 | 0.00 | 0.00 | 0.00 |
| 25,800.00 | 90.51 | 269.84 | 9,671.44 | -2,296.70 | -16,028.91 | 16,035.26 | 0.00 | 0.00 | 0.00 |
| 25,900.00 | 90.51 | 269.84 | 9,670.55 | -2,296.98 | -16,128.91 | 16,135.26 | 0.00 | 0.00 | 0.00 |
| 26,000.00 | 90.51 | 269.84 | 9,669.67 | -2,297.26 | -16,228.90 | 16,235.25 | 0.00 | 0.00 | 0.00 |
| 26,100.00 | 90.51 | 269.84 | 9,668.78 | -2,297.55 | -16,328.90 | 16,335.25 | 0.00 | 0.00 | 0.00 |
| 26,138.71 | 90.51 | 269.84 | 9,668.44 | -2,297.66 | -16,367.60 | 16,373.95 | 0.00 | 0.00 | 0.00 |
| 26,188.71 | 90.51 | 269.84 | 9,668.00 | -2,297.80 | -16,417.60 | 16,423.95 | 0.00 | 0.00 | 0.00 |



Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------|
| Database: | EDM 5000.1.13 Single User Db | Local Co-ordinate Reference: | Well #103H |
| Company: | XTO Energy | TVD Reference: | RKB = 25' @ 3555.00usft |
| Project: | Lea County, NM (NAD-27) | MD Reference: | RKB = 25' @ 3555.00usft |
| Site: | Big Eddy Unit DI BB JABBA | North Reference: | Grid |
| Well: | #103H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PERMIT | | |

Design Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|------------|--------------|
| DI BB JABBA 103H: S - plan hits target center - Point | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 565,034.10 | 676,603.20 | 32.5520801 | -103.7601791 |
| DI BB JABBA 103H: F - plan hits target center - Point | 0.00 | 0.00 | 9,668.00 | -2,297.80 | -16,417.60 | 562,736.30 | 660,185.60 | 32.5459956 | -103.8134958 |
| DI BB JABBA 103H: L - plan misses target center by 0.24usft at 26138.70usft MD (9668.44 TVD, -2297.66 N, -16367.60 E) - Point | 0.00 | 0.01 | 9,668.44 | -2,297.90 | -16,367.60 | 562,736.20 | 660,235.60 | 32.5459947 | -103.8133335 |
| DI BB JABBA 103H: F - plan hits target center - Point | 0.00 | 0.01 | 9,807.00 | -2,253.20 | -699.10 | 562,780.90 | 675,904.10 | 32.5458970 | -103.7624871 |

Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------------|-----------------------------|--------------------------|-----------|------------|-------------------------|
| 955.00 | 955.00 | Rustler | | | |
| 1,230.00 | 1,230.00 | Salado/Top of Salt | | | |
| 2,578.93 | 2,575.00 | Base of Salt | | | |
| 3,258.22 | 3,228.00 | Capitan Reef | | | |
| 4,820.36 | 4,722.00 | Delaware Sand | | | |
| 5,244.87 | 5,128.00 | Manzanita Marker | | | |
| 6,365.76 | 6,200.00 | Brushy Canyon Ss. | | | |
| 7,671.72 | 7,449.00 | Lower Brushy Canyon Ss. | | | |
| 7,960.31 | 7,725.00 | Bone Spring Lm. | | | |
| 8,107.74 | 7,866.00 | Avalon Ss. | | | |
| 8,196.62 | 7,951.00 | Upper Avalon Sh. | | | |
| 8,460.11 | 8,203.00 | Lw. Avalon Carb. | | | |
| 8,605.45 | 8,342.00 | Lw. Avalon Sh. | | | |
| 8,855.35 | 8,581.00 | Bone Spring Carb. | | | |
| 9,089.57 | 8,805.00 | First Bone Spring Ss. | | | |
| 9,417.89 | 9,119.00 | Second Bone Spring Carb. | | | |
| 9,652.44 | 9,343.00 | Second Bone Spring Ss. | | | |
| 9,958.46 | 9,607.00 | Second Bone Spring A Ss. | | | |
| 10,127.38 | 9,715.00 | Second Bone Spring B Ss. | | | |



GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

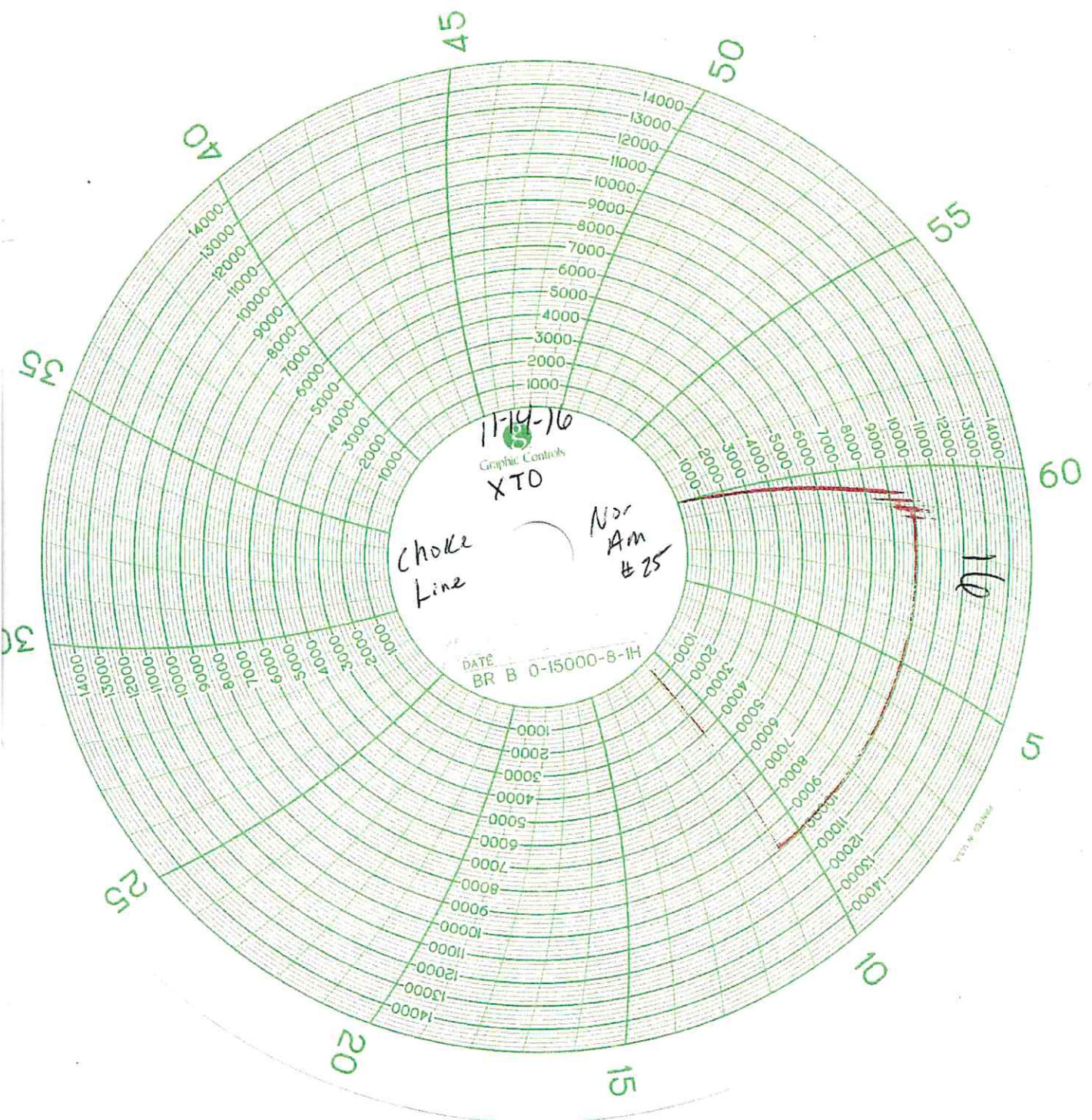
| | | | |
|----------------|---------------------|------------------|------------|
| Customer: | AUSTIN DISTRIBUTING | Test Date: | 6/8/2014 |
| Customer Ref.: | PENDING | Hose Serial No.: | D-060814-1 |
| Invoice No.: | 201709 | Created By: | NORMA |

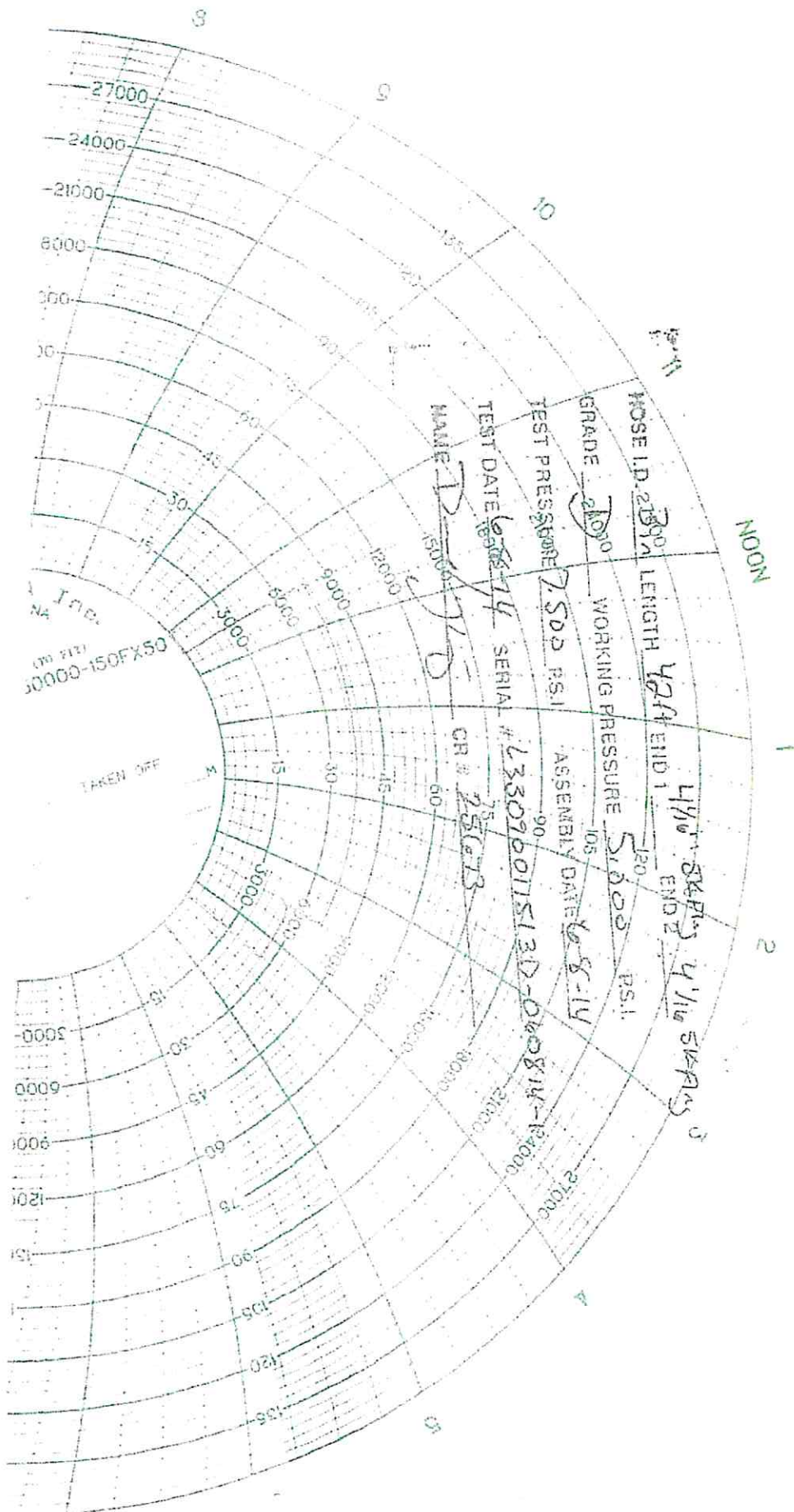
| | |
|----------------------|-----------------------------|
| Product Description: | FD3-042-0R41/16.5KFLGE/E LE |
|----------------------|-----------------------------|

| | | | |
|-------------------|-------------------|----------------|------------------------|
| End Filling 1: | 4 1/16 in. SK FLG | End Filling 2: | 4 1/16 in. SK FLG |
| Gates Part No.: | 4274-6001 | Assembly Code: | L33090011513D-060814-1 |
| Working Pressure: | 5,000 PSI | Test Pressure: | 7,500 PSI |

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

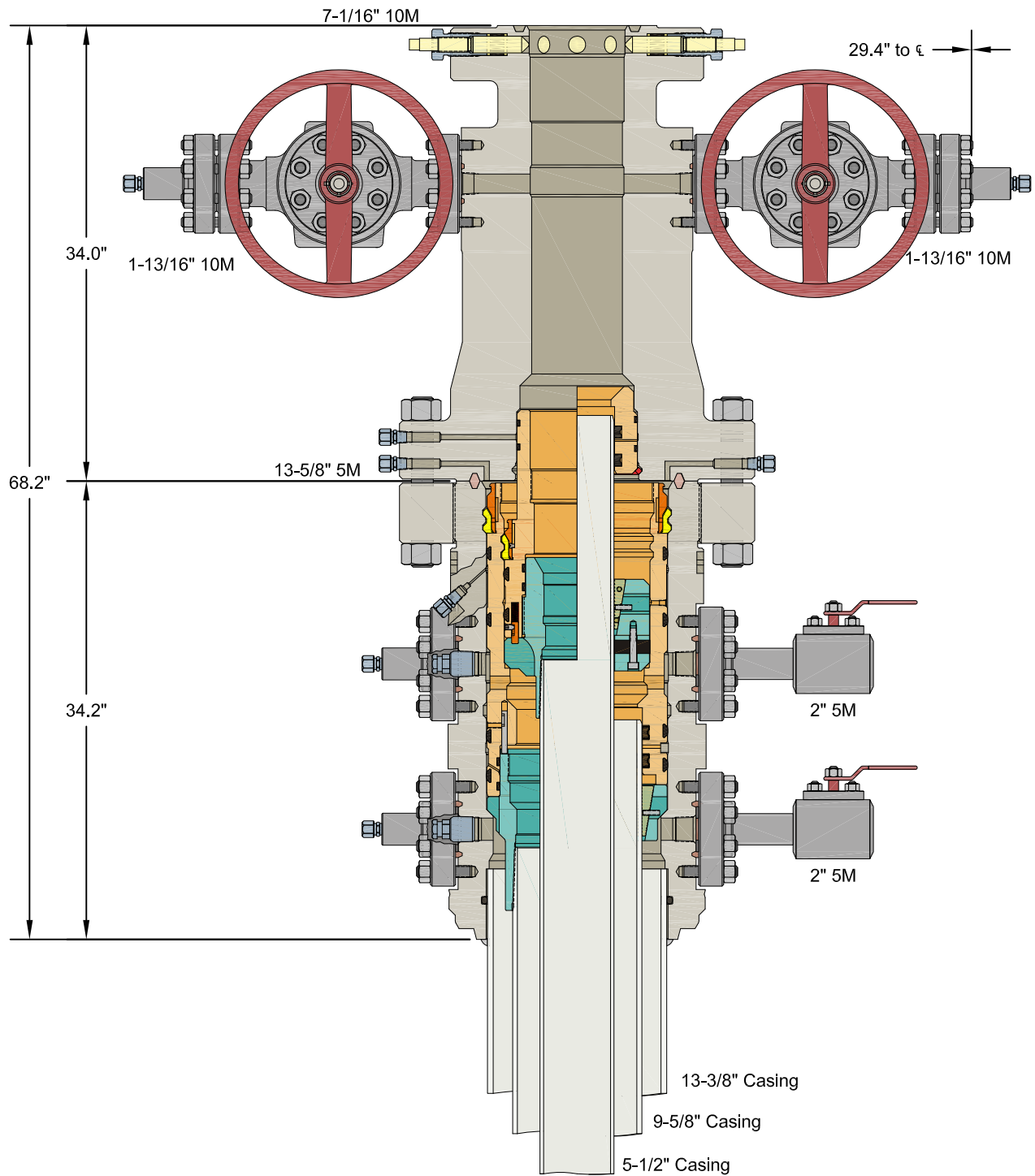
| | | | |
|----------|------------|-----------------------|------------|
| Quality: | Signature: | Technical Supervisor: | Signature: |
| Date: | Date: | Date: | Date: |
| 6/8/2014 | 6/8/2014 | 6/8/2014 | 6/8/2014 |
| QUALITY | | PRODUCTION | |







GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE

This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.

XTO ENERGY, INC.

13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead
Assembly, With T-EBS-F Tubing Head

| | | |
|--------------------|-----|----------|
| DRAWN | VJK | 16FEB17 |
| APPRV | KN | 16FEB17 |
| FOR REFERENCE ONLY | | |
| DRAWING NO. | | 10012842 |



APD ID: 10400046300

Submission Date: 08/22/2019

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres):

PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



APD ID: 10400046300

Submission Date: 08/22/2019

Highlighted data
reflects the most
recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: BIG EDDY UNIT DI BB JABBA

Well Number: 103H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Bond Information

Federal/Indian APD: FED

BLM Bond number: COB000050

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: