Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM136870

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.:

8. Lease Name and Well No.: CORRAL CANYON FEDERAL 11H

2. Name of Operator: XTO ENERGY INCORPORATED

9. API Well No.: 3001547217

3a. Address: 22777 Springwoods Village Parkway Spring TX 77389

3b. Phone No. *(include area code)*: (432)620-6700

10. Field and Pool, or Exploratory: WILLOW LAKE BONE SPRING SE

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NWNE / 5 FNL / 2155 FEL / LAT 32.151941 / LONG -103.970702

At proposed prod. zone: NENE / 200 FNL / 1650 FEL / LAT 32.180513 / LONG -103.969269

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 10 / T25S / R29E / NMP

14. Distance in miles and direction from nearest town or post office*: 8.3 miles

12. County or Parish: EDDY

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 5 feet

16. No of acres in lease: 1280

17. Spacing Unit dedicated to this well: 320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 50 feet

19. Proposed Depth: 8832 feet / 19142 feet

20. BLM/BIA Bond No. in file: FED: UTB000138

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3024 feet

22. Approximate date work will start*: 02/03/2021

23. Estimated duration: 25 days

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

| 25. Signature | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Elizabeth Zastoupil / Ph: (817)885-6750 | 10/06/2017 |

Title: Geologist

| Approved by *(Signature)* | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Cody Layton / Ph: (575)234-5959 | 06/23/2020 |

| Title | Office |
|---|---|
| Assistant Field Manager Lands & Minerals | CARLSBAD |

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)



**Approval Date: 06/23/2020**

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

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

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

☐AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

| API Number | Pool Code | Pool Name |
|---|---|---|
| 3001547217 | 96217 | Willow Lake; Bone Spring SE |

| Property Code | Property Name | Well Number |
|---|---|---|
| 314121 | CORRAL CANYON FEDERAL | 11H |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 005380 | XTO ENERGY | 3024' |

**Surface Location**

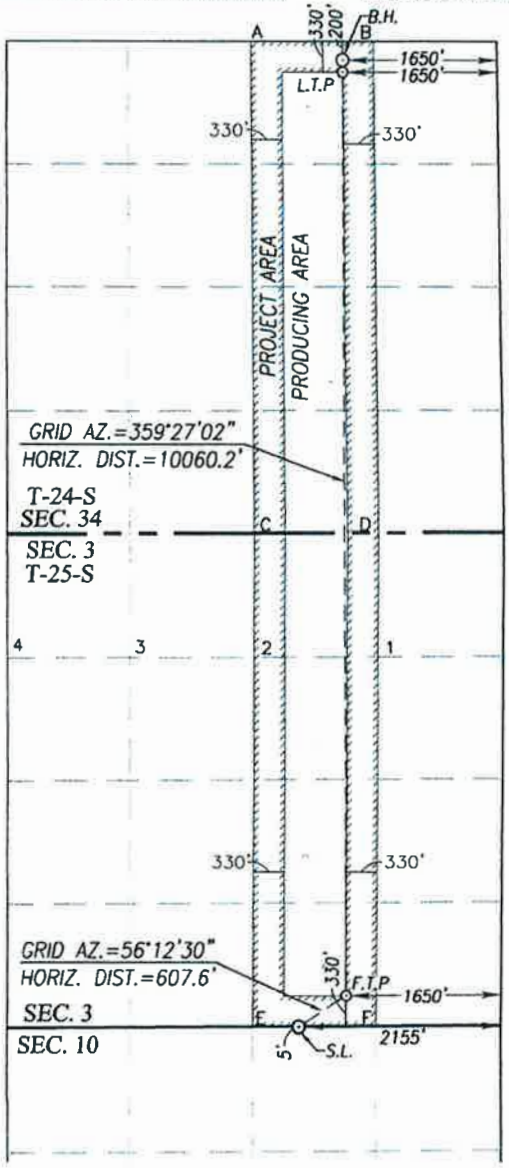
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| B | 10 | 25-S | 29-E | | 5 | NORTH | 2155 | EAST | EDDY |

**Bottom Hole Location If Different From Surface**

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| B | 34 | 24-S | 29-E | | 200 | NORTH | 1650 | EAST | EDDY |

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|---|---|---|---|
| ~~320.0~~ 319.97 | | | |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION




SCALE: 1"=2000'

**BOTTOM HOLE LOCATION**
**NAD 27 NME**
Y= 429537.1 N
X= 612787.4 E
LAT.=32.180389° N
LONG.=103.968782° W

**BOTTOM HOLE LOCATION**
**NAD 83 NME**
Y= 429595.7 N
X= 653971.7 E
LAT.=32.180513° N
LONG.=103.969269° W

**LAST TAKE POINT**
**NAD 27 NME**
Y= 429407.1 N
X= 612789.8 E
LAT.=32.180032° N
LONG.=103.968776° W

**LAST TAKE POINT**
**NAD 83 NME**
Y= 429465.8 N
X= 653974.1 E
LAT.=32.180155° N
LONG.=103.969263° W

**CORNER COORDINATES TABLE**
**NAD 27 NME**
A - Y= 429738.2 N, X= 611801.1 E
B - Y= 429736.7 N, X= 613117.3 E
C - Y= 424447.5 N, X= 611866.9 E
D - Y= 424452.9 N, X= 613199.5 E
E - Y= 419144.2 N, X= 611882.0 E
F - Y= 419151.7 N, X= 613207.6 E

**CORNER COORDINATES TABLE**
**NAD 83 NME**
A - Y= 429796.8 N, X= 652985.4 E
B - Y= 429795.3 N, X= 654301.6 E
C - Y= 424506.0 N, X= 653051.3 E
D - Y= 424511.4 N, X= 654383.9 E
E - Y= 419202.6 N, X= 653066.6 E
F - Y= 419210.1 N, X= 654392.2 E

**FIRST TAKE POINT**
**NAD 27 NME**
Y= 419479.8 N
X= 612883.6 E
LAT.=32.152741° N
LONG.=103.968582° W

**FIRST TAKE POINT**
**NAD 83 NME**
Y= 419538.2 N
X= 654068.1 E
LAT.=32.152865° N
LONG.=103.969068° W

**GEODETIC COORDINATES**
**NAD 27 NME**
**SURFACE LOCATION**
Y=419141.9 N
X=612378.7 E
LAT.=32.151817° N
LONG.=103.970217° W

**GEODETIC COORDINATES**
**NAD 83 NME**
**SURFACE LOCATION**
Y=419200.4 N
X=653563.3 E
LAT.=32.151941° N
LONG.=103.970702° W

### OPERATOR CERTIFICATION

*I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.*

Signature 10/6/2017 Date

Elizabeth Zastoupil
Printed Name

Elizabeth_Zastoupil@xtoenergy.com
E-mail Address

### SURVEYOR CERTIFICATION

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

MAY 5, 2014
Date of Survey

Signature & Seal of Professional Surveyor:

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

Ronald J. Eidson 05/07/2017

Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

ACK REL. W.O.: 14110434 JWSC W.O.: 17.13.0107

Intent [X] As Drilled [ ]

| API # |
|---|
| |

| Operator Name: | Property Name: | Well Number |
|---|---|---|
| XTO ENERGY INC | CORRAL CANYON FEDERAL | 11H |

Kick Off Point (KOP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| B | 10 | 25S | 29E | | 5 | NORTH | 2155 | EAST | EDDY |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.151941 | -103.970702 | 83 |

First Take Point (FTP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| O | 3 | 25S | 30E | | 330 | SOUTH | 1650 | EAST | EDDY |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.152865 | -103.969068 | 83 |

Last Take Point (LTP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| B | 34 | 24S | 29E | | 330 | NORTH | 1650 | EAST | EDDY |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.180155 | -103.969263 | 83 |

Is this well the defining well for the Horizontal Spacing Unit? [Yes]

Is this well an infill well? [NO]

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

| API # |
|---|
| |

| Operator Name: | Property Name: | Well Number |
|---|---|---|
| | | |

KZ 06/29/2018

# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | XTO Energy Incorporated |
| **WELL NAME & NO.:** | Corral Canyon Federal 11H |
| **LOCATION:** | Sec 10-25S-29E-NMP |
| **COUNTY:** | Eddy County, New Mexico |

COA

| | | | |
|---|---|---|---|
| H2S | ○ Yes | ◉ No | |
| Potash | ◉ None | ○ Secretary | ○ R-111-P |
| Cave/Karst Potential | ○ Low | ◉ Medium | ○ High |
| Cave/Karst Potential | ○ Critical | | |
| Variance | ○ None | ◉ Flex Hose | ○ Other |
| Wellhead | ○ Conventional | ◉ Multibowl | ○ Both |
| Other | ☐ 4 String Area | ☐ Capitan Reef | ☐ WIPP |
| Other | ☐ Fluid Filled | ☐ Cement Squeeze | ☐ Pilot Hole |
| Special Requirements | ☐ Water Disposal | ☐ COM | ☐ Unit |

## A. HYDROGEN SULFIDE

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.

## B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately 785 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours

after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

   - 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 cave/karst or potash.**

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**C. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

   a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
   c. Manufacturer representative shall install the test plug for the initial BOP test.
   d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
   e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

# GENERAL REQUIREMENTS

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

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

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ 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 intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-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.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. 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).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. 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.

e. The results of the test shall be reported to the appropriate BLM office.

f. 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.

g. 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.

h. 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.

**APD ID:** 10400023039 **Submission Date:** 10/06/2017

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON FEDERAL **Well Number:** 11H

**Well Type:** OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|---|---|---|---|---|---|---|---|
| 127160 | --- | 3024 | 0 | 0 | ALLUVIUM, OTHER : Quaternary | NONE | N |
| 127161 | RUSTLER | 2575 | 449 | 449 | SANDSTONE | USEABLE WATER | N |
| 127167 | TOP SALT | 2211 | 813 | 813 | SALT | USEABLE WATER | N |
| 127168 | BASE OF SALT | 130 | 2894 | 2894 | SALT | USEABLE WATER | N |
| 127162 | DELAWARE | -78 | 3102 | 3102 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 127163 | BRUSHY CANYON | -2569 | 5593 | 5593 | SANDSTONE | NATURAL GAS, OIL, USEABLE WATER | N |
| 127164 | BONE SPRING | -3823 | 6847 | 6847 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 127165 | BONE SPRING 1ST | -4769 | 7793 | 7793 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 127166 | 2ND BONE SPRING LIME | -5059 | 8083 | 8083 | LIMESTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |
| 127169 | BONE SPRING 2ND | -5564 | 8588 | 8688 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | Y |
| 127170 | BONE SPRING 3RD | -5850 | 8874 | 8874 | SANDSTONE | NATURAL GAS, OIL, OTHER : Produced Water | N |

## Section 2 - Blowout Prevention

**Pressure Rating (PSI):** 5M **Rating Depth:** 10000

**Equipment:** The blow out preventer equipment (BOP) for this well consists of a 13-5/8” minimum 5M Hydril and a 13-5/8” minimum 5M Double Ram BOP. Max bottom hole pressure should not exceed 4409 psi. With a Maximum Absolute Surface Pressure (MASP) = 2466psi
**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.
**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 nippling up on the 13-5/8” 5M flange, the BOP test will be limited to 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be

functioned tested each trip, pipe rams will be functioned tested each day.

**Choke Diagram Attachment:**

CorralCanyon11H_CkMani_20171006073608.pdf

**BOP Diagram Attachment:**

CorralCanyon11H_5MBOP_20171006073615.pdf

## Section 3 - Casing

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SURFACE | 17.5 | 13.375 | NEW | API | N | 0 | 785 | 0 | 785 | -5793 | -6608 | 785 | H-40 | 48 | ST&C | 2.06 | 5.77 | DRY | 8.55 | DRY | 8.55 |
| 2 | INTERMEDIATE | 12.25 | 9.625 | NEW | API | N | 0 | 6922 | 0 | 6922 | -5793 | -8843 | 6922 | HCL-80 | 40 | BUTT | 1.15 | 1.57 | DRY | 3.36 | DRY | 3.36 |
| 3 | PRODUCTION | 8.75 | 5.5 | NEW | API | N | 0 | 19142 | 0 | 8832 | -5793 | -14618 | 19142 | OTHER | 17 | BUTT | 1.69 | 1.12 | DRY | 2.62 | DRY | 2.62 |

**Casing Attachments**

**Casing ID:** 1 **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

CorralCanyon11H_CaseAssump_20171006073722.pdf

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON FEDERAL **Well Number:** 11H

**Casing Attachments**

**Casing ID:** 2 **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

CorralCanyon11H_CaseAssump_20171006073925.pdf

**Casing ID:** 3 **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

CorralCanyon11H_CaseAssump_20171006073931.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 | 785 | 810 | 1.35 | 14.8 | 1134 | 100 | HalCem-C | 2% CaCl |
| INTERMEDIATE | Lead | | 0 | 6922 | 2110 | 2.49 | 11.9 | 1531.35 | 100 | EconoCem-C | 3 lbm/sk Kol-Seal + 0.25 lbm D-air 5000 |
| INTERMEDIATE | Tail | | | | 285 | 1.33 | 14.8 | 385.7 | 100 | HalCem-C | none |
| PRODUCTION | Lead | | 3400 | 19142 | 520 | 2.77 | 10.8 | 1939 | 50 | Tuned Light | 2 lbm/sk Kol-Seal + 0.3 lbm/sk CFR-3 |

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON FEDERAL **Well Number:** 11H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCTION | Tail | | | | 2440 | 1.22 | 14.5 | 3513.6 | 30 | VersaCem-H | 3 lbm/sk Kol-Seal + 0.4% Halad 344 + 0.3% CFR-3 + 0.3% Super CBL + 0.25 lbm/sk D-air 5000 |

## 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. Spud with fresh water/native mud. Drill out from under 13-3/8" surface casing with brine solution. A 9.8ppg - 10.2ppg brine mud will be used while drilling through the salt formation. Cut brine will be used to drill the 8-3/4" section. A polymer water will be used to drill the 8-1/2" lateral. Pump speed will be recorded on a daily drilling report after mudding up.

**Describe the mud monitoring system utilized:** 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. Solids control equipment will be used to operate as a closed loop system.

## 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 | 785 | 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. Solids control equipment will be used to operate as a closed loop system. |
| 6922 | 9332 | OTHER : FW/Cut Brine | 8.6 | 9.4 | | | | | | | A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop |

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON FEDERAL **Well Number:** 11H

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | system. |
| 9332 | 19142 | OIL-BASED MUD | 9.2 | 9.6 | | | | | | | A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system. |
| 785 | 6922 | 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. Solids control equipment will be used to operate as a closed loop system. |

## Section 6 - Test, Logging, Coring

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

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

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:**

CBL,CNL,DS,DLL,GR,MUDLOG

**Coring operation description for the well:**

No coring will take place on this well

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4409 **Anticipated Surface Pressure:** 2465.96

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

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

**Describe:**

**Contingency Plans geoharzards description:**

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON FEDERAL **Well Number:** 11H

**Contingency Plans geohazards attachment:**

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

**Hydrogen sulfide drilling operations plan:**

CorralCanyon11H_H2S_20171006074639.pdf

CorralCanyon11H_H2SRigLayout_20171006074646.pdf

## Section 8 - Other Information

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

CorralCanyon11H_Directional_20171006074707.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

Corral_Fed_GCP_20190806063410.pdf

**Other Variance attachment:**

Corral_Fed_FH_20190806063446.pdf

Corral Canyon 11H **19142 ft TD** 5/24/2017

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13 3/8" | 785 | MD/TVD | 8.8 # mud | | | | | |
| 48#, H-40, ST&C | | collapse = | 740 | Burst = | 1730 | Tension = | 322000 | |
| (8.8)(0.052)(785) = | | 359 psi | | 740/359= | 2.06 | SF for collapse | | |
| Max exp. surf pressure | | 300 psi | | 1730/300= | 5.77 | SF for burst | | |
| (785)(48) = | 37680 lb | | | 322/37.7 = | 8.55 | SF for tension | | |
| 9-5/8" | 6922 | MD/TVD | 10.2 # mud | | | | | |
| 40#, HCL-80, BTC | | collapse = | 4230 | burst = | 5750 | tension = | 837000 | |
| Max expected surf pressure = | | | 3671 psi | | | | | |
| (10.2)(0.052)(6922) = | | 2170 psi | | 4230/2170= | 1.95 | SF for collapse | | |
| *Less internal fluid height | | | | 5750/3671.428 | 1.57 | SF for burst | | |
| (6922)(36)= | 249192 lb | | | 837/249.192= | 3.36 | SF for tension | | |
| 5 1/2" | 0 | Top | 19142 | Shoe (MD) | 8832 | TVD | 10.4 # mud | |
| | 0.35 | FF | 9332 | LP (MD) | 9810 | Lat Length | | |
| 17#, P-110, BTC | | collapse= | 7460 | burst= | 10640 | tension= | 568000 | |
| Max expected surf pressure = | | | 9500 psi *for frac | | | | | |
| (10.4)(0.052)(8832) = | | 4776 psi | | 7460/4776= | 1.56 | SF for collapse | | |
| Maximum Absolute Surface Pressure (MASP) | | | | | | | | |
| (10.4)(0.052)(8832) - (.22*8832) = | | 2833 psi | | 10640/9500= | 1.12 | SF for burst | | |
| (9332*17)+(9810*0.35*17)= | 217014 lb | | | 568/217.0135= | 2.62 | SF for tension | | |

Corral Canyon 11H **19142 ft TD** 5/24/2017

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13 3/8" | 785 | MD/TVD | 8.8 # mud | | | | | |
| 48#, H-40, ST&C | | collapse = | 740 | Burst = | 1730 | Tension = | 322000 | |
| (8.8)(0.052)(785) = | | 359 psi | | 740/359= | 2.06 | SF for collapse | | |
| Max exp. surf pressure | | 300 psi | | 1730/300= | 5.77 | SF for burst | | |
| (785)(48) = | 37680 lb | | | 322/37.7 = | 8.55 | SF for tension | | |
| 9-5/8" | 6922 | MD/TVD | 10.2 # mud | | | | | |
| 40#, HCL-80, BTC | | collapse = | 4230 | burst = | 5750 | tension = | 837000 | |
| Max expected surf pressure = | | | 3671 psi | | | | | |
| (10.2)(0.052)(6922) = | | 2170 psi | | 4230/2170= | 1.95 | SF for collapse | | |
| *Less internal fluid height | | | | 5750/3671.428 | 1.57 | SF for burst | | |
| (6922)(36)= | 249192 lb | | | 837/249.192= | 3.36 | SF for tension | | |
| 5 1/2" | 0 | Top | 19142 | Shoe (MD) | 8832 | TVD | 10.4 # mud | |
| | 0.35 | FF | 9332 | LP (MD) | 9810 | Lat Length | | |
| 17#, P-110, BTC | | collapse= | 7460 | burst= | 10640 | tension= | 568000 | |
| Max expected surf pressure = | | | 9500 psi *for frac | | | | | |
| (10.4)(0.052)(8832) = | | 4776 psi | | 7460/4776= | 1.56 | SF for collapse | | |
| Maximum Absolute Surface Pressure (MASP) | | | | | | | | |
| (10.4)(0.052)(8832) - (.22*8832) = | | 2833 psi | | 10640/9500= | 1.12 | SF for burst | | |
| (9332*17)+(9810*0.35*17)= | 217014 lb | | | 568/217.0135= | 2.62 | SF for tension | | |

Corral Canyon 11H **19142 ft TD** 5/24/2017

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13 3/8" | 785 | MD/TVD | 8.8 # mud | | | | | |
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| (785)(48) = | 37680 lb | | | 322/37.7 = | 8.55 | SF for tension | | |
| 9-5/8" | 6922 | MD/TVD | 10.2 # mud | | | | | |
| 40#, HCL-80, BTC | | collapse = | 4230 | burst = | 5750 | tension = | 837000 | |
| Max expected surf pressure = | | | 3671 psi | | | | | |
| (10.2)(0.052)(6922) = | | 2170 psi | | 4230/2170= | 1.95 | SF for collapse | | |
| *Less internal fluid height | | | | 5750/3671.428 | 1.57 | SF for burst | | |
| (6922)(36)= | 249192 lb | | | 837/249.192= | 3.36 | SF for tension | | |
| 5 1/2" | 0 | Top | 19142 | Shoe (MD) | 8832 | TVD | 10.4 # mud | |
| | 0.35 | FF | 9332 | LP (MD) | 9810 | Lat Length | | |
| 17#, P-110, BTC | | collapse= | 7460 | burst= | 10640 | tension= | 568000 | |
| Max expected surf pressure = | | | 9500 psi *for frac | | | | | |
| (10.4)(0.052)(8832) = | | 4776 psi | | 7460/4776= | 1.56 | SF for collapse | | |
| Maximum Absolute Surface Pressure (MASP) | | | | | | | | |
| (10.4)(0.052)(8832) - (.22*8832) = | | 2833 psi | | 10640/9500= | 1.12 | SF for burst | | |
| (9332*17)+(9810*0.35*17)= | 217014 lb | | | 568/217.0135= | 2.62 | SF for tension | | |

# 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 $H_2S$, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with $H_2S$ 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
    - Detection of $H_2S$, and
    - Measures for protection against the gas,
    - Equipment used for protection and emergency response.

## Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide ($SO_2$). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

### Characteristics of $H_2S$ and $SO_2$

| Common Name | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|---|---|---|---|---|---|
| Hydrogen Sulfide | $H_2S$ | 1.189 Air = I | 10 ppm | 100 ppm/hr | 600 ppm |
| Sulfur Dioxide | $SO_2$ | 2.21 Air = I | 2 ppm | N/A | 1000 ppm |

## Contacting Authorities

XTO Energy Inc's 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).

# EUNICE OFFICE – EDDY & LEA COUNTIES

EMSU @ Oil Center, NM, 8/10ths mile west of Hwy 8 on Hwy 175
Eunice, NM 575-394-2089

**XTO ENERGY INC PERSONNEL:**

| | |
|---|---|
| Logan Farmar, Drilling Engineer | 432-234-9872 |
| Milton Turman, Drilling Superintendent | 817-524-5107 |
| Jeff Raines, Construction Foreman | 432-557-3159 |
| Dudley McMinn, EH & S Manager | 432-557-7976 |
| 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:**

| | |
|---|---|
| Bureau of Land Management | 575-393-3612 |
| New Mexico Oil Conservation Division | 575-393-6161 |
| Mosaic Potash - Carlsbad | 575-887-2871 |

**CONTRACTORS:**

| | |
|---|---|
| ABC Rental – Light Towers | 575-394-3155 |
| Bulldog Services – Trucking/Forklift | 575-391-8543 |
| Champion – Chemical | 575-393-7726 |
| Indian Fire & Safety | 575-393-3093 |
| Key – Dirt Contractor | 575-393-3180 |
| Key Tools – Light Towers | 575-393-2415 |
| Sweatt – Dirt Contractor | 575-397-4541 |
| RWI – Contract Gang | 575-393-5305 |

October 6, 2017

Elizabeth Zastoupil
XTO Energy Inc.
810 Houston St.
Fort Worth, TX 76102
817-885-6750
Elizabeth_zastoupil@xtoenergy.com

Bureau of Land Management
620 E. Greene
Carlsbad, NM 88220
575-887-6544

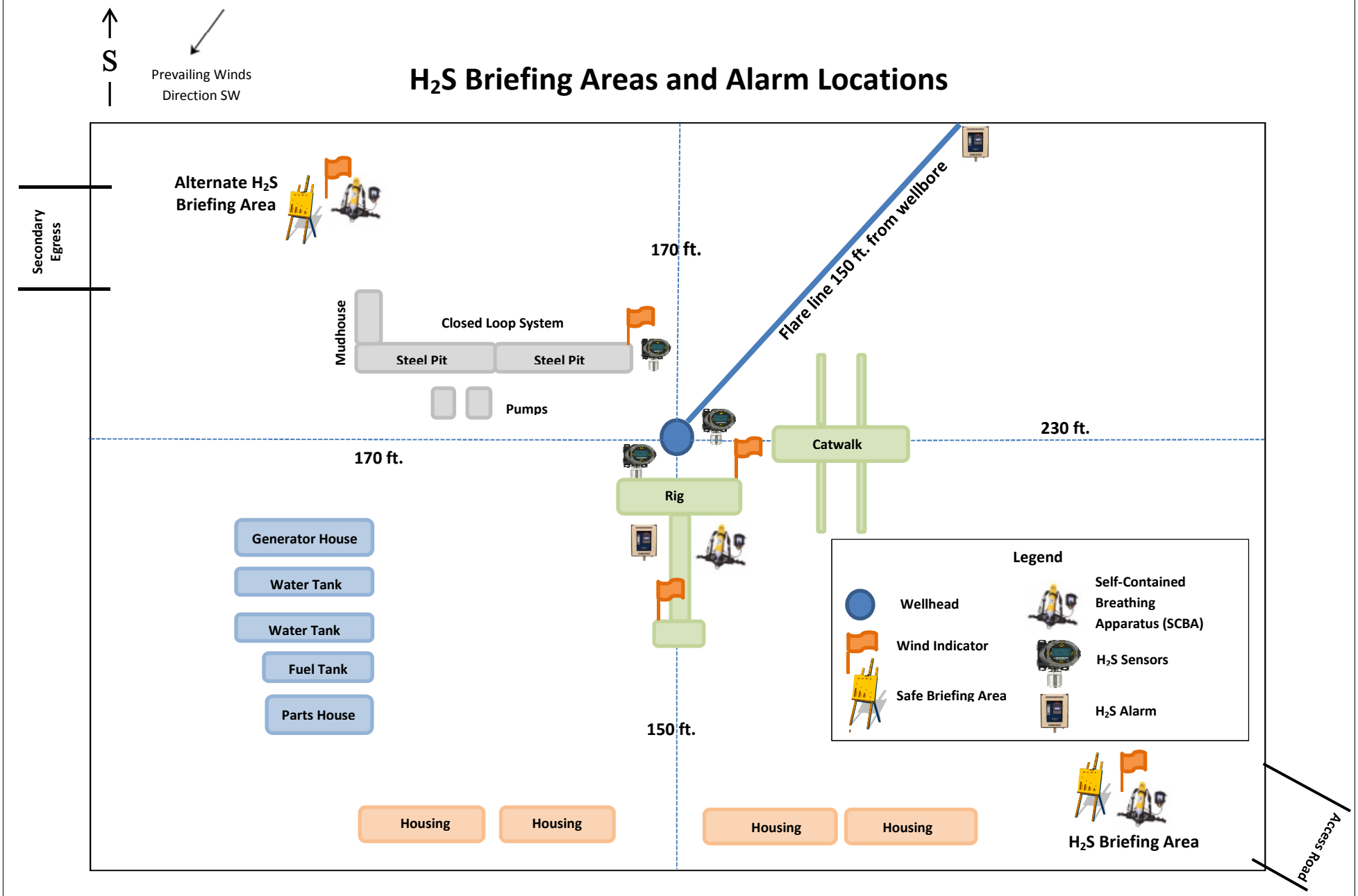
Dear Sirs:

XTO Energy Inc. does not anticipate encountering H2S while drilling the Corral Canyon Federal #11H located in Section 10, T25S, R29E, in Eddy County, New Mexico. As a precaution, I have attached an H2S contingency plan along with a gas analysis of our well stream. If you need anything further, please contact me at the telephone number or email listed above.

Thank you,

Elizabeth Zastoupil
Geologist

# $H_2S$ Briefing Areas and Alarm Locations



# XTO ENERGY, INC.

**Eddy County, NM**
**Sec 10, T25S, R29E**
**Corral Canyon Federal 11H**

**Wellbore #1**

**Plan: Plan #2**

# QES Well Planning Report

**23 May, 2017**

DIRECTIONAL DRILLING

| | | | |
|---|---|---|---|
| **Database:** | EDM5002 | **Local Co-ordinate Reference:** | Well Corral Canyon Federal 11H |
| **Company:** | XTO ENERGY, INC. | **TVD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Project:** | Eddy County, NM | **MD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Site:** | Sec 10, T25S, R29E | **North Reference:** | Grid |
| **Well:** | Corral Canyon Federal 11H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #2 | | |

**Project** Eddy County, NM

| | | | |
|---|---|---|---|
| **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** Sec 10, T25S, R29E

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 418,642.60 usft | **Latitude:** | 32° 9' 1.624 N |
| **From:** | Map | **Easting:** | 611,643.50 usft | **Longitude:** | 103° 58' 21.351 W |
| **Position Uncertainty:** | 0.0 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.19 ° |

**Well** Corral Canyon Federal 11H

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 499.3 usft | **Northing:** | 419,141.90 usft | **Latitude:** | 32° 9' 6.541 N |
| | **+E/-W** | 735.2 usft | **Easting:** | 612,378.70 usft | **Longitude:** | 103° 58' 12.780 W |
| **Position Uncertainty** | | 0.0 usft | **Wellhead Elevation:** | 0.0 usft | **Ground Level:** | 3,024.0 usft |

**Wellbore** Wellbore #1

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2015 | 5/23/2017 | 7.14 | 59.93 | 47,863 |

**Design** Plan #2

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.0 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 2.25 |

**Plan Sections**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,040.0 | 0.00 | 0.00 | 8,040.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,455.1 | 41.52 | 86.06 | 8,419.7 | 9.9 | 143.6 | 10.00 | 10.00 | 0.00 | 86.06 | |
| 9,332.3 | 90.00 | 359.45 | 8,832.0 | 585.6 | 502.5 | 10.00 | 5.53 | -9.87 | -87.46 | |
| 19,142.3 | 90.00 | 359.45 | 8,832.0 | 10,395.2 | 408.7 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL - Corral Canyor |

| | | | |
|---|---|---|---|
| **Database:** | EDM5002 | **Local Co-ordinate Reference:** | Well Corral Canyon Federal 11H |
| **Company:** | XTO ENERGY, INC. | **TVD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Project:** | Eddy County, NM | **MD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Site:** | Sec 10, T25S, R29E | **North Reference:** | Grid |
| **Well:** | Corral Canyon Federal 11H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #2 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Rustler** | | | | | | | | | |
| 449.0 | 0.00 | 0.00 | 449.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Top Salt** | | | | | | | | | |
| 813.0 | 0.00 | 0.00 | 813.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 0.00 | 0.00 | 1,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 0.00 | 0.00 | 1,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 0.00 | 0.00 | 2,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 0.00 | 0.00 | 2,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 0.00 | 0.00 | 2,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 0.00 | 0.00 | 2,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 0.00 | 0.00 | 2,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 0.00 | 0.00 | 2,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 0.00 | 0.00 | 2,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 0.00 | 0.00 | 2,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 0.00 | 0.00 | 2,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Base Salt** | | | | | | | | | |
| 2,894.0 | 0.00 | 0.00 | 2,894.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 0.00 | 0.00 | 2,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 0.00 | 0.00 | 3,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 0.00 | 0.00 | 3,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Delaware** | | | | | | | | | |
| 3,102.0 | 0.00 | 0.00 | 3,102.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 0.00 | 0.00 | 3,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 0.00 | 0.00 | 3,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 0.00 | 0.00 | 3,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 0.00 | 0.00 | 3,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 0.00 | 0.00 | 3,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 0.00 | 0.00 | 3,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 0.00 | 0.00 | 3,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 0.00 | 0.00 | 3,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Cherry Canyon** | | | | | | | | | |
| 3,971.0 | 0.00 | 0.00 | 3,971.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 0.00 | 0.00 | 4,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 0.00 | 0.00 | 4,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 0.00 | 0.00 | 4,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 0.00 | 0.00 | 4,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | EDM5002 | **Local Co-ordinate Reference:** | Well Corral Canyon Federal 11H |
| **Company:** | XTO ENERGY, INC. | **TVD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Project:** | Eddy County, NM | **MD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Site:** | Sec 10, T25S, R29E | **North Reference:** | Grid |
| **Well:** | Corral Canyon Federal 11H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #2 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,400.0 | 0.00 | 0.00 | 4,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 0.00 | 0.00 | 4,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 0.00 | 0.00 | 4,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 0.00 | 0.00 | 4,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 0.00 | 0.00 | 4,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 0.00 | 0.00 | 4,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 0.00 | 0.00 | 5,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 0.00 | 0.00 | 5,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 0.00 | 0.00 | 5,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 0.00 | 0.00 | 5,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 0.00 | 0.00 | 5,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 0.00 | 0.00 | 5,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Brushy Canyon** | | | | | | | | | |
| 5,593.0 | 0.00 | 0.00 | 5,593.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,600.0 | 0.00 | 0.00 | 5,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,700.0 | 0.00 | 0.00 | 5,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,800.0 | 0.00 | 0.00 | 5,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,900.0 | 0.00 | 0.00 | 5,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 0.00 | 0.00 | 6,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 0.00 | 0.00 | 6,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 0.00 | 0.00 | 6,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 0.00 | 0.00 | 6,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 0.00 | 0.00 | 6,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 0.00 | 0.00 | 6,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 0.00 | 0.00 | 6,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 0.00 | 0.00 | 6,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 0.00 | 0.00 | 6,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Bone Spring** | | | | | | | | | |
| 6,847.0 | 0.00 | 0.00 | 6,847.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 0.00 | 0.00 | 6,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 0.00 | 0.00 | 7,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 0.00 | 0.00 | 7,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 0.00 | 0.00 | 7,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 0.00 | 0.00 | 7,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.00 | 0.00 | 7,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 0.00 | 0.00 | 7,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 0.00 | 0.00 | 7,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **1st Bone Spring Lm** | | | | | | | | | |
| 7,654.0 | 0.00 | 0.00 | 7,654.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 0.00 | 0.00 | 7,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **1st Bone Spring Ss** | | | | | | | | | |
| 7,793.0 | 0.00 | 0.00 | 7,793.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 0.00 | 0.00 | 7,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 0.00 | 0.00 | 7,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 0.00 | 0.00 | 8,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **Build 10°/100'** | | | | | | | | | |
| 8,040.0 | 0.00 | 0.00 | 8,040.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 8,050.0 | 1.00 | 86.06 | 8,050.0 | 0.0 | 0.1 | 0.0 | 10.00 | 10.00 | 0.00 |
| **2nd Bone Spring Lm** | | | | | | | | | |
| 8,083.0 | 4.31 | 86.06 | 8,083.0 | 0.1 | 1.6 | 0.2 | 10.00 | 10.00 | 0.00 |
| 8,100.0 | 6.00 | 86.06 | 8,099.9 | 0.2 | 3.1 | 0.3 | 10.00 | 10.00 | 0.00 |
| 8,150.0 | 11.00 | 86.06 | 8,149.3 | 0.7 | 10.5 | 1.1 | 10.00 | 10.00 | 0.00 |
| 8,200.0 | 16.01 | 86.06 | 8,197.9 | 1.5 | 22.2 | 2.4 | 10.00 | 10.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | EDM5002 | **Local Co-ordinate Reference:** | Well Corral Canyon Federal 11H |
| **Company:** | XTO ENERGY, INC. | **TVD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Project:** | Eddy County, NM | **MD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Site:** | Sec 10, T25S, R29E | **North Reference:** | Grid |
| **Well:** | Corral Canyon Federal 11H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #2 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 8,250.0 | 21.01 | 86.06 | 8,245.3 | 2.6 | 38.0 | 4.1 | 10.00 | 10.00 | 0.00 |
| 8,300.0 | 26.01 | 86.06 | 8,291.2 | 4.0 | 57.9 | 6.3 | 10.00 | 10.00 | 0.00 |
| 8,350.0 | 31.01 | 86.06 | 8,335.1 | 5.6 | 81.7 | 8.8 | 10.00 | 10.00 | 0.00 |
| 8,400.0 | 36.01 | 86.06 | 8,376.8 | 7.5 | 109.2 | 11.8 | 10.00 | 10.00 | 0.00 |
| 8,450.0 | 41.02 | 86.06 | 8,415.9 | 9.7 | 140.3 | 15.2 | 10.00 | 10.00 | 0.00 |
| **EOB @ 41.52° Inc / 86.06° Azm - Build/Turn 10°/100'** | | | | | | | | | |
| 8,455.1 | 41.52 | 86.06 | 8,419.7 | 9.9 | 143.6 | 15.5 | 10.00 | 10.00 | 0.00 |
| 8,500.0 | 41.92 | 79.33 | 8,453.2 | 13.7 | 173.2 | 20.5 | 10.00 | 0.88 | -14.98 |
| 8,550.0 | 42.81 | 72.02 | 8,490.2 | 22.0 | 205.8 | 30.1 | 10.00 | 1.79 | -14.61 |
| 8,600.0 | 44.15 | 65.01 | 8,526.5 | 34.6 | 237.8 | 44.0 | 10.00 | 2.68 | -14.01 |
| 8,650.0 | 45.90 | 58.39 | 8,561.9 | 51.4 | 268.9 | 61.9 | 10.00 | 3.49 | -13.26 |
| **2nd Bone Spring Ss** | | | | | | | | | |
| 8,688.1 | 47.47 | 53.61 | 8,588.0 | 66.9 | 291.8 | 78.3 | 10.00 | 4.13 | -12.52 |
| 8,700.0 | 48.00 | 52.17 | 8,596.0 | 72.2 | 298.8 | 83.9 | 10.00 | 4.46 | -12.10 |
| 8,750.0 | 50.42 | 46.39 | 8,628.7 | 96.9 | 327.5 | 109.7 | 10.00 | 4.84 | -11.57 |
| 8,800.0 | 53.11 | 41.01 | 8,659.6 | 125.3 | 354.6 | 139.2 | 10.00 | 5.37 | -10.75 |
| 8,850.0 | 56.02 | 36.02 | 8,688.6 | 157.2 | 379.9 | 172.0 | 10.00 | 5.82 | -9.99 |
| 8,900.0 | 59.11 | 31.37 | 8,715.5 | 192.3 | 403.3 | 208.0 | 10.00 | 6.20 | -9.31 |
| 8,950.0 | 62.37 | 27.01 | 8,739.9 | 230.4 | 424.5 | 246.9 | 10.00 | 6.51 | -8.71 |
| 9,000.0 | 65.75 | 22.91 | 8,761.8 | 271.2 | 443.5 | 288.4 | 10.00 | 6.76 | -8.20 |
| **2nd Bone Spring "B" Ss** | | | | | | | | | |
| 9,012.9 | 66.64 | 21.89 | 8,767.0 | 282.1 | 448.0 | 299.5 | 10.00 | 6.90 | -7.91 |
| 9,050.0 | 69.24 | 19.03 | 8,780.9 | 314.3 | 460.0 | 332.1 | 10.00 | 7.00 | -7.71 |
| 9,100.0 | 72.81 | 15.32 | 8,797.2 | 359.4 | 473.9 | 377.8 | 10.00 | 7.14 | -7.41 |
| 9,150.0 | 76.44 | 11.76 | 8,810.4 | 406.3 | 485.2 | 425.0 | 10.00 | 7.27 | -7.13 |
| 9,200.0 | 80.13 | 8.30 | 8,820.6 | 454.5 | 493.7 | 473.5 | 10.00 | 7.37 | -6.91 |
| 9,250.0 | 83.84 | 4.92 | 8,827.6 | 503.7 | 499.4 | 522.9 | 10.00 | 7.44 | -6.76 |
| 9,300.0 | 87.58 | 1.59 | 8,831.3 | 553.4 | 502.2 | 572.7 | 10.00 | 7.48 | -6.66 |
| **EOBT @ 90.00° Inc / 359.45° Azm** | | | | | | | | | |
| 9,332.3 | 90.00 | 359.45 | 8,832.0 | 585.6 | 502.5 | 604.9 | 10.00 | 7.49 | -6.63 |
| 9,400.0 | 90.00 | 359.45 | 8,832.0 | 653.4 | 501.9 | 672.6 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 90.00 | 359.45 | 8,832.0 | 753.4 | 500.9 | 772.5 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 90.00 | 359.45 | 8,832.0 | 853.4 | 500.0 | 872.4 | 0.00 | 0.00 | 0.00 |
| 9,700.0 | 90.00 | 359.45 | 8,832.0 | 953.4 | 499.0 | 972.2 | 0.00 | 0.00 | 0.00 |
| 9,800.0 | 90.00 | 359.45 | 8,832.0 | 1,053.4 | 498.1 | 1,072.1 | 0.00 | 0.00 | 0.00 |
| 9,900.0 | 90.00 | 359.45 | 8,832.0 | 1,153.4 | 497.1 | 1,172.0 | 0.00 | 0.00 | 0.00 |
| 10,000.0 | 90.00 | 359.45 | 8,832.0 | 1,253.4 | 496.1 | 1,271.9 | 0.00 | 0.00 | 0.00 |
| 10,100.0 | 90.00 | 359.45 | 8,832.0 | 1,353.3 | 495.2 | 1,371.8 | 0.00 | 0.00 | 0.00 |
| 10,200.0 | 90.00 | 359.45 | 8,832.0 | 1,453.3 | 494.2 | 1,471.6 | 0.00 | 0.00 | 0.00 |
| 10,300.0 | 90.00 | 359.45 | 8,832.0 | 1,553.3 | 493.3 | 1,571.5 | 0.00 | 0.00 | 0.00 |
| 10,400.0 | 90.00 | 359.45 | 8,832.0 | 1,653.3 | 492.3 | 1,671.4 | 0.00 | 0.00 | 0.00 |
| 10,500.0 | 90.00 | 359.45 | 8,832.0 | 1,753.3 | 491.4 | 1,771.3 | 0.00 | 0.00 | 0.00 |
| 10,600.0 | 90.00 | 359.45 | 8,832.0 | 1,853.3 | 490.4 | 1,871.2 | 0.00 | 0.00 | 0.00 |
| 10,700.0 | 90.00 | 359.45 | 8,832.0 | 1,953.3 | 489.4 | 1,971.0 | 0.00 | 0.00 | 0.00 |
| 10,800.0 | 90.00 | 359.45 | 8,832.0 | 2,053.3 | 488.5 | 2,070.9 | 0.00 | 0.00 | 0.00 |
| 10,900.0 | 90.00 | 359.45 | 8,832.0 | 2,153.3 | 487.5 | 2,170.8 | 0.00 | 0.00 | 0.00 |
| 11,000.0 | 90.00 | 359.45 | 8,832.0 | 2,253.3 | 486.6 | 2,270.7 | 0.00 | 0.00 | 0.00 |
| 11,100.0 | 90.00 | 359.45 | 8,832.0 | 2,353.3 | 485.6 | 2,370.6 | 0.00 | 0.00 | 0.00 |
| 11,200.0 | 90.00 | 359.45 | 8,832.0 | 2,453.3 | 484.7 | 2,470.4 | 0.00 | 0.00 | 0.00 |
| 11,300.0 | 90.00 | 359.45 | 8,832.0 | 2,553.3 | 483.7 | 2,570.3 | 0.00 | 0.00 | 0.00 |
| 11,400.0 | 90.00 | 359.45 | 8,832.0 | 2,653.3 | 482.7 | 2,670.2 | 0.00 | 0.00 | 0.00 |
| 11,500.0 | 90.00 | 359.45 | 8,832.0 | 2,753.3 | 481.8 | 2,770.1 | 0.00 | 0.00 | 0.00 |
| 11,600.0 | 90.00 | 359.45 | 8,832.0 | 2,853.3 | 480.8 | 2,870.0 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | EDM5002 | **Local Co-ordinate Reference:** | Well Corral Canyon Federal 11H |
| **Company:** | XTO ENERGY, INC. | **TVD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Project:** | Eddy County, NM | **MD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Site:** | Sec 10, T25S, R29E | **North Reference:** | Grid |
| **Well:** | Corral Canyon Federal 11H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #2 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 11,700.0 | 90.00 | 359.45 | 8,832.0 | 2,953.3 | 479.9 | 2,969.8 | 0.00 | 0.00 | 0.00 |
| 11,800.0 | 90.00 | 359.45 | 8,832.0 | 3,053.3 | 478.9 | 3,069.7 | 0.00 | 0.00 | 0.00 |
| 11,900.0 | 90.00 | 359.45 | 8,832.0 | 3,153.3 | 478.0 | 3,169.6 | 0.00 | 0.00 | 0.00 |
| 12,000.0 | 90.00 | 359.45 | 8,832.0 | 3,253.3 | 477.0 | 3,269.5 | 0.00 | 0.00 | 0.00 |
| 12,100.0 | 90.00 | 359.45 | 8,832.0 | 3,353.3 | 476.1 | 3,369.4 | 0.00 | 0.00 | 0.00 |
| 12,200.0 | 90.00 | 359.45 | 8,832.0 | 3,453.3 | 475.1 | 3,469.3 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 90.00 | 359.45 | 8,832.0 | 3,553.2 | 474.1 | 3,569.1 | 0.00 | 0.00 | 0.00 |
| 12,400.0 | 90.00 | 359.45 | 8,832.0 | 3,653.2 | 473.2 | 3,669.0 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 90.00 | 359.45 | 8,832.0 | 3,753.2 | 472.2 | 3,768.9 | 0.00 | 0.00 | 0.00 |
| 12,600.0 | 90.00 | 359.45 | 8,832.0 | 3,853.2 | 471.3 | 3,868.8 | 0.00 | 0.00 | 0.00 |
| 12,700.0 | 90.00 | 359.45 | 8,832.0 | 3,953.2 | 470.3 | 3,968.7 | 0.00 | 0.00 | 0.00 |
| 12,800.0 | 90.00 | 359.45 | 8,832.0 | 4,053.2 | 469.4 | 4,068.5 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 90.00 | 359.45 | 8,832.0 | 4,153.2 | 468.4 | 4,168.4 | 0.00 | 0.00 | 0.00 |
| 13,000.0 | 90.00 | 359.45 | 8,832.0 | 4,253.2 | 467.4 | 4,268.3 | 0.00 | 0.00 | 0.00 |
| 13,100.0 | 90.00 | 359.45 | 8,832.0 | 4,353.2 | 466.5 | 4,368.2 | 0.00 | 0.00 | 0.00 |
| 13,200.0 | 90.00 | 359.45 | 8,832.0 | 4,453.2 | 465.5 | 4,468.1 | 0.00 | 0.00 | 0.00 |
| 13,300.0 | 90.00 | 359.45 | 8,832.0 | 4,553.2 | 464.6 | 4,567.9 | 0.00 | 0.00 | 0.00 |
| 13,400.0 | 90.00 | 359.45 | 8,832.0 | 4,653.2 | 463.6 | 4,667.8 | 0.00 | 0.00 | 0.00 |
| 13,500.0 | 90.00 | 359.45 | 8,832.0 | 4,753.2 | 462.7 | 4,767.7 | 0.00 | 0.00 | 0.00 |
| 13,600.0 | 90.00 | 359.45 | 8,832.0 | 4,853.2 | 461.7 | 4,867.6 | 0.00 | 0.00 | 0.00 |
| 13,700.0 | 90.00 | 359.45 | 8,832.0 | 4,953.2 | 460.8 | 4,967.5 | 0.00 | 0.00 | 0.00 |
| 13,800.0 | 90.00 | 359.45 | 8,832.0 | 5,053.2 | 459.8 | 5,067.3 | 0.00 | 0.00 | 0.00 |
| 13,900.0 | 90.00 | 359.45 | 8,832.0 | 5,153.2 | 458.8 | 5,167.2 | 0.00 | 0.00 | 0.00 |
| 14,000.0 | 90.00 | 359.45 | 8,832.0 | 5,253.2 | 457.9 | 5,267.1 | 0.00 | 0.00 | 0.00 |
| 14,100.0 | 90.00 | 359.45 | 8,832.0 | 5,353.2 | 456.9 | 5,367.0 | 0.00 | 0.00 | 0.00 |
| 14,200.0 | 90.00 | 359.45 | 8,832.0 | 5,453.2 | 456.0 | 5,466.9 | 0.00 | 0.00 | 0.00 |
| 14,300.0 | 90.00 | 359.45 | 8,832.0 | 5,553.2 | 455.0 | 5,566.7 | 0.00 | 0.00 | 0.00 |
| 14,400.0 | 90.00 | 359.45 | 8,832.0 | 5,653.2 | 454.1 | 5,666.6 | 0.00 | 0.00 | 0.00 |
| 14,500.0 | 90.00 | 359.45 | 8,832.0 | 5,753.1 | 453.1 | 5,766.5 | 0.00 | 0.00 | 0.00 |
| 14,600.0 | 90.00 | 359.45 | 8,832.0 | 5,853.1 | 452.1 | 5,866.4 | 0.00 | 0.00 | 0.00 |
| 14,700.0 | 90.00 | 359.45 | 8,832.0 | 5,953.1 | 451.2 | 5,966.3 | 0.00 | 0.00 | 0.00 |
| 14,800.0 | 90.00 | 359.45 | 8,832.0 | 6,053.1 | 450.2 | 6,066.1 | 0.00 | 0.00 | 0.00 |
| 14,900.0 | 90.00 | 359.45 | 8,832.0 | 6,153.1 | 449.3 | 6,166.0 | 0.00 | 0.00 | 0.00 |
| 15,000.0 | 90.00 | 359.45 | 8,832.0 | 6,253.1 | 448.3 | 6,265.9 | 0.00 | 0.00 | 0.00 |
| 15,100.0 | 90.00 | 359.45 | 8,832.0 | 6,353.1 | 447.4 | 6,365.8 | 0.00 | 0.00 | 0.00 |
| 15,200.0 | 90.00 | 359.45 | 8,832.0 | 6,453.1 | 446.4 | 6,465.7 | 0.00 | 0.00 | 0.00 |
| 15,300.0 | 90.00 | 359.45 | 8,832.0 | 6,553.1 | 445.4 | 6,565.6 | 0.00 | 0.00 | 0.00 |
| 15,400.0 | 90.00 | 359.45 | 8,832.0 | 6,653.1 | 444.5 | 6,665.4 | 0.00 | 0.00 | 0.00 |
| 15,500.0 | 90.00 | 359.45 | 8,832.0 | 6,753.1 | 443.5 | 6,765.3 | 0.00 | 0.00 | 0.00 |
| 15,600.0 | 90.00 | 359.45 | 8,832.0 | 6,853.1 | 442.6 | 6,865.2 | 0.00 | 0.00 | 0.00 |
| 15,700.0 | 90.00 | 359.45 | 8,832.0 | 6,953.1 | 441.6 | 6,965.1 | 0.00 | 0.00 | 0.00 |
| 15,800.0 | 90.00 | 359.45 | 8,832.0 | 7,053.1 | 440.7 | 7,065.0 | 0.00 | 0.00 | 0.00 |
| 15,900.0 | 90.00 | 359.45 | 8,832.0 | 7,153.1 | 439.7 | 7,164.8 | 0.00 | 0.00 | 0.00 |
| 16,000.0 | 90.00 | 359.45 | 8,832.0 | 7,253.1 | 438.8 | 7,264.7 | 0.00 | 0.00 | 0.00 |
| 16,100.0 | 90.00 | 359.45 | 8,832.0 | 7,353.1 | 437.8 | 7,364.6 | 0.00 | 0.00 | 0.00 |
| 16,200.0 | 90.00 | 359.45 | 8,832.0 | 7,453.1 | 436.8 | 7,464.5 | 0.00 | 0.00 | 0.00 |
| 16,300.0 | 90.00 | 359.45 | 8,832.0 | 7,553.1 | 435.9 | 7,564.4 | 0.00 | 0.00 | 0.00 |
| 16,400.0 | 90.00 | 359.45 | 8,832.0 | 7,653.1 | 434.9 | 7,664.2 | 0.00 | 0.00 | 0.00 |
| 16,500.0 | 90.00 | 359.45 | 8,832.0 | 7,753.1 | 434.0 | 7,764.1 | 0.00 | 0.00 | 0.00 |
| 16,600.0 | 90.00 | 359.45 | 8,832.0 | 7,853.1 | 433.0 | 7,864.0 | 0.00 | 0.00 | 0.00 |
| 16,700.0 | 90.00 | 359.45 | 8,832.0 | 7,953.0 | 432.1 | 7,963.9 | 0.00 | 0.00 | 0.00 |
| 16,800.0 | 90.00 | 359.45 | 8,832.0 | 8,053.0 | 431.1 | 8,063.8 | 0.00 | 0.00 | 0.00 |
| 16,900.0 | 90.00 | 359.45 | 8,832.0 | 8,153.0 | 430.1 | 8,163.6 | 0.00 | 0.00 | 0.00 |
| 17,000.0 | 90.00 | 359.45 | 8,832.0 | 8,253.0 | 429.2 | 8,263.5 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | EDM5002 | **Local Co-ordinate Reference:** | Well Corral Canyon Federal 11H |
| **Company:** | XTO ENERGY, INC. | **TVD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Project:** | Eddy County, NM | **MD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Site:** | Sec 10, T25S, R29E | **North Reference:** | Grid |
| **Well:** | Corral Canyon Federal 11H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #2 | | |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 17,100.0 | 90.00 | 359.45 | 8,832.0 | 8,353.0 | 428.2 | 8,363.4 | 0.00 | 0.00 | 0.00 |
| 17,200.0 | 90.00 | 359.45 | 8,832.0 | 8,453.0 | 427.3 | 8,463.3 | 0.00 | 0.00 | 0.00 |
| 17,300.0 | 90.00 | 359.45 | 8,832.0 | 8,553.0 | 426.3 | 8,563.2 | 0.00 | 0.00 | 0.00 |
| 17,400.0 | 90.00 | 359.45 | 8,832.0 | 8,653.0 | 425.4 | 8,663.0 | 0.00 | 0.00 | 0.00 |
| 17,500.0 | 90.00 | 359.45 | 8,832.0 | 8,753.0 | 424.4 | 8,762.9 | 0.00 | 0.00 | 0.00 |
| 17,600.0 | 90.00 | 359.45 | 8,832.0 | 8,853.0 | 423.5 | 8,862.8 | 0.00 | 0.00 | 0.00 |
| 17,700.0 | 90.00 | 359.45 | 8,832.0 | 8,953.0 | 422.5 | 8,962.7 | 0.00 | 0.00 | 0.00 |
| 17,800.0 | 90.00 | 359.45 | 8,832.0 | 9,053.0 | 421.5 | 9,062.6 | 0.00 | 0.00 | 0.00 |
| 17,900.0 | 90.00 | 359.45 | 8,832.0 | 9,153.0 | 420.6 | 9,162.4 | 0.00 | 0.00 | 0.00 |
| 18,000.0 | 90.00 | 359.45 | 8,832.0 | 9,253.0 | 419.6 | 9,262.3 | 0.00 | 0.00 | 0.00 |
| 18,100.0 | 90.00 | 359.45 | 8,832.0 | 9,353.0 | 418.7 | 9,362.2 | 0.00 | 0.00 | 0.00 |
| 18,200.0 | 90.00 | 359.45 | 8,832.0 | 9,453.0 | 417.7 | 9,462.1 | 0.00 | 0.00 | 0.00 |
| 18,300.0 | 90.00 | 359.45 | 8,832.0 | 9,553.0 | 416.8 | 9,562.0 | 0.00 | 0.00 | 0.00 |
| 18,400.0 | 90.00 | 359.45 | 8,832.0 | 9,653.0 | 415.8 | 9,661.9 | 0.00 | 0.00 | 0.00 |
| 18,500.0 | 90.00 | 359.45 | 8,832.0 | 9,753.0 | 414.8 | 9,761.7 | 0.00 | 0.00 | 0.00 |
| 18,600.0 | 90.00 | 359.45 | 8,832.0 | 9,853.0 | 413.9 | 9,861.6 | 0.00 | 0.00 | 0.00 |
| 18,700.0 | 90.00 | 359.45 | 8,832.0 | 9,953.0 | 412.9 | 9,961.5 | 0.00 | 0.00 | 0.00 |
| 18,800.0 | 90.00 | 359.45 | 8,832.0 | 10,053.0 | 412.0 | 10,061.4 | 0.00 | 0.00 | 0.00 |
| 18,900.0 | 90.00 | 359.45 | 8,832.0 | 10,152.9 | 411.0 | 10,161.3 | 0.00 | 0.00 | 0.00 |
| 19,000.0 | 90.00 | 359.45 | 8,832.0 | 10,252.9 | 410.1 | 10,261.1 | 0.00 | 0.00 | 0.00 |
| 19,100.0 | 90.00 | 359.45 | 8,832.0 | 10,352.9 | 409.1 | 10,361.0 | 0.00 | 0.00 | 0.00 |
| **TD @ 19142.3' MD / 8832.0' TVD** | | | | | | | | | |
| 19,142.3 | 90.00 | 359.45 | 8,832.0 | 10,395.2 | 408.7 | 10,403.2 | 0.00 | 0.00 | 0.00 |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| LTP - Corral Canyon Fe | 0.00 | 0.00 | 8,832.0 | 10,265.2 | 411.1 | 429,407.10 | 612,789.80 | 32° 10' 48.114 N | 103° 58' 7.594 W |
| - plan misses target center by 1.2usft at 19012.2usft MD (8832.0 TVD, 10265.2 N, 409.9 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| PBHL - Corral Canyon F | 0.00 | 0.00 | 8,832.0 | 10,395.2 | 408.7 | 429,537.10 | 612,787.40 | 32° 10' 49.401 N | 103° 58' 7.616 W |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |
| FTP - Corral Canyon Fe | 0.00 | 0.00 | 8,832.0 | 337.9 | 504.9 | 419,479.80 | 612,883.60 | 32° 9' 9.868 N | 103° 58' 6.894 W |
| - plan misses target center by 51.3usft at 9100.0usft MD (8797.2 TVD, 359.4 N, 473.9 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| | | | |
|---|---|---|---|
| **Database:** | EDM5002 | **Local Co-ordinate Reference:** | Well Corral Canyon Federal 11H |
| **Company:** | XTO ENERGY, INC. | **TVD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Project:** | Eddy County, NM | **MD Reference:** | RKB @ 3049.0usft (Frontier #27) |
| **Site:** | Sec 10, T25S, R29E | **North Reference:** | Grid |
| **Well:** | Corral Canyon Federal 11H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #2 | | |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 449.0 | 449.0 | Rustler | | | |
| 813.0 | 813.0 | Top Salt | | | |
| 2,894.0 | 2,894.0 | Base Salt | | | |
| 3,102.0 | 3,102.0 | Delaware | | | |
| 3,971.0 | 3,971.0 | Cherry Canyon | | | |
| 5,593.0 | 5,593.0 | Brushy Canyon | | | |
| 6,847.0 | 6,847.0 | Bone Spring | | | |
| 7,654.0 | 7,654.0 | 1st Bone Spring Lm | | | |
| 7,793.0 | 7,793.0 | 1st Bone Spring Ss | | | |
| 8,083.0 | 8,083.0 | 2nd Bone Spring Lm | | | |
| 8,688.1 | 8,588.0 | 2nd Bone Spring Ss | | | |
| 9,012.9 | 8,767.0 | 2nd Bone Spring "B" Ss | | | |

**Plan Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 8,040.0 | 8,040.0 | 0.0 | 0.0 | Build 10°/100' |
| 8,455.1 | 8,419.7 | 9.9 | 143.6 | EOB @ 41.52° Inc / 86.06° Azm - Build/Turn 10°/100' |
| 9,332.3 | 8,832.0 | 585.6 | 502.5 | EOBT @ 90.00° Inc / 359.45° Azm |
| 19,142.3 | 8,832.0 | 10,395.2 | 408.7 | TD @ 19142.3' MD / 8832.0' TVD |

Sec 10, T25S, R29E
Corral Canyon Federal 11H
**Q170*** & WT-170***
Plan #2

**Company Name: XTO ENERGY, INC.**
**Corral Canyon Federal 11H**
**Eddy County, NM**
**Rig: Frontier #27**
**Created By: Keith Noack**
**Date: 5/23/2017**

PROJECT DETAILS: Eddy County, NM

| | |
|---|---|
| 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 |

DIRECTIONAL DRILLING

**WELL DETAILS: Corral Canyon Federal 11H**

Ground Level: 3024.0

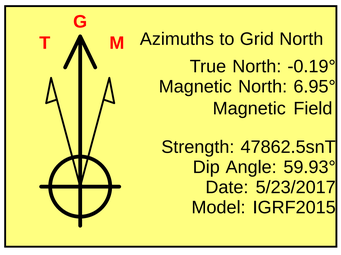
| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.0 | 0.0 | 419141.90 | 612378.70 | 32° 9' 6.541 N | 103° 58' 12.780 W |

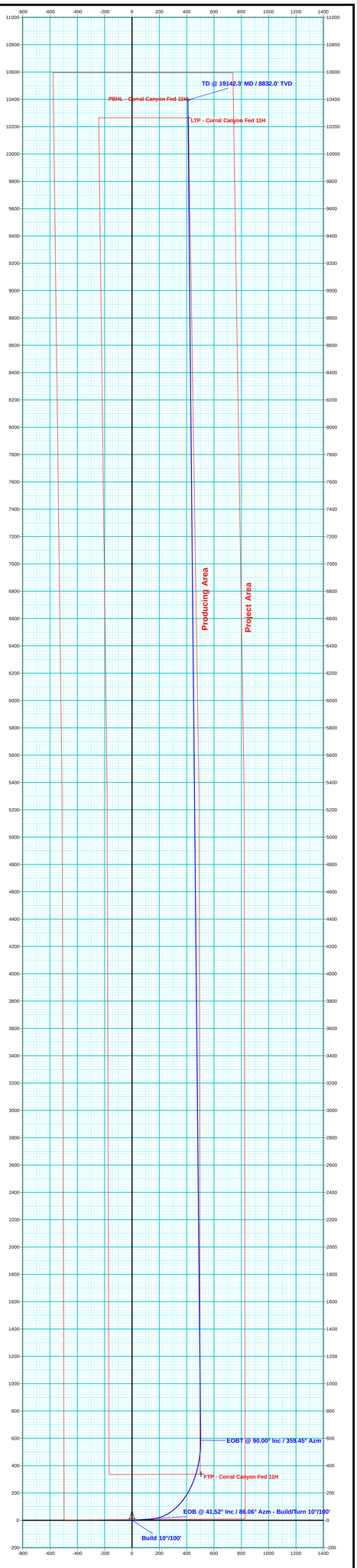
**ANNOTATIONS**

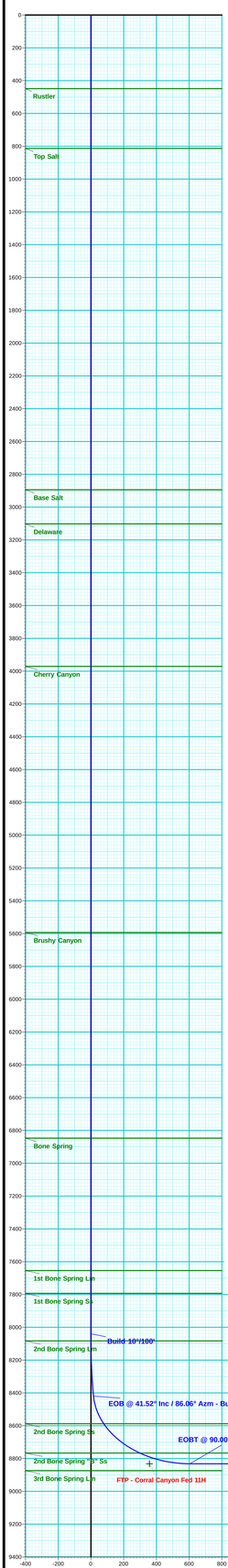
| MD | Inc | Azi | TVD | +N/-S | +E/-W | VSect | Departure | Annotation |
|---|---|---|---|---|---|---|---|---|
| 8040.0 | 0.00 | 0.00 | 8040.0 | 0.0 | 0.0 | 0.0 | 0.0 | Build 10°/100' |
| 8455.1 | 41.52 | 86.06 | 8419.7 | 9.9 | 143.6 | 15.5 | 143.9 | EOB @ 41.52° Inc / 86.06° Azm - Build/Turn 10°/100' |
| 9332.3 | 90.00 | 359.45 | 8832.0 | 585.6 | 502.5 | 604.9 | 884.7 | EOBT @ 90.00° Inc / 359.45° Azm |
| 19142.3 | 90.00 | 359.45 | 8832.0 | 10395.2 | 408.7 | 10403.2 | 10694.7 | TD @ 19142.3' MD / 8832.0' TVD |

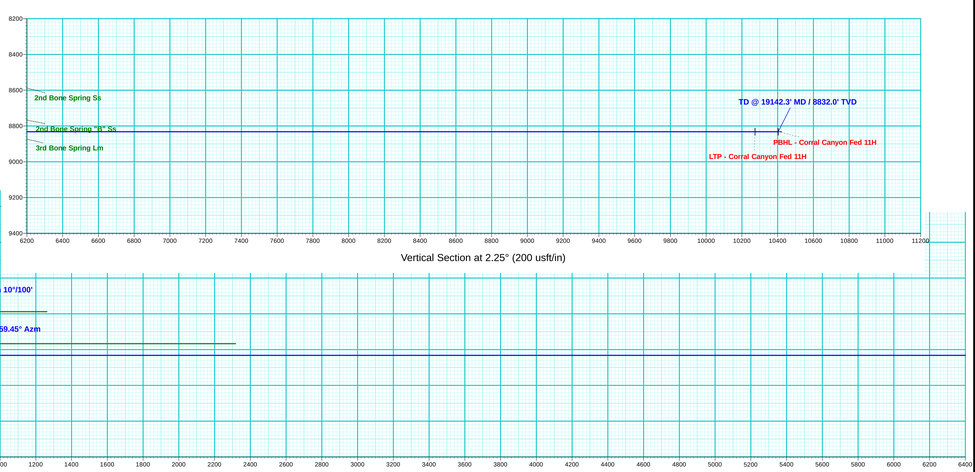
**DESIGN TARGET DETAILS**

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|---|---|
| FTP - Corral Canyon Fed 11H | 8832.0 | 337.9 | 504.9 | 419479.80 | 612883.60 | 32° 9' 9.868 N | 103° 58' 6.894 W |
| LTP - Corral Canyon Fed 11H | 8832.0 | 10265.2 | 411.1 | 429407.10 | 612789.80 | 32° 10' 48.114 N | 103° 58' 7.594 W |
| PBHL - Corral Canyon Fed 11H | 8832.0 | 10395.2 | 408.7 | 429537.10 | 612787.40 | 32° 10' 49.401 N | 103° 58' 7.616 W |




Vertical Section at 2.25° (200 usft/in)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

# GAS CAPTURE PLAN

Date: 05/01/2018

☒ Original Operator & OGRID No.: XTO Energy, Inc [005380]

☐ Amended - Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

## Well(s)/Production Facility – Name of facility: Corral Canyon 10 East CTB

The well(s) that will be located at the production facility are shown in the table below.

| Well Name | API | Well Location (ULSTR) | Footages | Expected MCF/D | Flared or Vented | Comments |
|---|---|---|---|---|---|---|
| Corral Canyon Federal 10H | | C-10-25S-29E | 500'FNL & 2410'FWL | 4500MCF/D | Flared/Sold | CTB Connected |
| Corral Canyon Federal 11H | | B-10-25S-29E | 5'FNL & 2155'FEL | 4500MCF/D | Flared/Sold | CTB Connected |
| Corral Canyon Federal 22H | | C-10-25S-29E | 500'FNL & 2460'FWL | 4500MCF/D | Flared/Sold | CTB Connected |
| Corral Canyon Federal 23H | | B-10-25S-29E | 5-FNL & 2205'FEL | 4500MCF/D | Flared/Sold | CTB Connected |

## Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enlink and will be connected to Enlink low/high pressure gathering system located in Loving County, Texas. It will require 0' of pipeline to connect the facility to low/high pressure gathering system. XTO Energy, Inc. provides (periodically) to Enlink a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO Energy, Inc. and Enlink have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enlink Processing Plant located in Block 27, Section 4, Loving County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

## Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Enlink system at that time. Based on current information, it is XTO Energy, Inc.'s belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

## Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines

- NGL Removal – On lease
    - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines