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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

MINRO-OCD ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

NMNM055929

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

CORRAL CANYON 5-32 FEDERAL  
107H

327082

9. API Well No.

30-015-46749

10. Field and Pool, or Exploratory  
WILDCAT; WOLFCAMP

11. Sec., T. R. M. or Blk. and Survey or Area  
SEC 8 / T25S / R29E / NMP

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

2. Name of Operator  
XTO ENERGY INCORPORATED

3a. Address  
22777 Springwoods Village Parkway Spring TX 77389

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

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

At surface NENE / 170 FNL / 750 FEL / LAT 32.151452 / LONG -104.000462

At proposed prod. zone NESE / 2440 FSL / 1170 FEL / LAT 32.173187 / LONG -104.001861

14. Distance in miles and direction from nearest town or post office\*  
8 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)  
170 feet

16. No of acres in lease  
639.33

17. Spacing Unit dedicated to this well  
480

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

19. Proposed Depth  
9925 feet / 17300 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
2941 feet

22. Approximate date work will start\*  
10/01/2019

23. Estimated duration  
90 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  
(Electronic Submission)

Name (Printed/Typed)  
Stephanie Rabadue / Ph: (432)620-6714

Date  
08/13/2019

Title  
Regulatory Coordinator

Approved by (Signature)  
(Electronic Submission)

Name (Printed/Typed)  
Cody Layton / Ph: (575)234-5959

Date  
02/11/2020

Title  
Assistant Field Manager Lands & Minerals

Office  
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**  
Approval Date: 02/11/2020

(Continued on page 2)

\*(Instructions on page 2)

RWP 2-18-2020

**PECOS DISTRICT  
DRILLING CONDITIONS OF APPROVAL**

<b>OPERATOR'S NAME:</b>	<b>XTO Energy, Inc.</b>
<b>LEASE NO.:</b>	<b>NMNM-055929</b>
<b>WELL NAME &amp; NO.:</b>	<b>Corral Canyon 5-32 Federal 107H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0170' FNL &amp; 0750' FEL</b>
<b>BOTTOM HOLE FOOTAGE</b>	<b>2440' FSL &amp; 1170' FEL Sec. 32, T. 24 S., R. 29 E.</b>
<b>LOCATION:</b>	<b>Section 08, T. 25 S., R. 29 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" 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 type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit

**Operator will use a 5M multibowl after setting surface casing as this is only a 3 string well. The 2M system is an error in this permit.**

**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.

**Medium Cave/Karst**

**Possibility of water flows in the Salado and Castile.**

**Possibility of lost circulation in the Rustler, Red Beds, and Delaware.**

## B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **530** feet (a minimum of 70 feet (Eddy 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 **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.

### **9-5/8" Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.**

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

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. DV tool must be 50 feet below previous shoe and minimum of 200 feet 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 cave/karst.**
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

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.

#### **D. SPECIAL REQUIREMENT (S)**

##### **Operator to add "COM" to the well name.**

##### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

##### **Anticollision report must be run due to the GULF 5 FEDERAL 1 (30-015-25312)**

## 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

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

**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. 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 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. 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 011720**



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

# Operator Certification Data Report

02/11/2020

## 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

**Title:** Regulatory Coordinator

**Street Address:** 500 W. Illinois St, Ste 100

**City:** Midland

**State:** TX

**Phone:** (432)620-6714

**Email address:** stephanie\_rabadue@xtoenergy.com

**Signed on:** 05/17/2018

**Zip:** 79701

## Field Representative

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**



APD ID: 10400045677

Submission Date: 08/13/2019

Highlighted data reflects the most recent changes

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 5-32 FEDERAL

Well Number: 107H

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

**Section 1 - General**

APD ID: 10400045677

Tie to previous NOS? N

Submission Date: 08/13/2019

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: NMNM055929

Lease Acres: 639.33

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: XTO ENERGY INCORPORATED

Operator letter of designation:

**Operator Info**

Operator Organization Name: XTO ENERGY INCORPORATED

Operator Address: 22777 Springwoods Village Parkway

Operator PO Box:

Zip: 77389

Operator City: Spring

State: TX

Operator Phone: (432)620-6700

Operator Internet Address: Richard\_redus@xtoenergy.com

**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: CORRAL CANYON 5-32 FEDERAL

Well Number: 107H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: WILDCAT;  
WOLFCAMP

Pool Name:

Is the proposed well in an area containing other mineral resources? USEABLE WATER, OTHER, NATURAL GAS, OIL

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 5-32 FEDERAL

Well Number: 107H

Is the proposed well in an area containing other mineral resources? USEABLE WATER, OTHER, NATURAL GAS, OIL

Describe other minerals: Produced Water

Is the proposed well in a Helium production area? N Use Existing Well Pad? N New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: CC 5- Number: 4

Well Class: HORIZONTAL

32 Fed

Number of Legs: 1

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: DELINEATION

Describe sub-type:

Distance to town: 8 Miles

Distance to nearest well: 0 FT

Distance to lease line: 170 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: CC\_5\_32\_107H\_C102\_20190809102754.pdf

Well work start Date: 10/01/2019

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	170	FNL	750	FEL	25S	29E	8	Aliquot NENE	32.151452	-104.000462	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 055929	2941	0	0	N
KOP Leg #1	170	FNL	750	FEL	25S	29E	8	Aliquot NENE	32.151452	-104.000462	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 055929	-1979	4920	4920	N
PPP Leg #1-1	330	FSL	1170	FEL	25S	29E	5	Aliquot SESE	32.152839	-104.001822	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 015302	-6984	10300	9925	Y

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 5-32 FEDERAL

Well Number: 107H

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?
EXIT Leg #1	231 0	FSL	117 0	FEL	24S	29E	32	Aliquot NESE	32.17283	- 104.0018 61	EDD Y	NEW MEXI CO	NEW MEXI CO	S	STATE	- 698 4	171 00	992 5	Y
BHL Leg #1	244 0	FSL	117 0	FEL	24S	29E	32	Aliquot NESE	32.17318 7	- 104.0018 61	EDD Y	NEW MEXI CO	NEW MEXI CO	S	STATE	- 698 4	173 00	992 5	Y



APD ID: 10400045677

Submission Date: 08/13/2019

Highlighted data reflects the most recent changes

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 5-32 FEDERAL

Well Number: 107H

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

### Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
511840	PERMIAN	2941	0	0	OTHER : Quaternary	NONE	N
511841	RUSTLER	2619	322	322	SILTSTONE	USEABLE WATER	N
511838	TOP SALT	2254	687	687	SALT	NONE	N
511835	BASE OF SALT	341	2600	2600	SALT	NONE	N
511842	DELAWARE	138	2803	2803	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
511843	BONE SPRING	-3615	6556	6556	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
511839	BONE SPRING 1ST	-4563	7504	7504	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
511836	BONE SPRING 2ND	-4779	7720	7720	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
511845	BONE SPRING 3RD	-5621	8562	8562	SANDSTONE	NATURAL GAS, OIL, OTHER, USEABLE WATER : produced water	N
511846	WOLFCAMP	-6781	9722	9722	SHALE	NATURAL GAS, OIL, OTHER, USEABLE WATER : produced water	Y

### Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M

Rating Depth: 530

**Equipment:** The blow out preventer equipment (BOP) for this well consists of a 13-5/8 minimum 2M Hydril and a 13-5/8 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.

**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 nipling 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 2M BOP diagram is attached. Blind rams will be function tested each trip, pipe rams will be function tested each day.

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 5-32 FEDERAL

Well Number: 107H

**Choke Diagram Attachment:**

CC\_5\_32\_2MCM\_20190809103423.pdf

**BOP Diagram Attachment:**

CC\_5\_32\_2MBOP\_20190809103429.pdf

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

**Rating Depth:** 6710

**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.

**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 on the 13-5/8 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 9-5/8, the BOP will be tested to a minimum of 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:**

CC\_5\_32\_5MCM\_20190809103349.pdf

**BOP Diagram Attachment:**

CC\_5\_32\_5MBOP\_20190809103356.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	530	0	530	2941	2411	530	J-55	54.5	ST&C	4.66	1.36	DRY	23.37	DRY	23.37
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	6710	0	6710		-3769	6710	J-55	40	LT&C	1.26	1.14	DRY	2.71	DRY	2.71
3	PRODUCTION	8.75	5.5	NEW	API	N	0	17300	0	9925		-6984	17300	P-110	17	BUTT	1.33	1.01	DRY	2.53	DRY	2.53

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON 5-32 FEDERAL

**Well Number:** 107H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

CC\_5\_32\_107H\_Csg\_20190809103559.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

CC\_5\_32\_107H\_Csg\_20190809103614.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

CC\_5\_32\_107H\_Csg\_20190809103639.pdf

**Section 4 - Cement**

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON 5-32 FEDERAL

**Well Number:** 107H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	530	540	1.35	14.8	729	100	Halcem-C	2% CaCl

INTERMEDIATE	Lead	630	0	630	540	1.35	14.8	729	100	Halcem-C	2% CaCl
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INTERMEDIATE	Lead		630	6710	1900	1.88	12.9	3572	100	HalCem-C	2% CaCl
INTERMEDIATE	Tail				470	14.8	1.33	625.1	100	Halcem-C	2% CaCl
PRODUCTION	Lead		0	1730 0	310	2.69	11.5	833.9	30	NeoCem	None
PRODUCTION	Tail		0		2330	13.2	1.61	3751. 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 a 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
6710	9925	OIL-BASED MUD	10.7	11							A Pason or Totco will be used to detect changes in loss or

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON 5-32 FEDERAL

**Well Number:** 107H

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
											gain of mud volume. A mud test will be performed every 24 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.
0	530	OTHER : FW/Native	8.4	8.8							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 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.
530	6710	OTHER : Brine/Gel Sweeps	9.5	10.2							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 hrs 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 logging Unit (2 man) on below intermediate casing. Catch 20' samples fr/6710' to TD

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

CEMENT BOND LOG,COMPENSATED NEUTRON LOG,DIRECTIONAL SURVEY,GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,

**Coring operation description for the well:**

No coring will take place on this well.

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CORRAL CANYON 5-32 FEDERAL

**Well Number:** 107H

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 5522

**Anticipated Surface Pressure:** 3338

**Anticipated Bottom Hole Temperature(F):** 150

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

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

**Hydrogen sulfide drilling operations plan:**

CC\_5\_32\_H2S\_Plan\_20190809104953.pdf

CC\_5\_32\_H2S\_P4\_20190809104954.pdf

### Section 8 - Other Information

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

CC\_5\_32\_107H\_DD\_20190809103733.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

CC\_5\_32\_107H\_GCP\_20190809103738.pdf

**Other Variance attachment:**

CC\_5\_32\_5.5MBS\_20190809103751.pdf

CC\_5\_32\_FH\_20190809103758.pdf



## HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN

**Assumed 100 ppm ROE = 3000'**

100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

### Emergency Procedures

In the event of a release of gas containing H<sub>2</sub>S, 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<sub>2</sub>S 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 H<sub>2</sub>S, 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 (SO<sub>2</sub>). 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<sub>2</sub>S and SO<sub>2</sub>

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	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  
Milton Turman, Drilling Superintendent  
Jeff Raines, Construction Foreman  
Toady Sanders, EH & S Manager  
Wes McSpadden, Production Foreman

903-521-6477  
817-524-5107  
432-557-3159  
903-520-1601  
575-441-1147

**SHERIFF DEPARTMENTS:**

Eddy County  
Lea County

575-887-7551  
575-396-3611

**NEW MEXICO STATE POLICE:**

575-392-5588

**FIRE DEPARTMENTS:**

Carlsbad  
Eunice  
Hobbs  
Jal  
Lovington

911  
575-885-2111  
575-394-2111  
575-397-9308  
575-395-2221  
575-396-2359

**HOSPITALS:**

Carlsbad Medical Emergency  
Eunice Medical Emergency  
Hobbs Medical Emergency  
Jal Medical Emergency  
Lovington Medical Emergency

911  
575-885-2111  
575-394-2112  
575-397-9308  
575-395-2221  
575-396-2359

**AGENT NOTIFICATIONS:**

**For Lea County:**

Bureau of Land Management – Hobbs  
New Mexico Oil Conservation Division – Hobbs

575-393-3612  
575-393-6161

**For Eddy County:**

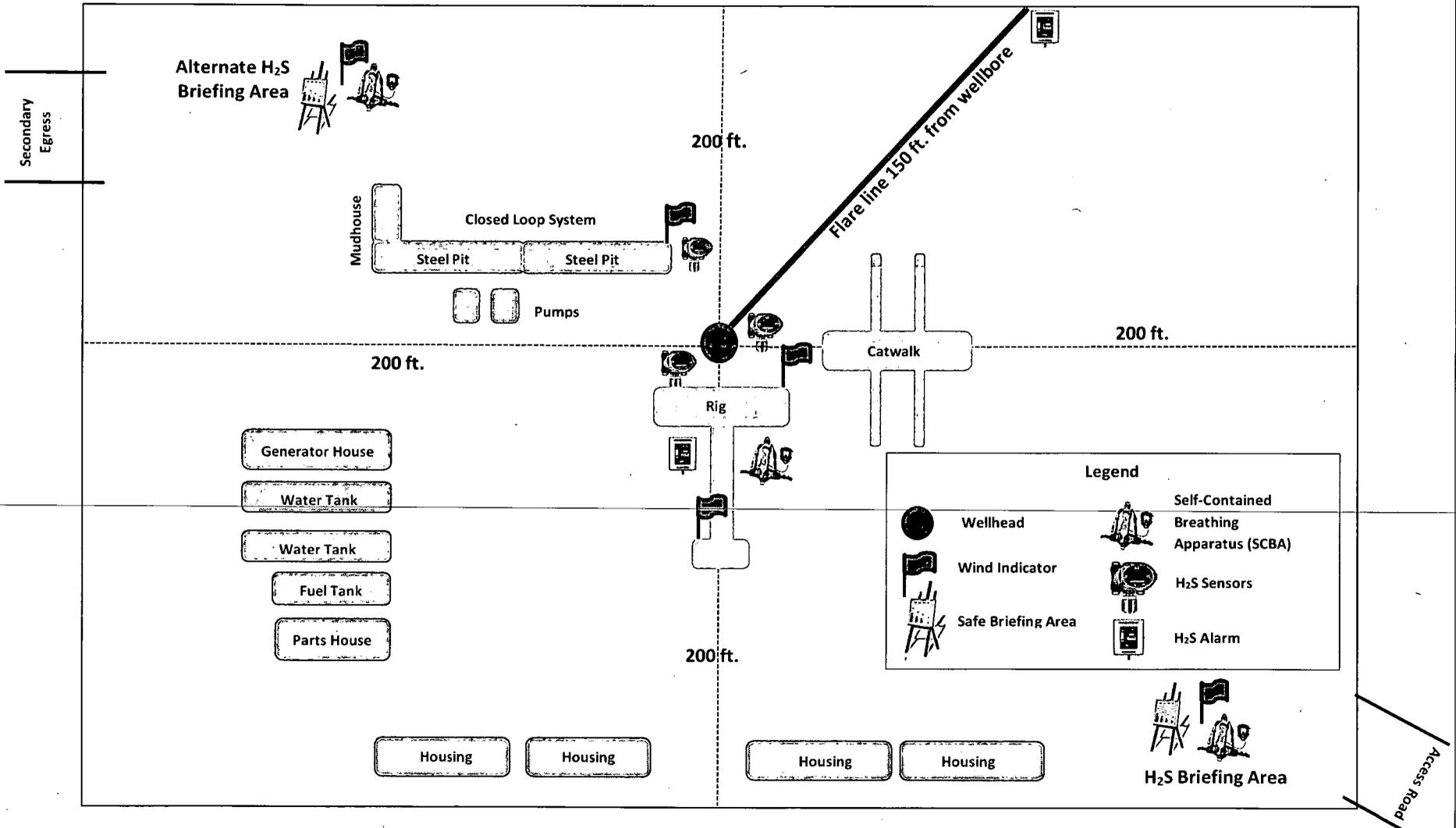
Bureau of Land Management - Carlsbad  
New Mexico Oil Conservation Division - Artesia

575-234-5972  
575-748-1283

↑  
S  
|

↙  
Prevailing Winds  
Direction SW

# H<sub>2</sub>S Briefing Areas and Alarm Locations







## **XTO Energy**

**Eddy County, NM (NAD-27)**

**Corral Canyon 5-32 Fed**

**#107H**

**OH**

**Plan: PERMIT**

# **Standard Planning Report**

**20 May, 2019**



Project: Eddy County, NM (NAD-27)  
 Site: Corral Canyon 5-32 Fed  
 Well: #107H  
 Wellbore: OH  
 Design: PERMIT

PROJECT DETAILS: Eddy 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

WELL DETAILS: #107H

Rig Name:	Ref GL @ 2941.00usft				
Ground Level:	2941.00				
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	418934.50	603169.70	32.1513287	-103.9999743

DESIGN TARGET DETAILS

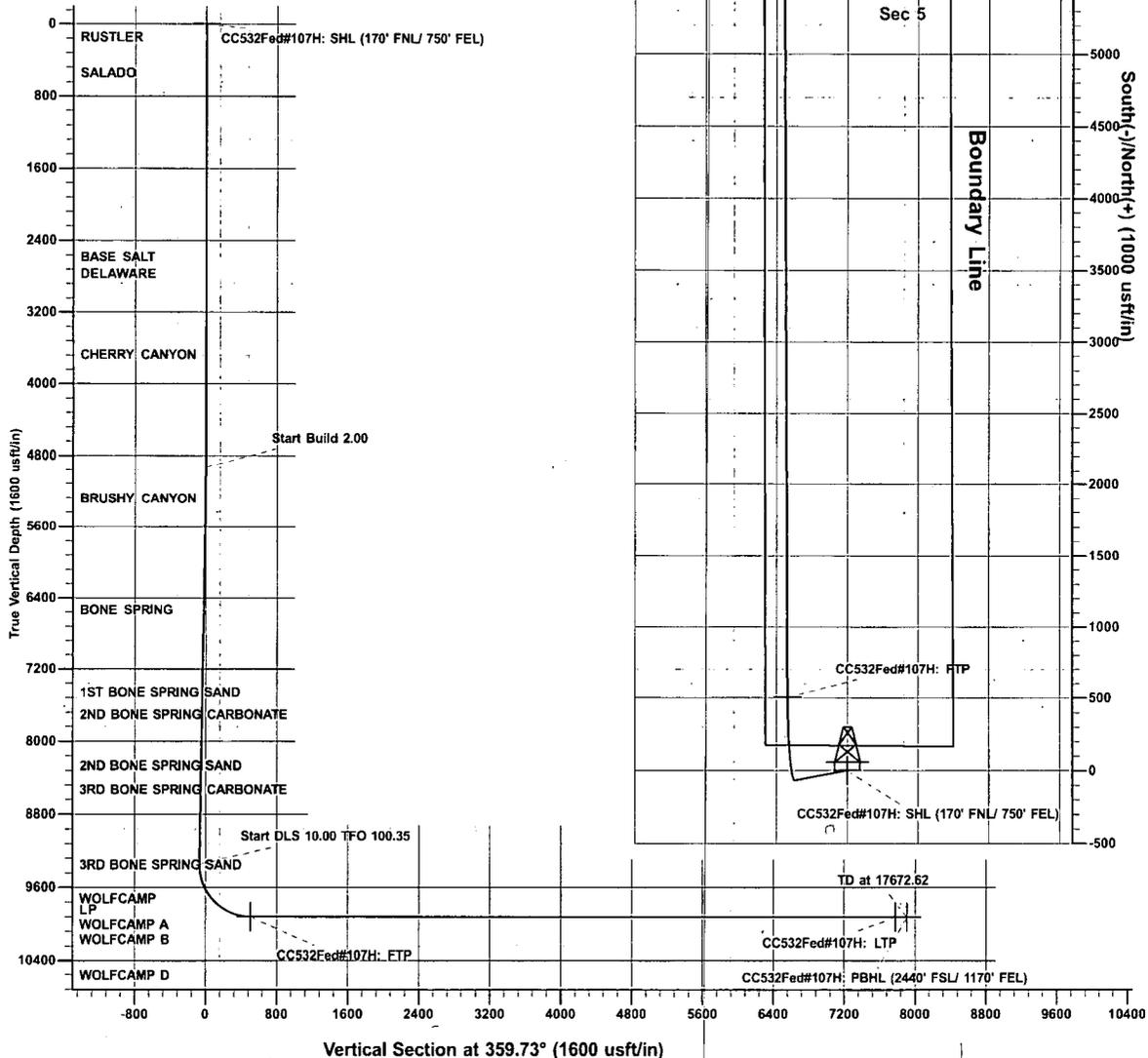
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
CC532Fed#107H: SHL (170' FNL/ 750' FEL)	0.00	0.00	0.00	418934.50	603169.70	32.1513287	-103.9999743
CC532Fed#107H: FTP	9925.00	503.10	-422.20	419437.60	602747.50	32.1527153	-104.0013335
CC532Fed#107H: LTP	9925.00	7775.20	-456.50	426709.70	602713.20	32.1727064	-104.0013716
CC532Fed#107H: PBHL (2440' FSL/ 1170' FEL)	9925.00	7905.20	-457.00	426839.70	602712.70	32.1730638	-104.0013721

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	4920.00	0.00	0.00	4920.00	0.00	0.00	0.00	0.00	0.00
3	5169.93	5.00	259.34	5169.62	-2.01	-10.71	2.00	259.34	-1.96
4	9361.44	5.00	259.34	9345.18	-49.55	-369.62	0.00	0.00	-67.80
5	10270.44	90.00	359.73	9825.00	503.10	-422.20	10.00	100.35	505.08
6	17542.62	90.00	359.73	9925.00	7775.20	-456.39	0.00	0.00	7777.26
7	17672.62	90.00	359.73	9925.00	7905.20	-457.00	0.00	0.00	7907.27

FORMATION TOP DETAILS

TVDPath	Formation
228.00	RUSTLER
627.00	SALADO
2667.00	BASE SALT
2853.00	DELAWARE
3758.00	CHERRY CANYON
5371.00	BRUSHY CANYON
6619.00	BONE SPRING
7547.00	1ST BONE SPRING SAND
7790.00	2ND BONE SPRING CARBONATE
8350.00	2ND BONE SPRING SAND
8607.00	3RD BONE SPRING CARBONATE
9435.00	3RD BONE SPRING SAND
9806.00	WOLFCAMP
9925.00	LP



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 Protype are at the sole risk and responsibility of the user.

Plan: PERMIT (#107H/OH)

Created By: Matthew May Date: 9:17, May 20 2019

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name CORRAL CANYON 5-32 FED	<sup>6</sup> Well Number 107H
<sup>7</sup> OGRID No. 005380	<sup>8</sup> Operator Name XTO ENERGY, INC.	<sup>9</sup> Elevation 2,941'

<sup>10</sup> Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	8	25 S	29 E		170	NORTH	750	EAST	EDDY

<sup>11</sup> Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	32	24 S	29 E		2,440	SOUTH	1,170	EAST	EDDY

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

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

The diagram shows a well location in Section 32, Township 25S, Range 29E. It includes surface location (S.L.), bottom hole location (B.H.L.), first take point (F.T.P.), and last take point (L.T.P.). Grid bearings and distances are provided for the well path.

**GEODETIC COORDINATES**  
NAD 27 NME  
SURFACE LOCATION  
Y= 418,934.5  
X= 603,169.7  
LAT.= 32.151329°N  
LONG.= 103.999974°W

**GEODETIC COORDINATES**  
NAD 83 NME  
SURFACE LOCATION  
Y= 418,993.0  
X= 644,353.8  
LAT.= 32.151452°N  
LONG.= 104.000462°W

**FIRST TAKE POINT**  
NAD 27 NME  
Y= 419,437.6  
X= 602,747.5  
LAT.= 32.152715°N  
LONG.= 104.001333°W

**FIRST TAKE POINT**  
NAD 83 NME  
Y= 419,495.1  
X= 643,931.6  
LAT.= 32.152839°N  
LONG.= 104.001822°W

**CORNER COORDINATES TABLE**  
NAD 27 NME  
A - Y= 427,054.7 N, X= 603,881.9 E  
B - Y= 427,056.8 N, X= 602,565.7 E  
C - Y= 424,400.2 N, X= 603,891.7 E  
D - Y= 424,399.7 N, X= 602,578.5 E  
E - Y= 421,752.6 N, X= 603,906.0 E  
F - Y= 421,758.9 N, X= 602,585.1 E  
G - Y= 419,098.9 N, X= 603,919.2 E  
H - Y= 419,108.8 N, X= 602,591.0 E

**CORNER COORDINATES TABLE**  
NAD 83 NME  
A - Y= 427,113.4 N, X= 645,065.8 E  
B - Y= 427,115.5 N, X= 643,749.6 E  
C - Y= 424,458.8 N, X= 645,075.7 E  
D - Y= 424,458.3 N, X= 643,762.5 E  
E - Y= 421,811.2 N, X= 645,090.1 E  
F - Y= 421,817.5 N, X= 643,769.1 E  
G - Y= 419,157.4 N, X= 645,103.3 E  
H - Y= 419,167.3 N, X= 643,775.1 E

**LAST TAKE POINT**  
NAD 27 NME  
Y= 426,709.7  
X= 602,713.2  
LAT.= 32.172706°N  
LONG.= 104.001372°W

**LAST TAKE POINT**  
NAD 83 NME  
Y= 426,768.4  
X= 643,897.1  
LAT.= 32.172830°N  
LONG.= 104.001861°W

**BOTTOM HOLE LOCATION**  
NAD 27 NME  
Y= 426,839.7  
X= 602,712.7  
LAT.= 32.173064°N  
LONG.= 104.001372°W

**BOTTOM HOLE LOCATION**  
NAD 83 NME  
Y= 426,898.4  
X= 643,896.6  
LAT.= 32.173187°N  
LONG.= 104.001861°W

**<sup>17</sup> OPERATOR CERTIFICATION**  
*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.*

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**<sup>18</sup> SURVEYOR CERTIFICATION**  
*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

4-22-2019  
Date of Survey \_\_\_\_\_

Signature and Seal of Professional Surveyor: \_\_\_\_\_

**PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT**

MARK DILLON HARP 23786  
Certificate Number \_\_\_\_\_ AI 2017091551





Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #107H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 2941.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 2941.00usft
<b>Site:</b>	Corral Canyon 5-32 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#107H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

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

<b>Site</b>	Corral Canyon 5-32 Fed				
<b>Site Position:</b>	<b>Northing:</b>	418,934.50 usft	<b>Latitude:</b>	32.1513287	
<b>From:</b> Map	<b>Easting:</b>	603,169.70 usft	<b>Longitude:</b>	-103.9999743	
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.18 °

<b>Well</b>	#107H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	418,934.50 usft	<b>Latitude:</b>	32.1513287
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	603,169.70 usft	<b>Longitude:</b>	-103.9999743
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	2,941.00 usft

<b>Wellbore</b>	OH			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	05/19/19	6.94	59.90	47,656

<b>Design</b>	PERMIT			
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<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	359.73

<b>Plan Sections</b>										
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	
4,920.00	0.00	0.00	4,920.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,169.93	5.00	259.34	5,169.62	-2.01	-10.71	2.00	2.00	0.00	259.34	
9,361.44	5.00	259.34	9,345.18	-69.55	-369.62	0.00	0.00	0.00	0.00	
10,270.44	90.00	359.73	9,925.00	503.10	-422.20	10.00	9.35	11.04	100.35	CC532Fed#107H: I
17,542.62	90.00	359.73	9,925.00	7,775.20	-456.39	0.00	0.00	0.00	0.00	CC532Fed#107H: I
17,672.62	90.00	359.73	9,925.00	7,905.20	-457.00	0.00	0.00	0.00	0.00	CC532Fed#107H: I



Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #107H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 2941.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 2941.00usft
<b>Site:</b>	Corral Canyon 5-32 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#107H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
228.00	0.00	0.00	228.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>RÜSTLER</b>									
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
627.00	0.00	0.00	627.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>SALADO</b>									
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
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
1,300.00	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	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,667.00	0.00	0.00	2,667.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>BASE SALT</b>									
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,853.00	0.00	0.00	2,853.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>DELAWARE</b>									
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,758.00	0.00	0.00	3,758.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>CHERRY CANYON</b>									
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #107H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 2941.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 2941.00usft
<b>Site:</b>	Corral Canyon 5-32 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#107H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,920.00	0.00	0.00	4,920.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	1.60	259.34	4,999.99	-0.21	-1.10	-0.20	2.00	2.00	0.00	0.00
5,100.00	3.60	259.34	5,099.88	-1.05	-5.56	-1.02	2.00	2.00	0.00	0.00
5,169.93	5.00	259.34	5,169.62	-2.01	-10.71	-1.96	2.00	2.00	0.00	0.00
5,200.00	5.00	259.34	5,199.57	-2.50	-13.28	-2.44	0.00	0.00	0.00	0.00
5,300.00	5.00	259.34	5,299.19	-4.11	-21.85	-4.01	0.00	0.00	0.00	0.00
5,372.09	5.00	259.34	5,371.00	-5.27	-28.02	-5.14	0.00	0.00	0.00	0.00
<b>BRUSHY CANYON</b>										
5,400.00	5.00	259.34	5,398.81	-5.72	-30.41	-5.58	0.00	0.00	0.00	0.00
5,500.00	5.00	259.34	5,498.43	-7.33	-38.97	-7.15	0.00	0.00	0.00	0.00
5,600.00	5.00	259.34	5,598.05	-8.94	-47.53	-8.72	0.00	0.00	0.00	0.00
5,700.00	5.00	259.34	5,697.67	-10.55	-56.10	-10.29	0.00	0.00	0.00	0.00
5,800.00	5.00	259.34	5,797.29	-12.17	-64.66	-11.86	0.00	0.00	0.00	0.00
5,900.00	5.00	259.34	5,896.91	-13.78	-73.22	-13.43	0.00	0.00	0.00	0.00
6,000.00	5.00	259.34	5,996.53	-15.39	-81.79	-15.00	0.00	0.00	0.00	0.00
6,100.00	5.00	259.34	6,096.15	-17.00	-90.35	-16.57	0.00	0.00	0.00	0.00
6,200.00	5.00	259.34	6,195.77	-18.61	-98.91	-18.14	0.00	0.00	0.00	0.00
6,300.00	5.00	259.34	6,295.39	-20.22	-107.47	-19.72	0.00	0.00	0.00	0.00
6,400.00	5.00	259.34	6,395.00	-21.83	-116.04	-21.29	0.00	0.00	0.00	0.00
6,500.00	5.00	259.34	6,494.62	-23.44	-124.60	-22.86	0.00	0.00	0.00	0.00
6,600.00	5.00	259.34	6,594.24	-25.06	-133.16	-24.43	0.00	0.00	0.00	0.00
6,624.85	5.00	259.34	6,619.00	-25.46	-135.29	-24.82	0.00	0.00	0.00	0.00
<b>BONE SPRING</b>										
6,700.00	5.00	259.34	6,693.86	-26.67	-141.73	-26.00	0.00	0.00	0.00	0.00
6,800.00	5.00	259.34	6,793.48	-28.28	-150.29	-27.57	0.00	0.00	0.00	0.00
6,900.00	5.00	259.34	6,893.10	-29.89	-158.85	-29.14	0.00	0.00	0.00	0.00
7,000.00	5.00	259.34	6,992.72	-31.50	-167.42	-30.71	0.00	0.00	0.00	0.00
7,100.00	5.00	259.34	7,092.34	-33.11	-175.98	-32.28	0.00	0.00	0.00	0.00
7,200.00	5.00	259.34	7,191.96	-34.72	-184.54	-33.85	0.00	0.00	0.00	0.00
7,300.00	5.00	259.34	7,291.58	-36.33	-193.10	-35.42	0.00	0.00	0.00	0.00
7,400.00	5.00	259.34	7,391.20	-37.94	-201.67	-36.99	0.00	0.00	0.00	0.00
7,500.00	5.00	259.34	7,490.82	-39.56	-210.23	-38.56	0.00	0.00	0.00	0.00
7,556.39	5.00	259.34	7,547.00	-40.46	-215.06	-39.45	0.00	0.00	0.00	0.00
<b>1ST BONE SPRING SAND</b>										
7,600.00	5.00	259.34	7,590.44	-41.17	-218.79	-40.14	0.00	0.00	0.00	0.00
7,700.00	5.00	259.34	7,690.06	-42.78	-227.36	-41.71	0.00	0.00	0.00	0.00
7,800.00	5.00	259.34	7,789.68	-44.39	-235.92	-43.28	0.00	0.00	0.00	0.00
7,800.32	5.00	259.34	7,790.00	-44.39	-235.95	-43.28	0.00	0.00	0.00	0.00
<b>2ND BONE SPRING CARBONATE</b>										
7,900.00	5.00	259.34	7,889.30	-46.00	-244.48	-44.85	0.00	0.00	0.00	0.00
8,000.00	5.00	259.34	7,988.92	-47.61	-253.05	-46.42	0.00	0.00	0.00	0.00
8,100.00	5.00	259.34	8,088.54	-49.22	-261.61	-47.99	0.00	0.00	0.00	0.00
8,200.00	5.00	259.34	8,188.16	-50.83	-270.17	-49.56	0.00	0.00	0.00	0.00
8,300.00	5.00	259.34	8,287.78	-52.44	-278.73	-51.13	0.00	0.00	0.00	0.00
8,362.46	5.00	259.34	8,350.00	-53.45	-284.08	-52.11	0.00	0.00	0.00	0.00
<b>2ND BONE SPRING SAND</b>										
8,400.00	5.00	259.34	8,387.40	-54.06	-287.30	-52.70	0.00	0.00	0.00	0.00



Planning Report

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<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 2941.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 2941.00usft
<b>Site:</b>	Corral Canyon 5-32 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#107H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
8,500.00	5.00	259.34	8,487.02	-55.67	-295.86	-54.27	0.00	0.00	0.00
8,600.00	5.00	259.34	8,586.64	-57.28	-304.42	-55.84	0.00	0.00	0.00
8,620.44	5.00	259.34	8,607.00	-57.61	-306.17	-56.16	0.00	0.00	0.00
<b>3RD BONE SPRING CARBONATE</b>									
8,700.00	5.00	259.34	8,686.26	-58.89	-312.99	-57.41	0.00	0.00	0.00
8,800.00	5.00	259.34	8,785.88	-60.50	-321.55	-58.98	0.00	0.00	0.00
8,900.00	5.00	259.34	8,885.50	-62.11	-330.11	-60.56	0.00	0.00	0.00
9,000.00	5.00	259.34	8,985.12	-63.72	-338.67	-62.13	0.00	0.00	0.00
9,100.00	5.00	259.34	9,084.74	-65.33	-347.24	-63.70	0.00	0.00	0.00
9,200.00	5.00	259.34	9,184.36	-66.95	-355.80	-65.27	0.00	0.00	0.00
9,300.00	5.00	259.34	9,283.98	-68.56	-364.36	-66.84	0.00	0.00	0.00
9,361.44	5.00	259.34	9,345.18	-69.55	-369.62	-67.80	0.00	0.00	0.00
9,400.00	5.74	300.79	9,383.59	-68.87	-372.93	-67.11	10.00	1.91	107.50
9,450.00	9.34	328.21	9,433.16	-64.14	-377.22	-62.36	10.00	7.22	54.83
9,451.86	9.50	328.80	9,435.00	-63.88	-377.38	-62.10	10.00	8.52	31.98
<b>3RD BONE SPRING SAND</b>									
9,500.00	13.84	339.30	9,482.13	-55.09	-381.47	-53.29	10.00	9.01	21.80
9,550.00	18.60	344.92	9,530.13	-41.79	-385.67	-39.97	10.00	9.51	11.24
9,600.00	23.45	348.29	9,576.79	-24.34	-389.76	-22.50	10.00	9.71	6.75
9,650.00	28.35	350.56	9,621.76	-2.87	-393.73	-1.02	10.00	9.80	4.53
9,700.00	33.28	352.20	9,664.69	22.45	-397.54	24.32	10.00	9.86	3.29
9,750.00	38.23	353.46	9,705.25	51.42	-401.17	53.31	10.00	9.89	2.52
9,800.00	43.18	354.47	9,743.15	83.84	-404.58	85.75	10.00	9.91	2.02
9,850.00	48.15	355.31	9,778.08	119.45	-407.76	121.37	10.00	9.93	1.68
9,893.74	52.49	355.94	9,806.00	153.01	-410.32	154.94	10.00	9.94	1.45
<b>WOLFCAMP</b>									
9,900.00	53.11	356.03	9,809.79	157.98	-410.67	159.92	10.00	9.94	1.35
9,950.00	58.09	356.66	9,838.02	199.14	-413.29	201.09	10.00	9.95	1.26
10,000.00	63.06	357.23	9,862.58	242.62	-415.61	244.57	10.00	9.95	1.13
10,050.00	68.04	357.74	9,883.27	288.08	-417.60	290.04	10.00	9.96	1.04
10,100.00	73.02	358.23	9,899.93	335.17	-419.25	337.14	10.00	9.96	0.97
10,150.00	78.00	358.68	9,912.43	383.55	-420.56	385.53	10.00	9.96	0.92
10,200.00	82.98	359.12	9,920.69	432.84	-421.50	434.82	10.00	9.96	0.88
10,250.00	87.96	359.56	9,924.64	482.66	-422.07	484.65	10.00	9.96	0.86
10,270.44	90.00	359.73	9,925.00	503.10	-422.20	505.08	10.00	9.96	0.86
<b>LP</b>									
10,300.00	90.00	359.73	9,925.00	532.66	-422.34	534.64	0.00	0.00	0.00
10,400.00	90.00	359.73	9,925.00	632.66	-422.81	634.64	0.00	0.00	0.00
10,500.00	90.00	359.73	9,925.00	732.65	-423.28	734.64	0.00	0.00	0.00
10,600.00	90.00	359.73	9,925.00	832.65	-423.75	834.64	0.00	0.00	0.00
10,700.00	90.00	359.73	9,925.00	932.65	-424.22	934.64	0.00	0.00	0.00
10,800.00	90.00	359.73	9,925.00	1,032.65	-424.69	1,034.64	0.00	0.00	0.00
10,900.00	90.00	359.73	9,925.00	1,132.65	-425.16	1,134.64	0.00	0.00	0.00
11,000.00	90.00	359.73	9,925.00	1,232.65	-425.63	1,234.64	0.00	0.00	0.00
11,100.00	90.00	359.73	9,925.00	1,332.65	-426.10	1,334.64	0.00	0.00	0.00
11,200.00	90.00	359.73	9,925.00	1,432.65	-426.57	1,434.64	0.00	0.00	0.00
11,300.00	90.00	359.73	9,925.00	1,532.65	-427.04	1,534.64	0.00	0.00	0.00
11,400.00	90.00	359.73	9,925.00	1,632.64	-427.51	1,634.64	0.00	0.00	0.00
11,500.00	90.00	359.73	9,925.00	1,732.64	-427.98	1,734.64	0.00	0.00	0.00
11,600.00	90.00	359.73	9,925.00	1,832.64	-428.45	1,834.64	0.00	0.00	0.00
11,700.00	90.00	359.73	9,925.00	1,932.64	-428.92	1,934.64	0.00	0.00	0.00
11,800.00	90.00	359.73	9,925.00	2,032.64	-429.39	2,034.64	0.00	0.00	0.00
11,900.00	90.00	359.73	9,925.00	2,132.64	-429.86	2,134.64	0.00	0.00	0.00



Planning Report

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<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 2941.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 2941.00usft
<b>Site:</b>	Corral Canyon 5-32 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#107H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
12,000.00	90.00	359.73	9,925.00	2,232.64	-430.33	2,234.64	0.00	0.00	0.00
12,100.00	90.00	359.73	9,925.00	2,332.64	-430.80	2,334.64	0.00	0.00	0.00
12,200.00	90.00	359.73	9,925.00	2,432.64	-431.27	2,434.64	0.00	0.00	0.00
12,300.00	90.00	359.73	9,925.00	2,532.63	-431.74	2,534.64	0.00	0.00	0.00
12,400.00	90.00	359.73	9,925.00	2,632.63	-432.21	2,634.64	0.00	0.00	0.00
12,500.00	90.00	359.73	9,925.00	2,732.63	-432.68	2,734.64	0.00	0.00	0.00
12,600.00	90.00	359.73	9,925.00	2,832.63	-433.15	2,834.64	0.00	0.00	0.00
12,700.00	90.00	359.73	9,925.00	2,932.63	-433.62	2,934.64	0.00	0.00	0.00
12,800.00	90.00	359.73	9,925.00	3,032.63	-434.09	3,034.64	0.00	0.00	0.00
12,900.00	90.00	359.73	9,925.00	3,132.63	-434.56	3,134.64	0.00	0.00	0.00
13,000.00	90.00	359.73	9,925.00	3,232.63	-435.03	3,234.64	0.00	0.00	0.00
13,100.00	90.00	359.73	9,925.00	3,332.63	-435.50	3,334.64	0.00	0.00	0.00
13,200.00	90.00	359.73	9,925.00	3,432.63	-435.97	3,434.64	0.00	0.00	0.00
13,300.00	90.00	359.73	9,925.00	3,532.62	-436.44	3,534.64	0.00	0.00	0.00
13,400.00	90.00	359.73	9,925.00	3,632.62	-436.91	3,634.64	0.00	0.00	0.00
13,500.00	90.00	359.73	9,925.00	3,732.62	-437.38	3,734.64	0.00	0.00	0.00
13,600.00	90.00	359.73	9,925.00	3,832.62	-437.85	3,834.64	0.00	0.00	0.00
13,700.00	90.00	359.73	9,925.00	3,932.62	-438.32	3,934.64	0.00	0.00	0.00
13,800.00	90.00	359.73	9,925.00	4,032.62	-438.79	4,034.64	0.00	0.00	0.00
13,900.00	90.00	359.73	9,925.00	4,132.62	-439.26	4,134.64	0.00	0.00	0.00
14,000.00	90.00	359.73	9,925.00	4,232.62	-439.73	4,234.64	0.00	0.00	0.00
14,100.00	90.00	359.73	9,925.00	4,332.62	-440.20	4,334.64	0.00	0.00	0.00
14,200.00	90.00	359.73	9,925.00	4,432.61	-440.67	4,434.64	0.00	0.00	0.00
14,300.00	90.00	359.73	9,925.00	4,532.61	-441.14	4,534.64	0.00	0.00	0.00
14,400.00	90.00	359.73	9,925.00	4,632.61	-441.61	4,634.64	0.00	0.00	0.00
14,500.00	90.00	359.73	9,925.00	4,732.61	-442.08	4,734.64	0.00	0.00	0.00
14,600.00	90.00	359.73	9,925.00	4,832.61	-442.55	4,834.64	0.00	0.00	0.00
14,700.00	90.00	359.73	9,925.00	4,932.61	-443.02	4,934.64	0.00	0.00	0.00
14,800.00	90.00	359.73	9,925.00	5,032.61	-443.49	5,034.64	0.00	0.00	0.00
14,900.00	90.00	359.73	9,925.00	5,132.61	-443.97	5,134.64	0.00	0.00	0.00
15,000.00	90.00	359.73	9,925.00	5,232.61	-444.44	5,234.64	0.00	0.00	0.00
15,100.00	90.00	359.73	9,925.00	5,332.60	-444.91	5,334.64	0.00	0.00	0.00
15,200.00	90.00	359.73	9,925.00	5,432.60	-445.38	5,434.64	0.00	0.00	0.00
15,300.00	90.00	359.73	9,925.00	5,532.60	-445.85	5,534.64	0.00	0.00	0.00
15,400.00	90.00	359.73	9,925.00	5,632.60	-446.32	5,634.64	0.00	0.00	0.00
15,500.00	90.00	359.73	9,925.00	5,732.60	-446.79	5,734.64	0.00	0.00	0.00
15,600.00	90.00	359.73	9,925.00	5,832.60	-447.26	5,834.64	0.00	0.00	0.00
15,700.00	90.00	359.73	9,925.00	5,932.60	-447.73	5,934.64	0.00	0.00	0.00
15,800.00	90.00	359.73	9,925.00	6,032.60	-448.20	6,034.64	0.00	0.00	0.00
15,900.00	90.00	359.73	9,925.00	6,132.60	-448.67	6,134.64	0.00	0.00	0.00
16,000.00	90.00	359.73	9,925.00	6,232.59	-449.14	6,234.64	0.00	0.00	0.00
16,100.00	90.00	359.73	9,925.00	6,332.59	-449.61	6,334.64	0.00	0.00	0.00
16,200.00	90.00	359.73	9,925.00	6,432.59	-450.08	6,434.64	0.00	0.00	0.00
16,300.00	90.00	359.73	9,925.00	6,532.59	-450.55	6,534.64	0.00	0.00	0.00
16,400.00	90.00	359.73	9,925.00	6,632.59	-451.02	6,634.64	0.00	0.00	0.00
16,500.00	90.00	359.73	9,925.00	6,732.59	-451.49	6,734.64	0.00	0.00	0.00
16,600.00	90.00	359.73	9,925.00	6,832.59	-451.96	6,834.64	0.00	0.00	0.00
16,700.00	90.00	359.73	9,925.00	6,932.59	-452.43	6,934.64	0.00	0.00	0.00
16,800.00	90.00	359.73	9,925.00	7,032.59	-452.90	7,034.64	0.00	0.00	0.00
16,900.00	90.00	359.73	9,925.00	7,132.58	-453.37	7,134.64	0.00	0.00	0.00
17,000.00	90.00	359.73	9,925.00	7,232.58	-453.84	7,234.64	0.00	0.00	0.00
17,100.00	90.00	359.73	9,925.00	7,332.58	-454.31	7,334.64	0.00	0.00	0.00
17,200.00	90.00	359.73	9,925.00	7,432.58	-454.78	7,434.64	0.00	0.00	0.00
17,300.00	90.00	359.73	9,925.00	7,532.58	-455.25	7,534.64	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #107H
Company:	XTO Energy	TVD Reference:	Ref GL @ 2941.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	Ref GL @ 2941.00usft
Site:	Corral Canyon 5-32 Fed	North Reference:	Grid
Well:	#107H	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)	
17,400.00	90.00	359.73	9,925.00	7,632.58	-455.72	7,634.64	0.00	0.00	0.00	
17,500.00	90.00	359.73	9,925.00	7,732.58	-456.19	7,734.64	0.00	0.00	0.00	
17,542.62	90.00	359.73	9,925.00	7,775.20	-456.39	7,777.27	0.00	0.00	0.00	
17,600.00	90.00	359.73	9,925.00	7,832.58	-456.66	7,834.64	0.00	0.00	0.00	
17,672.62	90.00	359.73	9,925.00	7,905.20	-457.00	7,907.27	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
CC532Fed#107H: SH - hit/miss target - Shape - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	418,934.50	603,169.70	32.1513287	-103.9999743	
CC532Fed#107H: FT - plan hits target center - Point	0.00	0.00	9,925.00	503.10	-422.20	419,437.60	602,747.50	32.1527153	-104.0013335	
CC532Fed#107H: LTI - plan misses target center by 0.11usft at 17542.62usft MD (9925.00 TVD, 7775.20 N, -456.39 E) - Point	0.00	0.00	9,925.00	7,775.20	-456.50	426,709.70	602,713.20	32.1727064	-104.0013718	
CC532Fed#107H: PB - plan hits target center - Point	0.00	0.00	9,925.00	7,905.20	-457.00	426,839.70	602,712.70	32.1730638	-104.0013721	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
228.00	228.00	RUSTLER				
627.00	627.00	SALADO				
2,667.00	2,667.00	BASE SALT				
2,853.00	2,853.00	DELAWARE				
3,758.00	3,758.00	CHERRY CANYON				
5,372.09	5,371.00	BRUSHY CANYON				
6,624.85	6,619.00	BONE SPRING				
7,556.39	7,547.00	1ST BONE SPRING SAND				
7,800.32	7,790.00	2ND BONE SPRING CARBONATE				
8,362.46	8,350.00	2ND BONE SPRING SAND				
8,620.44	8,607.00	3RD BONE SPRING CARBONATE				
9,451.86	9,435.00	3RD BONE SPRING SAND				
9,893.74	9,806.00	WOLFCAMP				
10,270.44	9,925.00	LP				