OCD Received 11/23/2020

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.
NMLC0063875A

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.
NMNM 071016X

8. Lease Name and Well No.
POKER LAKE UNIT 26 BD
101H

2. Name of Operator
XTO PERMIAN OPERATING LLC

9. API Well No.30 015 47718

3a. Address
6401 Holiday Hill Road, Bldg 5, Midland, TX 79707

3b. Phone No. *(include area code)*
(432) 682-8873

10. Field and Pool, or Exploratory
PURPLE SAGE WOLFCAMP GAS

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWNW / 2200 FNL / 495 FWL / LAT 32.102479 / LONG -103.858827
At proposed prod. zone SWSW / 200 FSL / 638 FWL / LAT 32.079752 / LONG -103.858465

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 26/T25S/R30E/NMP

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

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)
330 feet

16. No of acres in lease
1920

17. Spacing Unit dedicated to this well
480.0

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

19. Proposed Depth
11179 feet / 18962 feet

20. BLM/BIA Bond No. in file
FED: COB000050

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3304 feet

22. Approximate date work will start*
08/01/2020

23. Estimated duration
45 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)*
Kelly Kardos / Ph: (432) 682-8873

Date
10/22/2019

Title
Regulatory Coordinator

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Christopher Walls / Ph: (575) 234-2234

Date
05/19/2020

Title
Petroleum Engineer

Office
Carlsbad Field Office

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

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

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

- Will require a directional survey with the C-104

Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

SL

APPROVED WITH CONDITIONS

KP 11/30/2020 GEO Review

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 05/19/2020

Entered - KMS NMOCD

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

[1] API Number	[2] Pool Code	[3] Pool Name
30-015 47718	98220	PURPLE SAGE; WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
329859	POKER LAKE UNIT 26 BD	101H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,304'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	26	25 S	30 E		2,200	NORTH	495	WEST	EDDY

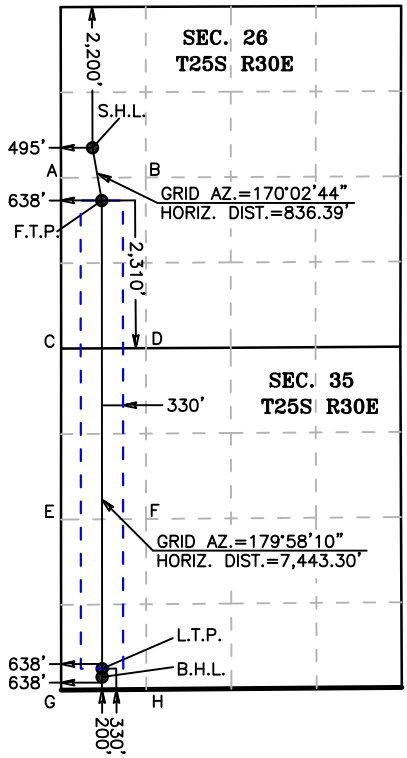
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	35	25 S	30 E		200	SOUTH	638	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
480			

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.

[16]



GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 401,341.7
X= 688,265.6
LAT.= 32.102479°N
LONG.= 103.858827°W

LAST TAKE POINT
NAD 83 NME
Y= 393,204.6
X= 688,413.9
LAT.= 32.080109°N
LONG.= 103.858464°W

FIRST TAKE POINT
NAD 83 NME
Y= 400,517.9
X= 688,410.2
LAT.= 32.100213°N
LONG.= 103.858372°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 393,074.6
X= 688,414.1
LAT.= 32.079752°N
LONG.= 103.858465°W

CORNER COORDINATES TABLE
NAD 83 NME
A – Y= 400,871.2 N, X= 687,771.6 E
B – Y= 400,877.5 N, X= 689,098.2 E
C – Y= 398,204.6 N, X= 687,775.9 E
D – Y= 398,211.5 N, X= 689,099.6 E
E – Y= 395,532.5 N, X= 687,772.0 E
F – Y= 395,542.5 N, X= 689,100.7 E
G – Y= 392,869.6 N, X= 687,776.5 E
H – Y= 392,880.1 N, X= 689,105.9 E

CORNER COORDINATES TABLE
NAD 27 NME
A – Y= 400,813.2 N, X= 646,586.3 E
B – Y= 400,819.5 N, X= 647,912.9 E
C – Y= 398,146.7 N, X= 646,590.5 E
D – Y= 398,153.6 N, X= 647,914.2 E
E – Y= 395,474.6 N, X= 646,586.6 E
F – Y= 395,484.7 N, X= 647,915.2 E
G – Y= 392,811.8 N, X= 646,591.0 E
H – Y= 392,822.3 N, X= 647,920.3 E

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 401,283.7
X= 647,080.3
LAT.= 32.102354°N
LONG.= 103.858346°W

LAST TAKE POINT
NAD 27 NME
Y= 393,146.8
X= 647,228.4
LAT.= 32.079985°N
LONG.= 103.857984°W

FIRST TAKE POINT
NAD 27 NME
Y= 400,459.9
X= 647,224.9
LAT.= 32.100088°N
LONG.= 103.857891°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 393,016.8
X= 647,228.6
LAT.= 32.079627°N
LONG.= 103.857985°W

[17] 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.

Kelly Kardos — 10/22/19
Signature — Date

Kelly Kardos
Printed Name

kelly_kardos@xtoenergy.com
E-mail Address

[18] 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.

07-29-2019
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number — AR — 2019030622

Intent [ ] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
XTO PERMIAN OPERATING, LLC	Poker Lake Unit 26 BD	101H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
E	26	25S	30E		2200	FNL	495	FWL	EDDY

Latitude	Longitude	NAD
32.102479	-103.858827	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
L	26	25S	30E		2310	FSL	638	FWL	EDDY

Latitude	Longitude	NAD
32.100213	-103.858372	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	35	25S	30E		330	FSL	638	FWL	EDDY

Latitude	Longitude	NAD
32.080109	-103.858464	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
XTO PERMIAN OPERATING, LLC		

KZ 06/29/2018

Additional Operator Remarks

Location of Well

0. SHL: SWNW / 2200 FNL / 495 FWL / TWSP: 25S / RANGE: 30E / SECTION: 26 / LAT: 32.102479 / LONG: -103.858827 (TVD: 0 feet, MD: 0 feet)

PPP: SWNW / 2310 FSL / 638 FWL / TWSP: 25S / RANGE: 30E / SECTION: 26 / LAT: 32.100213 / LONG: -103.858372 (TVD: 11179 feet, MD: 11519 feet)

BHL: SWSW / 200 FSL / 638 FWL / TWSP: 25S / RANGE: 30E / SECTION: 35 / LAT: 32.079752 / LONG: -103.858465 (TVD: 11179 feet, MD: 18962 feet)

BLM Point of Contact

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: (575) 234-5934

Email: pperez@blm.gov

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 26 BD 101H
LOCATION:	Sec 26-25S-30E-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 1075 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 **7** 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 **7** inch production casing is:

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

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:

    - Cement should tie-back **100 feet** into the previous casing. 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. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3,500 psi.**

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

e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months.

GENERAL REQUIREMENTS

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

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

☒ 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: 10400049902 **Submission Date:** 10/22/2019

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 26 BD **Well Number:** 101H

Well Type: CONVENTIONAL GAS 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
568525	PERMIAN	3304	0	0	OTHER : Quaternary	NONE	N
568516	RUSTLER	2354	950	950	SILTSTONE	USEABLE WATER	N
568517	TOP SALT	2204	1100	1100	SALT	OTHER : Produced Water	N
568518	BASE OF SALT	-554	3858	3858	SALT	OTHER : Produced Water	N
568514	DELAWARE	-646	3950	3950	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
568515	BONE SPRING	-4468	7772	7772	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
568533	WOLFCAMP	-7832	11136	11136	SHALE	NATURAL GAS, OIL, OTHER : Produced Water	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 11179

Equipment: Once the permanent WH is installed on the 13-3/8 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8 minimum 5M Hydril and a 13-5/8 minimum 5M 3-Ram BOP. MASP should not exceed 4235 psi.
Requesting Variance? YES

Variance request: · XTO requests to not utilize centralizers in the curve and lateral · 9-5/8" Collapse analyzed using 50% evacuation based on regional experience. · 4-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35 · Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less Permanent Wellhead – GE RSH Multibowl System A. Starting Head: 13-5/8" 10M top flange x 13-3/8" SOW bottom B. Tubing Head: 13-5/8" 10M bottom flange x 7-1/16" 15M top flange A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors. XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set 7" casing and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per GE recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.
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 3/8", 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nippling up on the 7-0", 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.

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 26 BD **Well Number:** 101H

Choke Diagram Attachment:

PLU_26_BD_5MCM_20191014092514.pdf

BOP Diagram Attachment:

PLU_26_BD_5MBOP_20191014092546.pdf

PLU_26_BD_Multi_20191014092837.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	1075	0	1075	3304	2229	1075	J-55	54.5	ST&C	2.32	2.27	BUOY	8.77	DRY	8.77
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3880	0	3880		-576	3880	J-55	40	ST&C	2.11	1.13	DRY	2.91	DRY	2.91
3	PRODUCTION	8.75	7.0	NEW	API	N	0	11625	0	11625	3500	-8321	11625	P-110	32	BUTT	1.78	1.31	DRY	2.41	DRY	2.41
4	LINER	6	4.5	NEW	API	N	10590	18962	10590	11179	-7279	-7875	8372	P-110	13.5	BUTT	1.6	1.31	DRY	2.21	DRY	2.21

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_101H_Csg_20191022071121.pdf

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 26 BD **Well Number:** 101H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_101H_Csg_20191022071142.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_101H_Csg_20191022071204.pdf

Casing ID: 4 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_26_BD_101H_Csg_20191022071236.pdf

Section 4 - Cement

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 26 BD **Well Number:** 101H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1075	570	1.87	12.9	1065.9	100	EconoCem-HLTRRC	none
SURFACE	Tail				300	1.35	14.8	405	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead		0	3880	1030	1.87	12.9	1926.1	100	EconoCem-HLTRRC	none
INTERMEDIATE	Tail				360	1.35	14.8	486	100	Halcem-C	2% CaCl
PRODUCTION	Lead		0	11625	1100	1.88	12.9	2068	100	Halcem-C	2% CaCl
PRODUCTION	Tail				220	1.33	14.8	292.6	100	Halcem-C	2% CaCl
LINER	Lead		10590	18962	580	1.61	13.2	933.8	30	VersaCem	none

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
10590	11179	OIL-BASED MUD	11.2	11.5							A mud test will be performed every 24 hours to determine:

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 26 BD **Well Number:** 101H

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
											density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system
3880	11625	OTHER : FW / Cut Brine	8.7	10							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system
0	1075	OTHER : FW/Native	8.4	8.8							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system
1075	3880	OTHER : Brine	9.8	10.2							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 26 BD **Well Number:** 101H

Section 6 - Test, Logging, Coring

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

Open hole logging to include will not be done on this well.

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

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.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6685 **Anticipated Surface Pressure:** 4225

Anticipated Bottom Hole Temperature(F): 160

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

Describe:

Potential loss of circulation through the Capitan Reef.

Contingency Plans geoharzards description:

The necessary mud products for weight addition and fluid loss control will be on location at all times.A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

PLU_26_BD_H2S_Dia_1E_20191021100303.pdf

PLU_26_BD_H2S_Dia_1W_20191021100319.pdf

PLU_26_BD_H2S_Plan_20191014094949.pdf

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 26 BD **Well Number:** 101H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

PLU_26_BD_101H_DD_20191022071453.pdf

Other proposed operations facets description:

The surface fresh water sands will be protected by setting 13 3/8" inch casing @ 1075' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9-5/8" inch casing at 3880' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 7-0" inch casing through the curve at 11625' and bringing TOC back 200' inside the previous shoe. A 6-0" inch lateral hole will be drilled to MD/TD and a 4-1/2 inch liner will be set at TD and cemented.

Other proposed operations facets attachment:

PLU_26_BD_GCPE_20191022071510.pdf

PLU_26_BD_GCPW_20191022071518.pdf

Other Variance attachment:

PLU_26_BD_FH_20191014095156.pdf

Casing Assumption Worksheet

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0’ – 1075'	13 3/8"	54.5	STC	J-55	New	2.27	2.32	8.77
12-1/4"	0’ – 3880'	9-5/8"	40	STC	J-55	New	1.13	2.11	2.91
8-3/4"	0’ – 11625'	7-0"	32	BTC	P-110	New	1.31	1.78	2.41
6-0"	10,590’ – 18987'	4-1/2"	13.5	BTC	P-110	New	1.31	1.60	2.21

· XTO requests to not utilize centralizers in the curve and lateral

· 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.

· 7-0" Collapse analyzed using 33% evacuation based on regional experience.

· 4-1/2” Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

· Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

WELLHEAD:

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8” 10M top flange x 13-3/8” SOW bottom

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

Casing Assumption Worksheet

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0’ – 1075'	13 3/8"	54.5	STC	J-55	New	2.27	2.32	8.77
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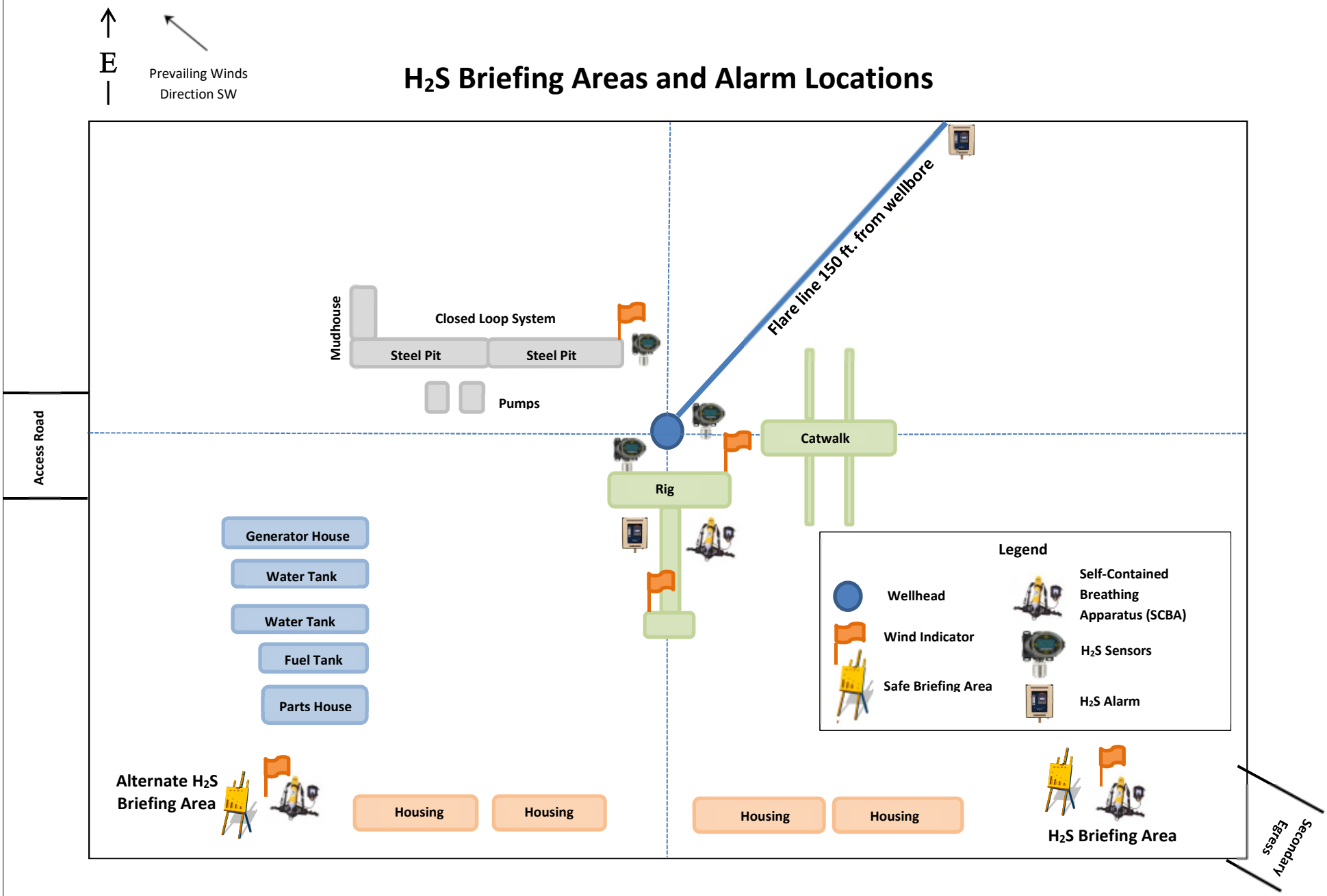
H_2S Briefing Areas and Alarm Locations



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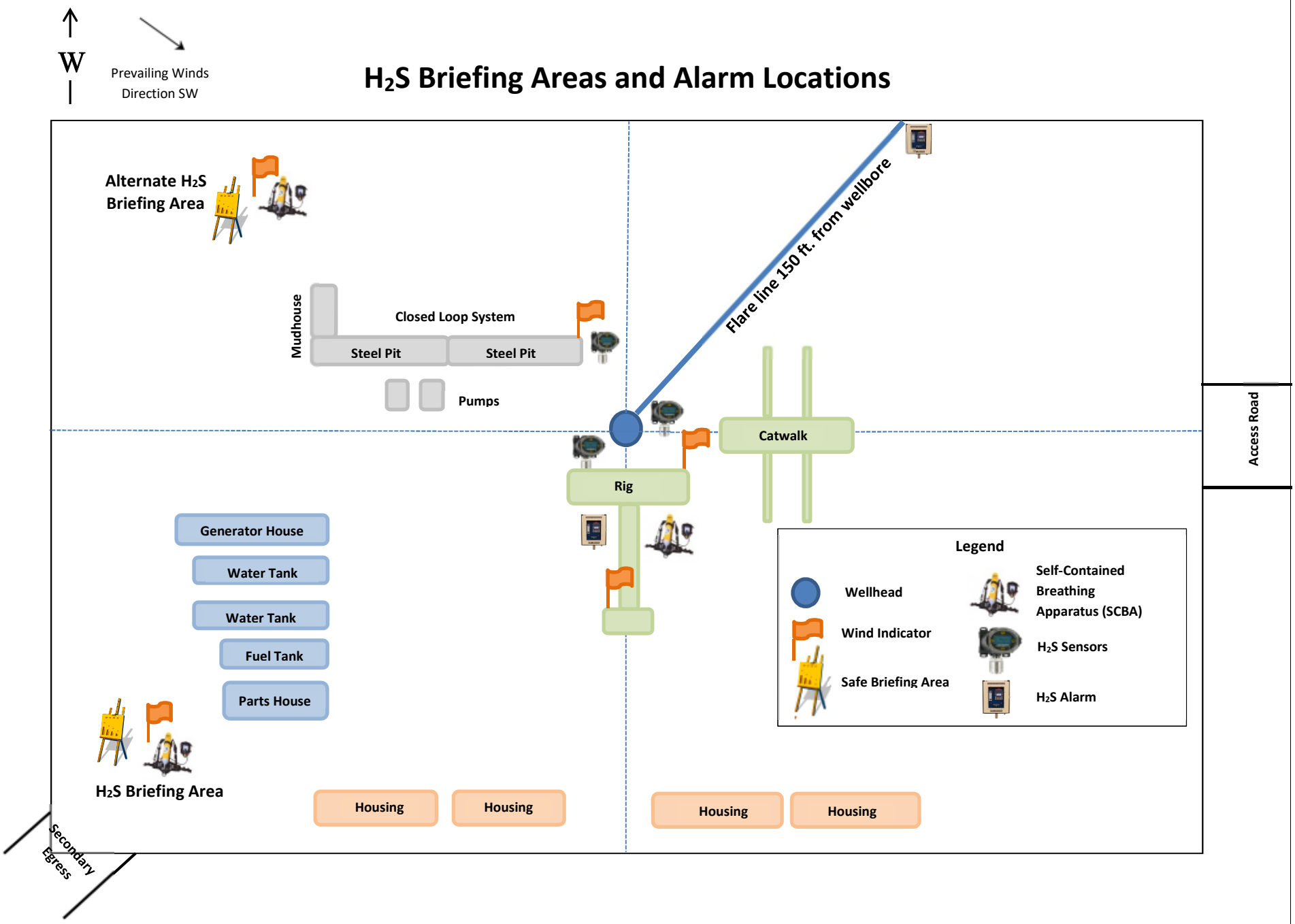


HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

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

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

CARLSBAD OFFICE – EDDY & LEA COUNTIES

3104 E. Greene St., Carlsbad, NM 88220
Carlsbad, NM 575-887-7329

XTO PERSONNEL:

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

SHERIFF DEPARTMENTS:

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

NEW MEXICO STATE POLICE: 575-392-5588

FIRE DEPARTMENTS: 911

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

HOSPITALS: 911

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

AGENT NOTIFICATIONS:

For Lea County:

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

For Eddy County:

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

XTO Energy

Eddy County, NM (NAD-27)
PLU 26 Brushy Draw
#101H

OH

Plan: PERMIT

Standard Planning Report

19 August, 2019

Project: Eddy County, NM (NAD-27)
Site: PLU 26 Brushy Draw
Well: #101H
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: #101H

Rig Name:
RKB = 23' @ 3327.00usft
Ground Level: 3304.00

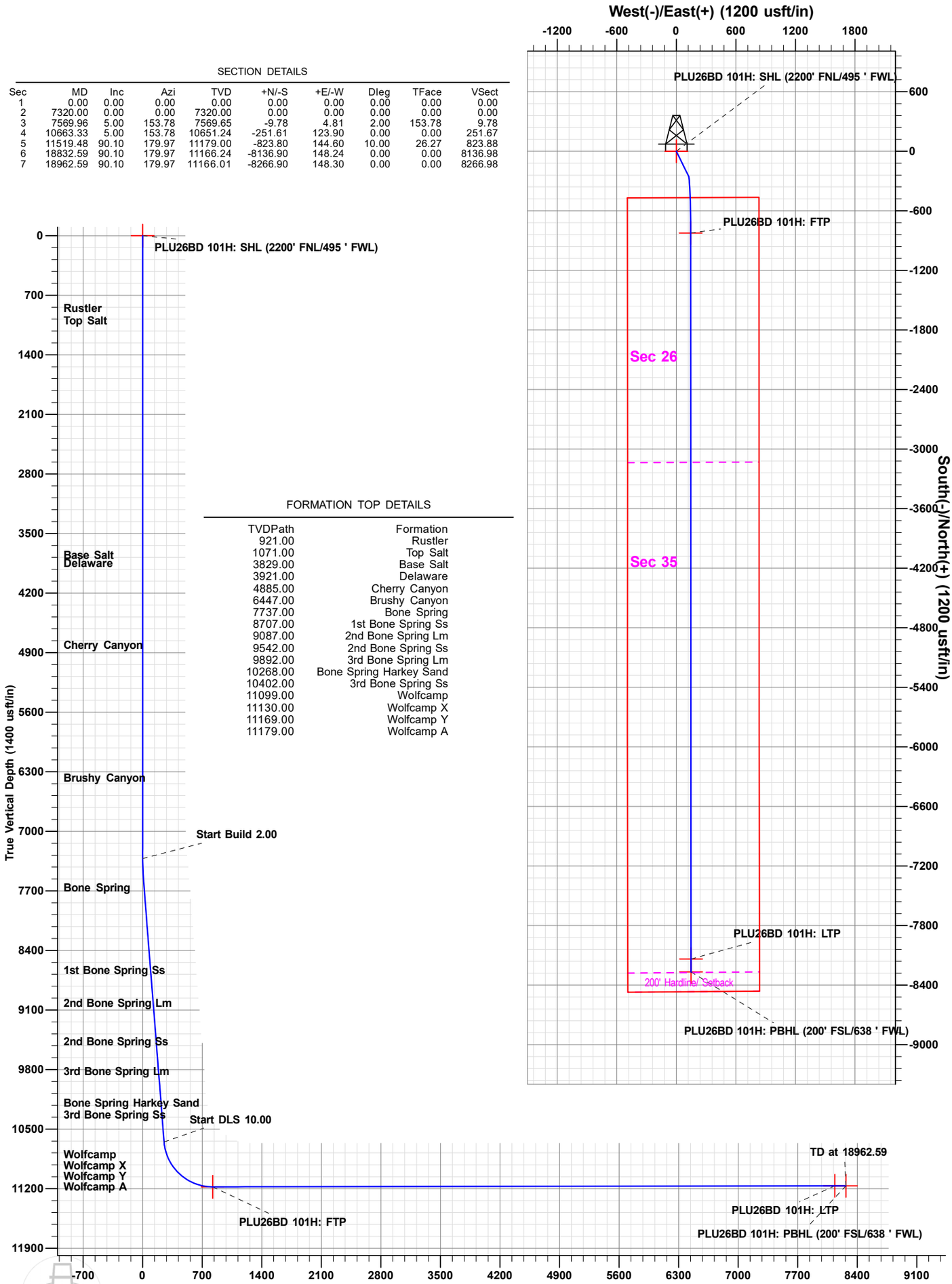
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	401283.70	647080.30	32.1023543	-103.8583466

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PLU26BD 101H: SHL (2200' FNL/495 ' FWL)	0.00	0.00	0.00	401283.70	647080.30	32.1023543	-103.8583466	Point
PLU26BD 101H: PBHL (200' FSL/638 ' FWL)	11166.01	-8266.90	148.30	393016.80	647228.60	32.0796272	-103.8579854	Point
PLU26BD 101H: LTP	11166.24	-8136.90	148.10	393146.80	647228.40	32.0799845	-103.8579842	Point
PLU26BD 101H: FTP	11179.00	-823.80	144.60	400459.90	647224.90	32.1000880	-103.8578914	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7320.00	0.00	0.00	7320.00	0.00	0.00	0.00	0.00	0.00
3	7569.96	5.00	153.78	7569.65	-9.78	4.81	2.00	153.78	9.78
4	10663.33	5.00	153.78	10651.24	-251.61	123.90	0.00	0.00	251.67
5	11519.48	90.10	179.97	11179.00	-823.80	144.60	10.00	26.27	823.88
6	18832.59	90.10	179.97	11166.24	-8136.90	148.24	0.00	0.00	8136.98
7	18962.59	90.10	179.97	11166.01	-8266.90	148.30	0.00	0.00	8266.98



FORMATION TOP DETAILS

TVDPath	Formation
921.00	Rustler
1071.00	Top Salt
3829.00	Base Salt
3921.00	Delaware
4885.00	Cherry Canyon
6447.00	Brushy Canyon
7737.00	Bone Spring
8707.00	1st Bone Spring Ss
9087.00	2nd Bone Spring Lm
9542.00	2nd Bone Spring Ss
9892.00	3rd Bone Spring Lm
10268.00	Bone Spring Harkey Sand
10402.00	3rd Bone Spring Ss
11099.00	Wolfcamp
11130.00	Wolfcamp X
11169.00	Wolfcamp Y
11179.00	Wolfcamp A

Plan: PERMIT (#101H/OH)

Created By: Prototype Well Planning, LLC Date: 16:33, August 19 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

[1] API Number	[2] Pool Code	[3] Pool Name
30-015		

[4] Property Code	[5] Property Name	[6] Well Number
	POKER LAKE UNIT 26 BD	101H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,304'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	26	25 S	30 E		2,200	NORTH	495	WEST	EDDY

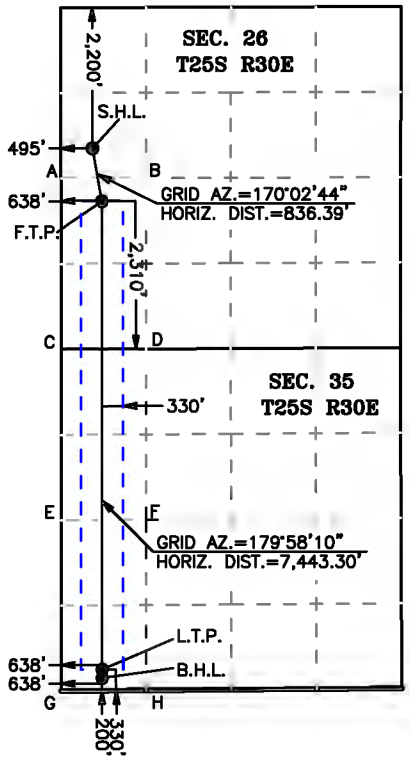
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	35	25 S	30 E		200	SOUTH	638	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] 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.

[16]



GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 401,341.7
X= 688,265.6
LAT.= 32.102479°N
LONG.= 103.858827°W

FIRST TAKE POINT
NAD 83 NME
Y= 400,517.9
X= 688,410.2
LAT.= 32.100213°N
LONG.= 103.858372°W

LAST TAKE POINT
NAD 83 NME
Y= 393,204.6
X= 688,413.9
LAT.= 32.080109°N
LONG.= 103.858464°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 393,074.6
X= 688,414.1
LAT.= 32.079752°N
LONG.= 103.858465°W

CORNER COORDINATES TABLE
NAD 83 NME
A – Y= 400,871.2 N, X= 687,771.6 E
B – Y= 400,877.5 N, X= 689,098.2 E
C – Y= 398,204.6 N, X= 687,775.9 E
D – Y= 398,211.5 N, X= 689,099.6 E
E – Y= 395,532.5 N, X= 687,772.0 E
F – Y= 395,542.5 N, X= 689,100.7 E
G – Y= 392,869.6 N, X= 687,776.5 E
H – Y= 392,880.1 N, X= 689,105.9 E

CORNER COORDINATES TABLE
NAD 27 NME
A – Y= 400,813.2 N, X= 646,586.3 E
B – Y= 400,819.5 N, X= 647,912.9 E
C – Y= 398,146.7 N, X= 646,590.5 E
D – Y= 398,153.6 N, X= 647,914.2 E
E – Y= 395,474.6 N, X= 646,586.6 E
F – Y= 395,484.7 N, X= 647,915.2 E
G – Y= 392,811.8 N, X= 646,591.0 E
H – Y= 392,822.3 N, X= 647,920.3 E

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 401,283.7
X= 647,080.3
LAT.= 32.102354°N
LONG.= 103.858346°W

FIRST TAKE POINT
NAD 27 NME
Y= 400,459.9
X= 647,224.9
LAT.= 32.100088°N
LONG.= 103.857891°W

LAST TAKE POINT
NAD 27 NME
Y= 393,146.8
X= 647,228.4
LAT.= 32.079985°N
LONG.= 103.857984°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 393,016.8
X= 647,228.6
LAT.= 32.079627°N
LONG.= 103.857985°W

[17] 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

[18] 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.

07-29-2019
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number AR 2019030622

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #101H
Company:	XTO Energy	**TVD Reference:**	RKB = 23' @ 3327.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 23' @ 3327.00usft
Site:	PLU 26 Brushy Draw	**North Reference:**	Grid
Well:	#101H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Project Eddy County, NM (NAD-27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site PLU 26 Brushy Draw

Site Position:		**Northing:**	401,222.60 usft	**Latitude:**	32.1021371
From:	Map	**Easting:**	651,093.70 usft	**Longitude:**	-103.8453869
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.26 °

Well #101H

Well Position	**+N/-S**	61.10 usft	**Northing:**	401,283.70 usft	**Latitude:**	32.1023544
	+E/-W	-4,013.40 usft	**Easting:**	647,080.30 usft	**Longitude:**	-103.8583466
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,304.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	08/19/19	6.84	59.88	47,614

Design PERMIT

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.97

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,320.00	0.00	0.00	7,320.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,569.96	5.00	153.78	7,569.65	-9.78	4.81	2.00	2.00	0.00	153.78	
10,663.33	5.00	153.78	10,651.24	-251.61	123.90	0.00	0.00	0.00	0.00	
11,519.48	90.10	179.97	11,179.00	-823.80	144.60	10.00	9.94	3.06	26.27	PLU26BD 101H: FT
18,832.59	90.10	179.97	11,166.24	-8,136.90	148.24	0.00	0.00	0.00	0.00	PLU26BD 101H: LT
18,962.59	90.10	179.97	11,166.01	-8,266.90	148.30	0.00	0.00	0.00	0.00	PLU26BD 101H: PB

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #101H
Company:	XTO Energy	**TVD Reference:**	RKB = 23' @ 3327.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 23' @ 3327.00usft
Site:	PLU 26 Brushy Draw	**North Reference:**	Grid
Well:	#101H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
921.00	0.00	0.00	921.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,071.00	0.00	0.00	1,071.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
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
2,700.00	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
2,900.00	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
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,829.00	0.00	0.00	3,829.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,921.00	0.00	0.00	3,921.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
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
4,400.00	0.00	0.00	4,400.00	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

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #101H
Company:	XTO Energy	**TVD Reference:**	RKB = 23' @ 3327.00usft
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Well:	#101H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.00	0.00	0.00	4,600.00	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
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,885.00	0.00	0.00	4,885.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,447.00	0.00	0.00	6,447.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,320.00	0.00	0.00	7,320.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	1.60	153.78	7,399.99	-1.00	0.49	1.00	2.00	2.00	0.00
7,500.00	3.60	153.78	7,499.88	-5.07	2.50	5.07	2.00	2.00	0.00
7,569.96	5.00	153.78	7,569.65	-9.78	4.81	9.78	2.00	2.00	0.00
7,600.00	5.00	153.78	7,599.57	-12.13	5.97	12.13	0.00	0.00	0.00
7,700.00	5.00	153.78	7,699.19	-19.94	9.82	19.95	0.00	0.00	0.00
7,737.96	5.00	153.78	7,737.00	-22.91	11.28	22.92	0.00	0.00	0.00
Bone Spring									
7,800.00	5.00	153.78	7,798.81	-27.76	13.67	27.77	0.00	0.00	0.00
7,900.00	5.00	153.78	7,898.43	-35.58	17.52	35.59	0.00	0.00	0.00
8,000.00	5.00	153.78	7,998.05	-43.40	21.37	43.41	0.00	0.00	0.00
8,100.00	5.00	153.78	8,097.67	-51.21	25.22	51.23	0.00	0.00	0.00
8,200.00	5.00	153.78	8,197.29	-59.03	29.07	59.05	0.00	0.00	0.00
8,300.00	5.00	153.78	8,296.91	-66.85	32.92	66.87	0.00	0.00	0.00
8,400.00	5.00	153.78	8,396.53	-74.67	36.77	74.69	0.00	0.00	0.00
8,500.00	5.00	153.78	8,496.15	-82.48	40.62	82.51	0.00	0.00	0.00
8,600.00	5.00	153.78	8,595.76	-90.30	44.47	90.33	0.00	0.00	0.00
8,700.00	5.00	153.78	8,695.38	-98.12	48.32	98.15	0.00	0.00	0.00
8,711.66	5.00	153.78	8,707.00	-99.03	48.77	99.06	0.00	0.00	0.00
1st Bone Spring Ss									
8,800.00	5.00	153.78	8,795.00	-105.94	52.17	105.97	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #101H
Company:	XTO Energy	**TVD Reference:**	RKB = 23' @ 3327.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 23' @ 3327.00usft
Site:	PLU 26 Brushy Draw	**North Reference:**	Grid
Well:	#101H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,900.00	5.00	153.78	8,894.62	-113.76	56.02	113.78	0.00	0.00	0.00
9,000.00	5.00	153.78	8,994.24	-121.57	59.87	121.60	0.00	0.00	0.00
9,093.11	5.00	153.78	9,087.00	-128.85	63.45	128.89	0.00	0.00	0.00
2nd Bone Spring Lm									
9,100.00	5.00	153.78	9,093.86	-129.39	63.72	129.42	0.00	0.00	0.00
9,200.00	5.00	153.78	9,193.48	-137.21	67.57	137.24	0.00	0.00	0.00
9,300.00	5.00	153.78	9,293.10	-145.03	71.42	145.06	0.00	0.00	0.00
9,400.00	5.00	153.78	9,392.72	-152.84	75.27	152.88	0.00	0.00	0.00
9,500.00	5.00	153.78	9,492.34	-160.66	79.12	160.70	0.00	0.00	0.00
9,549.85	5.00	153.78	9,542.00	-164.56	81.04	164.60	0.00	0.00	0.00
2nd Bone Spring Ss									
9,600.00	5.00	153.78	9,591.96	-168.48	82.97	168.52	0.00	0.00	0.00
9,700.00	5.00	153.78	9,691.58	-176.30	86.82	176.34	0.00	0.00	0.00
9,800.00	5.00	153.78	9,791.20	-184.12	90.67	184.16	0.00	0.00	0.00
9,900.00	5.00	153.78	9,890.82	-191.93	94.52	191.98	0.00	0.00	0.00
9,901.19	5.00	153.78	9,892.00	-192.03	94.56	192.08	0.00	0.00	0.00
3rd Bone Spring Lm									
10,000.00	5.00	153.78	9,990.44	-199.75	98.37	199.80	0.00	0.00	0.00
10,100.00	5.00	153.78	10,090.06	-207.57	102.22	207.62	0.00	0.00	0.00
10,200.00	5.00	153.78	10,189.68	-215.39	106.07	215.44	0.00	0.00	0.00
10,278.62	5.00	153.78	10,268.00	-221.53	109.09	221.59	0.00	0.00	0.00
Bone Spring Harkey Sand									
10,300.00	5.00	153.78	10,289.30	-223.20	109.92	223.26	0.00	0.00	0.00
10,400.00	5.00	153.78	10,388.92	-231.02	113.77	231.08	0.00	0.00	0.00
10,413.13	5.00	153.78	10,402.00	-232.05	114.27	232.11	0.00	0.00	0.00
3rd Bone Spring Ss									
10,500.00	5.00	153.78	10,488.54	-238.84	117.62	238.90	0.00	0.00	0.00
10,600.00	5.00	153.78	10,588.16	-246.66	121.47	246.72	0.00	0.00	0.00
10,663.33	5.00	153.78	10,651.24	-251.61	123.90	251.67	0.00	0.00	0.00
10,700.00	8.44	164.90	10,687.66	-255.64	125.31	255.71	10.00	9.40	30.31
10,750.00	13.33	170.59	10,736.75	-264.88	127.21	264.95	10.00	9.78	11.39
10,800.00	18.28	173.26	10,784.84	-278.37	129.08	278.43	10.00	9.90	5.33
10,850.00	23.25	174.81	10,831.58	-295.99	130.89	296.06	10.00	9.94	3.11
10,900.00	28.23	175.84	10,876.60	-317.63	132.64	317.70	10.00	9.96	2.06
10,950.00	33.22	176.59	10,919.57	-343.11	134.31	343.18	10.00	9.97	1.49
11,000.00	38.21	177.16	10,960.15	-372.25	135.90	372.32	10.00	9.98	1.14
11,050.00	43.20	177.61	10,998.05	-404.81	137.38	404.88	10.00	9.98	0.91
11,100.00	48.19	177.99	11,032.96	-440.55	138.75	440.63	10.00	9.99	0.76
11,150.00	53.18	178.31	11,064.63	-479.21	139.99	479.28	10.00	9.99	0.65
11,200.00	58.18	178.60	11,092.81	-520.47	141.10	520.55	10.00	9.99	0.57
11,211.94	59.37	178.66	11,099.00	-530.68	141.35	530.76	10.00	9.99	0.53
Wolfcamp									
11,250.00	63.17	178.85	11,117.29	-564.04	142.07	564.12	10.00	9.99	0.50
11,279.70	66.14	178.99	11,130.00	-590.88	142.58	590.95	10.00	9.99	0.47
Wolfcamp X									
11,300.00	68.17	179.08	11,137.88	-609.58	142.89	609.66	10.00	9.99	0.45
11,350.00	73.17	179.30	11,154.43	-656.74	143.56	656.82	10.00	9.99	0.43
11,400.00	78.16	179.50	11,166.80	-705.17	144.06	705.24	10.00	9.99	0.41
11,411.23	79.28	179.55	11,169.00	-716.18	144.15	716.25	10.00	9.99	0.40
Wolfcamp Y									
11,450.00	83.16	179.70	11,174.92	-754.49	144.40	754.56	10.00	9.99	0.40
11,500.00	88.15	179.90	11,178.70	-804.33	144.58	804.40	10.00	9.99	0.39
11,519.48	90.10	179.97	11,179.00	-823.80	144.60	823.88	10.00	9.99	0.39

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #101H
Company:	XTO Energy	**TVD Reference:**	RKB = 23' @ 3327.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 23' @ 3327.00usft
Site:	PLU 26 Brushy Draw	**North Reference:**	Grid
Well:	#101H	**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)
Wolfcamp A									
11,600.00	90.10	179.97	11,178.86	-904.32	144.64	904.40	0.00	0.00	0.00
11,700.00	90.10	179.97	11,178.69	-1,004.32	144.69	1,004.40	0.00	0.00	0.00
11,800.00	90.10	179.97	11,178.51	-1,104.32	144.74	1,104.40	0.00	0.00	0.00
11,900.00	90.10	179.97	11,178.34	-1,204.32	144.79	1,204.40	0.00	0.00	0.00
12,000.00	90.10	179.97	11,178.16	-1,304.32	144.84	1,304.40	0.00	0.00	0.00
12,100.00	90.10	179.97	11,177.99	-1,404.32	144.89	1,404.40	0.00	0.00	0.00
12,200.00	90.10	179.97	11,177.81	-1,504.32	144.94	1,504.40	0.00	0.00	0.00
12,300.00	90.10	179.97	11,177.64	-1,604.32	144.99	1,604.40	0.00	0.00	0.00
12,400.00	90.10	179.97	11,177.46	-1,704.32	145.04	1,704.40	0.00	0.00	0.00
12,500.00	90.10	179.97	11,177.29	-1,804.32	145.09	1,804.40	0.00	0.00	0.00
12,600.00	90.10	179.97	11,177.11	-1,904.32	145.14	1,904.40	0.00	0.00	0.00
12,700.00	90.10	179.97	11,176.94	-2,004.32	145.19	2,004.40	0.00	0.00	0.00
12,800.00	90.10	179.97	11,176.77	-2,104.32	145.24	2,104.40	0.00	0.00	0.00
12,900.00	90.10	179.97	11,176.59	-2,204.32	145.29	2,204.40	0.00	0.00	0.00
13,000.00	90.10	179.97	11,176.42	-2,304.32	145.34	2,304.40	0.00	0.00	0.00
13,100.00	90.10	179.97	11,176.24	-2,404.32	145.39	2,404.40	0.00	0.00	0.00
13,200.00	90.10	179.97	11,176.07	-2,504.32	145.44	2,504.40	0.00	0.00	0.00
13,300.00	90.10	179.97	11,175.89	-2,604.32	145.49	2,604.40	0.00	0.00	0.00
13,400.00	90.10	179.97	11,175.72	-2,704.32	145.53	2,704.40	0.00	0.00	0.00
13,500.00	90.10	179.97	11,175.54	-2,804.32	145.58	2,804.40	0.00	0.00	0.00
13,600.00	90.10	179.97	11,175.37	-2,904.32	145.63	2,904.40	0.00	0.00	0.00
13,700.00	90.10	179.97	11,175.19	-3,004.32	145.68	3,004.40	0.00	0.00	0.00
13,800.00	90.10	179.97	11,175.02	-3,104.32	145.73	3,104.40	0.00	0.00	0.00
13,900.00	90.10	179.97	11,174.85	-3,204.32	145.78	3,204.40	0.00	0.00	0.00
14,000.00	90.10	179.97	11,174.67	-3,304.32	145.83	3,304.40	0.00	0.00	0.00
14,100.00	90.10	179.97	11,174.50	-3,404.32	145.88	3,404.40	0.00	0.00	0.00
14,200.00	90.10	179.97	11,174.32	-3,504.32	145.93	3,504.40	0.00	0.00	0.00
14,300.00	90.10	179.97	11,174.15	-3,604.32	145.98	3,604.40	0.00	0.00	0.00
14,400.00	90.10	179.97	11,173.97	-3,704.32	146.03	3,704.40	0.00	0.00	0.00
14,500.00	90.10	179.97	11,173.80	-3,804.32	146.08	3,804.40	0.00	0.00	0.00
14,600.00	90.10	179.97	11,173.62	-3,904.32	146.13	3,904.40	0.00	0.00	0.00
14,700.00	90.10	179.97	11,173.45	-4,004.32	146.18	4,004.40	0.00	0.00	0.00
14,800.00	90.10	179.97	11,173.27	-4,104.32	146.23	4,104.40	0.00	0.00	0.00
14,900.00	90.10	179.97	11,173.10	-4,204.32	146.28	4,204.39	0.00	0.00	0.00
15,000.00	90.10	179.97	11,172.93	-4,304.32	146.33	4,304.39	0.00	0.00	0.00
15,100.00	90.10	179.97	11,172.75	-4,404.32	146.38	4,404.39	0.00	0.00	0.00
15,200.00	90.10	179.97	11,172.58	-4,504.32	146.43	4,504.39	0.00	0.00	0.00
15,300.00	90.10	179.97	11,172.40	-4,604.32	146.48	4,604.39	0.00	0.00	0.00
15,400.00	90.10	179.97	11,172.23	-4,704.32	146.53	4,704.39	0.00	0.00	0.00
15,500.00	90.10	179.97	11,172.05	-4,804.32	146.58	4,804.39	0.00	0.00	0.00
15,600.00	90.10	179.97	11,171.88	-4,904.32	146.63	4,904.39	0.00	0.00	0.00
15,700.00	90.10	179.97	11,171.70	-5,004.32	146.68	5,004.39	0.00	0.00	0.00
15,800.00	90.10	179.97	11,171.53	-5,104.32	146.73	5,104.39	0.00	0.00	0.00
15,900.00	90.10	179.97	11,171.35	-5,204.32	146.78	5,204.39	0.00	0.00	0.00
16,000.00	90.10	179.97	11,171.18	-5,304.32	146.83	5,304.39	0.00	0.00	0.00
16,100.00	90.10	179.97	11,171.01	-5,404.32	146.88	5,404.39	0.00	0.00	0.00
16,200.00	90.10	179.97	11,170.83	-5,504.32	146.93	5,504.39	0.00	0.00	0.00
16,300.00	90.10	179.97	11,170.66	-5,604.32	146.98	5,604.39	0.00	0.00	0.00
16,400.00	90.10	179.97	11,170.48	-5,704.32	147.03	5,704.39	0.00	0.00	0.00
16,500.00	90.10	179.97	11,170.31	-5,804.32	147.08	5,804.39	0.00	0.00	0.00
16,600.00	90.10	179.97	11,170.13	-5,904.32	147.13	5,904.39	0.00	0.00	0.00
16,700.00	90.10	179.97	11,169.96	-6,004.32	147.18	6,004.39	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #101H
Company:	XTO Energy	**TVD Reference:**	RKB = 23' @ 3327.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 23' @ 3327.00usft
Site:	PLU 26 Brushy Draw	**North Reference:**	Grid
Well:	#101H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,800.00	90.10	179.97	11,169.78	-6,104.32	147.22	6,104.39	0.00	0.00	0.00
16,900.00	90.10	179.97	11,169.61	-6,204.32	147.27	6,204.39	0.00	0.00	0.00
17,000.00	90.10	179.97	11,169.43	-6,304.32	147.32	6,304.39	0.00	0.00	0.00
17,100.00	90.10	179.97	11,169.26	-6,404.32	147.37	6,404.39	0.00	0.00	0.00
17,200.00	90.10	179.97	11,169.09	-6,504.32	147.42	6,504.39	0.00	0.00	0.00
17,300.00	90.10	179.97	11,168.91	-6,604.31	147.47	6,604.39	0.00	0.00	0.00
17,400.00	90.10	179.97	11,168.74	-6,704.31	147.52	6,704.39	0.00	0.00	0.00
17,500.00	90.10	179.97	11,168.56	-6,804.31	147.57	6,804.39	0.00	0.00	0.00
17,600.00	90.10	179.97	11,168.39	-6,904.31	147.62	6,904.39	0.00	0.00	0.00
17,700.00	90.10	179.97	11,168.21	-7,004.31	147.67	7,004.39	0.00	0.00	0.00
17,800.00	90.10	179.97	11,168.04	-7,104.31	147.72	7,104.39	0.00	0.00	0.00
17,900.00	90.10	179.97	11,167.86	-7,204.31	147.77	7,204.39	0.00	0.00	0.00
18,000.00	90.10	179.97	11,167.69	-7,304.31	147.82	7,304.39	0.00	0.00	0.00
18,100.00	90.10	179.97	11,167.52	-7,404.31	147.87	7,404.39	0.00	0.00	0.00
18,200.00	90.10	179.97	11,167.34	-7,504.31	147.92	7,504.39	0.00	0.00	0.00
18,300.00	90.10	179.97	11,167.17	-7,604.31	147.97	7,604.39	0.00	0.00	0.00
18,400.00	90.10	179.97	11,166.99	-7,704.31	148.02	7,704.39	0.00	0.00	0.00
18,500.00	90.10	179.97	11,166.82	-7,804.31	148.07	7,804.39	0.00	0.00	0.00
18,600.00	90.10	179.97	11,166.64	-7,904.31	148.12	7,904.39	0.00	0.00	0.00
18,700.00	90.10	179.97	11,166.47	-8,004.31	148.17	8,004.39	0.00	0.00	0.00
18,800.00	90.10	179.97	11,166.29	-8,104.31	148.22	8,104.39	0.00	0.00	0.00
18,832.59	90.10	179.97	11,166.24	-8,136.90	148.24	8,136.98	0.00	0.00	0.00
18,900.00	90.10	179.97	11,166.12	-8,204.31	148.27	8,204.39	0.00	0.00	0.00
18,962.59	90.10	179.97	11,166.01	-8,266.90	148.30	8,266.98	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
PLU26BD 101H: SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	401,283.70	647,080.30	32.1023544	-103.8583466
PLU26BD 101H: PBH - plan hits target center - Point	0.00	0.00	11,166.01	-8,266.90	148.30	393,016.80	647,228.60	32.0796272	-103.8579853
PLU26BD 101H: LTP - plan misses target center by 0.14usft at 18832.59usft MD (11166.24 TVD, -8136.90 N, 148.24 E) - Point	0.00	0.00	11,166.24	-8,136.90	148.10	393,146.80	647,228.40	32.0799846	-103.8579841
PLU26BD 101H: FTP - plan hits target center - Point	0.00	0.00	11,179.00	-823.80	144.60	400,459.90	647,224.90	32.1000880	-103.8578914

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #101H
Company:	XTO Energy	**TVD Reference:**	RKB = 23' @ 3327.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 23' @ 3327.00usft
Site:	PLU 26 Brushy Draw	**North Reference:**	Grid
Well:	#101H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
921.00	921.00	Rustler			
1,071.00	1,071.00	Top Salt			
3,829.00	3,829.00	Base Salt			
3,921.00	3,921.00	Delaware			
4,885.00	4,885.00	Cherry Canyon			
6,447.00	6,447.00	Brushy Canyon			
7,737.96	7,737.00	Bone Spring			
8,711.66	8,707.00	1st Bone Spring Ss			
9,093.11	9,087.00	2nd Bone Spring Lm			
9,549.85	9,542.00	2nd Bone Spring Ss			
9,901.19	9,892.00	3rd Bone Spring Lm			
10,278.62	10,268.00	Bone Spring Harkey Sand			
10,413.13	10,402.00	3rd Bone Spring Ss			
11,211.94	11,099.00	Wolfcamp			
11,279.70	11,130.00	Wolfcamp X			
11,411.23	11,169.00	Wolfcamp Y			
11,519.48	11,179.00	Wolfcamp A			

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: 10/10/2019

☒ Original
☐ Amended - Reason for Amendment:

Operator & OGRID No.: XTO Permian Operating, LLC [373075]

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: Poker Lake Unit 26 BD 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
Poker Lake Unit 26 BD 101H		E-26-25S-30E	2200'FNL & 495'FWL	2800	Flared/Sold	
Poker Lake Unit 26 BD 102H		E-26-25S-30E	2200'FNL & 794'FWL	2800	Flared/Sold	

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 LUCID and will be connected to LUCID low/high pressure gathering system located in Eddy County, New Mexico. It will require 2442.44' of pipeline to connect the facility to low/high pressure gathering system. XTO PERMIAN OPERATING, LLC provides (periodically) to LUCID a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO PERMIAN OPERATING, LLC and LUCID have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Red Hills Processing Plant located in Sec.32, Twn. T32S, Rng 28E, Eddy County, New Mexico. 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 LUCID system at that time. Based on current information, it is XTO PERMIAN OPERATING, LLC'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

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

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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: Poker Lake Unit 26w BD 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
Poker Lake Unit 26 BD 101H		E-26-25S-30E	2200'FNL & 495'FWL	2800	Flared/Sold	
Poker Lake Unit 26 BD 102H		E-26-25S-30E	2200'FNL & 794'FWL	2800	Flared/Sold	

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 LUCID and will be connected to LUCID low/high pressure gathering system located in Eddy County, New Mexico. It will require 831.58' of pipeline to connect the facility to low/high pressure gathering system. XTO PERMIAN OPERATING, LLC provides (periodically) to LUCID a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO PERMIAN OPERATING, LLC and LUCID have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Red Hills Processing Plant located in Sec.32, Twn. T32S, Rng 28E, Eddy County, New Mexico. 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 LUCID system at that time. Based on current information, it is XTO PERMIAN OPERATING, LLC'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