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.
NMLC0061634B

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 30 BS
155H

2. Name of Operator
XTO PERMIAN OPERATING LLC

9. API Well No.
3001547008

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/null

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWNE / 2310 FNL / 2040 FEL / LAT 32.102188 / LONG -103.815473
At proposed prod. zone NWSE / 200 FSL / 2383 FEL / LAT 32.07987 / LONG -103.816672

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 30/T25S/R31E/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
1560.6

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
12511 feet / 20280 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3366 feet

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

23. Estimated duration
60 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) 620-4374

Date
08/14/2019

Title
Regulatory Coordinator

Approved by *(Signature)*
(Electronic Submission)

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

Date
04/08/2020

Title
Assistant Field Manager Lands & Minerals

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.

Entered 04/09/2020 - KMS NMOCD

APPROVED WITH CONDITIONS

Approval Date: 04/08/2020

(Continued on page 2)

*(Instructions on page 2)

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- 47008	98220	PURPLE SAGE; WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
327328	POKER LAKE UNIT 30 BS	155H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,366'

[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
G	30	25 S	31 E		2,310	NORTH	2,040	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

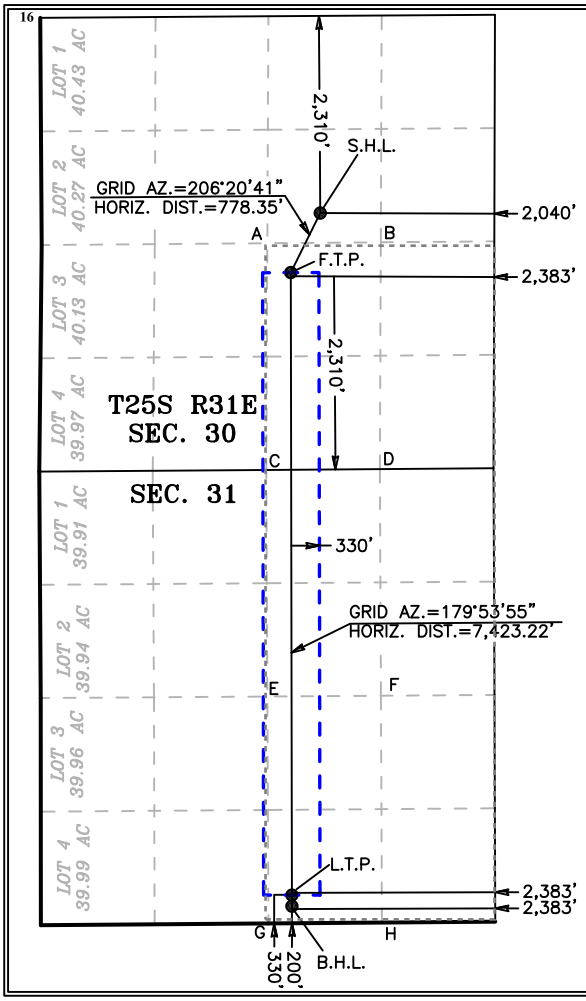
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	31	25 S	31 E		200	SOUTH	2,383	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640			

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.

Acreage corrected - KMS

[16]



GEODETIC COORDINATES
SURFACE LOCATION
NAD 27 NME
Y= 401,239.8
X= 660,505.1
LAT.= 32.102064'N
LONG.= 103.814994'W

GEODETIC COORDINATES
SURFACE LOCATION
NAD 83 NME
Y= 401,297.7
X= 701,690.6
LAT.= 32.102188'N
LONG.= 103.815473'W

FIRST TAKE POINT
NAD 27 NME
Y= 400,542.3
X= 660,159.7
LAT.= 32.100151'N
LONG.= 103.816120'W

FIRST TAKE POINT
NAD 83 NME
Y= 400,600.2
X= 701,345.2
LAT.= 32.100275'N
LONG.= 103.816600'W

CORNER COORDINATES TABLE
NAD 83 NME
A - Y= 400,944.7 N, X= 701,070.7 E
B - Y= 400,955.6 N, X= 702,400.1 E
C - Y= 398,288.0 N, X= 701,058.4 E
D - Y= 398,298.0 N, X= 702,389.1 E
E - Y= 395,633.7 N, X= 701,071.1 E
F - Y= 395,642.9 N, X= 702,401.5 E
G - Y= 392,974.7 N, X= 701,083.8 E
H - Y= 392,985.5 N, X= 702,412.9 E

CORNER COORDINATES TABLE
NAD 27 NME
A - Y= 400,886.8 N, X= 659,885.2 E
B - Y= 400,897.7 N, X= 661,214.6 E
C - Y= 398,230.1 N, X= 659,872.8 E
D - Y= 398,240.2 N, X= 661,203.5 E
E - Y= 395,575.9 N, X= 659,885.4 E
F - Y= 395,585.1 N, X= 661,215.8 E
G - Y= 392,917.0 N, X= 659,898.0 E
H - Y= 392,927.8 N, X= 661,227.1 E

LAST TAKE POINT
NAD 27 NME
Y= 393,249.3
X= 660,172.1
LAT.= 32.080103'N
LONG.= 103.816193'W

LAST TAKE POINT
NAD 83 NME
Y= 393,307.0
X= 701,357.8
LAT.= 32.080227'N
LONG.= 103.816672'W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 393,119.3
X= 660,172.6
LAT.= 32.079745'N
LONG.= 103.816194'W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 393,177.0
X= 701,358.3
LAT.= 32.079870'N
LONG.= 103.816672'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 — 7/22/19
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.

07-09-2019
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number — LB — 2017071036

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
XTO PERMIAN OPERATING, LLC	POKER LAKE UNIT 30 BS	155H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
G	30	25S	31E		2310	NORTH	2040	EAST	EDDY

Latitude	Longitude	NAD
32.102188	-103.815473	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
J	30	25S	31E		2310	SOUTH	2383	EAST	EDDY

Latitude	Longitude	NAD
32.100275	-103.816600	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	31	25S	31E		330	SOUTH	2383	EAST	EDDY

Latitude	Longitude	NAD
32.080227	-103.816672	83

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

Is this well an infill well? [Y]

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	POKER LAKE UNIT 30 BS	105H

KZ 06/29/2018

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME: XTO Permian Operating LLC
LEASE NO.: NMNM0061634B
LOCATION: Section 30, T.25 S., R.31 E., NMPM
COUNTY: Eddy County, New Mexico

Well Pad 1
Poker Lake Unit 30 BS 161H
Surface Hole Location: 2310' FNL & 395' FWL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 330' FWL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 121H
Surface Hole Location: 695' FNL & 2250' FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 1650' FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 101H
Surface Hole Location: 695' FNL & 2280' FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 1980' FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 152H
Surface Hole Location: 695' FNL & 2280' FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 1980' FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 122H
Surface Hole Location: 695' FNL & 2280' FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 1980' FEL, Section 31, T. 25 S, R 31 E.

Well Pad 2
Poker Lake Unit 30 BS 163H
Surface Hole Location: 2310' FNL & 1920' FWL, Section 30, T. 25 S., R. 31
Bottom Hole Location: 200' FSL & 1357' FWL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 153H
Surface Hole Location: 695' FNL & 2280' FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 1980' FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 103H
Surface Hole Location: 695' FNL & 2280' FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 1980' FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 124H
Surface Hole Location: 695' FNL & 2280' FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200' FSL & 1980' FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 164H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Well Pad 3
Poker Lake Unit 30 BS 155H
Surface Hole Location: 2310’ FNL & 2383’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 125H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 105H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 166H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 156H
Surface Hole Location: 2310’ FNL & 1920’ FEL, Section 30, T. 25 S., R. 31 E
Bottom Hole Location: 200’ FSL & 1357’ FEL, Section 31, T. 25 S, R 31 E.

Well Pad 4
Poker Lake Unit 30 BS 127H
Surface Hole Location: 2310’ FNL & 720’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 330’ FNL & 1254’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 167H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 107H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 128H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

Poker Lake Unit 30 BS 158H
Surface Hole Location: 695’ FNL & 2280’ FEL, Section 30, T. 25 S., R. 31 E.
Bottom Hole Location: 200’ FSL & 1980’ FEL, Section 31, T. 25 S, R 31 E.

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and

Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

Rangeland Management:

Livestock Watering Requirement
Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

Hydrology:

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

TANK BATTERY:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

BURIED/SURFACE LINE(S):
When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions

and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

ELECTRIC LINE(S):
Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production:
Construction:

General Construction:

- No blasting
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction, and no additional construction shall occur until clearance has been issued by the Authorized Officer.
- All linear surface disturbance activities will avoid sinkholes and other karst features to lessen the possibility of encountering near surface voids during construction, minimize changes to runoff, and prevent untimely leaks and spills from entering the karst drainage system.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

Pad Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche – no blasting.

- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised (i.e. an access road crossing the berm cannot be lower than the berm height).
- Following a rain event, all fluids will vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

Tank Battery Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche – no blasting.
- All tank battery locations and facilities will be lined and bermed.
- The liner should be at least 20 mil in thickness and installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures.
- Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Road Construction:

- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to alter the natural flow of water into or out of cave or karst features.
- Special restoration stipulations or realignment may be required if subsurface features are discovered during construction.

Powerline Construction:

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.
- Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- Special restoration stipulations or realignment may be required if subsurface voids are encountered.

Leak Detection System:

- A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present.
- A leak detection plan will be submitted to BLM that incorporates an automatic shut off system (see below) to minimize the effects of an undesirable event that could negatively sensitive cave/karst resources.
- Well heads, pipelines (surface and buried), storage tanks, and all supporting equipment should be monitored regularly after installation to promptly identify and fix leaks.

Automatic Shut-off Systems:

- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and groundwater concerns:

Closed Loop System:

- A closed loop system using steel tanks will be utilized during drilling – no pits
- All fluids and cuttings will be hauled off-site and disposed of properly at an authorized site

Rotary Drilling with Fresh Water:

- Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:

- The kick off point for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:

- ALL lost circulation zones between surface and the base of the cave occurrence zone will be logged and reported in the drilling report.
- If a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, regardless of the type of drilling machinery used, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:

- Additional plugging conditions of approval may be required upon well abandonment in high and medium karst potential occurrence zones.

- The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:

- The operator will perform annual pressure monitoring on all casing annuli and reported in a sundry notice.
- If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

V. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

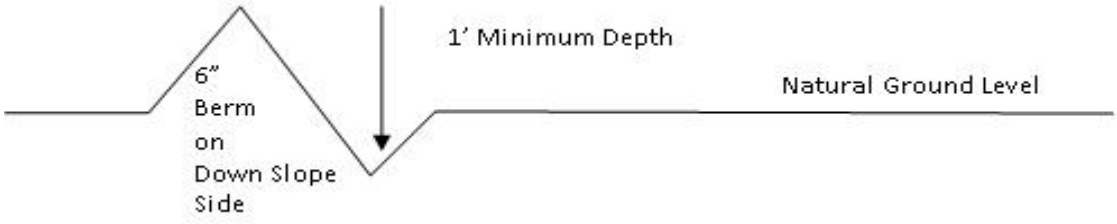
Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattle guards
An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

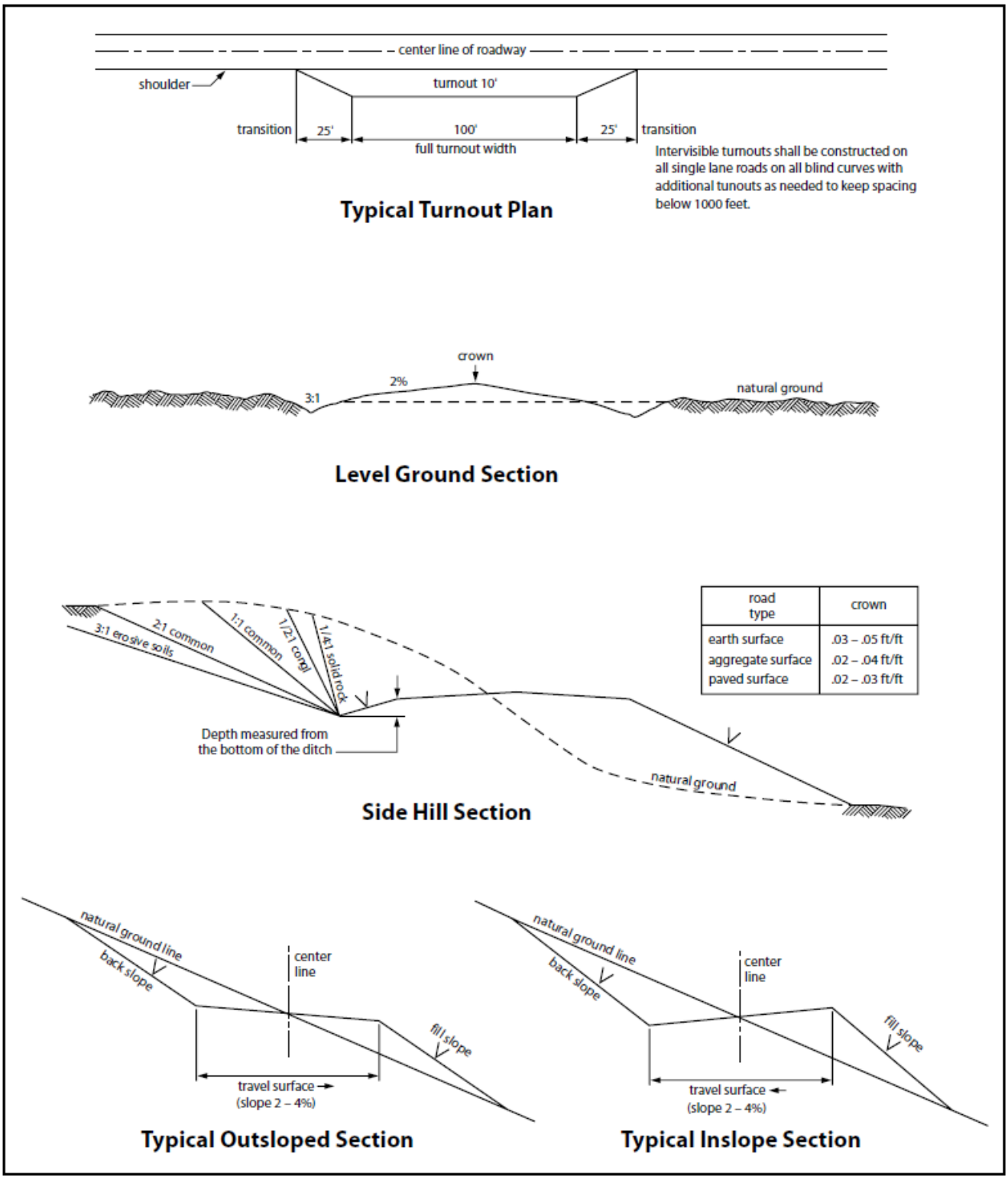


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VI. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. SURFACE PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq*. (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (*see* 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq*. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq*.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the

activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;

b. Activities of other parties including, but not limited to:
   (1) Land clearing
   (2) Earth-disturbing and earth-moving work
   (3) Blasting
   (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of **30** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 6 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized

officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

18. Special Stipulations:

Hydrology:

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Karst:

Surface Flowlines Installation:

- Flowlines will be routed around sinkholes and other karst features to minimize the possibility of leaks/spills from entering the karst drainage system.

C. BURIED PIPELINES

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction.

BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be All construction and maintenance activity shall be confined to the authorized right-of-way width of **30** feet for the buried pipelines and **110** feet for the midstream tie-in:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed All construction and maintenance activity shall be confined to the authorized right-of-way width of **30** feet for the buried pipelines and **110** feet for the midstream tie-in. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed All construction and maintenance activity shall be confined to the authorized right-of-way width of **30** feet for the buried pipelines and **110** feet for the midstream tie-in. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface*.)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc*.)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

( ) seed mixture 1 ( ) seed mixture 3

(X) seed mixture 2 ( ) seed mixture 4

( ) seed mixture 2/LPC ( ) Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.

b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

Hydrology:

- When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

- Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Karst:

- Rerouting of the buried line(s) may be required if a subsurface void is encountered during construction to minimize the potential subsidence/collapse of the feature(s) as well as the possibility of leaks/spills entering the karst drainage system.

D. OVERHEAD ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the

passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Hydrology:

ELECTRIC LINE(S):

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

Karst:

Powerline Construction:

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.
- Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- Special restoration stipulations or realignment may be required if subsurface voids are encountered.

VII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

VIII. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 30 BS 155H
LOCATION:	Sec 30-25S-31E-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 **18 5/8** inch surface casing shall be set at approximately 890 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing set at 4,150 feet is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **9-5/8** inch intermediate casing set at 10,300 feet is:

- Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

4. 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 **10,000 (10M)** 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. (This is not necessary for secondary recovery unit wells)

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: 10400045695 **Submission Date:** 08/14/2019

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS **Well Number:** 155H

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
512128	PERMIAN	3366	0	0	OTHER : Quaternary	NONE	N
512119	RUSTLER	2593	773	773	SILTSTONE	USEABLE WATER	N
512120	TOP SALT	2230	1136	1136	SALT	OTHER : Produced Water	N
512121	BASE OF SALT	-506	3872	3872	SALT	OTHER : Produced Water	N
512117	DELAWARE	-720	4086	4086	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
512118	BONE SPRING	-4655	8021	8021	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
512136	WOLFCAMP	-8025	11391	11391	SHALE	NATURAL GAS, OIL, OTHER : Produced Water	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 12511

Equipment: The blow out preventer equipment (BOP) on surface casing temporary wellhead will consist of a 21-1/4 minimum 2M Hydril. MASP should not exceed 1245 psi. Once the perminent wellhead is installed the blow out preventer equipment (BOP) for this well consists of a 13-5/8 minimum 10M Hydril and a 13-5/8 minimum 10M Double Ram BOP. MASP should not exceed 5380 psi.
Requesting Variance? YES

Variance request: XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint. 13-3/8" Collapse analyzed using 50% evacuation based on regional experience. 9-5/8" Collapse analyzed using 50% evacuation based on regional experience. 5-1/2” tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35 Permanent Wellhead – GE RSH Multibowl System A. Starting Head (RSH System): 13-3/8” SOW bottom x 13-5/8” 5M top flange 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 8-5/8" casing per Onshore Order 2. Wellhead manufacturer representative may not be present for BOP test plug installation A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer’s certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.
Testing Procedure: All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 13-5/8 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When the 11-3/4 and 8-5/8 casing is set, the packoff seals will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS **Well Number:** 155H

Choke Diagram Attachment:

PLU_30_BS_2M3MCM_20190808103915.pdf

PLU_30_BS_10MCM_20190809130606.pdf

BOP Diagram Attachment:

PLU_30_BS_Multi_20190808104125.pdf

PLU_30_BS_2MBOP_20190809133557.pdf

PLU_30_BS_10MBOP_20190809133611.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	24	18.625	NEW	API	N	0	930	0	930	3366	2436	930	J-55	87.5	BUTT	1.5	1.81	BUOY	16.89	DRY	16.89
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	4150	0	4150	3370	-784	4150	HCL-80	68	BUTT	2.31	1.67	DRY	10.41	DRY	10.41
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	11407	0	11407		-8041	11407	HCL-80	40	BUTT	1.27	1.02	DRY	2.77	DRY	2.77
4	PRODUCTION	8.75	5.5	NEW	API	N	0	20280	0	12511	3370	-9145	20280	P-110	17	BUTT	1.38	1.01	DRY	2.16	DRY	2.16

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_30_BS_155H_Csg_20190809133714.pdf

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS **Well Number:** 155H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_30_BS_155H_Csg_20190809133737.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_30_BS_155H_Csg_20190809133803.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

PLU_30_BS_155H_Csg_20190809133838.pdf

Section 4 - Cement

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS **Well Number:** 155H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	930	840	1.87	12.8	1571	100	EconoCem-HLTRRC	none
SURFACE	Tail				550	1.35	14.8	743	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead		0	4150	2450	1.88	12.8	4606	100	Halcem-C	2% CaCl
INTERMEDIATE	Tail				850	1.35	14.8	1148	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead	4200	0	11407	1130	1.87	12.8	2113	100	Halcem-C	2% CaCl
INTERMEDIATE	Tail				390	1.35	14.8	527	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead		4250	11407	2050	1.88	12.8	3854	100	Halcem-C	2%CaCl
INTERMEDIATE	Tail				470	1.33	14.8	625	100	Halcem-C	2%CaCl
PRODUCTION	Lead		0	202800	1840	1.88	11.5	3459	20	Halcem-C	2%CaCl
PRODUCTION	Tail				2000	1.33	13.2	2660	20	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

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS **Well Number:** 155H

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
11407	12511	OTHER : FW / Cut Brine / Poly / OBM	12.2	12.8							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
4150	11407	OTHER : FW / Cut Brine	9.1	9.5							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	930	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
930	4150	OTHER : Brine/Gel Sweeps	9.8	10.2							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS **Well Number:** 155H

Section 6 - Test, Logging, Coring

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

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

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

CEMENT BOND LOG,COMPENSATED NEUTRON LOG,DIRECTIONAL SURVEY,GAMMA RAY LOG,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: 8132 **Anticipated Surface Pressure:** 5379

Anticipated Bottom Hole Temperature(F): 170

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_30_BS_H2S_Plan_20190808111945.pdf

PLU_30_BS_H2S_Dia_Pad_3_20190809134142.pdf

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS **Well Number:** 155H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

PLU_30_BS_WWC_20190809134247.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

PLU_30_BS__GCPE_20190808112147.pdf
PLU_30_BS__GCPW_20190808112156.pdf

Other Variance attachment:

PLU_30_BS_FH_20190808112305.pdf
PLU_30_BS_WWC_20190809134239.pdf

Casing Assumption Worksheet

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 930'	18-5/8"	87.5	BTC	J-55	New	1.81	1.50	16.89
17-1/2"	0' – 4150'	13-3/8"	68	BTC	HCL-80	New	1.67	2.31	10.41
12-1/4"	0' – 11407'	9-5/8"	40	BTC	HCL-80	New	1.02	1.27	2.77
8-3/4"	0' – 20280'	5-1/2"	17	BTC	P-110	New	1.01	1.38	2.16

· XTO requests to not utilize centralizers in the curve and lateral
· 18-5/8" Collapse analyzed using 75% evacuation. Casing to be filled while running.
· 13-3/8" & 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
· 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
· Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichver is less

Wellhead:

Temporary Wellhead

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

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 10M top flange x 13-3/8" SOW bottom
B. Tubing Head: 13-5/8" 10M bottom flange x 7" 15M 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

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:

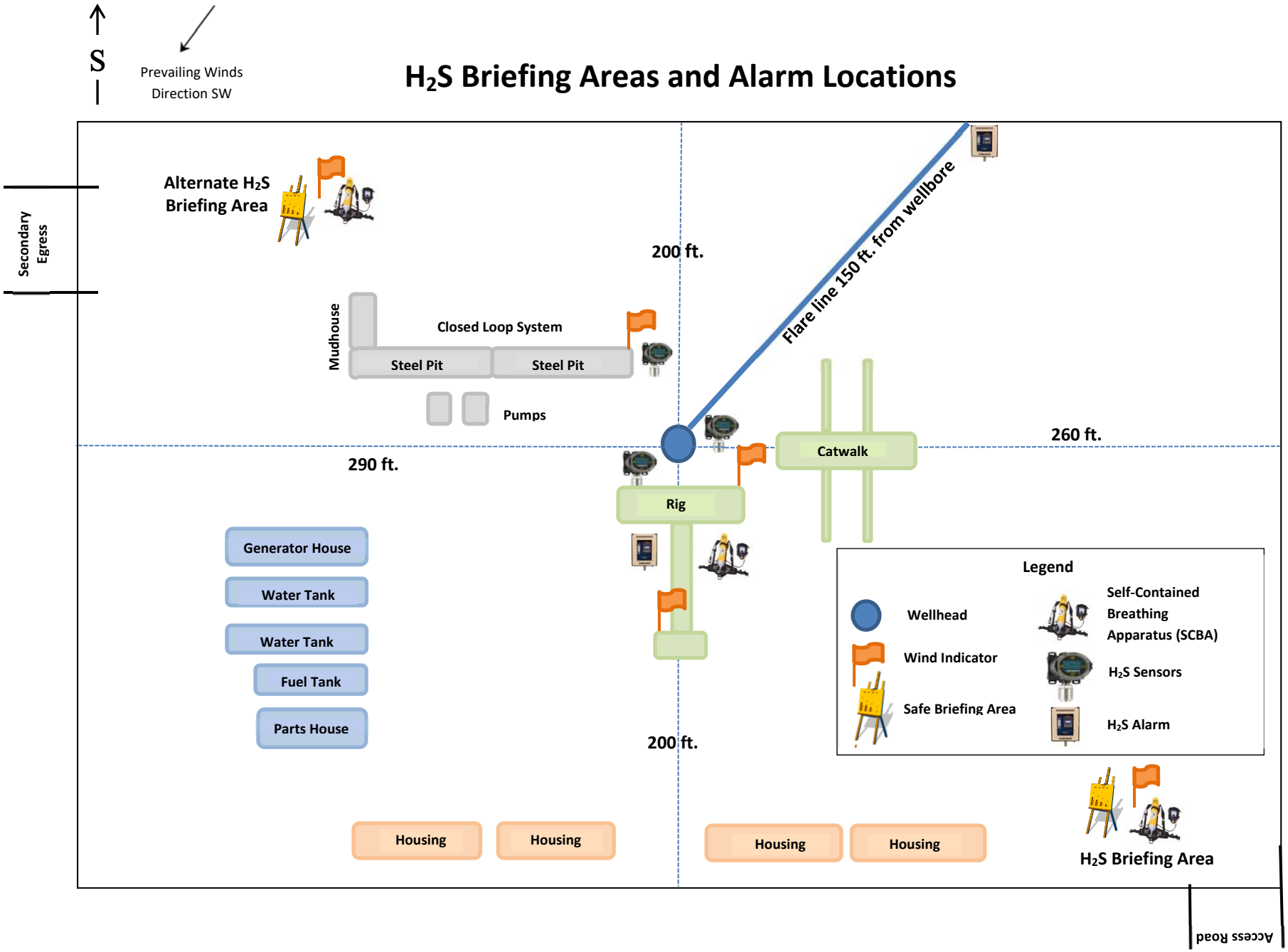
For Lea County:

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

H_2S Briefing Areas and Alarm Locations



10,000 PSI Annular BOP Variance Request

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

1. Component and Preventer Compatibility Tables

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

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

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

<u>General Procedure While Drilling</u>

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

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

General Procedure While Tripping

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

General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

    ii. Pit gain
    iii. Time
h. Regroup and identify forward plan

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

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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: 7/26/19

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

☐ Amended - Reason for Amendment: _____

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

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

Well(s)/Production Facility – Name of facility: Poker Lake Unit 30 BS 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 30 BS 101H		E-30-25S-31E	2310' FNL & 455' FWL	2600	Flared/Sold	
Poker Lake Unit 30 BS 161H		E-30-25S-31E	2310' FNL & 395' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 121H		E-30-25S-31E	2310' FNL & 425' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 152H		E-30-25S-31E	2310' FNL & 485' FWL	2900	Flared/Sold	
Poker Lake Unit 30 BS 122H		E-30-25S-31E	2310' FNL & 515' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 103H		F-30-25S-31E	2310' FNL & 1980' FWL	2600	Flared/Sold	
Poker Lake Unit 30 BS 163H		F-30-25S-31E	2310' FNL & 1920' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 153H		F-30-25S-31E	2310' FNL & 1950' FWL	2900	Flared/Sold	
Poker Lake Unit 30 BS 124H		F-30-25S-31E	2310' FNL & 2010' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 164H		F-30-25S-31E	2310' FNL & 2040' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 105H		G-30-25S-31E	2310' FNL & 1980' FEL	2600	Flared/Sold	
Poker Lake Unit 30 BS 155H		G-30-25S-31E	2310' FNL & 2040' FEL	2900	Flared/Sold	
Poker Lake Unit 30 BS 125H		G-30-25S-31E	2310' FNL & 2010' FEL	2800	Flared/Sold	
Poker Lake Unit 30 BS 166H		G-30-25S-31E	2310' FNL & 1950' FEL	4500	Flared/Sold	
Poker Lake Unit 30 BS 156H		G-30-25S-31E	2310' FNL & 1920' FEL	2900	Flared/Sold	
Poker Lake Unit 30 BS 107H		H-30-25S-31E	2310' FNL & 660' FEL	2600	Flared/Sold	
Poker Lake Unit 30 BS 127H		H-30-25S-31E	2310' FNL & 720' FEL	2900	Flared/Sold	
Poker Lake Unit 30 BS 167H		H-30-25S-31E	2310' FNL & 690' FEL	4500	Flared/Sold	
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Poker Lake Unit 30 BS 158H		H-30-25S-31E	2310' FNL & 600' FEL	2900	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 Enlink and will be connected to Enlink low/high pressure gathering system located in Loving County, Texas. It will require 850.35' of pipeline to connect the facility to low/high pressure gathering system. XTO PERMIAN OPERATING, LLC provides (periodically) to Enlink a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO PERMIAN OPERATING, LLC and Enlink have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enlink Processing Plant located in Block 27, Sec. 4, Loving County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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XTO Energy

Eddy County, NM (NAD-27)
PLU 30 Big Sinks
#155H

OH

Plan: PERMIT

Standard Planning Report

01 August, 2019

Project: Eddy County, NM (NAD-27)
Site: PLU 30 Big Sinks
Well: #155H
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: #155H

Rig Name:
RKB = 25' @ 3391.00usft
Ground Level: 3366.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	401239.80	660505.10	32.1020636	-103.8149942

DESIGN TARGET DETAILS

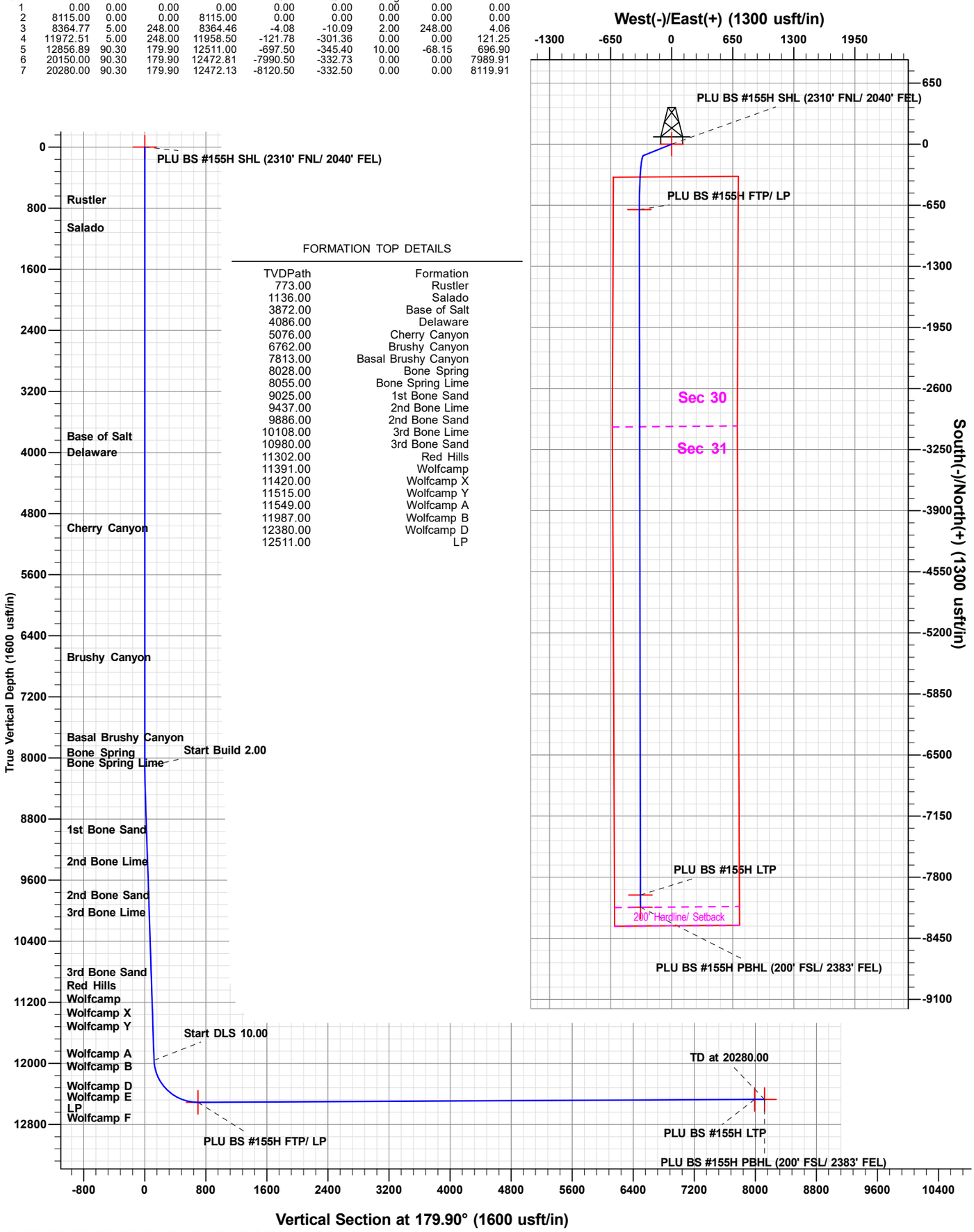
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PLU BS #155H SHL (2310' FNL/ 2040' FEL)	0.00	0.00	0.00	401239.80	660505.10	32.1020636	-103.8149942	Point
PLU BS #155H PBHL (200' FSL/ 2383' FEL)	12472.13	-8120.50	-332.50	393119.30	660172.60	32.0797453	-103.8161937	Point
PLU BS #155H LTP	12472.81	-7990.50	-333.00	393249.30	660172.10	32.0801026	-103.8161933	Point
PLU BS #155H FTP/ LP	12511.00	-697.50	-345.40	400542.30	660159.70	32.1001508	-103.8161204	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	8115.00	0.00	0.00	8115.00	0.00	0.00	0.00	0.00	0.00
3	8364.77	5.00	248.00	8364.46	-4.08	-10.09	2.00	248.00	4.06
4	11972.51	5.00	248.00	11958.50	-121.78	-301.36	0.00	0.00	121.25
5	12856.89	90.30	179.90	12511.00	-697.50	-345.40	10.00	-68.15	696.90
6	20150.00	90.30	179.90	12472.81	-7990.50	-332.73	0.00	0.00	7989.91
7	20280.00	90.30	179.90	12472.13	-8120.50	-332.50	0.00	0.00	8119.91

FORMATION TOP DETAILS

TVDPath	Formation
773.00	Rustler
1136.00	Salado
3872.00	Base of Salt
4086.00	Delaware
5076.00	Cherry Canyon
6762.00	Brushy Canyon
7813.00	Basal Brushy Canyon
8028.00	Bone Spring
8055.00	Bone Spring Lime
9025.00	1st Bone Sand
9437.00	2nd Bone Lime
9886.00	2nd Bone Sand
10108.00	3rd Bone Lime
10980.00	3rd Bone Sand
11302.00	Red Hills
11391.00	Wolfcamp
11420.00	Wolfcamp X
11515.00	Wolfcamp Y
11549.00	Wolfcamp A
11987.00	Wolfcamp B
12380.00	Wolfcamp D
12511.00	LP



Plan: PERMIT (#155H/OH)

Created By: Matthew May Date: 14:33, August 01 2019

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #155H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3391.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3391.00usft
Site:	PLU 30 Big Sinks	**North Reference:**	Grid
Well:	#155H	**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 30 Big Sinks

Site Position:		**Northing:**	401,221.20 usft	**Latitude:**	32.1020486
From:	Map	**Easting:**	657,754.30 usft	**Longitude:**	-103.8238776
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.27 °

Well #155H

Well Position	**+N/-S**	18.60 usft	**Northing:**	401,239.80 usft	**Latitude:**	32.1020637
	+E/-W	2,750.80 usft	**Easting:**	660,505.10 usft	**Longitude:**	-103.8149942
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,366.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	08/01/19	6.83	59.88	47,623

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	179.90

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	
8,115.00	0.00	0.00	8,115.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,364.77	5.00	248.00	8,364.46	-4.08	-10.09	2.00	2.00	0.00	248.00	
11,972.52	5.00	248.00	11,958.50	-121.78	-301.36	0.00	0.00	0.00	0.00	
12,856.89	90.30	179.90	12,511.00	-697.50	-345.40	10.00	9.65	-7.70	-68.15	PLU BS #155H FTP
20,150.00	90.30	179.90	12,472.81	-7,990.50	-332.73	0.00	0.00	0.00	0.00	PLU BS #155H LTP
20,280.00	90.30	179.90	12,472.13	-8,120.50	-332.50	0.00	0.00	0.00	0.00	PLU BS #155H PBH

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #155H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3391.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3391.00usft
Site:	PLU 30 Big Sinks	**North Reference:**	Grid
Well:	#155H	**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
773.00	0.00	0.00	773.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
1,136.00	0.00	0.00	1,136.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
3,872.00	0.00	0.00	3,872.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
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
4,086.00	0.00	0.00	4,086.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
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 #155H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3391.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3391.00usft
Site:	PLU 30 Big Sinks	**North Reference:**	Grid
Well:	#155H	**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
4,900.00	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
5,076.00	0.00	0.00	5,076.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
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
6,500.00	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
6,762.00	0.00	0.00	6,762.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
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
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,813.00	0.00	0.00	7,813.00	0.00	0.00	0.00	0.00	0.00	0.00
Basal Brushy Canyon									
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,028.00	0.00	0.00	8,028.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring									
8,055.00	0.00	0.00	8,055.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring Lime									
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,115.00	0.00	0.00	8,115.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	1.70	248.00	8,199.99	-0.47	-1.17	0.47	2.00	2.00	0.00
8,300.00	3.70	248.00	8,299.87	-2.24	-5.54	2.23	2.00	2.00	0.00
8,364.77	5.00	248.00	8,364.46	-4.08	-10.09	4.06	2.00	2.00	0.00
8,400.00	5.00	248.00	8,399.55	-5.23	-12.93	5.20	0.00	0.00	0.00
8,500.00	5.00	248.00	8,499.17	-8.49	-21.01	8.45	0.00	0.00	0.00
8,600.00	5.00	248.00	8,598.79	-11.75	-29.08	11.70	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #155H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3391.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3391.00usft
Site:	PLU 30 Big Sinks	**North Reference:**	Grid
Well:	#155H	**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)
8,700.00	5.00	248.00	8,698.41	-15.01	-37.15	14.95	0.00	0.00	0.00
8,800.00	5.00	248.00	8,798.03	-18.28	-45.23	18.20	0.00	0.00	0.00
8,900.00	5.00	248.00	8,897.65	-21.54	-53.30	21.45	0.00	0.00	0.00
9,000.00	5.00	248.00	8,997.27	-24.80	-61.37	24.69	0.00	0.00	0.00
9,027.84	5.00	248.00	9,025.00	-25.71	-63.62	25.60	0.00	0.00	0.00
1st Bone Sand									
9,100.00	5.00	248.00	9,096.89	-28.06	-69.45	27.94	0.00	0.00	0.00
9,200.00	5.00	248.00	9,196.51	-31.33	-77.52	31.19	0.00	0.00	0.00
9,300.00	5.00	248.00	9,296.13	-34.59	-85.59	34.44	0.00	0.00	0.00
9,400.00	5.00	248.00	9,395.75	-37.85	-93.67	37.69	0.00	0.00	0.00
9,441.41	5.00	248.00	9,437.00	-39.20	-97.01	39.03	0.00	0.00	0.00
2nd Bone Lime									
9,500.00	5.00	248.00	9,495.37	-41.11	-101.74	40.94	0.00	0.00	0.00
9,600.00	5.00	248.00	9,594.99	-44.38	-109.81	44.18	0.00	0.00	0.00
9,700.00	5.00	248.00	9,694.61	-47.64	-117.89	47.43	0.00	0.00	0.00
9,800.00	5.00	248.00	9,794.23	-50.90	-125.96	50.68	0.00	0.00	0.00
9,892.12	5.00	248.00	9,886.00	-53.91	-133.40	53.67	0.00	0.00	0.00
2nd Bone Sand									
9,900.00	5.00	248.00	9,893.85	-54.16	-134.03	53.93	0.00	0.00	0.00
10,000.00	5.00	248.00	9,993.47	-57.43	-142.11	57.18	0.00	0.00	0.00
10,100.00	5.00	248.00	10,093.09	-60.69	-150.18	60.43	0.00	0.00	0.00
10,114.96	5.00	248.00	10,108.00	-61.18	-151.39	60.91	0.00	0.00	0.00
3rd Bone Lime									
10,200.00	5.00	248.00	10,192.71	-63.95	-158.25	63.67	0.00	0.00	0.00
10,300.00	5.00	248.00	10,292.33	-67.21	-166.33	66.92	0.00	0.00	0.00
10,400.00	5.00	248.00	10,391.95	-70.47	-174.40	70.17	0.00	0.00	0.00
10,500.00	5.00	248.00	10,491.57	-73.74	-182.47	73.42	0.00	0.00	0.00
10,600.00	5.00	248.00	10,591.19	-77.00	-190.55	76.67	0.00	0.00	0.00
10,700.00	5.00	248.00	10,690.81	-80.26	-198.62	79.92	0.00	0.00	0.00
10,800.00	5.00	248.00	10,790.43	-83.52	-206.69	83.16	0.00	0.00	0.00
10,900.00	5.00	248.00	10,890.05	-86.79	-214.77	86.41	0.00	0.00	0.00
10,990.29	5.00	248.00	10,980.00	-89.73	-222.06	89.34	0.00	0.00	0.00
3rd Bone Sand									
11,000.00	5.00	248.00	10,989.67	-90.05	-222.84	89.66	0.00	0.00	0.00
11,100.00	5.00	248.00	11,089.29	-93.31	-230.91	92.91	0.00	0.00	0.00
11,200.00	5.00	248.00	11,188.91	-96.57	-238.99	96.16	0.00	0.00	0.00
11,300.00	5.00	248.00	11,288.53	-99.84	-247.06	99.41	0.00	0.00	0.00
11,313.52	5.00	248.00	11,302.00	-100.28	-248.15	99.84	0.00	0.00	0.00
Red Hills									
11,400.00	5.00	248.00	11,388.16	-103.10	-255.13	102.65	0.00	0.00	0.00
11,402.86	5.00	248.00	11,391.00	-103.19	-255.37	102.75	0.00	0.00	0.00
Wolfcamp									
11,431.97	5.00	248.00	11,420.00	-104.14	-257.72	103.69	0.00	0.00	0.00
Wolfcamp X									
11,500.00	5.00	248.00	11,487.78	-106.36	-263.21	105.90	0.00	0.00	0.00
11,527.33	5.00	248.00	11,515.00	-107.25	-265.41	106.79	0.00	0.00	0.00
Wolfcamp Y									
11,561.46	5.00	248.00	11,549.00	-108.37	-268.17	107.90	0.00	0.00	0.00
Wolfcamp A									
11,600.00	5.00	248.00	11,587.40	-109.62	-271.28	109.15	0.00	0.00	0.00
11,700.00	5.00	248.00	11,687.02	-112.89	-279.36	112.40	0.00	0.00	0.00
11,800.00	5.00	248.00	11,786.64	-116.15	-287.43	115.65	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #155H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3391.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3391.00usft
Site:	PLU 30 Big Sinks	**North Reference:**	Grid
Well:	#155H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,900.00	5.00	248.00	11,886.26	-119.41	-295.50	118.90	0.00	0.00	0.00
11,972.52	5.00	248.00	11,958.50	-121.78	-301.36	121.25	0.00	0.00	0.00
12,000.00	6.54	224.98	11,985.84	-123.33	-303.57	122.80	10.00	5.60	-83.75
12,001.16	6.62	224.26	11,987.00	-123.43	-303.67	122.90	10.00	7.09	-61.61
Wolfcamp B									
12,050.00	10.66	205.44	12,035.28	-129.53	-307.57	128.99	10.00	8.28	-38.55
12,100.00	15.31	197.15	12,083.99	-140.02	-311.51	139.48	10.00	9.30	-16.58
12,150.00	20.13	192.70	12,131.61	-154.73	-315.35	154.18	10.00	9.63	-8.89
12,200.00	25.02	189.93	12,177.76	-173.55	-319.07	172.99	10.00	9.77	-5.55
12,250.00	29.94	188.02	12,222.11	-196.34	-322.63	195.77	10.00	9.84	-3.82
12,300.00	34.88	186.60	12,264.31	-222.91	-326.02	222.34	10.00	9.89	-2.83
12,350.00	39.84	185.50	12,304.04	-253.07	-329.20	252.50	10.00	9.91	-2.20
12,400.00	44.80	184.61	12,341.00	-286.60	-332.16	286.02	10.00	9.93	-1.79
12,450.00	49.77	183.86	12,374.90	-323.22	-334.86	322.64	10.00	9.94	-1.50
12,457.96	50.56	183.75	12,380.00	-329.32	-335.26	328.73	10.00	9.94	-1.37
Wolfcamp D									
12,500.00	54.75	183.21	12,405.50	-362.67	-337.29	362.08	10.00	9.95	-1.28
12,550.00	59.72	182.64	12,432.55	-404.65	-339.42	404.06	10.00	9.95	-1.14
12,600.00	64.70	182.12	12,455.86	-448.83	-341.26	448.23	10.00	9.96	-1.03
12,650.00	69.68	181.65	12,475.23	-494.88	-342.77	494.28	10.00	9.96	-0.95
12,700.00	74.66	181.20	12,490.54	-542.45	-343.94	541.85	10.00	9.96	-0.89
12,750.00	79.65	180.77	12,501.65	-591.18	-344.78	590.57	10.00	9.97	-0.85
12,800.00	84.63	180.36	12,508.48	-640.69	-345.27	640.09	10.00	9.97	-0.82
12,850.00	89.61	179.96	12,511.00	-690.61	-345.41	690.01	10.00	9.97	-0.81
12,856.89	90.30	179.90	12,511.00	-697.50	-345.40	696.90	10.00	9.97	-0.81
LP									
12,900.00	90.30	179.90	12,510.77	-740.61	-345.33	740.01	0.00	0.00	0.00
13,000.00	90.30	179.90	12,510.25	-840.61	-345.15	840.00	0.00	0.00	0.00
13,100.00	90.30	179.90	12,509.73	-940.61	-344.98	940.00	0.00	0.00	0.00
13,200.00	90.30	179.90	12,509.20	-1,040.60	-344.80	1,040.00	0.00	0.00	0.00
13,300.00	90.30	179.90	12,508.68	-1,140.60	-344.63	1,140.00	0.00	0.00	0.00
13,400.00	90.30	179.90	12,508.16	-1,240.60	-344.46	1,240.00	0.00	0.00	0.00
13,500.00	90.30	179.90	12,507.63	-1,340.60	-344.28	1,340.00	0.00	0.00	0.00
13,600.00	90.30	179.90	12,507.11	-1,440.60	-344.11	1,440.00	0.00	0.00	0.00
13,700.00	90.30	179.90	12,506.59	-1,540.60	-343.93	1,539.99	0.00	0.00	0.00
13,800.00	90.30	179.90	12,506.06	-1,640.60	-343.76	1,639.99	0.00	0.00	0.00
13,900.00	90.30	179.90	12,505.54	-1,740.59	-343.59	1,739.99	0.00	0.00	0.00
14,000.00	90.30	179.90	12,505.01	-1,840.59	-343.41	1,839.99	0.00	0.00	0.00
14,100.00	90.30	179.90	12,504.49	-1,940.59	-343.24	1,939.99	0.00	0.00	0.00
14,200.00	90.30	179.90	12,503.97	-2,040.59	-343.07	2,039.99	0.00	0.00	0.00
14,300.00	90.30	179.90	12,503.44	-2,140.59	-342.89	2,139.99	0.00	0.00	0.00
14,400.00	90.30	179.90	12,502.92	-2,240.59	-342.72	2,239.99	0.00	0.00	0.00
14,500.00	90.30	179.90	12,502.40	-2,340.59	-342.54	2,339.98	0.00	0.00	0.00
14,600.00	90.30	179.90	12,501.87	-2,440.58	-342.37	2,439.98	0.00	0.00	0.00
14,700.00	90.30	179.90	12,501.35	-2,540.58	-342.20	2,539.98	0.00	0.00	0.00
14,800.00	90.30	179.90	12,500.83	-2,640.58	-342.02	2,639.98	0.00	0.00	0.00
14,900.00	90.30	179.90	12,500.30	-2,740.58	-341.85	2,739.98	0.00	0.00	0.00
15,000.00	90.30	179.90	12,499.78	-2,840.58	-341.68	2,839.98	0.00	0.00	0.00
15,100.00	90.30	179.90	12,499.26	-2,940.58	-341.50	2,939.98	0.00	0.00	0.00
15,200.00	90.30	179.90	12,498.73	-3,040.57	-341.33	3,039.97	0.00	0.00	0.00
15,300.00	90.30	179.90	12,498.21	-3,140.57	-341.15	3,139.97	0.00	0.00	0.00
15,400.00	90.30	179.90	12,497.68	-3,240.57	-340.98	3,239.97	0.00	0.00	0.00
15,500.00	90.30	179.90	12,497.16	-3,340.57	-340.81	3,339.97	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #155H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3391.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3391.00usft
Site:	PLU 30 Big Sinks	**North Reference:**	Grid
Well:	#155H	**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)
15,600.00	90.30	179.90	12,496.64	-3,440.57	-340.63	3,439.97	0.00	0.00	0.00
15,700.00	90.30	179.90	12,496.11	-3,540.57	-340.46	3,539.97	0.00	0.00	0.00
15,800.00	90.30	179.90	12,495.59	-3,640.57	-340.29	3,639.97	0.00	0.00	0.00
15,900.00	90.30	179.90	12,495.07	-3,740.56	-340.11	3,739.96	0.00	0.00	0.00
16,000.00	90.30	179.90	12,494.54	-3,840.56	-339.94	3,839.96	0.00	0.00	0.00
16,100.00	90.30	179.90	12,494.02	-3,940.56	-339.76	3,939.96	0.00	0.00	0.00
16,200.00	90.30	179.90	12,493.50	-4,040.56	-339.59	4,039.96	0.00	0.00	0.00
16,300.00	90.30	179.90	12,492.97	-4,140.56	-339.42	4,139.96	0.00	0.00	0.00
16,400.00	90.30	179.90	12,492.45	-4,240.56	-339.24	4,239.96	0.00	0.00	0.00
16,500.00	90.30	179.90	12,491.93	-4,340.55	-339.07	4,339.96	0.00	0.00	0.00
16,600.00	90.30	179.90	12,491.40	-4,440.55	-338.90	4,439.96	0.00	0.00	0.00
16,700.00	90.30	179.90	12,490.88	-4,540.55	-338.72	4,539.95	0.00	0.00	0.00
16,800.00	90.30	179.90	12,490.35	-4,640.55	-338.55	4,639.95	0.00	0.00	0.00
16,900.00	90.30	179.90	12,489.83	-4,740.55	-338.37	4,739.95	0.00	0.00	0.00
17,000.00	90.30	179.90	12,489.31	-4,840.55	-338.20	4,839.95	0.00	0.00	0.00
17,100.00	90.30	179.90	12,488.78	-4,940.55	-338.03	4,939.95	0.00	0.00	0.00
17,200.00	90.30	179.90	12,488.26	-5,040.54	-337.85	5,039.95	0.00	0.00	0.00
17,300.00	90.30	179.90	12,487.74	-5,140.54	-337.68	5,139.95	0.00	0.00	0.00
17,400.00	90.30	179.90	12,487.21	-5,240.54	-337.50	5,239.94	0.00	0.00	0.00
17,500.00	90.30	179.90	12,486.69	-5,340.54	-337.33	5,339.94	0.00	0.00	0.00
17,600.00	90.30	179.90	12,486.17	-5,440.54	-337.16	5,439.94	0.00	0.00	0.00
17,700.00	90.30	179.90	12,485.64	-5,540.54	-336.98	5,539.94	0.00	0.00	0.00
17,800.00	90.30	179.90	12,485.12	-5,640.54	-336.81	5,639.94	0.00	0.00	0.00
17,900.00	90.30	179.90	12,484.59	-5,740.53	-336.64	5,739.94	0.00	0.00	0.00
18,000.00	90.30	179.90	12,484.07	-5,840.53	-336.46	5,839.94	0.00	0.00	0.00
18,100.00	90.30	179.90	12,483.55	-5,940.53	-336.29	5,939.93	0.00	0.00	0.00
18,200.00	90.30	179.90	12,483.02	-6,040.53	-336.11	6,039.93	0.00	0.00	0.00
18,300.00	90.30	179.90	12,482.50	-6,140.53	-335.94	6,139.93	0.00	0.00	0.00
18,400.00	90.30	179.90	12,481.98	-6,240.53	-335.77	6,239.93	0.00	0.00	0.00
18,500.00	90.30	179.90	12,481.45	-6,340.52	-335.59	6,339.93	0.00	0.00	0.00
18,600.00	90.30	179.90	12,480.93	-6,440.52	-335.42	6,439.93	0.00	0.00	0.00
18,700.00	90.30	179.90	12,480.41	-6,540.52	-335.25	6,539.93	0.00	0.00	0.00
18,800.00	90.30	179.90	12,479.88	-6,640.52	-335.07	6,639.92	0.00	0.00	0.00
18,900.00	90.30	179.90	12,479.36	-6,740.52	-334.90	6,739.92	0.00	0.00	0.00
19,000.00	90.30	179.90	12,478.84	-6,840.52	-334.72	6,839.92	0.00	0.00	0.00
19,100.00	90.30	179.90	12,478.31	-6,940.52	-334.55	6,939.92	0.00	0.00	0.00
19,200.00	90.30	179.90	12,477.79	-7,040.51	-334.38	7,039.92	0.00	0.00	0.00
19,300.00	90.30	179.90	12,477.26	-7,140.51	-334.20	7,139.92	0.00	0.00	0.00
19,400.00	90.30	179.90	12,476.74	-7,240.51	-334.03	7,239.92	0.00	0.00	0.00
19,500.00	90.30	179.90	12,476.22	-7,340.51	-333.86	7,339.92	0.00	0.00	0.00
19,600.00	90.30	179.90	12,475.69	-7,440.51	-333.68	7,439.91	0.00	0.00	0.00
19,700.00	90.30	179.90	12,475.17	-7,540.51	-333.51	7,539.91	0.00	0.00	0.00
19,800.00	90.30	179.90	12,474.65	-7,640.50	-333.33	7,639.91	0.00	0.00	0.00
19,900.00	90.30	179.90	12,474.12	-7,740.50	-333.16	7,739.91	0.00	0.00	0.00
20,000.00	90.30	179.90	12,473.60	-7,840.50	-332.99	7,839.91	0.00	0.00	0.00
20,100.00	90.30	179.90	12,473.08	-7,940.50	-332.81	7,939.91	0.00	0.00	0.00
20,150.00	90.30	179.90	12,472.81	-7,990.50	-332.73	7,989.91	0.00	0.00	0.00
20,200.00	90.30	179.90	12,472.55	-8,040.50	-332.64	8,039.91	0.00	0.00	0.00
20,280.00	90.30	179.90	12,472.13	-8,120.50	-332.50	8,119.91	0.00	0.00	0.00

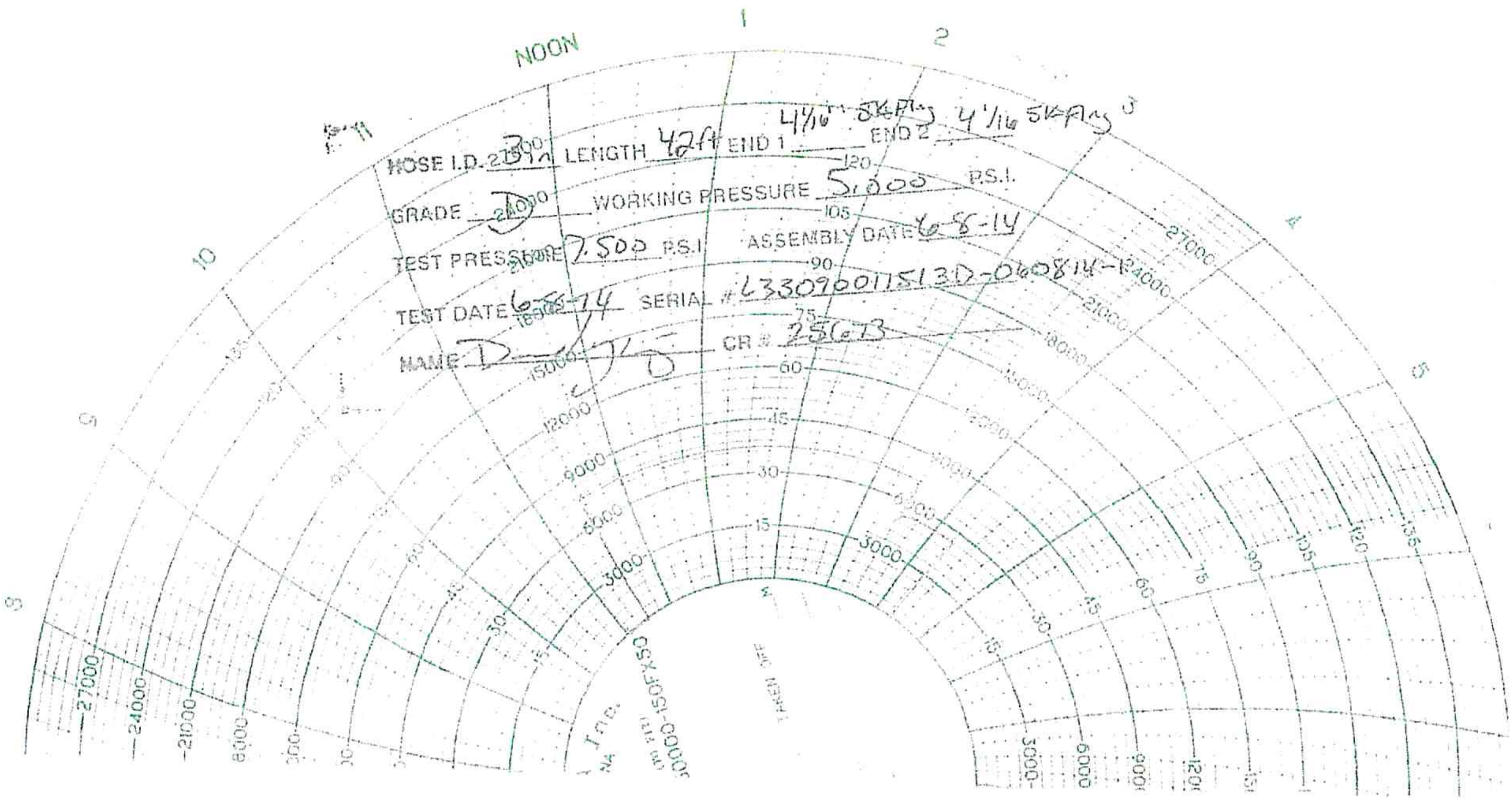
Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #155H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3391.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3391.00usft
Site:	PLU 30 Big Sinks	**North Reference:**	Grid
Well:	#155H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PLU BS #155H SHL (: - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	401,239.80	660,505.10	32.1020637	-103.8149942
PLU BS #155H PBHL - plan hits target center - Point	0.00	0.00	12,472.13	-8,120.50	-332.50	393,119.30	660,172.60	32.0797453	-103.8161937
PLU BS #155H LTP - plan misses target center by 0.27usft at 20150.00usft MD (12472.81 TVD, -7990.50 N, -332.73 E) - Point	0.00	0.00	12,472.81	-7,990.50	-333.00	393,249.30	660,172.10	32.0801027	-103.8161933
PLU BS #155H FTP - plan hits target center - Point	0.00	0.00	12,511.00	-697.50	-345.40	400,542.30	660,159.70	32.1001509	-103.8161204

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
773.00	773.00	Rustler			
1,136.00	1,136.00	Salado			
3,872.00	3,872.00	Base of Salt			
4,086.00	4,086.00	Delaware			
5,076.00	5,076.00	Cherry Canyon			
6,762.00	6,762.00	Brushy Canyon			
7,813.00	7,813.00	Basal Brushy Canyon			
8,028.00	8,028.00	Bone Spring			
8,055.00	8,055.00	Bone Spring Lime			
9,027.84	9,025.00	1st Bone Sand			
9,441.41	9,437.00	2nd Bone Lime			
9,892.12	9,886.00	2nd Bone Sand			
10,114.96	10,108.00	3rd Bone Lime			
10,990.29	10,980.00	3rd Bone Sand			
11,313.52	11,302.00	Red Hills			
11,402.86	11,391.00	Wolfcamp			
11,431.97	11,420.00	Wolfcamp X			
11,527.33	11,515.00	Wolfcamp Y			
11,561.46	11,549.00	Wolfcamp A			
12,001.16	11,987.00	Wolfcamp B			
12,457.96	12,380.00	Wolfcamp D			
12,856.89	12,511.00	LP			



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HOSE I.D. 3 in LENGTH 42 ft END 1 4 1/16" 5K Fig END 2 4 1/16 5K Fig
GRADE D WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I. ASSEMBLY DATE 6-8-14
TEST DATE 6-8-14 SERIAL # L330900115130-060814-1
NAME D. J. CR # 25673
TAKEN OFF
0000-150FX50

10,000 PSI Annular BOP Variance Request

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

1. Component and Preventer Compatibility Tables

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

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

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

<u>General Procedure While Drilling</u>

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

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

General Procedure While Tripping

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

General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

    ii. Pit gain
    iii. Time
h. Regroup and identify forward plan

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