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.
NMNM14778

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.
CORRAL CANYON 15-10 FED
168H

2. Name of Operator
XTO ENERGY INCORPORATED

9. API Well No. 30-015-53879

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
222777 SPRINGSWOODS VILLAGE PKWY, SPRING, TX	(817) 870-2800	PURPLE SAGE/WOLFCAMP (GAS)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NENE / 284 FNL / 955 FEL / LAT 32.121985 / LONG -103.966814
At proposed prod. zone NENE / 200 FNL / 330 FEL / LAT 32.151416 / LONG -103.964807

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 22/T25S/R29E/NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
	EDDY	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
330 feet		640.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
30 feet	11134 feet / 21581 feet	FED:

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3086 feet	11/30/2021	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	Name *(Printed/Typed)*	Date
(Electronic Submission)	KELLY KARDOS / Ph: (432) 620-6700	11/20/2020

Title
Regulatory Coordinator

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	CODY LAYTON / Ph: (575) 234-5959	12/02/2022

Title	Office
Assistant Field Manager Lands & Minerals	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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 12/02/2022

Additional Operator Remarks

Location of Well

0. SHL: NENE / 284 FNL / 955 FEL / TWSP: 25S / RANGE: 29E / SECTION: 22 / LAT: 32.121985 / LONG: -103.966814 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 330 FSL / 330 FEL / TWSP: 25S / RANGE: 29E / SECTION: 15 / LAT: 32.123677 / LONG: -103.964801 (TVD: 11134 feet, MD: 11490 feet)

BHL: NENE / 200 FNL / 330 FEL / TWSP: 25S / RANGE: 29E / SECTION: 10 / LAT: 32.151416 / LONG: -103.964807 (TVD: 11134 feet, MD: 21581 feet)

BLM Point of Contact

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: (575) 234-5934

Email: pperez@blm.gov

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
30-015-53879	98220	Purple Sage;Wolfcamp (gas)

[4] Property Code	[5] Property Name	[6] Well Number
334103	CORRAL CANYON 15-10 FED	168H

[7] OGRID No.	[8] Operator Name	[9] Elevation
005380	XTO ENERGY, INC.	3,086'

[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
A	22	25 S	29 E		284	NORTH	955	EAST	EDDY

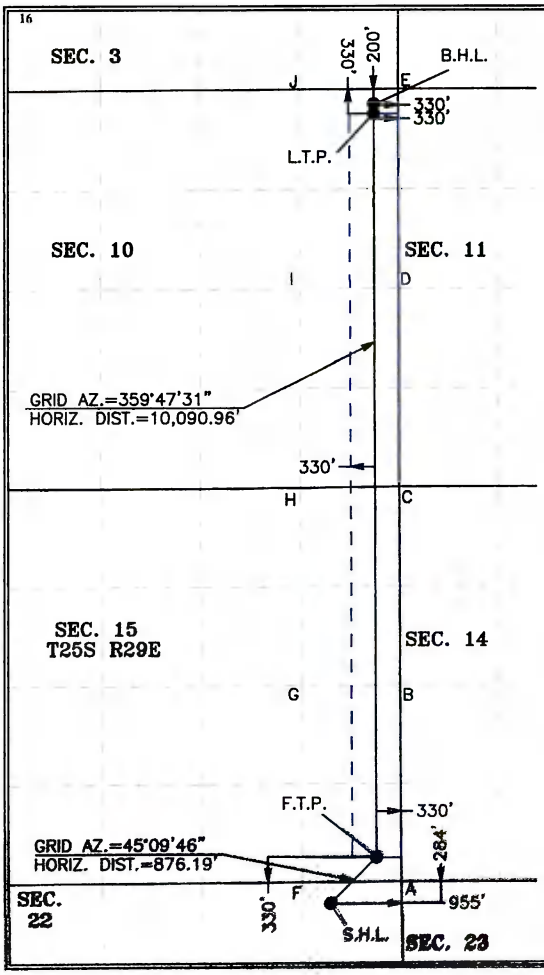
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	25 S	29 E		200	NORTH	330	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.

[16]



SHL (NAD83 NME)		LTP (NAD83 NME)	
Y =	408,307.1	Y =	418,885.8
X =	654,803.7	X =	655,388.7
LAT. =	32.121985 °N	LAT. =	32.151059 °N
LONG. =	103.966814 °W	LONG. =	103.964808 °W
FTP (NAD83 NME)		**BHL (NAD83 NME)**	
Y =	408,924.9	Y =	419,015.8
X =	655,425.0	X =	655,388.4
LAT. =	32.123677 °N	LAT. =	32.151416 °N
LONG. =	103.964801 °W	LONG. =	103.964807 °W

CORNER COORDINATES (NAD83 NME)		
A - Y =	408,596.8 N ,	X = 655,756.5 E
B - Y =	411,250.4 N ,	X = 655,744.5 E
C - Y =	413,906.2 N ,	X = 655,732.9 E
D - Y =	416,561.6 N ,	X = 655,725.5 E
E - Y =	419,217.6 N ,	X = 655,717.8 E
F - Y =	408,589.2 N ,	X = 654,431.2 E
G - Y =	411,243.4 N ,	X = 654,418.1 E
H - Y =	413,893.3 N ,	X = 654,405.3 E
I - Y =	416,553.2 N ,	X = 654,399.0 E
J - Y =	419,210.1 N ,	X = 654,392.5 E

SHL (NAD27 NME)		LTP (NAD27 NME)	
Y =	408,248.6	Y =	418,827.0
X =	613,619.4	X =	614,204.7
LAT. =	32.121860 °N	LAT. =	32.150934 °N
LONG. =	103.966328 °W	LONG. =	103.964320 °W
FTP (NAD27 NME)		**BHL (NAD27 NME)**	
Y =	408,866.4	Y =	418,957.0
X =	614,240.7	X =	614,204.3
LAT. =	32.123552 °N	LAT. =	32.151292 °N
LONG. =	103.964314 °W	LONG. =	103.964320 °W

CORNER COORDINATES (NAD27 NME)		
A - Y =	408,538.3 N ,	X = 614,572.2 E
B - Y =	411,191.9 N ,	X = 614,560.2 E
C - Y =	413,847.5 N ,	X = 614,548.6 E
D - Y =	416,502.9 N ,	X = 614,541.4 E
E - Y =	419,158.9 N ,	X = 614,533.7 E
F - Y =	408,530.7 N ,	X = 613,246.9 E
G - Y =	411,184.9 N ,	X = 613,233.9 E
H - Y =	413,834.6 N ,	X = 613,221.1 E
I - Y =	416,494.5 N ,	X = 613,214.9 E
J - Y =	419,151.4 N ,	X = 613,208.5 E

[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.

Cassie Evans 10/15/2020
Signature Date

Cassie Evans
Printed Name

cassie_evans@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.

9-16-2020
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP 23786
Certificate Number

LM 20200010012

P:\PROJECTS\2020\20200010012-XTO-CORRAL_CANYON_15-10_FED_168H-EDDY\DWG\20200010012-XTO-CORRAL_CANYON_15-10_FEDERAL_168H_C-102.dwg

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: _____XTO Energy Inc_____ **OGRID:** _____05380_____ **Date:** _01_/_16_/2023_

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Corral Canyon 15-10 Fed 102H		D-22-25S-29E	701' FNL; 585' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 103H		C-22-25S-29E	890' FNL; 2020' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 104H		B-22-25S-29E	894' FNL; 2049' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 105H		B-22-25S-29E	604' FNL; 1705' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 107H		A-22-25S-29E	284' FNL; 865' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 108H		A-22-25S-29E	284' FNL; 835' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 121H		D-22-25S-29E	705' FNL; 615' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 122H		D-22-25S-29E	709' FNL; 645' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 124H		C-22-25S-29E	886' FNL; 1990' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 125H		B-22-25S-29E	608' FNL; 1675' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 126H		B-22-25S-29E	612' FNL; 1646' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 127H		A-22-25S-29E	284' FNL; 895' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 161H		D-22-25S-29E	697' FNL; 555' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 162H		D-22-25S-29E	693' FNL; 526' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 163H		C-22-25S-29E	882' FNL; 1960' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 164H		C-22-25S-29E	878' FNL; 1930' FWL	2000	3200	3500
Corral Canyon 15-10 Fed 165H		B-22-25S-29E	600' FNL; 1735' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 166H		B-22-25S-29E	595' FNL; 1765' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 167H		A-22-25S-29E	284' FNL; 924' FEL	2000	3200	3500
Corral Canyon 15-10 Fed 168H		A-22-25S-29E	284' FNL; 955' FEL	2000	3200	3500

IV. Central Delivery Point Name: ____ Corral Canyon 15-10 CTB _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Corral Canyon 15-10 Fed 102H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 103H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 104H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 105H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 107H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 108H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 121H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 122H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 124H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 125H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 126H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 127H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 161H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 162H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 163H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 164H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 165H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 166H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 167H		TBD	TBD	TBD	TBD	TBD
Corral Canyon 15-10 Fed 168H		TBD	TBD	TBD	TBD	TBD

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☐ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☒ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☒ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: Cassie Evans
Printed Name: Cassie Evans
Title: Regulatory Analyst
E-mail Address: cassie.evans@exxonmobil.com
Date: 01/16/2023
Phone: 432.218.3671

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment:

XTO Permian Operating, LLC. production tank batteries include separation equipment designed to efficiently separate gas from liquid phases to optimize gas capture based on projected and estimated volumes from the targeted pool in conjunction with the total number of wells planned to or existing within the facility. Separation equipment is upgraded prior to well being drilled or completed, if determined to be undersized or needed. The separation equipment is designed and built according to the relevant industry specifications (API Specification 12J and ASME Sec VIII Div I). Other recognized industry publications such as the Gas Processors Suppliers Association (GPSA) are referenced when designing separation equipment to optimize gas capture.

VII. Operational Practices:

1. Subsection B.
    - During drilling, flare stacks will be located a minimum of 150 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
    - Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.
    - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
2. Subsection C.
    - During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.

    For emergencies, equipment malfunction, or if the operator decides to produce oil and gas during well completion:

    - Flowlines will be routed for flowback fluids into a completion or storage tank and, if feasible under well conditions, flare rather than vent and commence operation of a separator as soon as it is technically feasible for a separator to function.
    - Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.
    - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
3. Subsection D.
    - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
    - Monitor manual liquid unloading for wells on-site or in close proximity (<30 minutes' drive time), take reasonable actions to achieve a stabilized rate and pressure at the earliest practical time, and take reasonable actions to minimize venting to the maximum extent practicable.

- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

4. Subsection E.
   - All tanks and separation equipment are designed for maximum throughput and pressure to minimize waste.
   - Flare stack was installed prior to May 25, 2021 but has been designed for proper size and combustion efficiency. Flare currently has a continuous pilot and is located more than 100 feet from any known well and storage tanks.
   - At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
5. Subsection F.
   - Measurement equipment is installed to measure the volume of natural gas flared from process piping or a flowline piped from the equipment associated with a well and facility associated with the approved application for permit to drill that has an average daily production greater than 60 mcf of natural gas.
   - Measurement equipment installed is not designed or equipped with a manifold to allow diversion of natural gas around the metering equipment, except for the sole purpose of inspecting and servicing the measurement equipment, as noted in NMAC 19.15.27.8 Subsection G.

VIII. Best Management Practices:

1. During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
2. Operator does not flow well (well shut in) during initial production until all flowlines, tank batteries, and oil/gas takeaway are installed, tested, and determined operational.
3. Operator equips storage tanks with an automatic gauging system to reduce venting of natural gas.
4. Operator reduces the number of blowdowns by looking for opportunities to coordinate repair and maintenance activities.
5. Operator combusts natural gas that would otherwise be vented or flared, when feasible.
6. Operator has a flare stack designed in accordance with need and to handle sufficient volume to ensure proper combustion efficiency. Flare stacks are equipped with continuous pilots and securely anchored at least 100 feet (at minimum) from storage tanks and wells.
7. Operator minimizes venting (when feasible) through pump downs of vessels and reducing time required to purge equipment before returning equipment to service.
8. Operator will shut in wells (when feasible) in the event of a takeaway disruption, emergency situation, or other operations where venting or flaring may occur due to equipment failures.

AFMSS

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

Drilling Plan Data Report
05/02/2023

APD ID: 10400065315 **Submission Date:** 11/20/2020

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

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	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
1162482	PERMIAN	3086	0	0	OTHER : QUATERNERNARY	NONE	N
1162483	RUSTLER	2437	649	649	SILTSTONE	USEABLE WATER	N
1162484	TOP SALT	2132	954	954	SALT	NONE	N
1162485	BASE OF SALT	102	2984	2984	SALT	NONE	N
1162486	DELAWARE	-102	3188	3188	SANDSTONE	NATURAL GAS, OIL, OTHER : PRODUCED WATER	N
1162487	BONE SPRING	-3840	6926	6926	SANDSTONE	NATURAL GAS, OIL, OTHER : PRODUCED WATER	N
1162488	WOLFCAMP	-7060	10146	10146	SHALE	NATURAL GAS, OIL, OTHER : PRODUCED WATER	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 11134

Equipment: Once the permanent WH is installed on the 11-3/4 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8 minimum 5M Hydril and a 13-5/8 minimum 10M 3-Ram BOP. MASP should not exceed 5077 psi.

Requesting Variance? YES

Variance request: XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M). Also a variance is requested to test the 5M annular to 70% of working pressure at 3500 psi. 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. Approval to utilize a spudder rig to pre-set surface casing per the attached Description of Operations. Batch drill this well if necessary. In doing so, XTO will set each casing string and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per GE recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells. ONLY test broken pressure seals on the BOP equipment per the attached procedure. A variance is requested to cement offline for the surface and intermediate casing strings.

Testing Procedure: All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 70% of the working pressure. When nippling up on the 11 3/4", 10M bradenhead and flange, the BOP test will be limited to 10000 psi. All BOP tests will include a low pressure test as per BLM regulations.

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

Choke Diagram Attachment:

CC_15_10_10MCM_20201117090243.pdf

BOP Diagram Attachment:

CC_15_10_Fed_5M10M_BOP_20201117090459.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	14.75	11.75	NEW	API	N	0	875	0	875	3086	2211	875	J-55	47	ST&C	3.81	1.1	DRY	17.92	DRY	17.92
2	INTERMEDIATE	10.625	8.625	NEW	API	N	0	10220	0	10220	3084	-7134	10220	HCL-80	32	ST&C	1.34	1.12	DRY	2.54	DRY	2.54
3	PRODUCTION	7.875	5.5	NEW	API	N	0	21581	0	11099	3084	-8013	21581	P-110	20	BUTT	1.47	1.2	DRY	2.13	DRY	2.13

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CC_15_10_Fed_168H_csg_20201117095309.pdf

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CC_15_10_Fed_168H_csg_20201117095248.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CC_15_10_Fed_168H_csg_20201117095221.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	875	260	1.87	12.9	486.2	100	EconoCem-HLTRRC	none
SURFACE	Tail				190	1.35	14.8	256.5	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead		400	3500	580	1.88	12.9	1090.4	100	EconoCem-HLTRRC	none
INTERMEDIATE	Tail				150	1.33	14.8	199.5	100	Halcem-C	2% CaCl
INTERMEDIATE	Lead	3500	3500	10220	1280	1.87	12.9	2137.6	100	Econocem-HLTRRC	none

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail				310	1.35	14.8	418.5	100	Halcem-C	2% CaCl
PRODUCTION	Lead		9220	21581	1670	1.61	13.2	2688.7	30	VersaCem	none

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	875	OTHER : FW / Native	8.4	8.8							A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.
875	10220	OTHER : Brine / Cut Brine / WBM	8.8	9.5							A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

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
											performed every 24 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.
10220	11134	OTHER : Cut Brine / WBM / OBM	10	13.5							A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hrs to determine: density, viscosity, strength, filtration and pH as necessary. Solids control equipment will be used to operate as a closed loop system.

Section 6 - Test, Logging, Coring

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

Mud logging Unit (2 man) on below intermediate casing.

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

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

Coring operation description for the well:

no coring will take place on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7527 **Anticipated Surface Pressure:** 5077

Anticipated Bottom Hole Temperature(F): 160

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

CC_15_10_Fed_Pad_A_H2S_Diagram_20201023103238.pdf

CC_15_10_H2S_Plan_20201023103224.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

CC_15_10_Fed_168H_DD_20201117095527.pdf

Other proposed operations facets description:

The surface fresh water sands will be protected by setting 11 3/4" inch casing @ 875' (81' above the salt) and circulating cement back to surface. The 8-5/8" intermediate casing will be set at 10220' and bring TOC back 200' inside the previous shoe. A 7-7/8 inch curve and lateral hole will be drilled to MD/TD and 5-1/2 inch casing will be set at TD and cemented back 500' into the 8-5/8" casing shoe.

-XTO requests to not utilize centralizers in the curve and lateral
-8-5/8" 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 Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less.

Permanent Wellhead Multibowl System
A. Starting Head: 13-5/8 10M top flange x 13-3/8 SOW bottom
B. Tubing Head: 13-5/8 10M bottom flange x 7-1/16 15M top flange
-Wellhead will be installed by manufacturers representatives.
-Manufacturer will monitor welding process to ensure appropriate temperature of seal.
-Operator will test the 8-5/8" casing per BLM Onshore Order 2
-Wellhead Manufacturer representative will not be present for BOP test plug installation

Other proposed operations facets attachment:

CC_15_10_Fed_GCP_20201023103417.pdf

Other Variance attachment:

CC_15_10_Break_20201023103526.pdf

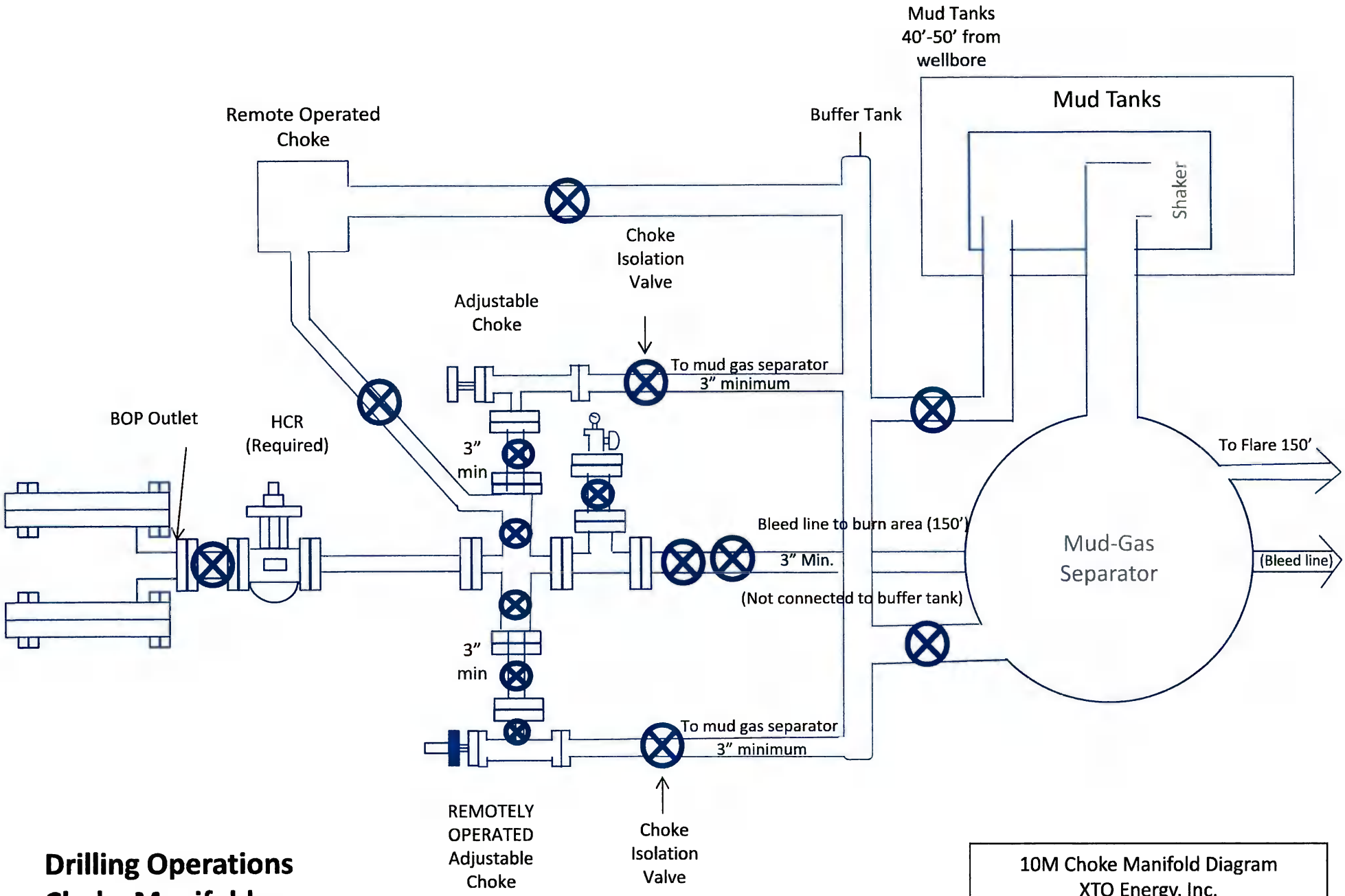
CC_15_10_FH_20201023103454.pdf

CC_15_10_MBD_20201023103510.PDF

CC_15_10_Spud_20201023103552.pdf

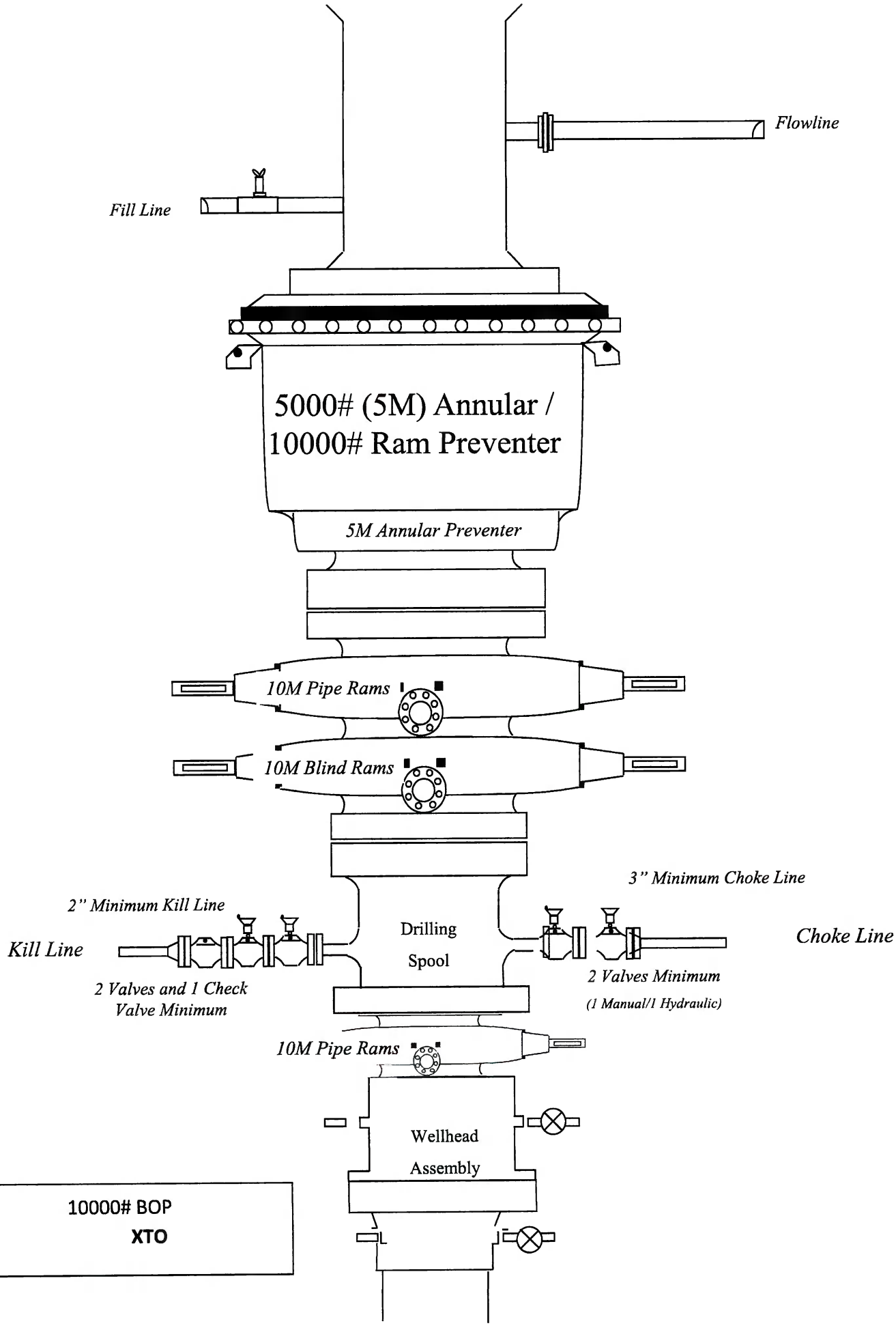
CC_15_10_WWCP_20201117091416.pdf

CC_15_10_cmt_variance_20201023103539.pdf



Drilling Operations
Choke Manifold
10M Service

10M Choke Manifold Diagram
XTO Energy, Inc.



10000# BOP

XTO

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
14-3/4"	0' – 875'	11 3/4"	47	STC	J-55	New	1.10	3.81	17.92
10-5/8"	0' – 10220'	8-5/8"	32	STC	HCL-80	New	1.12	1.34	2.24
7-7/8"	0' – 21581'	5-1/2"	20	BTC	P-110	New	1.20	1.47	2.13

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

· 8-5/8" 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 Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:

Permanent Wellhead – Cactus Multibowl System

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

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

· 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 BLM Onshore Order 2

· Wellhead Manufacturer representative will not be present for BOP test plug installation

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

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

GRADE D PRESSURE TEST CERTIFICATE

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

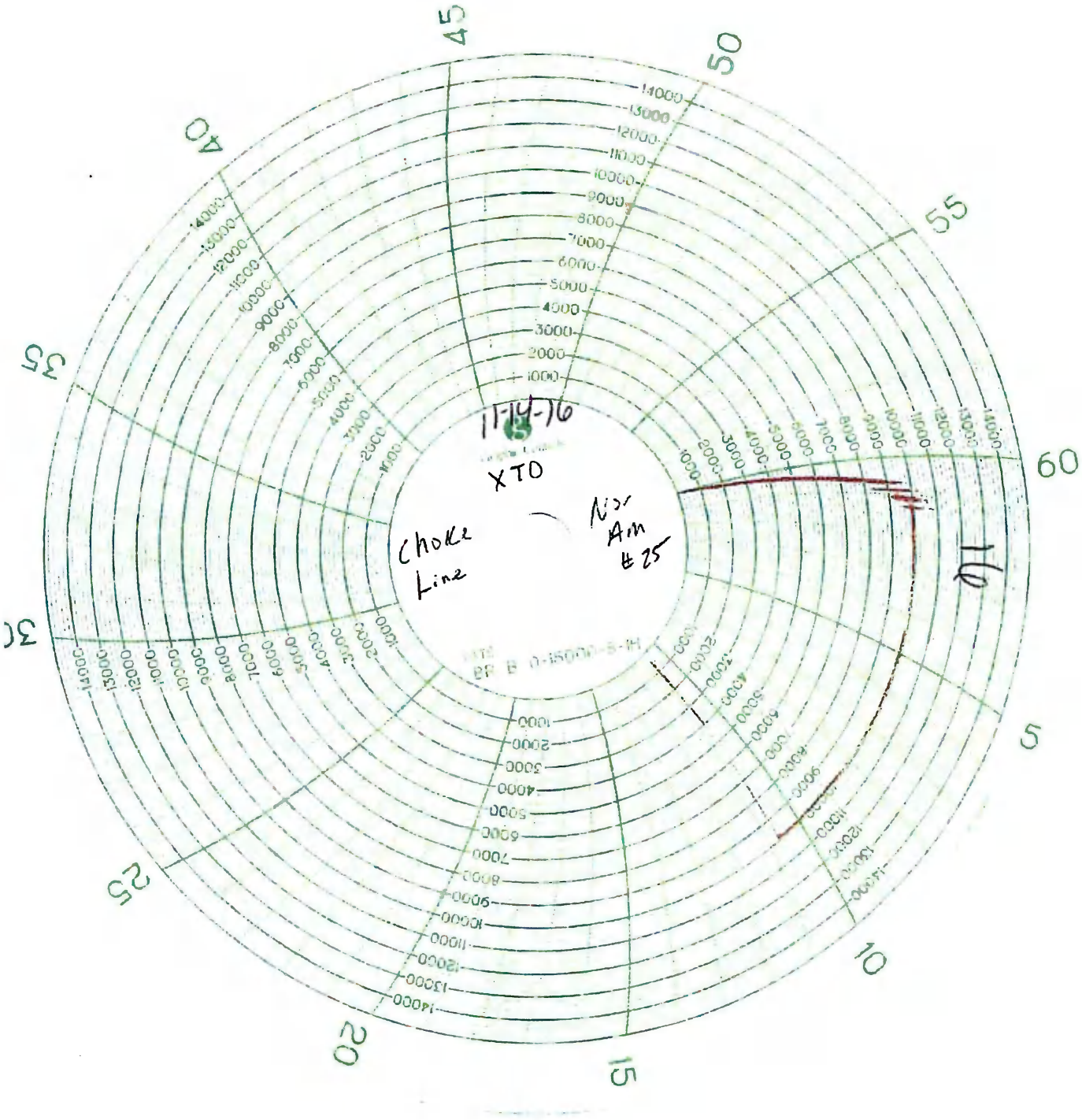
Product Description:	FD3.0-2.0R41/16.5KFLGE/E LE

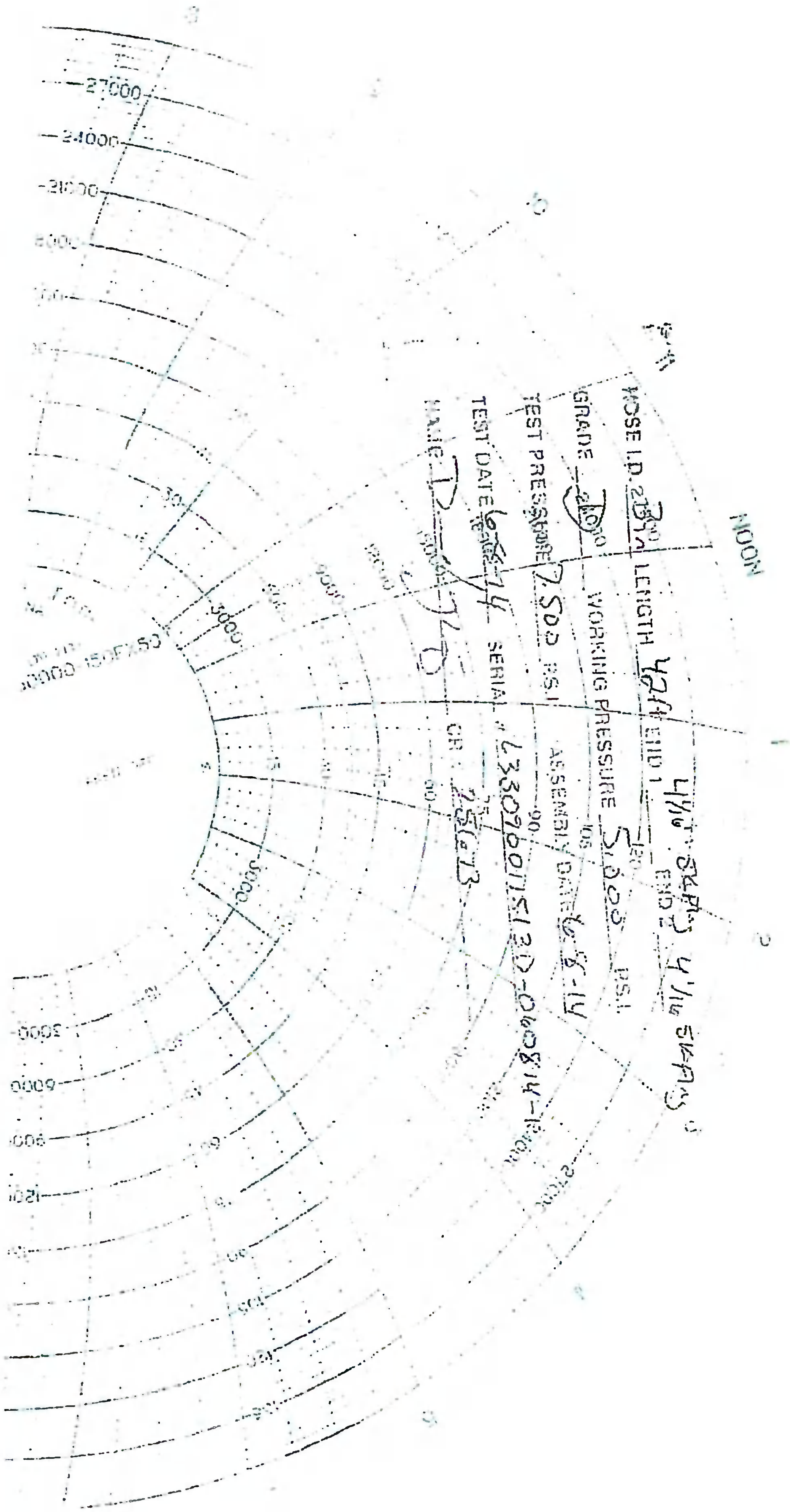
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

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

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

Form PTC - 01 Rev.0 2


11-14-16
XTO
Choke Line
Kill Arm #25


NOON
HOSE I.D. 3" LENGTH 42ft END 1 4 1/16 5K Flg END 2 4 1/16 5K Flg
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 # 633096011513D-060814-1
CR # 25673

Subject: Request for a Variance Allowing break Testing of the Blowout Preventer Equipment (BOPE)

XTO Energy requests a variance to ONLY test broken pressure seals on the BOPE and function test BOP when skidding a drilling rig between multiple wells on a pad.

Background

Onshore Oil and Gas Order (OOGO) No. 2, Drilling Operations, Sections III.A.2.i.iv.B states that the BOP test must be performed whenever any seal subject to test pressure is broken. The current interpretation of the Bureau of Land Management (BLM) requires a complete BOP test and not just a test of the affected component. OOGO No. 2, Section I.D.2 states, "Some situation may exist either on a well-by-well basis or field-wide basis whereby it is commonly accepted practice to vary a particular minimum standard(s) established in this order. This situation can be resolved by requesting a variance...". XTO Energy feels the break testing the BOPE is such a situation. Therefore, as per OOGO No. 2, Section IV., XTO Energy submits this request for the variance.

Supporting Documentation

OOGO No. 2 became effective on December 19, 1988 and has remained the standard for regulating BLM onshore drilling operations for over 30 years. During this time there have been significant changes in drilling technology. BLM continues to use the variance request process to allow for the use of modern technology and acceptable engineering practices that have arisen since OOGO No. 2 was originally released. The XTO Energy drilling rig fleet has many modern upgrades that allow the intact BOP stack to be moved between well slots on a multi-well pad, as well as, wellhead designs that incorporate quick connects facilitating release of the BOP from the wellhead without breaking any BOP stack components apart. These technologies have been used extensively offshore, and other regulators, API, and many operators around the world have endorsed break testing as safe and reliable.

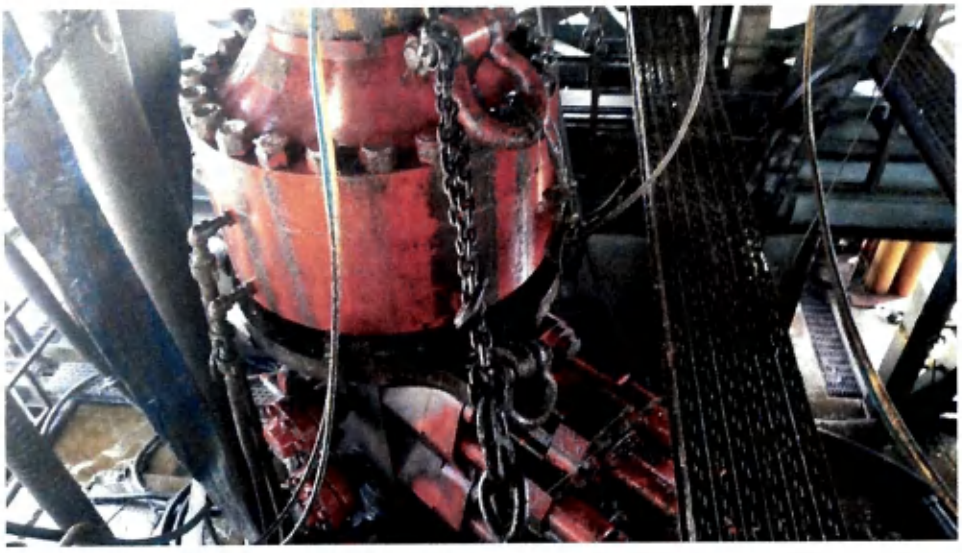


Figure 1: Winch System attached to BOP Stack

Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. OOGO No. 2 recognizes API recommended Practices (RP) 53 in its original development. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (Fifth Edition, December 2018, Annex C, Table C.4) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 5.3.7.1 states "A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component." See Table C.4 below for reference.

62 API STANDARD 53

Table C.4—Initial Pressure Testing, Surface BOP Stacks

Component to be Pressure Tested	Pressure Test—Low Pressure[a,c] psig (MPa)	Pressure Test—High Pressure[a,c]	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer[b]	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower
Fixed pipe, variable bore, blind, and BSR preventers[b,c]	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

[a] Pressure test evaluation periods shall be a minimum of five minutes.
No visible leaks.
The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

[b] Annular(s) and VBR(s) shall be pressure tested on the largest and smallest OD drill pipe to be used in well program.

[c] For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

[d] For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

[e] Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specification and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations.

Break testing has been approved by the BLM in the past with other operators based on the detailed information provided in this document.

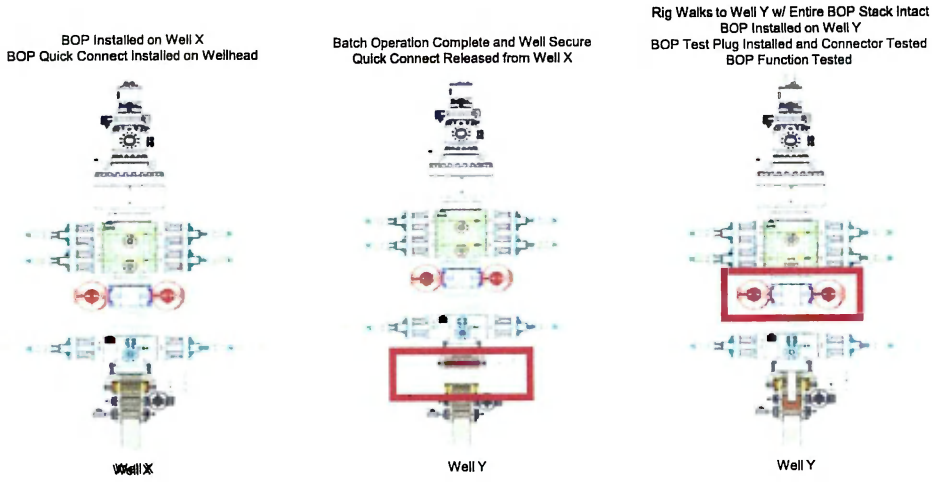
XTO Energy feels break testing and our current procedures meet the intent of OOGO No. 2 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of OOGO No. 2 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the OOGO No.2.

Procedures

1. XTO Energy will use this document for our break testing plan for New Mexico Delaware basin. The summary below will be referenced in the APD or Sundry Notice and receive approval prior to implementing this variance.
2. XTO Energy will perform BOP break testing on multi-wells pads where multiple intermediate sections can be drilled and cased within the 21-day BOP test window.
    a. A full BOP test will be conducted on the first well on the pad.
    b. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
        i. Our Lower WC targets set the intermediate casing shoe no deeper than the Wolfcamp B.
        ii. Our Upper WC targets set the intermediate casing shoe shallower than the Wolfcamp B.
    c. A Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
    d. A full BOP test will be required prior to drilling any production hole.
3. After performing a complete BOP test on the first well, the intermediate hole section will be drilled and cased, two breaks would be made on the BOP equipment.
    a. Between the HCV valve and choke line connection
    b. Between the BOP quick connect and the wellhead
4. The BOP is then lifted and removed from the wellhead by a hydraulic system.
5. After skidding to the next well, the BOP is moved to the wellhead by the same hydraulic system and installed.
6. The connections mentioned in 3a and 3b will then be reconnected.
7. Install test plug into the wellhead using test joint or drill pipe.
8. A shell test is performed against the upper pipe rams testing the two breaks.
9. The shell test will consist of a 250 psi low test and a high test to the value submitted in the APD or Sundry (e.g. 5,000 psi or 10,000psi).
10. Function test will be performed on the following components: lower pipe rams, blind rams, and annular.

11. For a multi-well pad the same two breaks on the BOP would be made and on the next wells and steps 4 through 10 would be repeated.
12. A second break test would only be done if the intermediate hole section being drilled could not be completed within the 21 day BOP test window.

Note: Picture below highlights BOP components that will be tested during batch operations



Summary

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API Standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to ONLY retest broken pressure seals if the following conditions are met:

1. After a full BOP test is conducted on the first well on the pad.

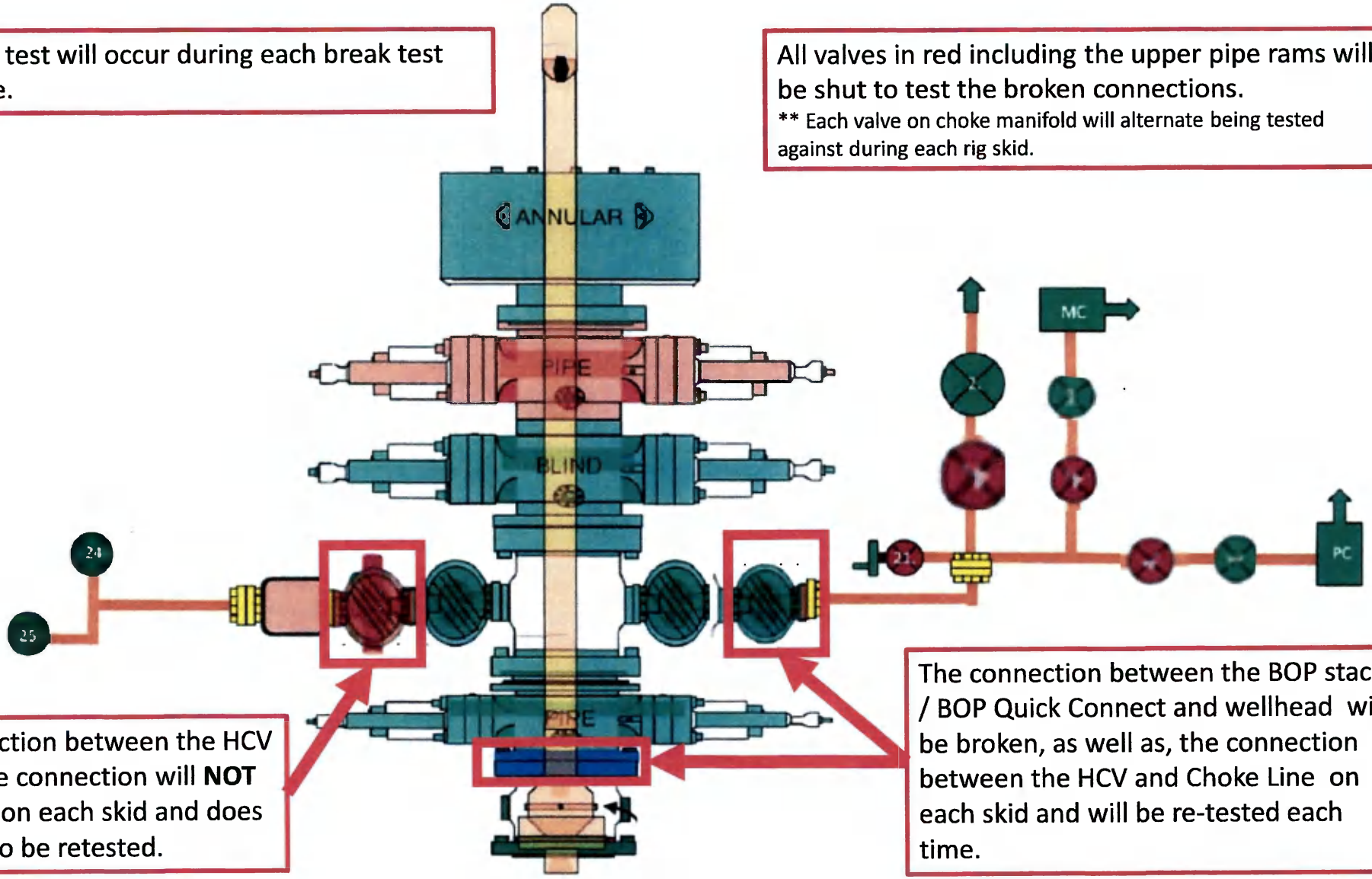
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.

3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.

4. Full BOP test will be required prior to drilling the production hole.

Only **ONE** test will occur during each break test procedure.

All valves in red including the upper pipe rams will be shut to test the broken connections.
** Each valve on choke manifold will alternate being tested against during each rig skid.



The connection between the HCV and kill line connection will **NOT** be broken on each skid and does not need to be retested.

The connection between the BOP stack / BOP Quick Connect and wellhead will be broken, as well as, the connection between the HCV and Choke Line on each skid and will be re-tested each time.

XTO Permian Operating, LLC Offline Cementing Variance Request

XTO requests the option to cement the surface and intermediate casing strings offline as a prudent batch drilling efficiency of acreage development.

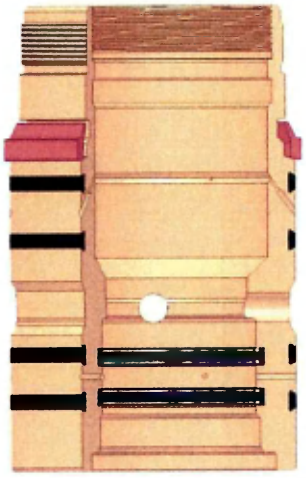
1. Cement Program

No changes to the cement program will take place for offline cementing.

2. Offline Cementing Procedure

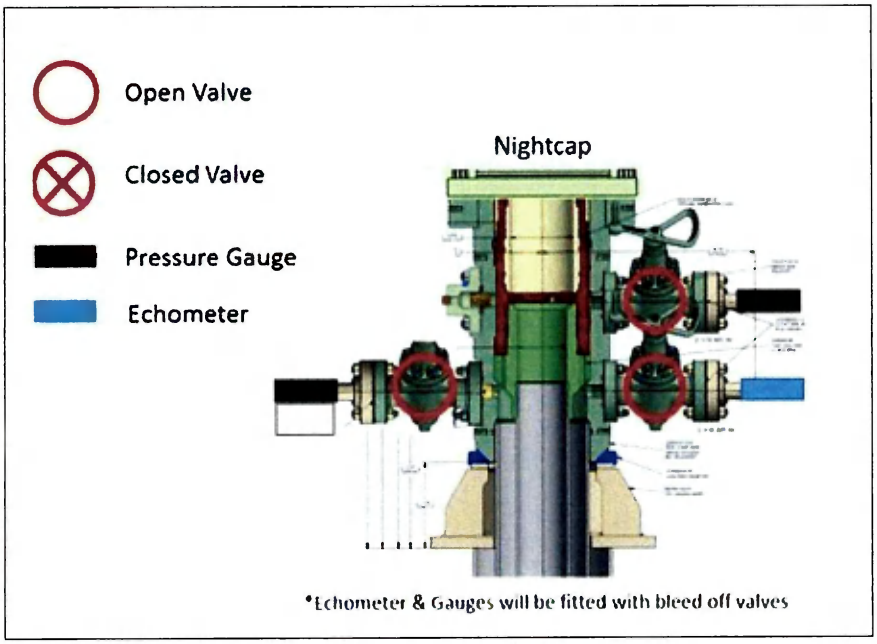
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal. Pressure ratings of wellhead components and valves is 5,000 psi.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
    a. If any barrier fails to test, the BOP stack will not be nippled down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



Annular packoff with both external and internal seals

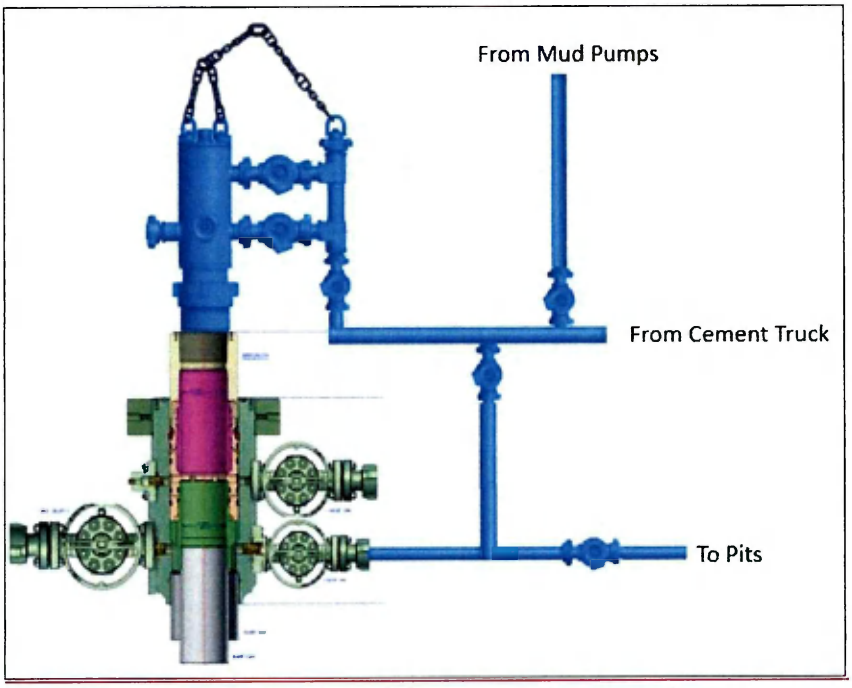
XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

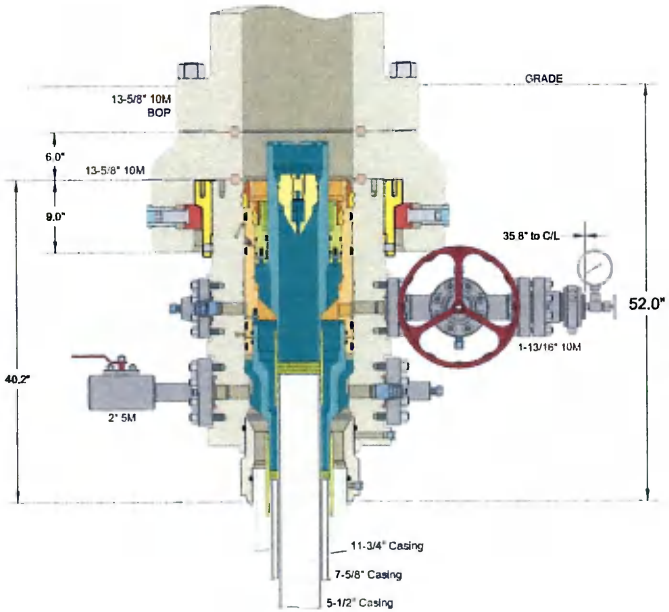
6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nippling up for further remediation.
    a. Well Control Plan
        i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
        ii. Rig pumps or a 3rd party pump will be tied into the upper casing valve to pump down the casing ID
        iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
        iv. Once influx is circulated out of the hole, kill weight mud will be circulated
        v. Well will be confirmed static
        vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment

XTO Permian Operating, LLC Offline Cementing Variance Request

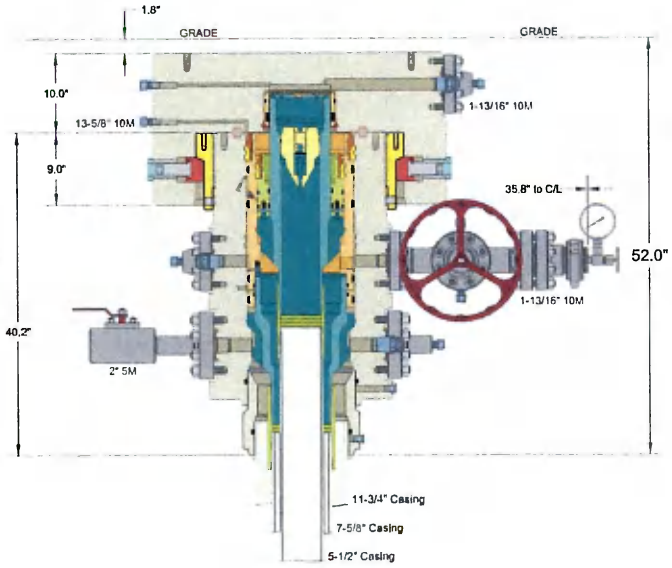


Wellhead diagram during offline cementing operations

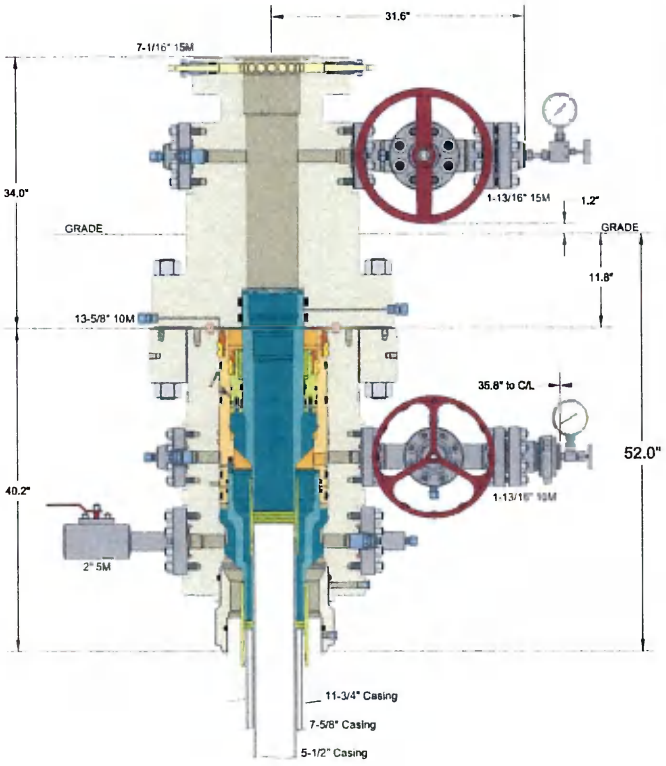
10. Circulate bottoms up with cement truck
    a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
    b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.



DRILLING



SKID



COMPLETION

ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	XTO ENERGY INC POKER LAKE, NM		
30" x 11-3/4" x 7-5/8" x 5-1/2" MBU-3T-SF SOW Wellhead System With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And 7-5/8" & 5-1/2" Fluted Mandrel Casing Hangers	DRAWN	DLE	09DEC19
	APPRV		
	DRAWING NO.	ODE0003261	

XTO respectfully requests approval to utilize a spudder rig to pre-set surface casing.

Description of Operations:

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
    a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
    b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wing valves.
    a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling Operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nippled up and tested on the wellhead before drilling operations resume on each well.
    a. The larger rig will move back onto the location within 180 days from the point at which the wells are secured and the spudder rig is moved off location.
    b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations
7. XTO will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, XTO will secure the wellhead area by placing a guard rail around the cellar area.

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.

General Procedure While Drilling

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

XTO Energy

Eddy County, NM (NAD-27)
Corral Canyon 15-10 Fed
#168H

Wellbore #1

Plan: PERMIT

Standard Planning Report

27 September, 2020

XTO ENERGY

Project: Eddy County, NM (NAD-27)
Site: Corral Canyon 15-10 Fed
Well: #168H
Wellbore: Wellbore #1
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: #168H

Rig Name:
GL @ 3086.00usft
Ground Level: 3086.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	408248.60	613619.40	32.1218599	-103.9663277

DESIGN TARGET DETAILS

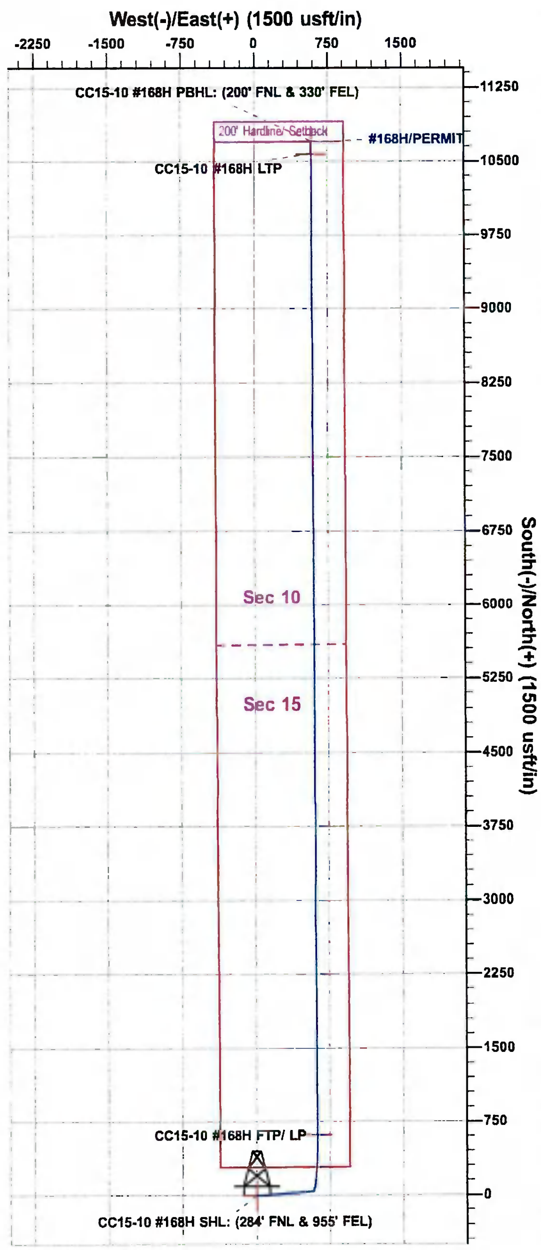
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
CC15-10 #168H SHL: (284' FNL & 955' FEL)	0.00	0.00	0.00	408248.60	613619.40	32.1218599	-103.9663277	Point
CC15-10 #168H PBHL: (200' FNL & 330' FEL)	11098.78	10708.40	584.90	418957.00	614204.30	32.1512916	-103.9643200	Point
CC15-10 #168H LTP	11099.23	10578.40	585.30	418827.00	614204.70	32.1509342	-103.9643201	Point
CC15-10 #168H FTP/ LP	11134.00	617.80	621.30	408866.40	614240.70	32.1235524	-103.9643141	Point

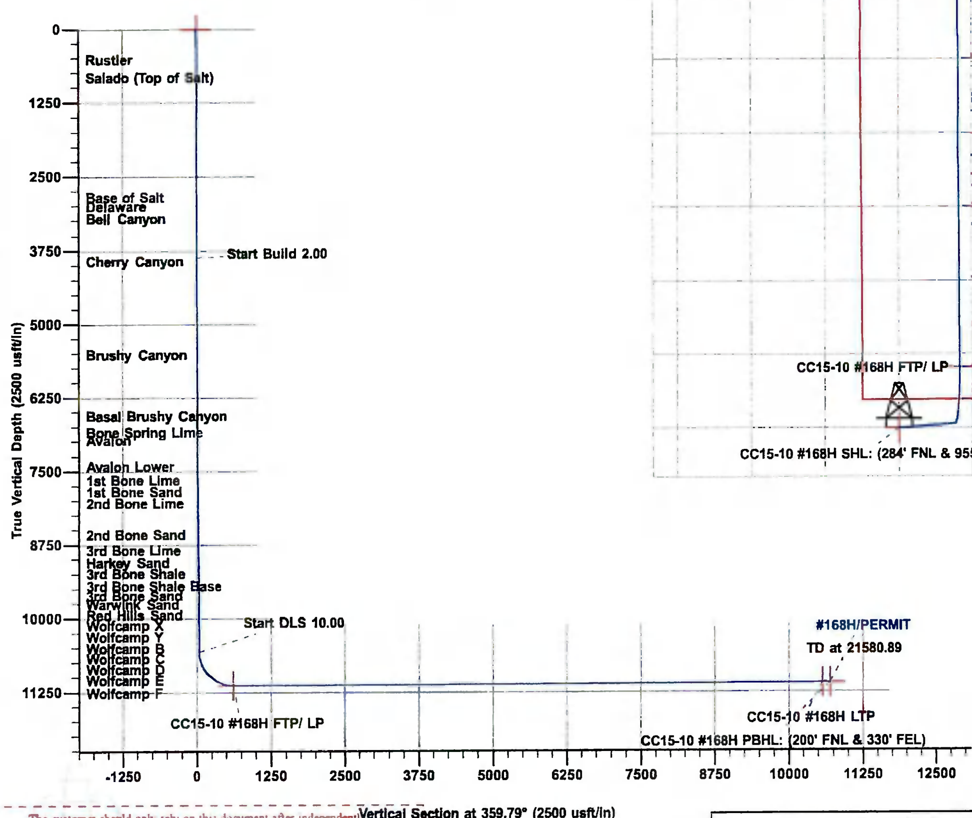
SECTION DETAILS

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	3865.00	0.00	0.00	3865.00	0.00	0.00	0.00	0.00	0.00
3	4114.96	5.00	85.74	4114.64	0.81	10.87	2.00	85.74	0.77
4	10591.70	5.00	85.74	10566.74	42.69	573.70	0.00	0.00	40.58
5	11490.16	90.20	359.79	11134.00	617.80	621.30	10.00	-85.95	615.52
6	21450.89	90.20	359.79	11099.23	10578.40	585.37	0.00	0.00	10576.18
7	21580.89	90.20	359.79	11098.78	10708.40	584.90	0.00	0.00	10706.18

FORMATION TOP DETAILS

TVDPath	Formation
651.00	Rustler
956.00	Salado (Top of Salt)
2984.00	Base of Salt
3188.00	Delaware
3233.00	Bell Canyon
4059.00	Cherry Canyon
5651.00	Brushy Canyon
6692.00	Basal Brushy Canyon
6926.00	Bone Spring
6952.00	Bone Spring
6967.00	Bone Spring Lime
7100.00	Avalon
7545.00	Avalon Lower
7830.00	1st Bone Lime
7876.00	1st Bone Sand
8177.00	2nd Bone Lime
8707.00	2nd Bone Sand
8973.00	3rd Bone Lime
9333.00	Harkey Sand
9368.00	3rd Bone Shale
9582.00	3rd Bone Shale Base
9627.00	3rd Bone Shale Lower
9793.00	3rd Bone Sand
9986.00	Warwink Sand
10074.00	Red Hills Sand
10146.00	Wolfcamp
10172.00	Wolfcamp X
10239.00	Wolfcamp Y
10292.00	Wolfcamp A
10619.00	Wolfcamp B
10811.00	Wolfcamp C
10993.00	Wolfcamp D
11124.00	Wolfcamp E
11134.00	LP





The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information ... the user.

Plan: PERMIT (#168H/Wellbore #1)
Created By: Matthew May   Date: 9:10, September 27 2020

XTO ENERGY

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #168H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Corral Canyon 15-10 Fed	**North Reference:**	Grid
Well:	#168H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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	Corral Canyon 15-10 Fed				
Site Position:		**Northing:**	418,842.10 usft	**Latitude:**	32.1509757
From:	Map	**Easting:**	614,204.90 usft	**Longitude:**	-103.9643193
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.20 °

Well	#168H					
Well Position	**+N/-S**	-10,593.50 usft	**Northing:**	408,248.60 usft	**Latitude:**	32.1218599
	+E/-W	-585.50 usft	**Easting:**	613,619.40 usft	**Longitude:**	-103.9663277
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,086.00 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	09/27/20	6.77	59.86	47,502

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	359.79	

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	
3,865.00	0.00	0.00	3,865.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,114.96	5.00	85.74	4,114.64	0.81	10.87	2.00	2.00	0.00	85.74	
10,591.70	5.00	85.74	10,566.74	42.69	573.70	0.00	0.00	0.00	0.00	
11,490.16	90.20	359.79	11,134.00	617.80	621.30	10.00	9.48	-9.57	-85.95	CC15-10 #168H FT
21,450.89	90.20	359.79	11,099.23	10,578.40	585.37	0.00	0.00	0.00	0.00	CC15-10 #168H LT
21,580.89	90.20	359.79	11,098.78	10,708.40	584.90	0.00	0.00	0.00	0.00	CC15-10 #168H PE

XTO ENERGY

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #168H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Corral Canyon 15-10 Fed	**North Reference:**	Grid
Well:	#168H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	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
3,865.00	0.00	0.00	3,865.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.70	85.74	3,900.00	0.02	0.21	0.02	2.00	2.00	0.00
4,000.00	2.70	85.74	3,999.95	0.24	3.17	0.22	2.00	2.00	0.00
4,100.00	4.70	85.74	4,099.74	0.71	9.61	0.68	2.00	2.00	0.00
4,114.96	5.00	85.74	4,114.64	0.81	10.87	0.77	2.00	2.00	0.00
4,200.00	5.00	85.74	4,199.36	1.36	18.26	1.29	0.00	0.00	0.00
4,300.00	5.00	85.74	4,298.98	2.01	26.95	1.91	0.00	0.00	0.00
4,400.00	5.00	85.74	4,398.60	2.65	35.64	2.52	0.00	0.00	0.00
4,500.00	5.00	85.74	4,498.22	3.30	44.33	3.14	0.00	0.00	0.00
4,600.00	5.00	85.74	4,597.84	3.94	53.02	3.75	0.00	0.00	0.00
4,700.00	5.00	85.74	4,697.46	4.59	61.71	4.37	0.00	0.00	0.00
4,800.00	5.00	85.74	4,797.08	5.24	70.40	4.98	0.00	0.00	0.00
4,900.00	5.00	85.74	4,896.70	5.88	79.09	5.59	0.00	0.00	0.00
5,000.00	5.00	85.74	4,996.32	6.53	87.78	6.21	0.00	0.00	0.00
5,100.00	5.00	85.74	5,095.94	7.18	96.47	6.82	0.00	0.00	0.00

XTO ENERGY

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #168H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Corral Canyon 15-10 Fed	**North Reference:**	Grid
Well:	#168H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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)
5,200.00	5.00	85.74	5,195.56	7.82	105.16	7.44	0.00	0.00	0.00
5,300.00	5.00	85.74	5,295.18	8.47	113.85	8.05	0.00	0.00	0.00
5,400.00	5.00	85.74	5,394.79	9.12	122.54	8.67	0.00	0.00	0.00
5,500.00	5.00	85.74	5,494.41	9.76	131.23	9.28	0.00	0.00	0.00
5,600.00	5.00	85.74	5,594.03	10.41	139.92	9.90	0.00	0.00	0.00
5,700.00	5.00	85.74	5,693.65	11.06	148.61	10.51	0.00	0.00	0.00
5,800.00	5.00	85.74	5,793.27	11.70	157.30	11.13	0.00	0.00	0.00
5,900.00	5.00	85.74	5,892.89	12.35	165.99	11.74	0.00	0.00	0.00
6,000.00	5.00	85.74	5,992.51	13.00	174.68	12.36	0.00	0.00	0.00
6,100.00	5.00	85.74	6,092.13	13.64	183.37	12.97	0.00	0.00	0.00
6,200.00	5.00	85.74	6,191.75	14.29	192.06	13.59	0.00	0.00	0.00
6,300.00	5.00	85.74	6,291.37	14.94	200.75	14.20	0.00	0.00	0.00
6,400.00	5.00	85.74	6,390.99	15.58	209.44	14.82	0.00	0.00	0.00
6,500.00	5.00	85.74	6,490.61	16.23	218.13	15.43	0.00	0.00	0.00
6,600.00	5.00	85.74	6,590.23	16.88	226.82	16.04	0.00	0.00	0.00
6,700.00	5.00	85.74	6,689.85	17.52	235.51	16.66	0.00	0.00	0.00
6,800.00	5.00	85.74	6,789.47	18.17	244.20	17.27	0.00	0.00	0.00
6,900.00	5.00	85.74	6,889.09	18.82	252.89	17.89	0.00	0.00	0.00
7,000.00	5.00	85.74	6,988.71	19.46	261.58	18.50	0.00	0.00	0.00
7,100.00	5.00	85.74	7,088.33	20.11	270.27	19.12	0.00	0.00	0.00
7,200.00	5.00	85.74	7,187.95	20.76	278.96	19.73	0.00	0.00	0.00
7,300.00	5.00	85.74	7,287.57	21.40	287.65	20.35	0.00	0.00	0.00
7,400.00	5.00	85.74	7,387.19	22.05	296.34	20.96	0.00	0.00	0.00
7,500.00	5.00	85.74	7,486.81	22.70	305.03	21.58	0.00	0.00	0.00
7,600.00	5.00	85.74	7,586.43	23.34	313.72	22.19	0.00	0.00	0.00
7,700.00	5.00	85.74	7,686.05	23.99	322.41	22.81	0.00	0.00	0.00
7,800.00	5.00	85.74	7,785.67	24.63	331.10	23.42	0.00	0.00	0.00
7,900.00	5.00	85.74	7,885.28	25.28	339.79	24.04	0.00	0.00	0.00
8,000.00	5.00	85.74	7,984.90	25.93	348.48	24.65	0.00	0.00	0.00
8,100.00	5.00	85.74	8,084.52	26.57	357.17	25.27	0.00	0.00	0.00
8,200.00	5.00	85.74	8,184.14	27.22	365.86	25.88	0.00	0.00	0.00
8,300.00	5.00	85.74	8,283.76	27.87	374.55	26.49	0.00	0.00	0.00
8,400.00	5.00	85.74	8,383.38	28.51	383.24	27.11	0.00	0.00	0.00
8,500.00	5.00	85.74	8,483.00	29.16	391.93	27.72	0.00	0.00	0.00
8,600.00	5.00	85.74	8,582.62	29.81	400.62	28.34	0.00	0.00	0.00
8,700.00	5.00	85.74	8,682.24	30.45	409.31	28.95	0.00	0.00	0.00
8,800.00	5.00	85.74	8,781.86	31.10	418.00	29.57	0.00	0.00	0.00
8,900.00	5.00	85.74	8,881.48	31.75	426.69	30.18	0.00	0.00	0.00
9,000.00	5.00	85.74	8,981.10	32.39	435.38	30.80	0.00	0.00	0.00
9,100.00	5.00	85.74	9,080.72	33.04	444.07	31.41	0.00	0.00	0.00
9,200.00	5.00	85.74	9,180.34	33.69	452.76	32.03	0.00	0.00	0.00
9,300.00	5.00	85.74	9,279.96	34.33	461.45	32.64	0.00	0.00	0.00
9,400.00	5.00	85.74	9,379.58	34.98	470.14	33.26	0.00	0.00	0.00
9,500.00	5.00	85.74	9,479.20	35.63	478.83	33.87	0.00	0.00	0.00
9,600.00	5.00	85.74	9,578.82	36.27	487.52	34.49	0.00	0.00	0.00
9,700.00	5.00	85.74	9,678.44	36.92	496.21	35.10	0.00	0.00	0.00
9,800.00	5.00	85.74	9,778.06	37.57	504.90	35.72	0.00	0.00	0.00
9,900.00	5.00	85.74	9,877.68	38.21	513.59	36.33	0.00	0.00	0.00
10,000.00	5.00	85.74	9,977.30	38.86	522.28	36.94	0.00	0.00	0.00
10,100.00	5.00	85.74	10,076.92	39.51	530.97	37.56	0.00	0.00	0.00
10,200.00	5.00	85.74	10,176.54	40.15	539.66	38.17	0.00	0.00	0.00
10,300.00	5.00	85.74	10,276.16	40.80	548.35	38.79	0.00	0.00	0.00
10,400.00	5.00	85.74	10,375.77	41.45	557.05	39.40	0.00	0.00	0.00
10,500.00	5.00	85.74	10,475.39	42.09	565.74	40.02	0.00	0.00	0.00

XTO ENERGY

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #168H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Corral Canyon 15-10 Fed	**North Reference:**	Grid
Well:	#168H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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)
10,591.70	5.00	85.74	10,566.74	42.69	573.70	40.58	0.00	0.00	0.00
10,600.00	5.13	76.43	10,575.01	42.80	574.43	40.69	10.00	1.52	-112.15
10,650.00	7.94	38.55	10,624.71	46.03	578.75	43.90	10.00	5.63	-75.77
10,700.00	12.23	23.54	10,673.93	53.59	583.02	51.45	10.00	8.59	-30.01
10,750.00	16.92	16.48	10,722.31	65.43	587.20	63.27	10.00	9.37	-14.12
10,800.00	21.74	12.45	10,769.48	81.45	591.27	79.28	10.00	9.64	-8.06
10,850.00	26.62	9.84	10,815.08	101.54	595.18	99.36	10.00	9.77	-5.23
10,900.00	31.54	7.98	10,858.77	125.55	598.91	123.35	10.00	9.84	-3.70
10,950.00	36.48	6.59	10,900.20	153.28	602.43	151.07	10.00	9.88	-2.79
11,000.00	41.43	5.48	10,939.07	184.53	605.72	182.31	10.00	9.90	-2.21
11,050.00	46.39	4.58	10,975.08	219.07	608.75	216.83	10.00	9.92	-1.81
11,100.00	51.36	3.81	11,007.96	256.62	611.49	254.38	10.00	9.93	-1.54
11,150.00	56.33	3.14	11,037.45	296.90	613.93	294.65	10.00	9.94	-1.34
11,200.00	61.30	2.55	11,063.33	339.61	616.05	337.35	10.00	9.95	-1.19
11,250.00	66.28	2.01	11,085.40	384.42	617.83	382.16	10.00	9.95	-1.08
11,300.00	71.26	1.51	11,103.50	430.99	619.26	428.72	10.00	9.96	-1.00
11,350.00	76.24	1.04	11,117.49	478.97	620.32	476.69	10.00	9.96	-0.94
11,400.00	81.22	0.58	11,127.26	527.98	621.01	525.70	10.00	9.96	-0.90
11,450.00	86.20	0.14	11,132.74	577.66	621.32	575.38	10.00	9.96	-0.88
11,490.16	90.20	359.79	11,134.00	617.80	621.30	615.52	10.00	9.96	-0.87
11,500.00	90.20	359.79	11,133.97	627.64	621.26	625.36	0.00	0.00	0.00
11,600.00	90.20	359.79	11,133.62	727.64	620.90	725.35	0.00	0.00	0.00
11,700.00	90.20	359.79	11,133.27	827.63	620.54	825.35	0.00	0.00	0.00
11,800.00	90.20	359.79	11,132.92	927.63	620.18	925.35	0.00	0.00	0.00
11,900.00	90.20	359.79	11,132.57	1,027.63	619.82	1,025.35	0.00	0.00	0.00
12,000.00	90.20	359.79	11,132.22	1,127.63	619.46	1,125.35	0.00	0.00	0.00
12,100.00	90.20	359.79	11,131.87	1,227.63	619.10	1,225.35	0.00	0.00	0.00
12,200.00	90.20	359.79	11,131.52	1,327.63	618.74	1,325.35	0.00	0.00	0.00
12,300.00	90.20	359.79	11,131.17	1,427.63	618.38	1,425.35	0.00	0.00	0.00
12,400.00	90.20	359.79	11,130.82	1,527.63	618.02	1,525.35	0.00	0.00	0.00
12,500.00	90.20	359.79	11,130.48	1,627.62	617.66	1,625.35	0.00	0.00	0.00
12,600.00	90.20	359.79	11,130.13	1,727.62	617.30	1,725.35	0.00	0.00	0.00
12,700.00	90.20	359.79	11,129.78	1,827.62	616.94	1,825.35	0.00	0.00	0.00
12,800.00	90.20	359.79	11,129.43	1,927.62	616.58	1,925.35	0.00	0.00	0.00
12,900.00	90.20	359.79	11,129.08	2,027.62	616.21	2,025.35	0.00	0.00	0.00
13,000.00	90.20	359.79	11,128.73	2,127.62	615.85	2,125.35	0.00	0.00	0.00
13,100.00	90.20	359.79	11,128.38	2,227.62	615.49	2,225.35	0.00	0.00	0.00
13,200.00	90.20	359.79	11,128.03	2,327.62	615.13	2,325.34	0.00	0.00	0.00
13,300.00	90.20	359.79	11,127.68	2,427.61	614.77	2,425.34	0.00	0.00	0.00
13,400.00	90.20	359.79	11,127.33	2,527.61	614.41	2,525.34	0.00	0.00	0.00
13,500.00	90.20	359.79	11,126.98	2,627.61	614.05	2,625.34	0.00	0.00	0.00
13,600.00	90.20	359.79	11,126.64	2,727.61	613.69	2,725.34	0.00	0.00	0.00
13,700.00	90.20	359.79	11,126.29	2,827.61	613.33	2,825.34	0.00	0.00	0.00
13,800.00	90.20	359.79	11,125.94	2,927.61	612.97	2,925.34	0.00	0.00	0.00
13,900.00	90.20	359.79	11,125.59	3,027.61	612.61	3,025.34	0.00	0.00	0.00
14,000.00	90.20	359.79	11,125.24	3,127.61	612.25	3,125.34	0.00	0.00	0.00
14,100.00	90.20	359.79	11,124.89	3,227.60	611.89	3,225.34	0.00	0.00	0.00
14,200.00	90.20	359.79	11,124.54	3,327.60	611.52	3,325.34	0.00	0.00	0.00
14,300.00	90.20	359.79	11,124.19	3,427.60	611.16	3,425.34	0.00	0.00	0.00
14,400.00	90.20	359.79	11,123.84	3,527.60	610.80	3,525.34	0.00	0.00	0.00
14,500.00	90.20	359.79	11,123.49	3,627.60	610.44	3,625.34	0.00	0.00	0.00
14,600.00	90.20	359.79	11,123.14	3,727.60	610.08	3,725.34	0.00	0.00	0.00
14,700.00	90.20	359.79	11,122.80	3,827.60	609.72	3,825.34	0.00	0.00	0.00
14,800.00	90.20	359.79	11,122.45	3,927.60	609.36	3,925.34	0.00	0.00	0.00

XTO ENERGY

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #168H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Corral Canyon 15-10 Fed	**North Reference:**	Grid
Well:	#168H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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)
14,900.00	90.20	359.79	11,122.10	4,027.59	609.00	4,025.33	0.00	0.00	0.00
15,000.00	90.20	359.79	11,121.75	4,127.59	608.64	4,125.33	0.00	0.00	0.00
15,100.00	90.20	359.79	11,121.40	4,227.59	608.28	4,225.33	0.00	0.00	0.00
15,200.00	90.20	359.79	11,121.05	4,327.59	607.92	4,325.33	0.00	0.00	0.00
15,300.00	90.20	359.79	11,120.70	4,427.59	607.56	4,425.33	0.00	0.00	0.00
15,400.00	90.20	359.79	11,120.35	4,527.59	607.20	4,525.33	0.00	0.00	0.00
15,500.00	90.20	359.79	11,120.00	4,627.59	606.84	4,625.33	0.00	0.00	0.00
15,600.00	90.20	359.79	11,119.65	4,727.58	606.47	4,725.33	0.00	0.00	0.00
15,700.00	90.20	359.79	11,119.31	4,827.58	606.11	4,825.33	0.00	0.00	0.00
15,800.00	90.20	359.79	11,118.96	4,927.58	605.75	4,925.33	0.00	0.00	0.00
15,900.00	90.20	359.79	11,118.61	5,027.58	605.39	5,025.33	0.00	0.00	0.00
16,000.00	90.20	359.79	11,118.26	5,127.58	605.03	5,125.33	0.00	0.00	0.00
16,100.00	90.20	359.79	11,117.91	5,227.58	604.67	5,225.33	0.00	0.00	0.00
16,200.00	90.20	359.79	11,117.56	5,327.58	604.31	5,325.33	0.00	0.00	0.00
16,300.00	90.20	359.79	11,117.21	5,427.58	603.95	5,425.33	0.00	0.00	0.00
16,400.00	90.20	359.79	11,116.86	5,527.57	603.59	5,525.33	0.00	0.00	0.00
16,500.00	90.20	359.79	11,116.51	5,627.57	603.23	5,625.32	0.00	0.00	0.00
16,600.00	90.20	359.79	11,116.16	5,727.57	602.87	5,725.32	0.00	0.00	0.00
16,700.00	90.20	359.79	11,115.81	5,827.57	602.51	5,825.32	0.00	0.00	0.00
16,800.00	90.20	359.79	11,115.47	5,927.57	602.15	5,925.32	0.00	0.00	0.00
16,900.00	90.20	359.79	11,115.12	6,027.57	601.79	6,025.32	0.00	0.00	0.00
17,000.00	90.20	359.79	11,114.77	6,127.57	601.42	6,125.32	0.00	0.00	0.00
17,100.00	90.20	359.79	11,114.42	6,227.57	601.06	6,225.32	0.00	0.00	0.00
17,200.00	90.20	359.79	11,114.07	6,327.56	600.70	6,325.32	0.00	0.00	0.00
17,300.00	90.20	359.79	11,113.72	6,427.56	600.34	6,425.32	0.00	0.00	0.00
17,400.00	90.20	359.79	11,113.37	6,527.56	599.98	6,525.32	0.00	0.00	0.00
17,500.00	90.20	359.79	11,113.02	6,627.56	599.62	6,625.32	0.00	0.00	0.00
17,600.00	90.20	359.79	11,112.67	6,727.56	599.26	6,725.32	0.00	0.00	0.00
17,700.00	90.20	359.79	11,112.32	6,827.56	598.90	6,825.32	0.00	0.00	0.00
17,800.00	90.20	359.79	11,111.97	6,927.56	598.54	6,925.32	0.00	0.00	0.00
17,900.00	90.20	359.79	11,111.63	7,027.56	598.18	7,025.32	0.00	0.00	0.00
18,000.00	90.20	359.79	11,111.28	7,127.55	597.82	7,125.32	0.00	0.00	0.00
18,100.00	90.20	359.79	11,110.93	7,227.55	597.46	7,225.32	0.00	0.00	0.00
18,200.00	90.20	359.79	11,110.58	7,327.55	597.10	7,325.31	0.00	0.00	0.00
18,300.00	90.20	359.79	11,110.23	7,427.55	596.74	7,425.31	0.00	0.00	0.00
18,400.00	90.20	359.79	11,109.88	7,527.55	596.37	7,525.31	0.00	0.00	0.00
18,500.00	90.20	359.79	11,109.53	7,627.55	596.01	7,625.31	0.00	0.00	0.00
18,600.00	90.20	359.79	11,109.18	7,727.55	595.65	7,725.31	0.00	0.00	0.00
18,700.00	90.20	359.79	11,108.83	7,827.55	595.29	7,825.31	0.00	0.00	0.00
18,800.00	90.20	359.79	11,108.48	7,927.54	594.93	7,925.31	0.00	0.00	0.00
18,900.00	90.20	359.79	11,108.14	8,027.54	594.57	8,025.31	0.00	0.00	0.00
19,000.00	90.20	359.79	11,107.79	8,127.54	594.21	8,125.31	0.00	0.00	0.00
19,100.00	90.20	359.79	11,107.44	8,227.54	593.85	8,225.31	0.00	0.00	0.00
19,200.00	90.20	359.79	11,107.09	8,327.54	593.49	8,325.31	0.00	0.00	0.00
19,300.00	90.20	359.79	11,106.74	8,427.54	593.13	8,425.31	0.00	0.00	0.00
19,400.00	90.20	359.79	11,106.39	8,527.54	592.77	8,525.31	0.00	0.00	0.00
19,500.00	90.20	359.79	11,106.04	8,627.54	592.41	8,625.31	0.00	0.00	0.00
19,600.00	90.20	359.79	11,105.69	8,727.53	592.05	8,725.31	0.00	0.00	0.00
19,700.00	90.20	359.79	11,105.34	8,827.53	591.68	8,825.31	0.00	0.00	0.00
19,800.00	90.20	359.79	11,104.99	8,927.53	591.32	8,925.30	0.00	0.00	0.00
19,900.00	90.20	359.79	11,104.64	9,027.53	590.96	9,025.30	0.00	0.00	0.00
20,000.00	90.20	359.79	11,104.30	9,127.53	590.60	9,125.30	0.00	0.00	0.00
20,100.00	90.20	359.79	11,103.95	9,227.53	590.24	9,225.30	0.00	0.00	0.00
20,200.00	90.20	359.79	11,103.60	9,327.53	589.88	9,325.30	0.00	0.00	0.00

XTO ENERGY

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #168H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Corral Canyon 15-10 Fed	**North Reference:**	Grid
Well:	#168H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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)
20,300.00	90.20	359.79	11,103.25	9,427.53	589.52	9,425.30	0.00	0.00	0.00
20,400.00	90.20	359.79	11,102.90	9,527.52	589.16	9,525.30	0.00	0.00	0.00
20,500.00	90.20	359.79	11,102.55	9,627.52	588.80	9,625.30	0.00	0.00	0.00
20,600.00	90.20	359.79	11,102.20	9,727.52	588.44	9,725.30	0.00	0.00	0.00
20,700.00	90.20	359.79	11,101.85	9,827.52	588.08	9,825.30	0.00	0.00	0.00
20,800.00	90.20	359.79	11,101.50	9,927.52	587.72	9,925.30	0.00	0.00	0.00
20,900.00	90.20	359.79	11,101.15	10,027.52	587.36	10,025.30	0.00	0.00	0.00
21,000.00	90.20	359.79	11,100.80	10,127.52	587.00	10,125.30	0.00	0.00	0.00
21,100.00	90.20	359.79	11,100.46	10,227.52	586.63	10,225.30	0.00	0.00	0.00
21,200.00	90.20	359.79	11,100.11	10,327.51	586.27	10,325.30	0.00	0.00	0.00
21,300.00	90.20	359.79	11,099.76	10,427.51	585.91	10,425.30	0.00	0.00	0.00
21,400.00	90.20	359.79	11,099.41	10,527.51	585.55	10,525.30	0.00	0.00	0.00
21,450.89	90.20	359.79	11,099.23	10,578.40	585.37	10,576.18	0.00	0.00	0.00
21,500.00	90.20	359.79	11,099.06	10,627.51	585.19	10,625.29	0.00	0.00	0.00
21,580.89	90.20	359.79	11,098.78	10,708.40	584.90	10,706.18	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
CC15-10 #168H SHL: - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	408,248.60	613,619.40	32.1218599	-103.9663277
CC15-10 #168H PBH - plan hits target center - Point	0.00	0.00	11,098.78	10,708.40	584.90	418,957.00	614,204.30	32.1512916	-103.9643200
CC15-10 #168H LTP - plan misses target center by 0.07usft at 21450.89usft MD (11099.23 TVD, 10578.40 N, 585.37 E) - Point	0.00	0.00	11,099.23	10,578.40	585.30	418,827.00	614,204.70	32.1509342	-103.9643201
CC15-10 #168H FTP/ - plan hits target center - Point	0.00	0.00	11,134.00	617.80	621.30	408,866.40	614,240.70	32.1235524	-103.9643140

XTO ENERGY

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #168H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Corral Canyon 15-10 Fed	**North Reference:**	Grid
Well:	#168H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
651.00	651.00	Rustler			
956.00	956.00	Salado (Top of Salt)			
2,984.00	2,984.00	Base of Salt			
3,188.00	3,188.00	Delaware			
3,233.00	3,233.00	Bell Canyon			
4,059.15	4,059.00	Cherry Canyon			
5,657.18	5,651.00	Brushy Canyon			
6,702.16	6,692.00	Basal Brushy Canyon			
6,937.05	6,926.00	Bone Spring			
6,963.15	6,952.00	Bone Spring			
6,978.21	6,967.00	Bone Spring Lime			
7,111.72	7,100.00	Avalon			
7,558.42	7,545.00	Avalon Lower			
7,844.50	7,830.00	1st Bone Lime			
7,890.68	7,876.00	1st Bone Sand			
8,192.83	8,177.00	2nd Bone Lime			
8,724.85	8,707.00	2nd Bone Sand			
8,991.87	8,973.00	3rd Bone Lime			
9,353.24	9,333.00	Harkey Sand			
9,388.38	9,368.00	3rd Bone Shale			
9,603.19	9,582.00	3rd Bone Shale Base			
9,648.37	9,627.00	3rd Bone Shale Lower			
9,815.00	9,793.00	3rd Bone Sand			
10,008.74	9,986.00	Warwink Sand			
10,097.07	10,074.00	Red Hills Sand			
10,169.35	10,146.00	Wolfcamp			
10,195.45	10,172.00	Wolfcamp X			
10,262.70	10,239.00	Wolfcamp Y			
10,315.91	10,292.00	Wolfcamp A			
10,644.24	10,619.00	Wolfcamp B			
10,845.44	10,811.00	Wolfcamp C			
11,076.64	10,993.00	Wolfcamp D			
11,380.73	11,124.00	Wolfcamp E			
11,490.16	11,134.00	LP			

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Energy, Inc.**
LEASE NO.:	**NMNM-014778**
WELL NAME & NO.:	**Corral Canyon 15-10 Fed 168H**
SURFACE HOLE FOOTAGE:	**0284' FNL & 0955' FEL**
BOTTOM HOLE FOOTAGE	**0200' FNL & 0330' FEL Sec. 10, T.25 S., R.29 E.**
LOCATION:	**Section 22, T.25 S., R.29 E., NMPM**
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

Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Red Beds, Rustler, and Delaware.
Abnormal pressure may be encountered in the 3rd Bone Spring and all subsequent formations.

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.

Approval Date: 12/02/2022

B. CASING

1. The **11-3/4** inch surface casing shall be set at approximately **875** 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 **8-5/8** inch intermediate casing is:

    Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

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

    b. Second stage above DV tool:

        - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

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

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

C. PRESSURE CONTROL

1. 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. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 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.

BOP Break Testing Variance

- Shelll testing is not approved for any portion of the hole with a MASP of 5000 psi or greater.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOP Break Testing operations.
- A full BOP test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOP test will be required.

D. SPECIAL REQUIREMENT (S)

Operator must submit an NOI sundry to add "COM" to the well name.

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   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 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.

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

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

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

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

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

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

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

    b. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. 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).

c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 04292021

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

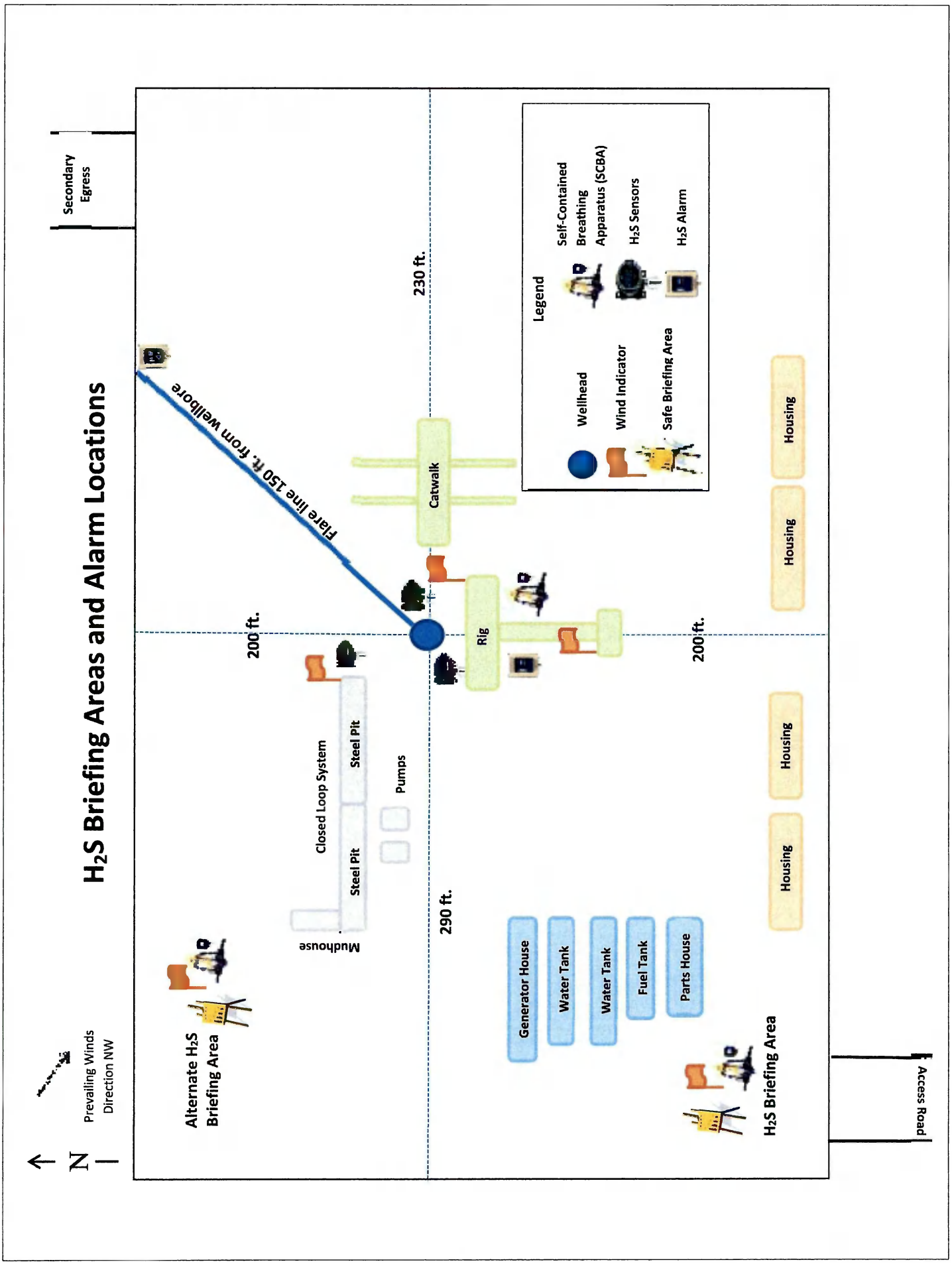
Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = I	2 ppm	N/A	1000 ppm

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


H2S Briefing Areas and Alarm Locations
Secondary Egress
Flare line 150 ft. from Wellbore
230 ft.
200 ft.
200 ft.
290 ft.
Catwalk
Rig
Legend
Self-Contained Breathing Apparatus (SCBA)
H2S Sensors
H2S Alarm
Wellhead
Wind Indicator
Safe Briefing Area
Housing
Housing
Housing
Housing
Closed Loop System
Steel Pit
Steel Pit
Pumps
Mudhouse
Generator House
Water Tank
Water Tank
Fuel Tank
Parts House
Alternate H2S Briefing Area
H2S Briefing Area
Access Road
Prevailing Winds Direction NW
N

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: R360 Environmental Solutions, 4507 W Carlsbad HWY, Hobbs, NM 88240, 575-393-1079

Waste type: SEWAGE

Waste content description: Human Waste

Amount of waste: 250 gallons

Waste disposal frequency : Weekly

Safe containment description: Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to the disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: A licensed 3rd party contractor will be used to haul and dispose human waste

Waste type: GARBAGE

Waste content description: Garbage, junk and non-flammable waste materials

Amount of waste: 250 pounds

Waste disposal frequency : Weekly

Safe containment description: All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approve sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: A licensed 3rd party contractor will be used to haul and safely dispose garbage, junk and non-flammable waste materials.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Operator Name: XTO ENERGY INCORPORATED

Well Name: CORRAL CANYON 15-10 FED **Well Number:** 168H

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site.

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

Corral_Canyon__15_10_168H_Layout_20201117095807.pdf

Comments: There are 4 multi-well pads in the Corral Canyon 15-10 lease anticipated. This will allow enough space for cuts and fills, topsoil storage, and storm water control. Interim reclamation of these pads is anticipated after the drilling and completion of all wells on the pad. Well site layouts for all pads are attached. From West to East: 1. Pad 1 is a 5-well pad expected to be 520x400. 2. Pad 2 is a 5-well pad expected to be 520x400. 3. Pad 3 is a 5-well pad expected to be 520x400. 4. Pad 4 is a 5-well pad expected to be 520x400.

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 226086

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 226086
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	6/13/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	6/13/2023
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	6/13/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	6/13/2023
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	6/13/2023