

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

Form C-101
August 1, 2011

Permit 282811

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707		2. OGRID Number 5380
		3. API Number 30-015-47119
4. Property Code 317788	5. Property Name REMUDA SOUTH 25 STATE	6. Well No. 161H

7. Surface Location

UL - Lot E	Section 25	Township 23S	Range 29E	Lot Idn E	Feet From 2354	N/S Line N	Feet From 600	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot M	Section 36	Township 23S	Range 29E	Lot Idn M	Feet From 200	N/S Line S	Feet From 430	E/W Line W	County Eddy
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9. Pool Information

PURPLE SAGE;WOLFCAMP (GAS)	98220
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Additional Well Information

11. Work Type New Well	12. Well Type GAS	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3064
16. Multiple N	17. Proposed Depth 18936	18. Formation Wolfcamp	19. Contractor	20. Spud Date 6/26/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	20	16	75	400	590	0
Int1	14.75	11.75	47	3127	1940	0
Int2	10.625	8.625	32	10550	1680	3227
Prod	7.875	5.5	20	18936	2230	10050

Casing/Cement Program: Additional Comments

DV Tool may be set @ 3227'. The surface fresh water sands will be protected by setting 16" inch casing @ 400' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 11-3/4" inch casing at 3127' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 8-5/8" inch casing at 10550' and cementing 200' into the 11-3/4 inch casing. 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 up to the 2nd intermediate (estimated TOC 10050 feet) per Potash regulations.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	10000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Deeann Kemp	Approved By: Raymond Podany	
Title: Regulatory	Title: Geologist	
Email Address: DeeAnn_Kemp@xtoenergy.com	Approved Date: 5/27/2020	Expiration Date: 5/27/2022
Date: 5/27/2020	Phone: 432-620-6724	
Conditions of Approval Attached		

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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 30-015-	² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp
⁴ Property Code	⁵ Property Name REMUDA SOUTH 25 STATE	⁶ Well Number 161H
⁷ OGRID No. 005380	⁸ Operator Name XTO ENERGY, INC.	⁹ Elevation 3,064'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	25	23 S	29 E		2,354	NORTH	600	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	36	23 S	29 E		200	SOUTH	430	WEST	EDDY

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

	SHL (NAD83 NME) Y = 464,624.1 X = 661,417.0 LAT. = 32.276728 °N LONG. = 103.944795 °W FTP (NAD83 NME) Y = 463,991.1 X = 661,246.8 LAT. = 32.274990 °N LONG. = 103.945353 °W CORNER COORDINATES (NAD83 NME) A - Y = 464,320.4 N , X = 660,816.8 E B - Y = 464,319.7 N , X = 662,143.0 E C - Y = 461,665.9 N , X = 660,817.1 E D - Y = 461,666.6 N , X = 662,145.6 E E - Y = 459,002.1 N , X = 660,832.0 E F - Y = 459,004.0 N , X = 662,159.8 E G - Y = 456,341.5 N , X = 660,848.3 E H - Y = 456,344.3 N , X = 662,174.7 E SHL (NAD27 NME) Y = 464,564.2 X = 620,234.2 LAT. = 32.276605 °N LONG. = 103.944303 °W FTP (NAD27 NME) Y = 463,931.2 X = 620,064.0 LAT. = 32.274866 °N LONG. = 103.944861 °W CORNER COORDINATES (NAD27 NME) A - Y = 464,260.5 N , X = 619,634.0 E B - Y = 464,259.9 N , X = 620,960.2 E C - Y = 461,606.0 N , X = 619,634.3 E D - Y = 461,606.7 N , X = 620,962.7 E E - Y = 458,942.4 N , X = 619,649.0 E F - Y = 458,944.3 N , X = 620,976.8 E G - Y = 456,281.8 N , X = 619,665.2 E H - Y = 456,284.6 N , X = 620,991.6 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. <i>Cassie Evans</i> 05/04/2020 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. 04-15-2020 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor: MARK DILLON HARP 23786 Certificate Number AR 2019103427		

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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GAS CAPTURE PLAN

Date: 5/27/2020

☒ Original

Operator & OGRID No.: [5380] XTO ENERGY, INC

☐ Amended - Reason for
Amendment: _____

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
REMUDA SOUTH 25 STATE #161H	30-015-47119	E-25-23S-29E	2354N 0600W	2600	None	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to LUCID ENERGY DELAWARE, LLC and will be connected to LUCID ENERGY DELAWARE, LLC High/Low Pressure gathering system located in Eddy County, New Mexico. It will require 0' of pipeline to connect the facility to High/Low Pressure gathering system. XTO ENERGY, INC provides (periodically) to LUCID ENERGY DELAWARE, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO ENERGY, INC and LUCID ENERGY DELAWARE, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at LUCID ENERGY DELAWARE, LLC Processing Plant located in Sec. 13, Twn. 24S, Rng. 33E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

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Form APD Comments

Permit 282811

PERMIT COMMENTS

Operator Name and Address: XTO ENERGY, INC [5380] 6401 Holiday Hill Road Midland, TX 79707	API Number: 30-015-47119
	Well: REMUDA SOUTH 25 STATE #161H

Created By	Comment	Comment Date
cevans	XTO requests the following variances: use a 5000 psi annular BOP with a 10,000 psi BOP stack. Also a variance is requested to test the 5M annular to 70% of working pressure at 3500 psi. 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 t	5/26/2020
cevans	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 pressu	5/27/2020

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Form APD Conditions

Permit 282811

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: XTO ENERGY, INC [5380] 6401 Holiday Hill Road Midland, TX 79707		API Number: 30-015-47119
		Well: REMUDA SOUTH 25 STATE #161H
OCD Reviewer	Condition	
ksimmons	Will require a directional survey with the C-104	
ksimmons	Cement is required to circulate on both surface and intermediate1 strings of casing	



XTO Permian Operating, LLC

**Eddy Co., NM
Remuda South 25 State
161H**

Wellbore #1

Plan: Design #1

Standard Planning Report

20 May, 2020





Nabors Drilling Solutions

Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Eddy Co., NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Remuda South 25 State		
Site Position:		Northing:	464,564.400 usft
From:	Map	Easting:	621,554.200 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	32° 16' 35.730724 N
		Longitude:	103° 56' 24.116704 W
		Grid Convergence:	0.21 °

Well	161H		
Well Position	+N/-S	-0.20 ft	Northing:
	+E/-W	-1,320.00 ft	Easting:
Position Uncertainty	2.00 ft	Wellhead Elevation:	
		Latitude:	32° 16' 35.776369 N
		Longitude:	103° 56' 39.491983 W
		Ground Level:	3,064.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	5/20/2020	6.87	59.98	47,840.60000000

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	179.77

Plan Survey Tool Program	Date	5/20/2020		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	10,660.54	Design #1 (Wellbore #1)	MWD+HRGM OWSG MWD + HRGM
2	10,660.54	18,936.18	Design #1 (Wellbore #1)	MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St



Nabors Drilling Solutions

Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,128.00	0.00	0.00	3,128.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,524.09	5.94	231.99	3,523.38	-12.63	-16.17	1.50	1.50	0.00	231.99	
5,214.41	5.94	231.99	5,204.62	-120.37	-154.03	0.00	0.00	0.00	0.00	
5,610.50	0.00	0.01	5,600.00	-133.00	-170.20	1.50	-1.50	0.00	180.00	
10,660.54	0.00	0.01	10,650.04	-133.00	-170.20	0.00	0.00	0.00	0.00	
11,558.99	89.84	179.78	11,223.00	-704.40	-168.04	10.00	10.00	20.01	179.78	
18,936.18	89.84	179.78	11,243.00	-8,081.52	-140.20	0.00	0.00	0.00	0.00	RS 25 S 161H - BHL



Nabors Drilling Solutions

Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
3,128.00	0.00	0.00	3,128.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	1.08	231.99	3,200.00	-0.42	-0.53	0.42	1.50	1.50	0.00
3,300.00	2.58	231.99	3,299.94	-2.38	-3.05	2.37	1.50	1.50	0.00
3,400.00	4.08	231.99	3,399.77	-5.96	-7.63	5.93	1.50	1.50	0.00
3,500.00	5.58	231.99	3,499.41	-11.14	-14.26	11.09	1.50	1.50	0.00
3,524.09	5.94	231.99	3,523.38	-12.63	-16.17	12.57	1.50	1.50	0.00
3,600.00	5.94	231.99	3,598.88	-17.47	-22.36	17.38	0.00	0.00	0.00
3,700.00	5.94	231.99	3,698.35	-23.85	-30.51	23.72	0.00	0.00	0.00
3,800.00	5.94	231.99	3,797.81	-30.22	-38.67	30.06	0.00	0.00	0.00
3,900.00	5.94	231.99	3,897.27	-36.59	-46.83	36.40	0.00	0.00	0.00
4,000.00	5.94	231.99	3,996.73	-42.97	-54.98	42.74	0.00	0.00	0.00
4,100.00	5.94	231.99	4,096.20	-49.34	-63.14	49.09	0.00	0.00	0.00
4,200.00	5.94	231.99	4,195.66	-55.71	-71.30	55.43	0.00	0.00	0.00
4,300.00	5.94	231.99	4,295.12	-62.09	-79.45	61.77	0.00	0.00	0.00
4,400.00	5.94	231.99	4,394.59	-68.46	-87.61	68.11	0.00	0.00	0.00
4,500.00	5.94	231.99	4,494.05	-74.83	-95.76	74.45	0.00	0.00	0.00
4,600.00	5.94	231.99	4,593.51	-81.21	-103.92	80.79	0.00	0.00	0.00
4,700.00	5.94	231.99	4,692.97	-87.58	-112.08	87.13	0.00	0.00	0.00
4,800.00	5.94	231.99	4,792.44	-93.95	-120.23	93.47	0.00	0.00	0.00
4,900.00	5.94	231.99	4,891.90	-100.33	-128.39	99.81	0.00	0.00	0.00



Nabors Drilling Solutions

Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,000.00	5.94	231.99	4,991.36	-106.70	-136.55	106.15	0.00	0.00	0.00	
5,100.00	5.94	231.99	5,090.83	-113.07	-144.70	112.49	0.00	0.00	0.00	
5,200.00	5.94	231.99	5,190.29	-119.45	-152.86	118.83	0.00	0.00	0.00	
5,214.41	5.94	231.99	5,204.62	-120.37	-154.03	119.75	0.00	0.00	0.00	
5,300.00	4.66	231.99	5,289.84	-125.23	-160.26	124.59	1.50	-1.50	0.00	
5,400.00	3.16	231.99	5,389.61	-129.43	-165.63	128.76	1.50	-1.50	0.00	
5,500.00	1.66	231.99	5,489.52	-132.02	-168.94	131.34	1.50	-1.50	0.00	
5,600.00	0.16	231.99	5,589.50	-132.99	-170.19	132.31	1.50	-1.50	0.00	
5,610.50	0.00	0.01	5,600.00	-133.00	-170.20	132.32	1.50	-1.50	0.00	
5,700.00	0.00	0.00	5,689.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,789.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,889.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,989.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,089.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,189.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,289.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,389.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,489.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,589.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,689.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,789.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,889.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,989.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,089.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,189.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,289.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,389.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,489.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,589.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,689.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,789.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,889.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,989.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,089.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,189.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,289.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,389.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,489.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,589.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,689.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,789.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,889.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,989.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,089.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,189.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,289.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,389.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,489.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,589.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,689.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,789.50	-133.00	-170.20	132.32	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,889.50	-133.00	-170.20	132.32	0.00	0.00	0.00	



Nabors Drilling Solutions

Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,000.00	0.00	0.00	9,989.50	-133.00	-170.20	132.32	0.00	0.00	0.00
10,100.00	0.00	0.00	10,089.50	-133.00	-170.20	132.32	0.00	0.00	0.00
10,200.00	0.00	0.00	10,189.50	-133.00	-170.20	132.32	0.00	0.00	0.00
10,300.00	0.00	0.00	10,289.50	-133.00	-170.20	132.32	0.00	0.00	0.00
10,400.00	0.00	0.00	10,389.50	-133.00	-170.20	132.32	0.00	0.00	0.00
10,500.00	0.00	0.00	10,489.50	-133.00	-170.20	132.32	0.00	0.00	0.00
10,600.00	0.00	0.00	10,589.50	-133.00	-170.20	132.32	0.00	0.00	0.00
10,660.54	0.00	0.01	10,650.04	-133.00	-170.20	132.32	0.00	0.00	0.00
10,700.00	3.95	179.78	10,689.47	-134.36	-170.20	133.67	10.00	10.00	0.00
10,750.00	8.95	179.78	10,739.14	-139.97	-170.17	139.29	10.00	10.00	0.00
10,800.00	13.95	179.78	10,788.13	-149.89	-170.14	149.20	10.00	10.00	0.00
10,850.00	18.95	179.78	10,836.07	-164.04	-170.08	163.36	10.00	10.00	0.00
10,900.00	23.95	179.78	10,882.59	-182.32	-170.01	181.63	10.00	10.00	0.00
10,950.00	28.95	179.78	10,927.34	-204.58	-169.93	203.89	10.00	10.00	0.00
11,000.00	33.95	179.78	10,969.99	-230.65	-169.83	229.97	10.00	10.00	0.00
11,050.00	38.95	179.78	11,010.20	-260.35	-169.72	259.66	10.00	10.00	0.00
11,100.00	43.95	179.78	11,047.66	-293.43	-169.59	292.75	10.00	10.00	0.00
11,150.00	48.95	179.78	11,082.10	-329.66	-169.46	328.97	10.00	10.00	0.00
11,200.00	53.95	179.78	11,113.26	-368.74	-169.31	368.06	10.00	10.00	0.00
11,250.00	58.95	179.78	11,140.88	-410.40	-169.15	409.72	10.00	10.00	0.00
11,300.00	63.95	179.78	11,164.77	-454.30	-168.99	453.62	10.00	10.00	0.00
11,350.00	68.95	179.78	11,184.75	-500.12	-168.81	499.44	10.00	10.00	0.00
11,400.00	73.95	179.78	11,200.65	-547.51	-168.64	546.83	10.00	10.00	0.00
11,450.00	78.95	179.78	11,212.37	-596.10	-168.45	595.42	10.00	10.00	0.00
11,500.00	83.95	179.78	11,219.80	-645.53	-168.27	644.85	10.00	10.00	0.00
11,550.00	88.95	179.78	11,222.90	-695.42	-168.08	694.74	10.00	10.00	0.00
11,558.99	89.84	179.78	11,223.00	-704.40	-168.04	703.72	10.00	10.00	0.00
11,600.00	89.84	179.78	11,223.11	-745.41	-167.89	744.73	0.00	0.00	0.00
11,700.00	89.84	179.78	11,223.38	-845.41	-167.51	844.73	0.00	0.00	0.00
11,800.00	89.84	179.78	11,223.65	-945.41	-167.13	944.73	0.00	0.00	0.00
11,900.00	89.84	179.78	11,223.92	-1,045.41	-166.76	1,044.73	0.00	0.00	0.00
12,000.00	89.84	179.78	11,224.19	-1,145.41	-166.38	1,144.73	0.00	0.00	0.00
12,100.00	89.84	179.78	11,224.46	-1,245.41	-166.00	1,244.73	0.00	0.00	0.00
12,200.00	89.84	179.78	11,224.73	-1,345.41	-165.62	1,344.73	0.00	0.00	0.00
12,300.00	89.84	179.78	11,225.01	-1,445.41	-165.25	1,444.73	0.00	0.00	0.00
12,400.00	89.84	179.78	11,225.28	-1,545.41	-164.87	1,544.73	0.00	0.00	0.00
12,500.00	89.84	179.78	11,225.55	-1,645.40	-164.49	1,644.73	0.00	0.00	0.00
12,600.00	89.84	179.78	11,225.82	-1,745.40	-164.11	1,744.73	0.00	0.00	0.00
12,700.00	89.84	179.78	11,226.09	-1,845.40	-163.74	1,844.73	0.00	0.00	0.00
12,800.00	89.84	179.78	11,226.36	-1,945.40	-163.36	1,944.73	0.00	0.00	0.00
12,900.00	89.84	179.78	11,226.63	-2,045.40	-162.98	2,044.73	0.00	0.00	0.00
13,000.00	89.84	179.78	11,226.90	-2,145.40	-162.60	2,144.73	0.00	0.00	0.00
13,100.00	89.84	179.78	11,227.17	-2,245.40	-162.23	2,244.73	0.00	0.00	0.00
13,200.00	89.84	179.78	11,227.45	-2,345.40	-161.85	2,344.73	0.00	0.00	0.00
13,300.00	89.84	179.78	11,227.72	-2,445.40	-161.47	2,444.73	0.00	0.00	0.00
13,400.00	89.84	179.78	11,227.99	-2,545.40	-161.10	2,544.73	0.00	0.00	0.00
13,500.00	89.84	179.78	11,228.26	-2,645.39	-160.72	2,644.73	0.00	0.00	0.00
13,600.00	89.84	179.78	11,228.53	-2,745.39	-160.34	2,744.73	0.00	0.00	0.00
13,700.00	89.84	179.78	11,228.80	-2,845.39	-159.96	2,844.73	0.00	0.00	0.00
13,800.00	89.84	179.78	11,229.07	-2,945.39	-159.59	2,944.73	0.00	0.00	0.00
13,900.00	89.84	179.78	11,229.34	-3,045.39	-159.21	3,044.73	0.00	0.00	0.00
14,000.00	89.84	179.78	11,229.62	-3,145.39	-158.83	3,144.73	0.00	0.00	0.00



Nabors Drilling Solutions

Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,100.00	89.84	179.78	11,229.89	-3,245.39	-158.45	3,244.73	0.00	0.00	0.00
14,200.00	89.84	179.78	11,230.16	-3,345.39	-158.08	3,344.72	0.00	0.00	0.00
14,300.00	89.84	179.78	11,230.43	-3,445.39	-157.70	3,444.72	0.00	0.00	0.00
14,400.00	89.84	179.78	11,230.70	-3,545.38	-157.32	3,544.72	0.00	0.00	0.00
14,500.00	89.84	179.78	11,230.97	-3,645.38	-156.94	3,644.72	0.00	0.00	0.00
14,600.00	89.84	179.78	11,231.24	-3,745.38	-156.57	3,744.72	0.00	0.00	0.00
14,700.00	89.84	179.78	11,231.51	-3,845.38	-156.19	3,844.72	0.00	0.00	0.00
14,800.00	89.84	179.78	11,231.78	-3,945.38	-155.81	3,944.72	0.00	0.00	0.00
14,900.00	89.84	179.78	11,232.06	-4,045.38	-155.43	4,044.72	0.00	0.00	0.00
15,000.00	89.84	179.78	11,232.33	-4,145.38	-155.06	4,144.72	0.00	0.00	0.00
15,100.00	89.84	179.78	11,232.60	-4,245.38	-154.68	4,244.72	0.00	0.00	0.00
15,200.00	89.84	179.78	11,232.87	-4,345.38	-154.30	4,344.72	0.00	0.00	0.00
15,300.00	89.84	179.78	11,233.14	-4,445.37	-153.92	4,444.72	0.00	0.00	0.00
15,400.00	89.84	179.78	11,233.41	-4,545.37	-153.55	4,544.72	0.00	0.00	0.00
15,500.00	89.84	179.78	11,233.68	-4,645.37	-153.17	4,644.72	0.00	0.00	0.00
15,600.00	89.84	179.78	11,233.95	-4,745.37	-152.79	4,744.72	0.00	0.00	0.00
15,700.00	89.84	179.78	11,234.22	-4,845.37	-152.41	4,844.72	0.00	0.00	0.00
15,800.00	89.84	179.78	11,234.50	-4,945.37	-152.04	4,944.72	0.00	0.00	0.00
15,900.00	89.84	179.78	11,234.77	-5,045.37	-151.66	5,044.72	0.00	0.00	0.00
16,000.00	89.84	179.78	11,235.04	-5,145.37	-151.28	5,144.72	0.00	0.00	0.00
16,100.00	89.84	179.78	11,235.31	-5,245.37	-150.90	5,244.72	0.00	0.00	0.00
16,200.00	89.84	179.78	11,235.58	-5,345.36	-150.53	5,344.72	0.00	0.00	0.00
16,300.00	89.84	179.78	11,235.85	-5,445.36	-150.15	5,444.72	0.00	0.00	0.00
16,400.00	89.84	179.78	11,236.12	-5,545.36	-149.77	5,544.72	0.00	0.00	0.00
16,500.00	89.84	179.78	11,236.39	-5,645.36	-149.40	5,644.72	0.00	0.00	0.00
16,600.00	89.84	179.78	11,236.67	-5,745.36	-149.02	5,744.72	0.00	0.00	0.00
16,700.00	89.84	179.78	11,236.94	-5,845.36	-148.64	5,844.72	0.00	0.00	0.00
16,800.00	89.84	179.78	11,237.21	-5,945.36	-148.26	5,944.72	0.00	0.00	0.00
16,900.00	89.84	179.78	11,237.48	-6,045.36	-147.89	6,044.71	0.00	0.00	0.00
17,000.00	89.84	179.78	11,237.75	-6,145.36	-147.51	6,144.71	0.00	0.00	0.00
17,100.00	89.84	179.78	11,238.02	-6,245.36	-147.13	6,244.71	0.00	0.00	0.00
17,200.00	89.84	179.78	11,238.29	-6,345.35	-146.75	6,344.71	0.00	0.00	0.00
17,300.00	89.84	179.78	11,238.56	-6,445.35	-146.38	6,444.71	0.00	0.00	0.00
17,400.00	89.84	179.78	11,238.83	-6,545.35	-146.00	6,544.71	0.00	0.00	0.00
17,500.00	89.84	179.78	11,239.11	-6,645.35	-145.62	6,644.71	0.00	0.00	0.00
17,600.00	89.84	179.78	11,239.38	-6,745.35	-145.24	6,744.71	0.00	0.00	0.00
17,700.00	89.84	179.78	11,239.65	-6,845.35	-144.87	6,844.71	0.00	0.00	0.00
17,800.00	89.84	179.78	11,239.92	-6,945.35	-144.49	6,944.71	0.00	0.00	0.00
17,900.00	89.84	179.78	11,240.19	-7,045.35	-144.11	7,044.71	0.00	0.00	0.00
18,000.00	89.84	179.78	11,240.46	-7,145.35	-143.73	7,144.71	0.00	0.00	0.00
18,100.00	89.84	179.78	11,240.73	-7,245.34	-143.36	7,244.71	0.00	0.00	0.00
18,200.00	89.84	179.78	11,241.00	-7,345.34	-142.98	7,344.71	0.00	0.00	0.00
18,300.00	89.84	179.78	11,241.28	-7,445.34	-142.60	7,444.71	0.00	0.00	0.00
18,400.00	89.84	179.78	11,241.55	-7,545.34	-142.22	7,544.71	0.00	0.00	0.00
18,500.00	89.84	179.78	11,241.82	-7,645.34	-141.85	7,644.71	0.00	0.00	0.00
18,600.00	89.84	179.78	11,242.09	-7,745.34	-141.47	7,744.71	0.00	0.00	0.00
18,700.00	89.84	179.78	11,242.36	-7,845.34	-141.09	7,844.71	0.00	0.00	0.00
18,800.00	89.84	179.78	11,242.63	-7,945.34	-140.71	7,944.71	0.00	0.00	0.00
18,900.00	89.84	179.78	11,242.90	-8,045.34	-140.34	8,044.71	0.00	0.00	0.00
18,936.18	89.84	179.78	11,243.00	-8,081.52	-140.20	8,080.89	0.00	0.00	0.00



Nabors Drilling Solutions

Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RS 25 S 161H - FTP - plan misses target center by 5.00ft at 11488.08ft MD (11218.42 TVD, -633.69 N, -168.31 E) - Point	0.00	0.01	11,223.00	-633.00	-170.20	463,931.200	620,064.000	32° 16' 29.518258 N 103° 56' 41.501157 W	
RS 25 S 161H - LTP - plan misses target center by 0.72ft at 18806.18ft MD (11242.65 TVD, -7951.51 N, -140.69 E) - Point	0.00	0.00	11,242.00	-7,951.52	-141.00	456,612.700	620,093.200	32° 15' 17.092674 N 103° 56' 41.469592 W	
RS 25 S 161H - BHL - plan hits target center - Point	0.00	0.00	11,243.00	-8,081.52	-140.20	456,482.700	620,094.000	32° 15' 15.806152 N 103° 56' 41.465753 W	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
82.00	82.00	Rustler				
220.00	220.00	Salado				
425.00	425.00	Est. Top of Salt				
3,027.00	3,027.00	Base of Salt				
3,229.01	3,229.00	Delaware Mountain Group				
3,285.04	3,285.00	Bell Canyon Sandstone				
4,146.05	4,142.00	Cherry Canyon Sandstone				
5,691.50	5,681.00	Brushy Canyon Sandstone				
6,696.50	6,686.00	Basal Brushy Canyon Sandstone				
6,940.50	6,930.00	Bone Spring				
7,120.50	7,110.00	Avalon Shale				
7,464.50	7,454.00	Avalon Limestone				
7,693.50	7,683.00	Lower Avalon Shale				
8,008.50	7,998.00	1st Bone Spring Sandstone				
8,332.50	8,322.00	2nd Bone Spring Limestone				
8,863.50	8,853.00	2nd Bone Spring Sandstone				
8,893.50	8,883.00	2nd Bone Spring Sandstone A				
8,954.50	8,944.00	2nd Bone Spring Limestone A/B				
9,022.50	9,012.00	2nd Bone Spring Sandstone B				
9,165.50	9,155.00	3rd Bone Spring Limestone				
9,499.50	9,489.00	3rd Bone Spring Shale				
9,935.50	9,925.00	3rd Bone Spring Sandstone				
10,224.50	10,214.00	3rd Bone Spring Sandstone Red Hills				
10,263.50	10,253.00	Wolfcamp Shale				
10,289.50	10,279.00	Wolfcamp X				
10,359.50	10,349.00	Wolfcamp Y				
10,396.50	10,386.00	Wolfcamp A				
10,738.12	10,727.38	Wolfcamp B		0.16	179.77	
10,927.61	10,907.54	Wolfcamp C		0.16	179.77	
11,100.22	11,047.82	Wolfcamp D		0.16	179.77	
11,312.88	11,170.30	Wolfcamp E		0.16	179.77	



Nabors Drilling Solutions
Planning Report



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 161H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Project:	Eddy Co., NM	MD Reference:	RT=32(Nabors X09) @ 3096.00ft (Nabors X09)
Site:	Remuda South 25 State	North Reference:	Grid
Well:	161H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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.

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API STANDARD 53

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

Component to be Pressure Tested	Pressure Test—Low Pressure ^{ac} psig (MPa)	Pressure Test—High Pressure ^{ac}	
		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 ^{bd}	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.

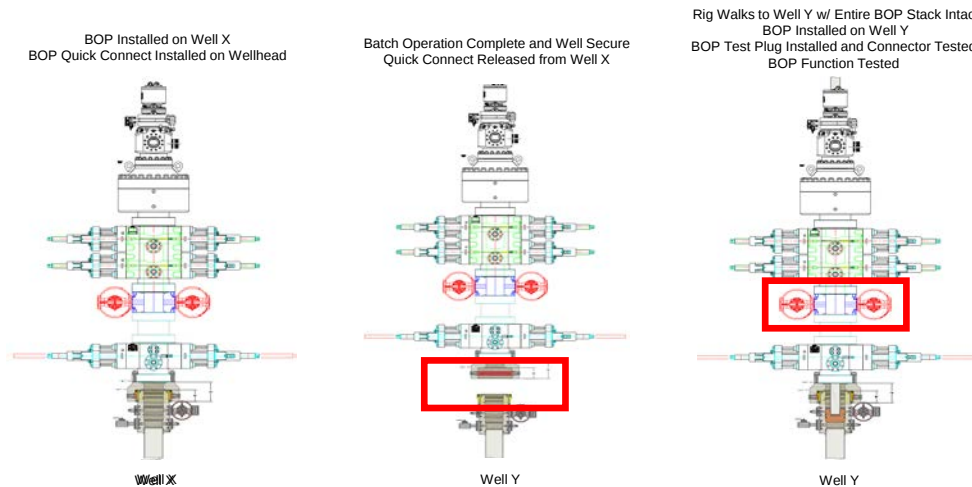
XTO Energy feels break testing and our current procedures meet the intent of OOGO No. 2 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that 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.

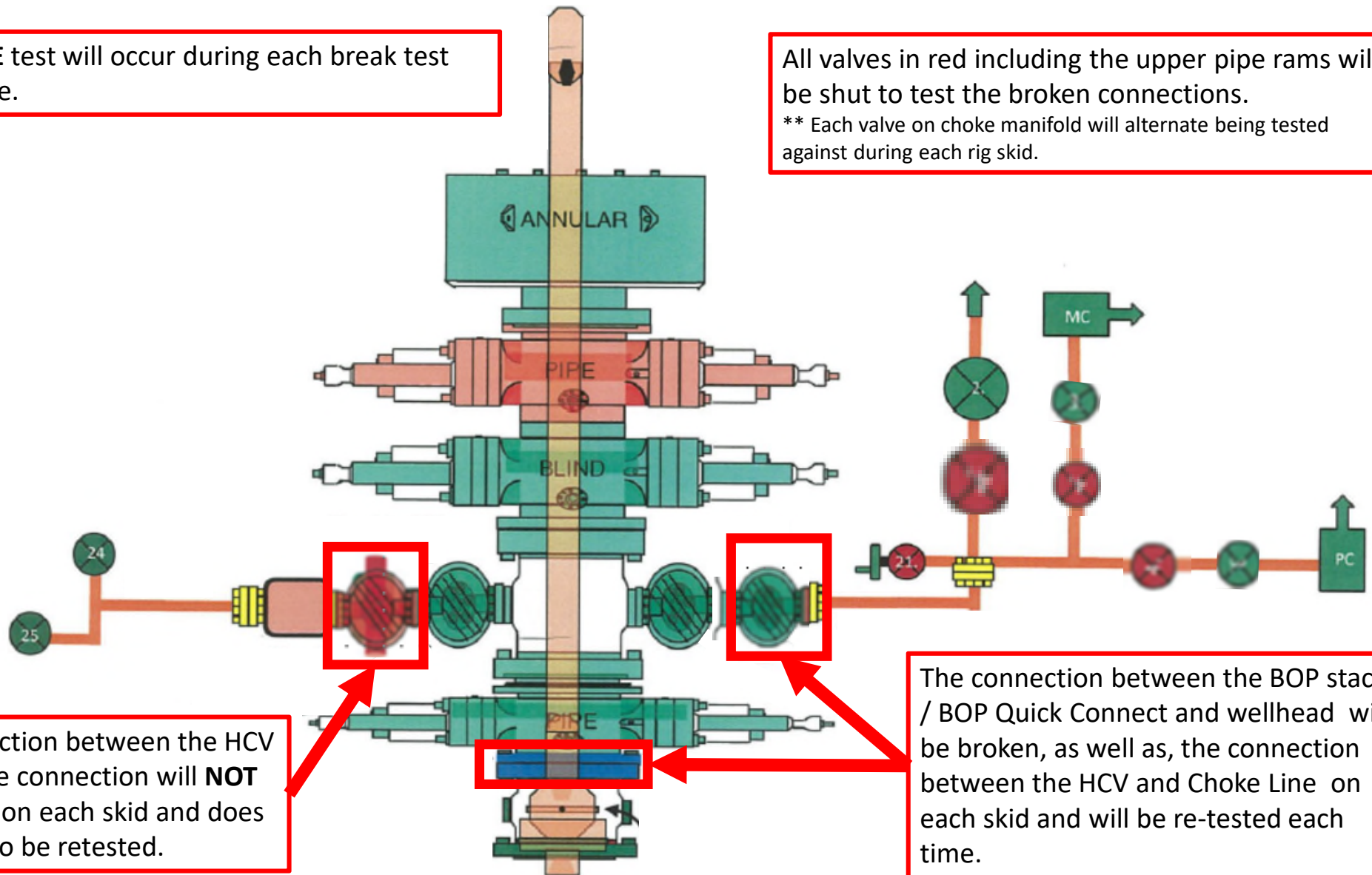
Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met:

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 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 nipped 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.