

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EMNRD-OCD ARTESIA

REC'D: 6/04/2020

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM06808
2. Name of Operator XTO PERMIAN OPERATING LLC Contact: KELLY KARDOS E-Mail: kelly_kardos@xtoenergy.com		6. If Indian, Allottee or Tribe Name
3a. Address 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707	3b. Phone No. (include area code) Ph: 432-620-4374	7. If Unit or CA/Agreement, Name and/or No. NMNM70965X
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 21 T22S R30E Mer NMP SENW 1480FNL 2560FWL 1608FNL 2575FEL		8. Well Name and No. JAMES RANCH UNIT DI 1A BS3E-7E 218H ENNIS 904H
		9. API Well No. 30-015-45617
		10. Field and Pool or Exploratory Area WILDCAT BONE SPRING LOS MEDANOS WOLFCAMP
		11. County or Parish, State EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

XTO Permian Operating, LLC requests permission to make the following changes to the APD:

Casing & cement design per the attached drilling program.

Change name from James Ranch Unit DI 1A BS3E-7E 218H to James Ranch Unit DI 1A Ennis 904H.

Change the formation from Wildcat Bone Spring to Los Medanos Wolfcamp.

Change SHL from 1480FNL & 2560FWL to 1608FNL & 2575FEL. No Surface Disturbance

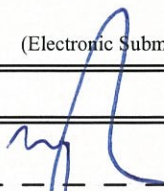
Change BHL from 990FSL & 2440FWL to 990FSL & 2590FWL

Surface good 6-3-20 same CO's BR

06/02/20 - AM All CO's apply. Additional CO's regarding shell testing attached.

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #516025 verified by the BLM Well Information System For XTO PERMIAN OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by PRISCILLA PEREZ on 05/21/2020 ()	
Name (Printed/Typed) KELLY KARDOS	Title REGULATORY COORDINATOR
Signature (Electronic Submission)	Date 05/20/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By 	Title AFM - RESOURCES	Date 03 Jun 2020
Conditions of approval, if any, are attached. Approval of this notice 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.	Office LCNMPO2000	

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.

(Instructions on page 2)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

Additional data for EC transaction #516025 that would not fit on the form

32. Additional remarks, continued

XTO requests the following variances:

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.

Attachments:

C102 & Supplement
Casing/Cement Design
Multibowl Diagram
Directional Plan
Spudder Rig Description of Operations
BOP Variance Procedure

Conditions of Approval
James Ranch Unit DI 1A Ennis 904H
30-015-45617

BOP Break Testing Variance (Note: Shell 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.

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

EMNRD-OCD ARTESIA
REC'D: 6/04/2020
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- 45617		² Pool Code 96597	³ Pool Name LOS MEDANOS; WOLFCAMP
⁴ Property Code 328259	⁵ Property Name JAMES RANCH UNIT DI 1A ENNIS		⁶ Well Number 904H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC.		⁹ Elevation 3,160'

¹⁰ Surface Location

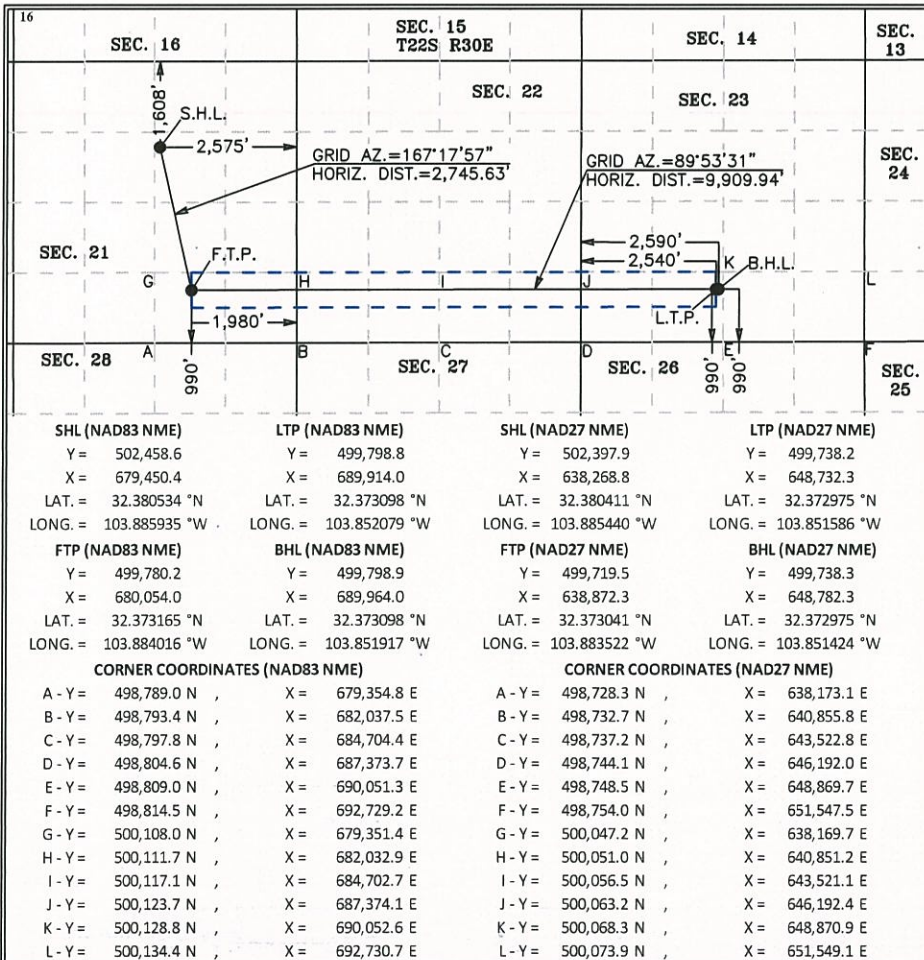
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	21	22S	30E		1,608	NORTH	2,575	EAST	EDDY

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
N	23	22S	30E		990	SOUTH	2,590	WEST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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



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

Kelly Kardos 5-20-20
Signature Date

Kelly Kardos
Printed Name

kelly_kardos@xtoenergy.com
E-mail Address

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

04-21-2020
Date of Survey

Signature and Seal of Professional Surveyor:

MARK DILLON HARP 23786
Certificate Number LM 2020030722

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR

RWP 6/12/2020

Intent ☒ As Drilled ☐

API # 30-015-45617		Operator Name: XTO PERMIAN OPERATING, LLC		Property Name: JAMES RANCH UNIT DI 1A ENNIS		Well Number 904H
-----------------------	--	--	--	--	--	---------------------

Kick Off Point (KOP)

UL G	Section 21	Township 22S	Range 30E	Lot	Feet 1608	From N/S NORTH	Feet 2575	From E/W EAST	County EDDY
Latitude 32.380534					Longitude -103.885935				NAD 83

First Take Point (FTP)

UL O	Section 21	Township 22S	Range 30E	Lot	Feet 990	From N/S SOUTH	Feet 1980	From E/W EAST	County EDDY
Latitude 32.373165					Longitude -103.884016				NAD 83

Last Take Point (LTP)

UL N	Section 23	Township 22S	Range 30E	Lot	Feet 990	From N/S SOUTH	Feet 2540	From E/W WEST	County EDDY
Latitude 32.373098					Longitude -103.852079				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐ N

Is this well an infill well? ☐ Y

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

API # 30-015-45611		Operator Name: XTO PERMIAN OPERATING, LLC		Property Name: JAMES RANCH UNIT DI 1A ENNIS		Well Number 115H
-----------------------	--	--	--	--	--	---------------------

KZ 06/29/2018

Casing Design

The surface fresh water sands will be protected by setting 16" inch casing @ 488' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 11-3/4" inch casing at 3328' 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 9883' and cemented 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 2nd intermediate (estimated TOC 9383 feet) per Potash regulations.

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
20"	0' - 488'	16"	75	BTC	J-55	New	2.77	5.75	40.07
14-3/4"	0' - 3328'	11-3/4"	47	BTC	J-55	New	1.13	1.57	4.96
10-5/8"	0' - 9883'	8-5/8"	32	BTC	HCL-80	New	1.10	1.38	2.17
7-7/8"	0' - 20965'	5-1/2"	20	C75	CYP-110	New	1.20	1.45	2.25

- XTO requests to not utilize centralizers in the curve and lateral
- 16" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 11-3/4" Collapse analyzed using 50% evacuation based on regional experience.
- 8-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

WELLHEAD:

Temporary Wellhead

- 16" SOW bottom x 16-3/4" 3M top flange

Permanent Wellhead - GE RSH Multibowl System

- Starting Head: 13-5/8" 10M top flange x 11-3/4" SOW bottom
 - 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 may not be present for BOP test plug installation

Cement Program

Surface Casing:

Tail: 560 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

*Two additional 1" top out jobs will be attempted after the surface cement job. If the top of cement is not affected by the two top out jobs, ~10-20 ppb gravel will be added on the backside of the 1" to attempt to get cement to surface.

1st Intermediate Casing:

Lead: 1880 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.39 ft³/sx, 10.13 gal/sx water)
Tail: 190 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing:

ECP/DV Tool to be set at 3428'

1st Stage:

Lead: 1180 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 2.11 ft³/sx, 9.61 gal/sx water)
Tail: 170 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.2 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Stage:

Lead: 30 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 2.16 ft³/sx, 9.61 gal/sx water)
Tail: 150 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Production Casing:

Lead: 160 sxs NeoCem (mixed at 10.5 ppg, 1.14 ft³/sx, 12.26 gal/sx water) Top of Cement:
Tail: 2120 sxs VersaCem (mixed at 13.2 ppg, 1.14 ft³/sx, 8.38 gal/sx water) Top of Cement:
Compressives: 12-hr = 1375 psi 24 hr = 2285

Mud Circulation Program

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 488'	20"	FW/Native	8.4-8.8	35-40	NC
488' - 3328'	14-3/4"	Brine	9.8-10.2	30-32	NC
3328' to 9883'	10-5/8"	FW / Cut Brine	8.7-9.4	30-32	NC
9883' to 20965'	7-7/8"	Cut Brine / Polymer	9.8 - 10.1	29-32	NC - 20

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

XTO Energy Inc.

James Ranch Unit DI 1A Ennis 904H
Projected TD: 20965' MD / 10656' TVD
SHL: 1608' FNL & 2575' FEL , Section 21, T22S, R30E
BHL: 990' FSL & 2590' FWL , Section 23, T22S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	143'	Water
Top of Salt	513'	Water
Base of Salt	3278'	Water
Delaware	3530'	Water
Bone Spring Lime	7383'	Water
1st Bone Spring Ss	8300'	Water/Oil/Gas
2nd Bone Spring Ss	8908'	Water/Oil/Gas
3rd Bone Spring Carb	9591'	Water/Oil/Gas
3rd Bone Spring Ss	10314'	Water/Oil/Gas
Target/Land Curve	10656'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 16" inch casing @ 488' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 11-3/4" inch casing at 3328' 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 9883' and cemented 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 2nd intermediate (estimated TOC 9383 feet) per Potash regulations.

Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
20"	0' – 488'	16"	75	BTC	J-55	New	2.77	5.75	40.07
14-3/4"	0' – 3328'	11-3/4"	47	BTC	J-55	New	1.13	1.57	4.96
10-5/8"	0' – 9883'	8-5/8"	32	BTC	HCL-80	New	1.10	1.38	2.17
7-7/8"	0' – 20965'	5-1/2"	20	C7S	CYP-110	New	1.20	1.45	2.25

- XTO requests to not utilize centralizers in the curve and lateral
- 16" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 11-3/4" Collapse analyzed using 50% evacuation based on regional experience.
- 8-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

Wellhead:

Temporary Wellhead

- 16" SOW bottom x 16-3/4" 3M top flange

• Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 10M top flange x 11-3/4" 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

4. Cement Program

Surface Casing: 16", 75 New J-55, BTC casing to be set at +/- 488'

Tail: 560 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Top of Cement: Surface

Two additional 1" top out jobs will be attempted after the surface cement job. If the top of cement is not affected by the two top out jobs, ~10-20 ppb gravel will be added on the backside of the 1" to attempt to get cement to surface.

1st Intermediate Casing: 11-3/4", 47 New J-55, BTC casing to be set at +/- 3328'

Lead: 1880 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.39 ft³/sx, 10.13 gal/sx water)
Tail: 190 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Top of Cement: Surface

*2nd Intermediate Casing: 8-5/8", 32 New HCL-80, BTC casing to be set at +/- 9883'
ECP/DV Tool to be set at 3428'*

1st Stage

Lead: 1180 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 2.11 ft³/sx, 9.61 gal/sx water)
Tail: 170 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.2 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Stage

Lead: 30 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 2.16 ft³/sx, 9.61 gal/sx water)
Tail: 150 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Top of Cement: 200' inside previous casing shoe

Production Casing: 5-1/2", 20 New CYP-110, C7S casing to be set at +/- 20965'

Lead: 160 sxs NeoCem (mixed at 10.5 ppg, 1.14 ft³/sx, 12.26 gal/sx water) Top of Cement:
Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

5. Pressure Control Equipment

The blow out preventer equipment (BOP) on surface casing temporary wellhead will consist of a 21-1/4" minimum 2M Hydril. MASP should not exceed 1016 psi.

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 5M Double Ram BOP. MASP should not exceed 3252 psi. In any instance where 10M BOP is required by BLM, 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).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 11-3/4", 5M bradenhead and flange, the BOP test will be limited to 5M psi. When nipping up on the 8-5/8", the BOP will be tested to a minimum of 5M psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set casing and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per GE recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 488'	20"	FW/Native	8.4-8.8	35-40	NC
488' - 3328'	14-3/4"	Brine	9.8-10.2	30-32	NC
3328' to 9883'	10-5/8"	FW / Cut Brine	8.7-9.4	30-32	NC
9883' to 20965'	7-7/8"	Cut Brine / Polymer	9.8 - 10.1	29-32	NC - 20

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under 16" surface casing with brine solution. A 9.8 ppg -10.2 ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 11-3/4" casing.

8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 170 to 190 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 5597 psi.

10. Anticipated Starting Date and Duration of Operations

Road and location construction will begin after Santa Fe and BLM have approved the APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 40 days. If production casing is run, an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.



XTO ENERGY, INC.

DRAWN	VJK	31OCT16
APPRV	KN	31OCT16

10012358



XTO Permian Operating, LLC

**Eddy Co., NM
JRU DI 1A Ennis
904H**

Wellbore #1

Plan: Design #1

Standard Planning Report

28 April, 2020





Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 904H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Project:	Eddy Co., NM	MD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Site:	JRU DI 1A Ennis	North Reference:	Grid
Well:	904H	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	JRU DI 1A Ennis		
Site Position:		Northing:	502,397.900 usft
From:	Map	Easting:	638,208.800 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	32° 22' 49.482274 N
		Longitude:	103° 53' 8.284500 W
		Grid Convergence:	0.24 °

Well	904H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	60.00 ft	Easting:
Position Uncertainty	2.00 ft	Wellhead Elevation:	Ground Level:
			3,160.00 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM_FILE	4/28/2020	6.92
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,929.00000000

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			104.20

Plan Survey Tool Program	Date 4/28/2020		
Depth From	Depth To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
1	0.00	20,964.68	Design #1 (Wellbore #1)
			MWD+HRGM
			OWSG MWD + HRGM
			Remarks

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
0.00	0.00	0.00	0.00	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	
5,310.80	30.16	167.30	5,219.20	-504.51	113.68	1.50	1.50	0.00	167.30	
8,716.61	30.16	167.30	8,163.90	-2,173.90	489.82	0.00	0.00	0.00	0.00	
10,727.41	0.00	0.00	10,083.10	-2,678.41	603.50	1.50	-1.50	0.00	180.00	
11,623.00	89.56	89.89	10,656.04	-2,677.33	1,172.04	10.00	10.00	10.04	89.89	
20,964.77	89.56	89.89	10,728.00	-2,659.61	10,513.52	0.00	0.00	0.00	0.00	JRU DI 1A Ennis 904I



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 904H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Project:	Eddy Co., NM	MD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Site:	JRU DI 1A Ennis	North Reference:	Grid
Well:	904H	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
3,200.00	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	1.50	167.30	3,399.99	-1.28	0.29	0.59	1.50	1.50	0.00
3,500.00	3.00	167.30	3,499.91	-5.11	1.15	2.37	1.50	1.50	0.00
3,600.00	4.50	167.30	3,599.69	-11.49	2.59	5.33	1.50	1.50	0.00
3,700.00	6.00	167.30	3,699.27	-20.41	4.60	9.47	1.50	1.50	0.00
3,800.00	7.50	167.30	3,798.57	-31.88	7.18	14.78	1.50	1.50	0.00
3,900.00	9.00	167.30	3,897.54	-45.88	10.34	21.27	1.50	1.50	0.00
4,000.00	10.50	167.30	3,996.09	-62.40	14.06	28.93	1.50	1.50	0.00
4,100.00	12.00	167.30	4,094.16	-81.43	18.35	37.76	1.50	1.50	0.00
4,200.00	13.50	167.30	4,191.70	-102.96	23.20	47.74	1.50	1.50	0.00
4,300.00	15.00	167.30	4,288.62	-126.97	28.61	58.87	1.50	1.50	0.00
4,400.00	16.50	167.30	4,384.86	-153.45	34.58	71.15	1.50	1.50	0.00
4,500.00	18.00	167.30	4,480.36	-182.38	41.09	84.57	1.50	1.50	0.00
4,600.00	19.50	167.30	4,575.05	-213.73	48.16	99.11	1.50	1.50	0.00
4,700.00	21.00	167.30	4,668.86	-247.50	55.77	114.76	1.50	1.50	0.00
4,800.00	22.50	167.30	4,761.74	-283.65	63.91	131.52	1.50	1.50	0.00
4,900.00	24.00	167.30	4,853.62	-322.16	72.59	149.38	1.50	1.50	0.00
5,000.00	25.50	167.30	4,944.43	-363.00	81.79	168.32	1.50	1.50	0.00
5,100.00	27.00	167.30	5,034.12	-406.14	91.51	188.32	1.50	1.50	0.00



Database: RyanUSA_32Bit
Company: XTO Permian Operating, LLC
Project: Eddy Co., NM
Site: JRU DI 1A Ennis
Well: 904H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well 904H
TVD Reference: RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
MD Reference: RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
5,200.00	28.50	167.30	5,122.61	-451.56	101.75	209.38	1.50	1.50	0.00
5,300.00	30.00	167.30	5,209.86	-499.23	112.49	231.48	1.50	1.50	0.00
5,310.80	30.16	167.30	5,219.20	-504.51	113.68	233.93	1.50	1.50	0.00
5,400.00	30.16	167.30	5,296.33	-548.23	123.53	254.21	0.00	0.00	0.00
5,500.00	30.16	167.30	5,382.79	-597.25	134.57	276.93	0.00	0.00	0.00
5,600.00	30.16	167.30	5,469.25	-646.26	145.62	299.66	0.00	0.00	0.00
5,700.00	30.16	167.30	5,555.71	-695.28	156.66	322.39	0.00	0.00	0.00
5,800.00	30.16	167.30	5,642.17	-744.30	167.71	345.12	0.00	0.00	0.00
5,900.00	30.16	167.30	5,728.63	-793.31	178.75	367.85	0.00	0.00	0.00
6,000.00	30.16	167.30	5,815.09	-842.33	189.79	390.57	0.00	0.00	0.00
6,100.00	30.16	167.30	5,901.55	-891.34	200.84	413.30	0.00	0.00	0.00
6,200.00	30.16	167.30	5,988.01	-940.36	211.88	436.03	0.00	0.00	0.00
6,300.00	30.16	167.30	6,074.48	-989.37	222.93	458.76	0.00	0.00	0.00
6,400.00	30.16	167.30	6,160.94	-1,038.39	233.97	481.49	0.00	0.00	0.00
6,500.00	30.16	167.30	6,247.40	-1,087.41	245.02	504.21	0.00	0.00	0.00
6,600.00	30.16	167.30	6,333.86	-1,136.42	256.06	526.94	0.00	0.00	0.00
6,700.00	30.16	167.30	6,420.32	-1,185.44	267.10	549.67	0.00	0.00	0.00
6,800.00	30.16	167.30	6,506.78	-1,234.45	278.15	572.40	0.00	0.00	0.00
6,900.00	30.16	167.30	6,593.24	-1,283.47	289.19	595.13	0.00	0.00	0.00
7,000.00	30.16	167.30	6,679.70	-1,332.49	300.24	617.85	0.00	0.00	0.00
7,100.00	30.16	167.30	6,766.16	-1,381.50	311.28	640.58	0.00	0.00	0.00
7,200.00	30.16	167.30	6,852.62	-1,430.52	322.33	663.31	0.00	0.00	0.00
7,300.00	30.16	167.30	6,939.08	-1,479.53	333.37	686.04	0.00	0.00	0.00
7,400.00	30.16	167.30	7,025.54	-1,528.55	344.41	708.76	0.00	0.00	0.00
7,500.00	30.16	167.30	7,112.01	-1,577.56	355.46	731.49	0.00	0.00	0.00
7,600.00	30.16	167.30	7,198.47	-1,626.58	366.50	754.22	0.00	0.00	0.00
7,700.00	30.16	167.30	7,284.93	-1,675.60	377.55	776.95	0.00	0.00	0.00
7,800.00	30.16	167.30	7,371.39	-1,724.61	388.59	799.68	0.00	0.00	0.00
7,900.00	30.16	167.30	7,457.85	-1,773.63	399.64	822.40	0.00	0.00	0.00
8,000.00	30.16	167.30	7,544.31	-1,822.64	410.68	845.13	0.00	0.00	0.00
8,100.00	30.16	167.30	7,630.77	-1,871.66	421.72	867.86	0.00	0.00	0.00
8,200.00	30.16	167.30	7,717.23	-1,920.68	432.77	890.59	0.00	0.00	0.00
8,300.00	30.16	167.30	7,803.69	-1,969.69	443.81	913.32	0.00	0.00	0.00
8,400.00	30.16	167.30	7,890.15	-2,018.71	454.86	936.04	0.00	0.00	0.00
8,500.00	30.16	167.30	7,976.61	-2,067.72	465.90	958.77	0.00	0.00	0.00
8,600.00	30.16	167.30	8,063.07	-2,116.74	476.95	981.50	0.00	0.00	0.00
8,700.00	30.16	167.30	8,149.54	-2,165.75	487.99	1,004.23	0.00	0.00	0.00
8,716.61	30.16	167.30	8,163.90	-2,173.90	489.82	1,008.00	0.00	0.00	0.00
8,800.00	28.91	167.30	8,236.45	-2,214.00	498.86	1,026.60	1.50	-1.50	0.00
8,900.00	27.41	167.30	8,324.61	-2,260.04	509.23	1,047.95	1.50	-1.50	0.00
9,000.00	25.91	167.30	8,413.97	-2,303.81	519.10	1,068.24	1.50	-1.50	0.00
9,100.00	24.41	167.30	8,504.48	-2,345.29	528.44	1,087.47	1.50	-1.50	0.00
9,200.00	22.91	167.30	8,596.07	-2,384.44	537.26	1,105.63	1.50	-1.50	0.00
9,300.00	21.41	167.30	8,688.68	-2,421.23	545.56	1,122.69	1.50	-1.50	0.00
9,400.00	19.91	167.30	8,782.25	-2,455.65	553.31	1,138.65	1.50	-1.50	0.00
9,500.00	18.41	167.30	8,876.71	-2,487.67	560.53	1,153.50	1.50	-1.50	0.00
9,600.00	16.91	167.30	8,971.99	-2,517.27	567.19	1,167.22	1.50	-1.50	0.00
9,700.00	15.41	167.30	9,068.03	-2,544.42	573.31	1,179.81	1.50	-1.50	0.00
9,800.00	13.91	167.30	9,164.78	-2,569.11	578.88	1,191.26	1.50	-1.50	0.00
9,900.00	12.41	167.30	9,262.15	-2,591.32	583.88	1,201.56	1.50	-1.50	0.00
10,000.00	10.91	167.30	9,360.08	-2,611.04	588.32	1,210.70	1.50	-1.50	0.00
10,100.00	9.41	167.30	9,458.51	-2,628.25	592.20	1,218.68	1.50	-1.50	0.00



Database: RyanUSA_32Bit
Company: XTO Permian Operating, LLC
Project: Eddy Co., NM
Site: JRU DI 1A Ennis
Well: 904H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well 904H
TVD Reference: RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
MD Reference: RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
10,200.00	7.91	167.30	9,557.37	-2,642.94	595.51	1,225.49	1.50	-1.50	0.00
10,300.00	6.41	167.30	9,656.58	-2,655.10	598.25	1,231.13	1.50	-1.50	0.00
10,400.00	4.91	167.30	9,756.09	-2,664.72	600.42	1,235.59	1.50	-1.50	0.00
10,500.00	3.41	167.30	9,855.83	-2,671.80	602.01	1,238.87	1.50	-1.50	0.00
10,600.00	1.91	167.30	9,955.71	-2,676.33	603.03	1,240.97	1.50	-1.50	0.00
10,700.00	0.41	167.30	10,055.69	-2,678.31	603.48	1,241.89	1.50	-1.50	0.00
10,727.41	0.00	0.00	10,083.10	-2,678.41	603.50	1,241.94	1.50	-1.50	0.00
10,750.00	2.26	89.89	10,105.69	-2,678.40	603.95	1,242.37	10.00	10.00	0.00
10,800.00	7.26	89.89	10,155.50	-2,678.40	608.09	1,246.39	10.00	10.00	0.00
10,850.00	12.26	89.89	10,204.76	-2,678.38	616.57	1,254.60	10.00	10.00	0.00
10,900.00	17.26	89.89	10,253.09	-2,678.36	629.30	1,266.93	10.00	10.00	0.00
10,950.00	22.26	89.89	10,300.13	-2,678.32	646.20	1,283.31	10.00	10.00	0.00
11,000.00	27.26	89.89	10,345.52	-2,678.28	667.13	1,303.59	10.00	10.00	0.00
11,050.00	32.26	89.89	10,388.92	-2,678.24	691.94	1,327.63	10.00	10.00	0.00
11,100.00	37.26	89.89	10,429.98	-2,678.18	720.44	1,355.25	10.00	10.00	0.00
11,150.00	42.26	89.89	10,468.41	-2,678.12	752.41	1,386.22	10.00	10.00	0.00
11,200.00	47.26	89.89	10,503.90	-2,678.06	787.60	1,420.33	10.00	10.00	0.00
11,250.00	52.26	89.89	10,536.19	-2,677.98	825.76	1,457.30	10.00	10.00	0.00
11,300.00	57.26	89.89	10,565.03	-2,677.91	866.58	1,496.86	10.00	10.00	0.00
11,350.00	62.26	89.89	10,590.20	-2,677.82	909.76	1,538.70	10.00	10.00	0.00
11,400.00	67.26	89.89	10,611.52	-2,677.74	954.97	1,582.51	10.00	10.00	0.00
11,450.00	72.26	89.89	10,628.81	-2,677.65	1,001.87	1,627.95	10.00	10.00	0.00
11,500.00	77.26	89.89	10,641.95	-2,677.56	1,050.10	1,674.68	10.00	10.00	0.00
11,550.00	82.26	89.89	10,650.84	-2,677.46	1,099.28	1,722.35	10.00	10.00	0.00
11,600.00	87.26	89.89	10,655.40	-2,677.37	1,149.06	1,770.58	10.00	10.00	0.00
11,623.00	89.56	89.89	10,656.04	-2,677.33	1,172.04	1,792.85	10.00	10.00	0.00
11,700.00	89.56	89.89	10,656.63	-2,677.18	1,249.05	1,867.47	0.00	0.00	0.00
11,800.00	89.56	89.89	10,657.40	-2,676.99	1,349.04	1,964.36	0.00	0.00	0.00
11,900.00	89.56	89.89	10,658.17	-2,676.80	1,449.04	2,061.26	0.00	0.00	0.00
12,000.00	89.56	89.89	10,658.95	-2,676.61	1,549.04	2,158.16	0.00	0.00	0.00
12,100.00	89.56	89.89	10,659.72	-2,676.42	1,649.03	2,255.05	0.00	0.00	0.00
12,200.00	89.56	89.89	10,660.49	-2,676.23	1,749.03	2,351.95	0.00	0.00	0.00
12,300.00	89.56	89.89	10,661.26	-2,676.04	1,849.03	2,448.85	0.00	0.00	0.00
12,400.00	89.56	89.89	10,662.03	-2,675.85	1,949.02	2,545.74	0.00	0.00	0.00
12,500.00	89.56	89.89	10,662.80	-2,675.66	2,049.02	2,642.64	0.00	0.00	0.00
12,600.00	89.56	89.89	10,663.57	-2,675.47	2,149.02	2,739.54	0.00	0.00	0.00
12,700.00	89.56	89.89	10,664.34	-2,675.28	2,249.02	2,836.43	0.00	0.00	0.00
12,800.00	89.56	89.89	10,665.11	-2,675.09	2,349.01	2,933.33	0.00	0.00	0.00
12,900.00	89.56	89.89	10,665.88	-2,674.90	2,449.01	3,030.22	0.00	0.00	0.00
13,000.00	89.56	89.89	10,666.65	-2,674.71	2,549.01	3,127.12	0.00	0.00	0.00
13,100.00	89.56	89.89	10,667.42	-2,674.52	2,649.00	3,224.02	0.00	0.00	0.00
13,200.00	89.56	89.89	10,668.19	-2,674.34	2,749.00	3,320.91	0.00	0.00	0.00
13,300.00	89.56	89.89	10,668.96	-2,674.15	2,849.00	3,417.81	0.00	0.00	0.00
13,400.00	89.56	89.89	10,669.73	-2,673.96	2,948.99	3,514.71	0.00	0.00	0.00
13,500.00	89.56	89.89	10,670.50	-2,673.77	3,048.99	3,611.60	0.00	0.00	0.00
13,600.00	89.56	89.89	10,671.27	-2,673.58	3,148.99	3,708.50	0.00	0.00	0.00
13,700.00	89.56	89.89	10,672.04	-2,673.39	3,248.98	3,805.40	0.00	0.00	0.00
13,800.00	89.56	89.89	10,672.81	-2,673.20	3,348.98	3,902.29	0.00	0.00	0.00
13,900.00	89.56	89.89	10,673.58	-2,673.01	3,448.98	3,999.19	0.00	0.00	0.00
14,000.00	89.56	89.89	10,674.35	-2,672.82	3,548.97	4,096.09	0.00	0.00	0.00
14,100.00	89.56	89.89	10,675.12	-2,672.63	3,648.97	4,192.98	0.00	0.00	0.00
14,200.00	89.56	89.89	10,675.89	-2,672.44	3,748.97	4,289.88	0.00	0.00	0.00



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 904H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Project:	Eddy Co., NM	MD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Site:	JRU DI 1A Ennis	North Reference:	Grid
Well:	904H	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)
14,300.00	89.56	89.89	10,676.66	-2,672.25	3,848.96	4,386.78	0.00	0.00	0.00
14,400.00	89.56	89.89	10,677.43	-2,672.06	3,948.96	4,483.67	0.00	0.00	0.00
14,500.00	89.56	89.89	10,678.20	-2,671.87	4,048.96	4,580.57	0.00	0.00	0.00
14,600.00	89.56	89.89	10,678.97	-2,671.68	4,148.96	4,677.47	0.00	0.00	0.00
14,700.00	89.56	89.89	10,679.74	-2,671.49	4,248.95	4,774.36	0.00	0.00	0.00
14,800.00	89.56	89.89	10,680.51	-2,671.30	4,348.95	4,871.26	0.00	0.00	0.00
14,900.00	89.56	89.89	10,681.28	-2,671.11	4,448.95	4,968.16	0.00	0.00	0.00
15,000.00	89.56	89.89	10,682.05	-2,670.92	4,548.94	5,065.05	0.00	0.00	0.00
15,100.00	89.56	89.89	10,682.82	-2,670.73	4,648.94	5,161.95	0.00	0.00	0.00
15,200.00	89.56	89.89	10,683.59	-2,670.54	4,748.94	5,258.85	0.00	0.00	0.00
15,300.00	89.56	89.89	10,684.36	-2,670.35	4,848.93	5,355.74	0.00	0.00	0.00
15,400.00	89.56	89.89	10,685.14	-2,670.16	4,948.93	5,452.64	0.00	0.00	0.00
15,500.00	89.56	89.89	10,685.91	-2,669.97	5,048.93	5,549.54	0.00	0.00	0.00
15,600.00	89.56	89.89	10,686.68	-2,669.78	5,148.92	5,646.43	0.00	0.00	0.00
15,700.00	89.56	89.89	10,687.45	-2,669.59	5,248.92	5,743.33	0.00	0.00	0.00
15,800.00	89.56	89.89	10,688.22	-2,669.40	5,348.92	5,840.22	0.00	0.00	0.00
15,900.00	89.56	89.89	10,688.99	-2,669.21	5,448.91	5,937.12	0.00	0.00	0.00
16,000.00	89.56	89.89	10,689.76	-2,669.02	5,548.91	6,034.02	0.00	0.00	0.00
16,100.00	89.56	89.89	10,690.53	-2,668.83	5,648.91	6,130.91	0.00	0.00	0.00
16,200.00	89.56	89.89	10,691.30	-2,668.64	5,748.90	6,227.81	0.00	0.00	0.00
16,300.00	89.56	89.89	10,692.07	-2,668.45	5,848.90	6,324.71	0.00	0.00	0.00
16,400.00	89.56	89.89	10,692.84	-2,668.26	5,948.90	6,421.60	0.00	0.00	0.00
16,500.00	89.56	89.89	10,693.61	-2,668.08	6,048.90	6,518.50	0.00	0.00	0.00
16,600.00	89.56	89.89	10,694.38	-2,667.89	6,148.89	6,615.40	0.00	0.00	0.00
16,700.00	89.56	89.89	10,695.15	-2,667.70	6,248.89	6,712.29	0.00	0.00	0.00
16,800.00	89.56	89.89	10,695.92	-2,667.51	6,348.89	6,809.19	0.00	0.00	0.00
16,900.00	89.56	89.89	10,696.69	-2,667.32	6,448.88	6,906.09	0.00	0.00	0.00
17,000.00	89.56	89.89	10,697.46	-2,667.13	6,548.88	7,002.98	0.00	0.00	0.00
17,100.00	89.56	89.89	10,698.23	-2,666.94	6,648.88	7,099.88	0.00	0.00	0.00
17,200.00	89.56	89.89	10,699.00	-2,666.75	6,748.87	7,196.78	0.00	0.00	0.00
17,300.00	89.56	89.89	10,699.77	-2,666.56	6,848.87	7,293.67	0.00	0.00	0.00
17,400.00	89.56	89.89	10,700.54	-2,666.37	6,948.87	7,390.57	0.00	0.00	0.00
17,500.00	89.56	89.89	10,701.31	-2,666.18	7,048.86	7,487.47	0.00	0.00	0.00
17,600.00	89.56	89.89	10,702.08	-2,665.99	7,148.86	7,584.36	0.00	0.00	0.00
17,700.00	89.56	89.89	10,702.85	-2,665.80	7,248.86	7,681.26	0.00	0.00	0.00
17,800.00	89.56	89.89	10,703.62	-2,665.61	7,348.85	7,778.16	0.00	0.00	0.00
17,900.00	89.56	89.89	10,704.39	-2,665.42	7,448.85	7,875.05	0.00	0.00	0.00
18,000.00	89.56	89.89	10,705.16	-2,665.23	7,548.85	7,971.95	0.00	0.00	0.00
18,100.00	89.56	89.89	10,705.93	-2,665.04	7,648.85	8,068.85	0.00	0.00	0.00
18,200.00	89.56	89.89	10,706.70	-2,664.85	7,748.84	8,165.74	0.00	0.00	0.00
18,300.00	89.56	89.89	10,707.47	-2,664.66	7,848.84	8,262.64	0.00	0.00	0.00
18,400.00	89.56	89.89	10,708.24	-2,664.47	7,948.84	8,359.54	0.00	0.00	0.00
18,500.00	89.56	89.89	10,709.01	-2,664.28	8,048.83	8,456.43	0.00	0.00	0.00
18,600.00	89.56	89.89	10,709.78	-2,664.09	8,148.83	8,553.33	0.00	0.00	0.00
18,700.00	89.56	89.89	10,710.55	-2,663.90	8,248.83	8,650.22	0.00	0.00	0.00
18,800.00	89.56	89.89	10,711.33	-2,663.71	8,348.82	8,747.12	0.00	0.00	0.00
18,900.00	89.56	89.89	10,712.10	-2,663.52	8,448.82	8,844.02	0.00	0.00	0.00
19,000.00	89.56	89.89	10,712.87	-2,663.33	8,548.82	8,940.91	0.00	0.00	0.00
19,100.00	89.56	89.89	10,713.64	-2,663.14	8,648.81	9,037.81	0.00	0.00	0.00
19,200.00	89.56	89.89	10,714.41	-2,662.95	8,748.81	9,134.71	0.00	0.00	0.00
19,300.00	89.56	89.89	10,715.18	-2,662.76	8,848.81	9,231.60	0.00	0.00	0.00
19,400.00	89.56	89.89	10,715.95	-2,662.57	8,948.80	9,328.50	0.00	0.00	0.00



Database: RyanUSA_32Bit
Company: XTO Permian Operating, LLC
Project: Eddy Co., NM
Site: JRU DI 1A Ennis
Well: 904H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well 904H
TVD Reference: RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
MD Reference: RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
19,500.00	89.56	89.89	10,716.72	-2,662.38	9,048.80	9,425.40	0.00	0.00	0.00
19,600.00	89.56	89.89	10,717.49	-2,662.19	9,148.80	9,522.29	0.00	0.00	0.00
19,700.00	89.56	89.89	10,718.26	-2,662.00	9,248.79	9,619.19	0.00	0.00	0.00
19,800.00	89.56	89.89	10,719.03	-2,661.81	9,348.79	9,716.09	0.00	0.00	0.00
19,900.00	89.56	89.89	10,719.80	-2,661.63	9,448.79	9,812.98	0.00	0.00	0.00
20,000.00	89.56	89.89	10,720.57	-2,661.44	9,548.79	9,909.88	0.00	0.00	0.00
20,100.00	89.56	89.89	10,721.34	-2,661.25	9,648.78	10,006.78	0.00	0.00	0.00
20,200.00	89.56	89.89	10,722.11	-2,661.06	9,748.78	10,103.67	0.00	0.00	0.00
20,300.00	89.56	89.89	10,722.88	-2,660.87	9,848.78	10,200.57	0.00	0.00	0.00
20,400.00	89.56	89.89	10,723.65	-2,660.68	9,948.77	10,297.47	0.00	0.00	0.00
20,500.00	89.56	89.89	10,724.42	-2,660.49	10,048.77	10,394.36	0.00	0.00	0.00
20,600.00	89.56	89.89	10,725.19	-2,660.30	10,148.77	10,491.26	0.00	0.00	0.00
20,700.00	89.56	89.89	10,725.96	-2,660.11	10,248.76	10,588.16	0.00	0.00	0.00
20,800.00	89.56	89.89	10,726.73	-2,659.92	10,348.76	10,685.05	0.00	0.00	0.00
20,900.00	89.56	89.89	10,727.50	-2,659.73	10,448.76	10,781.95	0.00	0.00	0.00
20,964.77	89.56	89.89	10,728.00	-2,659.61	10,513.52	10,844.71	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
JRU DI 1A Ennis 904H -	0.00	0.00	10,656.00	-2,678.41	603.50	499,719.500	638,872.300	32° 22' 22.949728 N	103° 53' 0.678634 W
- plan misses target center by 237.29ft at 11178.37ft MD (10488.92 TVD, -2678.09 N, 771.99 E)									
- Point									
JRU DI 1A Ennis 904H -	0.00	0.00	10,727.00	-2,659.71	10,463.52	499,738.200	648,732.300	32° 22' 22.710064 N	103° 51' 5.708438 W
- plan misses target center by 14.77ft at 20900.00ft MD (10727.50 TVD, -2659.73 N, 10448.76 E)									
- Point									
JRU DI 1A Ennis 904H -	0.00	0.00	10,728.00	-2,659.61	10,513.52	499,738.300	648,782.300	32° 22' 22.708826 N	103° 51' 5.125426 W
- plan hits target center									
- Point									



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 904H
Company:	XTO Permian Operating, LLC	TVD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Project:	Eddy Co., NM	MD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Site:	JRU DI 1A Ennis	North Reference:	Grid
Well:	904H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
143.00	143.00	Rustler			
513.00	513.00	Salado (Top of Salt)			
2,167.00	2,167.00	Castile Anhydrite 1 Top			
2,603.00	2,603.00	Castile Anhydrite 1 Base			
2,825.00	2,825.00	Castile Anhydrite 2 Top			
2,927.00	2,927.00	Castile Anhydrite 2 Base			
3,278.00	3,278.00	Base of Salt			
3,530.14	3,530.00	Delaware/Lamar			
3,573.23	3,573.00	Bell Canyon			
4,674.47	4,645.00	Cherry Canyon			
6,231.21	6,015.00	Brushy Canyon Ss.			
7,813.43	7,383.00	Bone Spring Lm.			
7,862.01	7,425.00	Avalon Ss.			
8,121.08	7,649.00	Upper Avalon Carb.			
8,213.61	7,729.00	Upper Avalon Sh.			
8,299.20	7,803.00	Middle Avalon Carb.			
8,491.19	7,969.00	Lower Avalon Sh.			
8,708.63	8,157.00	First Bone Spring Carb.			
8,872.23	8,300.00	First Bone Spring Ss.			
9,379.51	8,763.00	Second Bone Spring Carb.			
9,532.94	8,908.00	Second Bone Spring Ss.			
9,990.75	9,351.00	Second Bone Spring A/B Carb.			
10,081.23	9,440.00	Second Bone Spring B Ss.			
10,233.94	9,591.00	Third Bone Spring Carb.			
10,495.17	9,851.00	Third Bone Spring Shale			
10,965.07	10,314.00	Third Bone Spring Ss.			
11,403.87	10,613.00	Third Bone Spring Ss. - Red Hills			
11,619.27	10,656.00	Horizontal Landing Point			
16,940.34	10,697.00	Wolfcamp Shale			
18,887.64	10,712.00	Wolfcamp X Ss.			
20,964.77	10,728.00	Horizontal TD			

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.

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,d}	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.

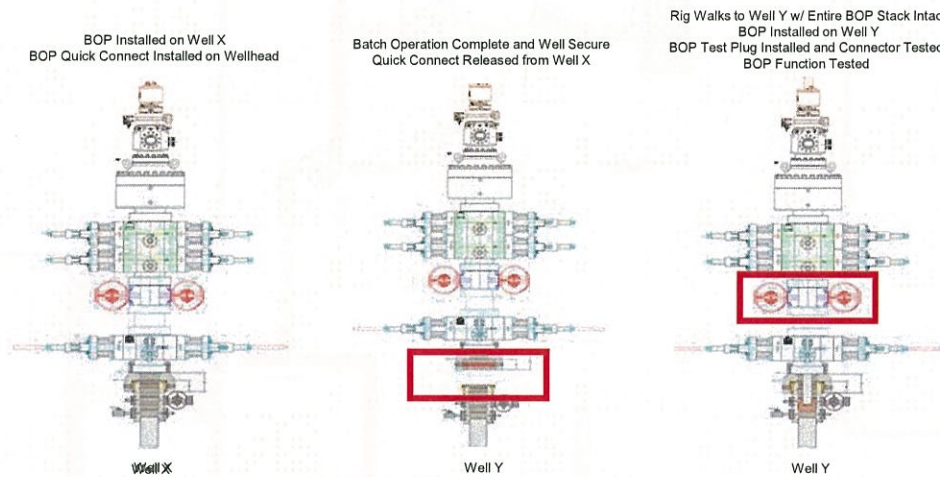
XTO Energy feels break testing and our current procedures meet the intent of OOGO No. 2 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that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

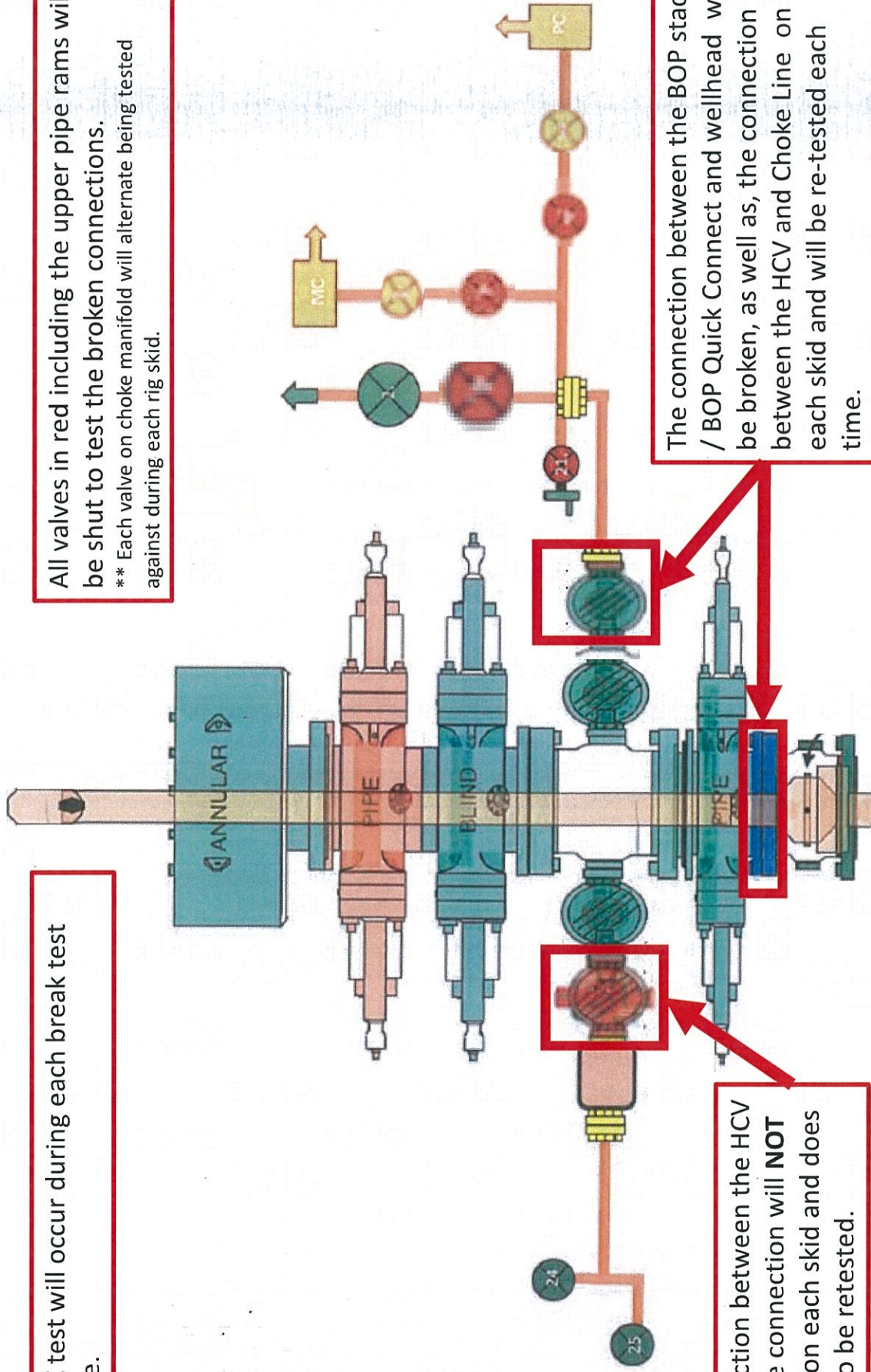
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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 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.

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