

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.5. Lease Serial No.
NMNM06808

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 27. If Unit or CA/Agreement, Name and/or No.
891000558X

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

JAMES RANCH UNIT DI 1A ENNIS 114H

2. Name of Operator

XTO PERMIAN OPERATING LLC

Contact: KELLY KARDOS

E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.

30-015-45615-00-X1

3a. Address

6401 HOLIDAY HILL ROAD BLDG 5
MIDLAND, TX 79707

3b. Phone No. (include area code)

Ph: 432-620-4374

10. Field and Pool or Exploratory Area
WILDCAT

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 21 T22S R30E SENW 1608FNL 2635FEL

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			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original APD
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 original APD:

Casing & cement design per the attached drilling program.

Change Name from James Ranch Unit DI 1A WCY-5E 221H to James Ranch Unit DI 1A Ennis 114H.

Change SHL from 1440FNL & 2510FWL to 1608FNL & 2635FEL. No Surface Disturbance

Change BHL from 1650FSL & 200FEL to 1650FSL & 2590FWL.

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,

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #513506 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 04/30/2020 (20PP2563SE)

Name (Printed/Typed) KELLY KARDOS

Title REGULATORY COORDINATOR

Signature (Electronic Submission)

Date 04/30/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By (BLM Approver Not Specified)

Title

Date 05/29/2020

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 Carlsbad

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #513506 that would not fit on the form

32. Additional remarks, continued

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.

Attachments:

C102 & Supplement
Casing/Cement Design
Multibowl Diagram
Directional Plan

Revisions to Operator-Submitted EC Data for Sundry Notice #513506

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM06808	NMNM06808
Agreement:	NMNM70965X	891000558X (NMNM70965X)
Operator:	XTO PERMIAN OPERATING, LLC 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO PERMIAN OPERATING LLC 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707 Ph: 432.683 2277
Admin Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Tech Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Location: State: County:	NM EDDY	NM EDDY
Field/Pool:	LOS MEDANOS WOLFCAMP	WILDCAT
Well/Facility:	JAMES RANCH UNIT DI 1A WCY-5E 221H Sec 21 T22S R30E Mer NMP SENW 1440FNL 2510FWL	JAMES RANCH UNIT DI 1A ENNIS 114H Sec 21 T22S R30E 1608FNL 2635FEL

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015- 45615	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 114H
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	2,635	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
K	23	22S	30E		1,650	SOUTH	2,590	WEST	EDDY

¹² Dedicated Acres 320	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.

¹⁶				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>Kelly Kardos</i> 4-30-20 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 2020030726	

Intent ☒ As Drilled ☐

API # 30-015-45615			
Operator Name: XTO PERMIAN OPERATING, LLC		Property Name: JAMES RANCH UNIT DI 1A	Well Number 114H

Kick Off Point (KOP)

UL G	Section 21	Township 22S	Range 30E	Lot	Feet 1608	From N/S NORTH	Feet 2635	From E/W EAST	County EDDY
Latitude 32.380535					Longitude -103.886129				NAD 83

First Take Point (FTP)

UL J	Section 21	Township 22S	Range 30E	Lot	Feet 1650	From N/S SOUTH	Feet 1980	From E/W EAST	County EDDY
Latitude 32.374979					Longitude -103.884015				NAD 83

Last Take Point (LTP)

UL K	Section 23	Township 22S	Range 30E	Lot	Feet 1650	From N/S SOUTH	Feet 2540	From E/W WEST	County EDDY
Latitude 32.374912					Longitude -103.852069				NAD 83

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: XTO PERMIAN OPERATING, LLC		Property Name:	Well Number

KZ 06/29/2018

James Ranch Unit DI 1A Ennis 114H
 Projected TD: 21411' MD / 10832' TVD
 SHL: 1608' FNL & 2635' FEL , Section 21, T22S, R30E
 BHL: 1650' FSL & 2590' FWL , Section 23, T22S, R30E
 Eddy County, NM

Casing Design

The surface fresh water sands will be protected by setting 18-5/8" inch casing @ 488' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8" 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 9-5/8" inch casing at 10059' and cemented 200' into the 13-3/8" inch casing. A 8-1/2" 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 9559 feet) per Potash regulations.

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 488'	18-5/8"	87.5	STC	H-40	New	1.60	2.85	13.09
17-1/2"	0' – 3328'	13-3/8"	68	STC	J-55	New	1.33	1.89	2.98
12-1/4"	0' – 10059'	9-5/8"	40	LTC	HCL-80	New	1.74	1.47	1.81
8-1/2"	0' – 21411'	5-1/2"	17	BTC	P-110	New	1.01	1.31	2.23

- XTO requests to not utilize centralizers in the curve and lateral
- 18-5/8" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" 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:

Permanent Wellhead – GE RSH Multibowl System

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

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

Wellhead will be installed by manufacturer's representatives.

Manufacturer will monitor welding process to ensure appropriate temperature of seal.

Operator will test the 9-5/8" casing per BLM Onshore Order 2

Wellhead manufacturer representative may not be present for BOP test plug installation

Cement Program

Surface Casing:

Tail: 900 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: 2240 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
 Tail: 300 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: 2040 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)
 Tail: 230 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

2nd Stage:

Lead: 60 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)
 Tail: 230 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:

Tail: 2300 sxs VersaCem (mixed at 13.2 ppg, 1.61 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'	24"	FW/Native	8.4-8.8	35-40	NC
488' - 3328'	17-1/2"	Brine	9.8-10.2	30-32	NC
3328' to 10059'	12-1/4"	FW / Cut Brine	8.7-9.4	30-32	NC
10059' to 21411'	8-1/2"	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 114H
Projected TD: 21411' MD / 10832' TVD
SHL: 1608' FNL & 2635' FEL , Section 21, T22S, R30E
BHL: 1650' 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
Wolfcamp	10697'	Water/Oil/Gas
Target/Land Curve	10832'	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 18-5/8" inch casing @ 488' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8" 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 9-5/8" inch casing at 10059' and cemented 200' into the 13-3/8" inch casing. A 8-1/2" 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 9559 feet) per Potash regulations.

Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 488'	18-5/8"	87.5	STC	H-40	New	1.60	2.85	13.09
17-1/2"	0' – 3328'	13-3/8"	68	STC	J-55	New	1.33	1.89	2.98
12-1/4"	0' – 10059'	9-5/8"	40	LTC	HCL-80	New	1.74	1.47	1.81
8-1/2"	0' – 21411'	5-1/2"	17	BTC	P-110	New	1.01	1.31	2.23

- XTO requests to not utilize centralizers in the curve and lateral
- 18-5/8" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" 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

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.
- Permanent Wellhead – GE RSH Multibowl System

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

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 18-5/8", 87.5 New H-40, STC casing to be set at +/- 488'

Tail: 900 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: 13-3/8", 68 New J-55, STC casing to be set at +/- 3328'

Lead: 2240 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 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: 9-5/8", 40 New HCL-80, LTC casing to be set at +/- 10059'
ECP/DV Tool to be set at 3428'

1st Stage

Lead: 2040 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)
Tail: 230 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

2nd Stage

Lead: 60 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)
Tail: 230 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", 17 New P-110, BTC casing to be set at +/- 21411'

Tail: 2300 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft3/sx, 8.38 gal/sx water) Top of Cement: **9559 feet**
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 13-3/8" casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 3306 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 13-3/8", 5M bradenhead and flange, the BOP test will be limited to 5M psi. When nipping up on the 9-5/8", 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'	24"	FW/Native	8.4-8.8	35-40	NC
488' - 3328'	17-1/2"	Brine	9.8-10.2	30-32	NC
3328' to 10059'	12-1/4"	FW / Cut Brine	8.7-9.4	30-32	NC
10059' to 21411'	8-1/2"	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 18-5/8" 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 13-3/8" 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

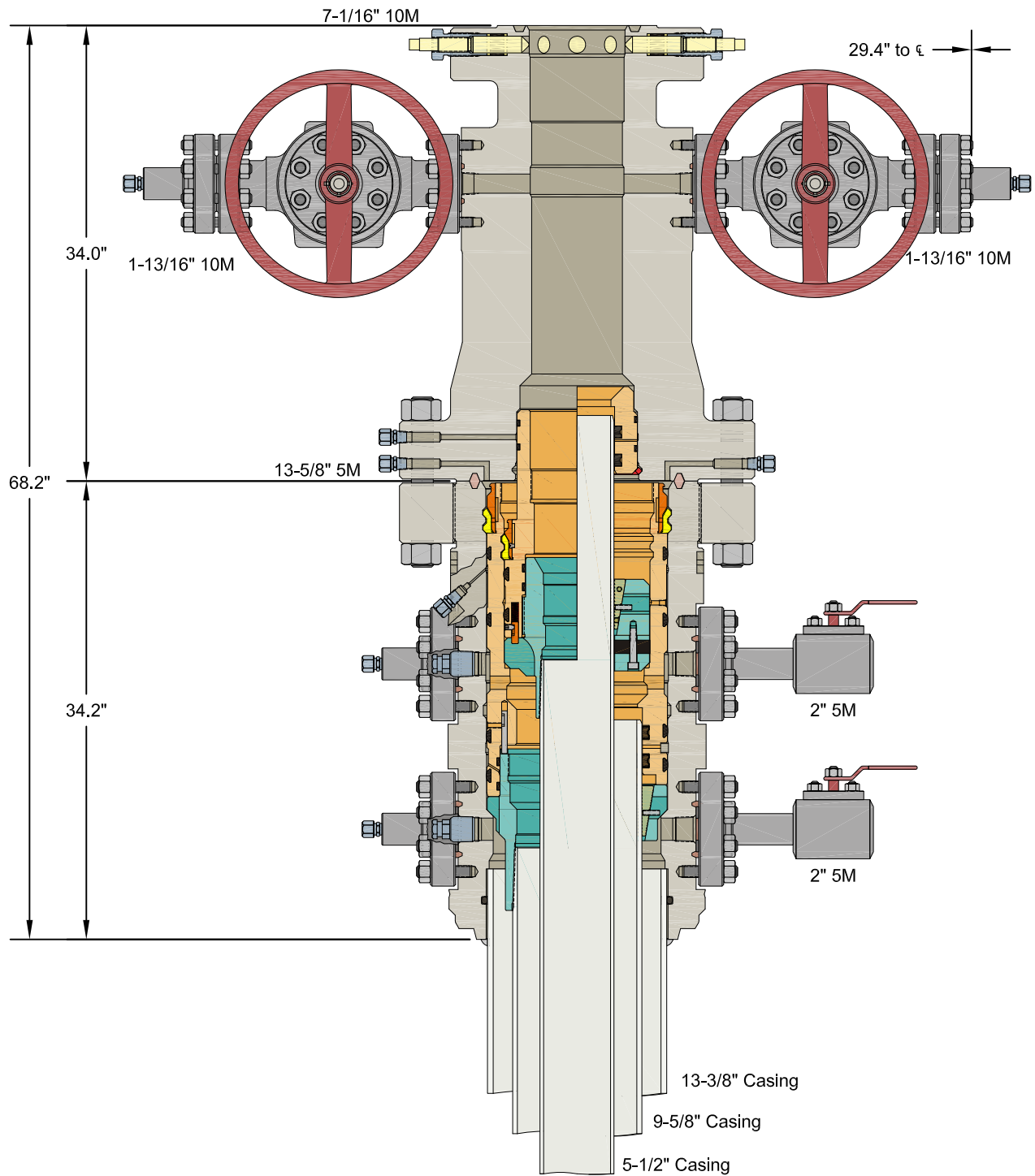
None Anticipated. BHT of 170 to 190 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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 5689 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.



GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE

This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.

XTO ENERGY, INC.

13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead
Assembly, With T-EBS-F Tubing Head

DRAWN	VJK	16FEB17
APPRV	KN	16FEB17
FOR REFERENCE ONLY		
DRAWING NO.		10012842



XTO Permian Operating, LLC

**Eddy Co., NM
JRU DI 1A Ennis
114H**

Wellbore #1

Plan: Design #1

Standard Planning Report

28 April, 2020





Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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:	114H	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	Latitude:	32° 22' 49.482274 N
From:	Map	Easting:	638,208.800 usft	Longitude:	103° 53' 8.284500 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.24 °

Well	114H					
Well Position	+N/-S	0.00 ft	Northing:	502,397.900 usft	Latitude:	32° 22' 49.482274 N
	+E/-W	0.00 ft	Easting:	638,208.800 usft	Longitude:	103° 53' 8.284500 W
Position Uncertainty		2.00 ft	Wellhead Elevation:		Ground Level:	3,160.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	4/28/2020	6.92	60.10	47,929.00000000

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	100.71

Plan Survey Tool Program		Date	4/28/2020		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	21,410.62	Design #1 (Wellbore #1)	MWD+HRGM	
				OWSG MWD + HRGM	



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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:	114H	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	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,694.34	20.92	177.41	4,663.58	-251.42	11.35	1.50	1.50	0.00	177.41	
8,947.42	20.92	177.41	8,636.42	-1,768.16	79.85	0.00	0.00	0.00	0.00	
10,341.75	0.00	0.00	10,000.00	-2,019.58	91.20	1.50	-1.50	0.00	180.00	
10,600.85	0.00	0.00	10,259.10	-2,019.58	91.20	0.00	0.00	0.00	0.00	
11,497.33	89.65	89.89	10,832.05	-2,018.49	660.63	10.00	10.00	10.03	89.89	
21,410.62	89.65	89.89	10,893.00	-1,999.60	10,573.72	0.00	0.00	0.00	0.00	JRU DI 1A Ennis 114H



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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:	114H	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	177.41	3,399.99	-1.31	0.06	0.30	1.50	1.50	0.00
3,500.00	3.00	177.41	3,499.91	-5.23	0.24	1.20	1.50	1.50	0.00
3,600.00	4.50	177.41	3,599.69	-11.76	0.53	2.71	1.50	1.50	0.00
3,700.00	6.00	177.41	3,699.27	-20.90	0.94	4.81	1.50	1.50	0.00
3,800.00	7.50	177.41	3,798.57	-32.64	1.47	7.51	1.50	1.50	0.00
3,900.00	9.00	177.41	3,897.54	-46.98	2.12	10.81	1.50	1.50	0.00
4,000.00	10.50	177.41	3,996.09	-63.90	2.89	14.71	1.50	1.50	0.00
4,100.00	12.00	177.41	4,094.16	-83.39	3.77	19.19	1.50	1.50	0.00
4,200.00	13.50	177.41	4,191.70	-105.43	4.76	24.27	1.50	1.50	0.00
4,300.00	15.00	177.41	4,288.62	-130.02	5.87	29.93	1.50	1.50	0.00
4,400.00	16.50	177.41	4,384.86	-157.14	7.10	36.17	1.50	1.50	0.00
4,500.00	18.00	177.41	4,480.36	-186.76	8.43	42.99	1.50	1.50	0.00
4,600.00	19.50	177.41	4,575.05	-218.87	9.88	50.38	1.50	1.50	0.00
4,694.34	20.92	177.41	4,663.58	-251.42	11.35	57.87	1.50	1.50	0.00
4,700.00	20.92	177.41	4,668.87	-253.44	11.44	58.34	0.00	0.00	0.00
4,800.00	20.92	177.41	4,762.28	-289.10	13.06	66.55	0.00	0.00	0.00
4,900.00	20.92	177.41	4,855.69	-324.77	14.67	74.76	0.00	0.00	0.00
5,000.00	20.92	177.41	4,949.10	-360.43	16.28	82.97	0.00	0.00	0.00



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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:	114H	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)
5,100.00	20.92	177.41	5,042.51	-396.09	17.89	91.18	0.00	0.00	0.00
5,200.00	20.92	177.41	5,135.92	-431.75	19.50	99.38	0.00	0.00	0.00
5,300.00	20.92	177.41	5,229.33	-467.41	21.11	107.59	0.00	0.00	0.00
5,400.00	20.92	177.41	5,322.74	-503.08	22.72	115.80	0.00	0.00	0.00
5,500.00	20.92	177.41	5,416.15	-538.74	24.33	124.01	0.00	0.00	0.00
5,600.00	20.92	177.41	5,509.57	-574.40	25.94	132.22	0.00	0.00	0.00
5,700.00	20.92	177.41	5,602.98	-610.06	27.55	140.43	0.00	0.00	0.00
5,800.00	20.92	177.41	5,696.39	-645.72	29.16	148.64	0.00	0.00	0.00
5,900.00	20.92	177.41	5,789.80	-681.39	30.77	156.85	0.00	0.00	0.00
6,000.00	20.92	177.41	5,883.21	-717.05	32.38	165.06	0.00	0.00	0.00
6,100.00	20.92	177.41	5,976.62	-752.71	33.99	173.27	0.00	0.00	0.00
6,200.00	20.92	177.41	6,070.03	-788.37	35.60	181.47	0.00	0.00	0.00
6,300.00	20.92	177.41	6,163.44	-824.03	37.21	189.68	0.00	0.00	0.00
6,400.00	20.92	177.41	6,256.85	-859.70	38.82	197.89	0.00	0.00	0.00
6,500.00	20.92	177.41	6,350.27	-895.36	40.43	206.10	0.00	0.00	0.00
6,600.00	20.92	177.41	6,443.68	-931.02	42.04	214.31	0.00	0.00	0.00
6,700.00	20.92	177.41	6,537.09	-966.68	43.65	222.52	0.00	0.00	0.00
6,800.00	20.92	177.41	6,630.50	-1,002.34	45.26	230.73	0.00	0.00	0.00
6,900.00	20.92	177.41	6,723.91	-1,038.01	46.87	238.94	0.00	0.00	0.00
7,000.00	20.92	177.41	6,817.32	-1,073.67	48.48	247.15	0.00	0.00	0.00
7,100.00	20.92	177.41	6,910.73	-1,109.33	50.10	255.36	0.00	0.00	0.00
7,200.00	20.92	177.41	7,004.14	-1,144.99	51.71	263.56	0.00	0.00	0.00
7,300.00	20.92	177.41	7,097.55	-1,180.66	53.32	271.77	0.00	0.00	0.00
7,400.00	20.92	177.41	7,190.96	-1,216.32	54.93	279.98	0.00	0.00	0.00
7,500.00	20.92	177.41	7,284.38	-1,251.98	56.54	288.19	0.00	0.00	0.00
7,600.00	20.92	177.41	7,377.79	-1,287.64	58.15	296.40	0.00	0.00	0.00
7,700.00	20.92	177.41	7,471.20	-1,323.30	59.76	304.61	0.00	0.00	0.00
7,800.00	20.92	177.41	7,564.61	-1,358.97	61.37	312.82	0.00	0.00	0.00
7,900.00	20.92	177.41	7,658.02	-1,394.63	62.98	321.03	0.00	0.00	0.00
8,000.00	20.92	177.41	7,751.43	-1,430.29	64.59	329.24	0.00	0.00	0.00
8,100.00	20.92	177.41	7,844.84	-1,465.95	66.20	337.45	0.00	0.00	0.00
8,200.00	20.92	177.41	7,938.25	-1,501.61	67.81	345.65	0.00	0.00	0.00
8,300.00	20.92	177.41	8,031.66	-1,537.28	69.42	353.86	0.00	0.00	0.00
8,400.00	20.92	177.41	8,125.08	-1,572.94	71.03	362.07	0.00	0.00	0.00
8,500.00	20.92	177.41	8,218.49	-1,608.60	72.64	370.28	0.00	0.00	0.00
8,600.00	20.92	177.41	8,311.90	-1,644.26	74.25	378.49	0.00	0.00	0.00
8,700.00	20.92	177.41	8,405.31	-1,679.92	75.86	386.70	0.00	0.00	0.00
8,800.00	20.92	177.41	8,498.72	-1,715.59	77.47	394.91	0.00	0.00	0.00
8,900.00	20.92	177.41	8,592.13	-1,751.25	79.08	403.12	0.00	0.00	0.00
8,947.42	20.92	177.41	8,636.42	-1,768.16	79.85	407.01	0.00	0.00	0.00
9,000.00	20.13	177.41	8,685.67	-1,786.57	80.68	411.25	1.50	-1.50	0.00
9,100.00	18.63	177.41	8,780.00	-1,819.71	82.17	418.88	1.50	-1.50	0.00
9,200.00	17.13	177.41	8,875.17	-1,850.38	83.56	425.94	1.50	-1.50	0.00
9,300.00	15.63	177.41	8,971.11	-1,878.54	84.83	432.42	1.50	-1.50	0.00
9,400.00	14.13	177.41	9,067.76	-1,904.19	85.99	438.32	1.50	-1.50	0.00
9,500.00	12.63	177.41	9,165.04	-1,927.30	87.03	443.64	1.50	-1.50	0.00
9,600.00	11.13	177.41	9,262.90	-1,947.86	87.96	448.37	1.50	-1.50	0.00
9,700.00	9.63	177.41	9,361.26	-1,965.85	88.77	452.52	1.50	-1.50	0.00
9,800.00	8.13	177.41	9,460.06	-1,981.26	89.47	456.06	1.50	-1.50	0.00
9,900.00	6.63	177.41	9,559.23	-1,994.09	90.05	459.02	1.50	-1.50	0.00
10,000.00	5.13	177.41	9,658.70	-2,004.32	90.51	461.37	1.50	-1.50	0.00
10,100.00	3.63	177.41	9,758.41	-2,011.94	90.85	463.13	1.50	-1.50	0.00



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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:	114H	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)
10,200.00	2.13	177.41	9,858.28	-2,016.95	91.08	464.28	1.50	-1.50	0.00
10,300.00	0.63	177.41	9,958.25	-2,019.35	91.19	464.83	1.50	-1.50	0.00
10,341.75	0.00	0.00	10,000.00	-2,019.58	91.20	464.88	1.50	-1.50	0.00
10,400.00	0.00	0.00	10,058.25	-2,019.58	91.20	464.88	0.00	0.00	0.00
10,500.00	0.00	0.00	10,158.25	-2,019.58	91.20	464.88	0.00	0.00	0.00
10,600.85	0.00	0.00	10,259.10	-2,019.58	91.20	464.88	0.00	0.00	0.00
10,650.00	4.91	89.89	10,308.19	-2,019.58	93.31	466.95	10.00	10.00	0.00
10,700.00	9.91	89.89	10,357.75	-2,019.56	99.76	473.29	10.00	10.00	0.00
10,750.00	14.91	89.89	10,406.57	-2,019.54	110.50	483.84	10.00	10.00	0.00
10,800.00	19.91	89.89	10,454.26	-2,019.51	125.46	498.54	10.00	10.00	0.00
10,850.00	24.91	89.89	10,500.47	-2,019.48	144.52	517.26	10.00	10.00	0.00
10,900.00	29.91	89.89	10,544.84	-2,019.43	167.53	539.86	10.00	10.00	0.00
10,950.00	34.91	89.89	10,587.04	-2,019.38	194.33	566.18	10.00	10.00	0.00
11,000.00	39.91	89.89	10,626.74	-2,019.33	224.70	596.01	10.00	10.00	0.00
11,050.00	44.91	89.89	10,663.64	-2,019.26	258.41	629.12	10.00	10.00	0.00
11,100.00	49.91	89.89	10,697.46	-2,019.19	295.21	665.27	10.00	10.00	0.00
11,150.00	54.91	89.89	10,727.95	-2,019.12	334.82	704.18	10.00	10.00	0.00
11,200.00	59.91	89.89	10,754.87	-2,019.04	376.94	745.55	10.00	10.00	0.00
11,250.00	64.91	89.89	10,778.01	-2,018.95	421.24	789.06	10.00	10.00	0.00
11,300.00	69.91	89.89	10,797.21	-2,018.86	467.39	834.39	10.00	10.00	0.00
11,350.00	74.91	89.89	10,812.31	-2,018.77	515.04	881.19	10.00	10.00	0.00
11,400.00	79.91	89.89	10,823.20	-2,018.68	563.82	929.11	10.00	10.00	0.00
11,450.00	84.91	89.89	10,829.80	-2,018.58	613.37	977.77	10.00	10.00	0.00
11,497.33	89.65	89.89	10,832.05	-2,018.49	660.63	1,024.20	10.00	10.00	0.00
11,500.00	89.65	89.89	10,832.06	-2,018.49	663.30	1,026.82	0.00	0.00	0.00
11,600.00	89.65	89.89	10,832.68	-2,018.30	763.30	1,125.04	0.00	0.00	0.00
11,700.00	89.65	89.89	10,833.29	-2,018.11	863.30	1,223.26	0.00	0.00	0.00
11,800.00	89.65	89.89	10,833.91	-2,017.92	963.30	1,321.48	0.00	0.00	0.00
11,900.00	89.65	89.89	10,834.52	-2,017.73	1,063.29	1,419.70	0.00	0.00	0.00
12,000.00	89.65	89.89	10,835.14	-2,017.54	1,163.29	1,517.93	0.00	0.00	0.00
12,100.00	89.65	89.89	10,835.75	-2,017.35	1,263.29	1,616.15	0.00	0.00	0.00
12,200.00	89.65	89.89	10,836.37	-2,017.16	1,363.29	1,714.37	0.00	0.00	0.00
12,300.00	89.65	89.89	10,836.98	-2,016.97	1,463.29	1,812.59	0.00	0.00	0.00
12,400.00	89.65	89.89	10,837.60	-2,016.77	1,563.28	1,910.81	0.00	0.00	0.00
12,500.00	89.65	89.89	10,838.21	-2,016.58	1,663.28	2,009.03	0.00	0.00	0.00
12,600.00	89.65	89.89	10,838.83	-2,016.39	1,763.28	2,107.25	0.00	0.00	0.00
12,700.00	89.65	89.89	10,839.44	-2,016.20	1,863.28	2,205.47	0.00	0.00	0.00
12,800.00	89.65	89.89	10,840.06	-2,016.01	1,963.28	2,303.69	0.00	0.00	0.00
12,900.00	89.65	89.89	10,840.67	-2,015.82	2,063.27	2,401.91	0.00	0.00	0.00
13,000.00	89.65	89.89	10,841.29	-2,015.63	2,163.27	2,500.14	0.00	0.00	0.00
13,100.00	89.65	89.89	10,841.90	-2,015.44	2,263.27	2,598.36	0.00	0.00	0.00
13,200.00	89.65	89.89	10,842.52	-2,015.25	2,363.27	2,696.58	0.00	0.00	0.00
13,300.00	89.65	89.89	10,843.13	-2,015.06	2,463.27	2,794.80	0.00	0.00	0.00
13,400.00	89.65	89.89	10,843.75	-2,014.87	2,563.26	2,893.02	0.00	0.00	0.00
13,500.00	89.65	89.89	10,844.36	-2,014.68	2,663.26	2,991.24	0.00	0.00	0.00
13,600.00	89.65	89.89	10,844.98	-2,014.49	2,763.26	3,089.46	0.00	0.00	0.00
13,700.00	89.65	89.89	10,845.59	-2,014.30	2,863.26	3,187.68	0.00	0.00	0.00
13,800.00	89.65	89.89	10,846.21	-2,014.11	2,963.25	3,285.90	0.00	0.00	0.00
13,900.00	89.65	89.89	10,846.82	-2,013.92	3,063.25	3,384.12	0.00	0.00	0.00
14,000.00	89.65	89.89	10,847.44	-2,013.73	3,163.25	3,482.35	0.00	0.00	0.00
14,100.00	89.65	89.89	10,848.05	-2,013.54	3,263.25	3,580.57	0.00	0.00	0.00
14,200.00	89.65	89.89	10,848.66	-2,013.34	3,363.25	3,678.79	0.00	0.00	0.00



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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:	114H	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	89.65	89.89	10,849.28	-2,013.15	3,463.24	3,777.01	0.00	0.00	0.00	
14,400.00	89.65	89.89	10,849.89	-2,012.96	3,563.24	3,875.23	0.00	0.00	0.00	
14,500.00	89.65	89.89	10,850.51	-2,012.77	3,663.24	3,973.45	0.00	0.00	0.00	
14,600.00	89.65	89.89	10,851.12	-2,012.58	3,763.24	4,071.67	0.00	0.00	0.00	
14,700.00	89.65	89.89	10,851.74	-2,012.39	3,863.24	4,169.89	0.00	0.00	0.00	
14,800.00	89.65	89.89	10,852.35	-2,012.20	3,963.23	4,268.11	0.00	0.00	0.00	
14,900.00	89.65	89.89	10,852.97	-2,012.01	4,063.23	4,366.33	0.00	0.00	0.00	
15,000.00	89.65	89.89	10,853.58	-2,011.82	4,163.23	4,464.56	0.00	0.00	0.00	
15,100.00	89.65	89.89	10,854.20	-2,011.63	4,263.23	4,562.78	0.00	0.00	0.00	
15,200.00	89.65	89.89	10,854.81	-2,011.44	4,363.23	4,661.00	0.00	0.00	0.00	
15,300.00	89.65	89.89	10,855.43	-2,011.25	4,463.22	4,759.22	0.00	0.00	0.00	
15,400.00	89.65	89.89	10,856.04	-2,011.06	4,563.22	4,857.44	0.00	0.00	0.00	
15,500.00	89.65	89.89	10,856.66	-2,010.87	4,663.22	4,955.66	0.00	0.00	0.00	
15,600.00	89.65	89.89	10,857.27	-2,010.68	4,763.22	5,053.88	0.00	0.00	0.00	
15,700.00	89.65	89.89	10,857.89	-2,010.49	4,863.22	5,152.10	0.00	0.00	0.00	
15,800.00	89.65	89.89	10,858.50	-2,010.30	4,963.21	5,250.32	0.00	0.00	0.00	
15,900.00	89.65	89.89	10,859.12	-2,010.11	5,063.21	5,348.54	0.00	0.00	0.00	
16,000.00	89.65	89.89	10,859.73	-2,009.91	5,163.21	5,446.77	0.00	0.00	0.00	
16,100.00	89.65	89.89	10,860.35	-2,009.72	5,263.21	5,544.99	0.00	0.00	0.00	
16,200.00	89.65	89.89	10,860.96	-2,009.53	5,363.21	5,643.21	0.00	0.00	0.00	
16,300.00	89.65	89.89	10,861.58	-2,009.34	5,463.20	5,741.43	0.00	0.00	0.00	
16,400.00	89.65	89.89	10,862.19	-2,009.15	5,563.20	5,839.65	0.00	0.00	0.00	
16,500.00	89.65	89.89	10,862.81	-2,008.96	5,663.20	5,937.87	0.00	0.00	0.00	
16,600.00	89.65	89.89	10,863.42	-2,008.77	5,763.20	6,036.09	0.00	0.00	0.00	
16,700.00	89.65	89.89	10,864.04	-2,008.58	5,863.19	6,134.31	0.00	0.00	0.00	
16,800.00	89.65	89.89	10,864.65	-2,008.39	5,963.19	6,232.53	0.00	0.00	0.00	
16,900.00	89.65	89.89	10,865.27	-2,008.20	6,063.19	6,330.75	0.00	0.00	0.00	
17,000.00	89.65	89.89	10,865.88	-2,008.01	6,163.19	6,428.98	0.00	0.00	0.00	
17,100.00	89.65	89.89	10,866.50	-2,007.82	6,263.19	6,527.20	0.00	0.00	0.00	
17,200.00	89.65	89.89	10,867.11	-2,007.63	6,363.18	6,625.42	0.00	0.00	0.00	
17,300.00	89.65	89.89	10,867.73	-2,007.44	6,463.18	6,723.64	0.00	0.00	0.00	
17,400.00	89.65	89.89	10,868.34	-2,007.25	6,563.18	6,821.86	0.00	0.00	0.00	
17,500.00	89.65	89.89	10,868.96	-2,007.06	6,663.18	6,920.08	0.00	0.00	0.00	
17,600.00	89.65	89.89	10,869.57	-2,006.87	6,763.18	7,018.30	0.00	0.00	0.00	
17,700.00	89.65	89.89	10,870.19	-2,006.68	6,863.17	7,116.52	0.00	0.00	0.00	
17,800.00	89.65	89.89	10,870.80	-2,006.48	6,963.17	7,214.74	0.00	0.00	0.00	
17,900.00	89.65	89.89	10,871.41	-2,006.29	7,063.17	7,312.96	0.00	0.00	0.00	
18,000.00	89.65	89.89	10,872.03	-2,006.10	7,163.17	7,411.18	0.00	0.00	0.00	
18,100.00	89.65	89.89	10,872.64	-2,005.91	7,263.17	7,509.41	0.00	0.00	0.00	
18,200.00	89.65	89.89	10,873.26	-2,005.72	7,363.16	7,607.63	0.00	0.00	0.00	
18,300.00	89.65	89.89	10,873.87	-2,005.53	7,463.16	7,705.85	0.00	0.00	0.00	
18,400.00	89.65	89.89	10,874.49	-2,005.34	7,563.16	7,804.07	0.00	0.00	0.00	
18,500.00	89.65	89.89	10,875.10	-2,005.15	7,663.16	7,902.29	0.00	0.00	0.00	
18,600.00	89.65	89.89	10,875.72	-2,004.96	7,763.16	8,000.51	0.00	0.00	0.00	
18,700.00	89.65	89.89	10,876.33	-2,004.77	7,863.15	8,098.73	0.00	0.00	0.00	
18,800.00	89.65	89.89	10,876.95	-2,004.58	7,963.15	8,196.95	0.00	0.00	0.00	
18,900.00	89.65	89.89	10,877.56	-2,004.39	8,063.15	8,295.17	0.00	0.00	0.00	
19,000.00	89.65	89.89	10,878.18	-2,004.20	8,163.15	8,393.39	0.00	0.00	0.00	
19,100.00	89.65	89.89	10,878.79	-2,004.01	8,263.15	8,491.62	0.00	0.00	0.00	
19,200.00	89.65	89.89	10,879.41	-2,003.82	8,363.14	8,589.84	0.00	0.00	0.00	
19,300.00	89.65	89.89	10,880.02	-2,003.63	8,463.14	8,688.06	0.00	0.00	0.00	
19,400.00	89.65	89.89	10,880.64	-2,003.44	8,563.14	8,786.28	0.00	0.00	0.00	



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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:	114H	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)
19,500.00	89.65	89.89	10,881.25	-2,003.24	8,663.14	8,884.50	0.00	0.00	0.00
19,600.00	89.65	89.89	10,881.87	-2,003.05	8,763.13	8,982.72	0.00	0.00	0.00
19,700.00	89.65	89.89	10,882.48	-2,002.86	8,863.13	9,080.94	0.00	0.00	0.00
19,800.00	89.65	89.89	10,883.10	-2,002.67	8,963.13	9,179.16	0.00	0.00	0.00
19,900.00	89.65	89.89	10,883.71	-2,002.48	9,063.13	9,277.38	0.00	0.00	0.00
20,000.00	89.65	89.89	10,884.33	-2,002.29	9,163.13	9,375.60	0.00	0.00	0.00
20,100.00	89.65	89.89	10,884.94	-2,002.10	9,263.12	9,473.83	0.00	0.00	0.00
20,200.00	89.65	89.89	10,885.56	-2,001.91	9,363.12	9,572.05	0.00	0.00	0.00
20,300.00	89.65	89.89	10,886.17	-2,001.72	9,463.12	9,670.27	0.00	0.00	0.00
20,400.00	89.65	89.89	10,886.79	-2,001.53	9,563.12	9,768.49	0.00	0.00	0.00
20,500.00	89.65	89.89	10,887.40	-2,001.34	9,663.12	9,866.71	0.00	0.00	0.00
20,600.00	89.65	89.89	10,888.02	-2,001.15	9,763.11	9,964.93	0.00	0.00	0.00
20,700.00	89.65	89.89	10,888.63	-2,000.96	9,863.11	10,063.15	0.00	0.00	0.00
20,800.00	89.65	89.89	10,889.25	-2,000.77	9,963.11	10,161.37	0.00	0.00	0.00
20,900.00	89.65	89.89	10,889.86	-2,000.58	10,063.11	10,259.59	0.00	0.00	0.00
21,000.00	89.65	89.89	10,890.48	-2,000.39	10,163.11	10,357.81	0.00	0.00	0.00
21,100.00	89.65	89.89	10,891.09	-2,000.20	10,263.10	10,456.04	0.00	0.00	0.00
21,200.00	89.65	89.89	10,891.71	-2,000.01	10,363.10	10,554.26	0.00	0.00	0.00
21,300.00	89.65	89.89	10,892.32	-1,999.81	10,463.10	10,652.48	0.00	0.00	0.00
21,400.00	89.65	89.89	10,892.93	-1,999.62	10,563.10	10,750.70	0.00	0.00	0.00
21,410.62	89.65	89.89	10,893.00	-1,999.60	10,573.72	10,761.13	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
JRU DI 1A Ennis 114H - - hit/miss target - Shape	0.00	0.00	10,832.00	-2,018.50	661.20	500,379.400	638,870.000	32° 22' 29.480088 N	103° 53' 0.673107 W
- plan misses target center by 0.05ft at 11497.90ft MD (10832.05 TVD, -2018.49 N, 661.20 E)									
- Point									
JRU DI 1A Ennis 114H - - plan misses target center by 0.69ft at 21360.62ft MD (10892.69 TVD, -1999.70 N, 10523.72 E)	0.00	0.00	10,892.00	-1,999.70	10,523.72	500,398.200	648,732.500	32° 22' 29.241280 N	103° 51' 5.671458 W
- Point									
JRU DI 1A Ennis 114H - - plan hits target center	0.00	0.00	10,893.00	-1,999.60	10,573.72	500,398.300	648,782.500	32° 22' 29.240041 N	103° 51' 5.088434 W
- Point									



Database:	RyanUSA_32Bit	Local Co-ordinate Reference:	Well 114H
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Project:	Eddy Co., NM	MD Reference:	RT=33(Nabors X03) @ 3193.00ft (Nabors X03)
Site:	JRU DI 1A Ennis	North Reference:	Grid
Well:	114H	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				
6,141.09	6,015.00	Brushy Canyon Ss.				
7,605.58	7,383.00	Bone Spring Lm.				
7,650.54	7,425.00	Avalon Ss.				
7,890.34	7,649.00	Upper Avalon Carb.				
7,975.99	7,729.00	Upper Avalon Sh.				
8,055.21	7,803.00	Middle Avalon Carb.				
8,232.92	7,969.00	Lower Avalon Sh.				
8,434.18	8,157.00	First Bone Spring Carb.				
8,587.26	8,300.00	First Bone Spring Ss.				
9,082.04	8,763.00	Second Bone Spring Carb.				
9,234.30	8,908.00	Second Bone Spring Ss.				
9,689.59	9,351.00	Second Bone Spring A/B Carb.				
9,779.73	9,440.00	Second Bone Spring B Ss.				
9,931.97	9,591.00	Third Bone Spring Carb.				
10,192.72	9,851.00	Third Bone Spring Shale				
10,655.84	10,314.00	Third Bone Spring Ss.				
10,982.32	10,613.00	Third Bone Spring Ss.- Red Hills				
11,099.28	10,697.00	Wolfcamp Shale				
11,123.14	10,712.00	Wolfcamp X Ss.				
11,352.66	10,813.00	Wolfcamp Y Ss.				
11,492.72	10,832.00	Horizontal Landing Point				
14,742.46	10,852.00	Wolfcamp A				
21,410.62	10,893.00	Horizontal TD				