

Submit 1 Copy To Appropriate District
Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Rec'd 05/26/2020 - NMOCD

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☐ Gas Well ☒ Other 2. Name of Operator XTO ENERGY, INC 3. Address of Operator 6401 HOLIDAY HILL RD, BLDG 5, MIDLAND TX 79705 4. Well Location Unit Letter <u>F</u> : <u>2310</u> feet from the <u>NORTH</u> line and <u>1950</u> feet from the <u>WEST</u> line Section <u>25</u> Township <u>23S</u> Range <u>29E</u> NMPM County <u>EDDY</u> 11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3075' GL	WELL API NO. 30-015-46433
	5. Indicate Type of Lease STATE ☒ FEE ☐
	6. State Oil & Gas Lease No. STATE
	7. Lease Name or Unit Agreement Name REMUDA SOUTH 25 STATE
	8. Well Number 163H
	9. OGRID Number 5380
	10. Pool name or Wildcat PURPLE SAGE; WOLFCAMP

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

XTO Energy, Inc requests permission to make the following changes:

Change the SHL from 2310'FNL & 1950'FWL to 2355'FNL & 1950'FWL *NO SURFACE DISTURBANCE

In addition, XTO Energy Inc. 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.

Attachments:

C102 & Supplement
GCP
Directional Plan
Spudder Rig Description of Operations

Spud Date:

Rig Release Date:

RWP

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Kelly Kardos TITLE Regulatory Coordinator DATE 05/13/20

Type or print name Kelly Kardos E-mail address: kelly_kardos@xtoenergy.com PHONE: 432-620-4374

For State Use Only

APPROVED BY: Raymond W. Duda TITLE Geologist DATE 5/27/2020

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District IV
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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 30-015-46433		² Pool Code		³ Pool Name	
⁴ Property Code 317788		⁵ Property Name REMUDA SOUTH 25 STATE			⁶ Well Number 163H
⁷ OGRID No. 005380		⁸ Operator Name XTO ENERGY, INC.			⁹ Elevation 3,075'

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
F	25	23 S	29 E		2,355	NORTH	1,950	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	36	23 S	29 E		200	SOUTH	1,750	WEST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

		SHL (NAD83 NME) Y = 464,624.5 X = 662,767.0 LAT. = 32.276716 °N LONG. = 103.940427 °W FTP (NAD83 NME) Y = 463,991.8 X = 662,566.8 LAT. = 32.274979 °N LONG. = 103.941082 °W CORNER COORDINATES (NAD83 NME) A - Y = 464,319.1 N , X = 663,469.2 E B - Y = 464,319.7 N , X = 662,143.0 E C - Y = 461,667.3 N , X = 663,474.1 E D - Y = 461,666.6 N , X = 662,145.6 E E - Y = 459,005.9 N , X = 663,487.6 E F - Y = 459,004.0 N , X = 662,159.8 E G - Y = 456,347.1 N , X = 663,501.0 E H - Y = 456,344.3 N , X = 662,174.7 E	LTP (NAD83 NME) Y = 456,675.2 X = 662,596.2 LAT. = 32.254866 °N LONG. = 103.941073 °W BHL (NAD83 NME) Y = 456,545.2 X = 662,597.0 LAT. = 32.254509 °N LONG. = 103.941072 °W	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Kelly Kardos</i> Signature _____ Date _____ Printed Name _____ E-mail Address _____
GRID AZ.=197°33'19" HORIZ. DIST.=663.60' GRID AZ.=179°46'04" HORIZ. DIST.=7,446.64'		SHL (NAD27 NME) Y = 464,564.6 X = 621,584.2 LAT. = 32.276592 °N LONG. = 103.939935 °W FTP (NAD27 NME) Y = 463,931.9 X = 621,384.0 LAT. = 32.274855 °N LONG. = 103.940590 °W CORNER COORDINATES (NAD27 NME) A - Y = 464,259.2 N , X = 622,286.4 E B - Y = 464,259.9 N , X = 620,960.2 E C - Y = 461,607.4 N , X = 622,291.2 E D - Y = 461,606.7 N , X = 620,962.7 E E - Y = 458,946.2 N , X = 622,304.6 E F - Y = 458,944.3 N , X = 620,976.8 E G - Y = 456,287.4 N , X = 622,318.0 E H - Y = 456,284.6 N , X = 620,991.6 E	LTP (NAD27 NME) Y = 456,615.5 X = 621,413.2 LAT. = 32.254742 °N LONG. = 103.940583 °W BHL (NAD27 NME) Y = 456,485.5 X = 621,414.0 LAT. = 32.254385 °N LONG. = 103.940582 °W	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. 03-09-2020 Date of Survey _____ Signature and Seal of Professional Surveyor: MARK DILLON HARP 23786 Certificate Number _____ AR 2019103424

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

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

First Take Point (FTP)

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

Last Take Point (LTP)

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

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

Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

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Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 05/13/20

☒ Original

Operator & OGRID No.: XTO Energy Inc [005380]

☐ Amended - Reason for Amendment: _____

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

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

Well(s)/Production Facility – Remuda CTB

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MMCF/D	Flared or Vented	Comments
Remuda South 25 State 163H	30-015-46433	F-25-23S-29E	2355'FNL & 1950'FWL	2.6 MMCF/D	Flared/Sold	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Lucid and will be connected to Lucid low/high pressure gathering system located in Eddy County, New Mexico. It will require 0' of pipeline to connect the facility to low/high pressure gathering system. XTO Energy, Inc. provides (periodically) to Lucid a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO Energy, Inc. and Lucid have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Lucid's Red Hills Plant located in Sec.13, Twn.24S, Rng. 33E, Eddy County, New Mexico or Lucid's Roadrunner Plant located in Sec.32, Twn.23S, Rng. 28E, Eddy County, New Mexico The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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



XTO Energy

**Eddy County, NM (NAD-27)
Remuda South 25 State
#163H**

Wellbore #1

Plan: PERMIT

Standard Planning Report

21 April, 2020



Project: Eddy County, NM (NAD-27)
Site: Remuda South 25 State
Well: #163H
Wellbore: Wellbore #1
Design: PERMIT

PROJECT DETAILS: Eddy County, NM (NAD-27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Remuda South 25 #163H: SHL (2355' FNL & 1950' FWL)	0.00	0.00	0.00	464564.60	621584.20	32.2765921	-103.9399353	Point
Remuda South 25 #163H: FTP/ LP	11257.00	-632.70	-200.20	463931.90	621384.00	32.2748549	-103.9405906	Point
Remuda South 25 #163H: LTP	11276.65	-7949.10	-171.00	456615.50	621413.20	32.2547425	-103.9405827	Point
Remuda South 25 #163H: PBHL (200' FNL & 1750' FWL)	11277.00	-8079.10	-170.20	456485.50	621414.00	32.2543851	-103.9405817	Point

WELL DETAILS: #163H

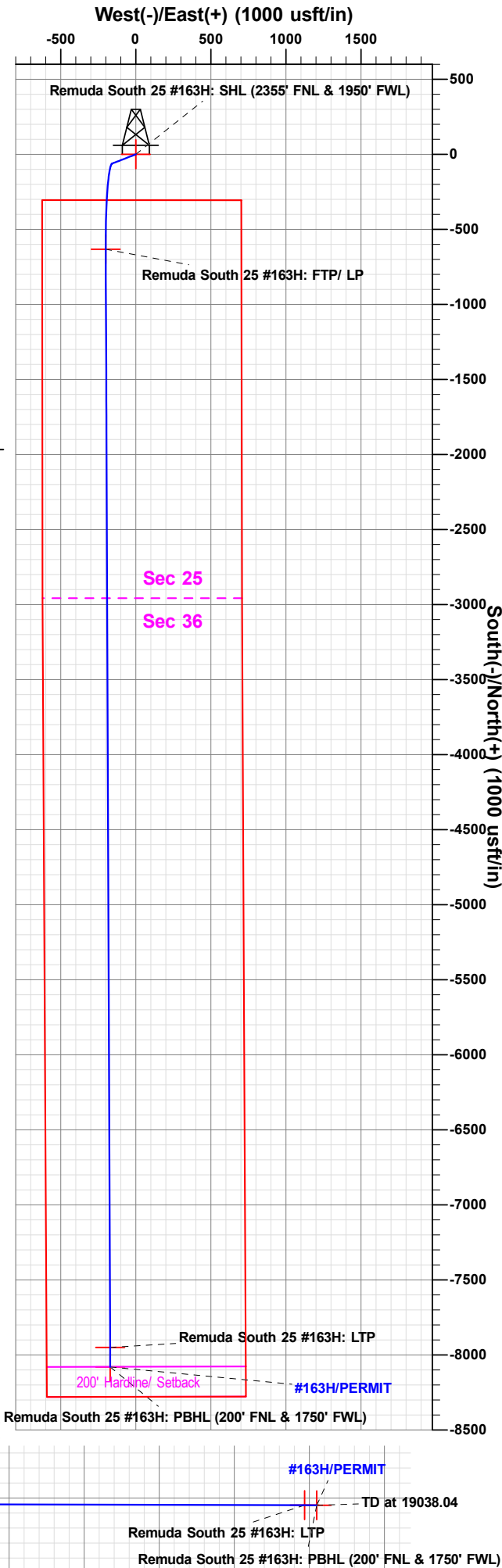
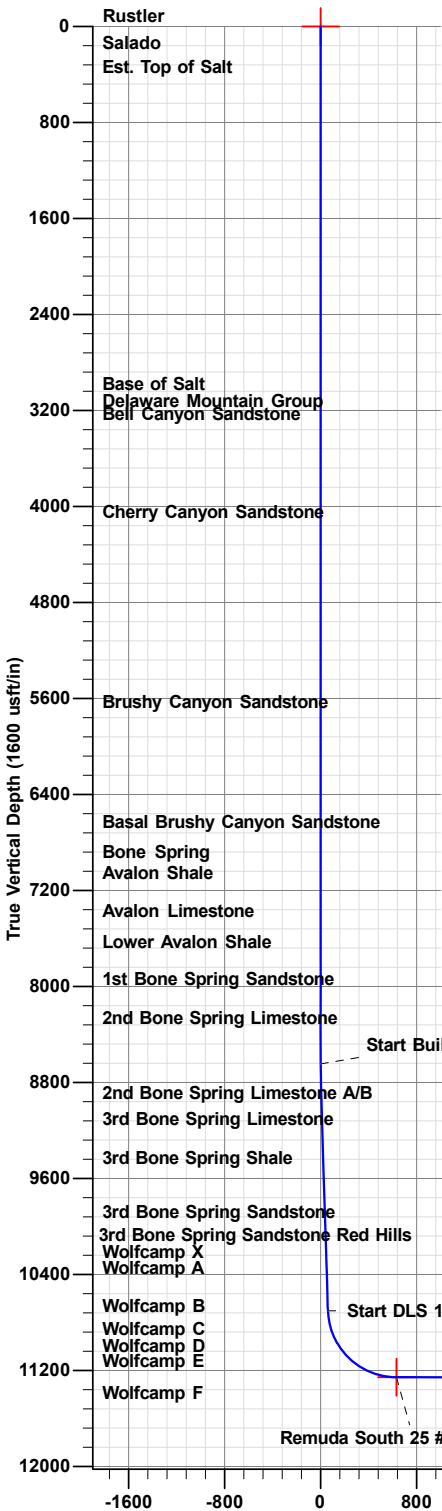
		Rig Name:			
		RKB = 23' @ 3098.00usft			
		Ground Level: 3075.00			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	464564.60	621584.20	32.2765921	-103.9399353

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8645.00	0.00	0.00	8645.00	0.00	0.00	0.00	0.00	0.00
3	8894.78	5.00	248.71	8894.46	-3.95	-10.14	2.00	248.71	3.91
4	10711.02	5.00	248.71	10703.80	-61.38	-157.50	0.00	0.00	60.75
5	11591.55	89.85	179.77	11257.00	-632.70	-200.20	10.00	-69.02	631.89
6	18908.03	89.85	179.77	11276.65	-7949.10	-170.72	0.00	0.00	7948.35
7	19038.04	89.85	179.77	11277.00	-8079.10	-170.20	0.00	0.00	8078.35

FORMATION TOP DETAILS

TVDPath	Formation
7.00	Dewey Lake (Alluvium)
67.00	Rustler
217.00	Salado
417.00	Est. Top of Salt
3061.00	Base of Salt
3269.00	Delaware Mountain Group
3309.00	Bell Canyon Sandstone
4132.00	Cherry Canyon Sandstone
5709.00	Brushy Canyon Sandstone
6714.00	Basal Brushy Canyon Sandstone
6966.00	Bone Spring
7139.00	Avalon Shale
7456.00	Avalon Limestone
7709.00	Lower Avalon Shale
8020.00	1st Bone Spring Sandstone
8346.00	2nd Bone Spring Limestone
8883.00	2nd Bone Spring Sandstone
8909.00	2nd Bone Spring Sandstone A
8973.00	2nd Bone Spring Limestone A/B
9038.00	2nd Bone Spring Sandstone B
9187.00	3rd Bone Spring Limestone
9509.00	3rd Bone Spring Shale
9963.00	3rd Bone Spring Sandstone
10246.00	3rd Bone Spring Sandstone Red Hills
10285.00	Wolfcamp Shale
10324.00	Wolfcamp X
10394.00	Wolfcamp Y
10431.00	Wolfcamp A
10745.00	Wolfcamp B
10933.00	Wolfcamp C
11080.00	Wolfcamp D
11205.00	Wolfcamp E
11257.00	LP
11277.00	TD



Vertical Section at 179.77° (1600 usft/in)

The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Prototype are at the sole risk and responsibility of the user.

Plan: PERMIT (#163H/Wellbore #1)

Created By: Matthew May Date: 14:30, April 21 2020



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #163H
Company:	XTO Energy	TVD Reference:	RKB = 23' @ 3098.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Project	Eddy County, NM (NAD-27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Remuda South 25 State				
Site Position:		Northing:	464,609.70 usft	Latitude:	32.2767294	
From:	Map	Easting:	620,263.40 usft	Longitude:	-103.9442083	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.21 °

Well	#163H					
Well Position	+N/-S	-45.10 usft	Northing:	464,564.60 usft	Latitude:	32.2765921
	+E/-W	1,320.80 usft	Easting:	621,584.20 usft	Longitude:	-103.9399353
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,075.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	03/10/20	6.83	60.02	47,652

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

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,645.00	0.00	0.01	8,645.00	0.00	0.00	0.00	0.00	0.00	0.01	
8,894.78	5.00	248.71	8,894.46	-3.95	-10.14	2.00	2.00	0.00	248.71	
10,711.02	5.00	248.71	10,703.80	-61.38	-157.50	0.00	0.00	0.00	0.00	
11,591.55	89.85	179.77	11,257.00	-632.70	-200.20	10.00	9.64	-7.83	-69.02	Remuda South 25 #
18,908.04	89.85	179.77	11,276.65	-7,949.10	-170.72	0.00	0.00	0.00	0.00	Remuda South 25 #
19,038.04	89.85	179.77	11,277.00	-8,079.10	-170.20	0.00	0.00	0.00	0.00	Remuda South 25 #



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #163H
Company:	XTO Energy	TVD Reference:	RKB = 23' @ 3098.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remuda South 25 #163H: SHL (2355' FNL & 1950' FWL)									
7.00	0.00	0.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00
Dewey Lake (Alluvium)									
67.00	0.00	0.00	67.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
217.00	0.00	0.00	217.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
417.00	0.00	0.00	417.00	0.00	0.00	0.00	0.00	0.00	0.00
Est. Top of Salt									
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
3,061.00	0.00	0.00	3,061.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
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
3,269.00	0.00	0.00	3,269.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware Mountain Group									
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,309.00	0.00	0.00	3,309.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon Sandstone									
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #163H
Company:	XTO Energy	TVD Reference:	RKB = 23' @ 3098.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,132.00	0.00	0.00	4,132.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon Sandstone									
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,709.00	0.00	0.00	5,709.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon Sandstone									
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,714.00	0.00	0.00	6,714.00	0.00	0.00	0.00	0.00	0.00	0.00
Basal Brushy Canyon Sandstone									
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,966.00	0.00	0.00	6,966.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring									
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,139.00	0.00	0.00	7,139.00	0.00	0.00	0.00	0.00	0.00	0.00
Avalon Shale									
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,456.00	0.00	0.00	7,456.00	0.00	0.00	0.00	0.00	0.00	0.00
Avalon Limestone									
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,709.00	0.00	0.00	7,709.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #163H
Company:	XTO Energy	TVD Reference:	RKB = 23' @ 3098.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Lower Avalon Shale									
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,020.00	0.00	0.00	8,020.00	0.00	0.00	0.00	0.00	0.00	0.00
1st Bone Spring Sandstone									
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,346.00	0.00	0.00	8,346.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd Bone Spring Limestone									
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,645.00	0.00	0.01	8,645.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	1.10	248.71	8,700.00	-0.19	-0.49	0.19	2.00	2.00	0.00
8,800.00	3.10	248.71	8,799.92	-1.52	-3.91	1.51	2.00	2.00	0.00
8,883.27	4.77	248.71	8,883.00	-3.60	-9.23	3.56	2.00	2.00	0.00
2nd Bone Spring Sandstone									
8,894.78	5.00	248.71	8,894.46	-3.95	-10.14	3.91	2.00	2.00	0.00
8,900.00	5.00	248.71	8,899.66	-4.12	-10.56	4.07	0.00	0.00	0.00
8,909.37	5.00	248.71	8,909.00	-4.41	-11.32	4.37	0.00	0.00	0.00
2nd Bone Spring Sandstone A									
8,973.62	5.00	248.71	8,973.00	-6.44	-16.54	6.38	0.00	0.00	0.00
2nd Bone Spring Limestone A/B									
9,000.00	5.00	248.71	8,999.28	-7.28	-18.68	7.20	0.00	0.00	0.00
9,038.86	5.00	248.71	9,038.00	-8.51	-21.83	8.42	0.00	0.00	0.00
2nd Bone Spring Sandstone B									
9,100.00	5.00	248.71	9,098.90	-10.44	-26.79	10.33	0.00	0.00	0.00
9,188.43	5.00	248.71	9,187.00	-13.24	-33.96	13.10	0.00	0.00	0.00
3rd Bone Spring Limestone									
9,200.00	5.00	248.71	9,198.52	-13.60	-34.90	13.46	0.00	0.00	0.00
9,300.00	5.00	248.71	9,298.14	-16.76	-43.02	16.59	0.00	0.00	0.00
9,400.00	5.00	248.71	9,397.76	-19.93	-51.13	19.72	0.00	0.00	0.00
9,500.00	5.00	248.71	9,497.38	-23.09	-59.24	22.85	0.00	0.00	0.00
9,511.66	5.00	248.71	9,509.00	-23.46	-60.19	23.22	0.00	0.00	0.00
3rd Bone Spring Shale									
9,600.00	5.00	248.71	9,597.01	-26.25	-67.36	25.98	0.00	0.00	0.00
9,700.00	5.00	248.71	9,696.63	-29.41	-75.47	29.11	0.00	0.00	0.00
9,800.00	5.00	248.71	9,796.25	-32.57	-83.58	32.24	0.00	0.00	0.00
9,900.00	5.00	248.71	9,895.87	-35.74	-91.70	35.37	0.00	0.00	0.00
9,967.39	5.00	248.71	9,963.00	-37.87	-97.16	37.48	0.00	0.00	0.00
3rd Bone Spring Sandstone									
10,000.00	5.00	248.71	9,995.49	-38.90	-99.81	38.50	0.00	0.00	0.00
10,100.00	5.00	248.71	10,095.11	-42.06	-107.92	41.63	0.00	0.00	0.00
10,200.00	5.00	248.71	10,194.73	-45.22	-116.04	44.76	0.00	0.00	0.00
10,251.47	5.00	248.71	10,246.00	-46.85	-120.21	46.37	0.00	0.00	0.00
3rd Bone Spring Sandstone Red Hills									
10,290.62	5.00	248.71	10,285.00	-48.09	-123.39	47.59	0.00	0.00	0.00
Wolfcamp Shale									
10,300.00	5.00	248.71	10,294.35	-48.38	-124.15	47.89	0.00	0.00	0.00
10,329.77	5.00	248.71	10,324.00	-49.33	-126.57	48.82	0.00	0.00	0.00



Planning Report

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Company:	XTO Energy	TVD Reference:	RKB = 23' @ 3098.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Wolfcamp X									
10,400.00	5.00	248.71	10,393.97	-51.55	-132.26	51.01	0.00	0.00	0.00
10,400.03	5.00	248.71	10,394.00	-51.55	-132.27	51.02	0.00	0.00	0.00
Wolfcamp Y									
10,437.18	5.00	248.71	10,431.00	-52.72	-135.28	52.18	0.00	0.00	0.00
Wolfcamp A									
10,500.00	5.00	248.71	10,493.59	-54.71	-140.38	54.14	0.00	0.00	0.00
10,600.00	5.00	248.71	10,593.21	-57.87	-148.49	57.27	0.00	0.00	0.00
10,700.00	5.00	248.71	10,692.83	-61.03	-156.60	60.40	0.00	0.00	0.00
10,711.02	5.00	248.71	10,703.80	-61.38	-157.50	60.75	0.00	0.00	0.00
10,750.00	7.35	218.97	10,742.57	-63.94	-160.65	63.29	10.00	6.05	-76.28
10,752.46	7.54	217.78	10,745.00	-64.19	-160.85	63.54	10.00	7.79	-48.40
Wolfcamp B									
10,800.00	11.65	203.06	10,791.88	-71.07	-164.64	70.41	10.00	8.64	-30.97
10,850.00	16.35	195.90	10,840.38	-82.50	-168.55	81.82	10.00	9.40	-14.32
10,900.00	21.19	191.91	10,887.71	-98.12	-172.34	97.42	10.00	9.67	-7.99
10,949.44	26.03	189.37	10,933.00	-117.57	-175.96	116.87	10.00	9.79	-5.12
Wolfcamp C									
10,950.00	26.08	189.35	10,933.50	-117.82	-176.00	117.11	10.00	9.83	-4.21
11,000.00	31.01	187.56	10,977.41	-141.44	-179.48	140.72	10.00	9.85	-3.59
11,050.00	35.95	186.21	11,019.10	-168.82	-182.76	168.09	10.00	9.89	-2.68
11,100.00	40.91	185.16	11,058.26	-199.74	-185.83	198.99	10.00	9.91	-2.11
11,129.43	43.83	184.63	11,080.00	-219.50	-187.52	218.75	10.00	9.93	-1.79
Wolfcamp D									
11,150.00	45.88	184.29	11,094.58	-233.96	-188.64	233.20	10.00	9.93	-1.64
11,200.00	50.85	183.57	11,127.79	-271.23	-191.19	270.46	10.00	9.94	-1.46
11,250.00	55.82	182.93	11,157.64	-311.26	-193.46	310.48	10.00	9.95	-1.27
11,300.00	60.80	182.37	11,183.90	-353.74	-195.42	352.96	10.00	9.95	-1.12
11,346.68	65.45	181.89	11,205.00	-395.34	-196.97	394.55	10.00	9.96	-1.02
Wolfcamp E									
11,350.00	65.78	181.86	11,206.37	-398.36	-197.07	397.57	10.00	9.96	-0.98
11,400.00	70.76	181.39	11,224.88	-444.77	-198.38	443.97	10.00	9.96	-0.94
11,450.00	75.74	180.94	11,239.29	-492.63	-199.35	491.82	10.00	9.96	-0.89
11,500.00	80.72	180.52	11,249.48	-541.56	-199.97	540.75	10.00	9.97	-0.85
11,550.00	85.70	180.11	11,255.39	-591.19	-200.24	590.38	10.00	9.97	-0.83
11,591.55	89.85	179.77	11,257.00	-632.70	-200.20	631.89	10.00	9.97	-0.81
LP - Remuda South 25 #163H: FTP/ LP									
11,600.00	89.85	179.77	11,257.02	-641.15	-200.17	640.34	0.00	0.00	0.00
11,700.00	89.85	179.77	11,257.29	-741.15	-199.76	740.34	0.00	0.00	0.00
11,800.00	89.85	179.77	11,257.56	-841.15	-199.36	840.34	0.00	0.00	0.00
11,900.00	89.85	179.77	11,257.83	-941.15	-198.96	940.34	0.00	0.00	0.00
12,000.00	89.85	179.77	11,258.10	-1,041.14	-198.55	1,040.34	0.00	0.00	0.00
12,100.00	89.85	179.77	11,258.37	-1,141.14	-198.15	1,140.34	0.00	0.00	0.00
12,200.00	89.85	179.77	11,258.63	-1,241.14	-197.75	1,240.34	0.00	0.00	0.00
12,300.00	89.85	179.77	11,258.90	-1,341.14	-197.35	1,340.34	0.00	0.00	0.00
12,400.00	89.85	179.77	11,259.17	-1,441.14	-196.94	1,440.34	0.00	0.00	0.00
12,500.00	89.85	179.77	11,259.44	-1,541.14	-196.54	1,540.34	0.00	0.00	0.00
12,600.00	89.85	179.77	11,259.71	-1,641.14	-196.14	1,640.34	0.00	0.00	0.00
12,700.00	89.85	179.77	11,259.98	-1,741.14	-195.73	1,740.34	0.00	0.00	0.00
12,800.00	89.85	179.77	11,260.25	-1,841.14	-195.33	1,840.34	0.00	0.00	0.00
12,900.00	89.85	179.77	11,260.51	-1,941.13	-194.93	1,940.34	0.00	0.00	0.00
13,000.00	89.85	179.77	11,260.78	-2,041.13	-194.53	2,040.34	0.00	0.00	0.00
13,100.00	89.85	179.77	11,261.05	-2,141.13	-194.12	2,140.34	0.00	0.00	0.00



Planning Report

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Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,200.00	89.85	179.77	11,261.32	-2,241.13	-193.72	2,240.34	0.00	0.00	0.00	
13,300.00	89.85	179.77	11,261.59	-2,341.13	-193.32	2,340.33	0.00	0.00	0.00	
13,400.00	89.85	179.77	11,261.86	-2,441.13	-192.91	2,440.33	0.00	0.00	0.00	
13,500.00	89.85	179.77	11,262.13	-2,541.13	-192.51	2,540.33	0.00	0.00	0.00	
13,600.00	89.85	179.77	11,262.39	-2,641.13	-192.11	2,640.33	0.00	0.00	0.00	
13,700.00	89.85	179.77	11,262.66	-2,741.13	-191.71	2,740.33	0.00	0.00	0.00	
13,800.00	89.85	179.77	11,262.93	-2,841.12	-191.30	2,840.33	0.00	0.00	0.00	
13,900.00	89.85	179.77	11,263.20	-2,941.12	-190.90	2,940.33	0.00	0.00	0.00	
14,000.00	89.85	179.77	11,263.47	-3,041.12	-190.50	3,040.33	0.00	0.00	0.00	
14,100.00	89.85	179.77	11,263.74	-3,141.12	-190.09	3,140.33	0.00	0.00	0.00	
14,200.00	89.85	179.77	11,264.01	-3,241.12	-189.69	3,240.33	0.00	0.00	0.00	
14,300.00	89.85	179.77	11,264.27	-3,341.12	-189.29	3,340.33	0.00	0.00	0.00	
14,400.00	89.85	179.77	11,264.54	-3,441.12	-188.89	3,440.33	0.00	0.00	0.00	
14,500.00	89.85	179.77	11,264.81	-3,541.12	-188.48	3,540.33	0.00	0.00	0.00	
14,600.00	89.85	179.77	11,265.08	-3,641.11	-188.08	3,640.33	0.00	0.00	0.00	
14,700.00	89.85	179.77	11,265.35	-3,741.11	-187.68	3,740.33	0.00	0.00	0.00	
14,800.00	89.85	179.77	11,265.62	-3,841.11	-187.27	3,840.33	0.00	0.00	0.00	
14,900.00	89.85	179.77	11,265.89	-3,941.11	-186.87	3,940.33	0.00	0.00	0.00	
15,000.00	89.85	179.77	11,266.15	-4,041.11	-186.47	4,040.33	0.00	0.00	0.00	
15,100.00	89.85	179.77	11,266.42	-4,141.11	-186.07	4,140.33	0.00	0.00	0.00	
15,200.00	89.85	179.77	11,266.69	-4,241.11	-185.66	4,240.33	0.00	0.00	0.00	
15,300.00	89.85	179.77	11,266.96	-4,341.11	-185.26	4,340.33	0.00	0.00	0.00	
15,400.00	89.85	179.77	11,267.23	-4,441.11	-184.86	4,440.33	0.00	0.00	0.00	
15,500.00	89.85	179.77	11,267.50	-4,541.10	-184.45	4,540.33	0.00	0.00	0.00	
15,600.00	89.85	179.77	11,267.77	-4,641.10	-184.05	4,640.33	0.00	0.00	0.00	
15,700.00	89.85	179.77	11,268.03	-4,741.10	-183.65	4,740.33	0.00	0.00	0.00	
15,800.00	89.85	179.77	11,268.30	-4,841.10	-183.25	4,840.33	0.00	0.00	0.00	
15,900.00	89.85	179.77	11,268.57	-4,941.10	-182.84	4,940.33	0.00	0.00	0.00	
16,000.00	89.85	179.77	11,268.84	-5,041.10	-182.44	5,040.33	0.00	0.00	0.00	
16,100.00	89.85	179.77	11,269.11	-5,141.10	-182.04	5,140.32	0.00	0.00	0.00	
16,200.00	89.85	179.77	11,269.38	-5,241.10	-181.63	5,240.32	0.00	0.00	0.00	
16,300.00	89.85	179.77	11,269.65	-5,341.09	-181.23	5,340.32	0.00	0.00	0.00	
16,400.00	89.85	179.77	11,269.91	-5,441.09	-180.83	5,440.32	0.00	0.00	0.00	
16,500.00	89.85	179.77	11,270.18	-5,541.09	-180.43	5,540.32	0.00	0.00	0.00	
16,600.00	89.85	179.77	11,270.45	-5,641.09	-180.02	5,640.32	0.00	0.00	0.00	
16,700.00	89.85	179.77	11,270.72	-5,741.09	-179.62	5,740.32	0.00	0.00	0.00	
16,800.00	89.85	179.77	11,270.99	-5,841.09	-179.22	5,840.32	0.00	0.00	0.00	
16,900.00	89.85	179.77	11,271.26	-5,941.09	-178.81	5,940.32	0.00	0.00	0.00	
17,000.00	89.85	179.77	11,271.53	-6,041.09	-178.41	6,040.32	0.00	0.00	0.00	
17,100.00	89.85	179.77	11,271.80	-6,141.09	-178.01	6,140.32	0.00	0.00	0.00	
17,200.00	89.85	179.77	11,272.06	-6,241.08	-177.60	6,240.32	0.00	0.00	0.00	
17,300.00	89.85	179.77	11,272.33	-6,341.08	-177.20	6,340.32	0.00	0.00	0.00	
17,400.00	89.85	179.77	11,272.60	-6,441.08	-176.80	6,440.32	0.00	0.00	0.00	
17,500.00	89.85	179.77	11,272.87	-6,541.08	-176.40	6,540.32	0.00	0.00	0.00	
17,600.00	89.85	179.77	11,273.14	-6,641.08	-175.99	6,640.32	0.00	0.00	0.00	
17,700.00	89.85	179.77	11,273.41	-6,741.08	-175.59	6,740.32	0.00	0.00	0.00	
17,800.00	89.85	179.77	11,273.68	-6,841.08	-175.19	6,840.32	0.00	0.00	0.00	
17,900.00	89.85	179.77	11,273.94	-6,941.08	-174.78	6,940.32	0.00	0.00	0.00	
18,000.00	89.85	179.77	11,274.21	-7,041.07	-174.38	7,040.32	0.00	0.00	0.00	
18,100.00	89.85	179.77	11,274.48	-7,141.07	-173.98	7,140.32	0.00	0.00	0.00	
18,200.00	89.85	179.77	11,274.75	-7,241.07	-173.58	7,240.32	0.00	0.00	0.00	
18,300.00	89.85	179.77	11,275.02	-7,341.07	-173.17	7,340.32	0.00	0.00	0.00	
18,400.00	89.85	179.77	11,275.29	-7,441.07	-172.77	7,440.32	0.00	0.00	0.00	
18,500.00	89.85	179.77	11,275.56	-7,541.07	-172.37	7,540.32	0.00	0.00	0.00	



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #163H
Company:	XTO Energy	TVD Reference:	RKB = 23' @ 3098.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,600.00	89.85	179.77	11,275.82	-7,641.07	-171.96	7,640.32	0.00	0.00	0.00
18,700.00	89.85	179.77	11,276.09	-7,741.07	-171.56	7,740.32	0.00	0.00	0.00
18,800.00	89.85	179.77	11,276.36	-7,841.07	-171.16	7,840.32	0.00	0.00	0.00
18,908.04	89.85	179.77	11,276.65	-7,949.10	-170.72	7,948.35	0.00	0.00	0.00
Remuda South 25 #163H: LTP									
19,000.00	89.85	179.77	11,276.90	-8,041.06	-170.35	8,040.31	0.00	0.00	0.00
19,038.04	89.85	179.77	11,277.00	-8,079.10	-170.20	8,078.35	0.00	0.00	0.00
TD - Remuda South 25 #163H: PBHL (200' FNL & 1750' FWL)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Remuda South 25 #163H - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	464,564.60	621,584.20	32.2765921	-103.9399353
Remuda South 25 #163H - plan hits target center - Point	0.00	0.01	11,257.00	-632.70	-200.20	463,931.90	621,384.00	32.2748549	-103.9405906
Remuda South 25 #163H - plan misses target center by 0.28usft at 18908.03usft MD (11276.65 TVD, -7949.10 N, -170.72 E) - Point	0.00	0.01	11,276.65	-7,949.10	-171.00	456,615.50	621,413.20	32.2547425	-103.9405827
Remuda South 25 #163H - plan hits target center - Point	0.00	0.01	11,277.00	-8,079.10	-170.20	456,485.50	621,414.00	32.2543851	-103.9405817



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #163H
Company:	XTO Energy	TVD Reference:	RKB = 23' @ 3098.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 23' @ 3098.00usft
Site:	Remuda South 25 State	North Reference:	Grid
Well:	#163H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7.00	7.00	Dewey Lake (Alluvium)			
67.00	67.00	Rustler			
217.00	217.00	Salado			
417.00	417.00	Est. Top of Salt			
3,061.00	3,061.00	Base of Salt			
3,269.00	3,269.00	Delaware Mountain Group			
3,309.00	3,309.00	Bell Canyon Sandstone			
4,132.00	4,132.00	Cherry Canyon Sandstone			
5,709.00	5,709.00	Brushy Canyon Sandstone			
6,714.00	6,714.00	Basal Brushy Canyon Sandstone			
6,966.00	6,966.00	Bone Spring			
7,139.00	7,139.00	Avalon Shale			
7,456.00	7,456.00	Avalon Limestone			
7,709.00	7,709.00	Lower Avalon Shale			
8,020.00	8,020.00	1st Bone Spring Sandstone			
8,346.00	8,346.00	2nd Bone Spring Limestone			
8,883.27	8,883.00	2nd Bone Spring Sandstone			
8,909.37	8,909.00	2nd Bone Spring Sandstone A			
8,973.62	8,973.00	2nd Bone Spring Limestone A/B			
9,038.86	9,038.00	2nd Bone Spring Sandstone B			
9,188.43	9,187.00	3rd Bone Spring Limestone			
9,511.66	9,509.00	3rd Bone Spring Shale			
9,967.39	9,963.00	3rd Bone Spring Sandstone			
10,251.47	10,246.00	3rd Bone Spring Sandstone Red Hil			
10,290.62	10,285.00	Wolfcamp Shale			
10,329.77	10,324.00	Wolfcamp X			
10,400.03	10,394.00	Wolfcamp Y			
10,437.18	10,431.00	Wolfcamp A			
10,752.46	10,745.00	Wolfcamp B			
10,949.44	10,933.00	Wolfcamp C			
11,129.43	11,080.00	Wolfcamp D			
11,346.68	11,205.00	Wolfcamp E			
11,591.55	11,257.00	LP			
19,038.04	11,277.00	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.