Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

5. Lease Serial No.
NMNM99147

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
CORRAL CANYON 8-32 FEDERAL 126H

2. Name of Operator
XTO ENERGY INCORPORATED
Contact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.
30-015-46491-00-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
PURPLE SAGE-WOLFCAMP (GAS)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 8 T25S R29E NWSE 2514FSL 2093FEL
32.144310 N Lat, 104.004814 W Lon

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 to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 recomplete 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 recompletion 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 Energy Inc. requests permission to change the casing & cement design per the attached drilling program.

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

XTO requests a variance to be able to 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.

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

Electronic Submission #501931 verified by the BLM Well Information System
For XTO ENERGY INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 02/04/2020 (20PP1087SE)

Name *(Printed/Typed)* KELLY KARDOS — Title REGULATORY COORDINATOR

Signature (Electronic Submission) — Date 02/04/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ACCEPTED — Title ALLISON MORENCY PETROLEUM ENGINEER — Date 02/20/2020

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 ****

Accepted 03/27/2020 - Kurt Simmons NMOCD

Additional data for EC transaction #501931 that would not fit on the form

32. Additional remarks, continued

Corral Canyon 8-32 Federal 165H 30-015-46490
Corral Canyon 8-32 Federal 125H 30-015-46487
Corral Canyon 8-32 Federal 105H 30-015-46489
Corral Canyon 8-32 Federal 126H 30-015-46491
Corral Canyon 8-32 Federal 166H 30-015-45488

Revisions to Operator-Submitted EC Data for Sundry Notice #501931

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM99147	NMNM99147
Agreement:		
Operator:	XTO ENERGY INC. 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO ENERGY INCORPORATED 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:	PURPLE SAGE; WOLFCAMP	PURPLE SAGE-WOLFCAMP (GAS)
Well/Facility:	CORRAL CANYON 8-32 FEDERAL 126H Sec 8 T25S R29E Mer NMP NWSE 2514FSL 2093FEL	CORRAL CANYON 8-32 FEDERAL 126H Sec 8 T25S R29E NWSE 2514FSL 2093FEL 32.144310 N Lat, 104.004814 W Lon

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

XTO Energy Inc.
Corral Canyon 8-32 FED 126H
Projected TD: 20519' MD / 10122' TVD
SHL: 2514' FSL & 2063' FEL , Section 8, T25S, R29E
BHL: 2440' FSL & 1590' FEL , Section 32, T24S, R29E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Permian

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	278'	Water
Top of Salt	679'	Water
Base of Salt	2679'	Water
Delaware	2877'	Water
Bone Spring	66115'	Water/Oil/Gas
1st Bone Spring Ss	7554'	Water/Oil/Gas
2nd Bone Spring Ss	8380'	Water/Oil/Gas
3rd Bone Spring Ss	9442'	Water/Oil/Gas
Wolfcamp	9813'	Water/Oil/Gas
Wolfcamp A	9949'	Water/Oil/Gas
Target/Land Curve	10122'	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 @ ' (679' above the salt) and circulating cement back to surface. The salt will be isolated by setting 11-3/4 inch casing at 570' and circulating cement to surface. A 10-5/8 inch vertical hole will be drilled to 9670' and 8-5/8 inch casing ran and cemented 500' into the 11-3/4 inch casing. An 7-7/8 inch curve and lateral hole will be drilled to MD/TD and 5-1/2 casing will be set at TD and cemented back 300' into the 8-5/8 inch casing shoe.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
14-3/4"	0' – 570'	11-3/4"	47	BTC	J-55	New	1.28	5.09	17.81
10-5/8"	0' – 9670'	8-5/8"	32	BTC	HCL-80	New	1.36	1.57	2.37
7-7/8"	0' – 20519'	5-1/2"	20	BTC	P-110	New	1.18	1.76	2.38

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

8-5/8" Collapse analyzed using 50% evacuation based on regional experience.

5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

· Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

WELLHEAD:

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head (RSH System): 11-3/4" SOW bottom x 13-5/8" 5M top flange
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 8-5/8" casing per Onshore Order 2.
- Wellhead manufacturer representative may not be present for BOP test plug installation

4. Cement Program

Surface Casing: 11-3/4", 47 New J-55, BTC casing to be set at +/- 570'

Lead: 120 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.88 ft3/sx, 9.61 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

Intermediate Casing: 8-5/8", 32 New HCL-80, BTC casing to be set at +/- 9670'
ECP/DV Tool to be set at 3580'
1st Stage

Lead: 560 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.87 ft3/sx, 9.61 gal/sx water)

Tail: 220 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 Stage

Lead: 1120 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 310 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 P-110, BTC casing to be set at +/- 20519'

Lead: 1780 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 1780 sxs VersaCem (mixed at 13.2 ppg, 9079 ft3/sx, 8.38 gal/sx water)
Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

Top of Cement: 300' inside previous casing shoe

5. Pressure Control Equipment

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 3-Ram BOP. MASP should not exceed 4089 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). Also a variance is requested to test the 5M annular to 70% of working pressure at 3500 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 13-5/8" 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When the 11-3/4" and 8-5/8" casing is set, the packoff seals will be tested to a minimum of 5000 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 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.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 570'	14-3/4"	FW / Native	8.4-8.8	30-40	NC
570' to 9670'	10-5/8"	BW/FWM/Direct Emulsion	8.7-9.8	29-32	NC - 20
9670' to 20519'	7-7/8"	FW / Cut Brine / Polymer/ OBM	11.5-12.5	32-50	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 and set 11 3/4" surface casing, isolating the fresh water aquifer. Drill out from under 11-3/4" surface casing with a brine/oil direct emulsion water-based mud. 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 1st intermediate casing.

Open hole logging will not be done on this well.

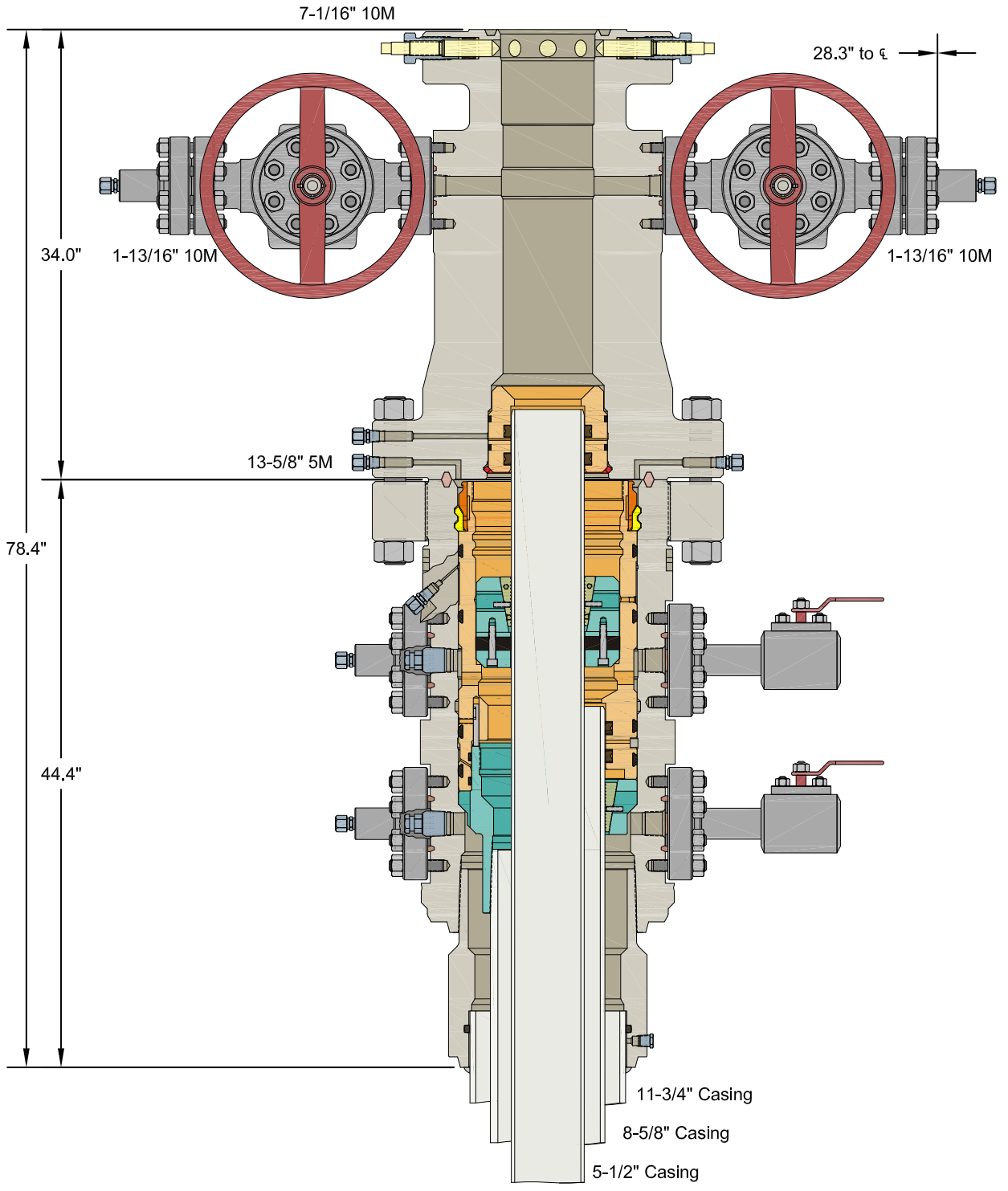
9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 140 to 160 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 6316 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

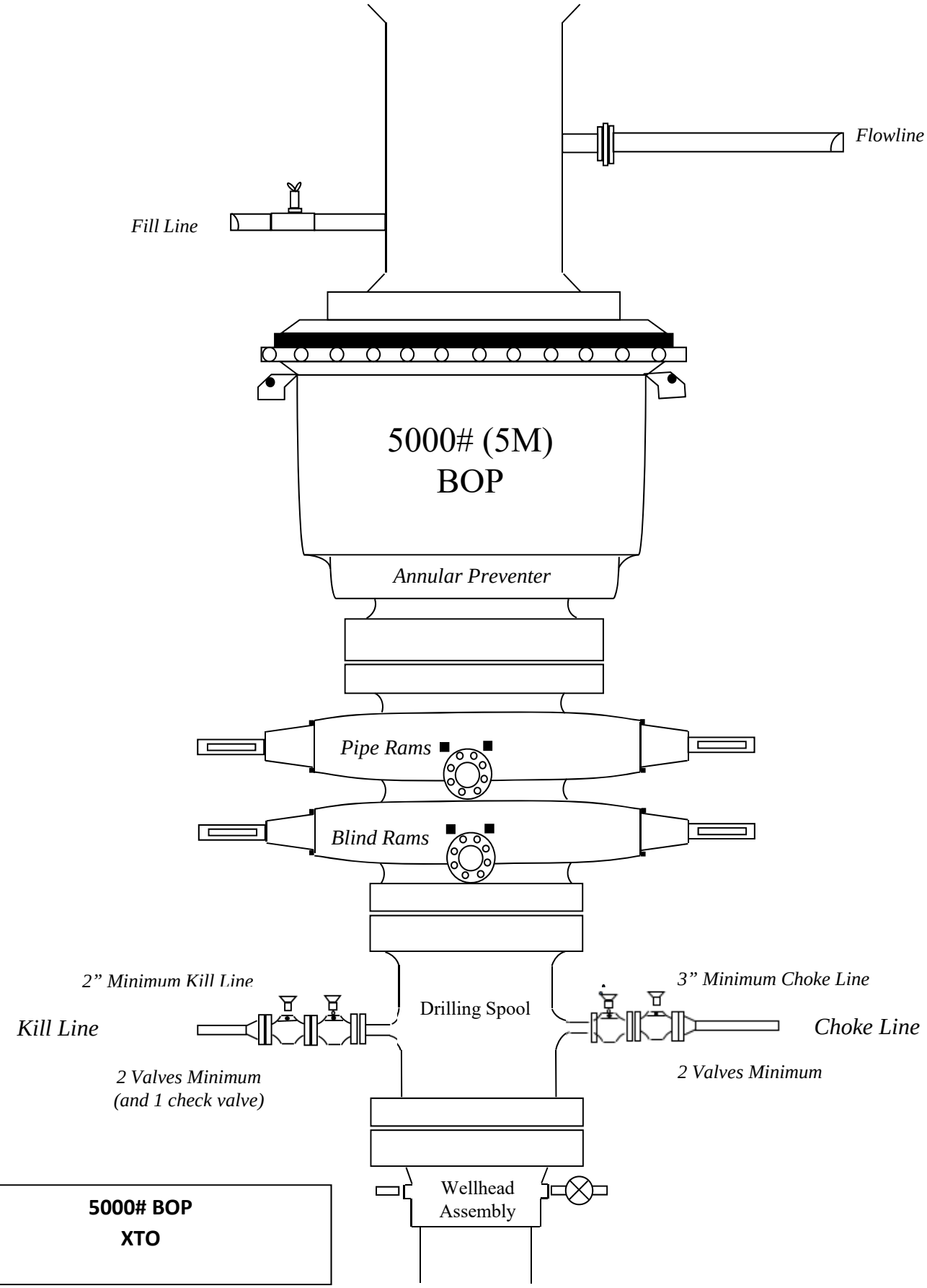
This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.

XTO ENERGY, INC.

11-3/4" x 8-5/8" x 5-1/2" 10M RSH-2 Wellhead Assembly, With T-EBS-F Tubing Head

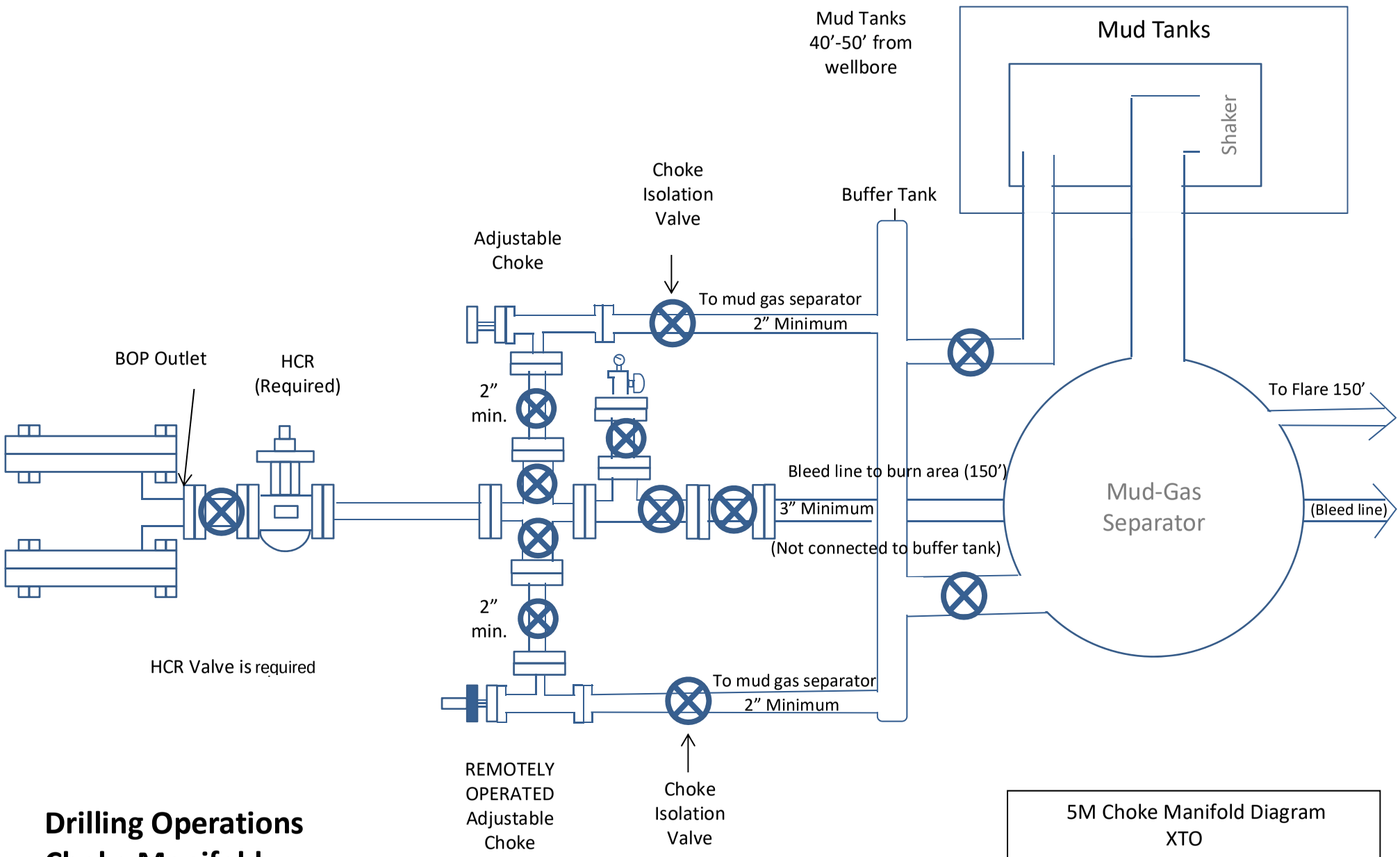
DRAWN	VJK	31OCT16
APPRV	KN	31OCT16

FOR REFERENCE ONLY
DRAWING NO. 10012358


Flowline
Fill Line
5000# (5M)
BOP
Annular Preventer
Pipe Rams
Blind Rams
2" Minimum Kill Line
3" Minimum Choke Line
Kill Line
Drilling Spool
Choke Line
2 Valves Minimum
(and 1 check valve)
2 Valves Minimum
Wellhead
Assembly

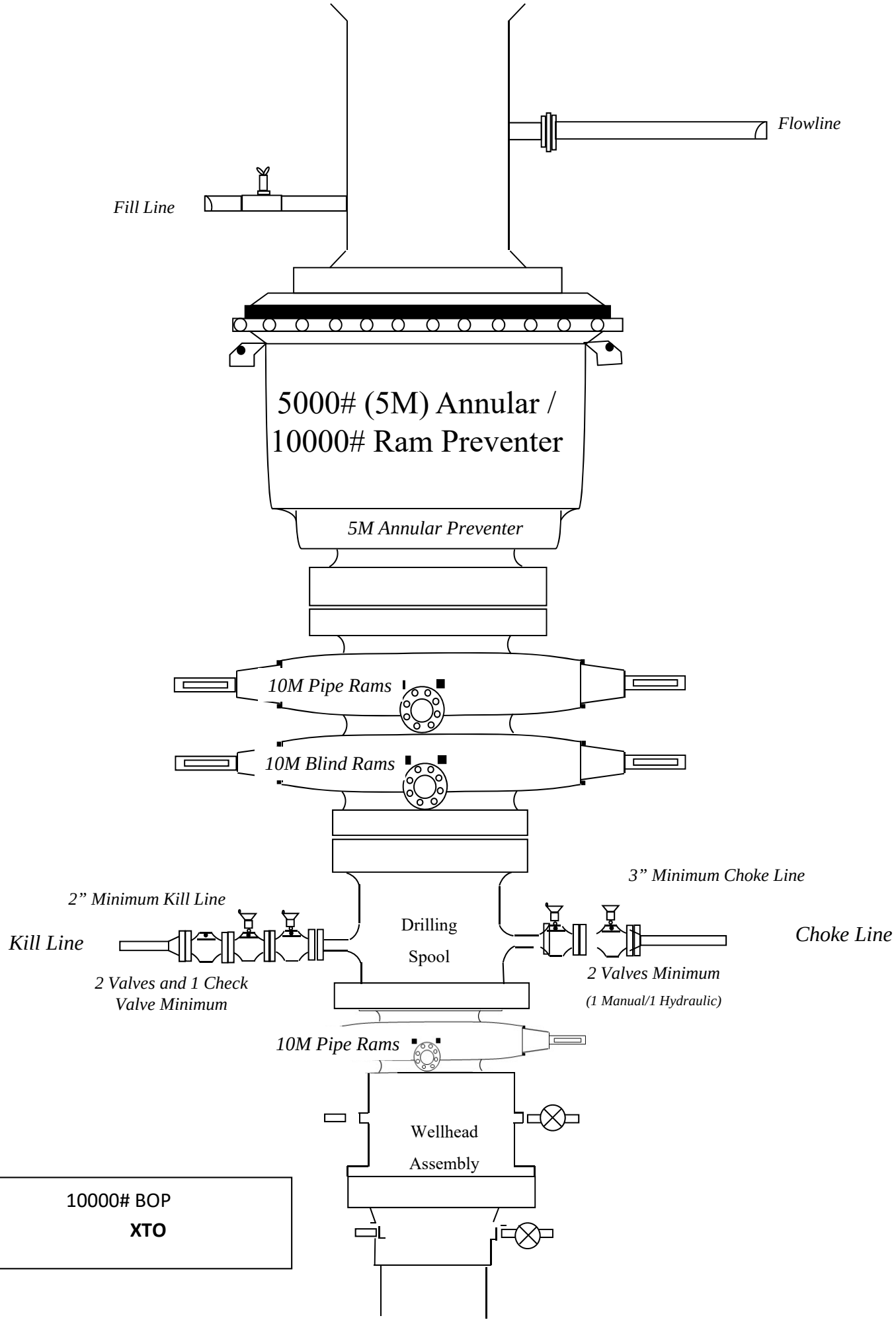
5000# BOP

XTO



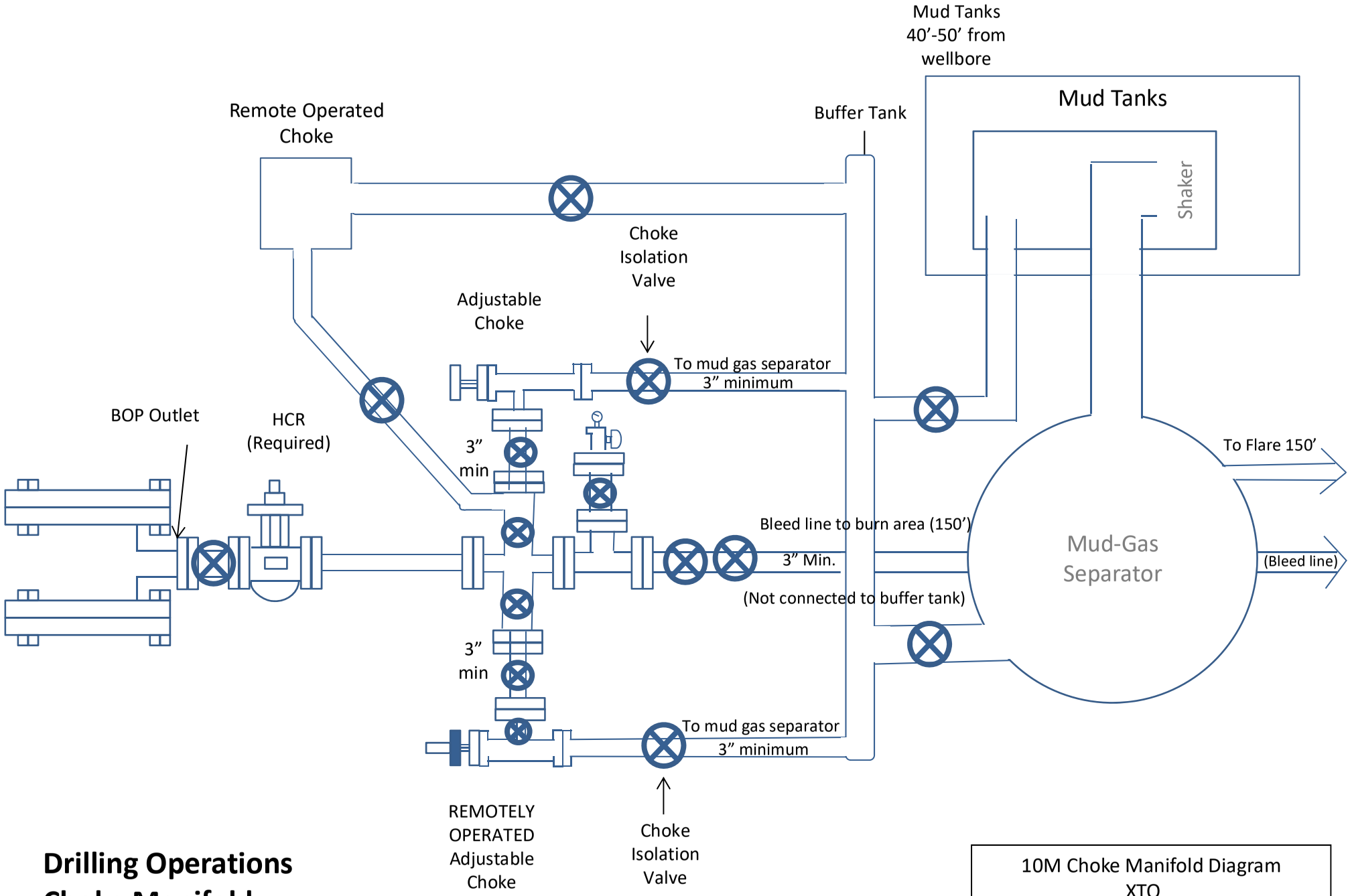
Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
XTO



10000# BOP

XTO



Drilling Operations
Choke Manifold
10M Service

10M Choke Manifold Diagram
XTO

10,000 PSI Annular BOP Variance Request

XTO Energy/XTO Permian Op. request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOPL).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

8-1/2" Production Hole Section 10M psi Requirement					
Component	**OD**	**Primary Preventer**	**RWP**	**Alternate Preventer(s)**	**RWP**
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

<u>General Procedure While Drilling</u>

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:
    a. Perform flow check. If flowing, continue to (b).
    b. Sound alarm (alert crew)
    c. Stab full-opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper variable bore rams
    e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP & SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
    a. Sound alarm (alert crew)
    b. Stab crossover and full-opening safety valve and close
    c. Space out drill string with upset just beneath the upper variable bore rams
    d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP & SICP

    ii. Pit gain
    iii. Time
h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
    a. Sound alarm (alert crew)
    b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
    c. If impossible to pull string clear of the stack:
    d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
    e. Space out drill string with tooljoint just beneath the upper variable bore ram
    f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
    g. Confirm shut-in
    h. Notify toolpusher/company representative
    i. Read and record the following:
        i. SIDPP & SICP
        ii. Pit gain
        iii. Time
    j. Regroup and identify forward plan

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

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

GRADE D PRESSURE TEST CERTIFICATE

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

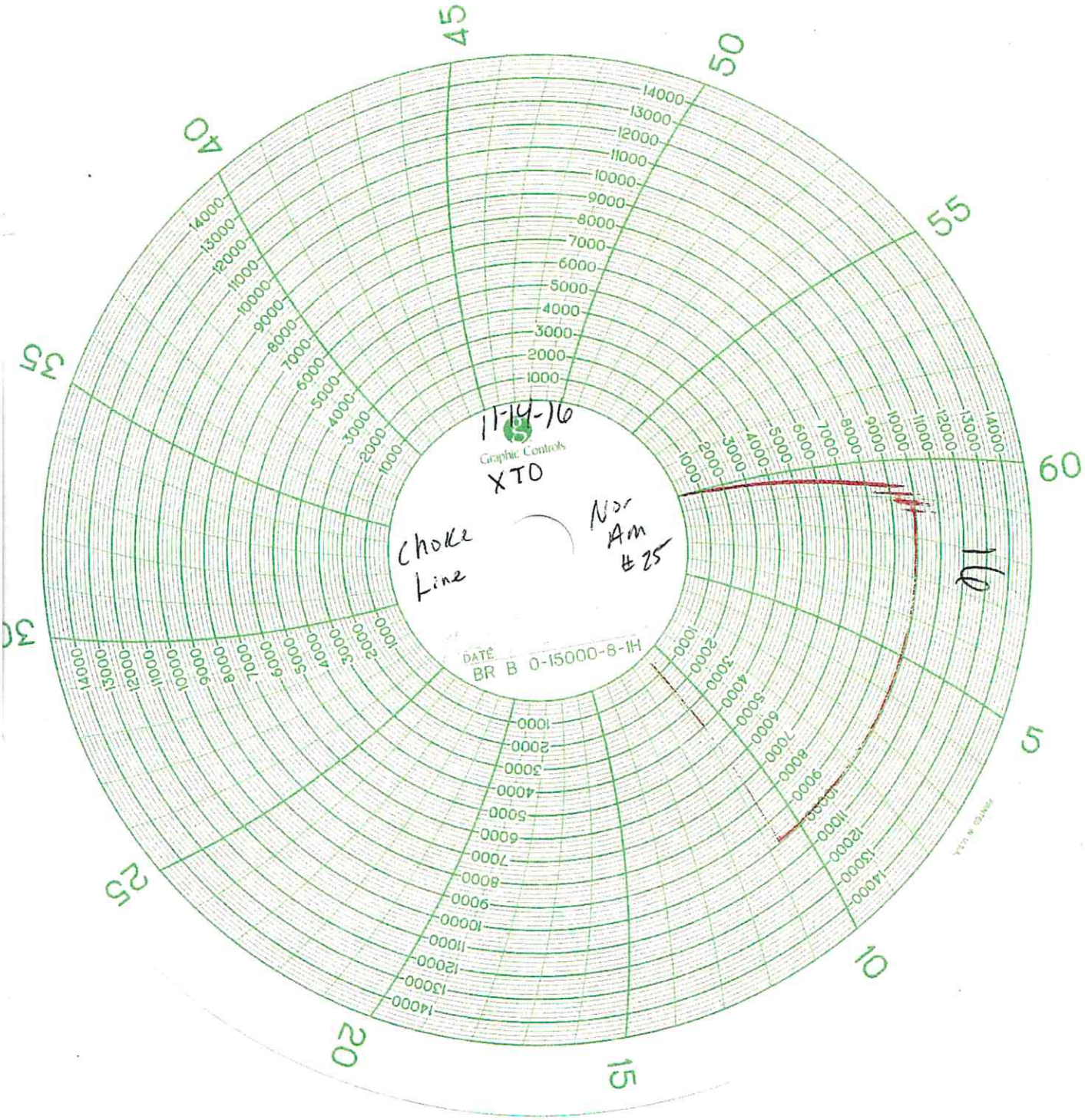
Product Description:	FD3.042.0R41/16.5KFLGE/E LE

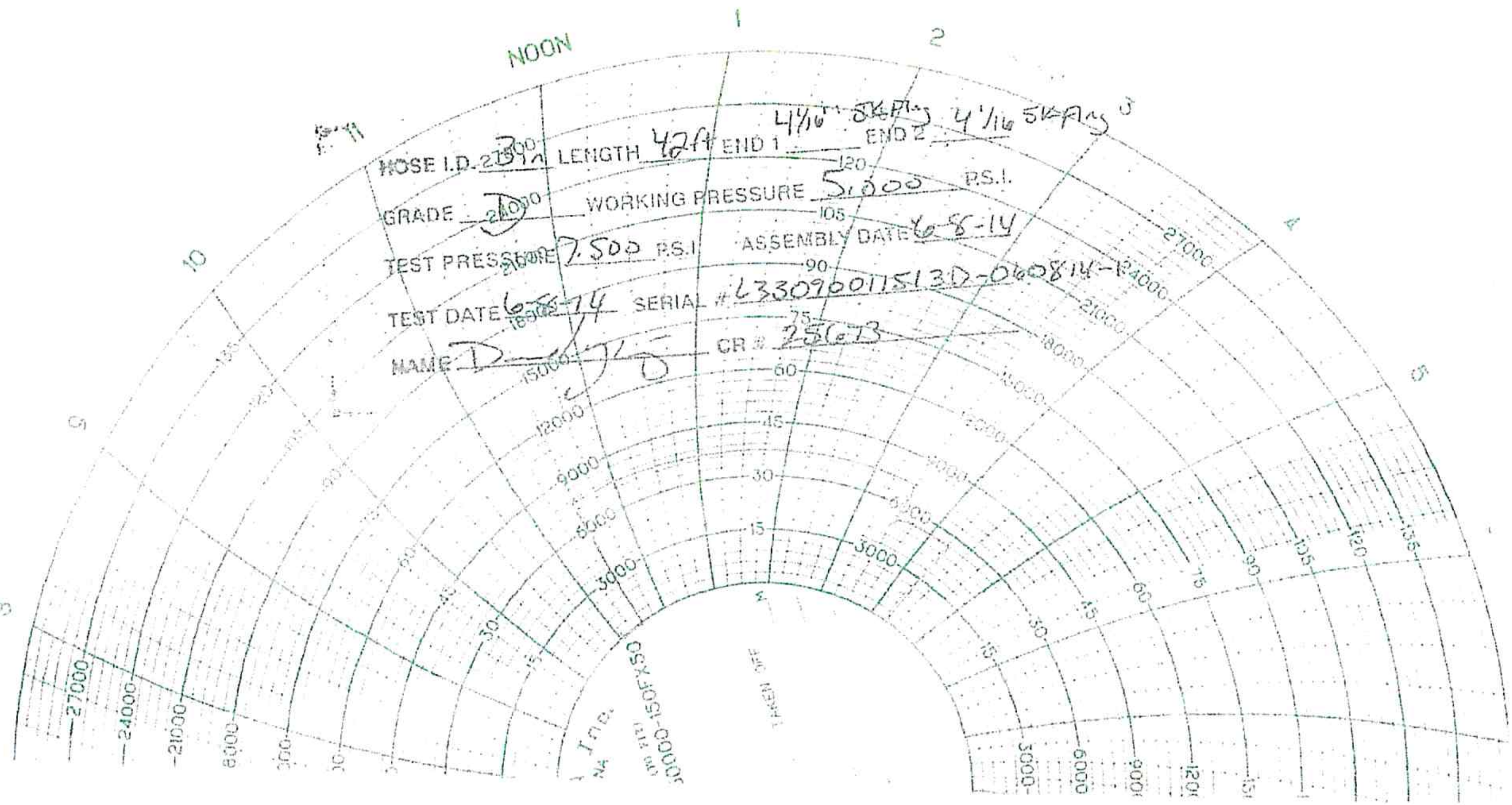
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

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

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

Form PTC - 01 Rev.0 2


11-14-16
Graphic Controls
XTO
Choke Line
Nor Am #25
DATE
BR B 0-15000-8-1H
16


HOSE I.D. 3in LENGTH 42ft END 1 4 1/16" 5K Flg END 2 4 1/16 5K Flg
GRADE D WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I. ASSEMBLY DATE 6-8-14
TEST DATE 6-8-14 SERIAL # 63309001151 3D-060814-1
NAME
CR # 25673
NOON
TAKEN OFF
150FX50

XTO Energy

2962+25 @ 2987.00usft (Ens451)
NAD 1927 (NADCON CONUS)

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: Corral Canyon 8-32 FED
Well: 126H
Wellbore: Lateral
Design: Plan #1

TARGET DETAILS

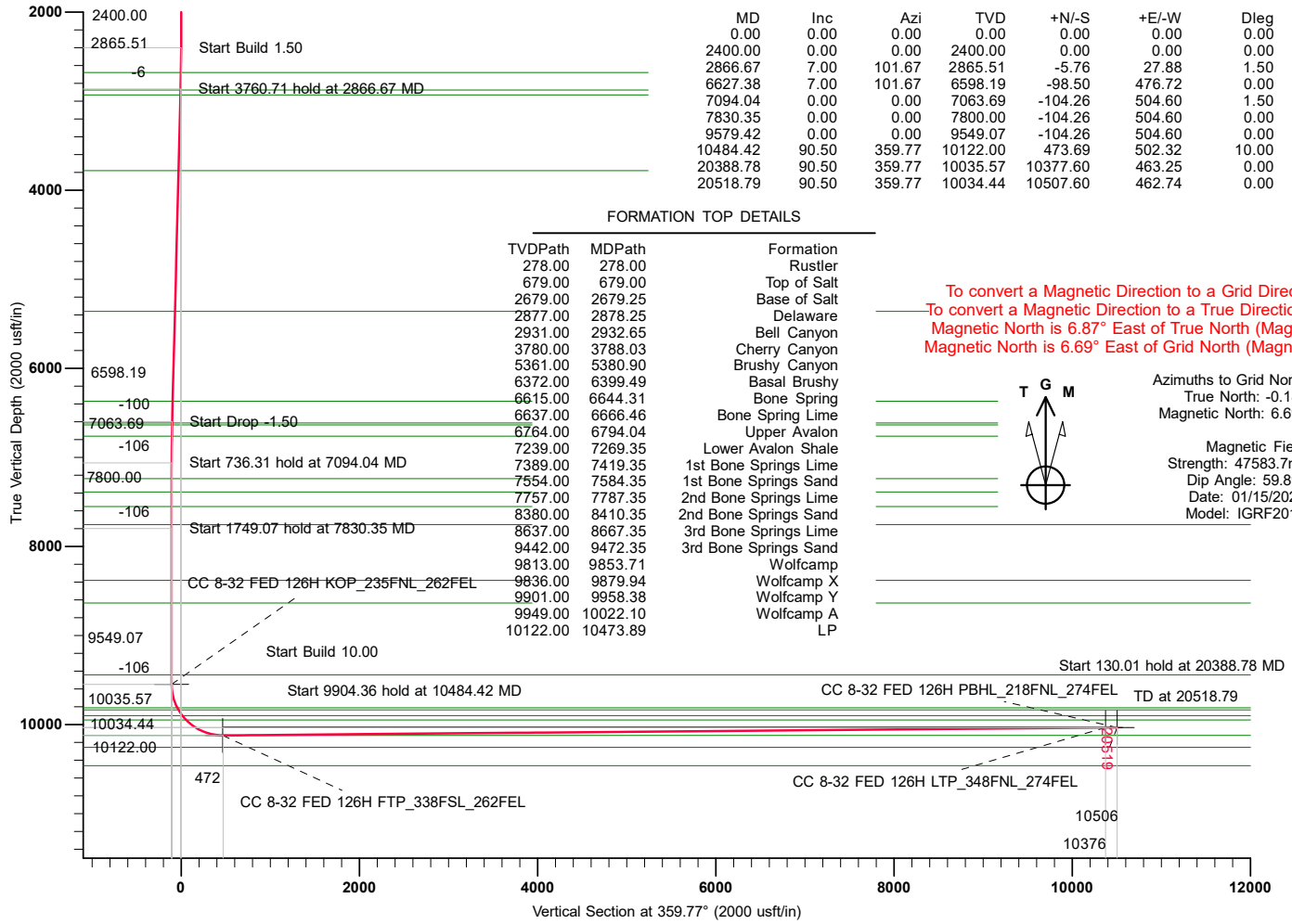
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
CC 8-32 FED 126H SHL	0.00	0.00	0.00	416331.90	601830.00	Point
CC 8-32 FED 126H KOP_235FNL_262FEL	9549.07	-104.26	504.56	416227.64	602334.56	Point
CC 8-32 FED 126H PBHL_218FNL_274FEL	10034.44	10507.60	462.70	426839.50	602292.70	Rectangle (Sides: L10042.00 W100.00)
CC 8-32 FED 126H LTP_348FNL_274FEL	10035.57	10377.60	463.20	426709.50	602293.20	Point
CC 8-32 FED 126H FTP_338FSL_262FEL	10122.00	468.70	502.30	416800.60	602332.30	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00
2866.67	7.00	101.67	2865.51	-5.76	27.88	1.50	101.67	-5.87
6627.38	7.00	101.67	6598.19	-98.50	476.72	0.00	0.00	-100.41
7094.04	0.00	0.00	7063.69	-104.26	504.60	1.50	180.00	-106.28
7830.35	0.00	0.00	7800.00	-104.26	504.60	0.00	0.00	-106.28
9579.42	0.00	0.00	9549.07	-104.26	504.60	0.00	0.00	-106.28
10484.42	90.50	359.77	10122.00	473.69	502.32	10.00	359.77	471.67
20388.78	90.50	359.77	10035.57	10377.60	463.25	0.00	0.00	10375.66
20518.79	90.50	359.77	10034.44	10507.60	462.74	0.00	0.00	10505.66

FORMATION TOP DETAILS

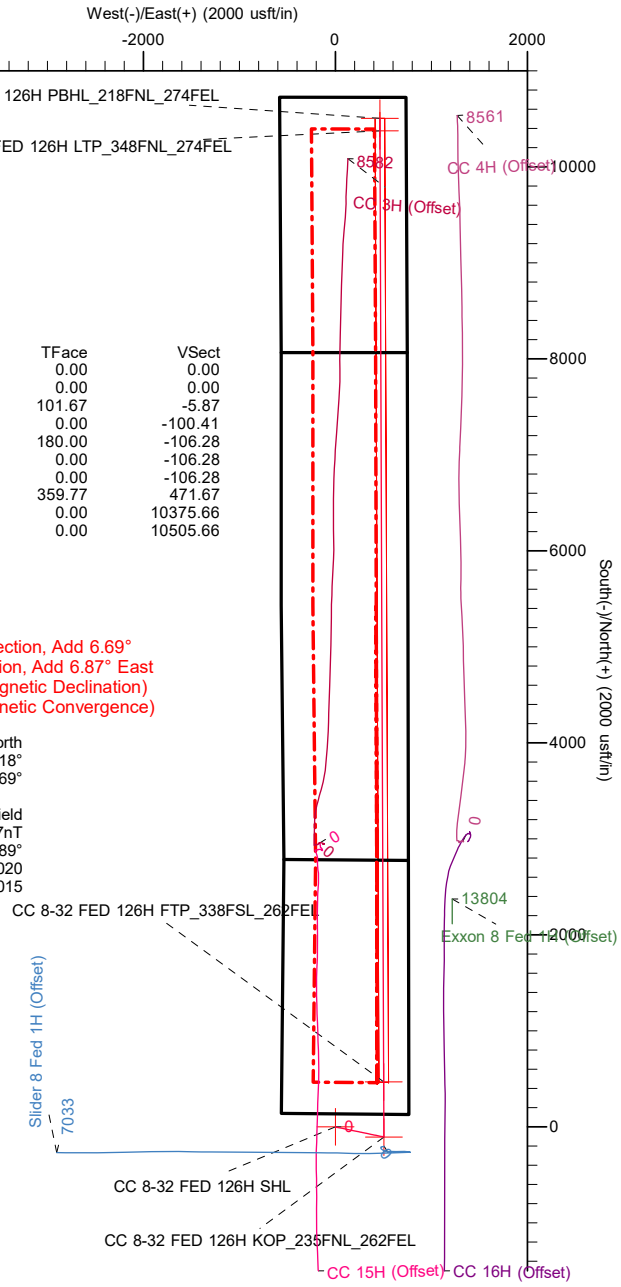
TVDPath	MDPath	Formation
278.00	278.00	Rustler
679.00	679.00	Top of Salt
2679.00	2679.25	Base of Salt
2877.00	2878.25	Delaware
2931.00	2932.65	Bell Canyon
3780.00	3788.03	Cherry Canyon
5361.00	5380.90	Brushy Canyon
6372.00	6399.49	Basal Brushy
6615.00	6644.31	Bone Spring
6637.00	6666.46	Bone Spring Lime
6764.00	6794.04	Upper Avalon
7239.00	7269.35	Lower Avalon Shale
7389.00	7419.35	1st Bone Springs Lime
7554.00	7584.35	1st Bone Springs Sand
7757.00	7787.35	2nd Bone Springs Lime
8380.00	8410.35	2nd Bone Springs Sand
8637.00	8667.35	3rd Bone Springs Lime
9442.00	9472.35	3rd Bone Springs Sand
9813.00	9853.71	Wolfcamp
9836.00	9879.94	Wolfcamp X
9901.00	9958.38	Wolfcamp Y
9949.00	10022.10	Wolfcamp A
10122.00	10473.89	LP



To convert a Magnetic Direction to a Grid Direction, Add 6.69°
To convert a Magnetic Direction to a True Direction, Add 6.87° East
Magnetic North is 6.87° East of True North (Magnetic Declination)
Magnetic North is 6.69° East of Grid North (Magnetic Convergence)

Azimuths to Grid North
True North: -0.18°
Magnetic North: 6.69°

Magnetic Field
Strength: 47583.7nT
Dip Angle: 59.89°
Date: 01/15/2020
Model: IGRF2015



Plan: Plan #1 (126H/Lateral)
Created By: Mekka Williams
eSomina Well Design
mekka@esominawelldesign.com
13:43, January 17 2020

BLACK VALLEY DIRECTIONAL DRILLING LLC
900 OLD HIGHWAY 105 WEST
CONROE TEXAS 77304 - 936-206-5859

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project Eddy County, NM (NAD27) NMEZ Grid

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Corral Canyon 8-32 FED

Site Position:		**Northing:**	416,331.60 usft	**Latitude:**	32.1441849
From:	Map	**Easting:**	601,800.00 usft	**Longitude:**	-104.0044257
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.20 in	**Grid Convergence:**	0.18 °

Well 126H - Slot CC 8-32 FED 126H SHL

Well Position	**+N/-S**	0.30 usft	**Northing:**	416,331.90 usft	**Latitude:**	32.1441855
	+E/-W	30.00 usft	**Easting:**	601,830.00 usft	**Longitude:**	-104.0043287
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	2,962.00 usft

Wellbore Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/15/20	6.87	59.89	47,583.70721566

Design Plan #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.77

Plan Survey Tool Program **Date** 01/16/20

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,518.79	Plan #1 (Lateral)	MWD+IFR1+MS	
				OWSG MWD + IFR1 + Multi-St	

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	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	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,866.67	7.00	101.67	2,865.51	-5.76	27.88	1.50	1.50	0.00	101.67	
6,627.38	7.00	101.67	6,598.19	-98.50	476.72	0.00	0.00	0.00	0.00	
7,094.04	0.00	0.00	7,063.69	-104.26	504.60	1.50	-1.50	0.00	180.00	
7,830.35	0.00	0.00	7,800.00	-104.26	504.60	0.00	0.00	0.00	0.00	
9,579.42	0.00	0.00	9,549.07	-104.26	504.60	0.00	0.00	0.00	0.00	
10,484.42	90.50	359.77	10,122.01	473.69	502.32	10.00	10.00	0.00	359.77	
20,388.78	90.50	359.77	10,035.57	10,377.60	463.25	0.00	0.00	0.00	0.00	CC 8-32 FED 126H L
20,518.79	90.50	359.77	10,034.44	10,507.60	462.74	0.00	0.00	0.00	0.00	CC 8-32 FED 126H P

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	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
278.00	0.00	0.00	278.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
679.00	0.00	0.00	679.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
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	1.50	101.67	2,499.99	-0.26	1.28	-0.27	1.50	1.50	0.00
2,600.00	3.00	101.67	2,599.91	-1.06	5.13	-1.08	1.50	1.50	0.00
2,679.25	4.19	101.67	2,679.00	-2.06	9.99	-2.10	1.50	1.50	0.00
Base of Salt									
2,700.00	4.50	101.67	2,699.69	-2.38	11.53	-2.43	1.50	1.50	0.00
2,800.00	6.00	101.67	2,799.27	-4.23	20.49	-4.32	1.50	1.50	0.00
2,866.67	7.00	101.67	2,865.51	-5.76	27.88	-5.87	1.50	1.50	0.00
2,878.25	7.00	101.67	2,877.00	-6.05	29.26	-6.16	0.00	0.00	0.00
Delaware									
2,900.00	7.00	101.67	2,898.59	-6.58	31.86	-6.71	0.00	0.00	0.00
2,932.65	7.00	101.67	2,931.00	-7.39	35.76	-7.53	0.00	0.00	0.00
Bell Canyon									
3,000.00	7.00	101.67	2,997.85	-9.05	43.80	-9.22	0.00	0.00	0.00
3,100.00	7.00	101.67	3,097.10	-11.52	55.73	-11.74	0.00	0.00	0.00
3,200.00	7.00	101.67	3,196.36	-13.98	67.67	-14.25	0.00	0.00	0.00
3,300.00	7.00	101.67	3,295.61	-16.45	79.60	-16.77	0.00	0.00	0.00
3,400.00	7.00	101.67	3,394.86	-18.91	91.54	-19.28	0.00	0.00	0.00
3,500.00	7.00	101.67	3,494.12	-21.38	103.47	-21.79	0.00	0.00	0.00
3,600.00	7.00	101.67	3,593.37	-23.84	115.40	-24.31	0.00	0.00	0.00
3,700.00	7.00	101.67	3,692.63	-26.31	127.34	-26.82	0.00	0.00	0.00
3,788.03	7.00	101.67	3,780.00	-28.48	137.85	-29.03	0.00	0.00	0.00
Cherry Canyon									
3,800.00	7.00	101.67	3,791.88	-28.78	139.27	-29.34	0.00	0.00	0.00
3,900.00	7.00	101.67	3,891.14	-31.24	151.21	-31.85	0.00	0.00	0.00

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	7.00	101.67	3,990.39	-33.71	163.14	-34.36	0.00	0.00	0.00
4,100.00	7.00	101.67	4,089.65	-36.17	175.08	-36.88	0.00	0.00	0.00
4,200.00	7.00	101.67	4,188.90	-38.64	187.01	-39.39	0.00	0.00	0.00
4,300.00	7.00	101.67	4,288.16	-41.11	198.95	-41.90	0.00	0.00	0.00
4,400.00	7.00	101.67	4,387.41	-43.57	210.88	-44.42	0.00	0.00	0.00
4,500.00	7.00	101.67	4,486.67	-46.04	222.82	-46.93	0.00	0.00	0.00
4,600.00	7.00	101.67	4,585.92	-48.50	234.75	-49.45	0.00	0.00	0.00
4,700.00	7.00	101.67	4,685.17	-50.97	246.69	-51.96	0.00	0.00	0.00
4,800.00	7.00	101.67	4,784.43	-53.44	258.62	-54.47	0.00	0.00	0.00
4,900.00	7.00	101.67	4,883.68	-55.90	270.56	-56.99	0.00	0.00	0.00
5,000.00	7.00	101.67	4,982.94	-58.37	282.49	-59.50	0.00	0.00	0.00
5,100.00	7.00	101.67	5,082.19	-60.83	294.43	-62.02	0.00	0.00	0.00
5,200.00	7.00	101.67	5,181.45	-63.30	306.36	-64.53	0.00	0.00	0.00
5,300.00	7.00	101.67	5,280.70	-65.77	318.30	-67.04	0.00	0.00	0.00
5,380.90	7.00	101.67	5,361.00	-67.76	327.95	-69.08	0.00	0.00	0.00
Brushy Canyon									
5,400.00	7.00	101.67	5,379.96	-68.23	330.23	-69.56	0.00	0.00	0.00
5,500.00	7.00	101.67	5,479.21	-70.70	342.17	-72.07	0.00	0.00	0.00
5,600.00	7.00	101.67	5,578.47	-73.16	354.10	-74.59	0.00	0.00	0.00
5,700.00	7.00	101.67	5,677.72	-75.63	366.04	-77.10	0.00	0.00	0.00
5,800.00	7.00	101.67	5,776.98	-78.10	377.97	-79.61	0.00	0.00	0.00
5,900.00	7.00	101.67	5,876.23	-80.56	389.91	-82.13	0.00	0.00	0.00
6,000.00	7.00	101.67	5,975.48	-83.03	401.84	-84.64	0.00	0.00	0.00
6,100.00	7.00	101.67	6,074.74	-85.49	413.78	-87.15	0.00	0.00	0.00
6,200.00	7.00	101.67	6,173.99	-87.96	425.71	-89.67	0.00	0.00	0.00
6,300.00	7.00	101.67	6,273.25	-90.43	437.65	-92.18	0.00	0.00	0.00
6,399.49	7.00	101.67	6,372.00	-92.88	449.52	-94.68	0.00	0.00	0.00
Basal Brushy									
6,400.00	7.00	101.67	6,372.50	-92.89	449.58	-94.70	0.00	0.00	0.00
6,500.00	7.00	101.67	6,471.76	-95.36	461.52	-97.21	0.00	0.00	0.00
6,600.00	7.00	101.67	6,571.01	-97.82	473.45	-99.72	0.00	0.00	0.00
6,627.38	7.00	101.67	6,598.19	-98.50	476.72	-100.41	0.00	0.00	0.00
6,644.31	6.75	101.67	6,615.00	-98.91	478.70	-100.83	1.50	-1.50	0.00
Bone Spring									
6,666.46	6.41	101.67	6,637.00	-99.42	481.19	-101.35	1.50	-1.50	0.00
Bone Spring Lime									
6,700.00	5.91	101.67	6,670.35	-100.15	484.71	-102.10	1.50	-1.50	0.00
6,794.04	4.50	101.67	6,764.00	-101.88	493.07	-103.86	1.50	-1.50	0.00
Upper Avalon									
6,800.00	4.41	101.67	6,769.94	-101.97	493.52	-103.95	1.50	-1.50	0.00
6,900.00	2.91	101.67	6,869.73	-103.26	499.77	-105.27	1.50	-1.50	0.00
7,000.00	1.41	101.67	6,969.66	-104.03	503.47	-106.05	1.50	-1.50	0.00
7,094.04	0.00	0.00	7,063.69	-104.26	504.60	-106.28	1.50	-1.50	0.00
7,100.00	0.00	0.00	7,069.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,200.00	0.00	0.00	7,169.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,269.35	0.00	0.00	7,239.00	-104.26	504.60	-106.28	0.00	0.00	0.00
Lower Avalon Shale									
7,300.00	0.00	0.00	7,269.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,400.00	0.00	0.00	7,369.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,419.35	0.00	0.00	7,389.00	-104.26	504.60	-106.28	0.00	0.00	0.00
1st Bone Springs Lime									
7,500.00	0.00	0.00	7,469.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,584.35	0.00	0.00	7,554.00	-104.26	504.60	-106.28	0.00	0.00	0.00

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1st Bone Springs Sand									
7,600.00	0.00	0.00	7,569.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,700.00	0.00	0.00	7,669.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,787.35	0.00	0.00	7,757.00	-104.26	504.60	-106.28	0.00	0.00	0.00
2nd Bone Springs Lime									
7,800.00	0.00	0.00	7,769.65	-104.26	504.60	-106.28	0.00	0.00	0.00
7,830.35	0.00	0.00	7,800.00	-104.26	504.60	-106.28	0.00	0.00	0.00
7,900.00	0.00	0.00	7,869.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,000.00	0.00	0.00	7,969.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,100.00	0.00	0.00	8,069.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,200.00	0.00	0.00	8,169.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,300.00	0.00	0.00	8,269.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,400.00	0.00	0.00	8,369.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,410.35	0.00	0.00	8,380.00	-104.26	504.60	-106.28	0.00	0.00	0.00
2nd Bone Springs Sand									
8,500.00	0.00	0.00	8,469.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,600.00	0.00	0.00	8,569.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,667.35	0.00	0.00	8,637.00	-104.26	504.60	-106.28	0.00	0.00	0.00
3rd Bone Springs Lime									
8,700.00	0.00	0.00	8,669.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,800.00	0.00	0.00	8,769.65	-104.26	504.60	-106.28	0.00	0.00	0.00
8,900.00	0.00	0.00	8,869.65	-104.26	504.60	-106.28	0.00	0.00	0.00
9,000.00	0.00	0.00	8,969.65	-104.26	504.60	-106.28	0.00	0.00	0.00
9,100.00	0.00	0.00	9,069.65	-104.26	504.60	-106.28	0.00	0.00	0.00
9,200.00	0.00	0.00	9,169.65	-104.26	504.60	-106.28	0.00	0.00	0.00
9,300.00	0.00	0.00	9,269.65	-104.26	504.60	-106.28	0.00	0.00	0.00
9,400.00	0.00	0.00	9,369.65	-104.26	504.60	-106.28	0.00	0.00	0.00
9,472.35	0.00	0.00	9,442.00	-104.26	504.60	-106.28	0.00	0.00	0.00
3rd Bone Springs Sand									
9,500.00	0.00	0.00	9,469.65	-104.26	504.60	-106.28	0.00	0.00	0.00
9,579.42	0.00	0.00	9,549.07	-104.26	504.60	-106.28	0.00	0.00	0.00
9,600.00	2.06	359.77	9,569.64	-103.89	504.60	-105.92	10.00	10.00	0.00
9,650.00	7.06	359.77	9,619.47	-99.92	504.58	-101.94	10.00	10.00	0.00
9,700.00	12.06	359.77	9,668.76	-91.62	504.55	-93.64	10.00	10.00	0.00
9,750.00	17.06	359.77	9,717.14	-79.06	504.50	-81.08	10.00	10.00	0.00
9,800.00	22.06	359.77	9,764.24	-62.32	504.43	-64.35	10.00	10.00	0.00
9,850.00	27.06	359.77	9,809.70	-41.55	504.35	-43.57	10.00	10.00	0.00
9,853.71	27.43	359.77	9,813.00	-39.85	504.35	-41.88	10.00	10.00	0.00
Wolfcamp									
9,879.94	30.05	359.77	9,836.00	-27.24	504.30	-29.26	10.00	10.00	0.00
Wolfcamp X									
9,900.00	32.06	359.77	9,853.18	-16.89	504.26	-18.92	10.00	10.00	0.00
9,950.00	37.06	359.77	9,894.35	11.46	504.14	9.44	10.00	10.00	0.00
9,958.38	37.90	359.77	9,901.00	16.56	504.12	14.54	10.00	10.00	0.00
Wolfcamp Y									
10,000.00	42.06	359.77	9,932.88	43.29	504.02	41.27	10.00	10.00	0.00
10,022.10	44.27	359.77	9,949.00	58.41	503.96	56.39	10.00	10.00	0.00
Wolfcamp A									
10,050.00	47.06	359.77	9,968.50	78.36	503.88	76.34	10.00	10.00	0.00
10,100.00	52.06	359.77	10,000.92	116.40	503.73	114.38	10.00	10.00	0.00
10,150.00	57.06	359.77	10,029.91	157.13	503.57	155.10	10.00	10.00	0.00
10,200.00	62.06	359.77	10,055.23	200.22	503.40	198.20	10.00	10.00	0.00
10,250.00	67.06	359.77	10,076.71	245.36	503.22	243.33	10.00	10.00	0.00

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,300.00	72.06	359.77	10,094.16	292.19	503.04	290.17	10.00	10.00	0.00
10,350.00	77.06	359.77	10,107.47	340.37	502.85	338.35	10.00	10.00	0.00
10,400.00	82.06	359.77	10,116.53	389.53	502.65	387.51	10.00	10.00	0.00
10,450.00	87.06	359.77	10,121.27	439.29	502.46	437.26	10.00	10.00	0.00
10,473.89	89.45	359.77	10,122.00	463.17	502.36	461.15	10.00	10.00	0.00
LP									
10,484.42	90.50	359.77	10,122.01	473.69	502.32	471.67	10.00	10.00	0.00
10,500.00	90.50	359.77	10,121.87	489.27	502.26	487.25	0.00	0.00	0.00
10,600.00	90.50	359.77	10,121.00	589.27	501.86	587.25	0.00	0.00	0.00
10,700.00	90.50	359.77	10,120.12	689.26	501.47	687.24	0.00	0.00	0.00
10,800.00	90.50	359.77	10,119.25	789.26	501.08	787.24	0.00	0.00	0.00
10,900.00	90.50	359.77	10,118.38	889.25	500.68	887.24	0.00	0.00	0.00
11,000.00	90.50	359.77	10,117.51	989.25	500.29	987.23	0.00	0.00	0.00
11,100.00	90.50	359.77	10,116.63	1,089.24	499.89	1,087.23	0.00	0.00	0.00
11,200.00	90.50	359.77	10,115.76	1,189.24	499.50	1,187.22	0.00	0.00	0.00
11,300.00	90.50	359.77	10,114.89	1,289.23	499.10	1,287.22	0.00	0.00	0.00
11,400.00	90.50	359.77	10,114.02	1,389.23	498.71	1,387.22	0.00	0.00	0.00
11,500.00	90.50	359.77	10,113.14	1,489.23	498.31	1,487.21	0.00	0.00	0.00
11,600.00	90.50	359.77	10,112.27	1,589.22	497.92	1,587.21	0.00	0.00	0.00
11,700.00	90.50	359.77	10,111.40	1,689.22	497.53	1,687.21	0.00	0.00	0.00
11,800.00	90.50	359.77	10,110.52	1,789.21	497.13	1,787.20	0.00	0.00	0.00
11,900.00	90.50	359.77	10,109.65	1,889.21	496.74	1,887.20	0.00	0.00	0.00
12,000.00	90.50	359.77	10,108.78	1,989.20	496.34	1,987.19	0.00	0.00	0.00
12,100.00	90.50	359.77	10,107.91	2,089.20	495.95	2,087.19	0.00	0.00	0.00
12,200.00	90.50	359.77	10,107.03	2,189.19	495.55	2,187.19	0.00	0.00	0.00
12,300.00	90.50	359.77	10,106.16	2,289.19	495.16	2,287.18	0.00	0.00	0.00
12,400.00	90.50	359.77	10,105.29	2,389.18	494.76	2,387.18	0.00	0.00	0.00
12,500.00	90.50	359.77	10,104.42	2,489.18	494.37	2,487.18	0.00	0.00	0.00
12,600.00	90.50	359.77	10,103.54	2,589.18	493.98	2,587.17	0.00	0.00	0.00
12,700.00	90.50	359.77	10,102.67	2,689.17	493.58	2,687.17	0.00	0.00	0.00
12,800.00	90.50	359.77	10,101.80	2,789.17	493.19	2,787.16	0.00	0.00	0.00
12,900.00	90.50	359.77	10,100.93	2,889.16	492.79	2,887.16	0.00	0.00	0.00
13,000.00	90.50	359.77	10,100.05	2,989.16	492.40	2,987.16	0.00	0.00	0.00
13,100.00	90.50	359.77	10,099.18	3,089.15	492.00	3,087.15	0.00	0.00	0.00
13,200.00	90.50	359.77	10,098.31	3,189.15	491.61	3,187.15	0.00	0.00	0.00
13,300.00	90.50	359.77	10,097.43	3,289.14	491.21	3,287.14	0.00	0.00	0.00
13,400.00	90.50	359.77	10,096.56	3,389.14	490.82	3,387.14	0.00	0.00	0.00
13,500.00	90.50	359.77	10,095.69	3,489.13	490.43	3,487.14	0.00	0.00	0.00
13,600.00	90.50	359.77	10,094.82	3,589.13	490.03	3,587.13	0.00	0.00	0.00
13,700.00	90.50	359.77	10,093.94	3,689.12	489.64	3,687.13	0.00	0.00	0.00
13,800.00	90.50	359.77	10,093.07	3,789.12	489.24	3,787.13	0.00	0.00	0.00
13,900.00	90.50	359.77	10,092.20	3,889.12	488.85	3,887.12	0.00	0.00	0.00
14,000.00	90.50	359.77	10,091.33	3,989.11	488.45	3,987.12	0.00	0.00	0.00
14,100.00	90.50	359.77	10,090.45	4,089.11	488.06	4,087.11	0.00	0.00	0.00
14,200.00	90.50	359.77	10,089.58	4,189.10	487.66	4,187.11	0.00	0.00	0.00
14,300.00	90.50	359.77	10,088.71	4,289.10	487.27	4,287.11	0.00	0.00	0.00
14,400.00	90.50	359.77	10,087.84	4,389.09	486.88	4,387.10	0.00	0.00	0.00
14,500.00	90.50	359.77	10,086.96	4,489.09	486.48	4,487.10	0.00	0.00	0.00
14,600.00	90.50	359.77	10,086.09	4,589.08	486.09	4,587.10	0.00	0.00	0.00
14,700.00	90.50	359.77	10,085.22	4,689.08	485.69	4,687.09	0.00	0.00	0.00
14,800.00	90.50	359.77	10,084.34	4,789.07	485.30	4,787.09	0.00	0.00	0.00
14,900.00	90.50	359.77	10,083.47	4,889.07	484.90	4,887.08	0.00	0.00	0.00
15,000.00	90.50	359.77	10,082.60	4,989.07	484.51	4,987.08	0.00	0.00	0.00
15,100.00	90.50	359.77	10,081.73	5,089.06	484.12	5,087.08	0.00	0.00	0.00

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,200.00	90.50	359.77	10,080.85	5,189.06	483.72	5,187.07	0.00	0.00	0.00
15,300.00	90.50	359.77	10,079.98	5,289.05	483.33	5,287.07	0.00	0.00	0.00
15,400.00	90.50	359.77	10,079.11	5,389.05	482.93	5,387.06	0.00	0.00	0.00
15,500.00	90.50	359.77	10,078.24	5,489.04	482.54	5,487.06	0.00	0.00	0.00
15,600.00	90.50	359.77	10,077.36	5,589.04	482.14	5,587.06	0.00	0.00	0.00
15,700.00	90.50	359.77	10,076.49	5,689.03	481.75	5,687.05	0.00	0.00	0.00
15,800.00	90.50	359.77	10,075.62	5,789.03	481.35	5,787.05	0.00	0.00	0.00
15,900.00	90.50	359.77	10,074.75	5,889.02	480.96	5,887.05	0.00	0.00	0.00
16,000.00	90.50	359.77	10,073.87	5,989.02	480.57	5,987.04	0.00	0.00	0.00
16,100.00	90.50	359.77	10,073.00	6,089.01	480.17	6,087.04	0.00	0.00	0.00
16,200.00	90.50	359.77	10,072.13	6,189.01	479.78	6,187.03	0.00	0.00	0.00
16,300.00	90.50	359.77	10,071.26	6,289.01	479.38	6,287.03	0.00	0.00	0.00
16,400.00	90.50	359.77	10,070.38	6,389.00	478.99	6,387.03	0.00	0.00	0.00
16,500.00	90.50	359.77	10,069.51	6,489.00	478.59	6,487.02	0.00	0.00	0.00
16,600.00	90.50	359.77	10,068.64	6,588.99	478.20	6,587.02	0.00	0.00	0.00
16,700.00	90.50	359.77	10,067.76	6,688.99	477.80	6,687.02	0.00	0.00	0.00
16,800.00	90.50	359.77	10,066.89	6,788.98	477.41	6,787.01	0.00	0.00	0.00
16,900.00	90.50	359.77	10,066.02	6,888.98	477.02	6,887.01	0.00	0.00	0.00
17,000.00	90.50	359.77	10,065.15	6,988.97	476.62	6,987.00	0.00	0.00	0.00
17,100.00	90.50	359.77	10,064.27	7,088.97	476.23	7,087.00	0.00	0.00	0.00
17,200.00	90.50	359.77	10,063.40	7,188.96	475.83	7,187.00	0.00	0.00	0.00
17,300.00	90.50	359.77	10,062.53	7,288.96	475.44	7,286.99	0.00	0.00	0.00
17,400.00	90.50	359.77	10,061.66	7,388.96	475.04	7,386.99	0.00	0.00	0.00
17,500.00	90.50	359.77	10,060.78	7,488.95	474.65	7,486.98	0.00	0.00	0.00
17,600.00	90.50	359.77	10,059.91	7,588.95	474.25	7,586.98	0.00	0.00	0.00
17,700.00	90.50	359.77	10,059.04	7,688.94	473.86	7,686.98	0.00	0.00	0.00
17,800.00	90.50	359.77	10,058.17	7,788.94	473.47	7,786.97	0.00	0.00	0.00
17,900.00	90.50	359.77	10,057.29	7,888.93	473.07	7,886.97	0.00	0.00	0.00
18,000.00	90.50	359.77	10,056.42	7,988.93	472.68	7,986.97	0.00	0.00	0.00
18,100.00	90.50	359.77	10,055.55	8,088.92	472.28	8,086.96	0.00	0.00	0.00
18,200.00	90.50	359.77	10,054.67	8,188.92	471.89	8,186.96	0.00	0.00	0.00
18,300.00	90.50	359.77	10,053.80	8,288.91	471.49	8,286.95	0.00	0.00	0.00
18,400.00	90.50	359.77	10,052.93	8,388.91	471.10	8,386.95	0.00	0.00	0.00
18,500.00	90.50	359.77	10,052.06	8,488.90	470.70	8,486.95	0.00	0.00	0.00
18,600.00	90.50	359.77	10,051.18	8,588.90	470.31	8,586.94	0.00	0.00	0.00
18,700.00	90.50	359.77	10,050.31	8,688.90	469.92	8,686.94	0.00	0.00	0.00
18,800.00	90.50	359.77	10,049.44	8,788.89	469.52	8,786.94	0.00	0.00	0.00
18,900.00	90.50	359.77	10,048.57	8,888.89	469.13	8,886.93	0.00	0.00	0.00
19,000.00	90.50	359.77	10,047.69	8,988.88	468.73	8,986.93	0.00	0.00	0.00
19,100.00	90.50	359.77	10,046.82	9,088.88	468.34	9,086.92	0.00	0.00	0.00
19,200.00	90.50	359.77	10,045.95	9,188.87	467.94	9,186.92	0.00	0.00	0.00
19,300.00	90.50	359.77	10,045.08	9,288.87	467.55	9,286.92	0.00	0.00	0.00
19,400.00	90.50	359.77	10,044.20	9,388.86	467.15	9,386.91	0.00	0.00	0.00
19,500.00	90.50	359.77	10,043.33	9,488.86	466.76	9,486.91	0.00	0.00	0.00
19,600.00	90.50	359.77	10,042.46	9,588.85	466.37	9,586.90	0.00	0.00	0.00
19,700.00	90.50	359.77	10,041.58	9,688.85	465.97	9,686.90	0.00	0.00	0.00
19,800.00	90.50	359.77	10,040.71	9,788.85	465.58	9,786.90	0.00	0.00	0.00
19,900.00	90.50	359.77	10,039.84	9,888.84	465.18	9,886.89	0.00	0.00	0.00
20,000.00	90.50	359.77	10,038.97	9,988.84	464.79	9,986.89	0.00	0.00	0.00
20,100.00	90.50	359.77	10,038.09	10,088.83	464.39	10,086.89	0.00	0.00	0.00
20,200.00	90.50	359.77	10,037.22	10,188.83	464.00	10,186.88	0.00	0.00	0.00
20,300.00	90.50	359.77	10,036.35	10,288.82	463.60	10,286.88	0.00	0.00	0.00
20,388.78	90.50	359.77	10,035.57	10,377.60	463.25	10,375.66	0.00	0.00	0.00
20,400.00	90.50	359.77	10,035.48	10,388.82	463.21	10,386.87	0.00	0.00	0.00

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
20,500.00	90.50	359.77	10,034.60	10,488.81	462.82	10,486.87	0.00	0.00	0.00
20,518.79	90.50	359.77	10,034.44	10,507.60	462.74	10,505.66	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
CC 8-32 FED 126H SHL	0.00	0.00	0.00	0.00	0.00	416,331.90	601,830.00	32.1441855	-104.0043287
- plan hits target center - Point									
CC 8-32 FED 126H KOP	0.00	0.01	9,549.07	-104.26	504.56	416,227.64	602,334.56	32.1438947	-104.0026996
- plan misses target center by 0.04usft at 9579.42usft MD (9549.07 TVD, -104.26 N, 504.60 E) - Point									
CC 8-32 FED 126H PBH	0.00	0.00	10,034.44	10,507.60	462.70	426,839.50	602,292.70	32.1730668	-104.0027295
- plan misses target center by 0.04usft at 20518.79usft MD (10034.44 TVD, 10507.60 N, 462.74 E) - Rectangle (sides W100.00 H10,042.00 D0.00)									
CC 8-32 FED 126H LTP	0.00	0.00	10,035.57	10,377.60	463.20	426,709.50	602,293.20	32.1727094	-104.0027292
- plan misses target center by 0.05usft at 20388.78usft MD (10035.57 TVD, 10377.60 N, 463.25 E) - Point									
CC 8-32 FED 126H FTP	0.00	0.00	10,122.00	468.70	502.30	416,800.60	602,332.30	32.1454697	-104.0027012
- plan misses target center by 0.05usft at 10479.43usft MD (10122.03 TVD, 468.70 N, 502.34 E) - Point									

Database:	XTO_EDM	**Local Co-ordinate Reference:**	Well 126H - Slot CC 8-32 FED 126H SHL
Company:	XTO Energy	**TVD Reference:**	2962+25 @ 2987.00usft (Ens451)
Project:	Eddy County, NM (NAD27) NMEZ Grid	**MD Reference:**	2962+25 @ 2987.00usft (Ens451)
Site:	Corral Canyon 8-32 FED	**North Reference:**	Grid
Well:	126H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
278.00	278.00	Rustler			
679.00	679.00	Top of Salt			
2,679.25	2,679.00	Base of Salt			
2,878.25	2,877.00	Delaware			
2,932.65	2,931.00	Bell Canyon			
3,788.03	3,780.00	Cherry Canyon			
5,380.90	5,361.00	Brushy Canyon			
6,399.49	6,372.00	Basal Brushy			
6,644.31	6,615.00	Bone Spring			
6,666.46	6,637.00	Bone Spring Lime			
6,794.04	6,764.00	Upper Avalon			
7,269.35	7,239.00	Lower Avalon Shale			
7,419.35	7,389.00	1st Bone Springs Lime			
7,584.35	7,554.00	1st Bone Springs Sand			
7,787.35	7,757.00	2nd Bone Springs Lime			
8,410.35	8,380.00	2nd Bone Springs Sand			
8,667.35	8,637.00	3rd Bone Springs Lime			
9,472.35	9,442.00	3rd Bone Springs Sand			
9,853.71	9,813.00	Wolfcamp			
9,879.94	9,836.00	Wolfcamp X			
9,958.38	9,901.00	Wolfcamp Y			
10,022.10	9,949.00	Wolfcamp A			
10,473.89	10,122.00	LP			