Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
JAN 21 2020
EMNRD-OCD-ARTESIA

Operator

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.
NMNM05039A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000303X

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

8. Well Name and No.
POKER LAKE UNIT 21 BD 701H

2. Name of Operator
XTO PERMIAN OPERATING LLC
Contact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.
30-015-45699-00-X1

3a. Address
6401 HOLIDAY HILL ROAD BLDG 5
MIDLAND, TX 79707

3b. Phone No. (include area code)
Ph: 432-620-4374

10. Field and Pool or Exploratory Area
WILDCAT - BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 21 T25S R30E SWSW 452FSL 828FWL
32.109608 N Lat, 103.892136 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 A PD
	☐ 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 Permian Operating, LLC requests permission to make the following changes to the original APD:

Change target formation from Corral Canyon; Bone Spring, South (oil) to Purple Sage; Wolfcamp (Gas).

Change the casing/cement program per the attached procedure.

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

8-5/8" casing will be a split string with CYP-110 run from surface to 3810' & HCL-80 from 3810' to TD because the 8-5/8 HCL-80 casing fails at SF burst at surface. The split string design passes our internal requirements.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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

Electronic Submission #497748 verified by the BLM Well Information System
For XTO PERMIAN OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER SANCHEZ on 01/07/2020 (20JAS0067SE)

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

Signature (Electronic Submission) — Date 01/06/2020

APPROVED

THIS SPACE FOR FEDERAL OR STATE OFFICE USE JAN 13 2020

Approved By _____ Title _____ Date

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 BUREAU OF LAND MANAGEMENT
ROSWELL FIELD OFFICE

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 ****

1/28/20 KS

Additional data for EC transaction #497748 that would not fit on the form

32. Additional remarks, continued

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.

Poker Lake Unit 21 BD 701H ? 30-015-45699
Poker Lake Unit 21 BD 901H ? 30-015-45477
Poker Lake Unit 21 BD 121H ? 30-015-45513
Poker Lake Unit 21 BD 122H ? 30-015-45696
Poker Lake Unit 21 BD 102H ? 30-015-45476

Revisions to Operator-Submitted EC Data for Sundry Notice #497748

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM05039A	NMNM05039A
Agreement:	NMNM71016X	891000303X (NMNM71016X)
Operator:	XTO PERMIAN OPERATING, LLC 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO PERMIAN OPERATING LLC 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707 Ph: 432.683 2277
Admin Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Tech Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Location: State: County:	 NM EDDY	 NM EDDY
Field/Pool:	CORRAL CANYON BONE SPRING	WILDCAT - BONE SPRING
Well/Facility:	POKER LAKE UNIT 21 BD 701H Sec 21 T25S R30E Mer NMP SWSW 452FSL 828FWL	POKER LAKE UNIT 21 BD 701H Sec 21 T25S R30E SWSW 452FSL 828FWL 32.109608 N Lat, 103.892136 W Lon

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

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

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

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015- 45699	98220	PURPLE SAGE; WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
	POKER LAKE UNIT 21 BD	701H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,219'

[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
M	21	25 S	30 E		452	SOUTH	828	WEST	EDDY

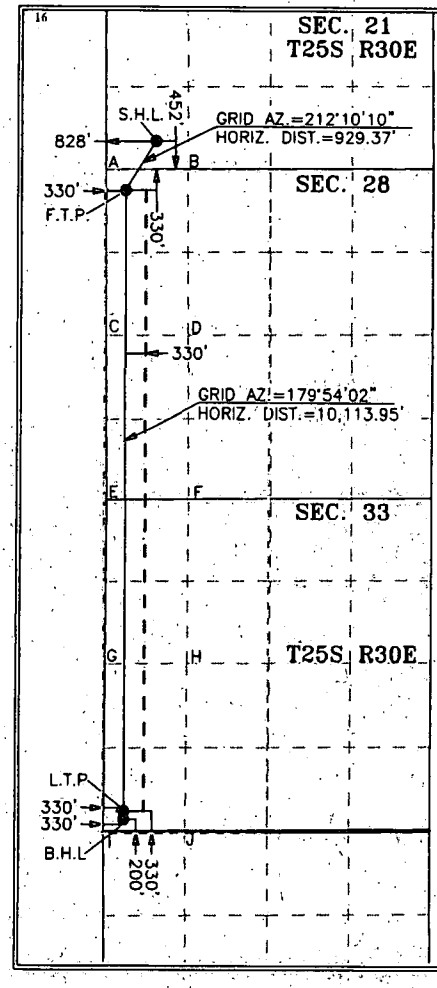
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	33	25 S	30 E		200	SOUTH	330	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640			

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

[16]



GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 403,832.6
X= 636,757.2
LAT.= 32.109482°N
LONG.= 103.891650°W

GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 403,890.7
X= 677,942.2
LAT.= 32.109606°N
LONG.= 103.892132°W

FIRST TAKE POINT
NAD 27 NME
Y= 403,045.9
X= 636,262.4
LAT.= 32.107325°N
LONG.= 103.893258°W

FIRST TAKE POINT
NAD 83 NME
Y= 403,104.0
X= 677,447.4
LAT.= 32.107449°N
LONG.= 103.893741°W

CORNER COORDINATES TABLE
NAD 27 NME
A - Y= 403,372.6 N, X= 635,930.2 E
B - Y= 403,385.9 N, X= 637,268.1 E
C - Y= 400,713.0 N, X= 635,948.5 E
D - Y= 400,723.6 N, X= 637,286.0 E
E - Y= 398,052.2 N, X= 635,967.2 E
F - Y= 398,066.7 N, X= 637,304.0 E
G - Y= 395,391.4 N, X= 635,958.1 E
H - Y= 395,401.5 N, X= 637,291.8 E
I - Y= 392,729.8 N, X= 635,948.9 E
J - Y= 392,739.7 N, X= 637,279.4 E

CORNER COORDINATES TABLE
NAD 83 NME
A - Y= 403,430.7 N, X= 677,115.2 E
B - Y= 403,444.0 N, X= 678,453.1 E
C - Y= 400,771.0 N, X= 677,133.6 E
D - Y= 400,781.6 N, X= 678,471.1 E
E - Y= 398,110.2 N, X= 677,152.4 E
F - Y= 398,124.6 N, X= 678,489.2 E
G - Y= 395,449.3 N, X= 677,143.4 E
H - Y= 395,459.4 N, X= 678,477.1 E
I - Y= 392,787.6 N, X= 677,134.3 E
J - Y= 392,797.5 N, X= 678,464.8 E

LAST TAKE POINT
NAD 27 NME
Y= 393,062.3
X= 636,280.0
LAT.= 32.079880°N
LONG.= 103.893333°W

LAST TAKE POINT
NAD 83 NME
Y= 393,120.1
X= 677,465.4
LAT.= 32.080004°N
LONG.= 103.893814°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 392,932.3
X= 636,279.6
LAT.= 32.079522°N
LONG.= 103.893336°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 392,990.1
X= 677,465.0
LAT.= 32.079647°N
LONG.= 103.893817°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.

Kelly Kardos — 11/18/19
Signature — Date

Kelly Kardos
Printed Name

kelly_kardos@xtoenergy.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

10-1-2019
Date of Survey

Signature and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number — LB/JC — 2017071066

P:\PROJECTS\2017\2017071066-XTO-POKER_LAKE_UNIT_21_BD_701H-EDDY\DWG\2017071066-XTO-POKER_LAKE_UNIT_21_BRUSHY_DRAW_701H_C-102.dwg

Intent [X] As Drilled [ ]

API #
30-015-45699

Operator Name:	Property Name:	Well Number
XTO Permian Operating, LLC	Poker Lake Unit 21 BD	701H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	21	25S	30E		452	South	828	West	Eddy

Latitude	Longitude	NAD
32.109606	-103.892132	NAD83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	28	25S	30E		330	North	330	West	Eddy

Latitude	Longitude	NAD
32.107449	-103.893741	NAD83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	33	25S	30E		330	South	330	West	Eddy

Latitude	Longitude	NAD
32.080004	-103.893814	NAD83

Is this well the defining well for the Horizontal Spacing Unit? [Y]

Is this well an infill well? [N]

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
XTO Permian Operating, LLC	Poker Lake Unit 21 BD	

KZ 06/29/2018

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

XTO Energy Inc.
PLU 21 Brushy Draw 701h
Projected TD: 22354' MD / 11889' TVD
SHL: 452' FSL & 828' FWL , Section 21, T25S, R30E
BHL: 200' FSL & 330' FWL , Section 33, T25S, R30E
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	979'	Water
Top of Salt	1136'	Water
Base of Salt	3516'	Water
Delaware	3753'	Water
Bone Spring	7570'	Water/Oil/Gas
1st Bone Spring Ss	8534'	Water/Oil/Gas
2nd Bone Spring Ss	9364'	Water/Oil/Gas
3rd Bone Spring Ss	10449'	Water/Oil/Gas
Wolfcamp	10784'	Water/Oil/Gas
Wolfcamp A	10939'	Water/Oil/Gas
Wolfcamp B	11399'	Water/Oil/Gas
Wolfcamp E	11870'	Water/Oil/Gas
Target/Land Curve	11889'	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 @ ' (1136' above the salt) and circulating cement back to surface. The salt will be isolated by setting 11-3/4 inch casing at 1030' and circulating cement to surface. A 10-5/8 inch vertical hole will be drilled to 11039' 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' - 1030'	11-3/4"	47	BTC	J-55	New	1.12	2.82	9.85
10-5/8"	0' - 3810'	8-5/8"	32	BTC	CYP-110	New	1.33	1.23	2.85
10-5/8"	3810' - 11039'	8-5/8"	32	BTC	HCL-80	New	0.96	1.37	2.07
7-7/8"	0' - 22354'	5-1/2"	20	BTC	P-110	New	1.18	1.33	2.11

XTO requests to not utilize centralizers in the curve and lateral
8-5/8" Collapse analyzed using 50% evacuation based on regional experience.
8-5/8 casing will be a split string with CYP-110 run from surface to 3810' & HCL-80 from 3810' to TD because the 8-5/8" HCL-80 casing fails at SF burst at surface. The split string design passes our internal requirements
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 +/- 1030'

Lead: 330 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 CYP-110, BTC casing to be set at +/- 11039'
ECP/DV Tool to be set at 1080'
1st Stage

Lead: 10 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.87 ft3/sx, 9.61 gal/sx water)

Tail: 70 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: 1990 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~~ surface

Production Casing: 5-1/2", 20 New P-110, BTC casing to be set at +/- 22354'

Lead: 1790 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 1790 sxs VersaCem (mixed at 13.2 ppg, 10862 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 10M 3-Ram BOP. MASP should not exceed 5730 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.

10 m system required

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" 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When the 11-3/4" and 8-5/8" casing is set, the packoff seals will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M 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

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 1030'	14-3/4".	FW / Native	8.4-8.8	30-40	NC
1030' to 11039'	10-5/8"	Brine / Cut Brine / WBM	8.7-9.8	29-32	NC - 20
11039' to 22354'	7-7/8"	FW / Cut Brine / Polymer/ OBM	13.2-13.8	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.

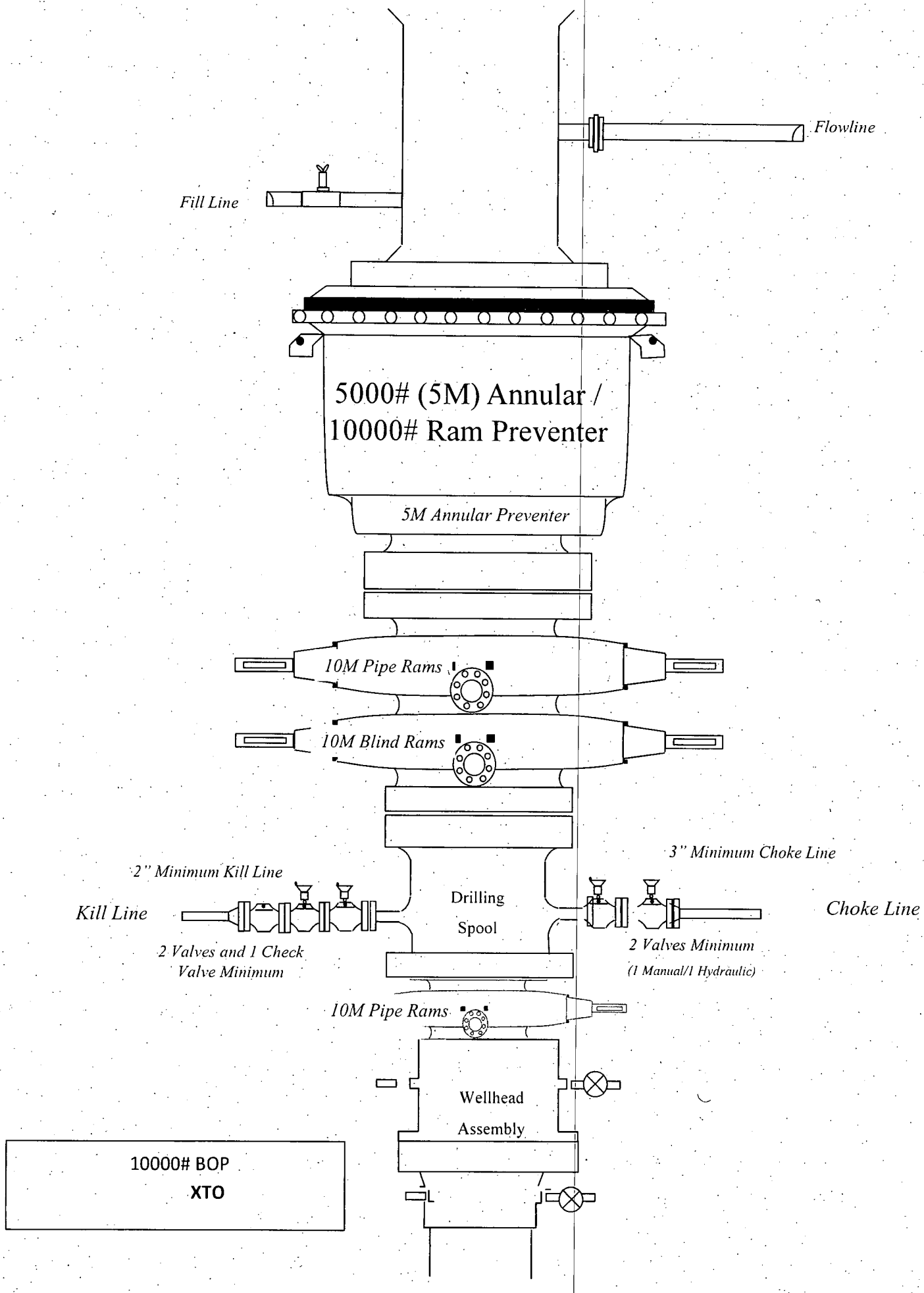
Open hole logging will not be done on this well.

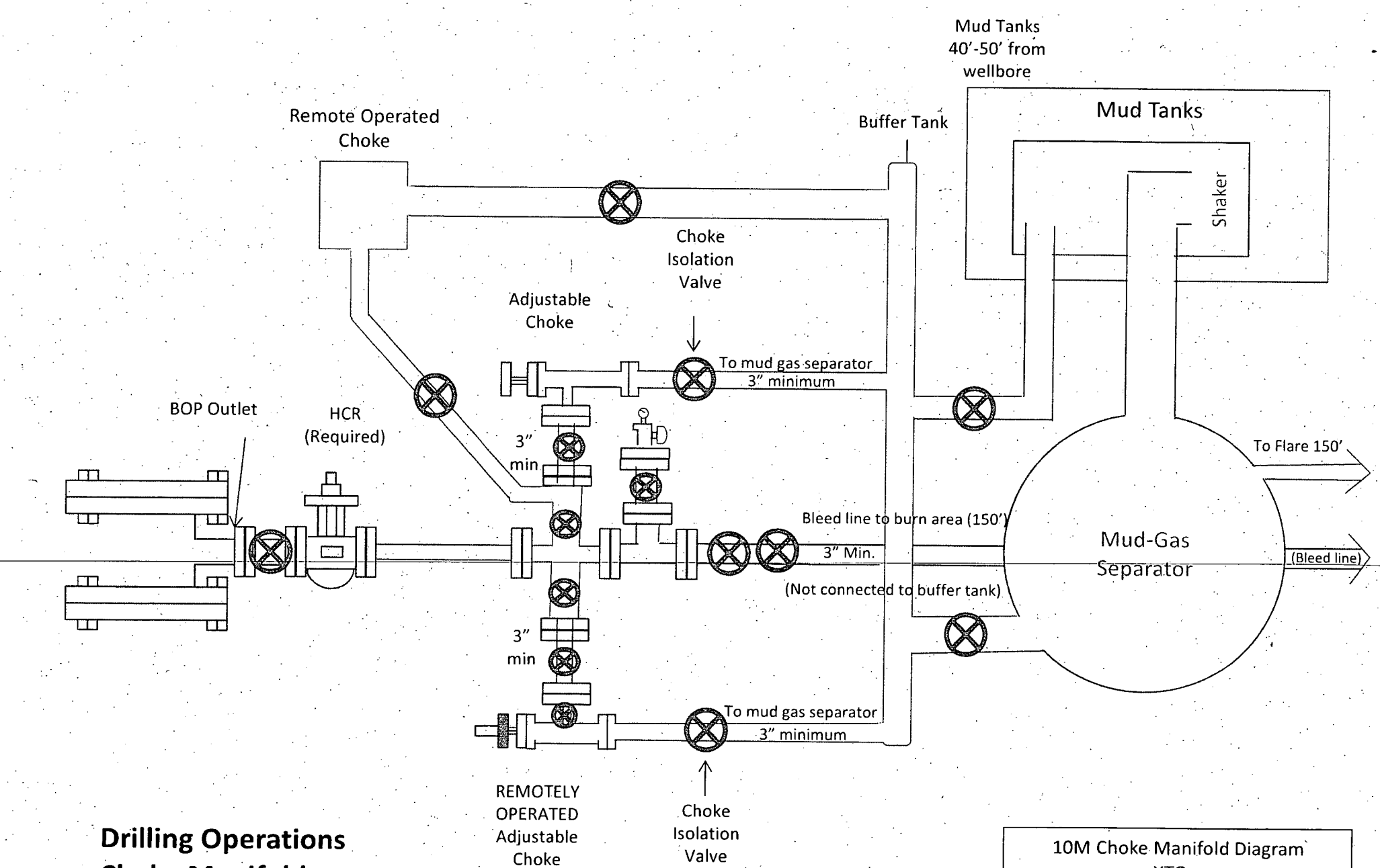
9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 155 to 175 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 8346 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.


Flowline
Fill Line
5000# (5M) Annular /
10000# Ram Preventer
5M Annular Preventer
10M Pipe Rams
10M Blind Rams
3" Minimum Choke Line
2" Minimum Kill Line
Kill Line
Drilling
Spool
Choke Line
2 Valves and 1 Check
Valve Minimum
2 Valves Minimum
(1 Manual/1 Hydraulic)
10M Pipe Rams
Wellhead
Assembly
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.

General Procedure While Drilling

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

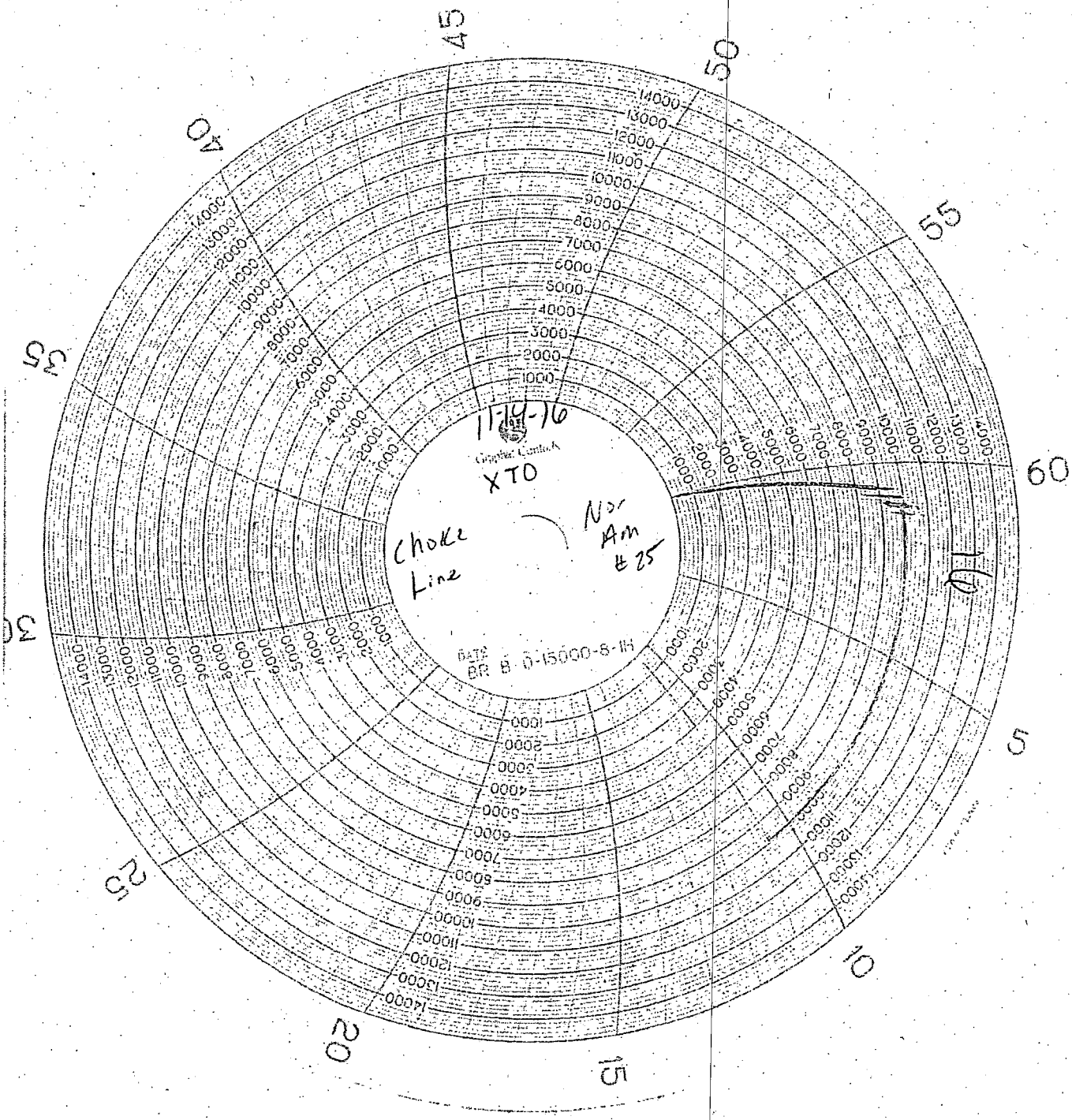
Product Description: FD3.042.0R41/16.5KFLGE/E LE

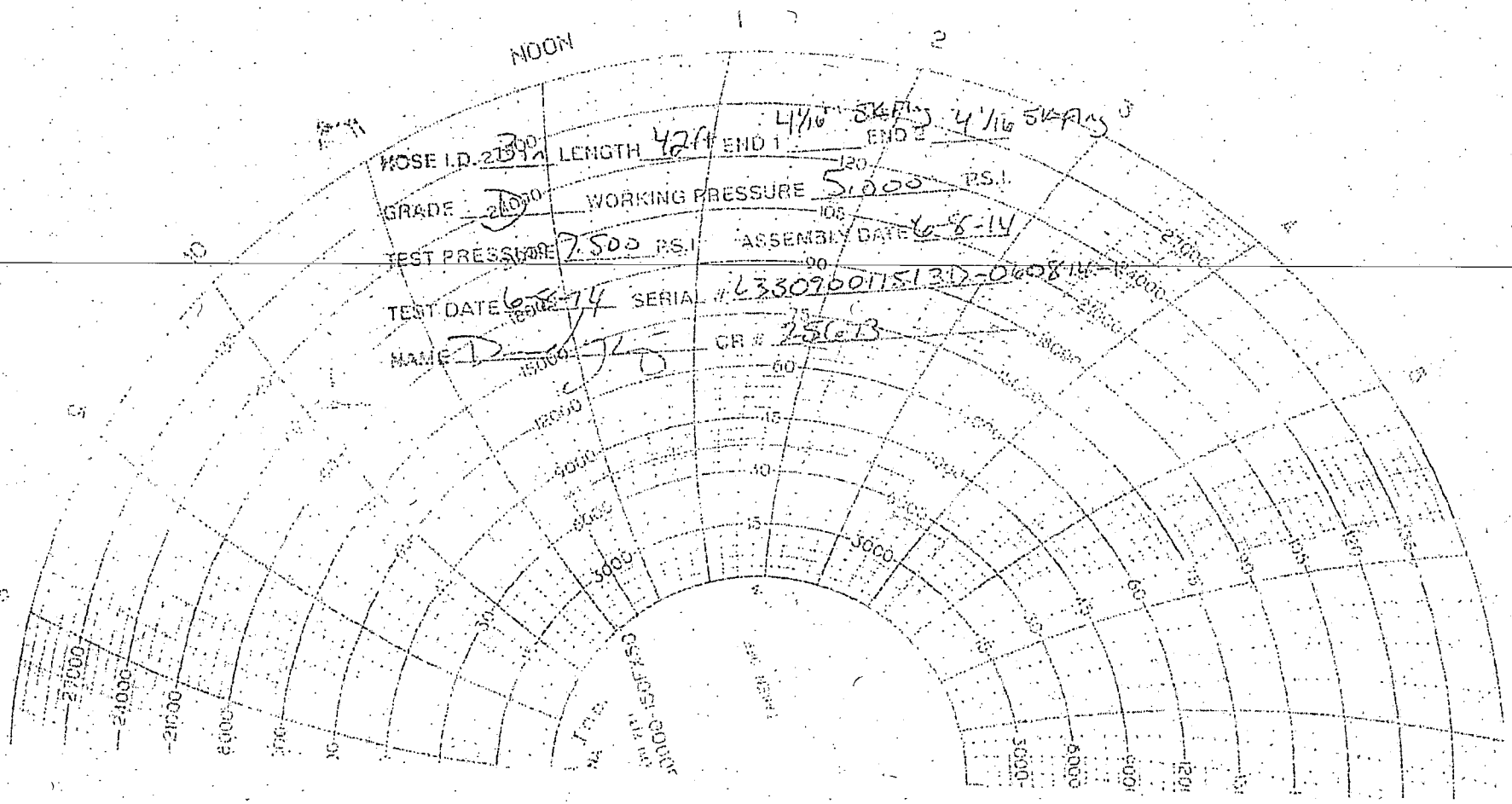
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

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
XTO
Choke Line
North Arm #25
BR B 5-15000-8-IH
45
50
55
60
5
10
15
20
25
30
35
40
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11000
12000
13000
14000


NOON
HOSE I.D. 2 1/2"
LENGTH 42"
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 # 433090011513D-060814-1
NAME D. J. C.
CR # 25613

XTO Energy

Eddy County, NM (NAD-27)
PLU 21 Brushy Draw
701H

OH

Plan: PERMITv2

Standard Planning Report

01 October, 2019

XTO ENERGY

Project: Eddy County, NM (NAD-27)
Site: PLU 21 Brushy Draw
Well: 701H
Wellbore: OH
Design: PERMITv2

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

WELL DETAILS: 701H

Rig Name:
RKB = 31' @ 3250.00usft
Ground Level: 3219.00

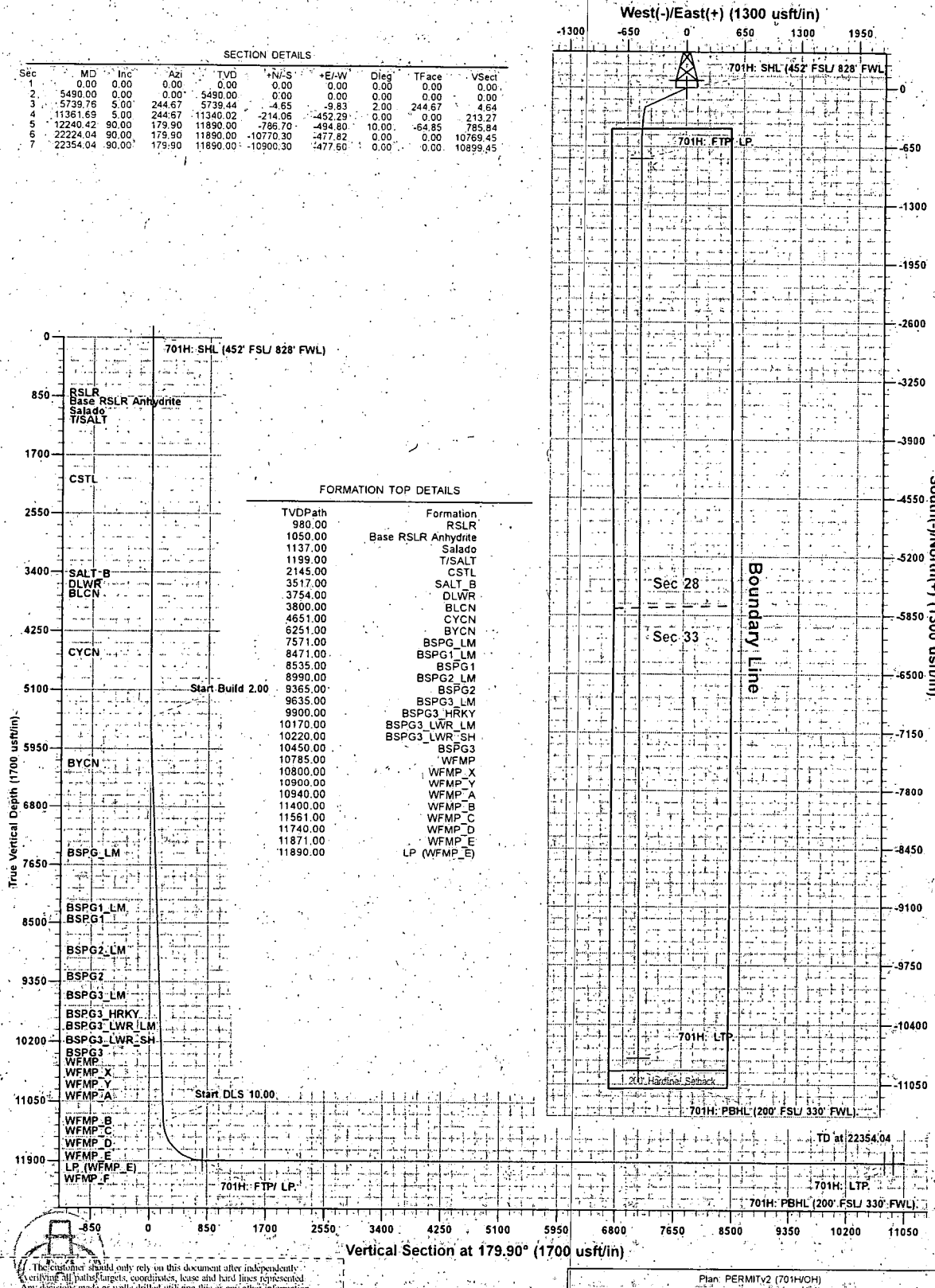
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	403832.60	636757.20	32.1094818	-103.8916498

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
701H: SHL (452' FSL/ 828' FWL)	0.00	0.00	0.00	403832.60	636757.20	32.1094818	-103.8916498	Point
701H: FTP/ LP	11890.00	-786.70	-494.80	403045.90	636262.40	32.1073248	-103.8932582	Point
701H: LTP	11890.00	-10770.30	-477.20	393062.30	636280.00	32.0798799	-103.8933329	Point
701H: PBHL (200' FSL/ 330' FWL)	11890.00	-10900.30	-477.60	392932.30	636279.60	32.0795226	-103.8933359	Point

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	5490.00	0.00	0.00	5490.00	0.00	0.00	0.00	0.00	0.00
3	5739.76	5.00	244.67	5739.44	-4.65	-9.83	2.00	244.67	4.64
4	11361.69	5.00	244.67	11340.02	-214.06	-452.29	0.00	0.00	213.27
5	12240.42	90.00	179.90	11890.00	-786.70	-494.80	10.00	-64.85	785.84
6	22224.04	90.00	179.90	11890.00	-10770.30	-477.82	0.00	0.00	10769.45
7	22354.04	90.00	179.90	11890.00	-10900.30	-477.60	0.00	0.00	10899.45



FORMATION TOP DETAILS

TVDPath	Formation
980.00	RSLR
1050.00	Base RSLR Anhydrite
1137.00	Salado
1199.00	T/SALT
2145.00	CSTL
3517.00	SALT_B
3754.00	DLWR
3800.00	BLCN
4651.00	CYCN
6251.00	BYCN
7571.00	BSPG_LM
8471.00	BSPG1_LM
8535.00	BSPG1
8990.00	BSPG2_LM
9365.00	BSPG2
9635.00	BSPG3_LM
9900.00	BSPG3_HRKY
10170.00	BSPG3_LWR_LM
10220.00	BSPG3_LWR_SH
10450.00	BSPG3
10785.00	WFMP
10800.00	WFMP_X
10900.00	WFMP_Y
10940.00	WFMP_A
11400.00	WFMP_B
11561.00	WFMP_C
11740.00	WFMP_D
11871.00	WFMP_E
11890.00	LP (WFMP_E)

Plan: PERMITv2 (701H/OH)
Created By: Matthew May Date: 14:04, October 01 2019

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

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 PLU 21 Brushy Draw

Site Position:		**Northing:**	403,833.80 usft	**Latitude:**	32.1094838
From:	Map	**Easting:**	636,877.20 usft	**Longitude:**	-103.8912622
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.24 °

Well 701H

Well Position	**+N/-S**	-1.20 usft	**Northing:**	403,832.60 usft	**Latitude:**	32.1094818
	+E/-W	-120.00 usft	**Easting:**	636,757.20 usft	**Longitude:**	-103.8916498
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,219.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/28/17	7.05	59.90	47,791

Design PERMITv2

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	179.90

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	
5,490.00	0.00	0.00	5,490.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,739.76	5.00	244.67	5,739.44	-4.65	-9.83	2.00	2.00	0.00	244.67	
11,361.69	5.00	244.67	11,340.02	-214.06	-452.29	0.00	0.00	0.00	0.00	
12,240.42	90.00	179.90	11,890.00	-786.70	-494.80	10.00	9.67	-7.37	-64.85	701H: FTP/ LP.
22,224.04	90.00	179.90	11,890.00	-10,770.30	-477.82	0.00	0.00	0.00	0.00	701H: LTP.
22,354.04	90.00	179.90	11,890.00	-10,900.30	-477.60	0.00	0.00	0.00	0.00	701H: PBHL (200' F

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
980.00	0.00	0.00	980.00	0.00	0.00	0.00	0.00	0.00	0.00
RSLR									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00
Base RSLR Anhydrite									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,137.00	0.00	0.00	1,137.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,199.00	0.00	0.00	1,199.00	0.00	0.00	0.00	0.00	0.00	0.00
T/SALT									
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
2,145.00	0.00	0.00	2,145.00	0.00	0.00	0.00	0.00	0.00	0.00
CSTL									
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	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
3,517.00	0.00	0.00	3,517.00	0.00	0.00	0.00	0.00	0.00	0.00
SALT_B									
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
3,754.00	0.00	0.00	3,754.00	0.00	0.00	0.00	0.00	0.00	0.00
DLWR									
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

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)
BLCN									
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
4,200.00	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
4,651.00	0.00	0.00	4,651.00	0.00	0.00	0.00	0.00	0.00	0.00
CYCN									
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
5,490.00	0.00	0.00	5,490.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.20	244.67	5,500.00	-0.01	-0.02	0.01	2.00	2.00	0.00
5,600.00	2.20	244.67	5,599.97	-0.90	-1.91	0.90	2.00	2.00	0.00
5,700.00	4.20	244.67	5,699.81	-3.29	-6.95	3.28	2.00	2.00	0.00
5,739.76	5.00	244.67	5,739.44	-4.65	-9.83	4.64	2.00	2.00	0.00
5,800.00	5.00	244.67	5,799.46	-6.90	-14.58	6.87	0.00	0.00	0.00
5,900.00	5.00	244.67	5,899.08	-10.62	-22.45	10.58	0.00	0.00	0.00
6,000.00	5.00	244.67	5,998.70	-14.35	-30.32	14.30	0.00	0.00	0.00
6,100.00	5.00	244.67	6,098.32	-18.07	-38.19	18.01	0.00	0.00	0.00
6,200.00	5.00	244.67	6,197.94	-21.80	-46.06	21.72	0.00	0.00	0.00
6,253.27	5.00	244.67	6,251.00	-23.78	-50.25	23.69	0.00	0.00	0.00
BYCN									
6,300.00	5.00	244.67	6,297.56	-25.52	-53.93	25.43	0.00	0.00	0.00
6,400.00	5.00	244.67	6,397.18	-29.25	-61.80	29.14	0.00	0.00	0.00
6,500.00	5.00	244.67	6,496.80	-32.97	-69.67	32.85	0.00	0.00	0.00
6,600.00	5.00	244.67	6,596.42	-36.70	-77.54	36.56	0.00	0.00	0.00
6,700.00	5.00	244.67	6,696.04	-40.42	-85.41	40.27	0.00	0.00	0.00
6,800.00	5.00	244.67	6,795.66	-44.15	-93.28	43.98	0.00	0.00	0.00
6,900.00	5.00	244.67	6,895.28	-47.87	-101.15	47.70	0.00	0.00	0.00
7,000.00	5.00	244.67	6,994.90	-51.60	-109.02	51.41	0.00	0.00	0.00
7,100.00	5.00	244.67	7,094.52	-55.32	-116.89	55.12	0.00	0.00	0.00
7,200.00	5.00	244.67	7,194.14	-59.05	-124.76	58.83	0.00	0.00	0.00
7,300.00	5.00	244.67	7,293.76	-62.77	-132.63	62.54	0.00	0.00	0.00
7,400.00	5.00	244.67	7,393.38	-66.50	-140.50	66.25	0.00	0.00	0.00
7,500.00	5.00	244.67	7,493.00	-70.22	-148.37	69.96	0.00	0.00	0.00
7,578.30	5.00	244.67	7,571.00	-73.14	-154.53	72.87	0.00	0.00	0.00
BSPG_LM									
7,600.00	5.00	244.67	7,592.62	-73.95	-156.24	73.67	0.00	0.00	0.00
7,700.00	5.00	244.67	7,692.24	-77.67	-164.11	77.38	0.00	0.00	0.00
7,800.00	5.00	244.67	7,791.86	-81.40	-171.98	81.10	0.00	0.00	0.00
7,900.00	5.00	244.67	7,891.48	-85.12	-179.85	84.81	0.00	0.00	0.00
8,000.00	5.00	244.67	7,991.10	-88.85	-187.72	88.52	0.00	0.00	0.00
8,100.00	5.00	244.67	8,090.72	-92.57	-195.59	92.23	0.00	0.00	0.00
8,200.00	5.00	244.67	8,190.34	-96.30	-203.46	95.94	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

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)
8,300.00	5.00	244.67	8,289.96	-100.02	-211.33	99.65	0.00	0.00	0.00
8,400.00	5.00	244.67	8,389.58	-103.74	-219.20	103.36	0.00	0.00	0.00
8,481.73	5.00	244.67	8,471.00	-106.79	-225.63	106.40	0.00	0.00	0.00
BSPG1_LM									
8,500.00	5.00	244.67	8,489.20	-107.47	-227.07	107.07	0.00	0.00	0.00
8,545.97	5.00	244.67	8,535.00	-109.18	-230.69	108.78	0.00	0.00	0.00
BSPG1									
8,600.00	5.00	244.67	8,588.82	-111.19	-234.94	110.78	0.00	0.00	0.00
8,700.00	5.00	244.67	8,688.44	-114.92	-242.81	114.50	0.00	0.00	0.00
8,800.00	5.00	244.67	8,788.06	-118.64	-250.68	118.21	0.00	0.00	0.00
8,900.00	5.00	244.67	8,887.68	-122.37	-258.55	121.92	0.00	0.00	0.00
9,000.00	5.00	244.67	8,987.30	-126.09	-266.42	125.63	0.00	0.00	0.00
9,002.71	5.00	244.67	8,990.00	-126.19	-266.63	125.73	0.00	0.00	0.00
BSPG2_LM									
9,100.00	5.00	244.67	9,086.92	-129.82	-274.29	129.34	0.00	0.00	0.00
9,200.00	5.00	244.67	9,186.54	-133.54	-282.16	133.05	0.00	0.00	0.00
9,300.00	5.00	244.67	9,286.16	-137.27	-290.03	136.76	0.00	0.00	0.00
9,379.14	5.00	244.67	9,365.00	-140.22	-296.26	139.70	0.00	0.00	0.00
BSPG2									
9,400.00	5.00	244.67	9,385.78	-140.99	-297.90	140.47	0.00	0.00	0.00
9,500.00	5.00	244.67	9,485.40	-144.72	-305.77	144.18	0.00	0.00	0.00
9,600.00	5.00	244.67	9,585.02	-148.44	-313.64	147.90	0.00	0.00	0.00
9,650.17	5.00	244.67	9,635.00	-150.31	-317.59	149.76	0.00	0.00	0.00
BSPG3_LM									
9,700.00	5.00	244.67	9,684.64	-152.17	-321.51	151.61	0.00	0.00	0.00
9,800.00	5.00	244.67	9,784.26	-155.89	-329.38	155.32	0.00	0.00	0.00
9,900.00	5.00	244.67	9,883.88	-159.62	-337.25	159.03	0.00	0.00	0.00
9,916.18	5.00	244.67	9,900.00	-160.22	-338.53	159.63	0.00	0.00	0.00
BSPG3_HRKY									
10,000.00	5.00	244.67	9,983.50	-163.34	-345.12	162.74	0.00	0.00	0.00
10,100.00	5.00	244.67	10,083.12	-167.07	-352.99	166.45	0.00	0.00	0.00
10,187.21	5.00	244.67	10,170.00	-170.32	-359.86	169.69	0.00	0.00	0.00
BSPG3_LWR_LM									
10,200.00	5.00	244.67	10,182.74	-170.79	-360.86	170.16	0.00	0.00	0.00
10,237.40	5.00	244.67	10,220.00	-172.19	-363.81	171.55	0.00	0.00	0.00
BSPG3_LWR_SH									
10,300.00	5.00	244.67	10,282.36	-174.52	-368.73	173.87	0.00	0.00	0.00
10,400.00	5.00	244.67	10,381.98	-178.24	-376.60	177.58	0.00	0.00	0.00
10,468.28	5.00	244.67	10,450.00	-180.79	-381.98	180.12	0.00	0.00	0.00
BSPG3									
10,500.00	5.00	244.67	10,481.60	-181.97	-384.47	181.30	0.00	0.00	0.00
10,600.00	5.00	244.67	10,581.23	-185.69	-392.34	185.01	0.00	0.00	0.00
10,700.00	5.00	244.67	10,680.85	-189.42	-400.21	188.72	0.00	0.00	0.00
10,800.00	5.00	244.67	10,780.47	-193.14	-408.08	192.43	0.00	0.00	0.00
10,804.55	5.00	244.67	10,785.00	-193.31	-408.44	192.60	0.00	0.00	0.00
WFMP									
10,819.61	5.00	244.67	10,800.00	-193.87	-409.63	193.16	0.00	0.00	0.00
WFMP_X									
10,900.00	5.00	244.67	10,880.09	-196.87	-415.95	196.14	0.00	0.00	0.00
10,919.99	5.00	244.67	10,900.00	-197.61	-417.53	196.88	0.00	0.00	0.00
WFMP_Y									
10,960.14	5.00	244.67	10,940.00	-199.11	-420.69	198.37	0.00	0.00	0.00
WFMP_A									

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

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)
11,000.00	5.00	244.67	10,979.71	-200.59	-423.82	199.85	0.00	0.00	0.00
11,100.00	5.00	244.67	11,079.33	-204.32	-431.69	203.56	0.00	0.00	0.00
11,200.00	5.00	244.67	11,178.95	-208.04	-439.56	207.27	0.00	0.00	0.00
11,300.00	5.00	244.67	11,278.57	-211.77	-447.43	210.98	0.00	0.00	0.00
11,361.69	5.00	244.67	11,340.02	-214.06	-452.29	213.27	0.00	0.00	0.00
11,400.00	7.47	216.96	11,378.11	-216.77	-455.30	215.97	10.00	6.47	-72.33
11,422.13	9.33	208.67	11,400.00	-219.49	-457.02	218.69	10.00	8.39	-37.50
WFMP_B									
11,450.00	11.84	202.05	11,427.40	-224.13	-459.18	223.33	10.00	9.02	-23.73
11,500.00	16.57	195.31	11,475.86	-235.77	-462.99	234.96	10.00	9.45	-13.48
11,550.00	21.42	191.53	11,523.12	-251.60	-466.70	250.78	10.00	9.70	-7.56
11,591.29	25.47	189.46	11,561.00	-267.75	-469.67	266.93	10.00	9.80	-5.02
WFMP_C									
11,600.00	26.32	189.10	11,568.83	-271.50	-470.28	270.68	10.00	9.84	-4.13
11,650.00	31.25	187.39	11,612.64	-295.33	-473.71	294.50	10.00	9.86	-3.42
11,700.00	36.20	186.10	11,654.21	-322.89	-476.95	322.06	10.00	9.90	-2.57
11,750.00	41.16	185.09	11,693.23	-353.98	-479.98	353.14	10.00	9.92	-2.02
11,800.00	46.13	184.26	11,729.40	-388.37	-482.78	387.52	10.00	9.93	-1.66
11,815.51	47.67	184.03	11,740.00	-399.66	-483.60	398.82	10.00	9.94	-1.48
WFMP_D									
11,850.00	51.10	183.56	11,762.45	-425.78	-485.33	424.93	10.00	9.95	-1.37
11,900.00	56.08	182.95	11,792.12	-465.94	-487.61	465.09	10.00	9.95	-1.22
11,950.00	61.06	182.41	11,818.18	-508.55	-489.59	507.69	10.00	9.96	-1.08
12,000.00	66.04	181.92	11,840.45	-553.27	-491.28	552.41	10.00	9.96	-0.98
12,050.00	71.02	181.46	11,858.74	-599.76	-492.65	598.90	10.00	9.96	-0.91
12,092.22	75.23	181.10	11,871.00	-640.15	-493.55	639.28	10.00	9.97	-0.86
WFMP_E									
12,100.00	76.00	181.03	11,872.93	-647.68	-493.69	646.82	10.00	9.97	-0.84
12,150.00	80.99	180.62	11,882.90	-696.65	-494.39	695.79	10.00	9.97	-0.82
12,200.00	85.97	180.22	11,888.58	-746.31	-494.76	745.45	10.00	9.97	-0.80
12,240.37	89.99	179.90	11,890.00	-786.65	-494.80	785.78	10.00	9.97	-0.79
LP (WFMP_E)									
12,240.42	90.00	179.90	11,890.00	-786.70	-494.80	785.84	10.00	9.97	-0.79
12,300.00	90.00	179.90	11,890.00	-846.28	-494.70	845.41	0.00	0.00	0.00
12,400.00	90.00	179.90	11,890.00	-946.28	-494.53	945.41	0.00	0.00	0.00
12,500.00	90.00	179.90	11,890.00	-1,046.28	-494.36	1,045.41	0.00	0.00	0.00
12,600.00	90.00	179.90	11,890.00	-1,146.28	-494.19	1,145.41	0.00	0.00	0.00
12,700.00	90.00	179.90	11,890.00	-1,246.28	-494.02	1,245.41	0.00	0.00	0.00
12,800.00	90.00	179.90	11,890.00	-1,346.28	-493.85	1,345.41	0.00	0.00	0.00
12,900.00	90.00	179.90	11,890.00	-1,446.28	-493.68	1,445.41	0.00	0.00	0.00
13,000.00	90.00	179.90	11,890.00	-1,546.28	-493.51	1,545.41	0.00	0.00	0.00
13,100.00	90.00	179.90	11,890.00	-1,646.28	-493.34	1,645.41	0.00	0.00	0.00
13,200.00	90.00	179.90	11,890.00	-1,746.28	-493.17	1,745.41	0.00	0.00	0.00
13,300.00	90.00	179.90	11,890.00	-1,846.28	-493.00	1,845.41	0.00	0.00	0.00
13,400.00	90.00	179.90	11,890.00	-1,946.28	-492.83	1,945.41	0.00	0.00	0.00
13,500.00	90.00	179.90	11,890.00	-2,046.28	-492.66	2,045.41	0.00	0.00	0.00
13,600.00	90.00	179.90	11,890.00	-2,146.28	-492.49	2,145.41	0.00	0.00	0.00
13,700.00	90.00	179.90	11,890.00	-2,246.28	-492.32	2,245.41	0.00	0.00	0.00
13,800.00	90.00	179.90	11,890.00	-2,346.28	-492.15	2,345.41	0.00	0.00	0.00
13,900.00	90.00	179.90	11,890.00	-2,446.28	-491.98	2,445.41	0.00	0.00	0.00
14,000.00	90.00	179.90	11,890.00	-2,546.28	-491.81	2,545.41	0.00	0.00	0.00
14,100.00	90.00	179.90	11,890.00	-2,646.28	-491.64	2,645.41	0.00	0.00	0.00
14,200.00	90.00	179.90	11,890.00	-2,746.28	-491.47	2,745.41	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

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)
14,300.00	90.00	179.90	11,890.00	-2,846.28	-491.30	2,845.41	0.00	0.00	0.00
14,400.00	90.00	179.90	11,890.00	-2,946.28	-491.13	2,945.41	0.00	0.00	0.00
14,500.00	90.00	179.90	11,890.00	-3,046.28	-490.96	3,045.41	0.00	0.00	0.00
14,600.00	90.00	179.90	11,890.00	-3,146.28	-490.79	3,145.41	0.00	0.00	0.00
14,700.00	90.00	179.90	11,890.00	-3,246.27	-490.62	3,245.41	0.00	0.00	0.00
14,800.00	90.00	179.90	11,890.00	-3,346.27	-490.45	3,345.41	0.00	0.00	0.00
14,900.00	90.00	179.90	11,890.00	-3,446.27	-490.28	3,445.41	0.00	0.00	0.00
15,000.00	90.00	179.90	11,890.00	-3,546.27	-490.11	3,545.41	0.00	0.00	0.00
15,100.00	90.00	179.90	11,890.00	-3,646.27	-489.94	3,645.41	0.00	0.00	0.00
15,200.00	90.00	179.90	11,890.00	-3,746.27	-489.77	3,745.41	0.00	0.00	0.00
15,300.00	90.00	179.90	11,890.00	-3,846.27	-489.60	3,845.41	0.00	0.00	0.00
15,400.00	90.00	179.90	11,890.00	-3,946.27	-489.43	3,945.41	0.00	0.00	0.00
15,500.00	90.00	179.90	11,890.00	-4,046.27	-489.26	4,045.41	0.00	0.00	0.00
15,600.00	90.00	179.90	11,890.00	-4,146.27	-489.09	4,145.41	0.00	0.00	0.00
15,700.00	90.00	179.90	11,890.00	-4,246.27	-488.92	4,245.41	0.00	0.00	0.00
15,800.00	90.00	179.90	11,890.00	-4,346.27	-488.75	4,345.41	0.00	0.00	0.00
15,900.00	90.00	179.90	11,890.00	-4,446.27	-488.58	4,445.41	0.00	0.00	0.00
16,000.00	90.00	179.90	11,890.00	-4,546.27	-488.41	4,545.41	0.00	0.00	0.00
16,100.00	90.00	179.90	11,890.00	-4,646.27	-488.24	4,645.41	0.00	0.00	0.00
16,200.00	90.00	179.90	11,890.00	-4,746.27	-488.07	4,745.41	0.00	0.00	0.00
16,300.00	90.00	179.90	11,890.00	-4,846.27	-487.90	4,845.41	0.00	0.00	0.00
16,400.00	90.00	179.90	11,890.00	-4,946.27	-487.73	4,945.41	0.00	0.00	0.00
16,500.00	90.00	179.90	11,890.00	-5,046.27	-487.56	5,045.41	0.00	0.00	0.00
16,600.00	90.00	179.90	11,890.00	-5,146.27	-487.39	5,145.41	0.00	0.00	0.00
16,700.00	90.00	179.90	11,890.00	-5,246.27	-487.22	5,245.41	0.00	0.00	0.00
16,800.00	90.00	179.90	11,890.00	-5,346.27	-487.05	5,345.41	0.00	0.00	0.00
16,900.00	90.00	179.90	11,890.00	-5,446.27	-486.88	5,445.41	0.00	0.00	0.00
17,000.00	90.00	179.90	11,890.00	-5,546.27	-486.71	5,545.41	0.00	0.00	0.00
17,100.00	90.00	179.90	11,890.00	-5,646.27	-486.54	5,645.41	0.00	0.00	0.00
17,200.00	90.00	179.90	11,890.00	-5,746.27	-486.37	5,745.41	0.00	0.00	0.00
17,300.00	90.00	179.90	11,890.00	-5,846.27	-486.20	5,845.41	0.00	0.00	0.00
17,400.00	90.00	179.90	11,890.00	-5,946.27	-486.03	5,945.41	0.00	0.00	0.00
17,500.00	90.00	179.90	11,890.00	-6,046.27	-485.86	6,045.41	0.00	0.00	0.00
17,600.00	90.00	179.90	11,890.00	-6,146.27	-485.69	6,145.41	0.00	0.00	0.00
17,700.00	90.00	179.90	11,890.00	-6,246.27	-485.52	6,245.41	0.00	0.00	0.00
17,800.00	90.00	179.90	11,890.00	-6,346.27	-485.34	6,345.41	0.00	0.00	0.00
17,900.00	90.00	179.90	11,890.00	-6,446.27	-485.17	6,445.41	0.00	0.00	0.00
18,000.00	90.00	179.90	11,890.00	-6,546.27	-485.00	6,545.41	0.00	0.00	0.00
18,100.00	90.00	179.90	11,890.00	-6,646.27	-484.83	6,645.41	0.00	0.00	0.00
18,200.00	90.00	179.90	11,890.00	-6,746.27	-484.66	6,745.41	0.00	0.00	0.00
18,300.00	90.00	179.90	11,890.00	-6,846.27	-484.49	6,845.41	0.00	0.00	0.00
18,400.00	90.00	179.90	11,890.00	-6,946.27	-484.32	6,945.41	0.00	0.00	0.00
18,500.00	90.00	179.90	11,890.00	-7,046.27	-484.15	7,045.41	0.00	0.00	0.00
18,600.00	90.00	179.90	11,890.00	-7,146.27	-483.98	7,145.41	0.00	0.00	0.00
18,700.00	90.00	179.90	11,890.00	-7,246.27	-483.81	7,245.41	0.00	0.00	0.00
18,800.00	90.00	179.90	11,890.00	-7,346.27	-483.64	7,345.41	0.00	0.00	0.00
18,900.00	90.00	179.90	11,890.00	-7,446.27	-483.47	7,445.41	0.00	0.00	0.00
19,000.00	90.00	179.90	11,890.00	-7,546.27	-483.30	7,545.41	0.00	0.00	0.00
19,100.00	90.00	179.90	11,890.00	-7,646.27	-483.13	7,645.41	0.00	0.00	0.00
19,200.00	90.00	179.90	11,890.00	-7,746.27	-482.96	7,745.41	0.00	0.00	0.00
19,300.00	90.00	179.90	11,890.00	-7,846.27	-482.79	7,845.41	0.00	0.00	0.00
19,400.00	90.00	179.90	11,890.00	-7,946.27	-482.62	7,945.41	0.00	0.00	0.00
19,500.00	90.00	179.90	11,890.00	-8,046.27	-482.45	8,045.41	0.00	0.00	0.00
19,600.00	90.00	179.90	11,890.00	-8,146.27	-482.28	8,145.41	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

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)
19,700.00	90.00	179.90	11,890.00	-8,246.27	-482.11	8,245.41	0.00	0.00	0.00
19,800.00	90.00	179.90	11,890.00	-8,346.27	-481.94	8,345.41	0.00	0.00	0.00
19,900.00	90.00	179.90	11,890.00	-8,446.27	-481.77	8,445.41	0.00	0.00	0.00
20,000.00	90.00	179.90	11,890.00	-8,546.27	-481.60	8,545.41	0.00	0.00	0.00
20,100.00	90.00	179.90	11,890.00	-8,646.27	-481.43	8,645.41	0.00	0.00	0.00
20,200.00	90.00	179.90	11,890.00	-8,746.27	-481.26	8,745.41	0.00	0.00	0.00
20,300.00	90.00	179.90	11,890.00	-8,846.27	-481.09	8,845.41	0.00	0.00	0.00
20,400.00	90.00	179.90	11,890.00	-8,946.27	-480.92	8,945.41	0.00	0.00	0.00
20,500.00	90.00	179.90	11,890.00	-9,046.27	-480.75	9,045.41	0.00	0.00	0.00
20,600.00	90.00	179.90	11,890.00	-9,146.27	-480.58	9,145.41	0.00	0.00	0.00
20,700.00	90.00	179.90	11,890.00	-9,246.27	-480.41	9,245.41	0.00	0.00	0.00
20,800.00	90.00	179.90	11,890.00	-9,346.27	-480.24	9,345.41	0.00	0.00	0.00
20,900.00	90.00	179.90	11,890.00	-9,446.27	-480.07	9,445.41	0.00	0.00	0.00
21,000.00	90.00	179.90	11,890.00	-9,546.27	-479.90	9,545.41	0.00	0.00	0.00
21,100.00	90.00	179.90	11,890.00	-9,646.27	-479.73	9,645.41	0.00	0.00	0.00
21,200.00	90.00	179.90	11,890.00	-9,746.27	-479.56	9,745.41	0.00	0.00	0.00
21,300.00	90.00	179.90	11,890.00	-9,846.27	-479.39	9,845.41	0.00	0.00	0.00
21,400.00	90.00	179.90	11,890.00	-9,946.27	-479.22	9,945.41	0.00	0.00	0.00
21,500.00	90.00	179.90	11,890.00	-10,046.27	-479.05	10,045.41	0.00	0.00	0.00
21,600.00	90.00	179.90	11,890.00	-10,146.27	-478.88	10,145.41	0.00	0.00	0.00
21,700.00	90.00	179.90	11,890.00	-10,246.27	-478.71	10,245.41	0.00	0.00	0.00
21,800.00	90.00	179.90	11,890.00	-10,346.26	-478.54	10,345.41	0.00	0.00	0.00
21,900.00	90.00	179.90	11,890.00	-10,446.26	-478.37	10,445.41	0.00	0.00	0.00
22,000.00	90.00	179.90	11,890.00	-10,546.26	-478.20	10,545.41	0.00	0.00	0.00
22,100.00	90.00	179.90	11,890.00	-10,646.26	-478.03	10,645.41	0.00	0.00	0.00
22,200.00	90.00	179.90	11,890.00	-10,746.26	-477.86	10,745.41	0.00	0.00	0.00
22,224.04	90.00	179.90	11,890.00	-10,770.30	-477.82	10,769.45	0.00	0.00	0.00
22,300.00	90.00	179.90	11,890.00	-10,846.26	-477.69	10,845.41	0.00	0.00	0.00
22,354.04	90.00	179.90	11,890.00	-10,900.30	-477.60	10,899.45	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
701H: SHL (452' FSL/ - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	403,832.60	636,757.20	32.1094818	-103.8916498
701H: PBHL (200' FSL - plan hits target center - Point	0.00	0.00	11,890.00	-10,900.30	-477.60	392,932.30	636,279.60	32.0795226	-103.8933359
701H: FTP/ LP. - plan hits target center - Point	0.00	0.00	11,890.00	-786.70	-494.80	403,045.90	636,262.40	32.1073248	-103.8932582
701H: LTP. - plan misses target center by 0.62usft at 22224.04usft MD (11890.00 TVD, -10770.30 N, -477.82 E) - Point	0.00	0.01	11,890.00	-10,770.30	-477.20	393,062.30	636,280.00	32.0798800	-103.8933329

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 701H
Company:	XTO Energy	**TVD Reference:**	RKB = 31' @ 3250.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 31' @ 3250.00usft
Site:	PLU 21 Brushy Draw	**North Reference:**	Grid
Well:	701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMITv2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
980.00	977.00	RSLR			
1,050.00	1,047.00	Base RSLR Anhydrite			
1,137.00	1,134.00	Salado			
1,199.00	1,196.00	T/SALT			
2,145.00	2,142.00	CSTL			
3,517.00	3,514.00	SALT_B			
3,754.00	3,751.00	DLWR			
3,800.00	3,797.00	BLCN			
4,651.00	4,648.00	CYCN			
6,253.27	6,248.00	BYCN			
7,578.30	7,568.00	BSPG_LM			
8,481.73	8,468.00	BSPG1_LM			
8,545.97	8,532.00	BSPG1			
9,002.71	8,987.00	BSPG2_LM			
9,379.14	9,362.00	BSPG2			
9,650.17	9,632.00	BSPG3_LM			
9,916.18	9,897.00	BSPG3_HRKY			
10,187.21	10,167.00	BSPG3_LWR_LM			
10,237.40	10,217.00	BSPG3_LWR_SH			
10,468.28	10,447.00	BSPG3			
10,804.55	10,782.00	WFMP			
10,819.61	10,797.00	WFMP_X			
10,919.99	10,897.00	WFMP_Y			
10,960.14	10,937.00	WFMP_A			
11,422.13	11,397.00	WFMP_B			
11,591.29	11,558.00	WFMP_C			
11,815.51	11,737.00	WFMP_D			
12,092.22	11,868.00	WFMP_E			
12,240.42	11,887.00	LP (WFMP_E)			

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Permian Operating, LLC.**
LEASE NO.:	**NMNM-05039A**
WELL NAME & NO.:	**Poker Lake Unit 21 BD 701H**
SURFACE HOLE FOOTAGE:	**0452' FSL & 0828' FWL**
BOTTOM HOLE FOOTAGE	**0200' FSL & 0330' FWL Sec. 33, T.25 S., R.30 E.**
LOCATION:	**Section 21, T.25 S., R.30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☑ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Red Beds, Rustler, and Delaware.
Abnormal pressure may be encountered in the 3rd Bone Spring and all subsequent formations.

B. CASING

1. The **11-3/4** inch surface casing shall be set at approximately **1030** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

    Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

    Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. The DV tool may be cancelled if cement circulates to surface on the first stage.

    a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

    b. Second stage above DV tool:

        - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to negative 58% - Additional cement will be required.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

4. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

5. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

6. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
7. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer.

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

    d. The results of the test shall be reported to the appropriate BLM office.

    e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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