

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
ArtesiaFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		5. Lease Serial No. NMLC063079A
2. Name of Operator XTO PERMIAN OPERATING LLC		6. If Indian, Allottee or Tribe Name
3a. Address 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707		7. If Unit or CA/Agreement, Name and/or No. 891000303X
3b. Phone No. (include area code) Ph: 432-620-4374		8. Well Name and No. POKER LAKE UNIT 25 BD 102H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 25 T25S R30E SWNW 2560FNL 772FWL 32.101479 N Lat, 103.840797 W Lon		9. API Well No. 30-015-45846-00-X1
		10. Field and Pool or Exploratory Area PURPLE SAGE-WOLFCAMP (GAS)
		11. County or Parish, State EDDY COUNTY, NM

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

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

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple 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 recomple 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:

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 21 2019

2. Change BHL from 2440'FNL & 980' FWL in Sec. 12-26S-30E to 200'FSL & 750'FWL in Sec. 36-25S-30E. ✓

3. Change from a 3-string casing design to a 4-string casing design.

RECEIVED

In additions, XTO Permian Operating, LLC XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set 7" casing and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per GE recommendations, XTO will contact the BLM to skid the rig to drill the

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #472164 verified by the BLM Well Information System For XTO PERMIAN OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by PRISCILLA PEREZ on 07/03/2019 (19PP2714SE)	
Name (Printed/Typed) KELLY KARDOS	Title REGULATORY COORDINATOR
Signature (Electronic Submission)	Date 07/03/2019
APPROVED	
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
JUL 17 2019	
Approved By	Title
BUREAU OF LAND MANAGEMENT	
ROSWELL FIELD OFFICE	
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.	
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 **

Rev 10-29-19

Additional data for EC transaction #472164 that would not fit on the form

32. Additional remarks, continued

remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.

PLU 25 BD 122H - 30-015-45852

PLU 25 BD 102H - 30-015-45846

PLU 25 BD 701H - 30-015-45859

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015- 45846	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP
⁴ Property Code	⁵ Property Name POKER LAKE UNIT 25 BD	⁶ Well Number 102H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC.	⁹ Elevation 3,343'

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
E	25	25 S	30 E		2,560	NORTH	772	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	36	25 S	30 E		200	SOUTH	750	WEST	EDDY

¹² Dedicated Acres 480	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. 15
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 400,944.6 X= 652,665.1 LAT.= 32.101353°N LONG.= 103.840317°W FIRST TAKE POINT NAD 27 NME Y= 400,491.9 X= 652,642.0 LAT.= 32.100109°N LONG.= 103.840398°W	GEODETIC COORDINATES NAD 83 NME SURFACE LOCATION Y= 401,002.5 X= 693,850.4 LAT.= 32.101478°N LONG.= 103.840797°W FIRST TAKE POINT NAD 83 NME Y= 400,549.8 X= 693,827.4 LAT.= 32.100233°N LONG.= 103.840878°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 7/3/19 Signature Date																
	CORNER COORDINATES TABLE NAD 27 NME <table border="1"> <tr><td>A - Y= 400,845.0 N, X= 653,224.3 E</td></tr> <tr><td>B - Y= 400,838.4 N, X= 651,892.9 E</td></tr> <tr><td>C - Y= 398,185.5 N, X= 653,217.9 E</td></tr> <tr><td>D - Y= 398,177.1 N, X= 651,887.1 E</td></tr> <tr><td>E - Y= 395,525.4 N, X= 653,229.4 E</td></tr> <tr><td>F - Y= 395,514.7 N, X= 651,898.9 E</td></tr> <tr><td>G - Y= 392,863.6 N, X= 653,241.1 E</td></tr> <tr><td>H - Y= 392,853.4 N, X= 651,911.2 E</td></tr> </table>	A - Y= 400,845.0 N, X= 653,224.3 E	B - Y= 400,838.4 N, X= 651,892.9 E	C - Y= 398,185.5 N, X= 653,217.9 E	D - Y= 398,177.1 N, X= 651,887.1 E	E - Y= 395,525.4 N, X= 653,229.4 E	F - Y= 395,514.7 N, X= 651,898.9 E	G - Y= 392,863.6 N, X= 653,241.1 E	H - Y= 392,853.4 N, X= 651,911.2 E	CORNER COORDINATES TABLE NAD 83 NME <table border="1"> <tr><td>A - Y= 400,902.9 N, X= 694,409.7 E</td></tr> <tr><td>B - Y= 400,896.3 N, X= 693,078.2 E</td></tr> <tr><td>C - Y= 398,243.4 N, X= 694,403.4 E</td></tr> <tr><td>D - Y= 398,235.0 N, X= 693,072.5 E</td></tr> <tr><td>E - Y= 395,583.2 N, X= 694,415.0 E</td></tr> <tr><td>F - Y= 395,572.5 N, X= 693,084.4 E</td></tr> <tr><td>G - Y= 392,921.4 N, X= 694,426.7 E</td></tr> <tr><td>H - Y= 392,911.2 N, X= 693,096.8 E</td></tr> </table>	A - Y= 400,902.9 N, X= 694,409.7 E	B - Y= 400,896.3 N, X= 693,078.2 E	C - Y= 398,243.4 N, X= 694,403.4 E	D - Y= 398,235.0 N, X= 693,072.5 E	E - Y= 395,583.2 N, X= 694,415.0 E	F - Y= 395,572.5 N, X= 693,084.4 E	G - Y= 392,921.4 N, X= 694,426.7 E	H - Y= 392,911.2 N, X= 693,096.8 E	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. 4-2-2019 Date of Survey Signature and Seal of Professional Surveyor: MARK DILLON HARP 23786 Certificate Number JC 2018010047
	A - Y= 400,845.0 N, X= 653,224.3 E																		
	B - Y= 400,838.4 N, X= 651,892.9 E																		
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G - Y= 392,921.4 N, X= 694,426.7 E																			
H - Y= 392,911.2 N, X= 693,096.8 E																			
LAST TAKE POINT NAD 27 NME Y= 393,189.1 X= 652,659.6 LAT.= 32.080033°N LONG.= 103.840449°W BOTTOM HOLE LOCATION NAD 27 NME Y= 393,059.1 X= 652,660.2 LAT.= 32.079677°N LONG.= 103.840449°W	LAST TAKE POINT NAD 83 NME Y= 393,246.9 X= 693,845.2 LAT.= 32.080159°N LONG.= 103.840928°W BOTTOM HOLE LOCATION NAD 83 NME Y= 393,116.9 X= 693,845.8 LAT.= 32.079801°N LONG.= 103.840928°W	Signature and Seal of Professional Surveyor: MARK DILLON HARP 23786 Certificate Number JC 2018010047																	
MARK DILLON HARP 23786 Certificate Number JC 2018010047																			

RW 10-29-19

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

XTO Energy Inc.
PLU 25 Brushy Draw 102H
Projected TD: 20028' MD / 12265' TVD
SHL: 2560' FNL & 772' FWL , Section 25, T25S, R30E
BHL: 200' FSL & 750' FWL , Section 36, 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	965'	Water
Top of Salt	1215'	Water
Base of Salt	3815'	Water
Delaware	4015'	Water
Bone Spring	7840'	Water/Oil/Gas
1st Bone Spring Ss	8865'	Water/Oil/Gas
2nd Bone Spring Ss	9565'	Water/Oil/Gas
3rd Bone Spring Ss	10765'	Water/Oil/Gas
Wolfcamp	11185'	Water/Oil/Gas
Wolfcamp E	12265'	Water/Oil/Gas
Target/Land Curve	12265'	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 13-3/8 inch casing @ 1090' (125' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9-5/8 inch casing at 3870' and circulating cement to surface. An 8-3/4 inch vertical and curve hole will be drilled and 7 inch casing run and cemented 500' into the 9-5/8 inch casing. A 6 inch curve and lateral hole will be drilled to MD/TD and 4-1/2 inch liner will be set at TD and cemented back 250' into the 7 inch casing shoe.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' - 1090'	13-3/8"	54.5	BTC	J-55	New	2.27	2.27	16.30
12-1/4"	0' - 3870'	9-5/8"	40	BTC	J-55	New	1.33	2.11	4.52
8-3/4"	0' - 11315'	7"	32	BTC	P-110	New	1.31	1.97	2.73
6"	11015' - 20028'	4-1/2"	13.5	BTC	P-110	New	1.31	1.89	2.06

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" & 4-1/2" Collapse analyzed using 50% evacuation based on regional experience.
- 4-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

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

B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 15M top flange

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

4. Cement Program

Surface Casing: 13-3/8", 54.5 New J-55, BTC casing to be set at +/- 1090'

Lead: 580 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Tail: 300 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Intermediate Casing: 9-5/8", 40 New J-55, BTC casing to be set at +/- 3870'

Lead: 1120 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft³/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 7", 32 New P-110, BTC casing to be set at +/- 11315'

Lead: 1030 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft³/sx, 9.61 gal/sx water)

Tail: 60 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Production Casing: 4-1/2", 13.5 New P-110, BTC casing to be set at +/- 20028'

Tail: 640 sxs VersaCem (mixed at 13.2 ppg, 1.33 ft³/sx, 8.38 gal/sx water)

Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

5. Pressure Control Equipment

The blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 10M Hydril and a 13-5/8" minimum 10M Double Ram BOP. MASP should not exceed 5593 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 nipping up on the 13-5/8" 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When the 9-5/8" and 7" 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.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 1090'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
1090' to 3870'	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
3870' to 11315'	8-3/4"	FW / Cut Brine	8.6-9.5	29-32	NC - 20
11315' to 20028'	6"	FW / Cut Brine / Polymer	12.7-13	32-50	20'

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

Spud with fresh water/native mud. Drill out from under 13-3/8" surface casing with brine solution. A 9.8ppg-10.2ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 13-3/8" casing.

8. Logging, Coring and Testing Program

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

Open hole logging will not be done on this well.

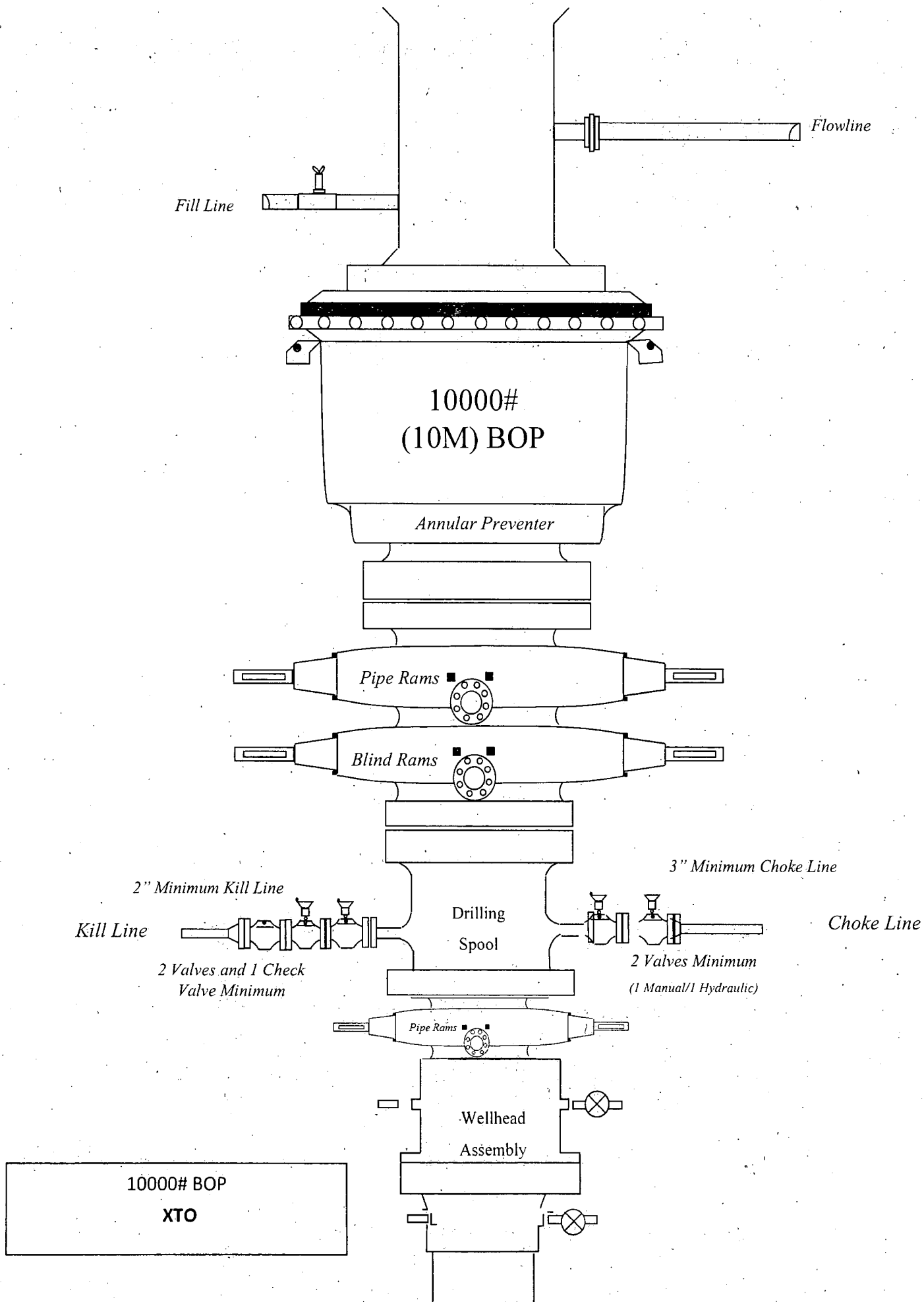
9. Abnormal Pressures and Temperatures / Potential Hazards

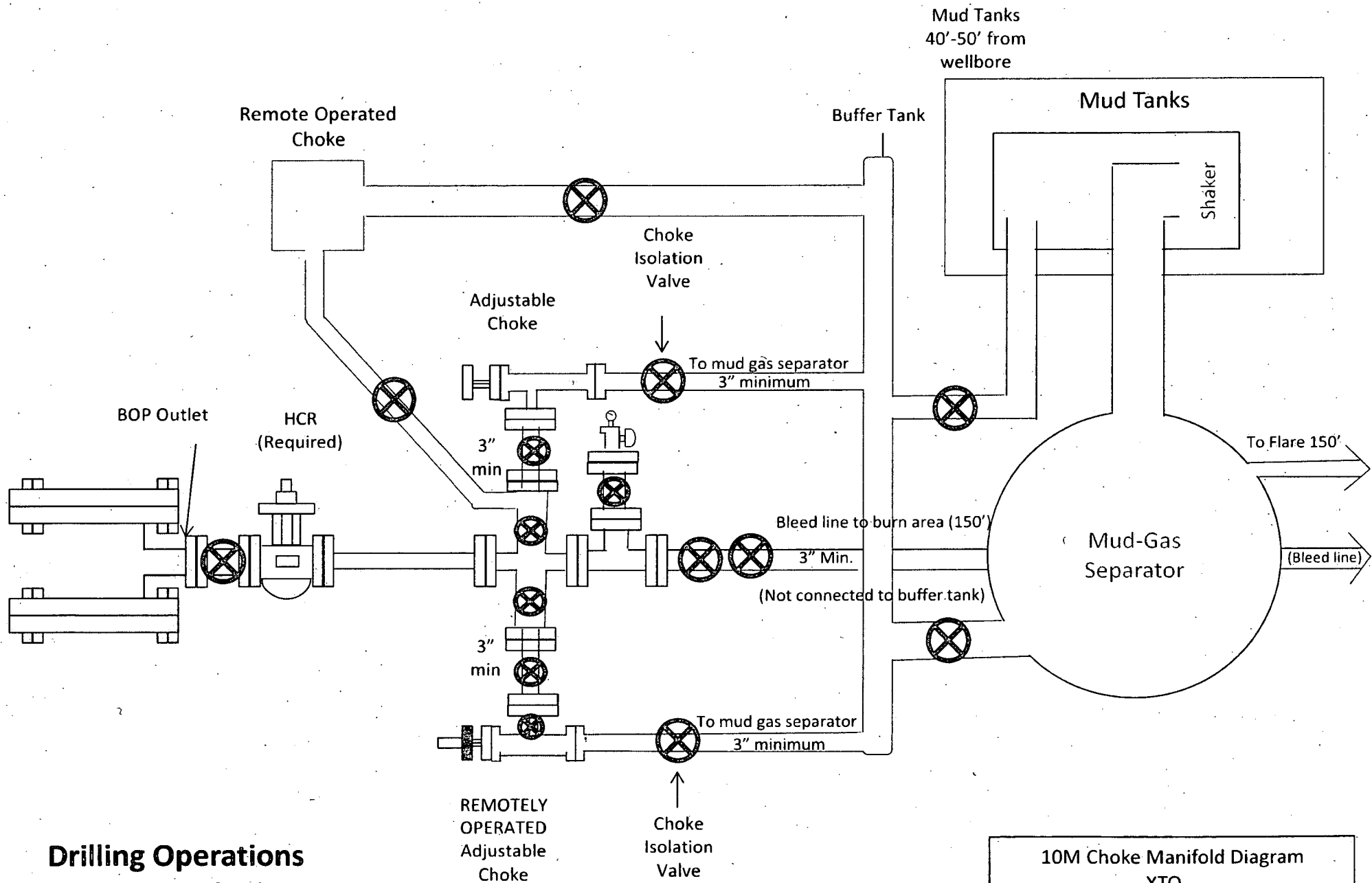
None Anticipated. BHT of 155 to 175 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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 8291 psi.

10. Anticipated Starting Date and Duration of Operations

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

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set 7" casing and ensure that





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.

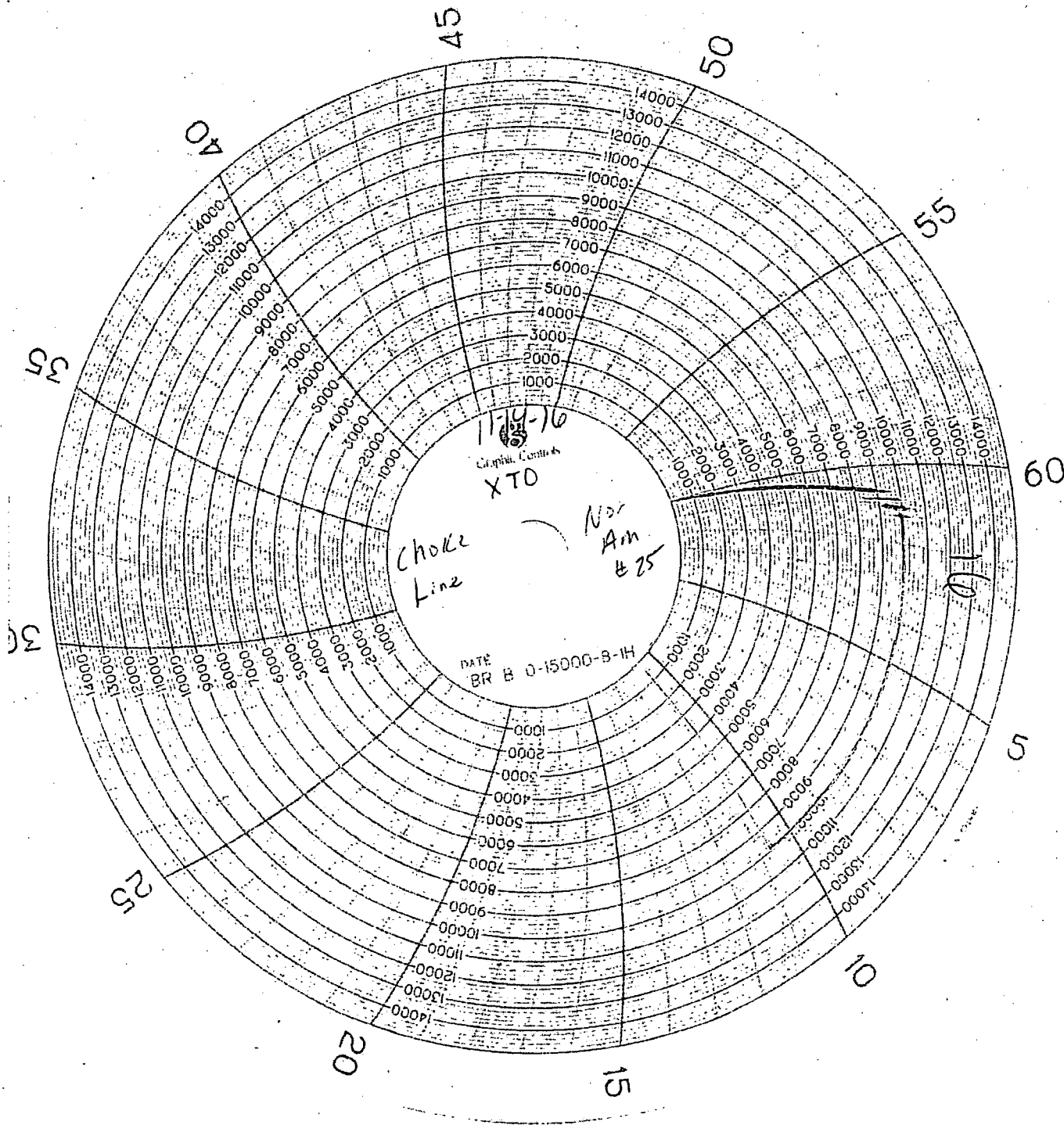
General Procedure With No Pipe In Hole (Open Hole)

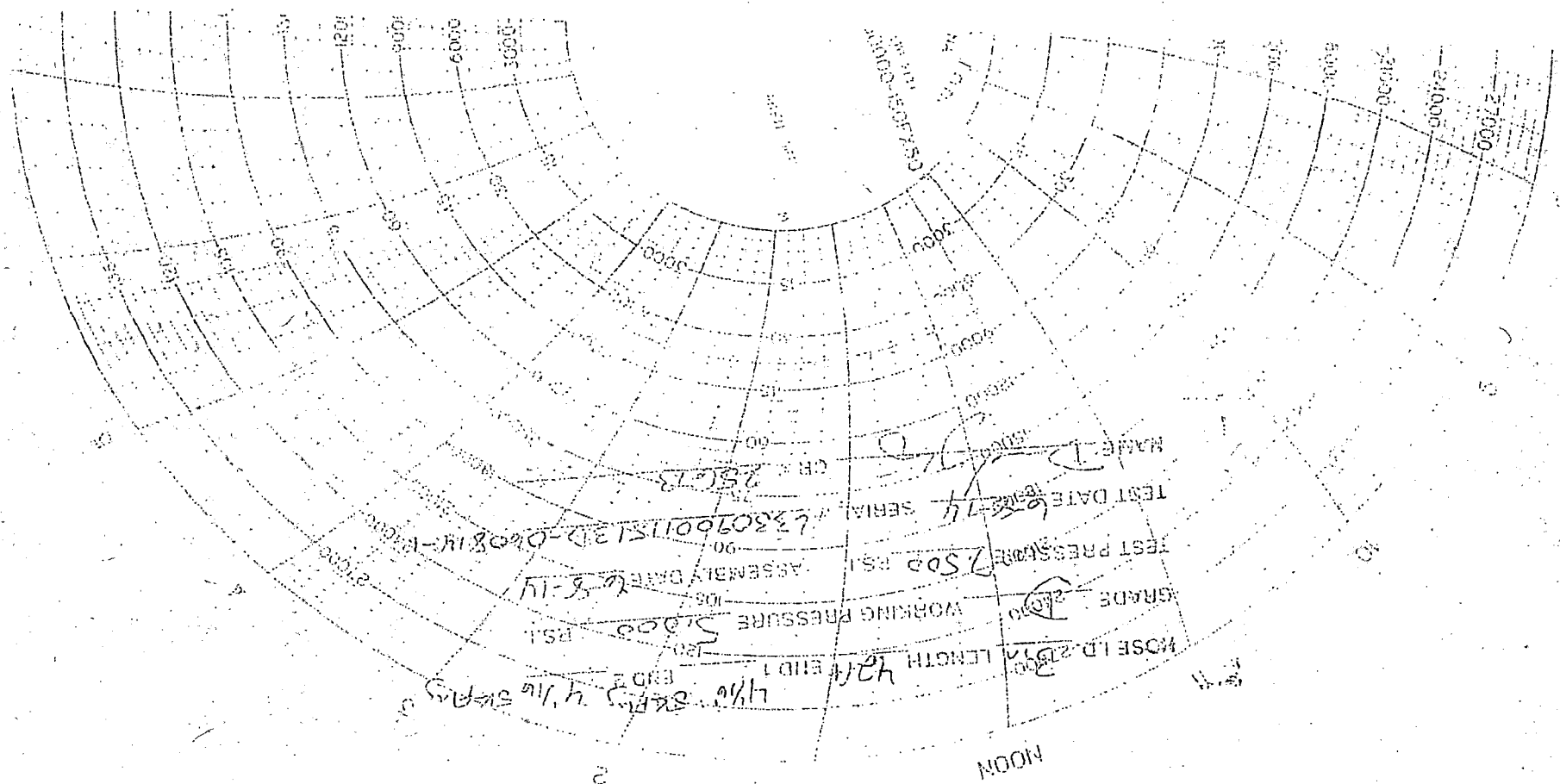
1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
6. Regroup and identify forward plan

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





NOON

NOSE I.D. 21.50

LENGTH 42 1/2

END 1 4 1/2

END 2 4 1/2

SUBS 4 1/2

WORKING PRESSURE 2500 PSI

TEST PRESSURE 3500 PSI

SERIAL 63809015137-010814-10000

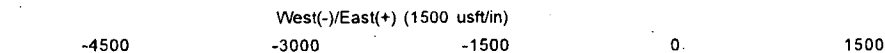
TEST DATE 6-2-74

NAME D-7775

XTO ENERGY INC.

Project: Eddy County, NM (NMEZ) NAD27 Grid
 Site: Poker Lake Unit 25 BD
 Well: PLU 25 BD 102H_RSN 152H
 Wellbore: 102H-152H
 Design: Plan #1

3344+22 @ 3366.00usft (122-162 AK22)
 NAD 1927 (NADCON CONUS)



PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	0.00	
3	4300.00	5.00	348.50	4299.36	21.37	-4.35	1.00	348.50	-21.36	
4	5200.00	5.00	348.50	5195.94	98.23	-19.99	0.00	0.00	-98.22	
5	5700.00	0.00	348.50	5695.30	119.60	-24.33	1.00	180.00	-119.58	
6	11696.74	0.00	348.50	11692.04	119.60	-24.33	0.00	348.50	-119.58	
7	12596.74	90.00	179.86	12265.00	-453.36	-22.94	10.00	179.86	453.37	
8	20028.90	90.00	179.86	12265.00	-7885.50	-4.90	0.00	0.00	7885.50	PLU 25 BD 102H_RSN 152H PBHL_200FSL_580FEL

2500
3800.00
4299.36
5195.94
5000
5695.30
10000
11692.04
12500

Start-Build -1.00
 Start 900.00 hold at 4300.00 MD
 Start Drop -1.00
 Start 5996.74 hold at 5700.00 MD

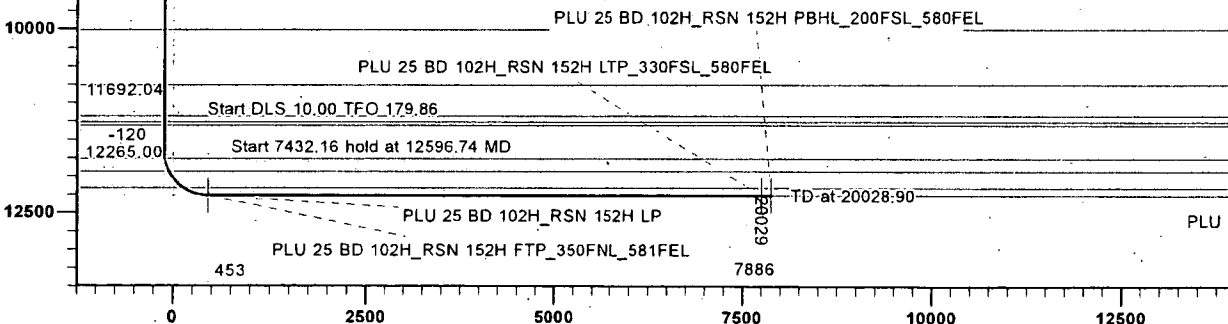


Azimuths to Grid North
 True North: -0.26°
 Magnetic North: 6.59°

Magnetic Field
 Strength: 47630.7nT
 Dip Angle: 59.88°
 Date: 06/23/2019
 Model: IGRF2015

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PLU 25 BD 102H_RSN 152H SHL	0.00	0.00	0.00	400944.60	652665.10	32° 6' 4.872 N	103° 50' 25.139 W
PLU 25 BD 102H_RSN 152H FTP_350FNL_581FEL	12265.00	-452.70	-23.10	400491.90	652642.00	32° 6' 0.393 N	103° 50' 25.432 W
PLU 25 BD 102H_RSN 152H LP	12265.00	-453.36	-22.94	400491.24	652642.16	32° 6' 0.386 N	103° 50' 25.430 W
PLU 25 BD 102H_RSN 152H LTP_330FSL_580FEL	12265.00	-7755.50	-5.50	393189.10	652659.60	32° 4' 48.122 N	103° 50' 25.615 W
PLU 25 BD 102H_RSN 152H PBHL_200FSL_580FEL	12265.00	-7885.50	-4.90	393059.10	652660.20	32° 4' 46.835 N	103° 50' 25.615 W



Vertical Section at 180.04° (2500 usft/in)

PLU 25 BD 102H_RSN 152H SHL

PLU 25 BD 102H_RSN 152H FTP_350FNL_581FEL

PLU 25 BD 102H_RSN 152H LP

OH Offset

OH Offset

14442

100' Drilling Window (50' Left/50' Right)

Lease Lines

330' Hard Lines

OH Offset

13178

PLU 25 BD 102H_RSN 152H LTP_330FSL_580FEL

102H-152H

12265

PLU 25 BD 102H_RSN 152H PBHL_200FSL_580FEL

To convert a Magnetic Direction to a Grid Direction, Add 6.59°
 Magnetic North is 6.59° East of Grid North (Magnetic Convergence)
 Magnetic North is 6.85° East of True North (Magnetic Declination)

Plan: Plan #1 (PLU 25 BD 102H_RSN 152H/102H-152H)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawell.com
 21:58, June 24 2019

CRUDE OILFIELD SOLUTIONS
 14427 Interdrive W Houston 77032
 832-230-2519



Planning Report

Database:	CRUDE_EDM	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Company:	XTO ENERGY INC.	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Project:	Eddy County, NM (NMEZ) NAD27 Grid	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site:	Poker Lake Unit 25 BD	North Reference:	Grid
Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H-152H		
Design:	Plan #1		

Project	Eddy County, NM (NMEZ) NAD27 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	Poker Lake Unit 25 BD				
Site Position:		Northing:	400,979.50 usft	Latitude:	32° 6' 5.217 N
From:	Map	Easting:	652,664.90 usft	Longitude:	103° 50' 25.140 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.26 °

Well	PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL					
Well Position	+N-S	-34.90 usft	Northing:	400,944.60 usft	Latitude:	32° 6' 4.872 N
	+E-W	0.20 usft	Easting:	652,665.10 usft	Longitude:	103° 50' 25.139 W
Position Uncertainty	0.00 usft	Wellhead Elevation:		Ground Level:	3,343.00 usft	

Wellbore	102H-152H				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	06/23/19	(°)	(°)	(nT)
			6.85	59.88	47,630.73553032

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	180.04	

Plan Survey Tool Program	Date	06/23/19			
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks:	
(usft)	(usft)				
1	0.00	20,028.68 Plan #1 (102H-152H)	MWD+IFR1+MS		
			OWSG MWD + IFR1 + Multi-SI		

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N-S	+E-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,300.00	5.00	348.50	4,299.36	21.37	-4.35	1.00	1.00	0.00	348.50	
5,200.00	5.00	348.50	5,195.94	98.23	-19.99	0.00	0.00	0.00	0.00	
5,700.00	0.00	348.50	5,695.30	119.60	-24.33	1.00	-1.00	0.00	180.00	
11,696.74	0.00	348.50	11,692.04	119.60	-24.33	0.00	0.00	0.00	348.50	
12,596.74	90.00	179.86	12,265.00	-453.36	-22.94	10.00	10.00	-18.74	179.86	
20,028.90	90.00	179.86	12,265.00	-7,885.50	-4.90	0.00	0.00	0.00	0.00	PLU 25 BD 102H_RS

Planning Report

Database: CRUDE_EDM

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Company: XTO ENERGY INC.

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Project: Eddy County, NM (NMEZ) NAD27 Grid

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site: Poker Lake Unit 25 BD

North Reference:

Grid

Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Wellbore: 102H-152H

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
PLU 25 BD 102H_RSN 152H SHL - PLU 25 BD 701H_RSN 122H SHL									
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
965.00	0.00	0.00	965.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
1,215.00	0.00	0.00	1,215.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,815.00	0.15	348.50	3,815.00	0.02	0.00	-0.02	1.00	1.00	0.00
Base Salt									
3,900.00	1.00	348.50	3,900.00	0.86	-0.17	-0.86	1.00	1.00	0.00
4,000.00	2.00	348.50	3,999.96	3.42	-0.70	-3.42	1.00	1.00	0.00
4,015.05	2.15	348.50	4,015.00	3.95	-0.80	-3.95	1.00	1.00	0.00
Delaware									
4,100.00	3.00	348.50	4,099.86	7.69	-1.57	-7.69	1.00	1.00	0.00
4,200.00	4.00	348.50	4,199.68	13.68	-2.78	-13.68	1.00	1.00	0.00

Planning Report

Database: CRUDE_EDM

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Company: XTO ENERGY INC.

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Project: Eddy County, NM (NMEZ) NAD27 Grid

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site: Poker Lake Unit 25 BD

North Reference:

Grid

Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Wellbore: 102H-152H

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)
4,300.00	5.00	348.50	4,299.36	21.37	-4.35	-21.36	1.00	1.00	0.00
4,400.00	5.00	348.50	4,398.99	29.91	-6.08	-29.90	0.00	0.00	0.00
4,500.00	5.00	348.50	4,498.60	38.45	-7.82	-38.44	0.00	0.00	0.00
4,600.00	5.00	348.50	4,598.22	46.99	-9.56	-46.98	0.00	0.00	0.00
4,700.00	5.00	348.50	4,697.84	55.53	-11.30	-55.52	0.00	0.00	0.00
4,800.00	5.00	348.50	4,797.46	64.07	-13.03	-64.06	0.00	0.00	0.00
4,900.00	5.00	348.50	4,897.08	72.61	-14.77	-72.60	0.00	0.00	0.00
5,000.00	5.00	348.50	4,996.70	81.15	-16.51	-81.14	0.00	0.00	0.00
5,100.00	5.00	348.50	5,096.32	89.69	-18.25	-89.68	0.00	0.00	0.00
5,200.00	5.00	348.50	5,195.94	98.23	-19.99	-98.22	0.00	0.00	0.00
5,300.00	4.00	348.50	5,295.63	105.92	-21.55	-105.91	1.00	-1.00	0.00
5,400.00	3.00	348.50	5,395.44	111.90	-22.77	-111.89	1.00	-1.00	0.00
5,500.00	2.00	348.50	5,495.35	116.18	-23.64	-116.16	1.00	-1.00	0.00
5,600.00	1.00	348.50	5,595.31	118.74	-24.16	-118.73	1.00	-1.00	0.00
5,700.00	0.00	348.50	5,695.30	119.60	-24.33	-119.58	1.00	-1.00	0.00
5,800.00	0.00	348.50	5,795.31	119.60	-24.33	-119.58	0.00	0.00	0.00
5,900.00	0.00	348.50	5,895.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,000.00	0.00	348.50	5,995.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,100.00	0.00	348.50	6,095.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,200.00	0.00	348.50	6,195.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,300.00	0.00	348.50	6,295.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,400.00	0.00	348.50	6,395.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,500.00	0.00	348.50	6,495.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,600.00	0.00	348.50	6,595.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,700.00	0.00	348.50	6,695.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,800.00	0.00	348.50	6,795.31	119.60	-24.33	-119.58	0.00	0.00	0.00
6,900.00	0.00	348.50	6,895.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,000.00	0.00	348.50	6,995.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,100.00	0.00	348.50	7,095.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,200.00	0.00	348.50	7,195.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,300.00	0.00	348.50	7,295.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,400.00	0.00	348.50	7,395.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,500.00	0.00	348.50	7,495.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,600.00	0.00	348.50	7,595.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,700.00	0.00	348.50	7,695.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,800.00	0.00	348.50	7,795.31	119.60	-24.33	-119.58	0.00	0.00	0.00
7,844.69	0.00	0.00	7,840.00	119.60	-24.33	-119.58	0.00	0.00	0.00
Bone Spring									
7,900.00	0.00	348.50	7,895.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,000.00	0.00	348.50	7,995.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,100.00	0.00	348.50	8,095.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,200.00	0.00	348.50	8,195.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,300.00	0.00	348.50	8,295.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,400.00	0.00	348.50	8,395.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,500.00	0.00	348.50	8,495.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,600.00	0.00	348.50	8,595.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,700.00	0.00	348.50	8,695.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,800.00	0.00	348.50	8,795.31	119.60	-24.33	-119.58	0.00	0.00	0.00
8,869.69	0.00	0.00	8,865.00	119.60	-24.33	-119.58	0.00	0.00	0.00
1st Bone Spring Ss									
8,900.00	0.00	348.50	8,895.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,000.00	0.00	348.50	8,995.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,100.00	0.00	348.50	9,095.31	119.60	-24.33	-119.58	0.00	0.00	0.00

Planning Report

Database:	CRUDE_EDM	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Company:	XTO ENERGY INC.	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Project:	Eddy County, NM (NMEZ) NAD27 Grid	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site:	Poker Lake Unit 25 BD	North Reference:	Grid
Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H-152H		
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)
9,200.00	0.00	348.50	9,195.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,300.00	0.00	348.50	9,295.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,400.00	0.00	348.50	9,395.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,500.00	0.00	348.50	9,495.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,569.69	0.00	0.00	9,565.00	119.60	-24.33	-119.58	0.00	0.00	0.00
2nd Bone Spring Ss									
9,600.00	0.00	348.50	9,595.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,700.00	0.00	348.50	9,695.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,800.00	0.00	348.50	9,795.31	119.60	-24.33	-119.58	0.00	0.00	0.00
9,900.00	0.00	348.50	9,895.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,000.00	0.00	348.50	9,995.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,019.69	0.00	0.00	10,015.00	119.60	-24.33	-119.58	0.00	0.00	0.00
3rd Bone Spring Lm									
10,100.00	0.00	348.50	10,095.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,200.00	0.00	348.50	10,195.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,300.00	0.00	348.50	10,295.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,400.00	0.00	348.50	10,395.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,500.00	0.00	348.50	10,495.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,600.00	0.00	348.50	10,595.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,700.00	0.00	348.50	10,695.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,769.69	0.00	0.00	10,765.00	119.60	-24.33	-119.58	0.00	0.00	0.00
3rd Bone Spring Ss									
10,800.00	0.00	348.50	10,795.31	119.60	-24.33	-119.58	0.00	0.00	0.00
10,900.00	0.00	348.50	10,895.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,000.00	0.00	348.50	10,995.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,100.00	0.00	348.50	11,095.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,189.69	0.00	0.00	11,185.00	119.60	-24.33	-119.58	0.00	0.00	0.00
Wolfcamp									
11,200.00	0.00	348.50	11,195.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,269.69	0.00	0.00	11,265.00	119.60	-24.33	-119.58	0.00	0.00	0.00
Wolfcamp Y									
11,300.00	0.00	348.50	11,295.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,319.69	0.00	0.00	11,315.00	119.60	-24.33	-119.58	0.00	0.00	0.00
Wolfcamp A									
11,400.00	0.00	348.50	11,395.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,500.00	0.00	348.50	11,495.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,569.69	0.00	0.00	11,565.00	119.60	-24.33	-119.58	0.00	0.00	0.00
PLU 25 BD 701H_RSN 122H FTP_350FNL_161FEL									
11,600.00	0.00	348.50	11,595.31	119.60	-24.33	-119.58	0.00	0.00	0.00
11,696.74	0.00	348.50	11,692.04	119.60	-24.33	-119.58	0.00	0.00	0.00
11,700.00	0.33	179.86	11,695.31	119.59	-24.33	-119.57	10.00	10.00	-5,169.80
11,750.00	5.33	179.86	11,745.23	117.12	-24.33	-117.11	10.00	10.00	0.00
11,769.89	7.32	179.86	11,765.00	114.93	-24.32	-114.92	10.00	10.00	0.00
Wolfcamp B									
11,800.00	10.33	179.86	11,794.75	110.32	-24.31	-110.30	10.00	10.00	0.00
11,850.00	15.33	179.86	11,843.49	99.22	-24.28	-99.20	10.00	10.00	0.00
11,900.00	20.33	179.86	11,891.07	83.92	-24.25	-83.90	10.00	10.00	0.00
11,950.00	25.33	179.86	11,937.14	64.53	-24.20	-64.51	10.00	10.00	0.00
11,953.17	25.64	179.86	11,940.00	63.16	-24.19	-63.15	10.00	10.00	0.00
Wolfcamp C									
12,000.00	30.33	179.86	11,981.34	41.19	-24.14	-41.18	10.00	10.00	0.00
12,050.00	35.33	179.86	12,023.35	14.10	-24.08	-14.08	10.00	10.00	0.00

Planning Report

Database:	CRUDE_EDM	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Company:	XTO ENERGY INC.	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Project:	Eddy County, NM (NMEZ) NAD27 Grid	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site:	Poker Lake Unit 25 BD	North Reference:	Grid
Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H-152H		
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)
12,100.00	40.33	179.86	12,062.83	-16.55	-24.00	16.57	10.00	10.00	0.00
12,150.00	45.33	179.86	12,099.49	-50.53	-23.92	50.55	10.00	10.00	0.00
12,200.00	50.33	179.86	12,133.05	-87.58	-23.83	87.59	10.00	10.00	0.00
12,250.00	55.33	179.86	12,163.25	-127.40	-23.73	127.42	10.00	10.00	0.00
12,253.09	55.64	179.86	12,165.00	-129.95	-23.73	129.97	10.00	10.00	0.00
Wolfcamp D									
12,300.00	60.33	179.86	12,189.86	-169.71	-23.63	169.73	10.00	10.00	0.00
12,350.00	65.33	179.86	12,212.69	-214.18	-23.52	214.19	10.00	10.00	0.00
12,400.00	70.33	179.86	12,231.56	-260.47	-23.41	260.48	10.00	10.00	0.00
12,450.00	75.33	179.86	12,246.31	-308.22	-23.29	308.24	10.00	10.00	0.00
12,500.00	80.33	179.86	12,256.85	-357.08	-23.17	357.10	10.00	10.00	0.00
12,550.00	85.33	179.86	12,263.10	-406.68	-23.05	406.69	10.00	10.00	0.00
12,594.44	89.77	179.86	12,265.00	-451.06	-22.95	451.08	10.00	10.00	0.00
PLU 25 BD 122H_RSN 162H FTP_350FNL_161FEL									
12,595.60	89.89	179.86	12,265.00	-452.22	-22.94	452.24	10.00	10.00	0.00
Wolfcamp E - LP									
12,596.08	89.93	179.86	12,265.00	-452.70	-22.94	452.71	10.00	10.00	0.00
PLU 25 BD 102H_RSN 152H FTP_350FNL_581FEL									
12,596.74	90.00	179.86	12,265.00	-453.36	-22.94	453.37	10.00	10.00	0.00
PLU 25 BD 102H_RSN 152H LP									
12,600.00	90.00	179.86	12,265.00	-456.62	-22.93	456.64	0.00	0.00	0.00
12,700.00	90.00	179.86	12,265.00	-556.62	-22.69	556.64	0.00	0.00	0.00
12,800.00	90.00	179.86	12,265.00	-656.62	-22.45	656.64	0.00	0.00	0.00
12,900.00	90.00	179.86	12,265.00	-756.62	-22.21	756.64	0.00	0.00	0.00
13,000.00	90.00	179.86	12,265.00	-856.62	-21.96	856.64	0.00	0.00	0.00
13,100.00	90.00	179.86	12,265.00	-956.62	-21.72	956.64	0.00	0.00	0.00
13,200.00	90.00	179.86	12,265.00	-1,056.62	-21.48	1,056.63	0.00	0.00	0.00
13,300.00	90.00	179.86	12,265.00	-1,156.62	-21.23	1,156.63	0.00	0.00	0.00
13,400.00	90.00	179.86	12,265.00	-1,256.62	-20.99	1,256.63	0.00	0.00	0.00
13,500.00	90.00	179.86	12,265.00	-1,356.62	-20.75	1,356.63	0.00	0.00	0.00
13,600.00	90.00	179.86	12,265.00	-1,456.62	-20.51	1,456.63	0.00	0.00	0.00
13,700.00	90.00	179.86	12,265.00	-1,556.62	-20.26	1,556.63	0.00	0.00	0.00
13,800.00	90.00	179.86	12,265.00	-1,656.62	-20.02	1,656.63	0.00	0.00	0.00
13,900.00	90.00	179.86	12,265.00	-1,756.62	-19.78	1,756.63	0.00	0.00	0.00
14,000.00	90.00	179.86	12,265.00	-1,856.62	-19.53	1,856.63	0.00	0.00	0.00
14,100.00	90.00	179.86	12,265.00	-1,956.62	-19.29	1,956.63	0.00	0.00	0.00
14,200.00	90.00	179.86	12,265.00	-2,056.62	-19.05	2,056.63	0.00	0.00	0.00
14,300.00	90.00	179.86	12,265.00	-2,156.62	-18.81	2,156.63	0.00	0.00	0.00
14,400.00	90.00	179.86	12,265.00	-2,256.62	-18.56	2,256.63	0.00	0.00	0.00
14,500.00	90.00	179.86	12,265.00	-2,356.62	-18.32	2,356.63	0.00	0.00	0.00
14,600.00	90.00	179.86	12,265.00	-2,456.62	-18.08	2,456.63	0.00	0.00	0.00
14,700.00	90.00	179.86	12,265.00	-2,556.62	-17.84	2,556.63	0.00	0.00	0.00
14,800.00	90.00	179.86	12,265.00	-2,656.62	-17.59	2,656.63	0.00	0.00	0.00
14,900.00	90.00	179.86	12,265.00	-2,756.62	-17.35	2,756.63	0.00	0.00	0.00
15,000.00	90.00	179.86	12,265.00	-2,856.62	-17.11	2,856.63	0.00	0.00	0.00
15,100.00	90.00	179.86	12,265.00	-2,956.62	-16.86	2,956.63	0.00	0.00	0.00
15,200.00	90.00	179.86	12,265.00	-3,056.62	-16.62	3,056.63	0.00	0.00	0.00
15,300.00	90.00	179.86	12,265.00	-3,156.62	-16.38	3,156.62	0.00	0.00	0.00
15,400.00	90.00	179.86	12,265.00	-3,256.62	-16.14	3,256.62	0.00	0.00	0.00
15,500.00	90.00	179.86	12,265.00	-3,356.61	-15.89	3,356.62	0.00	0.00	0.00
15,600.00	90.00	179.86	12,265.00	-3,456.61	-15.65	3,456.62	0.00	0.00	0.00
15,700.00	90.00	179.86	12,265.00	-3,556.61	-15.41	3,556.62	0.00	0.00	0.00
15,800.00	90.00	179.86	12,265.00	-3,656.61	-15.17	3,656.62	0.00	0.00	0.00

Planning Report

Database:	CRUDE_EDM	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Company:	XTO ENERGY INC.	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Project:	Eddy County, NM (NMEZ) NAD27 Grid	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site:	Poker Lake Unit 25 BD	North Reference:	Grid
Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Wellbore:	102H-152H		
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)
15,900.00	90.00	179.86	12,265.00	-3,756.61	-14.92	3,756.62	0.00	0.00	0.00
16,000.00	90.00	179.86	12,265.00	-3,856.61	-14.68	3,856.62	0.00	0.00	0.00
16,100.00	90.00	179.86	12,265.00	-3,956.61	-14.44	3,956.62	0.00	0.00	0.00
16,200.00	90.00	179.86	12,265.00	-4,056.61	-14.19	4,056.62	0.00	0.00	0.00
16,300.00	90.00	179.86	12,265.00	-4,156.61	-13.95	4,156.62	0.00	0.00	0.00
16,400.00	90.00	179.86	12,265.00	-4,256.61	-13.71	4,256.62	0.00	0.00	0.00
16,500.00	90.00	179.86	12,265.00	-4,356.61	-13.47	4,356.62	0.00	0.00	0.00
16,600.00	90.00	179.86	12,265.00	-4,456.61	-13.22	4,456.62	0.00	0.00	0.00
16,700.00	90.00	179.86	12,265.00	-4,556.61	-12.98	4,556.62	0.00	0.00	0.00
16,800.00	90.00	179.86	12,265.00	-4,656.61	-12.74	4,656.62	0.00	0.00	0.00
16,900.00	90.00	179.86	12,265.00	-4,756.61	-12.50	4,756.62	0.00	0.00	0.00
17,000.00	90.00	179.86	12,265.00	-4,856.61	-12.25	4,856.62	0.00	0.00	0.00
17,100.00	90.00	179.86	12,265.00	-4,956.61	-12.01	4,956.62	0.00	0.00	0.00
17,200.00	90.00	179.86	12,265.00	-5,056.61	-11.77	5,056.62	0.00	0.00	0.00
17,300.00	90.00	179.86	12,265.00	-5,156.61	-11.52	5,156.62	0.00	0.00	0.00
17,400.00	90.00	179.86	12,265.00	-5,256.61	-11.28	5,256.62	0.00	0.00	0.00
17,500.00	90.00	179.86	12,265.00	-5,356.61	-11.04	5,356.61	0.00	0.00	0.00
17,600.00	90.00	179.86	12,265.00	-5,456.61	-10.80	5,456.61	0.00	0.00	0.00
17,700.00	90.00	179.86	12,265.00	-5,556.61	-10.55	5,556.61	0.00	0.00	0.00
17,800.00	90.00	179.86	12,265.00	-5,656.61	-10.31	5,656.61	0.00	0.00	0.00
17,900.00	90.00	179.86	12,265.00	-5,756.61	-10.07	5,756.61	0.00	0.00	0.00
18,000.00	90.00	179.86	12,265.00	-5,856.61	-9.83	5,856.61	0.00	0.00	0.00
18,100.00	90.00	179.86	12,265.00	-5,956.61	-9.58	5,956.61	0.00	0.00	0.00
18,200.00	90.00	179.86	12,265.00	-6,056.61	-9.34	6,056.61	0.00	0.00	0.00
18,300.00	90.00	179.86	12,265.00	-6,156.61	-9.10	6,156.61	0.00	0.00	0.00
18,400.00	90.00	179.86	12,265.00	-6,256.61	-8.85	6,256.61	0.00	0.00	0.00
18,500.00	90.00	179.86	12,265.00	-6,356.61	-8.61	6,356.61	0.00	0.00	0.00
18,600.00	90.00	179.86	12,265.00	-6,456.61	-8.37	6,456.61	0.00	0.00	0.00
18,700.00	90.00	179.86	12,265.00	-6,556.61	-8.13	6,556.61	0.00	0.00	0.00
18,800.00	90.00	179.86	12,265.00	-6,656.61	-7.88	6,656.61	0.00	0.00	0.00
18,900.00	90.00	179.86	12,265.00	-6,756.60	-7.64	6,756.61	0.00	0.00	0.00
19,000.00	90.00	179.86	12,265.00	-6,856.60	-7.40	6,856.61	0.00	0.00	0.00
19,100.00	90.00	179.86	12,265.00	-6,956.60	-7.15	6,956.61	0.00	0.00	0.00
19,200.00	90.00	179.86	12,265.00	-7,056.60	-6.91	7,056.61	0.00	0.00	0.00
19,300.00	90.00	179.86	12,265.00	-7,156.60	-6.67	7,156.61	0.00	0.00	0.00
19,400.00	90.00	179.86	12,265.00	-7,256.60	-6.43	7,256.61	0.00	0.00	0.00
19,500.00	90.00	179.86	12,265.00	-7,356.60	-6.18	7,356.61	0.00	0.00	0.00
19,600.00	90.00	179.86	12,265.00	-7,456.60	-5.94	7,456.61	0.00	0.00	0.00
19,700.00	90.00	179.86	12,265.00	-7,556.60	-5.70	7,556.60	0.00	0.00	0.00
19,800.00	90.00	179.86	12,265.00	-7,656.60	-5.46	7,656.60	0.00	0.00	0.00
19,896.62	90.00	179.86	12,265.00	-7,753.22	-5.22	7,753.22	0.00	0.00	0.00
PLU 25 BD 122H_RSN 162H LTP_330FSL_160FEL - PLU 25 BD 701H_RSN 122H LTP_330FSL_160FEL									
19,898.90	90.00	179.86	12,265.00	-7,755.50	-5.22	7,755.50	0.00	0.00	0.00
PLU 25 BD 102H_RSN 152H LTP_330FSL_580FEL									
19,900.00	90.00	179.86	12,265.00	-7,756.60	-5.21	7,756.60	0.00	0.00	0.00
20,000.00	90.00	179.86	12,265.00	-7,856.60	-4.97	7,856.60	0.00	0.00	0.00
20,026.62	90.00	179.86	12,265.00	-7,883.22	-4.91	7,883.22	0.00	0.00	0.00
PLU 25 BD 122H_RSN 162H PBHL_200FSL_160FEL									
20,028.90	90.00	179.86	12,265.00	-7,885.50	-4.90	7,885.50	0.00	0.00	0.00
PLU 25 BD 102H_RSN 152H PBHL_200FSL_580FEL									

Planning Report

Database: CRUDE_EDM

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Company: XTO ENERGY INC.

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Project: Eddy County, NM (NMEZ) NAD27 Grid

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site: Poker Lake Unit 25 BD

North Reference:

Grid

Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Wellbore: 102H-152H

Design: Plan #1

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
PLU 25 BD 102H_RSN - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	400,944.60	652,665.10	32° 6' 4.872 N	103° 50' 25.139 W
PLU 25 BD 102H_RSN - plan hits target center - Rectangle (sides W100.00 H7,433.00 D0.00)	0.00	0.00	12,265.00	-7,885.50	-4.90	393,059.10	652,660.20	32° 4' 46.835 N	103° 50' 25.615 W
PLU 25 BD 102H_RSN - plan hits target center - Point	0.00	0.01	12,265.00	-453.36	-22.94	400,491.24	652,642.16	32° 6' 0.386 N	103° 50' 25.430 W
PLU 25 BD 102H_RSN - plan misses target center by 0.28usft at 19898.90usft MD (12265.00 TVD, -7755.50 N, -5.22 E) - Point	0.00	0.00	12,265.00	-7,755.50	-5.50	393,189.10	652,659.60	32° 4' 48.122 N	103° 50' 25.615 W
PLU 25 BD 102H_RSN - plan misses target center by 0.16usft at 12596.08usft MD (12265.00 TVD, -452.70 N, -22.94 E) - Point	0.00	0.00	12,265.00	-452.70	-23.10	400,491.90	652,642.00	32° 6' 0.393 N	103° 50' 25.432 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
965.00	965.00	Rustler			
1,215.00	1,215.00	Top Salt			
3,815.00	3,815.00	Base Salt			
4,015.05	4,015.00	Delaware			
7,844.69	7,840.00	Bone Spring			
8,869.69	8,865.00	1st Bone Spring Ss			
9,569.69	9,565.00	2nd Bone Spring Ss			
10,019.69	10,015.00	3rd Bone Spring Lm			
10,769.69	10,765.00	3rd Bone Spring Ss			
11,189.69	11,185.00	Wolfcamp			
11,269.69	11,265.00	Wolfcamp Y			
11,319.69	11,315.00	Wolfcamp A			
11,769.89	11,765.00	Wolfcamp B			
11,953.17	11,940.00	Wolfcamp C			
12,253.09	12,165.00	Wolfcamp D			
12,595.60	12,265.00	Wolfcamp E			
12,595.60	12,265.00	LP			

Anticollision Report

Company: XTO ENERGY INC. Local Co-ordinate Reference: Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Project: Eddy County, NM (NMEZ) NAD27 Grid TVD Reference: 3344+22 @ 3366.00usft (122-162 AK22)

Reference Site: Poker Lake Unit 25 BD MD Reference: 3344+22 @ 3366.00usft (122-162 AK22)

Site Error: 0.00 usft North Reference: Grid

Reference Well: PLU 25 BD 102H_RSN 152H Survey Calculation Method: Minimum Curvature

Well Error: 0.00 usft Output errors are at: 2.00 sigma

Reference Wellbore: 102H-152H Database: CRUDE_EDM

Reference Design: Plan #1 Offset TVD Reference: Reference Datum

Reference: Plan #1

Filter type: NO GLOBAL FILTER: Using user defined selection & filtering criteria

Interpolation Method: MD Interval 50.00usft Error Model: ISCWSA

Depth Range: Unlimited Scan Method: Closest Approach 3D

Results Limited by: Maximum separation factor of 4.00 Error Surface: Ellipsoid Separation

Warning Levels Evaluated at: 2.00 Sigma Casing Method: Not applied

Survey Tool Program Date 06/23/19

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	20,028.68	Plan #1 (102H-152H)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Poker Lake Unit 25 BD						
PLU 25 BD 122H_RSN 162H - 122H-162H - Plan #1	3,500.00	3,500.00	34.90	9.34	1.365	Level 3, CC
PLU 25 BD 122H_RSN 162H - 122H-162H - Plan #1	3,600.00	3,599.79	35.20	8.90	1.338	Level 3, ES
PLU 25 BD 122H_RSN 162H - 122H-162H - Plan #1	3,650.00	3,649.66	35.61	8.90	1.333	Level 3, SF
PLU 25 BD 701H_RSN 122H - 701H-122H - Plan #1	3,825.15	3,825.47	33.11	5.71	1.208	Level 2, CC
PLU 25 BD 701H_RSN 122H - 701H-122H - Plan #1	3,850.00	3,850.29	33.19	5.67	1.206	Level 2, ES, SF
PLU 36 BD BROMISTA MON STATE 1 - OH Offset - OH	18,153.58	12,243.00	152.65	-179.18	0.460	Level 1, CC
PLU 36 BD BROMISTA MON STATE 1 - OH Offset - OH	18,300.00	12,243.00	211.53	-646.09	0.247	Level 1, ES, SF
PokerLake20(Offset) - OH Offset - OH NoSurveys	15,000.00	12,243.00	829.64	8.27	1.010	Level 2, ES, SF
PokerLake20(Offset) - OH Offset - OH NoSurveys	15,521.85	12,243.00	644.96	226.61	1.542	CC
PokerLake4 - OH Offset - OH NoSurveys	14,749.67	12,243.00	1,519.62	990.23	2.871	CC
PokerLake4 - OH Offset - OH NoSurveys	15,250.00	12,243.00	1,599.87	881.87	2.228	ES
PokerLake4 - OH Offset - OH NoSurveys	15,500.00	12,243.00	1,694.77	908.54	2.156	SF
PreOngard56 (Offset) - OH Offset - OH NoSurveys						Out of range

Offset Design - Poker Lake Unit 25 BD - PLU 25 BD 122H_RSN 162H - 122H-162H - Plan #1														Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
1,200.00	1,200.00	1,200.00	1,200.00	4.95	4.95	-0.33	34.90	-0.20	34.90	25.88	9.02	3.868		
1,250.00	1,250.00	1,250.00	1,250.00	5.14	5.14	-0.33	34.90	-0.20	34.90	25.52	9.38	3.719		
1,300.00	1,300.00	1,300.00	1,300.00	5.32	5.32	-0.33	34.90	-0.20	34.90	25.15	9.75	3.581		
1,350.00	1,350.00	1,350.00	1,350.00	5.50	5.50	-0.33	34.90	-0.20	34.90	24.79	10.11	3.453		
1,400.00	1,400.00	1,400.00	1,400.00	5.69	5.69	-0.33	34.90	-0.20	34.90	24.43	10.47	3.334		
1,450.00	1,450.00	1,450.00	1,450.00	5.87	5.87	-0.33	34.90	-0.20	34.90	24.07	10.83	3.223		
1,500.00	1,500.00	1,500.00	1,500.00	6.05	6.05	-0.33	34.90	-0.20	34.90	23.71	11.19	3.119		
1,550.00	1,550.00	1,550.00	1,550.00	6.23	6.24	-0.33	34.90	-0.20	34.90	23.35	11.55	3.022		
1,600.00	1,600.00	1,600.00	1,600.00	6.42	6.42	-0.33	34.90	-0.20	34.90	22.99	11.91	2.930		
1,650.00	1,650.00	1,650.00	1,650.00	6.60	6.60	-0.33	34.90	-0.20	34.90	22.63	12.27	2.844		
1,700.00	1,700.00	1,700.00	1,700.00	6.78	6.78	-0.33	34.90	-0.20	34.90	22.27	12.63	2.763		
1,750.00	1,750.00	1,750.00	1,750.00	6.95	6.96	-0.33	34.90	-0.20	34.90	21.91	12.99	2.687		
1,800.00	1,800.00	1,800.00	1,800.00	7.14	7.15	-0.33	34.90	-0.20	34.90	21.55	13.35	2.614		
1,850.00	1,850.00	1,850.00	1,850.00	7.33	7.33	-0.33	34.90	-0.20	34.90	21.19	13.71	2.545		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: XTO ENERGY INC.

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Project: Eddy County, NM (NMEZ) NAD27 Grid

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Reference Site: Poker Lake Unit 25 BD

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site Error: 0.00 usft

North Reference:

Grid

Reference Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Well Error: 0.00 usft

Output errors are at

2.00 sigma

Reference Wellbore: 102H-152H

Database:

CRUDE_EDM

Reference Design: Plan #1

Offset TVD Reference:

Reference Datum

Offset Design Poker Lake Unit 25 BD - PLU 25 BD 122H_RSN 162H - 122H-162H - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)					
1,900.00	1,900.00	1,900.00	1,900.00	7.51	7.51	-0.33	34.90	-0.20	34.90	20.83	14.07	2.480			
1,950.00	1,950.00	1,950.00	1,950.00	7.69	7.69	-0.33	34.90	-0.20	34.90	20.47	14.43	2.419			
2,000.00	2,000.00	2,000.00	2,000.00	7.87	7.87	-0.33	34.90	-0.20	34.90	20.11	14.79	2.360			
2,050.00	2,050.00	2,050.00	2,050.00	8.05	8.05	-0.33	34.90	-0.20	34.90	19.75	15.15	2.304			
2,100.00	2,100.00	2,100.00	2,100.00	8.23	8.23	-0.33	34.90	-0.20	34.90	19.39	15.51	2.250			
2,150.00	2,150.00	2,150.00	2,150.00	8.41	8.41	-0.33	34.90	-0.20	34.90	19.03	15.87	2.199			
2,200.00	2,200.00	2,200.00	2,200.00	8.59	8.60	-0.33	34.90	-0.20	34.90	18.67	16.23	2.151			
2,250.00	2,250.00	2,250.00	2,250.00	8.77	8.78	-0.33	34.90	-0.20	34.90	18.31	16.59	2.104			
2,300.00	2,300.00	2,300.00	2,300.00	8.96	8.96	-0.33	34.90	-0.20	34.90	17.95	16.95	2.059			
2,350.00	2,350.00	2,350.00	2,350.00	9.14	9.14	-0.33	34.90	-0.20	34.90	17.59	17.31	2.017			
2,400.00	2,400.00	2,400.00	2,400.00	9.32	9.32	-0.33	34.90	-0.20	34.90	17.23	17.67	1.976			
2,450.00	2,450.00	2,450.00	2,450.00	9.50	9.50	-0.33	34.90	-0.20	34.90	16.88	18.03	1.936			
2,500.00	2,500.00	2,500.00	2,500.00	9.68	9.68	-0.33	34.90	-0.20	34.90	16.52	18.38	1.898			
2,550.00	2,550.00	2,550.00	2,550.00	9.86	9.86	-0.33	34.90	-0.20	34.90	16.16	18.74	1.862			
2,600.00	2,600.00	2,600.00	2,600.00	10.04	10.04	-0.33	34.90	-0.20	34.90	15.80	19.10	1.827			
2,650.00	2,650.00	2,650.00	2,650.00	10.22	10.22	-0.33	34.90	-0.20	34.90	15.44	19.46	1.793			
2,700.00	2,700.00	2,700.00	2,700.00	10.40	10.40	-0.33	34.90	-0.20	34.90	15.08	19.82	1.761			
2,750.00	2,750.00	2,750.00	2,750.00	10.58	10.58	-0.33	34.90	-0.20	34.90	14.72	20.18	1.729			
2,800.00	2,800.00	2,800.00	2,800.00	10.76	10.76	-0.33	34.90	-0.20	34.90	14.36	20.54	1.699			
2,850.00	2,850.00	2,850.00	2,850.00	10.94	10.94	-0.33	34.90	-0.20	34.90	14.00	20.90	1.670			
2,900.00	2,900.00	2,900.00	2,900.00	11.12	11.12	-0.33	34.90	-0.20	34.90	13.64	21.26	1.642			
2,950.00	2,950.00	2,950.00	2,950.00	11.30	11.30	-0.33	34.90	-0.20	34.90	13.28	21.62	1.615			
3,000.00	3,000.00	3,000.00	3,000.00	11.48	11.48	-0.33	34.90	-0.20	34.90	12.93	21.98	1.588			
3,050.00	3,050.00	3,050.00	3,050.00	11.66	11.66	-0.33	34.90	-0.20	34.90	12.57	22.33	1.563			
3,100.00	3,100.00	3,100.00	3,100.00	11.84	11.84	-0.33	34.90	-0.20	34.90	12.21	22.69	1.538			
3,150.00	3,150.00	3,150.00	3,150.00	12.02	12.02	-0.33	34.90	-0.20	34.90	11.85	23.05	1.514			
3,200.00	3,200.00	3,200.00	3,200.00	12.20	12.20	-0.33	34.90	-0.20	34.90	11.49	23.41	1.491 Level 3			
3,250.00	3,250.00	3,250.00	3,250.00	12.38	12.38	-0.33	34.90	-0.20	34.90	11.13	23.77	1.468 Level 3			
3,300.00	3,300.00	3,300.00	3,300.00	12.56	12.56	-0.33	34.90	-0.20	34.90	10.77	24.13	1.446 Level 3			
3,350.00	3,350.00	3,350.00	3,350.00	12.74	12.74	-0.33	34.90	-0.20	34.90	10.41	24.49	1.425 Level 3			
3,400.00	3,400.00	3,400.00	3,400.00	12.92	12.92	-0.33	34.90	-0.20	34.90	10.05	24.85	1.405 Level 3			
3,450.00	3,450.00	3,450.00	3,450.00	13.10	13.10	-0.33	34.90	-0.20	34.90	9.69	25.21	1.385 Level 3			
3,500.00	3,500.00	3,500.00	3,500.00	13.28	13.28	-0.33	34.90	-0.20	34.90	9.34	25.56	1.365 Level 3, CC			
3,550.00	3,550.00	3,549.90	3,549.90	13.46	13.45	0.01	34.97	0.00	34.97	9.05	25.93	1.349 Level 3			
3,600.00	3,600.00	3,599.79	3,599.78	13.64	13.62	1.00	35.20	0.62	35.20	8.90	26.31	1.338 Level 3, ES			
3,650.00	3,650.00	3,649.66	3,649.64	13.82	13.79	2.63	35.57	1.64	35.61	8.90	26.71	1.333 Level 3, SF			
3,700.00	3,700.00	3,699.51	3,699.47	14.00	13.95	4.85	36.09	3.06	36.22	9.09	27.13	1.335 Level 3			
3,750.00	3,750.00	3,749.33	3,749.25	14.18	14.11	7.59	36.76	4.90	37.09	9.53	27.56	1.346 Level 3			
3,800.00	3,800.00	3,799.11	3,798.98	14.36	14.28	10.75	37.57	7.14	38.25	10.26	27.99	1.367 Level 3			
3,850.00	3,850.00	3,848.85	3,848.64	14.54	14.44	25.87	38.53	9.78	39.58	11.14	28.44	1.392 Level 3			
3,900.00	3,900.00	3,898.54	3,898.22	14.72	14.60	30.00	39.64	12.82	40.94	12.07	28.88	1.418 Level 3			
3,950.00	3,949.98	3,948.17	3,947.71	14.90	14.77	34.60	40.89	16.26	42.44	13.13	29.31	1.448 Level 3			
4,000.00	3,999.96	3,997.73	3,997.10	15.08	14.93	39.58	42.29	20.10	44.18	14.46	29.72	1.487 Level 3			
4,050.00	4,049.92	4,047.20	4,046.37	15.26	15.10	44.84	43.83	24.34	46.26	16.16	30.10	1.537			
4,100.00	4,099.86	4,096.59	4,095.51	15.44	15.26	50.24	45.51	28.96	48.80	18.34	30.45	1.602			
4,150.00	4,149.78	4,145.88	4,144.51	15.61	15.43	55.66	47.34	33.97	51.87	21.10	30.77	1.686			
4,200.00	4,199.68	4,195.06	4,193.36	15.79	15.59	60.96	49.30	39.37	55.55	24.49	31.06	1.789			
4,250.00	4,249.54	4,244.13	4,242.04	15.97	15.75	66.03	51.40	45.14	59.89	28.57	31.32	1.912			
4,300.00	4,299.36	4,293.07	4,290.54	16.15	15.92	70.80	53.64	51.30	64.93	33.37	31.56	2.057			
4,350.00	4,349.18	4,342.41	4,339.40	16.33	16.08	75.14	55.99	57.74	70.57	38.73	31.85	2.216			
4,400.00	4,398.99	4,391.83	4,388.34	16.51	16.25	78.83	58.34	64.21	76.57	44.43	32.14	2.382			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: XTO ENERGY INC.
Project: Eddy County, NM (NMEZ) NAD27 Grid
Reference Site: Poker Lake Unit 25 BD
Site Error: 0.00 usft
Reference Well: PLU 25 BD 102H_RSN 152H
Well Error: 0.00 usft
Reference Wellbore: 102H-152H
Reference Design: Plan #1

Local Co-ordinate Reference: Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
TVD Reference: 3344+22 @ 3366.00usft (122-162 AK22)
MD Reference: 3344+22 @ 3366.00usft (122-162 AK22)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: CRUDE_EDM
Offset TVD Reference: Reference Datum

Offset Design Poker Lake Unit 25 BD - PLU 25 BD 122H_RSN 162H - 122H-162H - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
4,450.00	4,448.79	4,441.24	4,437.27	16.69	16.41	81.97	60.69	70.67	82.83	50.40	32.43	2.554			
4,500.00	4,498.60	4,490.66	4,486.20	16.86	16.58	84.67	63.05	77.13	89.31	56.57	32.74	2.728			
4,550.00	4,548.41	4,540.07	4,535.14	17.04	16.75	87.00	65.40	83.59	95.95	62.91	33.04	2.904			
4,600.00	4,598.22	4,589.48	4,584.07	17.22	16.91	89.03	67.75	90.06	102.74	69.38	33.35	3.080			
4,650.00	4,648.03	4,638.90	4,633.00	17.40	17.08	90.81	70.10	96.52	109.63	75.96	33.67	3.256			
4,700.00	4,697.84	4,688.31	4,681.94	17.58	17.25	92.38	72.45	102.98	116.61	82.62	33.99	3.431			
4,750.00	4,747.65	4,737.73	4,730.67	17.76	17.42	93.76	74.81	109.44	123.68	89.36	34.32	3.604			
4,800.00	4,797.46	4,787.14	4,779.81	17.94	17.59	95.00	77.16	115.91	130.80	96.16	34.64	3.776			
4,850.00	4,847.27	4,836.56	4,828.74	18.11	17.76	96.11	79.51	122.37	137.98	103.01	34.97	3.945			
15,950.00	12,265.00	16,031.51	12,266.00	52.17	53.09	-90.14	-3,805.55	404.79	419.60	314.47	105.13	3.991			
16,000.00	12,265.00	16,081.51	12,266.00	52.37	53.30	-90.14	-3,855.55	404.92	419.60	314.06	105.55	3.975			
16,050.00	12,265.00	16,131.51	12,266.00	52.58	53.51	-90.14	-3,905.55	405.05	419.61	313.63	105.97	3.960			
16,100.00	12,265.00	16,181.51	12,266.00	52.79	53.73	-90.14	-3,955.55	405.17	419.61	313.21	106.40	3.944			
16,150.00	12,265.00	16,231.51	12,266.00	53.01	53.95	-90.14	-4,005.55	405.30	419.62	312.78	106.84	3.928			
16,200.00	12,265.00	16,281.51	12,266.00	53.22	54.17	-90.14	-4,055.55	405.43	419.62	312.35	107.27	3.912			
16,250.00	12,265.00	16,331.51	12,266.00	53.44	54.39	-90.14	-4,105.55	405.55	419.63	311.92	107.71	3.896			
16,300.00	12,265.00	16,381.51	12,266.00	53.66	54.61	-90.14	-4,155.55	405.68	419.63	311.48	108.16	3.880			
16,350.00	12,265.00	16,431.51	12,266.00	53.88	54.84	-90.14	-4,205.55	405.81	419.64	311.03	108.60	3.864			
16,400.00	12,265.00	16,481.51	12,266.00	54.11	55.07	-90.14	-4,255.55	405.93	419.64	310.59	109.05	3.848			
16,450.00	12,265.00	16,531.51	12,266.00	54.33	55.29	-90.14	-4,305.55	406.06	419.65	310.14	109.51	3.832			
16,500.00	12,265.00	16,581.51	12,266.00	54.56	55.52	-90.14	-4,355.55	406.18	419.65	309.69	109.97	3.816			
16,550.00	12,265.00	16,631.51	12,266.00	54.79	55.76	-90.14	-4,405.55	406.31	419.66	309.23	110.43	3.800			
16,600.00	12,265.00	16,681.51	12,266.00	55.02	55.99	-90.14	-4,455.55	406.44	419.66	308.77	110.89	3.784			
16,650.00	12,265.00	16,731.51	12,266.00	55.25	56.23	-90.14	-4,505.55	406.56	419.67	308.31	111.36	3.769			
16,700.00	12,265.00	16,781.51	12,266.00	55.48	56.46	-90.14	-4,555.55	406.69	419.67	307.84	111.83	3.753			
16,750.00	12,265.00	16,831.51	12,266.00	55.72	56.70	-90.14	-4,605.55	406.82	419.68	307.37	112.31	3.737			
16,800.00	12,265.00	16,881.51	12,266.00	55.96	56.94	-90.14	-4,655.55	406.94	419.68	306.90	112.78	3.721			
16,850.00	12,265.00	16,931.51	12,266.00	56.19	57.18	-90.14	-4,705.55	407.07	419.69	306.42	113.27	3.705			
16,900.00	12,265.00	16,981.51	12,266.00	56.43	57.43	-90.14	-4,755.55	407.20	419.69	305.95	113.75	3.690			
16,950.00	12,265.00	17,031.51	12,266.00	56.68	57.67	-90.14	-4,805.55	407.32	419.70	305.46	114.24	3.674			
17,000.00	12,265.00	17,081.51	12,266.00	56.92	57.92	-90.14	-4,855.55	407.45	419.70	304.98	114.73	3.658			
17,050.00	12,265.00	17,131.51	12,266.00	57.16	58.16	-90.14	-4,905.55	407.58	419.71	304.49	115.22	3.643			
17,100.00	12,265.00	17,181.51	12,266.00	57.41	58.41	-90.14	-4,955.55	407.70	419.71	304.00	115.71	3.627			
17,150.00	12,265.00	17,231.51	12,266.00	57.66	58.66	-90.14	-5,005.55	407.83	419.72	303.50	116.21	3.612			
17,200.00	12,265.00	17,281.51	12,266.00	57.91	58.92	-90.14	-5,055.55	407.95	419.72	303.01	116.72	3.596			
17,250.00	12,265.00	17,331.51	12,266.00	58.16	59.17	-90.14	-5,105.55	408.08	419.73	302.51	117.22	3.581			
17,300.00	12,265.00	17,381.51	12,266.00	58.41	59.42	-90.14	-5,155.55	408.21	419.73	302.01	117.73	3.565			
17,350.00	12,265.00	17,431.51	12,266.00	58.66	59.68	-90.14	-5,205.55	408.33	419.74	301.50	118.24	3.550			
17,400.00	12,265.00	17,481.51	12,266.00	58.92	59.94	-90.14	-5,255.55	408.46	419.74	300.99	118.75	3.535			
17,450.00	12,265.00	17,531.51	12,266.00	59.18	60.20	-90.14	-5,305.55	408.59	419.75	300.48	119.27	3.519			
17,500.00	12,265.00	17,581.51	12,266.00	59.43	60.46	-90.14	-5,355.55	408.71	419.75	299.97	119.78	3.504			
17,550.00	12,265.00	17,631.51	12,266.00	59.69	60.72	-90.14	-5,405.55	408.84	419.76	299.45	120.31	3.489			
17,600.00	12,265.00	17,681.51	12,266.00	59.95	60.98	-90.14	-5,455.55	408.97	419.76	298.93	120.83	3.474			
17,650.00	12,265.00	17,731.51	12,266.00	60.22	61.25	-90.14	-5,505.55	409.09	419.77	298.41	121.36	3.459			
17,700.00	12,265.00	17,781.51	12,266.00	60.48	61.51	-90.14	-5,555.55	409.22	419.77	297.89	121.88	3.444			
17,750.00	12,265.00	17,831.51	12,266.00	60.74	61.78	-90.14	-5,605.55	409.34	419.78	297.36	122.42	3.429			
17,800.00	12,265.00	17,881.51	12,266.00	61.01	62.04	-90.14	-5,655.55	409.47	419.78	296.83	122.95	3.414			
17,850.00	12,265.00	17,931.51	12,266.00	61.28	62.31	-90.14	-5,705.55	409.60	419.79	296.30	123.49	3.399			
17,900.00	12,265.00	17,981.51	12,266.00	61.54	62.58	-90.14	-5,755.55	409.72	419.79	295.77	124.02	3.385			
17,950.00	12,265.00	18,031.51	12,266.00	61.81	62.86	-90.14	-5,805.55	409.85	419.80	295.23	124.57	3.370			
18,000.00	12,265.00	18,081.51	12,266.00	62.08	63.13	-90.14	-5,855.55	409.98	419.80	294.70	125.11	3.356			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: XTO ENERGY INC.

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Project: Eddy County, NM (NMEZ) NAD27 Grid

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Reference Site: Poker Lake Unit 25 BD

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site Error: 0.00 usft

North Reference:

Grid

Reference Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Well Error: 0.00 usft

Output errors are at

2.00 sigma

Reference Wellbore: 102H-152H

Database:

CRUDE_EDM

Reference Design: Plan #1

Offset TVD Reference:

Reference Datum

Offset Design													Offset Site Error:		0.00 usft
Poker Lake Unit 25 BD - PLU 25 BD 122H_RSN 162H - 122H-162H - Plan #1													Offset Well Error:		0.00 usft
Survey Program: 0-MWD+IFR1+MS															
Reference				Offset			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
18,050.00	12,265.00	18,131.51	12,266.00	62.36	63.40	-90.14	-5,905.55	410.10	419.81	294.15	125.65	3.341			
18,100.00	12,265.00	18,181.51	12,266.00	62.63	63.68	-90.14	-5,955.55	410.23	419.81	293.61	126.20	3.327			
18,150.00	12,265.00	18,231.51	12,266.00	62.90	63.95	-90.14	-6,005.55	410.36	419.82	293.07	126.75	3.312			
18,200.00	12,265.00	18,281.51	12,266.00	63.18	64.23	-90.14	-6,055.55	410.48	419.82	292.52	127.30	3.298			
18,250.00	12,265.00	18,331.51	12,266.00	63.45	64.51	-90.14	-6,105.55	410.61	419.83	291.97	127.86	3.284			
18,300.00	12,265.00	18,381.51	12,266.00	63.73	64.79	-90.14	-6,155.55	410.74	419.83	291.42	128.42	3.269			
18,350.00	12,265.00	18,431.51	12,266.00	64.01	65.07	-90.14	-6,205.55	410.86	419.84	290.86	128.98	3.255			
18,400.00	12,265.00	18,481.51	12,266.00	64.29	65.35	-90.14	-6,255.54	410.99	419.84	290.31	129.54	3.241			
18,450.00	12,265.00	18,531.51	12,266.00	64.57	65.63	-90.14	-6,305.54	411.11	419.85	289.75	130.10	3.227			
18,500.00	12,265.00	18,581.51	12,266.00	64.85	65.91	-90.14	-6,355.54	411.24	419.85	289.19	130.66	3.213			
18,550.00	12,265.00	18,631.51	12,266.00	65.13	66.20	-90.14	-6,405.54	411.37	419.86	288.63	131.23	3.199			
18,600.00	12,265.00	18,681.51	12,266.00	65.42	66.48	-90.14	-6,455.54	411.49	419.86	288.06	131.80	3.186			
18,650.00	12,265.00	18,731.51	12,266.00	65.70	66.77	-90.14	-6,505.54	411.62	419.87	287.50	132.37	3.172			
18,700.00	12,265.00	18,781.51	12,266.00	65.99	67.05	-90.14	-6,555.54	411.75	419.87	286.93	132.94	3.158			
18,750.00	12,265.00	18,831.51	12,266.00	66.27	67.34	-90.14	-6,605.54	411.87	419.88	286.36	133.52	3.145			
18,800.00	12,265.00	18,881.51	12,266.00	66.56	67.63	-90.14	-6,655.54	412.00	419.88	285.79	134.10	3.131			
18,850.00	12,265.00	18,931.51	12,266.00	66.85	67.92	-90.14	-6,705.54	412.13	419.89	285.21	134.68	3.118			
18,900.00	12,265.00	18,981.51	12,266.00	67.14	68.21	-90.14	-6,755.54	412.25	419.89	284.64	135.26	3.104			
18,950.00	12,265.00	19,031.51	12,266.00	67.43	68.50	-90.14	-6,805.54	412.38	419.90	284.06	135.84	3.091			
19,000.00	12,265.00	19,081.51	12,266.00	67.72	68.80	-90.14	-6,855.54	412.50	419.90	283.48	136.42	3.078			
19,050.00	12,265.00	19,131.51	12,266.00	68.01	69.09	-90.14	-6,905.54	412.63	419.91	282.90	137.01	3.065			
19,100.00	12,265.00	19,181.51	12,266.00	68.31	69.38	-90.14	-6,955.54	412.76	419.91	282.32	137.60	3.052			
19,150.00	12,265.00	19,231.51	12,266.00	68.60	69.68	-90.14	-7,005.54	412.88	419.92	281.73	138.19	3.039			
19,200.00	12,265.00	19,281.51	12,266.00	68.90	69.98	-90.14	-7,055.54	413.01	419.92	281.15	138.78	3.026			
19,250.00	12,265.00	19,331.51	12,266.00	69.19	70.27	-90.14	-7,105.54	413.14	419.93	280.56	139.37	3.013			
19,300.00	12,265.00	19,381.51	12,266.00	69.49	70.57	-90.14	-7,155.54	413.26	419.93	279.97	139.96	3.000			
19,350.00	12,265.00	19,431.51	12,266.00	69.79	70.87	-90.14	-7,205.54	413.39	419.94	279.38	140.56	2.988			
19,400.00	12,265.00	19,481.51	12,266.00	70.08	71.17	-90.14	-7,255.54	413.52	419.95	278.79	141.16	2.975			
19,450.00	12,265.00	19,531.51	12,266.00	70.38	71.47	-90.14	-7,305.54	413.64	419.95	278.19	141.76	2.962			
19,500.00	12,265.00	19,581.51	12,266.00	70.68	71.77	-90.14	-7,355.54	413.77	419.96	277.60	142.36	2.950			
19,550.00	12,265.00	19,631.51	12,266.00	70.98	72.07	-90.14	-7,405.54	413.90	419.96	277.00	142.96	2.938			
19,600.00	12,265.00	19,681.51	12,266.00	71.29	72.37	-90.14	-7,455.54	414.02	419.97	276.40	143.57	2.925			
19,650.00	12,265.00	19,731.51	12,266.00	71.59	72.68	-90.14	-7,505.54	414.15	419.97	275.80	144.17	2.913			
19,700.00	12,265.00	19,781.51	12,266.00	71.89	72.98	-90.14	-7,555.54	414.27	419.98	275.20	144.78	2.901			
19,750.00	12,265.00	19,831.51	12,266.00	72.19	73.29	-90.14	-7,605.54	414.40	419.98	274.59	145.39	2.889			
19,800.00	12,265.00	19,881.51	12,266.00	72.50	73.59	-90.14	-7,655.54	414.53	419.99	273.99	146.00	2.877			
19,850.00	12,265.00	19,931.51	12,266.00	72.80	73.90	-90.14	-7,705.54	414.65	419.99	273.38	146.61	2.865			
19,900.00	12,265.00	19,981.51	12,266.00	73.11	74.20	-90.14	-7,755.54	414.78	420.00	272.77	147.22	2.853			
19,950.00	12,265.00	20,031.51	12,266.00	73.42	74.51	-90.14	-7,805.54	414.91	420.00	272.16	147.84	2.841			
20,000.00	12,265.00	20,081.51	12,266.00	73.72	74.82	-90.14	-7,855.54	415.03	420.01	271.55	148.45	2.829			
20,002.11	12,265.00	20,083.61	12,266.00	73.74	74.83	-90.14	-7,857.64	415.04	420.01	271.52	148.48	2.829			
20,028.90	12,265.00	20,108.17	12,266.00	73.90	74.98	-90.14	-7,882.20	415.10	420.01	271.20	148.81	2.822			

Anticollision Report

Company: XTO ENERGY INC.

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Project: Eddy County, NM (NMEZ) NAD27 Grid

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Reference Site: Poker Lake Unit 25 BD

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site Error: 0.00 usft

North Reference:

Grid

Reference Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Well Error: 0.00 usft

Output errors are at

2.00 sigma

Reference Wellbore: 102H-152H

Database:

CRUDE_EDM

Reference Design: Plan #1

Offset TVD Reference:

Reference Datum

Offset Design - Poker Lake Unit 25 BD - PLU 25 BD 701H_RSN 122H - 701H-122H - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
1,200.00	1,200.00	1,200.00	1,200.00	4.95	4.95	179.67	-35.00	0.20	35.00	25.98	9.02	3.880			
1,250.00	1,250.00	1,250.00	1,250.00	5.14	5.14	179.67	-35.00	0.20	35.00	25.62	9.38	3.730			
1,300.00	1,300.00	1,300.00	1,300.00	5.32	5.32	179.67	-35.00	0.20	35.00	25.26	9.74	3.592			
1,350.00	1,350.00	1,350.00	1,350.00	5.50	5.50	179.67	-35.00	0.20	35.00	24.90	10.11	3.464			
1,400.00	1,400.00	1,400.00	1,400.00	5.69	5.69	179.67	-35.00	0.20	35.00	24.53	10.47	3.344			
1,450.00	1,450.00	1,450.00	1,450.00	5.87	5.87	179.67	-35.00	0.20	35.00	24.17	10.83	3.233			
1,500.00	1,500.00	1,500.00	1,500.00	6.05	6.05	179.67	-35.00	0.20	35.00	23.81	11.19	3.128			
1,550.00	1,550.00	1,550.00	1,550.00	6.23	6.23	179.67	-35.00	0.20	35.00	23.45	11.55	3.031			
1,600.00	1,600.00	1,600.00	1,600.00	6.42	6.42	179.67	-35.00	0.20	35.00	23.09	11.91	2.939			
1,650.00	1,650.00	1,650.00	1,650.00	6.60	6.60	179.67	-35.00	0.20	35.00	22.73	12.27	2.853			
1,700.00	1,700.00	1,700.00	1,700.00	6.78	6.78	179.67	-35.00	0.20	35.00	22.37	12.63	2.771			
1,750.00	1,750.00	1,750.00	1,750.00	6.96	6.96	179.67	-35.00	0.20	35.00	22.01	12.99	2.695			
1,800.00	1,800.00	1,800.00	1,800.00	7.14	7.14	179.67	-35.00	0.20	35.00	21.65	13.35	2.622			
1,850.00	1,850.00	1,850.00	1,850.00	7.33	7.33	179.67	-35.00	0.20	35.00	21.29	13.71	2.553			
1,900.00	1,900.00	1,900.00	1,900.00	7.51	7.51	179.67	-35.00	0.20	35.00	20.93	14.07	2.488			
1,950.00	1,950.00	1,950.00	1,950.00	7.69	7.69	179.67	-35.00	0.20	35.00	20.57	14.43	2.426			
2,000.00	2,000.00	2,000.00	2,000.00	7.87	7.87	179.67	-35.00	0.20	35.00	20.21	14.79	2.367			
2,050.00	2,050.00	2,050.00	2,050.00	8.05	8.05	179.67	-35.00	0.20	35.00	19.85	15.15	2.311			
2,100.00	2,100.00	2,100.00	2,100.00	8.23	8.23	179.67	-35.00	0.20	35.00	19.49	15.51	2.257			
2,150.00	2,150.00	2,150.00	2,150.00	8.41	8.41	179.67	-35.00	0.20	35.00	19.13	15.87	2.206			
2,200.00	2,200.00	2,200.00	2,200.00	8.59	8.59	179.67	-35.00	0.20	35.00	18.77	16.23	2.157			
2,250.00	2,250.00	2,250.00	2,250.00	8.77	8.77	179.67	-35.00	0.20	35.00	18.41	16.59	2.110			
2,300.00	2,300.00	2,300.00	2,300.00	8.96	8.96	179.67	-35.00	0.20	35.00	18.06	16.95	2.066			
2,350.00	2,350.00	2,350.00	2,350.00	9.14	9.14	179.67	-35.00	0.20	35.00	17.70	17.30	2.023			
2,400.00	2,400.00	2,400.00	2,400.00	9.32	9.32	179.67	-35.00	0.20	35.00	17.34	17.66	1.981			
2,450.00	2,450.00	2,450.00	2,450.00	9.50	9.50	179.67	-35.00	0.20	35.00	16.98	18.02	1.942			
2,500.00	2,500.00	2,500.00	2,500.00	9.68	9.68	179.67	-35.00	0.20	35.00	16.62	18.38	1.904			
2,550.00	2,550.00	2,550.00	2,550.00	9.86	9.86	179.67	-35.00	0.20	35.00	16.26	18.74	1.868			
2,600.00	2,600.00	2,600.00	2,600.00	10.04	10.04	179.67	-35.00	0.20	35.00	15.90	19.10	1.832			
2,650.00	2,650.00	2,650.00	2,650.00	10.22	10.22	179.67	-35.00	0.20	35.00	15.54	19.46	1.799			
2,700.00	2,700.00	2,700.00	2,700.00	10.40	10.40	179.67	-35.00	0.20	35.00	15.18	19.82	1.766			
2,750.00	2,750.00	2,750.00	2,750.00	10.58	10.58	179.67	-35.00	0.20	35.00	14.82	20.18	1.735			
2,800.00	2,800.00	2,800.00	2,800.00	10.76	10.76	179.67	-35.00	0.20	35.00	14.46	20.54	1.704			
2,850.00	2,850.00	2,850.00	2,850.00	10.94	10.94	179.67	-35.00	0.20	35.00	14.10	20.90	1.675			
2,900.00	2,900.00	2,900.00	2,900.00	11.12	11.12	179.67	-35.00	0.20	35.00	13.74	21.26	1.647			
2,950.00	2,950.00	2,950.00	2,950.00	11.30	11.30	179.67	-35.00	0.20	35.00	13.39	21.61	1.619			
3,000.00	3,000.00	3,000.00	3,000.00	11.48	11.48	179.67	-35.00	0.20	35.00	13.03	21.97	1.593			
3,050.00	3,050.00	3,050.00	3,050.00	11.66	11.66	179.67	-35.00	0.20	35.00	12.67	22.33	1.567			
3,100.00	3,100.00	3,100.00	3,100.00	11.84	11.84	179.67	-35.00	0.20	35.00	12.31	22.69	1.542			
3,150.00	3,150.00	3,150.00	3,150.00	12.02	12.02	179.67	-35.00	0.20	35.00	11.95	23.05	1.518			
3,200.00	3,200.00	3,200.00	3,200.00	12.20	12.20	179.67	-35.00	0.20	35.00	11.59	23.41	1.495 Level 3			
3,250.00	3,250.00	3,250.00	3,250.00	12.38	12.38	179.67	-35.00	0.20	35.00	11.23	23.77	1.473 Level 3			
3,300.00	3,300.00	3,300.00	3,300.00	12.56	12.56	179.67	-35.00	0.20	35.00	10.87	24.13	1.451 Level 3			
3,350.00	3,350.00	3,350.00	3,350.00	12.74	12.74	179.67	-35.00	0.20	35.00	10.51	24.49	1.429 Level 3			
3,400.00	3,400.00	3,400.00	3,400.00	12.92	12.92	179.67	-35.00	0.20	35.00	10.16	24.85	1.409 Level 3			
3,450.00	3,450.00	3,450.00	3,450.00	13.10	13.10	179.67	-35.00	0.20	35.00	9.80	25.20	1.389 Level 3			
3,500.00	3,500.00	3,500.00	3,500.00	13.28	13.28	179.67	-35.00	0.20	35.00	9.44	25.56	1.369 Level 3			
3,550.00	3,550.00	3,550.10	3,550.10	13.46	13.45	179.33	-34.93	0.41	34.93	9.03	25.90	1.348 Level 3			
3,600.00	3,600.00	3,600.20	3,600.19	13.64	13.62	178.31	-34.70	1.02	34.72	8.50	26.22	1.324 Level 3			
3,650.00	3,650.00	3,650.27	3,650.26	13.82	13.79	176.58	-34.33	2.05	34.39	7.88	26.51	1.297 Level 3			
3,700.00	3,700.00	3,700.33	3,700.29	14.00	13.95	174.10	-33.80	3.49	33.98	7.20	26.79	1.269 Level 3			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: XTO ENERGY INC.

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Project: Eddy County, NM (NMEZ) NAD27 Grid

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Reference Site: Poker Lake Unit 25 BD

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site Error: 0.00 usft

North Reference:

Grid

Reference Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Well Error: 0.00 usft

Output errors are at

2.00 sigma

Reference Wellbore: 102H-152H

Database:

CRUDE_EDM

Reference Design: Plan #1

Offset TVD Reference:

Reference Datum

Offset Design Poker Lake Unit 25 BD - PLU 25 BD 701H_RSN 122H - 701H-122H - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
3,750.00	3,750.00	3,750.36	3,750.28	14.18	14.11	170.85	-33.13	5.34	33.56	6.52	27.04	1.241	Level 2		
3,800.00	3,800.00	3,800.34	3,800.21	14.36	14.28	166.77	-32.31	7.60	33.19	5.91	27.28	1.217	Level 2		
3,825.15	3,825.15	3,825.47	3,825.29	14.45	14.36	175.92	-31.84	8.88	33.11	5.71	27.40	1.208	Level 2, CC		
3,850.00	3,850.00	3,850.29	3,850.07	14.54	14.44	173.42	-31.34	10.26	33.19	5.67	27.52	1.206	Level 2, ES, SF		
3,900.00	3,900.00	3,900.18	3,899.65	14.72	14.61	168.02	-30.22	13.33	33.88	6.12	27.76	1.220	Level 2		
3,950.00	3,949.98	3,950.01	3,949.54	14.90	14.77	162.39	-28.96	16.80	35.35	7.32	28.02	1.261	Level 3		
4,000.00	3,999.96	3,999.76	3,999.13	15.08	14.94	156.87	-27.55	20.67	37.63	9.32	28.31	1.329	Level 3		
4,050.00	4,049.92	4,049.44	4,049.60	15.26	15.10	151.73	-26.00	24.94	40.76	12.13	28.62	1.424	Level 3		
4,100.00	4,099.86	4,099.03	4,097.94	15.44	15.27	147.15	-24.30	29.60	44.71	15.75	28.96	1.544			
4,150.00	4,149.78	4,148.52	4,147.13	15.61	15.43	143.18	-22.46	34.65	49.44	20.13	29.31	1.687			
4,200.00	4,199.68	4,197.90	4,195.17	15.79	15.60	139.81	-20.48	40.09	54.93	25.25	29.66	1.852			
4,250.00	4,249.54	4,247.16	4,245.05	15.97	15.76	137.00	-18.36	45.91	61.13	31.10	30.02	2.036			
4,300.00	4,299.36	4,296.30	4,293.74	16.15	15.93	134.67	-16.10	52.11	68.00	37.61	30.38	2.238			
4,350.00	4,349.18	4,345.69	4,342.64	16.33	16.09	132.77	-13.75	58.57	75.25	44.50	30.76	2.447			
4,400.00	4,398.99	4,395.10	4,391.58	16.51	16.26	131.20	-11.40	65.03	82.58	51.44	31.13	2.652			
4,450.00	4,448.79	4,444.52	4,440.51	16.69	16.42	129.89	-9.05	71.50	89.95	58.45	31.51	2.855			
4,500.00	4,498.60	4,493.93	4,489.45	16.86	16.59	128.78	-6.70	77.96	97.37	65.49	31.88	3.054			
4,550.00	4,548.41	4,543.34	4,538.38	17.04	16.76	127.83	-4.35	84.42	104.81	72.56	32.25	3.250			
4,600.00	4,598.22	4,592.76	4,587.31	17.22	16.92	127.00	-1.99	90.88	112.28	79.66	32.62	3.442			
4,650.00	4,648.03	4,642.17	4,636.25	17.40	17.09	126.28	0.36	97.35	119.77	86.78	32.99	3.631			
4,700.00	4,697.84	4,691.59	4,685.18	17.58	17.26	125.64	2.71	103.81	127.28	93.92	33.35	3.816			
4,750.00	4,747.65	4,741.00	4,734.11	17.76	17.43	125.07	5.06	110.27	134.80	101.08	33.72	3.998			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: XTO ENERGY INC.

Local Co-ordinate Reference:

Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Project: Eddy County, NM (NMEZ) NAD27 Grid

TVD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Reference Site: Poker Lake Unit 25 BD

MD Reference:

3344+22 @ 3366.00usft (122-162 AK22)

Site Error: 0.00 usft

North Reference:

Grid

Reference Well: PLU 25 BD 102H_RSN 152H

Survey Calculation Method:

Minimum Curvature

Well Error: 0.00 usft

Output errors are at

2.00 sigma

Reference Wellbore: 102H-152H

Database:

CRUDE_EDM

Reference Design: Plan #1

Offset TVD Reference:

Reference Datum

Offset Design - Poker Lake Unit 25 BD - PLU 36 BD BROMISTA MON STATE 1 - OH Offset - OH NoSurveys														Offset Site Error:	0.00 usft
Survey Program: 500-INC-ONLY														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		Between Centres (usft)	Between Ellipses (usft)							
16,150.00	12,265.00	12,243.00	12,265.00	53.01	802.21	-90.00	-6,009.80	143.20	2,009.37	1,499.87	509.50	3.944			
16,200.00	12,265.00	12,243.00	12,265.00	53.22	802.21	-90.00	-6,009.80	143.20	1,959.52	1,453.25	506.27	3.871			
16,250.00	12,265.00	12,243.00	12,265.00	53.44	802.21	-90.00	-6,009.80	143.20	1,909.67	1,406.78	502.89	3.797			
16,300.00	12,265.00	12,243.00	12,265.00	53.65	802.21	-90.00	-6,009.80	143.20	1,859.84	1,360.48	499.35	3.724			
16,350.00	12,265.00	12,243.00	12,265.00	53.88	802.21	-90.00	-6,009.80	143.20	1,810.01	1,314.36	495.65	3.652			
16,400.00	12,265.00	12,243.00	12,265.00	54.11	802.21	-90.00	-6,009.80	143.20	1,760.20	1,268.43	491.77	3.579			
16,450.00	12,265.00	12,243.00	12,265.00	54.33	802.21	-90.00	-6,009.80	143.20	1,710.39	1,222.69	487.70	3.507			
16,500.00	12,265.00	12,243.00	12,265.00	54.56	802.21	-90.00	-6,009.80	143.20	1,660.60	1,177.17	483.43	3.435			
16,550.00	12,265.00	12,243.00	12,265.00	54.79	802.21	-90.00	-6,009.80	143.20	1,610.81	1,131.86	478.96	3.363			
16,600.00	12,265.00	12,243.00	12,265.00	55.02	802.21	-90.00	-6,009.80	143.20	1,561.05	1,086.78	474.27	3.291			
16,650.00	12,265.00	12,243.00	12,265.00	55.25	802.21	-90.00	-6,009.80	143.20	1,511.29	1,041.93	469.36	3.220			
16,700.00	12,265.00	12,243.00	12,265.00	55.48	802.21	-90.00	-6,009.80	143.20	1,461.56	997.34	464.21	3.148			
16,750.00	12,265.00	12,243.00	12,265.00	55.72	802.21	-90.00	-6,009.80	143.20	1,411.84	953.01	458.83	3.077			
16,800.00	12,265.00	12,243.00	12,265.00	55.95	802.21	-90.00	-6,009.80	143.20	1,362.14	908.95	453.19	3.006			
16,850.00	12,265.00	12,243.00	12,265.00	56.19	802.21	-90.00	-6,009.80	143.20	1,312.47	865.17	447.30	2.934			
16,900.00	12,265.00	12,243.00	12,265.00	56.43	802.21	-90.00	-6,009.80	143.20	1,262.82	821.68	441.14	2.863			
16,950.00	12,265.00	12,243.00	12,265.00	56.68	802.21	-90.00	-6,009.80	143.20	1,213.21	778.49	434.72	2.791			
17,000.00	12,265.00	12,243.00	12,265.00	56.92	802.21	-90.00	-6,009.80	143.20	1,163.62	735.60	428.02	2.719			
17,050.00	12,265.00	12,243.00	12,265.00	57.16	802.21	-90.00	-6,009.80	143.20	1,114.07	693.02	421.05	2.646			
17,100.00	12,265.00	12,243.00	12,265.00	57.41	802.21	-90.00	-6,009.80	143.20	1,064.57	650.76	413.81	2.573			
17,150.00	12,265.00	12,243.00	12,265.00	57.66	802.21	-90.00	-6,009.80	143.20	1,015.11	608.82	406.29	2.498			
17,200.00	12,265.00	12,243.00	12,265.00	57.91	802.21	-90.00	-6,009.80	143.20	965.71	567.20	398.51	2.423			
17,250.00	12,265.00	12,243.00	12,265.00	58.16	802.21	-90.00	-6,009.80	143.20	916.37	525.91	390.45	2.347			
17,300.00	12,265.00	12,243.00	12,265.00	58.41	802.21	-90.00	-6,009.80	143.20	867.11	484.96	382.15	2.269			
17,350.00	12,265.00	12,243.00	12,265.00	58.66	802.21	-90.00	-6,009.80	143.20	817.93	444.34	373.60	2.189			
17,400.00	12,265.00	12,243.00	12,265.00	58.92	802.21	-90.00	-6,009.80	143.20	768.87	404.06	364.81	2.108			
17,450.00	12,265.00	12,243.00	12,265.00	59.18	802.21	-90.00	-6,009.80	143.20	719.93	364.12	355.82	2.023			
17,500.00	12,265.00	12,243.00	12,265.00	59.43	802.21	-90.00	-6,009.80	143.20	671.15	324.51	346.64	1.936			
17,550.00	12,265.00	12,243.00	12,265.00	59.69	802.21	-90.00	-6,009.80	143.20	622.57	285.25	337.32	1.846			
17,600.00	12,265.00	12,243.00	12,265.00	59.95	802.21	-90.00	-6,009.80	143.20	574.23	246.33	327.90	1.751			
17,650.00	12,265.00	12,243.00	12,265.00	60.22	802.21	-90.00	-6,009.80	143.20	526.19	207.78	318.42	1.653			
17,700.00	12,265.00	12,243.00	12,265.00	60.48	802.21	-90.00	-6,009.80	143.20	478.56	169.57	308.99	1.549			
17,750.00	12,265.00	12,243.00	12,265.00	60.74	802.21	-90.00	-6,009.80	143.20	431.47	131.71	299.76	1.439 Level 3			
17,800.00	12,265.00	12,243.00	12,265.00	61.01	802.21	-90.00	-6,009.80	143.20	385.11	94.21	290.90	1.324 Level 3			
17,850.00	12,265.00	12,243.00	12,265.00	61.28	802.21	-90.00	-6,009.80	143.20	339.78	57.09	282.70	1.202 Level 2			
17,900.00	12,265.00	12,243.00	12,265.00	61.54	802.21	-90.00	-6,009.80	143.20	295.97	20.35	275.62	1.074 Level 2			
17,950.00	12,265.00	12,243.00	12,265.00	61.81	802.21	-90.00	-6,009.80	143.20	254.44	-16.01	270.46	0.941 Level 1			
18,000.00	12,265.00	12,243.00	12,265.00	62.08	802.21	-90.00	-6,009.80	143.20	216.53	-51.99	268.52	0.806 Level 1			
18,050.00	12,265.00	12,243.00	12,265.00	62.36	802.21	-90.00	-6,009.80	143.20	184.47	-87.65	272.12	0.678 Level 1			
18,100.00	12,265.00	12,243.00	12,265.00	62.63	802.21	-90.00	-6,009.80	143.20	161.78	-124.89	286.66	0.564 Level 1			
18,150.00	12,265.00	12,243.00	12,265.00	62.90	802.21	-90.00	-6,009.80	143.20	152.69	-174.58	327.27	0.467 Level 1			
18,153.58	12,265.00	12,243.00	12,265.00	62.92	802.21	-90.00	-6,009.80	143.20	152.65	-179.18	331.83	0.460 Level 1, CC			
18,200.00	12,265.00	12,243.00	12,265.00	63.18	802.21	-90.00	-6,009.80	143.20	159.56	-259.04	418.60	0.381 Level 1			
18,250.00	12,265.00	12,243.00	12,265.00	63.45	802.21	-90.00	-6,009.80	143.20	180.56	-412.83	593.39	0.304 Level 1			
18,300.00	12,265.00	12,243.00	12,265.00	63.73	802.21	-90.00	-6,009.80	143.20	211.53	-646.09	857.63	0.247 Level 1, ES, SF			
18,350.00	12,265.00	12,243.00	12,265.00	64.01	802.21	-90.00	-6,009.80	143.20	248.78	-450.24	699.02	0.356 Level 1			
18,400.00	12,265.00	12,243.00	12,265.00	64.29	802.21	-90.00	-6,009.80	143.20	289.89	-314.38	604.27	0.480 Level 1			
18,450.00	12,265.00	12,243.00	12,265.00	64.57	802.21	-90.00	-6,009.80	143.20	333.43	-225.75	559.18	0.596 Level 1			
18,500.00	12,265.00	12,243.00	12,265.00	64.85	802.21	-90.00	-6,009.80	143.20	378.58	-157.43	536.01	0.706 Level 1			
18,550.00	12,265.00	12,243.00	12,265.00	65.13	802.21	-90.00	-6,009.80	143.20	424.81	-99.21	524.02	0.811 Level 1			
18,600.00	12,265.00	12,243.00	12,265.00	65.42	802.21	-90.00	-6,009.80	143.20	471.81	-46.72	518.54	0.910 Level 1			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: XTO ENERGY INC. Local Co-ordinate Reference: Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL

Project: Eddy County, NM (NMEZ) NAD27 Grid TVD Reference: 3344+22 @ 3366.00usft (122-162 AK22)

Reference Site: Poker Lake Unit 25 BD MD Reference: 3344+22 @ 3366.00usft (122-162 AK22)

Site Error: 0.00 usft North Reference: Grid

Reference Well: PLU 25 BD 102H_RSN 152H Survey Calculation Method: Minimum Curvature

Well Error: 0.00 usft Output errors are at 2.00 sigma

Reference Wellbore: 102H-152H Database: CRUDE_EDM

Reference Design: Plan #1 Offset TVD Reference: Reference Datum

Offset Design Poker Lake Unit 25 BD - PLU 36 BD BROMISTA MON STATE 1 - OH Offset - OH NoSurveys														Offset Site Error: 0.00 usft
Survey Program: 500-INC-ONLY														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre N/S (usft)	+E/W (usft)						
18,650.00	12,265.00	12,243.00	12,265.00	65.70	802.21	-90.00	-6,009.80	143.20	519.38	1.88	517.50	1.004	Level 2	
18,700.00	12,265.00	12,243.00	12,265.00	65.99	802.21	-90.00	-6,009.80	143.20	567.36	48.97	518.39	1.094	Level 2	
18,750.00	12,265.00	12,243.00	12,265.00	66.27	802.21	-90.00	-6,009.80	143.20	615.66	94.47	521.19	1.181	Level 2	
18,800.00	12,265.00	12,243.00	12,265.00	66.56	802.21	-90.00	-6,009.80	143.20	664.22	138.86	525.36	1.264	Level 3	
18,850.00	12,265.00	12,243.00	12,265.00	66.85	802.21	-90.00	-6,009.80	143.20	712.97	182.50	530.47	1.344	Level 3	
18,900.00	12,265.00	12,243.00	12,265.00	67.14	802.21	-90.00	-6,009.80	143.20	761.89	225.80	536.08	1.421	Level 3	
18,950.00	12,265.00	12,243.00	12,265.00	67.43	802.21	-90.00	-6,009.80	143.20	810.93	269.48	541.46	1.498	Level 3	
19,000.00	12,265.00	12,243.00	12,265.00	67.72	802.21	-90.00	-6,009.80	143.20	860.09	313.58	546.51	1.574		
19,050.00	12,265.00	12,243.00	12,265.00	68.01	802.21	-90.00	-6,009.80	143.20	909.34	358.08	551.26	1.650		
19,100.00	12,265.00	12,243.00	12,265.00	68.31	802.21	-90.00	-6,009.80	143.20	958.67	402.98	555.69	1.725		
19,150.00	12,265.00	12,243.00	12,265.00	68.60	802.21	-90.00	-6,009.80	143.20	1,008.06	448.25	559.81	1.801		
19,200.00	12,265.00	12,243.00	12,265.00	68.90	802.21	-90.00	-6,009.80	143.20	1,057.51	493.87	563.64	1.876		
19,250.00	12,265.00	12,243.00	12,265.00	69.19	802.21	-90.00	-6,009.80	143.20	1,107.01	539.81	567.20	1.952		
19,300.00	12,265.00	12,243.00	12,265.00	69.49	802.21	-90.00	-6,009.80	143.20	1,156.55	586.07	570.49	2.027		
19,350.00	12,265.00	12,243.00	12,265.00	69.79	802.21	-90.00	-6,009.80	143.20	1,206.14	632.59	573.54	2.103		
19,400.00	12,265.00	12,243.00	12,265.00	70.08	802.21	-90.00	-6,009.80	143.20	1,255.75	679.38	576.37	2.179		
19,450.00	12,265.00	12,243.00	12,265.00	70.38	802.21	-90.00	-6,009.80	143.20	1,305.39	726.41	578.98	2.255		
19,500.00	12,265.00	12,243.00	12,265.00	70.68	802.21	-90.00	-6,009.80	143.20	1,355.06	773.65	581.41	2.331		
19,550.00	12,265.00	12,243.00	12,265.00	70.98	802.21	-90.00	-6,009.80	143.20	1,404.76	821.09	583.67	2.407		
19,600.00	12,265.00	12,243.00	12,265.00	71.29	802.21	-90.00	-6,009.80	143.20	1,454.47	868.70	585.77	2.483		
19,650.00	12,265.00	12,243.00	12,265.00	71.59	802.21	-90.00	-6,009.80	143.20	1,504.20	916.49	587.72	2.559		
19,700.00	12,265.00	12,243.00	12,265.00	71.89	802.21	-90.00	-6,009.80	143.20	1,553.95	964.42	589.54	2.636		
19,750.00	12,265.00	12,243.00	12,265.00	72.19	802.21	-90.00	-6,009.80	143.20	1,603.72	1,012.48	591.24	2.712		
19,800.00	12,265.00	12,243.00	12,265.00	72.50	802.21	-90.00	-6,009.80	143.20	1,653.50	1,060.67	592.82	2.789		
19,850.00	12,265.00	12,243.00	12,265.00	72.80	802.21	-90.00	-6,009.80	143.20	1,703.29	1,108.98	594.31	2.866		
19,900.00	12,265.00	12,243.00	12,265.00	73.11	802.21	-90.00	-6,009.80	143.20	1,753.10	1,157.39	595.71	2.943		
19,950.00	12,265.00	12,243.00	12,265.00	73.42	802.21	-90.00	-6,009.80	143.20	1,802.91	1,205.89	597.02	3.020		
20,000.00	12,265.00	12,243.00	12,265.00	73.72	802.21	-90.00	-6,009.80	143.20	1,852.74	1,254.48	598.26	3.097		
20,028.90	12,265.00	12,243.00	12,265.00	73.90	802.21	-90.00	-6,009.80	143.20	1,881.54	1,282.60	598.94	3.141		

Anticollision Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Reference Site:	Poker Lake Unit 25 BD	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	102H-152H	Database:	CRUDE_EDM
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Offset Design Poker Lake Unit 25 BD - PokerLake20(Offset) - OH Offset - OH NoSurveys													Offset Site Error:	0.00 usft
Survey Program: 500-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre N/S (usft)	Offset Wellbore Centre E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,800.00	12,265.00	12,243.00	12,265.00	44.91	802.21	90.00	-3,380.03	-660.80	2,797.22	2,095.28	701.94	3.985		
12,850.00	12,265.00	12,243.00	12,265.00	44.92	802.21	90.00	-3,380.03	-660.80	2,748.59	2,045.36	703.23	3.909		
12,900.00	12,265.00	12,243.00	12,265.00	44.93	802.21	90.00	-3,380.03	-660.80	2,700.01	1,995.45	704.56	3.832		
12,950.00	12,265.00	12,243.00	12,265.00	44.94	802.21	90.00	-3,380.03	-660.80	2,651.49	1,945.54	705.95	3.756		
13,000.00	12,265.00	12,243.00	12,265.00	44.96	802.21	90.00	-3,380.03	-660.80	2,603.02	1,895.63	707.38	3.680		
13,050.00	12,265.00	12,243.00	12,265.00	44.98	802.21	90.00	-3,380.03	-660.80	2,554.60	1,845.74	708.87	3.604		
13,100.00	12,265.00	12,243.00	12,265.00	45.00	802.21	90.00	-3,380.03	-660.80	2,506.26	1,795.84	710.42	3.528		
13,150.00	12,265.00	12,243.00	12,265.00	45.02	802.21	90.00	-3,380.03	-660.80	2,457.97	1,745.95	712.02	3.452		
13,200.00	12,265.00	12,243.00	12,265.00	45.04	802.21	90.00	-3,380.03	-660.80	2,409.76	1,696.07	713.69	3.376		
13,250.00	12,265.00	12,243.00	12,265.00	45.07	802.21	90.00	-3,380.03	-660.80	2,361.62	1,646.20	715.43	3.301		
13,300.00	12,265.00	12,243.00	12,265.00	45.10	802.21	90.00	-3,380.03	-660.80	2,313.56	1,596.33	717.24	3.225		
13,350.00	12,265.00	12,243.00	12,265.00	45.13	802.21	90.00	-3,380.03	-660.80	2,265.59	1,546.47	719.12	3.150		
13,400.00	12,265.00	12,243.00	12,265.00	45.16	802.21	90.00	-3,380.03	-660.80	2,217.70	1,496.61	721.09	3.075		
13,450.00	12,265.00	12,243.00	12,265.00	45.20	802.21	90.00	-3,380.03	-660.80	2,169.91	1,446.77	723.14	3.001		
13,500.00	12,265.00	12,243.00	12,265.00	45.25	802.21	90.00	-3,380.03	-660.80	2,122.23	1,396.94	725.29	2.926		
13,550.00	12,265.00	12,243.00	12,265.00	45.30	802.21	90.00	-3,380.03	-660.80	2,074.65	1,347.12	727.53	2.852		
13,600.00	12,265.00	12,243.00	12,265.00	45.35	802.21	90.00	-3,380.03	-660.80	2,027.18	1,297.31	729.87	2.777		
13,650.00	12,265.00	12,243.00	12,265.00	45.41	802.21	90.00	-3,380.03	-660.80	1,979.85	1,247.51	732.33	2.703		
13,700.00	12,265.00	12,243.00	12,265.00	45.47	802.21	90.00	-3,380.03	-660.80	1,932.64	1,197.73	734.91	2.630		
13,750.00	12,265.00	12,243.00	12,265.00	45.55	802.21	90.00	-3,380.03	-660.80	1,885.58	1,147.97	737.61	2.556		
13,800.00	12,265.00	12,243.00	12,265.00	45.62	802.21	90.00	-3,380.03	-660.80	1,838.68	1,098.23	740.45	2.483		
13,850.00	12,265.00	12,243.00	12,265.00	45.70	802.21	90.00	-3,380.03	-660.80	1,791.94	1,048.50	743.44	2.410		
13,900.00	12,265.00	12,243.00	12,265.00	45.78	802.21	90.00	-3,380.03	-660.80	1,745.38	998.81	746.58	2.338		
13,950.00	12,265.00	12,243.00	12,265.00	45.88	802.21	90.00	-3,380.03	-660.80	1,699.02	949.14	749.89	2.266		
14,000.00	12,265.00	12,243.00	12,265.00	45.97	802.21	90.00	-3,380.03	-660.80	1,652.87	899.50	753.37	2.194		
14,050.00	12,265.00	12,243.00	12,265.00	46.07	802.21	90.00	-3,380.03	-660.80	1,606.96	849.90	757.06	2.123		
14,100.00	12,265.00	12,243.00	12,265.00	46.17	802.21	90.00	-3,380.03	-660.80	1,561.29	800.34	760.95	2.052		
14,150.00	12,265.00	12,243.00	12,265.00	46.28	802.21	90.00	-3,380.03	-660.80	1,515.90	750.83	765.07	1.981		
14,200.00	12,265.00	12,243.00	12,265.00	46.39	802.21	90.00	-3,380.03	-660.80	1,470.80	701.38	769.42	1.912		
14,250.00	12,265.00	12,243.00	12,265.00	46.51	802.21	90.00	-3,380.03	-660.80	1,426.03	651.99	774.04	1.842		
14,300.00	12,265.00	12,243.00	12,265.00	46.62	802.21	90.00	-3,380.03	-660.80	1,381.62	602.69	778.93	1.774		
14,350.00	12,265.00	12,243.00	12,265.00	46.75	802.21	90.00	-3,380.03	-660.80	1,337.61	553.49	784.12	1.706		
14,400.00	12,265.00	12,243.00	12,265.00	46.87	802.21	90.00	-3,380.03	-660.80	1,294.03	504.41	789.62	1.639		
14,450.00	12,265.00	12,243.00	12,265.00	47.00	802.21	90.00	-3,380.03	-660.80	1,250.93	455.49	795.44	1.573		
14,500.00	12,265.00	12,243.00	12,265.00	47.14	802.21	90.00	-3,380.03	-660.80	1,208.37	406.76	801.60	1.507		
14,550.00	12,265.00	12,243.00	12,265.00	47.27	802.21	90.00	-3,380.03	-660.80	1,166.39	358.29	808.10	1.443 Level 3		
14,600.00	12,265.00	12,243.00	12,265.00	47.41	802.21	90.00	-3,380.03	-660.80	1,125.07	310.15	814.91	1.381 Level 3		
14,650.00	12,265.00	12,243.00	12,265.00	47.55	802.21	90.00	-3,380.03	-660.80	1,084.48	262.49	821.99	1.319 Level 3		
14,700.00	12,265.00	12,243.00	12,265.00	47.70	802.21	90.00	-3,380.03	-660.80	1,044.70	215.49	829.22	1.260 Level 3		
14,750.00	12,265.00	12,243.00	12,265.00	47.85	802.21	90.00	-3,380.03	-660.80	1,005.84	169.49	836.35	1.203 Level 2		
14,800.00	12,265.00	12,243.00	12,265.00	48.00	802.21	90.00	-3,380.03	-660.80	968.01	125.09	842.91	1.148 Level 2		
14,850.00	12,265.00	12,243.00	12,265.00	48.15	802.21	90.00	-3,380.03	-660.80	931.32	83.44	847.88	1.098 Level 2		
14,900.00	12,265.00	12,243.00	12,265.00	48.31	802.21	90.00	-3,380.03	-660.80	895.92	46.90	849.02	1.055 Level 2		
14,950.00	12,265.00	12,243.00	12,265.00	48.47	802.21	90.00	-3,380.03	-660.80	861.97	20.14	841.83	1.024 Level 2		
15,000.00	12,265.00	12,243.00	12,265.00	48.63	802.21	90.00	-3,380.03	-660.80	829.64	8.27	821.37	1.010 Level 2, ES, SF		
15,050.00	12,265.00	12,243.00	12,265.00	48.80	802.21	90.00	-3,380.03	-660.80	799.13	9.44	789.70	1.012 Level 2		
15,100.00	12,265.00	12,243.00	12,265.00	48.96	802.21	90.00	-3,380.03	-660.80	770.67	19.40	751.27	1.026 Level 2		
15,150.00	12,265.00	12,243.00	12,265.00	49.13	802.21	90.00	-3,380.03	-660.80	744.48	35.34	709.14	1.050 Level 2		
15,200.00	12,265.00	12,243.00	12,265.00	49.30	802.21	90.00	-3,380.03	-660.80	720.80	55.29	665.51	1.083 Level 2		
15,250.00	12,265.00	12,243.00	12,265.00	49.48	802.21	90.00	-3,380.03	-660.80	699.91	78.14	621.77	1.126 Level 2		
15,300.00	12,265.00	12,243.00	12,265.00	49.66	802.21	90.00	-3,380.03	-660.80	682.05	102.94	579.11	1.178 Level 2		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Reference Site:	Poker Lake Unit 25 BD	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	102H-152H	Database:	CRUDE_EDM
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Offset Design Poker Lake Unit 25 BD - PokerLake20(Offset) - OH Offset - OH NoSurveys														Offset Site Error:	0.00 usft
Survey Program: 500-INC-ONLY														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	+N/S (usft)		+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)					
15,350.00	12,265.00	12,243.00	12,265.00	49.84	802.21	90.00	-3,380.03	-660.80	667.46	129.32	538.14	1.240	Level 2		
15,400.00	12,265.00	12,243.00	12,265.00	50.02	802.21	90.00	-3,380.03	-660.80	656.37	156.83	499.54	1.314	Level 3		
15,450.00	12,265.00	12,243.00	12,265.00	50.20	802.21	90.00	-3,380.03	-660.80	648.95	185.01	463.94	1.399	Level 3		
15,500.00	12,265.00	12,243.00	12,265.00	50.39	802.21	90.00	-3,380.03	-660.80	645.33	213.85	431.48	1.496	Level 3		
15,521.85	12,265.00	12,243.00	12,265.00	50.47	802.21	90.00	-3,380.03	-660.80	644.96	226.61	418.35	1.542	CC		
15,550.00	12,265.00	12,243.00	12,265.00	50.58	802.21	90.00	-3,380.03	-660.80	645.57	243.24	402.33	1.605			
15,600.00	12,265.00	12,243.00	12,265.00	50.77	802.21	90.00	-3,380.03	-660.80	649.68	273.33	376.35	1.726			
15,650.00	12,265.00	12,243.00	12,265.00	50.96	802.21	90.00	-3,380.03	-660.80	657.57	304.03	353.54	1.860			
15,700.00	12,265.00	12,243.00	12,265.00	51.16	802.21	90.00	-3,380.03	-660.80	669.11	335.30	333.81	2.004			
15,750.00	12,265.00	12,243.00	12,265.00	51.35	802.21	90.00	-3,380.03	-660.80	684.13	367.09	317.03	2.158			
15,800.00	12,265.00	12,243.00	12,265.00	51.55	802.21	90.00	-3,380.03	-660.80	702.38	399.39	303.00	2.318			
15,850.00	12,265.00	12,243.00	12,265.00	51.76	802.21	90.00	-3,380.03	-660.80	723.64	432.13	291.51	2.482			
15,900.00	12,265.00	12,243.00	12,265.00	51.96	802.21	90.00	-3,380.03	-660.80	747.64	465.31	282.33	2.648			
15,950.00	12,265.00	12,243.00	12,265.00	52.17	802.21	90.00	-3,380.03	-660.80	774.14	498.90	275.23	2.813			
16,000.00	12,265.00	12,243.00	12,265.00	52.37	802.21	90.00	-3,380.03	-660.80	802.87	532.89	269.98	2.974			
16,050.00	12,265.00	12,243.00	12,265.00	52.58	802.21	90.00	-3,380.03	-660.80	833.62	567.25	266.36	3.130			
16,100.00	12,265.00	12,243.00	12,265.00	52.79	802.21	90.00	-3,380.03	-660.80	866.16	601.98	264.18	3.279			
16,150.00	12,265.00	12,243.00	12,265.00	53.01	802.21	90.00	-3,380.03	-660.80	900.30	637.05	263.25	3.420			
16,200.00	12,265.00	12,243.00	12,265.00	53.22	802.21	90.00	-3,380.03	-660.80	935.88	672.48	263.40	3.553			
16,250.00	12,265.00	12,243.00	12,265.00	53.44	802.21	90.00	-3,380.03	-660.80	972.72	708.23	264.49	3.678			
16,300.00	12,265.00	12,243.00	12,265.00	53.66	802.21	90.00	-3,380.03	-660.80	1,010.69	744.30	266.39	3.794			
16,350.00	12,265.00	12,243.00	12,265.00	53.88	802.21	90.00	-3,380.03	-660.80	1,049.67	780.69	268.98	3.902			

Anticollision Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Reference Site:	Poker Lake Unit 25 BD	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	102H-152H	Database:	CRUDE_EDM
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Offset Design Poker Lake Unit 25 BD - PokerLake4 - OH Offset - OH NoSurveys													Offset Site Error:	0.00 usft
Survey Program: 500-INC-ONLY													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,350.00	12,265.00	12,243.00	12,265.00	46.75	802.21	-90.00	-2,602.60	1,501.90	1,571.30	1,177.76	393.54	3.993		
14,400.00	12,265.00	12,243.00	12,265.00	46.87	802.21	-90.00	-2,602.60	1,501.90	1,559.33	1,151.29	408.04	3.822		
14,450.00	12,265.00	12,243.00	12,265.00	47.00	802.21	-90.00	-2,602.60	1,501.90	1,548.89	1,125.55	423.34	3.659		
14,500.00	12,265.00	12,243.00	12,265.00	47.14	802.21	-90.00	-2,602.60	1,501.90	1,539.99	1,100.59	439.41	3.505		
14,550.00	12,265.00	12,243.00	12,265.00	47.27	802.21	-90.00	-2,602.60	1,501.90	1,532.68	1,076.47	456.21	3.360		
14,600.00	12,265.00	12,243.00	12,265.00	47.41	802.21	-90.00	-2,602.60	1,501.90	1,526.97	1,053.28	473.69	3.224		
14,650.00	12,265.00	12,243.00	12,265.00	47.56	802.21	-90.00	-2,602.60	1,501.90	1,522.88	1,031.10	491.79	3.097		
14,700.00	12,265.00	12,243.00	12,265.00	47.70	802.21	-90.00	-2,602.60	1,501.90	1,520.43	1,010.01	510.42	2.979		
14,749.57	12,265.00	12,243.00	12,265.00	47.85	802.21	-90.00	-2,602.60	1,501.90	1,519.62	990.23	529.39	2.871 CC		
14,750.00	12,265.00	12,243.00	12,265.00	47.85	802.21	-90.00	-2,602.60	1,501.90	1,519.62	990.11	529.51	2.870		
14,800.00	12,265.00	12,243.00	12,265.00	48.00	802.21	-90.00	-2,602.60	1,501.90	1,520.45	971.51	548.94	2.770		
14,850.00	12,265.00	12,243.00	12,265.00	48.15	802.21	-90.00	-2,602.60	1,501.90	1,522.93	954.32	568.60	2.678		
14,900.00	12,265.00	12,243.00	12,265.00	48.31	802.21	-90.00	-2,602.60	1,501.90	1,527.04	938.67	588.37	2.595		
14,950.00	12,265.00	12,243.00	12,265.00	48.47	802.21	-90.00	-2,602.60	1,501.90	1,532.77	924.67	608.09	2.521		
15,000.00	12,265.00	12,243.00	12,265.00	48.63	802.21	-90.00	-2,602.60	1,501.90	1,540.10	912.45	627.65	2.454		
15,050.00	12,265.00	12,243.00	12,265.00	48.80	802.21	-90.00	-2,602.60	1,501.90	1,549.01	902.12	646.89	2.395		
15,100.00	12,265.00	12,243.00	12,265.00	48.96	802.21	-90.00	-2,602.60	1,501.90	1,559.48	893.81	665.67	2.343		
15,150.00	12,265.00	12,243.00	12,265.00	49.13	802.21	-90.00	-2,602.60	1,501.90	1,571.47	887.80	683.87	2.298		
15,200.00	12,265.00	12,243.00	12,265.00	49.30	802.21	-90.00	-2,602.60	1,501.90	1,584.94	883.60	701.34	2.260		
15,250.00	12,265.00	12,243.00	12,265.00	49.48	802.21	-90.00	-2,602.60	1,501.90	1,599.87	881.87	718.00	2.228 ES		
15,300.00	12,265.00	12,243.00	12,265.00	49.65	802.21	-90.00	-2,602.60	1,501.90	1,616.20	882.48	733.73	2.203		
15,350.00	12,265.00	12,243.00	12,265.00	49.84	802.21	-90.00	-2,602.60	1,501.90	1,633.90	885.44	748.46	2.183		
15,400.00	12,265.00	12,243.00	12,265.00	50.02	802.21	-90.00	-2,602.60	1,501.90	1,652.93	890.78	762.14	2.169		
15,450.00	12,265.00	12,243.00	12,265.00	50.20	802.21	-90.00	-2,602.60	1,501.90	1,673.23	898.49	774.74	2.160		
15,500.00	12,265.00	12,243.00	12,265.00	50.39	802.21	-90.00	-2,602.60	1,501.90	1,694.77	908.54	786.23	2.156 SF		
15,550.00	12,265.00	12,243.00	12,265.00	50.58	802.21	-90.00	-2,602.60	1,501.90	1,717.49	920.86	796.63	2.156		
15,600.00	12,265.00	12,243.00	12,265.00	50.77	802.21	-90.00	-2,602.60	1,501.90	1,741.35	935.41	805.94	2.161		
15,650.00	12,265.00	12,243.00	12,265.00	50.96	802.21	-90.00	-2,602.60	1,501.90	1,766.31	952.10	814.20	2.169		
15,700.00	12,265.00	12,243.00	12,265.00	51.16	802.21	-90.00	-2,602.60	1,501.90	1,792.31	970.84	821.46	2.182		
15,750.00	12,265.00	12,243.00	12,265.00	51.35	802.21	-90.00	-2,602.60	1,501.90	1,819.31	991.53	827.78	2.198		
15,800.00	12,265.00	12,243.00	12,265.00	51.55	802.21	-90.00	-2,602.60	1,501.90	1,847.28	1,014.08	833.20	2.217		
15,850.00	12,265.00	12,243.00	12,265.00	51.75	802.21	-90.00	-2,602.60	1,501.90	1,876.16	1,038.36	837.80	2.239		
15,900.00	12,265.00	12,243.00	12,265.00	51.96	802.21	-90.00	-2,602.60	1,501.90	1,905.91	1,064.28	841.63	2.265		
15,950.00	12,265.00	12,243.00	12,265.00	52.17	802.21	-90.00	-2,602.60	1,501.90	1,936.50	1,091.73	844.77	2.292		
16,000.00	12,265.00	12,243.00	12,265.00	52.37	802.21	-90.00	-2,602.60	1,501.90	1,967.88	1,120.62	847.26	2.323		
16,050.00	12,265.00	12,243.00	12,265.00	52.58	802.21	-90.00	-2,602.60	1,501.90	2,000.02	1,150.63	849.19	2.355		
16,100.00	12,265.00	12,243.00	12,265.00	52.79	802.21	-90.00	-2,602.60	1,501.90	2,032.89	1,182.29	850.60	2.390		
16,150.00	12,265.00	12,243.00	12,265.00	53.01	802.21	-90.00	-2,602.60	1,501.90	2,066.44	1,214.89	851.55	2.427		
16,200.00	12,265.00	12,243.00	12,265.00	53.22	802.21	-90.00	-2,602.60	1,501.90	2,100.64	1,248.56	852.09	2.465		
16,250.00	12,265.00	12,243.00	12,265.00	53.44	802.21	-90.00	-2,602.60	1,501.90	2,135.47	1,283.21	852.26	2.506		
16,300.00	12,265.00	12,243.00	12,265.00	53.66	802.21	-90.00	-2,602.60	1,501.90	2,170.89	1,318.78	852.11	2.548		
16,350.00	12,265.00	12,243.00	12,265.00	53.88	802.21	-90.00	-2,602.60	1,501.90	2,206.87	1,355.20	851.67	2.591		
16,400.00	12,265.00	12,243.00	12,265.00	54.11	802.21	-90.00	-2,602.60	1,501.90	2,243.40	1,392.41	850.99	2.636		
16,450.00	12,265.00	12,243.00	12,265.00	54.33	802.21	-90.00	-2,602.60	1,501.90	2,280.43	1,430.34	850.09	2.683		
16,500.00	12,265.00	12,243.00	12,265.00	54.56	802.21	-90.00	-2,602.60	1,501.90	2,317.95	1,468.94	849.01	2.730		
16,550.00	12,265.00	12,243.00	12,265.00	54.79	802.21	-90.00	-2,602.60	1,501.90	2,355.93	1,508.18	847.76	2.779		
16,600.00	12,265.00	12,243.00	12,265.00	55.02	802.21	-90.00	-2,602.60	1,501.90	2,394.36	1,547.99	846.37	2.829		
16,650.00	12,265.00	12,243.00	12,265.00	55.25	802.21	-90.00	-2,602.60	1,501.90	2,433.21	1,588.34	844.86	2.880		
16,700.00	12,265.00	12,243.00	12,265.00	55.48	802.21	-90.00	-2,602.60	1,501.90	2,472.45	1,629.20	843.26	2.932		
16,750.00	12,265.00	12,243.00	12,265.00	55.72	802.21	-90.00	-2,602.60	1,501.90	2,512.08	1,670.52	841.56	2.985		
16,800.00	12,265.00	12,243.00	12,265.00	55.96	802.21	-90.00	-2,602.60	1,501.90	2,552.08	1,712.28	839.80	3.039		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well PLU 25 BD 102H_RSN 152H - Slot PLU 25 BD 102H_RSN 152H SHL
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Reference Site:	Poker Lake Unit 25 BD	MD Reference:	3344+22 @ 3366.00usft (122-162 AK22)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	PLU 25 BD 102H_RSN 152H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	102H-152H	Database:	CRUDE_EDM
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Offset Design Poker Lake Unit 25 BD - PokerLake4 - OH Offset - OH NoSurveys													Offset Site Error: 0.00 usft	
Survey Program: 500-INC-ONLY													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Tooface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
16,850.00	12,265.00	12,243.00	12,265.00	56.19	802.21	-90.00	-2,602.60	1,501.90	2,592.42	1,754.44	837.98	3.094		
16,900.00	12,265.00	12,243.00	12,265.00	56.43	802.21	-90.00	-2,602.60	1,501.90	2,533.09	1,796.98	836.11	3.149		
16,950.00	12,265.00	12,243.00	12,265.00	56.68	802.21	-90.00	-2,602.60	1,501.90	2,574.08	1,839.87	834.20	3.206		
17,000.00	12,265.00	12,243.00	12,265.00	56.92	802.21	-90.00	-2,602.60	1,501.90	2,715.37	1,883.10	832.27	3.263		
17,050.00	12,265.00	12,243.00	12,265.00	57.16	802.21	-90.00	-2,602.60	1,501.90	2,756.95	1,926.63	830.31	3.320		
17,100.00	12,265.00	12,243.00	12,265.00	57.41	802.21	-90.00	-2,602.60	1,501.90	2,798.80	1,970.45	828.35	3.379		
17,150.00	12,265.00	12,243.00	12,265.00	57.66	802.21	-90.00	-2,602.60	1,501.90	2,840.92	2,014.55	826.37	3.438		
17,200.00	12,265.00	12,243.00	12,265.00	57.91	802.21	-90.00	-2,602.60	1,501.90	2,883.29	2,058.89	824.39	3.497		
17,250.00	12,265.00	12,243.00	12,265.00	58.16	802.21	-90.00	-2,602.60	1,501.90	2,925.90	2,103.48	822.42	3.558		
17,300.00	12,265.00	12,243.00	12,265.00	58.41	802.21	-90.00	-2,602.60	1,501.90	2,968.74	2,148.30	820.44	3.618		
17,350.00	12,265.00	12,243.00	12,265.00	58.66	802.21	-90.00	-2,602.60	1,501.90	3,011.80	2,193.32	818.48	3.680		
17,400.00	12,265.00	12,243.00	12,265.00	58.92	802.21	-90.00	-2,602.60	1,501.90	3,055.07	2,238.55	816.53	3.742		
17,450.00	12,265.00	12,243.00	12,265.00	59.18	802.21	-90.00	-2,602.60	1,501.90	3,098.55	2,283.96	814.59	3.804		
17,500.00	12,265.00	12,243.00	12,265.00	59.43	802.21	-90.00	-2,602.60	1,501.90	3,142.22	2,329.55	812.67	3.867		
17,550.00	12,265.00	12,243.00	12,265.00	59.69	802.21	-90.00	-2,602.60	1,501.90	3,186.08	2,375.31	810.77	3.930		
17,600.00	12,265.00	12,243.00	12,265.00	59.95	802.21	-90.00	-2,602.60	1,501.90	3,230.11	2,421.22	808.89	3.993		

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating, LLC
LEASE NO.:	NMLC-0063079A
WELL NAME & NO.:	Poker Lake Unit 25 BD 102H
SURFACE HOLE FOOTAGE:	2560' FNL & 0772' FWL
BOTTOM HOLE FOOTAGE:	0200' FSL & 0750' FWL Sec. 36, T. 25 S., R 30 E.
LOCATION:	Section 25, T. 25 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

The original COAs still stand with the following drilling modifications:

Commercial Well Determination

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

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.

A. DRILLING OPERATIONS 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. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. **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. If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**

3. 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 wells.
4. 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 is located, this does not include the dog house or stairway area.
5. 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.

B. CASING

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.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

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.

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.

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

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.

1. The 13-3/8 inch surface casing shall be set at approximately 1090 feet (in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface.
 - 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 is to include the lead cement slurry.
 - 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.

Formation below the 13-3/8" shoe to be tested according to Onshore Order

2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the 7 inch production casing is:

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

Formation below the 7" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

4. The minimum required fill of cement behind the 4-1/2 inch production Liner is:

- ☒ Cement as proposed. Operator shall provide method of verification.

5. 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.

C. 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 53.
2. Variance approved to use flex line from BOP to choke manifold. 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.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. 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 approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi.)

10M 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.

4. 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.

D. 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.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. 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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