

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**5. Lease Serial No.  
NMLC061705B

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on page 2**7. If Unit or CA/Agreement, Name and/or No.  
891000303X

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.  
POKER LAKE UNIT 17 TWR 126H

2. Name of Operator

XTO PERMIAN OPERATING LLC

Contact: KELLY KARDOS

E-Mail: kelly\_kardos@xtoenergy.com

9. API Well No.

30-015-46712-00-X1

3a. Address

6401 HOLIDAY HILL ROAD BLDG 5  
MIDLAND, TX 79707

3b. Phone No. (include area code)

Ph: 432-620-4374

10. Field and Pool or Exploratory Area

PURPLE SAGE-WOLFCAMP (GAS)

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

Sec 20 T24S R31E NWNE 30FNL 1613FEL  
32.210068 N Lat, 103.796509 W Lon

11. County or Parish, State

EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A PD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

XTO Permian Operating, LLC requests permission to make the following changes to the original APD:

Change the casing/cement design per the attached drilling program.

Change SHL from 5?FNL &amp; 1613?FEL to 30?FNL &amp; 1613?FEL \*No surface disturbance.

Change BHL from 2440?FNL &amp; 1655?FEL in Sec. 32-T24S-R31E to 220?FSL &amp; 2230?FEL in Sec. 29-T24S-R31E.

XTO requests the following variances:

XTO requests to use a 5000 psi annular BOP with a 10,000 psi BOP stack. Also a variance is

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

**Electronic Submission #507399 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 03/17/2020 (20PP1680SE)**

Name (Printed/Typed) KELLY KARDOS

Title REGULATORY COORDINATOR

Signature (Electronic Submission)

Date 03/17/2020

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By CODY LAYTON

Title ASSIST FIELD MANAGER LANDS MINERALS

Date 03/24/2020

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

ACCEPTED 03/30/2020 - Kurt Simmons NMOCD

## **Additional data for EC transaction #507399 that would not fit on the form**

### **32. Additional remarks, continued**

requested to test the 5M annular to 70% of working pressure at 3500 psi

Batch drill this well if necessary. In doing so, XTO will set each casing string and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per GE recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.

ONLY test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. Based on discussions with the BLM on February 27th 2020, we will request permission to ONLY retest broken pressure seals if the following conditions are met: 1. After a full BOP test is conducted on the first well on the pad (First well will be the deepest Intermediate) 2. When skidding to drill an intermediate section does not penetrate into the Wolfcamp 3. Full BOP test will be required prior to drilling the production hole.

A variance is requested to cement offline for the surface and intermediate casing strings.

Attachments:

Updated C102

Casing/Cement Design

5M10M Diagram / Well Control Plan

Directional Plan

## Revisions to Operator-Submitted EC Data for Sundry Notice #507399

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMLC061705B	NMLC061705B
Agreement:	NMNM71016X	891000303X (NMNM71016X)
Operator:	XTO ENERGY PERMIAN OPERATING 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO PERMIAN OPERATING LLC 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707 Ph: 432.683 2277
Admin Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com  Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com  Ph: 432-620-4374
Tech Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com  Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com  Ph: 432-620-4374
Location: State: County:	NM EDDY	NM EDDY
Field/Pool:	PURPLE SAGE WOLFCAMP	PURPLE SAGE-WOLFCAMP (GAS)
Well/Facility:	POKER LAKE UNIT 17 TWR 126H Sec 20 T24S R31E Mer NMP NWNE 5FNL 1613FEL	POKER LAKE UNIT 17 TWR 126H Sec 20 T24S R31E NWNE 30FNL 1613FEL 32.210068 N Lat, 103.796509 W Lon

## Kardos, Kelly

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**From:** jmedrano@blm.gov  
**Sent:** Wednesday, March 25, 2020 3:05 PM  
**To:** Kardos, Kelly  
**Subject:** Well POKER LAKE UNIT 17 TWR 126H  
**Attachments:** EC507399.pdf

**Categories:** External Sender

External Email - Think Before You Click

The sundry for Change to Original APD you submitted has been approved by the BLM. Your original Electronic Commerce (EC) transmission was assigned ID 507399. Please be sure to open and save all attachments to this message, since they contain important information.

Approved by Cody R. Layton 03/24/2020.

**All COAs still apply. Offline cement and shell testing variance not approved.**

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

<sup>1</sup> API Number 30-015-	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name POKER LAKE UNIT 17 TWR	<sup>6</sup> Well Number 126H
<sup>7</sup> OGRID No. 373075	<sup>8</sup> Operator Name XTO PERMIAN OPERATING, LLC.	<sup>9</sup> Elevation 3,507'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	20	24 S	31 E		30	NORTH	1,613	EAST	EDDY

<sup>11</sup> 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
O	29	24 S	31 E		220	SOUTH	2,230	EAST	EDDY

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.

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.

	<p><b>SHL (NAD83 NME)</b> Y = 440,545.7 X = 707,366.9 LAT. = 32.209997 °N LONG. = 103.796510 °W</p> <p><b>FTP (NAD83 NME)</b> Y = 440,241.6 X = 706,751.8 LAT. = 32.209170 °N LONG. = 103.798504 °W</p> <p><b>SHL (NAD27 NME)</b> Y = 440,486.8 X = 666,183.0 LAT. = 32.209873 °N LONG. = 103.796026 °W</p> <p><b>FTP (NAD27 NME)</b> Y = 440,182.7 X = 665,567.9 LAT. = 32.209046 °N LONG. = 103.798020 °W</p> <p><b>CORNER COORDINATES (NAD27 NME)</b> A - Y = 440,510.0 N , X = 665,151.3 E B - Y = 437,870.2 N , X = 665,168.2 E C - Y = 435,229.7 N , X = 665,185.1 E D - Y = 432,633.0 N , X = 665,052.6 E E - Y = 429,947.5 N , X = 665,219.6 E F - Y = 440,518.7 N , X = 666,473.5 E G - Y = 437,879.5 N , X = 666,490.2 E H - Y = 435,237.8 N , X = 666,506.6 E I - Y = 432,596.8 N , X = 666,523.5 E J - Y = 429,955.7 N , X = 666,540.4 E</p>	<p><b>LTP (NAD83 NME)</b> Y = 430,338.7 X = 706,813.5 LAT. = 32.181948 °N LONG. = 103.798464 °W</p> <p><b>BHL (NAD83 NME)</b> Y = 430,228.7 X = 706,814.2 LAT. = 32.181645 °N LONG. = 103.798463 °W</p> <p><b>LTP (NAD27 NME)</b> Y = 430,280.0 X = 665,629.2 LAT. = 32.181824 °N LONG. = 103.797981 °W</p> <p><b>BHL (NAD27 NME)</b> Y = 430,170.0 X = 665,629.9 LAT. = 32.181521 °N LONG. = 103.797980 °W</p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> 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.</p> <p><i>Kelly Kardos</i> Signature _____ Date _____ Printed Name _____ E-mail Address _____</p>
	<p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> 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.</p> <p>03-17-2020 Date of Survey Signature and Seal of Professional Surveyor: _____ MARK DILLON HARP 23786 Certificate Number LM 2018010209</p>		

**PLU 17 Twin Wells Ranch 126H**  
 Projected TD: 22768' MD / 12667' TVD  
 SHL: 30' FNL & 1613' FEL , Section 20, T24S, R31E  
 BHL: 220' FSL & 2230' FEL , Section 29, T24S, R31E  
 Eddy County, NM

**Casing Design**

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' – 810'	13-3/8"	68	BTC	J-55	New	1.17	5.32	19.41
12-1/4"	0' – 4600'	9-5/8"	40	BTC	HCP-110	New	1.37	1.41	2.65
12-1/4"	4600' – 11913'	9-5/8"	40	BTC	HCL-80	New	1.00	1.29	1.92
8-3/4-8-1/2"	0' – 22768'	5-1/2"	20	BTC	P-110	New	1.03	1.29	1.95

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

9-5/8" Collapse analyzed using 50% evacuation based on regional experience.

9-5/8" casing will be split string with CYP-1110 run from surface to 4600' & HCL-80 from 4600' to TD. The 9-5/8" casing fails SF burst at surface but will be crossed over to CYP-110 at 4600'. The split string design passes our internal requirements.

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

**WELLHEAD:**

*Permanent Wellhead – GE RSH Multibowl System*

- A. Starting Head (RSH System): 13-3/8" SOW bottom x 13-5/8" 5M top flange
- B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange
  - Wellhead will be installed by manufacturer's representatives.
  - Manufacturer will monitor welding process to ensure appropriate temperature of seal.
  - Operator will test the 9-5/8" casing per Onshore Order 2.
  - Wellhead manufacturer representative may not be present for BOP test plug installation

**Cement Program**

**Surface Casing:**

Lead: 370 sxs Halcem-C + 2% CaCl (mixed at 12.8 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:**

*ECP/DV Tool to be set at 4807'*

*1st Stage*

Lead: 1100 sxs Halcem-C + 2% CaCl (mixed at 11.0 ppg, 3.45 ft3/sx, 21.14 gal/sx water)

Tail: 470 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.32 ft3/sx, 6.39 gal/sx water)

Compressives: 12-hr = 500 psi 24 hr = 1151 psi

*2nd Stage*

Lead: 690 sxs Halcem-C + 2% CaCl (mixed at 11.0 ppg, 3.45 ft3/sx, 21.14 gal/sx water)

Tail: 450 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.32 ft3/sx, 6.39 gal/sx water)

Compressives: 12-hr = 500 psi 24 hr = 1151 psi

**Production Casing:**

Lead: 80 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 2420 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

**Mud Circulation Program**

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 810'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
810' to 11907'	12-1/4"	FW / Cut Brine / Direct Emulsion	8.5-9.5	29-32	NC - 20
11907' to 22768'	8-3/4-8-1/2"	FW / Cut Brine / Polymer/ OBM	12.7-13.5	32-50	NC - 20

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

XTO Energy Inc.  
PLU 17 Twin Wells Ranch 126H  
Projected TD: 22768' MD / 12667' TVD  
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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	567'	Water
Top of Salt	967'	Water
Base of Salt	4087'	Water
Delaware	4307'	Water
Bone Spring	8167'	Water/Oil/Gas
1st Bone Spring Ss	9127'	Water/Oil/Gas
2nd Bone Spring Ss	9927'	Water/Oil/Gas
3rd Bone Spring Ss	11107'	Water/Oil/Gas
Wolfcamp Shale	11507'	Water/Oil/Gas
Wolfcamp D Shale	12487'	Water/Oil/Gas
Target/Land Curve	12667'	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 @ 810' (157' above the salt) and circulating cement back to surface. A 12-1/4 inch vertical hole will be drilled to 11907' and 9-5/8 inch casing ran and cemented 200' into the 13-3/8 inch casing. An 8-3/4 inch curve and lateral hole will be drilled to MD/TD and 5-1/2 casing will be set at TD and cemented back 300' into the 9-5/8 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' – 810'	13-3/8"	68	BTC	J-55	New	1.17	5.32	19.41
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8-3/4-8-1/2"	0' – 22768'	5-1/2"	20	BTC	P-110	New	1.03	1.29	1.95

XTO requests to utilize centralizers after KOP and only a minimum of one every other joint.

9-5/8" Collapse analyzed using 50% evacuation based on regional experience.

9-5/8" casing will be split string with CYP-1110 run from surface to 4600' & HCL-80 from 4600' to TD. The 9-5/8" casing fails

SF burst at surface but will be crossed over to CYP-110 at 4600'. The split string design passes our internal requirements.

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

**WELLHEAD:**

Permanent Wellhead – GE RSH Multibowl System

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

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

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.

- Operator will test the 9-5/8" casing per Onshore Order 2.
- Wellhead manufacturer representative may not be present for BOP test plug installation

#### 4. Cement Program

*Surface Casing: 13-3/8", 68 New J-55, BTC casing to be set at +/- 810'*

Lead: 370 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.87 ft<sup>3</sup>/sx, 10.13 gal/sx water)

Tail: 300 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

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

Top of Cement: Surface

*2nd Intermediate Casing (Stage 2): 9-5/8", 40 New HCL-80, BTC casing to be set at +/- 1190'*

*ECP/DV Tool to be set at 4807'*

*1st Stage*

Lead: 1100 sxs Halcem-C + 2% CaCl (mixed at 11.0 ppg, 3.45 ft<sup>3</sup>/sx, 21.14 gal/sx water)

Tail: 470 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.32 ft<sup>3</sup>/sx, 6.39 gal/sx water)

Compressives:        12-hr =            500 psi            24 hr = 1151 psi

*2nd Stage*

Lead: 690 sxs Halcem-C + 2% CaCl (mixed at 11.0 ppg, 3.45 ft<sup>3</sup>/sx, 21.14 gal/sx water)

Tail: 450 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.32 ft<sup>3</sup>/sx, 6.39 gal/sx water)

Compressives:        12-hr =            500 psi            24 hr = 1151 psi

Top of Cement: 200' inside previous casing shoe

*Production Casing: 5-1/2", 20 New P-110, BTC casing to be set at +/- 22768'*

Lead: 80 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.88 ft<sup>3</sup>/sx, 9.61 gal/sx water)

Tail: 2420 sxs VersaCem (mixed at 13.2 ppg, 1.33 ft<sup>3</sup>/sx, 8.38 gal/sx water)

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

Top of Cement: 300' inside previous casing shoe

#### 5. Pressure Control Equipment

Once the permanent WH is installed on the 13-3/8 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 10M 3-Ram BOP. MASP should not exceed 5776 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M). Also a variance is requested to test the 5M annular to 70% of working pressure at 3500 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 70% of the working pressure. When nipping up on the 13-3/8", 5M bradenhead and flange, the BOP test will be limited to 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

A variance is requested to ONLY test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API standard 53 states, that for pad drilling operation,

moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. Based on discussions with the BLM on February 27th 2020, we will request permission to ONLY retest broken pressure seals if the following conditions are met: 1. After a full BOP test is conducted on the first well on the pad (First well will be the deepest Intermediate) 2. When skidding to drill an intermediate section does not penetrate into the Wolfcamp 3. Full BOP test will be required prior to drilling the production hole.

A variance is requested to cement offline for the surface and intermediate casing strings.

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set each casing string and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per GE recommendations, XTO will contact the BLM on each rig skid on the pad. Once surface and intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.

## 6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 810'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
810' to 11907'	12-1/4"	FW / Cut Brine / Direct Emulsion	8.5-9.5	29-32	NC - 20
11907' to 22768'	8-3/4-8-1/2"	FW / Cut Brine / Polymer/ OBM	12.7-13.5	32-50	NC - 20

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

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

## 7. Auxiliary Well Control and Monitoring Equipment

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

## 8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below 1st intermediate casing.

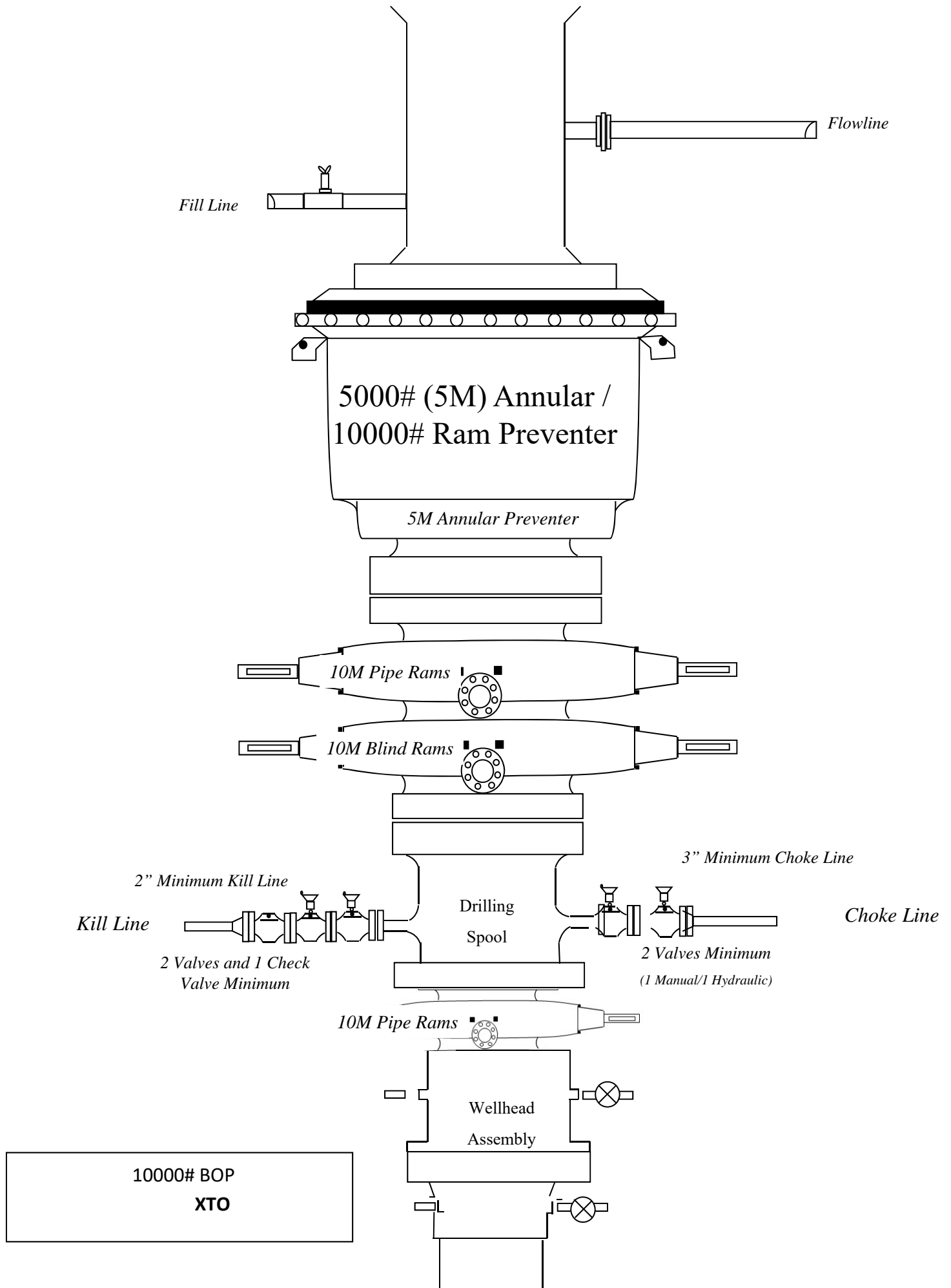
Open hole logging will not be done on this well.

## 9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 160 to 180 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 8563 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.





## 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



## **XTO Energy**

**Eddy County, NM (NAD27)**

**PLU 17 Twin Wells Ranch**

**126H**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**13 March, 2020**





Project: Eddy County, NM (NAD27)  
 Site: PLU 17 Twin Wells Ranch  
 Well: 126H  
 Wellbore: OH  
 Design: Plan #1  
 Lat: 32.209874  
 Long: -103.796026  
 GL: 3520.00  
 KB: WELL @ 3547.00usft (H&P 467)



## WELL DETAILS: 126H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	440486.80	666183.00	32.209874	-103.796026

## WELLBORE TARGET DETAILS (LAT/LONG)

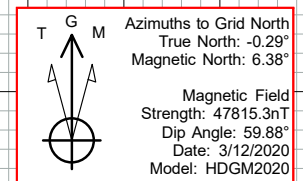
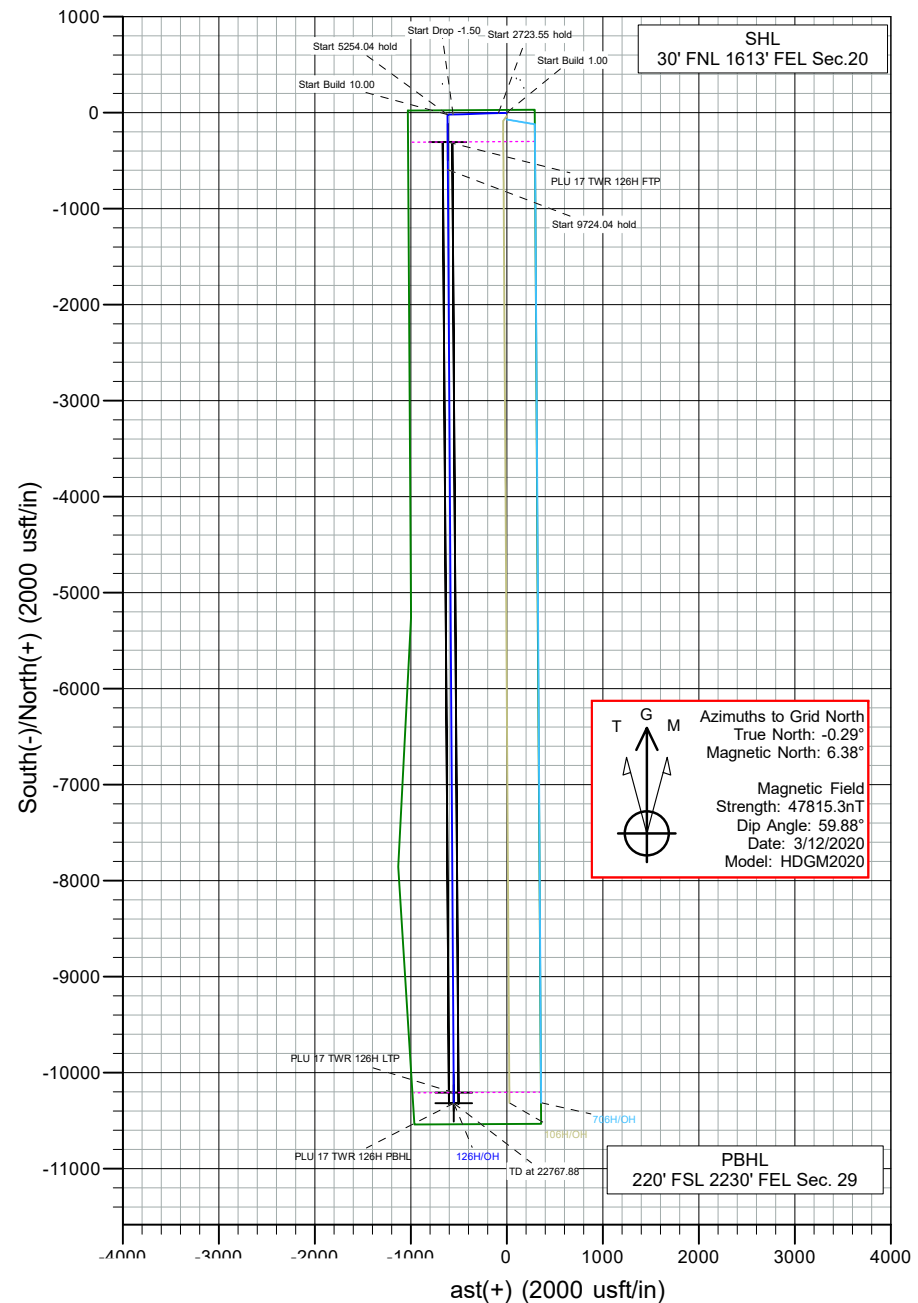
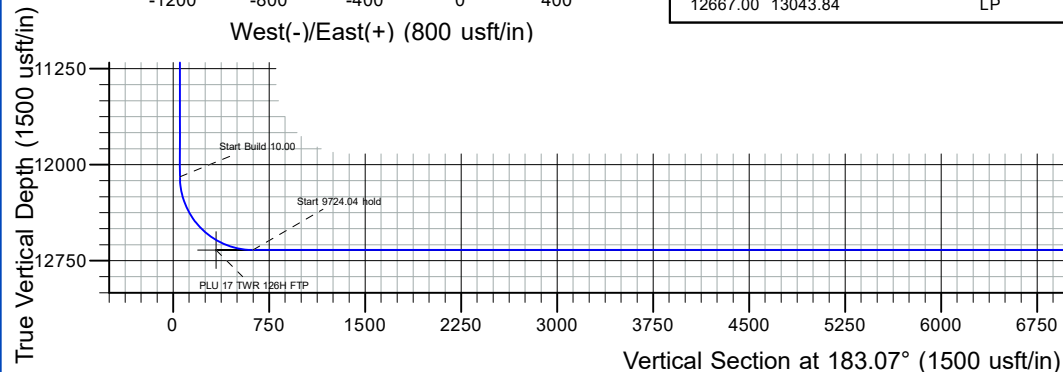
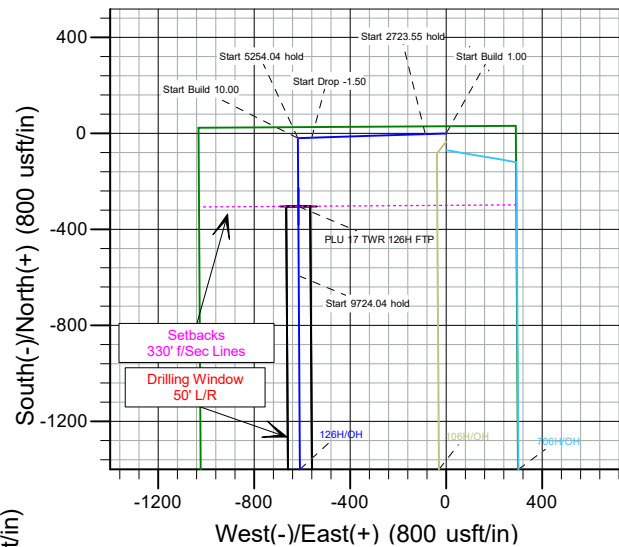
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PLU 17 TWR 126H FTP	12667.00	-304.10	-615.10	440182.70	665567.90	Point
PLU 17 TWR 126H LTP	12667.00	-10206.80	-553.80	430280.00	665629.20	Point
PLU 17 TWR 126H PBHL	12667.00	-10316.80	-553.10	430170.00	665629.90	Rectangle (Sides: L10013.13 W100.00)

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00
3499.75	10.00	268.14	3494.68	-2.82	-86.96	1.00	268.14	7.47	Start 2723.55 hold
6223.30	10.00	268.14	6176.88	-18.12	-559.53	0.00	0.00	48.05	Start Drop -1.50
6889.80	0.00	0.00	6840.00	-20.00	-617.50	1.50	180.00	53.03	Start 5254.04 hold
12143.84	0.00	0.00	12094.04	-20.00	-617.50	0.00	0.00	53.03	Start Build 10.00
13043.84	90.00	179.64	12667.00	-592.95	-613.92	10.00	179.64	624.96	Start 9724.04 hold
22767.88	90.00	179.64	12667.00	-10316.80	-553.10	0.00	0.00	10331.62	TD at 22767.88

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
567.00	567.00	Rustler
657.00	657.00	Magenta Dolomite
967.00	967.00	Top Salt
4087.00	4101.20	Base Salt
4307.00	4324.59	Delaware
5197.00	5228.31	Cherry Canyon
6507.00	6556.38	Brushy Canyon
7877.00	7926.80	Basal Brushy Canyon
8167.00	8216.80	Bone Spring Lime
8267.00	8316.80	Avalon Sand
8287.00	8336.80	Upper Avalon Shale
8697.00	8746.80	Lower Avalon Shale
8917.00	8966.80	1st Bone Spring Lime
9127.00	9176.80	1st Bone Spring Ss
9612.00	9661.80	2nd Bone Spring Lime
9927.00	9976.80	2nd Bone Spring Ss
10317.00	10366.80	3rd Bone Spring Lm
11107.00	11156.80	3rd Bone Spring Ss
11412.00	11461.80	Red Hills SS
11507.00	11556.80	Wolfcamp
11592.00	11641.80	Wolfcamp X
11662.00	11711.80	Wolfcamp Y
11717.00	11766.80	Wolfcamp A
11857.00	11906.80	Wolfcamp A Lower
12097.00	12146.80	Wolfcamp B
12267.00	12319.54	Wolfcamp C
12487.00	12576.86	Wolfcamp D
12667.00	13043.84	LP



PBHL  
 220° FSL 2230° FEL Sec. 29

## CASING DETAILS

No casing data is available

Plan: Plan #1 (126H/OH)

Created By: Bret Wolford Date: 12:27, March 13 2020



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Eddy County, NM (NAD27)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b>	PLU 17 Twin Wells Ranch		
<b>Site Position:</b>		<b>Northing:</b>	440,511.70 usft
<b>From:</b>	Map	<b>Easting:</b>	666,182.90 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32.209942
		<b>Longitude:</b>	-103.796026

<b>Well</b>	126H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 440,486.80 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 666,183.00 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>	0.29 °	<b>Ground Level:</b>	3,520.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM2020	3/12/2020	6.67	59.88	47,815.30000000

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	183.07

<b>Plan Survey Tool Program</b>	<b>Date</b>	3/13/2020		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	22,767.88 Plan #1 (OH)	MWD+IFR1+MS	
			OWSG MWD + IFR1 + Multi-St	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	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	
3,499.75	10.00	268.14	3,494.68	-2.82	-86.96	1.00	1.00	0.00	268.14	
6,223.30	10.00	268.14	6,176.88	-18.12	-559.53	0.00	0.00	0.00	0.00	
6,889.80	0.00	0.00	6,840.00	-20.00	-617.50	1.50	-1.50	0.00	180.00	
12,143.84	0.00	0.00	12,094.04	-20.00	-617.50	0.00	0.00	0.00	0.00	
13,043.84	90.00	179.64	12,667.00	-592.95	-613.92	10.00	10.00	0.00	179.64	PLU 17 TWR 126H P
22,767.88	90.00	179.64	12,667.00	-10,316.80	-553.10	0.00	0.00	0.00	0.00	PLU 17 TWR 126H P



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
567.00	0.00	0.00	567.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Rustler</b>									
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
657.00	0.00	0.00	657.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Magenta Dolomite</b>									
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
967.00	0.00	0.00	967.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Top Salt</b>									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 1.00</b>									
2,600.00	1.00	268.14	2,599.99	-0.03	-0.87	0.07	1.00	1.00	0.00
2,700.00	2.00	268.14	2,699.96	-0.11	-3.49	0.30	1.00	1.00	0.00
2,800.00	3.00	268.14	2,799.86	-0.25	-7.85	0.67	1.00	1.00	0.00
2,900.00	4.00	268.14	2,899.68	-0.45	-13.95	1.20	1.00	1.00	0.00
3,000.00	5.00	268.14	2,999.37	-0.71	-21.79	1.87	1.00	1.00	0.00
3,100.00	6.00	268.14	3,098.90	-1.02	-31.37	2.69	1.00	1.00	0.00
3,200.00	7.00	268.14	3,198.26	-1.38	-42.69	3.67	1.00	1.00	0.00
3,300.00	8.00	268.14	3,297.40	-1.81	-55.73	4.79	1.00	1.00	0.00
3,400.00	9.00	268.14	3,396.30	-2.28	-70.50	6.05	1.00	1.00	0.00
3,499.75	10.00	268.14	3,494.68	-2.82	-86.96	7.47	1.00	1.00	0.00
<b>Start 2723.55 hold</b>									
3,600.00	10.00	268.14	3,593.41	-3.38	-104.35	8.96	0.00	0.00	0.00
3,700.00	10.00	268.14	3,691.89	-3.94	-121.70	10.45	0.00	0.00	0.00
3,800.00	10.00	268.14	3,790.38	-4.50	-139.05	11.94	0.00	0.00	0.00
3,900.00	10.00	268.14	3,888.86	-5.07	-156.41	13.43	0.00	0.00	0.00
4,000.00	10.00	268.14	3,987.34	-5.63	-173.76	14.92	0.00	0.00	0.00
4,100.00	10.00	268.14	4,085.82	-6.19	-191.11	16.41	0.00	0.00	0.00
4,101.20	10.00	268.14	4,087.00	-6.20	-191.32	16.43	0.00	0.00	0.00
<b>Base Salt</b>									
4,200.00	10.00	268.14	4,184.30	-6.75	-208.46	17.90	0.00	0.00	0.00



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	10.00	268.14	4,282.78	-7.31	-225.81	19.39	0.00	0.00	0.00
4,324.59	10.00	268.14	4,307.00	-7.45	-230.08	19.76	0.00	0.00	0.00
<b>Delaware</b>									
4,400.00	10.00	268.14	4,381.26	-7.88	-243.16	20.88	0.00	0.00	0.00
4,500.00	10.00	268.14	4,479.75	-8.44	-260.51	22.37	0.00	0.00	0.00
4,600.00	10.00	268.14	4,578.23	-9.00	-277.86	23.86	0.00	0.00	0.00
4,700.00	10.00	268.14	4,676.71	-9.56	-295.22	25.35	0.00	0.00	0.00
4,800.00	10.00	268.14	4,775.19	-10.12	-312.57	26.84	0.00	0.00	0.00
4,900.00	10.00	268.14	4,873.67	-10.69	-329.92	28.33	0.00	0.00	0.00
5,000.00	10.00	268.14	4,972.15	-11.25	-347.27	29.82	0.00	0.00	0.00
5,100.00	10.00	268.14	5,070.64	-11.81	-364.62	31.31	0.00	0.00	0.00
5,200.00	10.00	268.14	5,169.12	-12.37	-381.97	32.80	0.00	0.00	0.00
5,228.31	10.00	268.14	5,197.00	-12.53	-386.89	33.22	0.00	0.00	0.00
<b>Cherry Canyon</b>									
5,300.00	10.00	268.14	5,267.60	-12.93	-399.32	34.29	0.00	0.00	0.00
5,400.00	10.00	268.14	5,366.08	-13.50	-416.68	35.78	0.00	0.00	0.00
5,500.00	10.00	268.14	5,464.56	-14.06	-434.03	37.27	0.00	0.00	0.00
5,600.00	10.00	268.14	5,563.04	-14.62	-451.38	38.76	0.00	0.00	0.00
5,700.00	10.00	268.14	5,661.52	-15.18	-468.73	40.25	0.00	0.00	0.00
5,800.00	10.00	268.14	5,760.01	-15.74	-486.08	41.74	0.00	0.00	0.00
5,900.00	10.00	268.14	5,858.49	-16.31	-503.43	43.23	0.00	0.00	0.00
6,000.00	10.00	268.14	5,956.97	-16.87	-520.78	44.72	0.00	0.00	0.00
6,100.00	10.00	268.14	6,055.45	-17.43	-538.14	46.21	0.00	0.00	0.00
6,200.00	10.00	268.14	6,153.93	-17.99	-555.49	47.70	0.00	0.00	0.00
6,223.30	10.00	268.14	6,176.88	-18.12	-559.53	48.05	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
6,300.00	8.85	268.14	6,252.54	-18.53	-572.08	49.13	1.50	-1.50	0.00
6,400.00	7.35	268.14	6,351.54	-18.98	-586.16	50.34	1.50	-1.50	0.00
6,500.00	5.85	268.14	6,450.88	-19.36	-597.64	51.32	1.50	-1.50	0.00
6,556.38	5.00	268.14	6,507.00	-19.53	-602.96	51.78	1.50	-1.50	0.00
<b>Brushy Canyon</b>									
6,600.00	4.35	268.14	6,550.48	-19.64	-606.52	52.09	1.50	-1.50	0.00
6,700.00	2.85	268.14	6,650.28	-19.85	-612.79	52.62	1.50	-1.50	0.00
6,800.00	1.35	268.14	6,750.21	-19.97	-616.45	52.94	1.50	-1.50	0.00
6,889.80	0.00	0.00	6,840.00	-20.00	-617.50	53.03	1.50	-1.50	102.29
<b>Start 5254.04 hold</b>									
6,900.00	0.00	0.00	6,850.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,000.00	0.00	0.00	6,950.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,100.00	0.00	0.00	7,050.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,200.00	0.00	0.00	7,150.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,300.00	0.00	0.00	7,250.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,400.00	0.00	0.00	7,350.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,500.00	0.00	0.00	7,450.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,600.00	0.00	0.00	7,550.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,700.00	0.00	0.00	7,650.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,800.00	0.00	0.00	7,750.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,900.00	0.00	0.00	7,850.20	-20.00	-617.50	53.03	0.00	0.00	0.00
7,926.80	0.00	0.00	7,877.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Basal Brushy Canyon</b>									
8,000.00	0.00	0.00	7,950.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,100.00	0.00	0.00	8,050.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,200.00	0.00	0.00	8,150.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,216.80	0.00	0.00	8,167.00	-20.00	-617.50	53.03	0.00	0.00	0.00



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>Bone Spring Lime</b>									
8,300.00	0.00	0.00	8,250.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,316.80	0.00	0.00	8,267.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Avalon Sand</b>									
8,336.80	0.00	0.00	8,287.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Upper Avalon Shale</b>									
8,400.00	0.00	0.00	8,350.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,500.00	0.00	0.00	8,450.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,600.00	0.00	0.00	8,550.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,700.00	0.00	0.00	8,650.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,746.80	0.00	0.00	8,697.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Lower Avalon Shale</b>									
8,800.00	0.00	0.00	8,750.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,900.00	0.00	0.00	8,850.20	-20.00	-617.50	53.03	0.00	0.00	0.00
8,966.80	0.00	0.00	8,917.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>1st Bone Spring Lime</b>									
9,000.00	0.00	0.00	8,950.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,100.00	0.00	0.00	9,050.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,176.80	0.00	0.00	9,127.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>1st Bone Spring Ss</b>									
9,200.00	0.00	0.00	9,150.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,300.00	0.00	0.00	9,250.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,400.00	0.00	0.00	9,350.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,500.00	0.00	0.00	9,450.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,600.00	0.00	0.00	9,550.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,661.80	0.00	0.00	9,612.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>2nd Bone Spring Lime</b>									
9,700.00	0.00	0.00	9,650.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,800.00	0.00	0.00	9,750.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,900.00	0.00	0.00	9,850.20	-20.00	-617.50	53.03	0.00	0.00	0.00
9,976.80	0.00	0.00	9,927.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>2nd Bone Spring Ss</b>									
10,000.00	0.00	0.00	9,950.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,100.00	0.00	0.00	10,050.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,200.00	0.00	0.00	10,150.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,300.00	0.00	0.00	10,250.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,366.80	0.00	0.00	10,317.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>3rd Bone Spring Lm</b>									
10,400.00	0.00	0.00	10,350.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,500.00	0.00	0.00	10,450.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,600.00	0.00	0.00	10,550.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,700.00	0.00	0.00	10,650.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,800.00	0.00	0.00	10,750.20	-20.00	-617.50	53.03	0.00	0.00	0.00
10,900.00	0.00	0.00	10,850.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,000.00	0.00	0.00	10,950.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,100.00	0.00	0.00	11,050.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,156.80	0.00	0.00	11,107.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>3rd Bone Spring Ss</b>									
11,200.00	0.00	0.00	11,150.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,300.00	0.00	0.00	11,250.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,400.00	0.00	0.00	11,350.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,461.80	0.00	0.00	11,412.00	-20.00	-617.50	53.03	0.00	0.00	0.00



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>Red Hills SS</b>									
11,500.00	0.00	0.00	11,450.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,556.80	0.00	0.00	11,507.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Wolfcamp</b>									
11,600.00	0.00	0.00	11,550.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,641.80	0.00	0.00	11,592.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Wolfcamp X</b>									
11,700.00	0.00	0.00	11,650.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,711.80	0.00	0.00	11,662.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Wolfcamp Y</b>									
11,766.80	0.00	0.00	11,717.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Wolfcamp A</b>									
11,800.00	0.00	0.00	11,750.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,900.00	0.00	0.00	11,850.20	-20.00	-617.50	53.03	0.00	0.00	0.00
11,906.80	0.00	0.00	11,857.00	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Wolfcamp A Lower</b>									
12,000.00	0.00	0.00	11,950.20	-20.00	-617.50	53.03	0.00	0.00	0.00
12,100.00	0.00	0.00	12,050.20	-20.00	-617.50	53.03	0.00	0.00	0.00
12,143.84	0.00	0.00	12,094.04	-20.00	-617.50	53.03	0.00	0.00	0.00
<b>Start Build 10.00</b>									
12,146.80	0.30	179.64	12,097.00	-20.01	-617.50	53.04	10.00	10.00	0.00
<b>Wolfcamp B</b>									
12,150.00	0.62	179.64	12,100.20	-20.03	-617.50	53.06	10.00	10.00	0.00
12,200.00	5.62	179.64	12,150.11	-22.75	-617.48	55.77	10.00	10.00	0.00
12,250.00	10.62	179.64	12,199.60	-29.81	-617.44	62.82	10.00	10.00	0.00
12,300.00	15.62	179.64	12,248.28	-41.15	-617.37	74.14	10.00	10.00	0.00
12,319.54	17.57	179.64	12,267.00	-46.73	-617.33	79.71	10.00	10.00	0.00
<b>Wolfcamp C</b>									
12,350.00	20.62	179.64	12,295.78	-56.69	-617.27	89.66	10.00	10.00	0.00
12,400.00	25.62	179.64	12,341.75	-76.31	-617.15	109.24	10.00	10.00	0.00
12,450.00	30.62	179.64	12,385.84	-99.87	-617.00	132.76	10.00	10.00	0.00
12,500.00	35.62	179.64	12,427.70	-127.18	-616.83	160.02	10.00	10.00	0.00
12,550.00	40.62	179.64	12,467.03	-158.03	-616.64	190.81	10.00	10.00	0.00
12,576.86	43.30	179.64	12,487.00	-175.99	-616.52	208.74	10.00	10.00	0.00
<b>Wolfcamp D</b>									
12,600.00	45.62	179.64	12,503.52	-192.19	-616.42	224.92	10.00	10.00	0.00
12,650.00	50.62	179.64	12,536.89	-229.40	-616.19	262.06	10.00	10.00	0.00
12,700.00	55.62	179.64	12,566.89	-269.38	-615.94	301.97	10.00	10.00	0.00
12,750.00	60.62	179.64	12,593.29	-311.83	-615.67	344.34	10.00	10.00	0.00
12,776.45	63.26	179.64	12,605.73	-335.17	-615.53	367.64	10.00	10.00	0.00
<b>PLU 17 TWR 126H FTP</b>									
12,800.00	65.62	179.64	12,615.89	-356.41	-615.40	388.84	10.00	10.00	0.00
12,850.00	70.62	179.64	12,634.52	-402.79	-615.11	435.14	10.00	10.00	0.00
12,900.00	75.62	179.64	12,649.04	-450.62	-614.81	482.88	10.00	10.00	0.00
12,950.00	80.62	179.64	12,659.33	-499.53	-614.50	531.71	10.00	10.00	0.00
13,000.00	85.62	179.64	12,665.32	-549.15	-614.19	581.24	10.00	10.00	0.00
13,043.84	90.00	179.64	12,667.00	-592.95	-613.92	624.96	10.00	10.00	0.00
<b>Start 9724.04 hold - LP</b>									
13,100.00	90.00	179.64	12,667.00	-649.11	-613.57	681.02	0.00	0.00	0.00
13,200.00	90.00	179.64	12,667.00	-749.11	-612.94	780.84	0.00	0.00	0.00
13,300.00	90.00	179.64	12,667.00	-849.10	-612.31	880.67	0.00	0.00	0.00
13,400.00	90.00	179.64	12,667.00	-949.10	-611.69	980.49	0.00	0.00	0.00
13,500.00	90.00	179.64	12,667.00	-1,049.10	-611.06	1,080.31	0.00	0.00	0.00



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,600.00	90.00	179.64	12,667.00	-1,149.10	-610.44	1,180.13	0.00	0.00	0.00
13,700.00	90.00	179.64	12,667.00	-1,249.10	-609.81	1,279.95	0.00	0.00	0.00
13,800.00	90.00	179.64	12,667.00	-1,349.09	-609.19	1,379.77	0.00	0.00	0.00
13,900.00	90.00	179.64	12,667.00	-1,449.09	-608.56	1,479.59	0.00	0.00	0.00
14,000.00	90.00	179.64	12,667.00	-1,549.09	-607.94	1,579.41	0.00	0.00	0.00
14,100.00	90.00	179.64	12,667.00	-1,649.09	-607.31	1,679.24	0.00	0.00	0.00
14,200.00	90.00	179.64	12,667.00	-1,749.09	-606.69	1,779.06	0.00	0.00	0.00
14,300.00	90.00	179.64	12,667.00	-1,849.08	-606.06	1,878.88	0.00	0.00	0.00
14,400.00	90.00	179.64	12,667.00	-1,949.08	-605.43	1,978.70	0.00	0.00	0.00
14,500.00	90.00	179.64	12,667.00	-2,049.08	-604.81	2,078.52	0.00	0.00	0.00
14,600.00	90.00	179.64	12,667.00	-2,149.08	-604.18	2,178.34	0.00	0.00	0.00
14,700.00	90.00	179.64	12,667.00	-2,249.08	-603.56	2,278.16	0.00	0.00	0.00
14,800.00	90.00	179.64	12,667.00	-2,349.07	-602.93	2,377.98	0.00	0.00	0.00
14,900.00	90.00	179.64	12,667.00	-2,449.07	-602.31	2,477.80	0.00	0.00	0.00
15,000.00	90.00	179.64	12,667.00	-2,549.07	-601.68	2,577.63	0.00	0.00	0.00
15,100.00	90.00	179.64	12,667.00	-2,649.07	-601.06	2,677.45	0.00	0.00	0.00
15,200.00	90.00	179.64	12,667.00	-2,749.07	-600.43	2,777.27	0.00	0.00	0.00
15,300.00	90.00	179.64	12,667.00	-2,849.06	-599.81	2,877.09	0.00	0.00	0.00
15,400.00	90.00	179.64	12,667.00	-2,949.06	-599.18	2,976.91	0.00	0.00	0.00
15,500.00	90.00	179.64	12,667.00	-3,049.06	-598.56	3,076.73	0.00	0.00	0.00
15,600.00	90.00	179.64	12,667.00	-3,149.06	-597.93	3,176.55	0.00	0.00	0.00
15,700.00	90.00	179.64	12,667.00	-3,249.06	-597.30	3,276.37	0.00	0.00	0.00
15,800.00	90.00	179.64	12,667.00	-3,349.05	-596.68	3,376.19	0.00	0.00	0.00
15,900.00	90.00	179.64	12,667.00	-3,449.05	-596.05	3,476.02	0.00	0.00	0.00
16,000.00	90.00	179.64	12,667.00	-3,549.05	-595.43	3,575.84	0.00	0.00	0.00
16,100.00	90.00	179.64	12,667.00	-3,649.05	-594.80	3,675.66	0.00	0.00	0.00
16,200.00	90.00	179.64	12,667.00	-3,749.05	-594.18	3,775.48	0.00	0.00	0.00
16,300.00	90.00	179.64	12,667.00	-3,849.04	-593.55	3,875.30	0.00	0.00	0.00
16,400.00	90.00	179.64	12,667.00	-3,949.04	-592.93	3,975.12	0.00	0.00	0.00
16,500.00	90.00	179.64	12,667.00	-4,049.04	-592.30	4,074.94	0.00	0.00	0.00
16,600.00	90.00	179.64	12,667.00	-4,149.04	-591.68	4,174.76	0.00	0.00	0.00
16,700.00	90.00	179.64	12,667.00	-4,249.04	-591.05	4,274.59	0.00	0.00	0.00
16,800.00	90.00	179.64	12,667.00	-4,349.03	-590.42	4,374.41	0.00	0.00	0.00
16,900.00	90.00	179.64	12,667.00	-4,449.03	-589.80	4,474.23	0.00	0.00	0.00
17,000.00	90.00	179.64	12,667.00	-4,549.03	-589.17	4,574.05	0.00	0.00	0.00
17,100.00	90.00	179.64	12,667.00	-4,649.03	-588.55	4,673.87	0.00	0.00	0.00
17,200.00	90.00	179.64	12,667.00	-4,749.03	-587.92	4,773.69	0.00	0.00	0.00
17,300.00	90.00	179.64	12,667.00	-4,849.03	-587.30	4,873.51	0.00	0.00	0.00
17,400.00	90.00	179.64	12,667.00	-4,949.02	-586.67	4,973.33	0.00	0.00	0.00
17,500.00	90.00	179.64	12,667.00	-5,049.02	-586.05	5,073.15	0.00	0.00	0.00
17,600.00	90.00	179.64	12,667.00	-5,149.02	-585.42	5,172.98	0.00	0.00	0.00
17,700.00	90.00	179.64	12,667.00	-5,249.02	-584.80	5,272.80	0.00	0.00	0.00
17,800.00	90.00	179.64	12,667.00	-5,349.02	-584.17	5,372.62	0.00	0.00	0.00
17,900.00	90.00	179.64	12,667.00	-5,449.01	-583.54	5,472.44	0.00	0.00	0.00
18,000.00	90.00	179.64	12,667.00	-5,549.01	-582.92	5,572.26	0.00	0.00	0.00
18,100.00	90.00	179.64	12,667.00	-5,649.01	-582.29	5,672.08	0.00	0.00	0.00
18,200.00	90.00	179.64	12,667.00	-5,749.01	-581.67	5,771.90	0.00	0.00	0.00
18,300.00	90.00	179.64	12,667.00	-5,849.01	-581.04	5,871.72	0.00	0.00	0.00
18,400.00	90.00	179.64	12,667.00	-5,949.00	-580.42	5,971.55	0.00	0.00	0.00
18,500.00	90.00	179.64	12,667.00	-6,049.00	-579.79	6,071.37	0.00	0.00	0.00
18,600.00	90.00	179.64	12,667.00	-6,149.00	-579.17	6,171.19	0.00	0.00	0.00
18,700.00	90.00	179.64	12,667.00	-6,249.00	-578.54	6,271.01	0.00	0.00	0.00
18,800.00	90.00	179.64	12,667.00	-6,349.00	-577.92	6,370.83	0.00	0.00	0.00
18,900.00	90.00	179.64	12,667.00	-6,448.99	-577.29	6,470.65	0.00	0.00	0.00



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
19,000.00	90.00	179.64	12,667.00	-6,548.99	-576.67	6,570.47	0.00	0.00	0.00	
19,100.00	90.00	179.64	12,667.00	-6,648.99	-576.04	6,670.29	0.00	0.00	0.00	
19,200.00	90.00	179.64	12,667.00	-6,748.99	-575.41	6,770.11	0.00	0.00	0.00	
19,300.00	90.00	179.64	12,667.00	-6,848.99	-574.79	6,869.94	0.00	0.00	0.00	
19,400.00	90.00	179.64	12,667.00	-6,948.98	-574.16	6,969.76	0.00	0.00	0.00	
19,500.00	90.00	179.64	12,667.00	-7,048.98	-573.54	7,069.58	0.00	0.00	0.00	
19,600.00	90.00	179.64	12,667.00	-7,148.98	-572.91	7,169.40	0.00	0.00	0.00	
19,700.00	90.00	179.64	12,667.00	-7,248.98	-572.29	7,269.22	0.00	0.00	0.00	
19,800.00	90.00	179.64	12,667.00	-7,348.98	-571.66	7,369.04	0.00	0.00	0.00	
19,900.00	90.00	179.64	12,667.00	-7,448.97	-571.04	7,468.86	0.00	0.00	0.00	
20,000.00	90.00	179.64	12,667.00	-7,548.97	-570.41	7,568.68	0.00	0.00	0.00	
20,100.00	90.00	179.64	12,667.00	-7,648.97	-569.79	7,668.51	0.00	0.00	0.00	
20,200.00	90.00	179.64	12,667.00	-7,748.97	-569.16	7,768.33	0.00	0.00	0.00	
20,300.00	90.00	179.64	12,667.00	-7,848.97	-568.53	7,868.15	0.00	0.00	0.00	
20,400.00	90.00	179.64	12,667.00	-7,948.96	-567.91	7,967.97	0.00	0.00	0.00	
20,500.00	90.00	179.64	12,667.00	-8,048.96	-567.28	8,067.79	0.00	0.00	0.00	
20,600.00	90.00	179.64	12,667.00	-8,148.96	-566.66	8,167.61	0.00	0.00	0.00	
20,700.00	90.00	179.64	12,667.00	-8,248.96	-566.03	8,267.43	0.00	0.00	0.00	
20,800.00	90.00	179.64	12,667.00	-8,348.96	-565.41	8,367.25	0.00	0.00	0.00	
20,900.00	90.00	179.64	12,667.00	-8,448.95	-564.78	8,467.07	0.00	0.00	0.00	
21,000.00	90.00	179.64	12,667.00	-8,548.95	-564.16	8,566.90	0.00	0.00	0.00	
21,100.00	90.00	179.64	12,667.00	-8,648.95	-563.53	8,666.72	0.00	0.00	0.00	
21,200.00	90.00	179.64	12,667.00	-8,748.95	-562.91	8,766.54	0.00	0.00	0.00	
21,300.00	90.00	179.64	12,667.00	-8,848.95	-562.28	8,866.36	0.00	0.00	0.00	
21,400.00	90.00	179.64	12,667.00	-8,948.95	-561.66	8,966.18	0.00	0.00	0.00	
21,500.00	90.00	179.64	12,667.00	-9,048.94	-561.03	9,066.00	0.00	0.00	0.00	
21,600.00	90.00	179.64	12,667.00	-9,148.94	-560.40	9,165.82	0.00	0.00	0.00	
21,700.00	90.00	179.64	12,667.00	-9,248.94	-559.78	9,265.64	0.00	0.00	0.00	
21,800.00	90.00	179.64	12,667.00	-9,348.94	-559.15	9,365.46	0.00	0.00	0.00	
21,900.00	90.00	179.64	12,667.00	-9,448.94	-558.53	9,465.29	0.00	0.00	0.00	
22,000.00	90.00	179.64	12,667.00	-9,548.93	-557.90	9,565.11	0.00	0.00	0.00	
22,100.00	90.00	179.64	12,667.00	-9,648.93	-557.28	9,664.93	0.00	0.00	0.00	
22,200.00	90.00	179.64	12,667.00	-9,748.93	-556.65	9,764.75	0.00	0.00	0.00	
22,300.00	90.00	179.64	12,667.00	-9,848.93	-556.03	9,864.57	0.00	0.00	0.00	
22,400.00	90.00	179.64	12,667.00	-9,948.93	-555.40	9,964.39	0.00	0.00	0.00	
22,500.00	90.00	179.64	12,667.00	-10,048.92	-554.78	10,064.21	0.00	0.00	0.00	
22,600.00	90.00	179.64	12,667.00	-10,148.92	-554.15	10,164.03	0.00	0.00	0.00	
22,657.88	90.00	179.64	12,667.00	-10,206.80	-553.79	10,221.81	0.00	0.00	0.00	
PLU 17 TWR 126H LTP										
22,700.00	90.00	179.64	12,667.00	-10,248.92	-553.52	10,263.86	0.00	0.00	0.00	
22,767.88	90.00	179.64	12,667.00	-10,316.80	-553.10	10,331.62	0.00	0.00	0.00	
TD at 22767.88 - PLU 17 TWR 126H PBHL										



# Altitude Energy Partners

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 126H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
PLU 17 TWR 126H FTP	0.00	0.00	12,667.00	-304.10	-615.10	440,182.70	665,567.90	32.209046	-103.798020
- plan misses target center by 68.70usft at 12776.45usft MD (12605.73 TVD, -335.17 N, -615.53 E)									
- Point									
PLU 17 TWR 126H LTP	0.00	0.00	12,667.00	-10,206.80	-553.80	430,280.00	665,629.20	32.181824	-103.797981
- plan misses target center by 0.01usft at 22657.88usft MD (12667.00 TVD, -10206.80 N, -553.79 E)									
- Point									
PLU 17 TWR 126H PBH	0.00	0.00	12,667.00	-10,316.80	-553.10	430,170.00	665,629.90	32.181521	-103.797980
- plan hits target center									
- Rectangle (sides W100.00 H10,013.13 D0.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
567.00	567.00	Rustler				
657.00	657.00	Magenta Dolomite				
967.00	967.00	Top Salt				
4,101.20	4,087.00	Base Salt				
4,324.59	4,307.00	Delaware				
5,228.31	5,197.00	Cherry Canyon				
6,556.38	6,507.00	Brushy Canyon				
7,926.80	7,877.00	Basal Brushy Canyon				
8,216.80	8,167.00	Bone Spring Lime				
8,316.80	8,267.00	Avalon Sand				
8,336.80	8,287.00	Upper Avalon Shale				
8,746.80	8,697.00	Lower Avalon Shale				
8,966.80	8,917.00	1st Bone Spring Lime				
9,176.80	9,127.00	1st Bone Spring Ss				
9,661.80	9,612.00	2nd Bone Spring Lime				
9,976.80	9,927.00	2nd Bone Spring Ss				
10,366.80	10,317.00	3rd Bone Spring Lm				
11,156.80	11,107.00	3rd Bone Spring Ss				
11,461.80	11,412.00	Red Hills SS				
11,556.80	11,507.00	Wolfcamp				
11,641.80	11,592.00	Wolfcamp X				
11,711.80	11,662.00	Wolfcamp Y				
11,766.80	11,717.00	Wolfcamp A				
11,906.80	11,857.00	Wolfcamp A Lower				
12,146.80	12,097.00	Wolfcamp B				
12,319.54	12,267.00	Wolfcamp C				
12,576.86	12,487.00	Wolfcamp D				
13,043.84	12,667.00	LP		0.00		



Altitude Energy Partners  
Planning Report



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<b>Project:</b>	Eddy County, NM (NAD27)	<b>MD Reference:</b>	WELL @ 3547.00usft (H&P 467)
<b>Site:</b>	PLU 17 Twin Wells Ranch	<b>North Reference:</b>	Grid
<b>Well:</b>	126H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,500.00	2,500.00	0.00	0.00	Start Build 1.00
3,499.75	3,494.68	-2.82	-86.96	Start 2723.55 hold
6,223.30	6,176.88	-18.12	-559.53	Start Drop -1.50
6,889.80	6,840.00	-20.00	-617.50	Start 5254.04 hold
12,143.84	12,094.04	-20.00	-617.50	Start Build 10.00
13,043.84	12,667.00	-592.95	-613.92	Start 9724.04 hold
22,767.88	12,667.00	-10,316.80	-553.10	TD at 22767.88



# **XTO Energy**

**Eddy County, NM (NAD27)  
PLU 17 Twin Wells Ranch  
126H**

**OH  
Plan #1**

## **Anticollision Report**

**13 March, 2020**

