Rec'd 04/22/2020 - NMOCD

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMLC061705B

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
POKER LAKE UNIT 17 TWR 106H

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

9. API Well No.
30-015-46655-00-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 65FNL 1613FEL

11. County or Parish, State
EDDY COUNTY, NM

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

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

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

XTO 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 40FNL & 1613FEL to 65FNL & 1613FEL *No surface disturbance.

Change BHL from 2440FNL & 1655FEL in Sec. 32-T24S-R31E to 220FSL & 1650FEL in Sec. 29-T24S-R31E.

XTO requests the following variances:

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

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

Electronic Submission #508709 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 03/28/2020 (20PP1808SE)

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

Signature (Electronic Submission) — Date 03/27/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ACCEPTED — Title CODY LAYTON ASSIST FIELD MANAGER LANDS MINERALS — Date 04/22/2020

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 ****

SHL/BHL entered 04/24/2020 - KMSNMOCD

Additional data for EC transaction #508709 that would not fit on the form

32. Additional remarks, continued

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
Directional Plan

Revisions to Operator-Submitted EC Data for Sundry Notice #508709

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMLC061705B	NMLC061705B
Agreement:	NMNM71016X	891000303X (NMNM71016X)
Operator:	XTO PERMIAN OPERATING, LLC 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO PERMIAN OPERATING LLC 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707 Ph: 432.683 2277
Admin Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Tech Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Location: State: County:	 NM EDDY	 NM EDDY
Field/Pool:	PURPLE SAGE WOLFCAMP	PURPLE SAGE-WOLFCAMP (GAS)
Well/Facility:	POKER LAKE UNIT 17 TWR 106H Sec 20 T24S R31E Mer NMP NWNE 65FNL 1613FEL	POKER LAKE UNIT 17 TWR 106H Sec 20 T24S R31E NWNE 65FNL 1613FEL

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

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

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

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015- 46655	98220	PURPLE SAGE; WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
	POKER LAKE UNIT 17 TWR	106H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,507'

[10] Surface Location

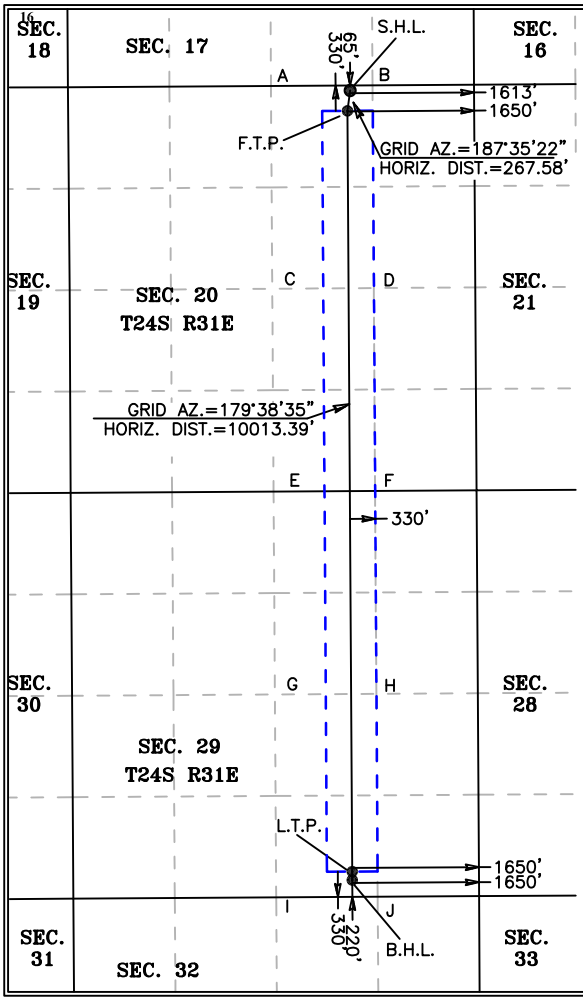
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	20	24 S	31 E		65	NORTH	1,613	EAST	EDDY

[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
O	29	24 S	31 E		220	SOUTH	1,650	EAST	EDDY

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

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



GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 440,451.9
X= 666,183.0
LAT.= 32.209778°N
LONG.= 103.796026°W

GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 440,510.7
X= 707,367.1
LAT.= 32.209901°N
LONG.= 103.796510°W

FIRST TAKE POINT
NAD 27 NME
Y= 440,186.7
X= 666,147.7
LAT.= 32.209049°N
LONG.= 103.796145°W

FIRST TAKE POINT
NAD 83 NME
Y= 440,245.5
X= 707,331.8
LAT.= 32.209172°N
LONG.= 103.796629°W

CORNER COORDINATES TABLE
NAD 27 NME
A – Y= 440,510.1 N, X= 665,151.3 E
B – Y= 440,518.8 N, X= 666,473.4 E
C – Y= 437,870.4 N, X= 665,168.1 E
D – Y= 437,879.7 N, X= 666,490.0 E
E – Y= 435,229.8 N, X= 665,185.0 E
F – Y= 435,238.0 N, X= 666,506.6 E
G – Y= 432,588.8 N, X= 665,202.3 E
H – Y= 432,596.9 N, X= 666,523.3 E
I – Y= 429,947.7 N, X= 665,219.5 E
J – Y= 429,955.8 N, X= 666,540.2 E

CORNER COORDINATES TABLE
NAD 83 NME
A – Y= 440,568.9 N, X= 706,335.3 E
B – Y= 440,577.6 N, X= 707,657.5 E
C – Y= 437,929.1 N, X= 706,352.2 E
D – Y= 437,938.4 N, X= 707,674.2 E
E – Y= 435,288.4 N, X= 706,369.2 E
F – Y= 435,296.6 N, X= 707,690.8 E
G – Y= 432,647.4 N, X= 706,386.6 E
H – Y= 432,655.5 N, X= 707,707.7 E
I – Y= 430,006.2 N, X= 706,403.9 E
J – Y= 430,014.3 N, X= 707,724.7 E

LAST TAKE POINT
NAD 27 NME
Y= 430,283.8
X= 666,209.1
LAT.= 32.181826°N
LONG.= 103.796106°W

LAST TAKE POINT
NAD 83 NME
Y= 430,342.3
X= 707,393.5
LAT.= 32.181950°N
LONG.= 103.796589°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 430,173.8
X= 666,209.8
LAT.= 32.181524°N
LONG.= 103.796106°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 430,232.3
X= 707,394.2
LAT.= 32.181647°N
LONG.= 103.796589°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 — Signature
3-27-20 — Date

Kelly Kardos — Printed Name

kelly_kardos@xtoenergy.com — E-mail Address

[18] SURVEYOR CERTIFICATION

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

03-26-2020 — Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786 — Certificate Number

LM/AI — 2018010208

P:\PROJECTS\2018\2018010208-XTO-POKER_LAKE_UNIT_17_TWIN_WELL_RANCH_106H-EDDY\DWG\2018010208-XTO-POKER_LAKE_UNIT_17_TWIN_WELL_RANCH_106H_C-102_REVISED.dwg

Poker Lake Unit 17 TWR 106H
Projected TD: 21891' MD / 11906' TVD
SHL: 65' FNL & 1613' FEL , Section 20, T24S, R31E
BHL: 220' FSL & 1650' FEL , Section 29, T24S, R31E
Eddy County, NM

Casing Design

The surface fresh water sands will be protected by setting 13-3/8 inch casing @ 810' (156' above the salt) and circulating cement back to surface. A 12-1/4 inch vertical hole will be drilled to 10366' 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.

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	1.34	5.32	19.41
12-1/4"	0' – 10366'	9-5/8"	40	BTC	HCL-80	New	1.37	1.48	2.21
8-3/4-8-1/2"	0' – 21891'	5-1/2"	20	BTC	P-110	New	1.03	1.63	2.05

XTO requests to not utilize centralizers in the curve and lateral
9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

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 4806'

1st Stage

Lead: 820 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: 120 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.88 ft3/sx, 9.61 gal/sx water)
Tail: 2510 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 10366'	12-1/4"	FW / Cut Brine / Direct Emulsion	8.5-9.5	29-32	NC - 20
10366' to 21891'	8-3/4-8-1/2"	FW / Cut Brine / Polymer/ OBM	10.7-11.5	32-50	NC - 20

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

XTO Energy Inc.
PLU 17 Twin Wells Ranch 106H
Projected TD: 21891' MD / 11906' TVD
SHL: 65' FNL & 1613' FEL , Section 20, T24S, R31E
BHL: 220' FSL & 1650' FEL , Section 29, T24S, R31E
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	566'	Water
Top of Salt	966'	Water
Base of Salt	4086'	Water
Delaware	4306'	Water
Bone Spring	8166'	Water/Oil/Gas
1st Bone Spring Ss	9126'	Water/Oil/Gas
2nd Bone Spring Ss	9926'	Water/Oil/Gas
3rd Bone Spring Ss	11106'	Water/Oil/Gas
Wolfcamp Shale	11506'	Water/Oil/Gas
Wolfcamp A Shale	11716'	Water/Oil/Gas
Target/Land Curve	11906'	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' (156' above the salt) and circulating cement back to surface. A 12-1/4 inch vertical hole will be drilled to 10366' 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	1.34	5.32	19.41
12-1/4"	0’ – 10366'	9-5/8"	40	BTC	HCL-80	New	1.37	1.48	2.21
8-3/4-8-1/2"	0' – 21891'	5-1/2”	20	BTC	P-110	New	1.03	1.63	2.05

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.
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 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

Top of Cement: Surface

2nd Intermediate Casing (Stage 2): 9-5/8", 40 New HCL-80, BTC casing to be set at +/- 10366'
ECP/DV Tool to be set at 4806'

1st Stage

Lead: 820 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

Top of Cement: 200' inside previous casing shoe

Production Casing: 5-1/2", 20 New P-110, BTC casing to be set at +/- 21891'

Lead: 120 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 2510 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

Top of Cement: 300' inside previous casing shoe

5. Pressure Control Equipment

Once the permanent WH is installed on the 13-3/8 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M 3-Ram BOP. MASP should not exceed 4191 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 nippling 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

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 10366'	12-1/4"	FW / Cut Brine / Direct Emulsion	8.5-9.5	29-32	NC - 20
10366' to 21891'	8-3/4-8-1/2"	FW / Cut Brine / Polymer/ OBM	10.7-11.5	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 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 6810 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 Energy

Eddy County, NM (NAD27)
PLU 17 Twin Wells Ranch
106H

OH

Plan: Plan #1

Standard Planning Report

13 March, 2020

Plan #1

Project: Eddy County, NM (NAD27)
Site: PLU 17 Twin Wells Ranch
Well: 106H
Wellbore: OH
Design: Plan #1
Lat: 32.209778
Long: -103.796026
GL: 3519.00
KB: WELL @ 3546.00usft (H&P 467)

WELL DETAILS: 106H

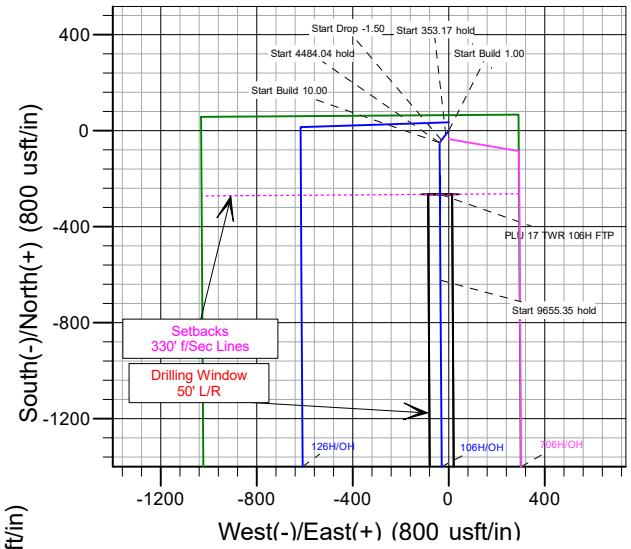
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	440451.90	666183.00	32.209778	-103.796026

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PLU 17 TWR 106H FTP	11906.00	-265.20	-35.30	440186.70	666147.70	Point
PLU 17 TWR 106H LTP	11906.00	-10168.10	26.10	430283.80	666209.10	Point
PLU 17 TWR 106H PBHL	11906.00	-10278.10	26.80	430173.80	666209.80	Rectangle (Sides: L10013.13 W100.00)

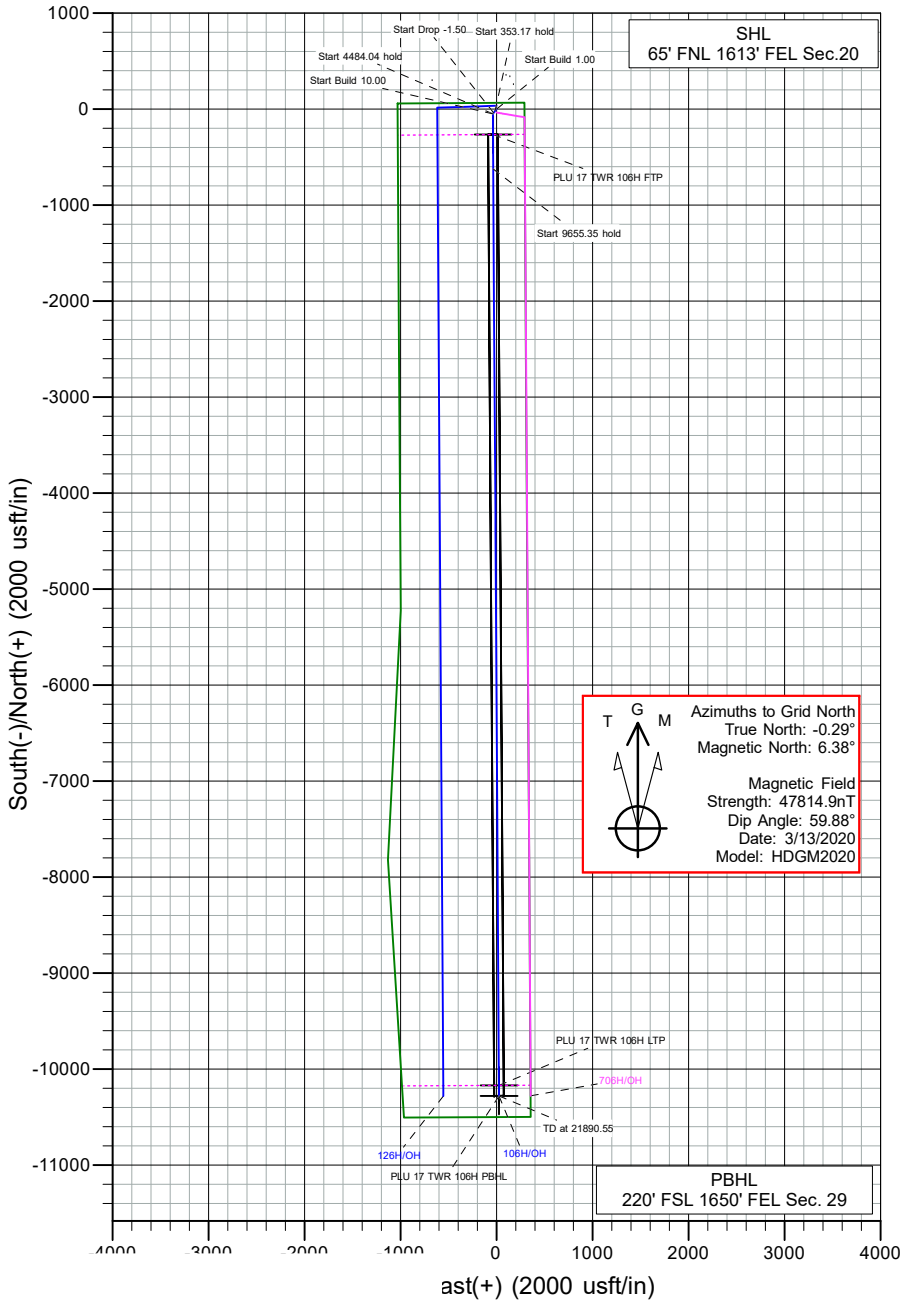
SECTION DETAILS

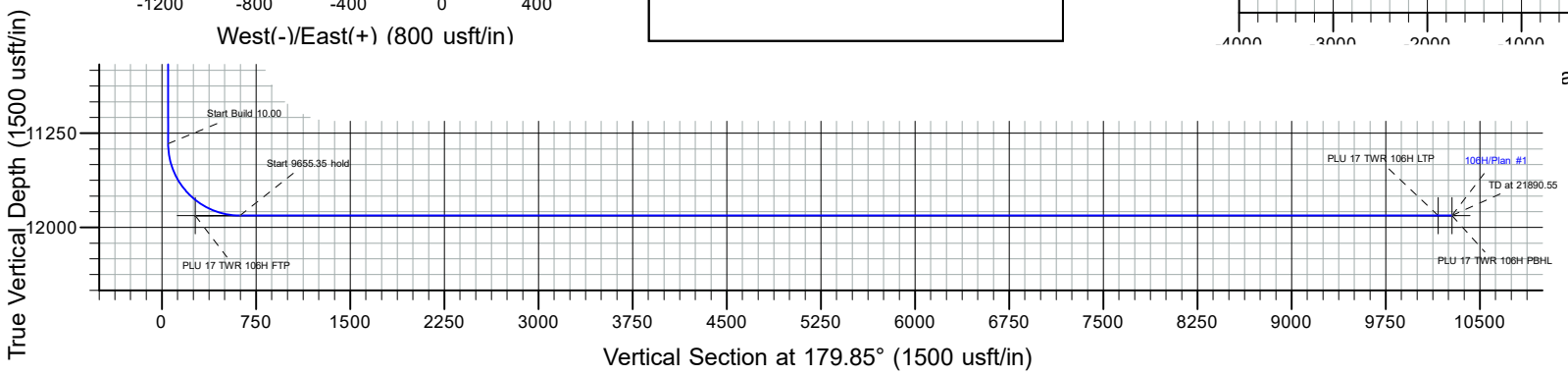
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00
6178.79	4.79	217.23	6178.24	-15.92	-12.10	1.00	217.23	15.89	Start 353.17 hold
6531.96	4.79	217.23	6530.18	-39.39	-29.93	0.00	0.00	39.31	Start Drop -1.50
6851.16	0.00	0.00	6849.00	-50.00	-38.00	1.50	180.00	49.90	Start 4484.04 hold
11335.20	0.00	0.00	11333.04	-50.00	-38.00	0.00	0.00	49.90	Start Build 10.00
12235.20	90.00	179.64	11906.00	-622.95	-34.37	10.00	179.64	622.85	Start 9655.35 hold
21890.55	90.00	179.64	11906.00	-10278.10	26.80	0.00	0.00	10278.13	TD at 21890.55



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
566.00	566.00	Rustler
656.00	656.00	Magenta Dolomite
966.00	966.00	Top Salt
4086.00	4086.00	Base Salt
4306.00	4306.00	Delaware
5196.00	5196.00	Cherry Canyon
6506.00	6507.70	Brushy Canyon
7876.00	7878.16	Basal Brushy Canyon
8166.00	8168.16	Bone Spring Lime
8266.00	8268.16	Avalon Sand
8286.00	8288.16	Upper Avalon Shale
8696.00	8698.16	Lower Avalon Shale
8916.00	8918.16	1st Bone Spring Lime
9126.00	9128.16	1st Bone Spring Ss
9611.00	9613.16	2nd Bone Spring Lime
9926.00	9928.16	2nd Bone Spring Ss
10316.00	10318.16	3rd Bone Spring Lm
11106.00	11108.16	3rd Bone Spring Ss
11411.00	11413.40	Red Hills SS
11506.00	11510.90	Wolfcamp
11591.00	11602.78	Wolfcamp X
11661.00	11684.38	Wolfcamp Y
11716.00	11754.63	Wolfcamp A
11856.00	11994.07	Wolfcamp A Lower
11906.00	12235.20	LP





CASING DETAILS

TVD	MD	Name	Size

Plan: Plan #1 (106H/OH)
Created By: Bret Wolford Date: 12:34, March 13 2020

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 106H
Company:	XTO Energy	**TVD Reference:**	WELL @ 3546.00usft (H&P 467)
Project:	Eddy County, NM (NAD27)	**MD Reference:**	WELL @ 3546.00usft (H&P 467)
Site:	PLU 17 Twin Wells Ranch	**North Reference:**	Grid
Well:	106H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project Eddy County, NM (NAD27)

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

Site PLU 17 Twin Wells Ranch

Site Position:		**Northing:**	440,511.70 usft	**Latitude:**	32.209942
From:	Map	**Easting:**	666,182.90 usft	**Longitude:**	-103.796026
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well 106H

Well Position	**+N/-S**	0.00 usft	**Northing:**	440,451.90 usft	**Latitude:**	32.209778
	+E/-W	0.00 usft	**Easting:**	666,183.00 usft	**Longitude:**	-103.796027
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,519.00 usft
Grid Convergence:		0.29 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	3/13/2020	6.67	59.88	47,814.90000000

Design Plan #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.85

Plan Survey Tool Program **Date** 3/13/2020

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	21,890.55	Plan #1 (OH)	MWD+IFR1+MS	
				OWSG MWD + IFR1 + Multi-St	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,178.79	4.79	217.23	6,178.24	-15.92	-12.10	1.00	1.00	0.00	217.23	
6,531.96	4.79	217.23	6,530.18	-39.39	-29.93	0.00	0.00	0.00	0.00	
6,851.16	0.00	0.00	6,849.00	-50.00	-38.00	1.50	-1.50	0.00	180.00	
11,335.20	0.00	0.00	11,333.04	-50.00	-38.00	0.00	0.00	0.00	0.00	
12,235.20	90.00	179.64	11,906.00	-622.95	-34.37	10.00	10.00	0.00	179.64	PLU 17 TWR 106H P
21,890.55	90.00	179.64	11,906.00	-10,278.10	26.80	0.00	0.00	0.00	0.00	PLU 17 TWR 106H P

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Site:	PLU 17 Twin Wells Ranch	**North Reference:**	Grid
Well:	106H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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
566.00	0.00	0.00	566.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
656.00	0.00	0.00	656.00	0.00	0.00	0.00	0.00	0.00	0.00
Magenta Dolomite									
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
966.00	0.00	0.00	966.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	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
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,086.00	0.00	0.00	4,086.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,306.00	0.00	0.00	4,306.00	0.00	0.00	0.00	0.00	0.00	0.00

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Site:	PLU 17 Twin Wells Ranch	**North Reference:**	Grid
Well:	106H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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)
Delaware									
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,196.00	0.00	0.00	5,196.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.00									
5,800.00	1.00	217.23	5,800.00	-0.69	-0.53	0.69	1.00	1.00	0.00
5,900.00	2.00	217.23	5,899.96	-2.78	-2.11	2.77	1.00	1.00	0.00
6,000.00	3.00	217.23	5,999.86	-6.25	-4.75	6.24	1.00	1.00	0.00
6,100.00	4.00	217.23	6,099.68	-11.11	-8.45	11.09	1.00	1.00	0.00
6,178.79	4.79	217.23	6,178.24	-15.92	-12.10	15.89	1.00	1.00	0.00
Start 353.17 hold									
6,200.00	4.79	217.23	6,199.37	-17.33	-13.17	17.29	0.00	0.00	0.00
6,300.00	4.79	217.23	6,299.02	-23.97	-18.22	23.93	0.00	0.00	0.00
6,400.00	4.79	217.23	6,398.67	-30.62	-23.27	30.56	0.00	0.00	0.00
6,500.00	4.79	217.23	6,498.32	-37.26	-28.32	37.19	0.00	0.00	0.00
6,507.70	4.79	217.23	6,506.00	-37.78	-28.71	37.70	0.00	0.00	0.00
Brushy Canyon									
6,531.96	4.79	217.23	6,530.18	-39.39	-29.93	39.31	0.00	0.00	0.00
Start Drop -1.50									
6,600.00	3.77	217.23	6,598.02	-43.43	-33.01	43.34	1.50	-1.50	0.00
6,700.00	2.27	217.23	6,697.88	-47.62	-36.19	47.52	1.50	-1.50	0.00
6,800.00	0.77	217.23	6,797.84	-49.73	-37.79	49.63	1.50	-1.50	0.00
6,851.16	0.00	0.00	6,849.00	-50.00	-38.00	49.90	1.50	-1.50	279.05
Start 4484.04 hold									
6,900.00	0.00	0.00	6,897.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,000.00	0.00	0.00	6,997.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,100.00	0.00	0.00	7,097.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,200.00	0.00	0.00	7,197.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,300.00	0.00	0.00	7,297.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,400.00	0.00	0.00	7,397.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,500.00	0.00	0.00	7,497.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,600.00	0.00	0.00	7,597.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,700.00	0.00	0.00	7,697.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,800.00	0.00	0.00	7,797.84	-50.00	-38.00	49.90	0.00	0.00	0.00
7,878.16	0.00	0.00	7,876.00	-50.00	-38.00	49.90	0.00	0.00	0.00
Basal Brushy Canyon									
7,900.00	0.00	0.00	7,897.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,000.00	0.00	0.00	7,997.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,100.00	0.00	0.00	8,097.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,168.16	0.00	0.00	8,166.00	-50.00	-38.00	49.90	0.00	0.00	0.00

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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)
Bone Spring Lime									
8,200.00	0.00	0.00	8,197.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,268.16	0.00	0.00	8,266.00	-50.00	-38.00	49.90	0.00	0.00	0.00
Avalon Sand									
8,288.16	0.00	0.00	8,286.00	-50.00	-38.00	49.90	0.00	0.00	0.00
Upper Avalon Shale									
8,300.00	0.00	0.00	8,297.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,400.00	0.00	0.00	8,397.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,500.00	0.00	0.00	8,497.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,600.00	0.00	0.00	8,597.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,698.16	0.00	0.00	8,696.00	-50.00	-38.00	49.90	0.00	0.00	0.00
Lower Avalon Shale									
8,700.00	0.00	0.00	8,697.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,800.00	0.00	0.00	8,797.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,900.00	0.00	0.00	8,897.84	-50.00	-38.00	49.90	0.00	0.00	0.00
8,918.16	0.00	0.00	8,916.00	-50.00	-38.00	49.90	0.00	0.00	0.00
1st Bone Spring Lime									
9,000.00	0.00	0.00	8,997.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,100.00	0.00	0.00	9,097.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,128.16	0.00	0.00	9,126.00	-50.00	-38.00	49.90	0.00	0.00	0.00
1st Bone Spring Ss									
9,200.00	0.00	0.00	9,197.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,300.00	0.00	0.00	9,297.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,400.00	0.00	0.00	9,397.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,500.00	0.00	0.00	9,497.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,600.00	0.00	0.00	9,597.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,613.16	0.00	0.00	9,611.00	-50.00	-38.00	49.90	0.00	0.00	0.00
2nd Bone Spring Lime									
9,700.00	0.00	0.00	9,697.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,800.00	0.00	0.00	9,797.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,900.00	0.00	0.00	9,897.84	-50.00	-38.00	49.90	0.00	0.00	0.00
9,928.16	0.00	0.00	9,926.00	-50.00	-38.00	49.90	0.00	0.00	0.00
2nd Bone Spring Ss									
10,000.00	0.00	0.00	9,997.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,100.00	0.00	0.00	10,097.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,200.00	0.00	0.00	10,197.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,300.00	0.00	0.00	10,297.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,318.16	0.00	0.00	10,316.00	-50.00	-38.00	49.90	0.00	0.00	0.00
3rd Bone Spring Lm									
10,400.00	0.00	0.00	10,397.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,500.00	0.00	0.00	10,497.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,600.00	0.00	0.00	10,597.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,700.00	0.00	0.00	10,697.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,800.00	0.00	0.00	10,797.84	-50.00	-38.00	49.90	0.00	0.00	0.00
10,900.00	0.00	0.00	10,897.84	-50.00	-38.00	49.90	0.00	0.00	0.00
11,000.00	0.00	0.00	10,997.84	-50.00	-38.00	49.90	0.00	0.00	0.00
11,100.00	0.00	0.00	11,097.84	-50.00	-38.00	49.90	0.00	0.00	0.00
11,108.16	0.00	0.00	11,106.00	-50.00	-38.00	49.90	0.00	0.00	0.00
3rd Bone Spring Ss									
11,200.00	0.00	0.00	11,197.84	-50.00	-38.00	49.90	0.00	0.00	0.00
11,300.00	0.00	0.00	11,297.84	-50.00	-38.00	49.90	0.00	0.00	0.00
11,335.20	0.00	0.00	11,333.04	-50.00	-38.00	49.90	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 106H
Company:	XTO Energy	**TVD Reference:**	WELL @ 3546.00usft (H&P 467)
Project:	Eddy County, NM (NAD27)	**MD Reference:**	WELL @ 3546.00usft (H&P 467)
Site:	PLU 17 Twin Wells Ranch	**North Reference:**	Grid
Well:	106H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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)
Start Build 10.00									
11,350.00	1.48	179.64	11,347.84	-50.19	-38.00	50.09	10.00	10.00	0.00
11,400.00	6.48	179.64	11,397.70	-53.66	-37.98	53.56	10.00	10.00	0.00
11,413.40	7.82	179.64	11,411.00	-55.33	-37.97	55.23	10.00	10.00	0.00
Red Hills SS									
11,450.00	11.48	179.64	11,447.07	-61.46	-37.93	61.36	10.00	10.00	0.00
11,500.00	16.48	179.64	11,495.58	-73.54	-37.85	73.44	10.00	10.00	0.00
11,510.90	17.57	179.64	11,506.00	-76.73	-37.83	76.63	10.00	10.00	0.00
Wolfcamp									
11,550.00	21.48	179.64	11,542.84	-89.79	-37.75	89.69	10.00	10.00	0.00
11,600.00	26.48	179.64	11,588.51	-110.11	-37.62	110.01	10.00	10.00	0.00
11,602.78	26.76	179.64	11,591.00	-111.35	-37.61	111.26	10.00	10.00	0.00
Wolfcamp X									
11,650.00	31.48	179.64	11,632.24	-134.32	-37.47	134.23	10.00	10.00	0.00
11,684.38	34.92	179.64	11,661.00	-153.14	-37.35	153.05	10.00	10.00	0.00
Wolfcamp Y									
11,700.00	36.48	179.64	11,673.69	-162.26	-37.29	162.16	10.00	10.00	0.00
11,750.00	41.48	179.64	11,712.54	-193.70	-37.09	193.60	10.00	10.00	0.00
11,754.63	41.94	179.64	11,716.00	-196.78	-37.07	196.69	10.00	10.00	0.00
Wolfcamp A									
11,800.00	46.48	179.64	11,748.51	-228.41	-36.87	228.31	10.00	10.00	0.00
11,850.00	51.48	179.64	11,781.32	-266.12	-36.63	266.03	10.00	10.00	0.00
11,900.00	56.48	179.64	11,810.71	-306.55	-36.37	306.45	10.00	10.00	0.00
11,913.68	57.85	179.64	11,818.13	-318.04	-36.30	317.95	10.00	10.00	0.00
PLU 17 TWR 106H FTP									
11,950.00	61.48	179.64	11,836.47	-349.38	-36.10	349.29	10.00	10.00	0.00
11,994.07	65.89	179.64	11,856.00	-388.87	-35.85	388.78	10.00	10.00	0.00
Wolfcamp A Lower									
12,000.00	66.48	179.64	11,858.40	-394.30	-35.82	394.21	10.00	10.00	0.00
12,050.00	71.48	179.64	11,876.33	-440.96	-35.52	440.86	10.00	10.00	0.00
12,100.00	76.48	179.64	11,890.12	-489.00	-35.22	488.91	10.00	10.00	0.00
12,150.00	81.48	179.64	11,899.67	-538.06	-34.91	537.97	10.00	10.00	0.00
12,200.00	86.48	179.64	11,904.92	-587.77	-34.59	587.68	10.00	10.00	0.00
12,235.20	90.00	179.64	11,906.00	-622.95	-34.37	622.85	10.00	10.00	0.00
Start 9655.35 hold - LP									
12,300.00	90.00	179.64	11,906.00	-687.74	-33.96	687.65	0.00	0.00	0.00
12,400.00	90.00	179.64	11,906.00	-787.74	-33.33	787.65	0.00	0.00	0.00
12,500.00	90.00	179.64	11,906.00	-887.74	-32.69	887.65	0.00	0.00	0.00
12,600.00	90.00	179.64	11,906.00	-987.74	-32.06	987.65	0.00	0.00	0.00
12,700.00	90.00	179.64	11,906.00	-1,087.74	-31.43	1,087.65	0.00	0.00	0.00
12,800.00	90.00	179.64	11,906.00	-1,187.73	-30.79	1,187.65	0.00	0.00	0.00
12,900.00	90.00	179.64	11,906.00	-1,287.73	-30.16	1,287.65	0.00	0.00	0.00
13,000.00	90.00	179.64	11,906.00	-1,387.73	-29.52	1,387.65	0.00	0.00	0.00
13,100.00	90.00	179.64	11,906.00	-1,487.73	-28.89	1,487.65	0.00	0.00	0.00
13,200.00	90.00	179.64	11,906.00	-1,587.73	-28.26	1,587.65	0.00	0.00	0.00
13,300.00	90.00	179.64	11,906.00	-1,687.72	-27.62	1,687.65	0.00	0.00	0.00
13,400.00	90.00	179.64	11,906.00	-1,787.72	-26.99	1,787.65	0.00	0.00	0.00
13,500.00	90.00	179.64	11,906.00	-1,887.72	-26.36	1,887.64	0.00	0.00	0.00
13,600.00	90.00	179.64	11,906.00	-1,987.72	-25.72	1,987.64	0.00	0.00	0.00
13,700.00	90.00	179.64	11,906.00	-2,087.72	-25.09	2,087.64	0.00	0.00	0.00
13,800.00	90.00	179.64	11,906.00	-2,187.71	-24.46	2,187.64	0.00	0.00	0.00
13,900.00	90.00	179.64	11,906.00	-2,287.71	-23.82	2,287.64	0.00	0.00	0.00
14,000.00	90.00	179.64	11,906.00	-2,387.71	-23.19	2,387.64	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 106H
Company:	XTO Energy	**TVD Reference:**	WELL @ 3546.00usft (H&P 467)
Project:	Eddy County, NM (NAD27)	**MD Reference:**	WELL @ 3546.00usft (H&P 467)
Site:	PLU 17 Twin Wells Ranch	**North Reference:**	Grid
Well:	106H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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)
14,100.00	90.00	179.64	11,906.00	-2,487.71	-22.56	2,487.64	0.00	0.00	0.00
14,200.00	90.00	179.64	11,906.00	-2,587.71	-21.92	2,587.64	0.00	0.00	0.00
14,300.00	90.00	179.64	11,906.00	-2,687.70	-21.29	2,687.64	0.00	0.00	0.00
14,400.00	90.00	179.64	11,906.00	-2,787.70	-20.66	2,787.64	0.00	0.00	0.00
14,500.00	90.00	179.64	11,906.00	-2,887.70	-20.02	2,887.64	0.00	0.00	0.00
14,600.00	90.00	179.64	11,906.00	-2,987.70	-19.39	2,987.64	0.00	0.00	0.00
14,700.00	90.00	179.64	11,906.00	-3,087.70	-18.75	3,087.64	0.00	0.00	0.00
14,800.00	90.00	179.64	11,906.00	-3,187.69	-18.12	3,187.64	0.00	0.00	0.00
14,900.00	90.00	179.64	11,906.00	-3,287.69	-17.49	3,287.64	0.00	0.00	0.00
15,000.00	90.00	179.64	11,906.00	-3,387.69	-16.85	3,387.63	0.00	0.00	0.00
15,100.00	90.00	179.64	11,906.00	-3,487.69	-16.22	3,487.63	0.00	0.00	0.00
15,200.00	90.00	179.64	11,906.00	-3,587.69	-15.59	3,587.63	0.00	0.00	0.00
15,300.00	90.00	179.64	11,906.00	-3,687.68	-14.95	3,687.63	0.00	0.00	0.00
15,400.00	90.00	179.64	11,906.00	-3,787.68	-14.32	3,787.63	0.00	0.00	0.00
15,500.00	90.00	179.64	11,906.00	-3,887.68	-13.69	3,887.63	0.00	0.00	0.00
15,600.00	90.00	179.64	11,906.00	-3,987.68	-13.05	3,987.63	0.00	0.00	0.00
15,700.00	90.00	179.64	11,906.00	-4,087.68	-12.42	4,087.63	0.00	0.00	0.00
15,800.00	90.00	179.64	11,906.00	-4,187.67	-11.79	4,187.63	0.00	0.00	0.00
15,900.00	90.00	179.64	11,906.00	-4,287.67	-11.15	4,287.63	0.00	0.00	0.00
16,000.00	90.00	179.64	11,906.00	-4,387.67	-10.52	4,387.63	0.00	0.00	0.00
16,100.00	90.00	179.64	11,906.00	-4,487.67	-9.89	4,487.63	0.00	0.00	0.00
16,200.00	90.00	179.64	11,906.00	-4,587.67	-9.25	4,587.63	0.00	0.00	0.00
16,300.00	90.00	179.64	11,906.00	-4,687.66	-8.62	4,687.63	0.00	0.00	0.00
16,400.00	90.00	179.64	11,906.00	-4,787.66	-7.98	4,787.62	0.00	0.00	0.00
16,500.00	90.00	179.64	11,906.00	-4,887.66	-7.35	4,887.62	0.00	0.00	0.00
16,600.00	90.00	179.64	11,906.00	-4,987.66	-6.72	4,987.62	0.00	0.00	0.00
16,700.00	90.00	179.64	11,906.00	-5,087.66	-6.08	5,087.62	0.00	0.00	0.00
16,800.00	90.00	179.64	11,906.00	-5,187.65	-5.45	5,187.62	0.00	0.00	0.00
16,900.00	90.00	179.64	11,906.00	-5,287.65	-4.82	5,287.62	0.00	0.00	0.00
17,000.00	90.00	179.64	11,906.00	-5,387.65	-4.18	5,387.62	0.00	0.00	0.00
17,100.00	90.00	179.64	11,906.00	-5,487.65	-3.55	5,487.62	0.00	0.00	0.00
17,200.00	90.00	179.64	11,906.00	-5,587.65	-2.92	5,587.62	0.00	0.00	0.00
17,300.00	90.00	179.64	11,906.00	-5,687.64	-2.28	5,687.62	0.00	0.00	0.00
17,400.00	90.00	179.64	11,906.00	-5,787.64	-1.65	5,787.62	0.00	0.00	0.00
17,500.00	90.00	179.64	11,906.00	-5,887.64	-1.02	5,887.62	0.00	0.00	0.00
17,600.00	90.00	179.64	11,906.00	-5,987.64	-0.38	5,987.62	0.00	0.00	0.00
17,700.00	90.00	179.64	11,906.00	-6,087.64	0.25	6,087.62	0.00	0.00	0.00
17,800.00	90.00	179.64	11,906.00	-6,187.63	0.88	6,187.62	0.00	0.00	0.00
17,900.00	90.00	179.64	11,906.00	-6,287.63	1.52	6,287.61	0.00	0.00	0.00
18,000.00	90.00	179.64	11,906.00	-6,387.63	2.15	6,387.61	0.00	0.00	0.00
18,100.00	90.00	179.64	11,906.00	-6,487.63	2.79	6,487.61	0.00	0.00	0.00
18,200.00	90.00	179.64	11,906.00	-6,587.63	3.42	6,587.61	0.00	0.00	0.00
18,300.00	90.00	179.64	11,906.00	-6,687.62	4.05	6,687.61	0.00	0.00	0.00
18,400.00	90.00	179.64	11,906.00	-6,787.62	4.69	6,787.61	0.00	0.00	0.00
18,500.00	90.00	179.64	11,906.00	-6,887.62	5.32	6,887.61	0.00	0.00	0.00
18,600.00	90.00	179.64	11,906.00	-6,987.62	5.95	6,987.61	0.00	0.00	0.00
18,700.00	90.00	179.64	11,906.00	-7,087.62	6.59	7,087.61	0.00	0.00	0.00
18,800.00	90.00	179.64	11,906.00	-7,187.61	7.22	7,187.61	0.00	0.00	0.00
18,900.00	90.00	179.64	11,906.00	-7,287.61	7.85	7,287.61	0.00	0.00	0.00
19,000.00	90.00	179.64	11,906.00	-7,387.61	8.49	7,387.61	0.00	0.00	0.00
19,100.00	90.00	179.64	11,906.00	-7,487.61	9.12	7,487.61	0.00	0.00	0.00
19,200.00	90.00	179.64	11,906.00	-7,587.61	9.75	7,587.61	0.00	0.00	0.00
19,300.00	90.00	179.64	11,906.00	-7,687.60	10.39	7,687.60	0.00	0.00	0.00
19,400.00	90.00	179.64	11,906.00	-7,787.60	11.02	7,787.60	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 106H
Company:	XTO Energy	**TVD Reference:**	WELL @ 3546.00usft (H&P 467)
Project:	Eddy County, NM (NAD27)	**MD Reference:**	WELL @ 3546.00usft (H&P 467)
Site:	PLU 17 Twin Wells Ranch	**North Reference:**	Grid
Well:	106H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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)
19,500.00	90.00	179.64	11,906.00	-7,887.60	11.66	7,887.60	0.00	0.00	0.00
19,600.00	90.00	179.64	11,906.00	-7,987.60	12.29	7,987.60	0.00	0.00	0.00
19,700.00	90.00	179.64	11,906.00	-8,087.60	12.92	8,087.60	0.00	0.00	0.00
19,800.00	90.00	179.64	11,906.00	-8,187.59	13.56	8,187.60	0.00	0.00	0.00
19,900.00	90.00	179.64	11,906.00	-8,287.59	14.19	8,287.60	0.00	0.00	0.00
20,000.00	90.00	179.64	11,906.00	-8,387.59	14.82	8,387.60	0.00	0.00	0.00
20,100.00	90.00	179.64	11,906.00	-8,487.59	15.46	8,487.60	0.00	0.00	0.00
20,200.00	90.00	179.64	11,906.00	-8,587.59	16.09	8,587.60	0.00	0.00	0.00
20,300.00	90.00	179.64	11,906.00	-8,687.58	16.72	8,687.60	0.00	0.00	0.00
20,400.00	90.00	179.64	11,906.00	-8,787.58	17.36	8,787.60	0.00	0.00	0.00
20,500.00	90.00	179.64	11,906.00	-8,887.58	17.99	8,887.60	0.00	0.00	0.00
20,600.00	90.00	179.64	11,906.00	-8,987.58	18.62	8,987.60	0.00	0.00	0.00
20,700.00	90.00	179.64	11,906.00	-9,087.58	19.26	9,087.60	0.00	0.00	0.00
20,800.00	90.00	179.64	11,906.00	-9,187.57	19.89	9,187.59	0.00	0.00	0.00
20,900.00	90.00	179.64	11,906.00	-9,287.57	20.52	9,287.59	0.00	0.00	0.00
21,000.00	90.00	179.64	11,906.00	-9,387.57	21.16	9,387.59	0.00	0.00	0.00
21,100.00	90.00	179.64	11,906.00	-9,487.57	21.79	9,487.59	0.00	0.00	0.00
21,200.00	90.00	179.64	11,906.00	-9,587.57	22.43	9,587.59	0.00	0.00	0.00
21,300.00	90.00	179.64	11,906.00	-9,687.56	23.06	9,687.59	0.00	0.00	0.00
21,400.00	90.00	179.64	11,906.00	-9,787.56	23.69	9,787.59	0.00	0.00	0.00
21,500.00	90.00	179.64	11,906.00	-9,887.56	24.33	9,887.59	0.00	0.00	0.00
21,600.00	90.00	179.64	11,906.00	-9,987.56	24.96	9,987.59	0.00	0.00	0.00
21,700.00	90.00	179.64	11,906.00	-10,087.56	25.59	10,087.59	0.00	0.00	0.00
21,780.55	90.00	179.64	11,906.00	-10,168.10	26.10	10,168.13	0.00	0.00	0.00
PLU 17 TWR 106H LTP									
21,800.00	90.00	179.64	11,906.00	-10,187.55	26.23	10,187.59	0.00	0.00	0.00
21,890.55	90.00	179.64	11,906.00	-10,278.10	26.80	10,278.14	0.00	0.00	0.00
TD at 21890.55 - PLU 17 TWR 106H PBHL									

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 17 TWR 106H LTP - plan hits target center - Point	0.00	0.00	11,906.00	-10,168.10	26.10	430,283.80	666,209.10	32.181826	-103.796107
PLU 17 TWR 106H PBH - plan hits target center - Rectangle (sides W100.00 H10,013.13 D0.00)	0.00	0.00	11,906.00	-10,278.10	26.80	430,173.80	666,209.80	32.181524	-103.796106
PLU 17 TWR 106H FTP - plan misses target center by 102.54usft at 11913.68usft MD (11818.13 TVD, -318.04 N, -36.30 E) - Point	0.00	0.00	11,906.00	-265.20	-35.30	440,186.70	666,147.70	32.209049	-103.796145

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 106H
Company:	XTO Energy	**TVD Reference:**	WELL @ 3546.00usft (H&P 467)
Project:	Eddy County, NM (NAD27)	**MD Reference:**	WELL @ 3546.00usft (H&P 467)
Site:	PLU 17 Twin Wells Ranch	**North Reference:**	Grid
Well:	106H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
566.00	566.00	Rustler			
656.00	656.00	Magenta Dolomite			
966.00	966.00	Top Salt			
4,086.00	4,086.00	Base Salt			
4,306.00	4,306.00	Delaware			
5,196.00	5,196.00	Cherry Canyon			
6,507.70	6,506.00	Brushy Canyon			
7,878.16	7,876.00	Basal Brushy Canyon			
8,168.16	8,166.00	Bone Spring Lime			
8,268.16	8,266.00	Avalon Sand			
8,288.16	8,286.00	Upper Avalon Shale			
8,698.16	8,696.00	Lower Avalon Shale			
8,918.16	8,916.00	1st Bone Spring Lime			
9,128.16	9,126.00	1st Bone Spring Ss			
9,613.16	9,611.00	2nd Bone Spring Lime			
9,928.16	9,926.00	2nd Bone Spring Ss			
10,318.16	10,316.00	3rd Bone Spring Lm			
11,108.16	11,106.00	3rd Bone Spring Ss			
11,413.40	11,411.00	Red Hills SS			
11,510.90	11,506.00	Wolfcamp			
11,602.78	11,591.00	Wolfcamp X			
11,684.38	11,661.00	Wolfcamp Y			
11,754.63	11,716.00	Wolfcamp A			
11,994.07	11,856.00	Wolfcamp A Lower			
12,235.20	11,906.00	LP		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5,700.00	5,700.00	0.00	0.00	Start Build 1.00
6,178.79	6,178.24	-15.92	-12.10	Start 353.17 hold
6,531.96	6,530.18	-39.39	-29.93	Start Drop -1.50
6,851.16	6,849.00	-50.00	-38.00	Start 4484.04 hold
11,335.20	11,333.04	-50.00	-38.00	Start Build 10.00
12,235.20	11,906.00	-622.95	-34.37	Start 9655.35 hold
21,890.55	11,906.00	-10,278.10	26.80	TD at 21890.55