Form 3160-5
(June 2015)

OCD – Artesia – REC'D 4/27/2020

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.
NMLC061634B

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 30 BS 124H

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

9. API Well No.
30-015-46943-00-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 30 T25S R31E SENW 2310FNL 2010FWL
32.102180 N Lat, 103.819527 W Lon

11. County or Parish, State
EDDY COUNTY, NM

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

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

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

XTO 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 the BHL from 200FSL & 2178FWL to 200FSL & 2382FWL

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 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

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

**Electronic Submission #509448 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 04/03/2020 (20PP1896SE)**

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

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

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ALLISON MORENCY — Title PETROLEUM ENGINEER — Date 04/23/2020

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 4/30/2020 RWP

## Additional data for EC transaction #509448 that would not fit on the form

**32. Additional remarks, continued**

all completed, XTO will begin drilling the production hole on each of the wells.

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. We will also function test BOP equipment after each nipple up. A full BOP test will be required prior to drilling any production hole.

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

Attachments:
C102 & Supplement
Casing/Cement Design
Multibowl Diagram
Directional Plan

## Revisions to Operator-Submitted EC Data for Sundry Notice #509448

| | Operator Submitted | BLM Revised (AFMSS) |
|---|---|---|
| Sundry Type: | APDCH<br>NOI | APDCH<br>NOI |
| Lease: | NMLC061634B | NMLC061634B |
| Agreement: | NMNM71016X | 891000303X (NMNM71016X) |
| Operator: | XTO PERMIAN OPERATING, LLC<br>6401 HOLIDAY HILL RD BLDG 5<br>MIDLAND, TX 79707<br>Ph: 432-620-4374 | XTO PERMIAN OPERATING LLC<br>6401 HOLIDAY HILL ROAD BLDG 5<br>MIDLAND, TX 79707<br>Ph: 432.683 2277 |
| Admin Contact: | KELLY KARDOS<br>REGULATORY COORDINATOR<br>E-Mail: kelly_kardos@xtoenergy.com<br><br>Ph: 432-620-4374 | KELLY KARDOS<br>REGULATORY COORDINATOR<br>E-Mail: kelly_kardos@xtoenergy.com<br><br>Ph: 432-620-4374 |
| Tech Contact: | KELLY KARDOS<br>REGULATORY COORDINATOR<br>E-Mail: kelly_kardos@xtoenergy.com<br><br>Ph: 432-620-4374 | KELLY KARDOS<br>REGULATORY COORDINATOR<br>E-Mail: kelly_kardos@xtoenergy.com<br><br>Ph: 432-620-4374 |
| Location:<br>State:<br>County: | <br>NM<br>EDDY | <br>NM<br>EDDY |
| Field/Pool: | PURPLE SAGE WOLFCAMP | PURPLE SAGE-WOLFCAMP (GAS) |
| Well/Facility: | POKER LAKE UNIT 30 BS 124H<br>Sec 30 T25S R31E Mer NMP SENW 2310FNL 2010FWL | POKER LAKE UNIT 30 BS 124H<br>Sec 30 T25S R31E SENW 2310FNL 2010FWL<br>32.102180 N Lat, 103.819527 W Lon |

## Kardos, Kelly

**From:** amorency@blm.gov
**Sent:** Thursday, April 23, 2020 10:35 PM
**To:** Kardos, Kelly
**Subject:** Well POKER LAKE UNIT 30 BS 124H
**Attachments:** EC509448.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 509448. Please be sure to open and save all attachments to this message, since they contain important information.

04/23/2020 - AM
All COAs still apply. Offline cementing and shell testing 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

| [1] API Number | [2] Pool Code | [3] Pool Name |
|---|---|---|
| 30-015- 46943 | 98220 | PURPLE SAGE; WOLFCAMP |

| [4] Property Code | [5] Property Name | [6] Well Number |
|---|---|---|
| 327328 | POKER LAKE UNIT 30 BS | 124H |

| [7] OGRID No. | [8] Operator Name | [9] Elevation |
|---|---|---|
| 373075 | XTO PERMIAN OPERATING, LLC. | 3,382' |

## [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 |
|---|---|---|---|---|---|---|---|---|---|
| F | 30 | 25 S | 31 E | | 2,310 | NORTH | 2,010 | WEST | EDDY |

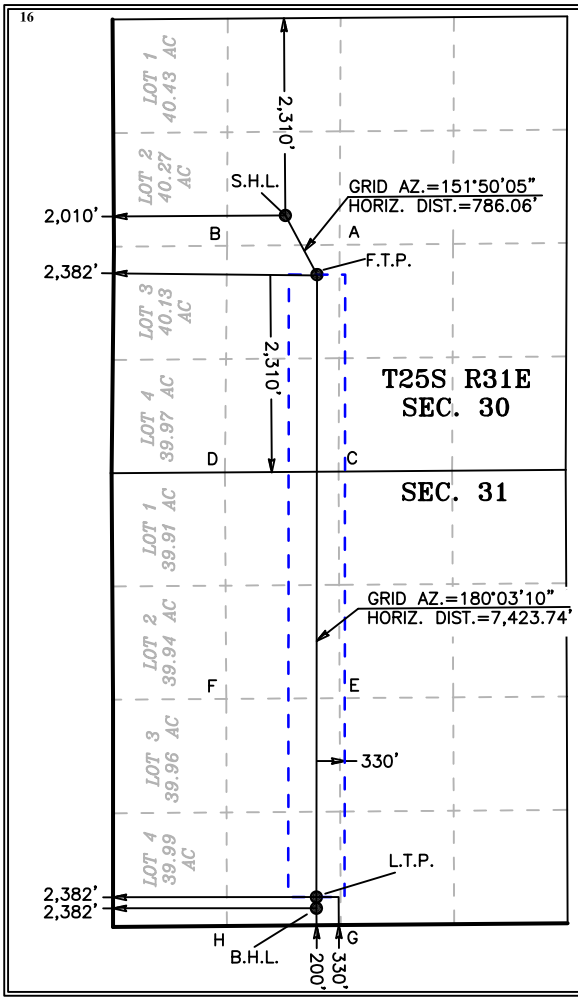
## [11] Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| N | 31 | 25 S | 31 E | | 200 | SOUTH | 2,382 | WEST | EDDY |

| [12] Dedicated Acres | [13] Joint or Infill | [14] Consolidation Code | [15] Order No. |
|---|---|---|---|
| 640.6 | | | |

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

[16]




GEODETIC COORDINATES
SURFACE LOCATION
NAD 27 NME
Y= 401,231.3
X= 659,249.3
LAT.= 32.102057°N
LONG.= 103.819050°W

GEODETIC COORDINATES
SURFACE LOCATION
NAD 83 NME
Y= 401,289.2
X= 700,434.7
LAT.= 32.102181°N
LONG.= 103.819529°W

FIRST TAKE POINT
NAD 27 NME
Y= 400,538.3
X= 659,620.2
LAT.= 32.100147°N
LONG.= 103.817863°W

FIRST TAKE POINT
NAD 83 NME
Y= 400,596.2
X= 700,805.7
LAT.= 32.100271°N
LONG.= 103.818342°W

CORNER COORDINATES TABLE
NAD 83 NME
A – Y= 400,944.7 N, X= 701,070.7 E
B – Y= 400,933.8 N, X= 699,752.5 E
C – Y= 398,288.0 N, X= 701,058.4 E
D – Y= 398,278.5 N, X= 699,727.5 E
E – Y= 395,633.7 N, X= 701,071.1 E
F – Y= 395,624.6 N, X= 699,742.6 E
G – Y= 392,974.7 N, X= 701,083.8 E
H – Y= 392,964.1 N, X= 699,750.1 E

CORNER COORDINATES TABLE
NAD 27 NME
A – Y= 400,886.8 N, X= 659,885.2 E
B – Y= 400,875.9 N, X= 658,567.1 E
C – Y= 398,230.1 N, X= 659,872.8 E
D – Y= 398,220.6 N, X= 658,542.0 E
E – Y= 395,575.9 N, X= 659,885.4 E
F – Y= 395,566.8 N, X= 658,557.0 E
G – Y= 392,917.0 N, X= 659,898.0 E
H – Y= 392,906.4 N, X= 658,564.4 E

LAST TAKE POINT
NAD 27 NME
Y= 393,244.8
X= 659,613.1
LAT.= 32.080097°N
LONG.= 103.817998°W

LAST TAKE POINT
NAD 83 NME
Y= 393,302.5
X= 700,798.8
LAT.= 32.080222°N
LONG.= 103.818476°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 393,114.8
X= 659,613.2
LAT.= 32.079740°N
LONG.= 103.818000°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 393,172.5
X= 700,798.9
LAT.= 32.079865°N
LONG.= 103.818478°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
4-2-20 — 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.*

2-26-2020 — Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786 — Certificate Number
JC 2017071030

4/30/2020 RWP

P:\PROJECTS\2017\2017071030-XTO-POKER_LAKE_UNIT_30_BS_124H-EDDY\DWG\2017071030-XTO-POKER_LAKE_UNIT_30_BS_124H_C-102.dwg

Intent [X] As Drilled [ ]

| API # |
|---|
| 30-015-46943 |

| Operator Name: | Property Name: | Well Number |
|---|---|---|
| XTO PERMIAN OPERATING, LLC | POKER LAKE UNIT 30 BS | 124H |

Kick Off Point (KOP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| F | 30 | 25S | 31E | | 2310 | NORTH | 2010 | WEST | EDDY |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.102181 | -103.819529 | 83 |

First Take Point (FTP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| K | 30 | 25S | 31E | | 2310 | SOUTH | 2382 | WEST | EDDY |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.100271 | -103.818342 | 83 |

Last Take Point (LTP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| N | 31 | 25S | 31E | | 330 | SOUTH | 2382 | WEST | EDDY |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.080222 | -103.818476 | 83 |

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

Is this well an infill well? [Y]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

| API # |
|---|
| |

| Operator Name: | Property Name: | Well Number |
|---|---|---|
| XTO PERMIAN OPERATING, LLC | POKER LAKE UNIT 30 BS | 122H |

KZ 06/29/2018

**Poker Lake Unit 30 BS 124H**
Projected TD: 19500' MD / 11737' TVD
SHL: 2310' FNL & 2010' FWL , Section 30, T25S, R31E
BHL: 200' FSL & 2382' FWL , Section 31, T25S, R31E
Eddy County, NM

## Casing Design

*The surface fresh water sands will be protected by setting 11-3/4" casing @ 1400' (96' above the salt) and circulating cement back to surface. The 7-5/8" intermediate casing will be set at 10900' and bring TOC back to surface. A 6-3/4 inch curve and lateral hole will be drilled to MD/TD and 5-1/2" x 5-0" casing will be set at TD and cemented back 300' into the 7-5/8" casing shoe.*

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 14-3/4" | 0' – 1400' | 11-3/4" | 54 | STC | J-55 | New | 1.09 | 2.38 | 7.25 |
| 9-7/8" | 0' – 10900' | 7-5/8" | 29.7 | BTC | L-80 | New | 1.80 | 1.67 | 2.11 |
| 6-3/4" | 0' – 10800' | 5-1/2" | 23 | BTC | P-110 | New | 1.21 | 2.27 | 2.74 |
| 6-3/4" | 10800' - 19500' | 5-0" | 18 | BTC | P-110 | New | 1.16 | 2.10 | 2.20 |

XTO requests to not utilize centralizers in the curve and lateral
7-5/8" Collapse analyzed using 50% evacuation based on regional experience.
5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

**WELLHEAD:**

*Permanent Wellhead – Multibowl System*
A. Starting Head: 11" 10M top flange x 11-3/4" SOW bottom
B. Tubing Head: 11" 10M bottom flange x 7-1/16" 15M top flange
- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 7-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

## Cement Program

### Surface Casing:
Lead: 510 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 190 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

### Intermediate Casing:
*ECP/DV Tool to be set at 4600'*

*1st Stage*

Lead: 1210 sxs Halcem - Class C (mixed at 11.0 ppg, 1.87 ft3/sx, 15.10 gal/sx water)
Tail: 310 sxs Halcem - Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1150 psi

*2nd Stage*

Lead: 820 sxs Halcem - Class C (mixed at 11.0 ppg, 1.88 ft3/sx, 10.13 gal/sx water)
Tail: 320 sxs Halcem-Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 5.29 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1150 psi

### Production Casing:
Lead: 20 sxs VersaCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water)
Tail: 800 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 7.20 gal/sx water)
Compressives: 12-hr = 800 psi 24 hr = 1500 psi

## Mud Circulation Program

| INTERVAL | Hole Size | Mud Type | MW (ppg) | Viscosity (sec/qt) | Fluid Loss (cc) |
|---|---|---|---|---|---|
| 0' - 1400' | 14-3/4" | FW / Native | 8.4-8.8 | 35-40 | NC |
| 1400' - 10900' | 9-7/8" | Brine / Cut Brine / Direct Emuslion | 8.7-9.2 | 30-32 | NC |
| 10900' to 19500' | 6-3/4" | Cut Brine / WBM / OBM | 10-10.5 | 32-36 | NC |

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

XTO Energy Inc.
Poker Lake Unit 30 Big Sinks 124H
Projected TD: 19500' MD / 11737' TVD
SHL: 2310' FNL & 2010' FWL , Section 30, T25S, R31E
BHL: 200' FSL & 2382' FWL , Section 31, T25S, 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 | 1170' | Water |
| Top of Salt | 1496' | Water |
| Base of Salt | 3972' | Water |
| Delaware | 4139' | Water |
| Bone Spring | 8075' | Water |
| 1st Bone Spring Ss | 9075' | Water/Oil/Gas |
| 2nd Bone Spring Ss | 9722' | Water/Oil/Gas |
| 3rd Bone Spring Ss | 11041' | Water/Oil/Gas |
| Wolfcamp | 11341' | Water/Oil/Gas |
| Wolfcamp A | 11509' | Water/Oil/Gas |
| Target/Land Curve | 11737' | 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 11-3/4" casing @ 1400' (96' above the salt) and circulating cement back to surface. The 7-5/8" intermediate casing will be set at 10900' and bring TOC back to surface. A 6-3/4 inch curve and lateral hole will be drilled to MD/TD and 5-1/2" x 5-0" casing will be set at TD and cemented back 300' into the 7-5/8" casing shoe.

**3. Casing Design**

| Hole Size | Depth | OD Csg | Weight | Collar | Grade | New/Used | SF Burst | SF Collapse | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 14-3/4" | 0' – 1400' | 11-3/4" | 54 | STC | J-55 | New | 1.09 | 2.38 | 7.25 |
| 9-7/8" | 0' – 10900' | 7-5/8" | 29.7 | BTC | L-80 | New | 1.80 | 1.67 | 2.11 |
| 6-3/4" | 0' – 10800' | 5-1/2" | 23 | BTC | P-110 | New | 1.21 | 2.27 | 2.74 |
| 6-3/4" | 10800' - 19500' | 5-0" | 18 | BTC | P-110 | New | 1.16 | 2.10 | 2.20 |

· XTO requests to not utilize centralizers in the curve and lateral
·7-5/8" Collapse analyzed using 50% evacuation based on regional experience.
· 5-1/2" x 5-0" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
· Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

**Wellhead:**

*Permanent Wellhead – Multibowl System*

A. Starting Head: 11" 10M top flange x 11-3/4" SOW bottom
B. Tubing Head: 11" 10M bottom flange x 7-1/16" 15M top flange

· Wellhead will be installed by manufacturer's representatives.
· Manufacturer will monitor welding process to ensure appropriate temperature of seal.
· Operator will test the 7-5/8" casing per BLM Onshore Order 2
· Wellhead Manufacturer representative will not be present for BOP test plug installation

## 4. Cement Program

***Surface Casing: 11-3/4", 54 New J-55, STC casing to be set at +/- 1400'***

Lead: 510 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.87 ft3/sx, 10.13 gal/sx water)

Tail: 190 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi
TOC: Surface

***Intermediate Casing: 7-5/8", 29.7 New L-80, BTC casing to be set at +/- 10900'***
*ECP/DV Tool to be set at 4600'*
1st Stage
Lead: 1210 sxs Halcem - Class C (mixed at 11.0 ppg, 1.87 ft3/sx, 15.10 gal/sx water)

Tail: 310 sxs Halcem - Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1150psi

2nd Stage
Lead: 820 sxs Halcem - Class C (mixed at 11.0 ppg, 1.88 ft3/sx, 10.13 gal/sx water)

Tail: 320 sxs Halcem-Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 5.29 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1150 psi
TOC: Surface

***Production Casing: 5-0", 18 New P-110, BTC casing to be set at +/- 19500'***
Lead: 20 sxs VersaCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water)

Tail: 800 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 7.20 gal/sx water)
Compressives 12-hr = 800 psi 24 hr = 1500 psi
TOC: 300' inside previous shoe

## 5. Pressure Control Equipment

Once the permanent WH is installed on the 11-3/4" 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 3826 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 11-3/4", 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.

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.

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compainace with API Standard 53. API standard 53 states, that for pad drilling operation, moving from one welhead to another with in 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. We will also function test BOP equipment after each nipple up. A full BOP test will be required prior to drilling any production hole.

**6. Proposed Mud Circulation System**

| INTERVAL | Hole Size | Mud Type | MW (ppg) | Viscosity (sec/qt) | Fluid Loss (cc) |
|---|---|---|---|---|---|
| 0' - 1400' | 14-3/4" | FW / Native | 8.4-8.8 | 35-40 | NC |
| 1400' - 10900' | 9-7/8" | Brine / Cut Brine / Direct Emuslion | 8.7-9.2 | 30-32 | NC |
| 10900' to 19500' | 6-3/4" | Cut Brine / WBM / OBM | 10-10.5 | 32-36 | NC |

The necessary mud products for weight addition and fluid loss control will be on location at all times.
Spud with fresh water/native mud and set 11-3/4" surface casing, isolating the fresh water aquifer. Drill out from under 11-3/4" surface casing with a brine/oil direct emulsion mud system. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

**7. Auxiliary Well Control and Monitoring Equipment**

A. A Kelly cock will be in the drill string at all times.
B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
C. H2S monitors will be on location when drilling below the 11-3/4" casing.

**8. Logging, Coring and Testing Program**

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

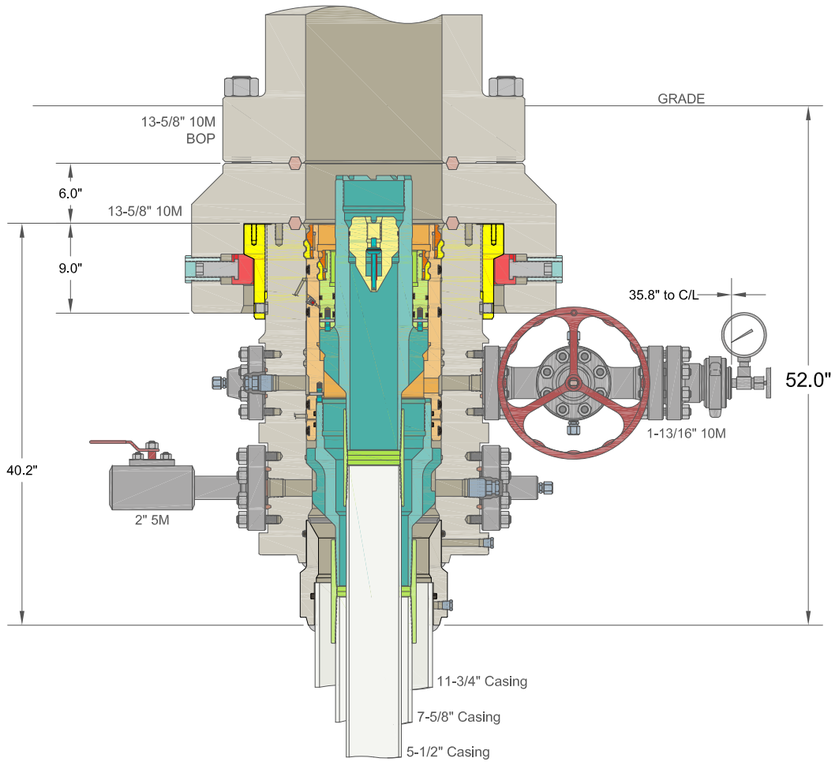
Open hole logging will not be done on this well.

**9. Abnormal Pressures and Temperatures / Potential Hazards**

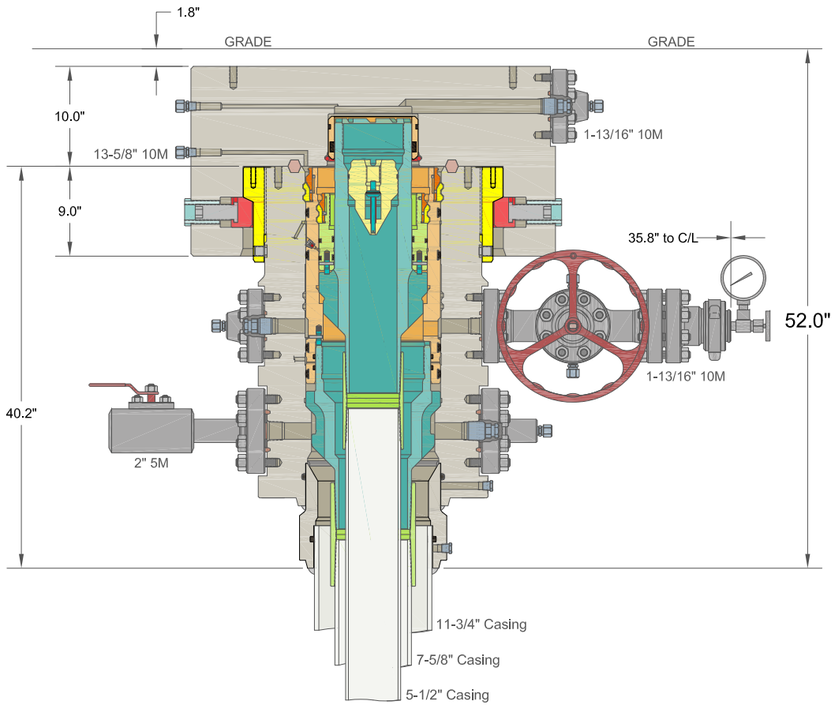
None Anticipated. BHT of 155 to 175 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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 6408 psi.

**10. Anticipated Starting Date and Duration of Operations**

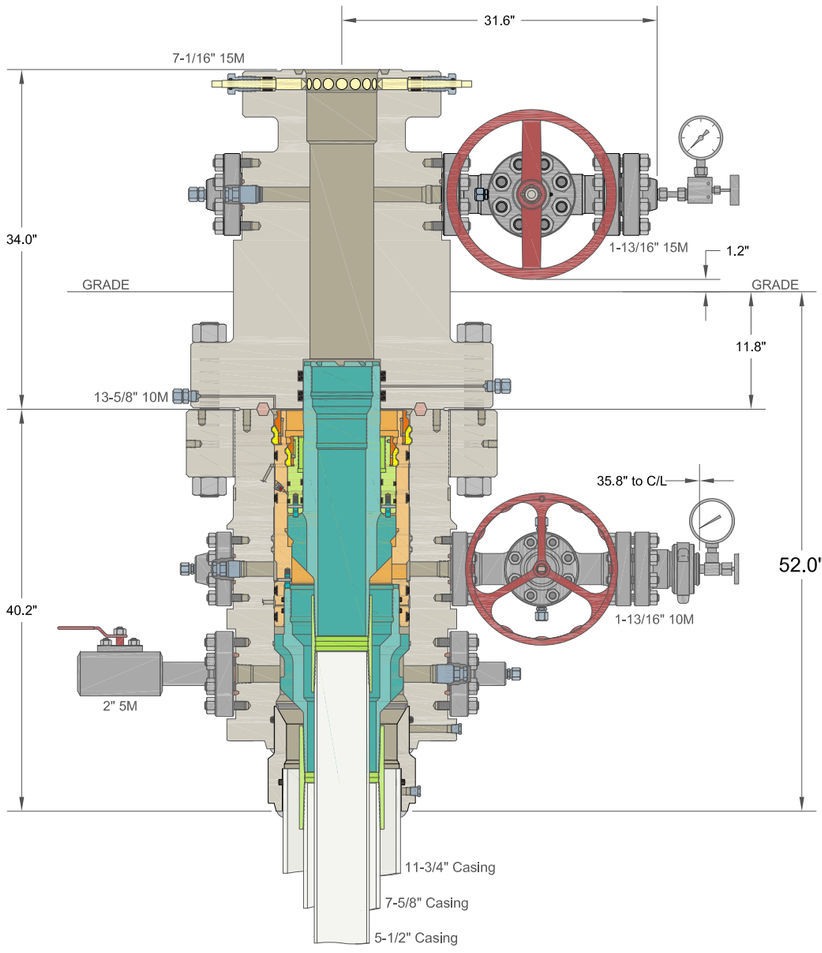
Road and location construction will begin after Santa Fe and BLM have approved the APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 45 days. If production casing is run, an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.




DRILLING




SKID




COMPLETION

ALL DIMENSIONS APPROXIMATE

| | | |
|---|---|---|
| CACTUS WELLHEAD LLC | XTO ENERGY INC<br>POKER LAKE, NM | |
| 30" x 11-3/4" x 7-5/8" x 5-1/2" MBU-3T-SF SOW Wellhead System<br>With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head<br>And 7-5/8" & 5-1/2" Fluted Mandrel Casing Hangers | DRAWN | DLE 09DEC19 |
| | APPRV | |
| | DRAWING NO. | ODE0003261 |

# XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: PLU 30 BS
Well: 124H
Wellbore: Lateral
Design: Plan #1

3382+25 @ 3407.00usft (e101)
NAD 1927 (NADCON CONUS)

To convert a Magnetic Direction to a True Direction, Add 6.80° East
To convert a Magnetic Direction to a Grid Direction, Add 6.53°
Magnetic North is 6.80° East of True North (Magnetic Declination)
Magnetic North is 6.53° East of Grid North (Magnetic Convergence)

SECTION DETAILS

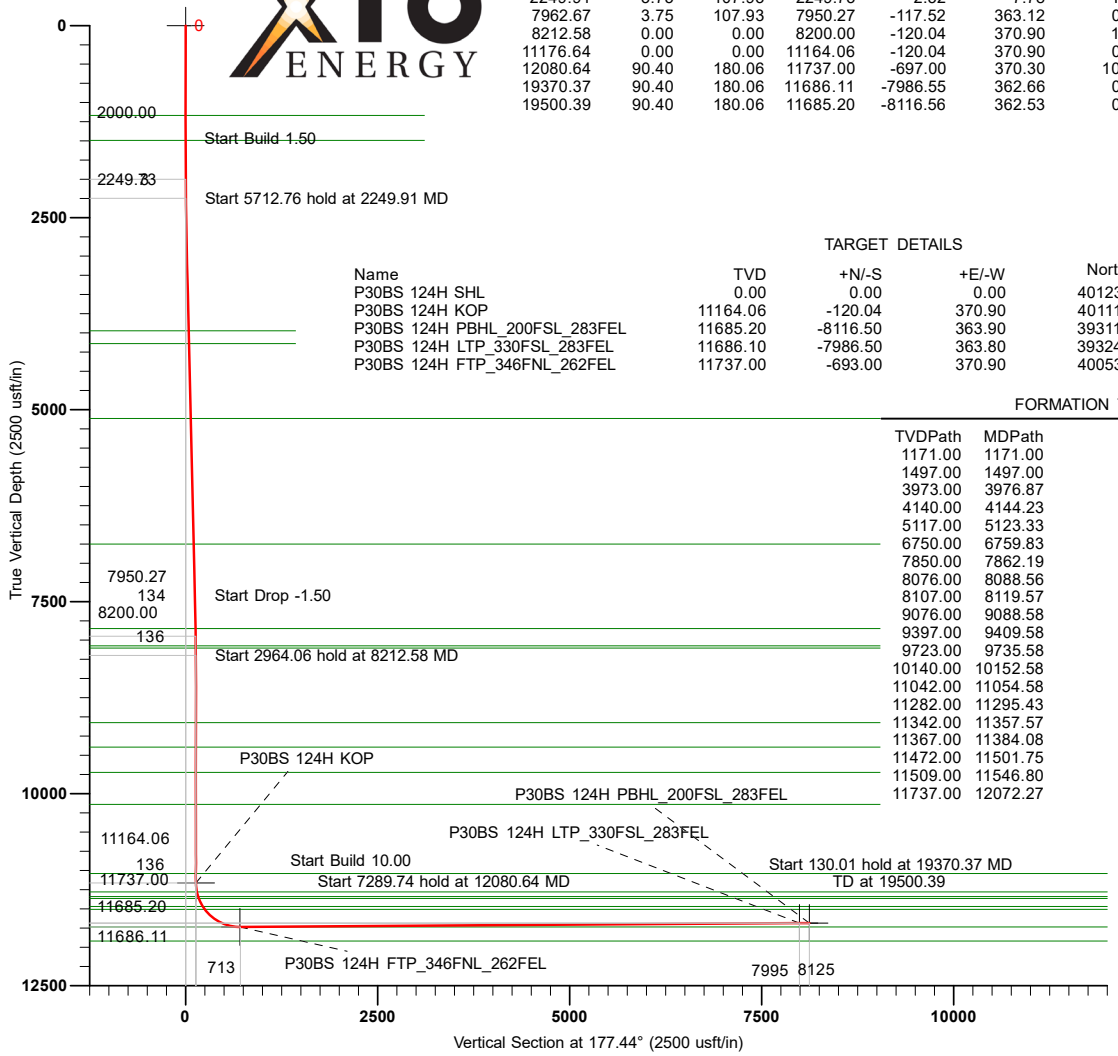
| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2000.00 | 0.00 | 0.00 | 2000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2249.91 | 3.75 | 107.93 | 2249.73 | -2.52 | 7.78 | 1.50 | 107.93 | 2.86 |
| 7962.67 | 3.75 | 107.93 | 7950.27 | -117.52 | 363.12 | 0.00 | 0.00 | 133.61 |
| 8212.58 | 0.00 | 0.00 | 8200.00 | -120.04 | 370.90 | 1.50 | 180.00 | 136.47 |
| 11176.64 | 0.00 | 0.00 | 11164.06 | -120.04 | 370.90 | 0.00 | 0.00 | 136.47 |
| 12080.64 | 90.40 | 180.06 | 11737.00 | -697.00 | 370.30 | 10.00 | 180.06 | 712.82 |
| 19370.37 | 90.40 | 180.06 | 11686.11 | -7986.55 | 362.66 | 0.00 | 0.00 | 7994.78 |
| 19500.39 | 90.40 | 180.06 | 11685.20 | -8116.56 | 362.53 | 0.00 | 0.00 | 8124.65 |

TARGET DETAILS

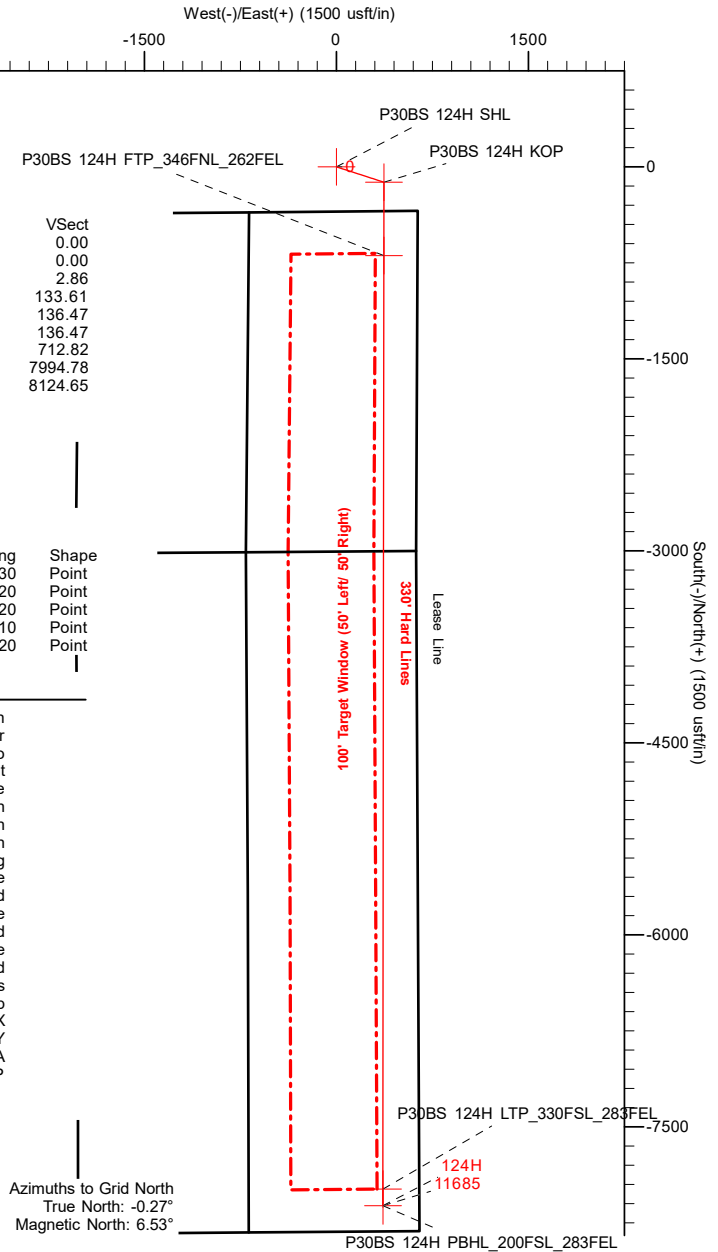
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Shape |
|---|---|---|---|---|---|---|
| P30BS 124H SHL | 0.00 | 0.00 | 0.00 | 401231.30 | 659249.30 | Point |
| P30BS 124H KOP | 11164.06 | -120.04 | 370.90 | 401111.26 | 659620.20 | Point |
| P30BS 124H PBHL_200FSL_283FEL | 11685.20 | -8116.50 | 363.90 | 393114.80 | 659613.20 | Point |
| P30BS 124H LTP_330FSL_283FEL | 11686.10 | -7986.50 | 363.80 | 393244.80 | 659613.10 | Point |
| P30BS 124H FTP_346FNL_262FEL | 11737.00 | -693.00 | 370.90 | 400538.30 | 659620.20 | Point |

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---|---|---|
| 1171.00 | 1171.00 | Rustler |
| 1497.00 | 1497.00 | Salado |
| 3973.00 | 3976.87 | Base of Salt |
| 4140.00 | 4144.23 | Delaware |
| 5117.00 | 5123.33 | Cherry Canyon |
| 6750.00 | 6759.83 | Brushy Canyon |
| 7850.00 | 7862.19 | Basal Brushy Canyon |
| 8076.00 | 8088.56 | Bone Spring |
| 8107.00 | 8119.57 | Bone Spring Lime |
| 9076.00 | 9088.58 | 1st Bone Sand |
| 9397.00 | 9409.58 | 2nd Bone Lime |
| 9723.00 | 9735.58 | 2nd Bone Sand |
| 10140.00 | 10152.58 | 3rd Bone Lime |
| 11042.00 | 11054.58 | 3rd Bone Sand |
| 11282.00 | 11295.43 | Red Hills |
| 11342.00 | 11357.57 | Wolfcamp |
| 11367.00 | 11384.08 | Wolfcamp X |
| 11472.00 | 11501.75 | Wolfcamp Y |
| 11509.00 | 11546.80 | Wolfcamp A |
| 11737.00 | 12072.27 | LP |








Azimuths to Grid North
True North: -0.27°
Magnetic North: 6.53°

Magnetic Field
Strength: 47529.6nT
Dip Angle: 59.79°
Date: 03/04/2020
Model: IGRF2020

Plan: Plan #1 (124H/Lateral)
Created By: Mekka Williams
eSomina Well Design
mekka@esominawelldesign.com
13:12, March 06 2020


***STRYKER DIRECTIONAL***
***6701 FM 307***
***Midland, Texas 79706 - 432-687-1121***

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Project** Eddy County, NM (NAD27) NMEZ Grid

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

**Site** PLU 30 BS

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 401,230.80 usft | **Latitude:** | 32° 6' 7.4038 N |
| **From:** | Map | **Easting:** | 659,159.30 usft | **Longitude:** | 103° 49' 9.6252 W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13.20 in | **Grid Convergence:** | 0.27 ° |

**Well** 124H - Slot P30BS 124H SHL

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.50 usft | **Northing:** | 401,231.30 usft | **Latitude:** | 32° 6' 7.4045 N |
| | **+E/-W** | 90.00 usft | **Easting:** | 659,249.30 usft | **Longitude:** | 103° 49' 8.5789 W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | | **Ground Level:** | 3,382.00 usft |

**Wellbore** Lateral

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2020 | 03/04/20 | 6.80 | 59.79 | 47,529.61484093 |

**Design** Plan #1

**Audit Notes:**

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

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 177.44 |

**Plan Survey Tool Program** **Date** 03/04/20

| | Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name | Remarks |
|---|---|---|---|---|---|
| 1 | 0.00 | 11,176.64 | Plan #1 (Lateral) | MWD<br>OWSG MWD - Standard | |
| 2 | 11,176.64 | 19,500.39 | Plan #1 (Lateral) | MWD+IFR1+MS<br>OWSG MWD + IFR1 + Multi-St | |

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Plan Sections**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,249.91 | 3.75 | 107.93 | 2,249.73 | -2.52 | 7.78 | 1.50 | 1.50 | 0.00 | 107.93 | |
| 7,962.67 | 3.75 | 107.93 | 7,950.27 | -117.52 | 363.12 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,212.58 | 0.00 | 0.00 | 8,200.00 | -120.04 | 370.90 | 1.50 | -1.50 | 0.00 | 180.00 | |
| 11,176.64 | 0.00 | 0.00 | 11,164.06 | -120.04 | 370.90 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 12,080.64 | 90.40 | 180.06 | 11,737.00 | -697.00 | 370.30 | 10.00 | 10.00 | 0.00 | 180.06 | |
| 19,370.37 | 90.40 | 180.06 | 11,686.11 | -7,986.55 | 362.66 | 0.00 | 0.00 | 0.00 | 0.00 | P30BS 124H LTP_33( |
| 19,500.39 | 90.40 | 180.06 | 11,685.20 | -8,116.56 | 362.53 | 0.00 | 0.00 | 0.00 | 0.00 | P30BS 124H PBHL_2 |

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 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 |
| 1,171.00 | 0.00 | 0.00 | 1,171.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Rustler** | | | | | | | | | |
| 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 |
| 1,497.00 | 0.00 | 0.00 | 1,497.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Salado** | | | | | | | | | |
| 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 | 1.50 | 107.93 | 2,099.99 | -0.40 | 1.25 | 0.46 | 1.50 | 1.50 | 0.00 |
| 2,200.00 | 3.00 | 107.93 | 2,199.91 | -1.61 | 4.98 | 1.83 | 1.50 | 1.50 | 0.00 |
| 2,249.91 | 3.75 | 107.93 | 2,249.73 | -2.52 | 7.78 | 2.86 | 1.50 | 1.50 | 0.00 |
| 2,300.00 | 3.75 | 107.93 | 2,299.71 | -3.52 | 10.89 | 4.01 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 3.75 | 107.93 | 2,399.50 | -5.54 | 17.11 | 6.30 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 3.75 | 107.93 | 2,499.29 | -7.55 | 23.33 | 8.58 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 3.75 | 107.93 | 2,599.07 | -9.56 | 29.55 | 10.87 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 3.75 | 107.93 | 2,698.86 | -11.58 | 35.77 | 13.16 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 3.75 | 107.93 | 2,798.64 | -13.59 | 41.99 | 15.45 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 3.75 | 107.93 | 2,898.43 | -15.60 | 48.21 | 17.74 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 3.75 | 107.93 | 2,998.22 | -17.62 | 54.43 | 20.03 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 3.75 | 107.93 | 3,098.00 | -19.63 | 60.65 | 22.32 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 3.75 | 107.93 | 3,197.79 | -21.64 | 66.87 | 24.61 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 3.75 | 107.93 | 3,297.58 | -23.66 | 73.09 | 26.89 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 3.75 | 107.93 | 3,397.36 | -25.67 | 79.31 | 29.18 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 3.75 | 107.93 | 3,497.15 | -27.68 | 85.53 | 31.47 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 3.75 | 107.93 | 3,596.93 | -29.70 | 91.75 | 33.76 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 3.75 | 107.93 | 3,696.72 | -31.71 | 97.97 | 36.05 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 3.75 | 107.93 | 3,796.51 | -33.72 | 104.20 | 38.34 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 3.75 | 107.93 | 3,896.29 | -35.74 | 110.42 | 40.63 | 0.00 | 0.00 | 0.00 |
| 3,976.87 | 3.75 | 107.93 | 3,973.00 | -37.28 | 115.20 | 42.39 | 0.00 | 0.00 | 0.00 |
| **Base of Salt** | | | | | | | | | |
| 4,000.00 | 3.75 | 107.93 | 3,996.08 | -37.75 | 116.64 | 42.92 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 3.75 | 107.93 | 4,095.86 | -39.76 | 122.86 | 45.20 | 0.00 | 0.00 | 0.00 |
| 4,144.23 | 3.75 | 107.93 | 4,140.00 | -40.65 | 125.61 | 46.22 | 0.00 | 0.00 | 0.00 |
| **Delaware** | | | | | | | | | |
| 4,200.00 | 3.75 | 107.93 | 4,195.65 | -41.77 | 129.08 | 47.49 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 3.75 | 107.93 | 4,295.44 | -43.79 | 135.30 | 49.78 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 3.75 | 107.93 | 4,395.22 | -45.80 | 141.52 | 52.07 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,500.00 | 3.75 | 107.93 | 4,495.01 | -47.81 | 147.74 | 54.36 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 3.75 | 107.93 | 4,594.79 | -49.83 | 153.96 | 56.65 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 3.75 | 107.93 | 4,694.58 | -51.84 | 160.18 | 58.94 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 3.75 | 107.93 | 4,794.37 | -53.85 | 166.40 | 61.23 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 3.75 | 107.93 | 4,894.15 | -55.87 | 172.62 | 63.51 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 3.75 | 107.93 | 4,993.94 | -57.88 | 178.84 | 65.80 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 3.75 | 107.93 | 5,093.72 | -59.89 | 185.06 | 68.09 | 0.00 | 0.00 | 0.00 |
| 5,123.33 | 3.75 | 107.93 | 5,117.00 | -60.36 | 186.51 | 68.63 | 0.00 | 0.00 | 0.00 |
| **Cherry Canyon** | | | | | | | | | |
| 5,200.00 | 3.75 | 107.93 | 5,193.51 | -61.91 | 191.28 | 70.38 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 3.75 | 107.93 | 5,293.30 | -63.92 | 197.50 | 72.67 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 3.75 | 107.93 | 5,393.08 | -65.93 | 203.72 | 74.96 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 3.75 | 107.93 | 5,492.87 | -67.95 | 209.94 | 77.25 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 3.75 | 107.93 | 5,592.65 | -69.96 | 216.16 | 79.53 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 3.75 | 107.93 | 5,692.44 | -71.97 | 222.38 | 81.82 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 3.75 | 107.93 | 5,792.23 | -73.99 | 228.60 | 84.11 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 3.75 | 107.93 | 5,892.01 | -76.00 | 234.82 | 86.40 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 3.75 | 107.93 | 5,991.80 | -78.01 | 241.04 | 88.69 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 3.75 | 107.93 | 6,091.58 | -80.03 | 247.26 | 90.98 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 3.75 | 107.93 | 6,191.37 | -82.04 | 253.48 | 93.27 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 3.75 | 107.93 | 6,291.16 | -84.05 | 259.70 | 95.56 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 3.75 | 107.93 | 6,390.94 | -86.06 | 265.92 | 97.84 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 3.75 | 107.93 | 6,490.73 | -88.08 | 272.14 | 100.13 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 3.75 | 107.93 | 6,590.51 | -90.09 | 278.36 | 102.42 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 3.75 | 107.93 | 6,690.30 | -92.10 | 284.58 | 104.71 | 0.00 | 0.00 | 0.00 |
| 6,759.83 | 3.75 | 107.93 | 6,750.00 | -93.31 | 288.30 | 106.08 | 0.00 | 0.00 | 0.00 |
| **Brushy Canyon** | | | | | | | | | |
| 6,800.00 | 3.75 | 107.93 | 6,790.09 | -94.12 | 290.80 | 107.00 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 3.75 | 107.93 | 6,889.87 | -96.13 | 297.02 | 109.29 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 3.75 | 107.93 | 6,989.66 | -98.14 | 303.24 | 111.58 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 3.75 | 107.93 | 7,089.45 | -100.16 | 309.46 | 113.87 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 3.75 | 107.93 | 7,189.23 | -102.17 | 315.68 | 116.15 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 3.75 | 107.93 | 7,289.02 | -104.18 | 321.90 | 118.44 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 3.75 | 107.93 | 7,388.80 | -106.20 | 328.13 | 120.73 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 3.75 | 107.93 | 7,488.59 | -108.21 | 334.35 | 123.02 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 3.75 | 107.93 | 7,588.38 | -110.22 | 340.57 | 125.31 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 3.75 | 107.93 | 7,688.16 | -112.24 | 346.79 | 127.60 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 3.75 | 107.93 | 7,787.95 | -114.25 | 353.01 | 129.89 | 0.00 | 0.00 | 0.00 |
| 7,862.19 | 3.75 | 107.93 | 7,850.00 | -115.50 | 356.87 | 131.31 | 0.00 | 0.00 | 0.00 |
| **Basal Brushy Canyon** | | | | | | | | | |
| 7,900.00 | 3.75 | 107.93 | 7,887.73 | -116.26 | 359.23 | 132.17 | 0.00 | 0.00 | 0.00 |
| 7,962.67 | 3.75 | 107.93 | 7,950.27 | -117.52 | 363.12 | 133.61 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 3.19 | 107.93 | 7,987.53 | -118.22 | 365.27 | 134.40 | 1.50 | -1.50 | 0.00 |
| 8,088.56 | 1.86 | 107.93 | 8,076.00 | -119.42 | 368.98 | 135.77 | 1.50 | -1.50 | 0.00 |
| **Bone Spring** | | | | | | | | | |
| 8,100.00 | 1.69 | 107.93 | 8,087.44 | -119.53 | 369.32 | 135.89 | 1.50 | -1.50 | 0.00 |
| 8,119.57 | 1.40 | 107.93 | 8,107.00 | -119.69 | 369.82 | 136.07 | 1.50 | -1.50 | 0.00 |
| **Bone Spring Lime** | | | | | | | | | |
| 8,200.00 | 0.19 | 107.93 | 8,187.42 | -120.03 | 370.88 | 136.46 | 1.50 | -1.50 | 0.00 |
| 8,212.58 | 0.00 | 0.00 | 8,200.00 | -120.04 | 370.90 | 136.47 | 1.50 | -1.50 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 8,287.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 8,387.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,487.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 8,600.00 | 0.00 | 0.00 | 8,587.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 0.00 | 0.00 | 8,687.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 0.00 | 0.00 | 8,787.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 0.00 | 0.00 | 8,887.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 0.00 | 0.00 | 8,987.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,088.58 | 0.00 | 0.00 | 9,076.00 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| **1st Bone Sand** | | | | | | | | | |
| 9,100.00 | 0.00 | 0.00 | 9,087.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 0.00 | 0.00 | 9,187.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 0.00 | 0.00 | 9,287.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 0.00 | 0.00 | 9,387.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,409.58 | 0.00 | 0.00 | 9,397.00 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| **2nd Bone Lime** | | | | | | | | | |
| 9,500.00 | 0.00 | 0.00 | 9,487.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 0.00 | 0.00 | 9,587.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 0.00 | 0.00 | 9,687.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,735.58 | 0.00 | 0.00 | 9,723.00 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| **2nd Bone Sand** | | | | | | | | | |
| 9,800.00 | 0.00 | 0.00 | 9,787.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 0.00 | 0.00 | 9,887.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 0.00 | 0.00 | 9,987.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 0.00 | 0.00 | 10,087.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,152.58 | 0.00 | 0.00 | 10,140.00 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| **3rd Bone Lime** | | | | | | | | | |
| 10,200.00 | 0.00 | 0.00 | 10,187.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 0.00 | 0.00 | 10,287.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 0.00 | 0.00 | 10,387.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 0.00 | 0.00 | 10,487.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 0.00 | 0.00 | 10,587.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 0.00 | 0.00 | 10,687.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 0.00 | 0.00 | 10,787.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 0.00 | 0.00 | 10,887.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 0.00 | 0.00 | 10,987.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 11,054.58 | 0.00 | 0.00 | 11,042.00 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| **3rd Bone Sand** | | | | | | | | | |
| 11,100.00 | 0.00 | 0.00 | 11,087.42 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 11,176.64 | 0.00 | 0.00 | 11,164.06 | -120.04 | 370.90 | 136.47 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 2.34 | 180.06 | 11,187.41 | -120.52 | 370.90 | 136.95 | 10.00 | 10.00 | 0.00 |
| 11,250.00 | 7.34 | 180.06 | 11,237.22 | -124.73 | 370.90 | 141.16 | 10.00 | 10.00 | 0.00 |
| 11,295.43 | 11.88 | 180.06 | 11,282.00 | -132.31 | 370.89 | 148.73 | 10.00 | 10.00 | 0.00 |
| **Red Hills** | | | | | | | | | |
| 11,300.00 | 12.34 | 180.06 | 11,286.47 | -133.27 | 370.89 | 149.69 | 10.00 | 10.00 | 0.00 |
| 11,350.00 | 17.34 | 180.06 | 11,334.79 | -146.07 | 370.87 | 162.47 | 10.00 | 10.00 | 0.00 |
| 11,357.57 | 18.09 | 180.06 | 11,342.00 | -148.37 | 370.87 | 164.77 | 10.00 | 10.00 | 0.00 |
| **Wolfcamp** | | | | | | | | | |
| 11,384.08 | 20.74 | 180.06 | 11,367.00 | -157.18 | 370.86 | 173.58 | 10.00 | 10.00 | 0.00 |
| **Wolfcamp X** | | | | | | | | | |
| 11,400.00 | 22.34 | 180.06 | 11,381.81 | -163.03 | 370.85 | 179.41 | 10.00 | 10.00 | 0.00 |
| 11,450.00 | 27.34 | 180.06 | 11,427.17 | -184.02 | 370.83 | 200.39 | 10.00 | 10.00 | 0.00 |
| 11,500.00 | 32.34 | 180.06 | 11,470.53 | -208.89 | 370.81 | 225.23 | 10.00 | 10.00 | 0.00 |
| 11,501.75 | 32.51 | 180.06 | 11,472.00 | -209.83 | 370.81 | 226.16 | 10.00 | 10.00 | 0.00 |
| **Wolfcamp Y** | | | | | | | | | |
| 11,546.80 | 37.02 | 180.06 | 11,509.00 | -235.51 | 370.78 | 251.82 | 10.00 | 10.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Wolfcamp A** | | | | | | | | | |
| 11,550.00 | 37.34 | 180.06 | 11,511.55 | -237.44 | 370.78 | 253.75 | 10.00 | 10.00 | 0.00 |
| 11,600.00 | 42.34 | 180.06 | 11,549.93 | -269.46 | 370.74 | 285.74 | 10.00 | 10.00 | 0.00 |
| 11,650.00 | 47.34 | 180.06 | 11,585.38 | -304.71 | 370.71 | 320.94 | 10.00 | 10.00 | 0.00 |
| 11,700.00 | 52.34 | 180.06 | 11,617.62 | -342.90 | 370.67 | 359.10 | 10.00 | 10.00 | 0.00 |
| 11,750.00 | 57.34 | 180.06 | 11,646.40 | -383.77 | 370.62 | 399.92 | 10.00 | 10.00 | 0.00 |
| 11,800.00 | 62.34 | 180.06 | 11,671.52 | -426.98 | 370.58 | 443.09 | 10.00 | 10.00 | 0.00 |
| 11,850.00 | 67.34 | 180.06 | 11,692.77 | -472.22 | 370.53 | 488.29 | 10.00 | 10.00 | 0.00 |
| 11,900.00 | 72.34 | 180.06 | 11,710.00 | -519.14 | 370.48 | 535.16 | 10.00 | 10.00 | 0.00 |
| 11,950.00 | 77.34 | 180.06 | 11,723.08 | -567.39 | 370.43 | 583.35 | 10.00 | 10.00 | 0.00 |
| 12,000.00 | 82.34 | 180.06 | 11,731.90 | -616.59 | 370.38 | 632.50 | 10.00 | 10.00 | 0.00 |
| 12,050.00 | 87.34 | 180.06 | 11,736.40 | -666.37 | 370.33 | 682.23 | 10.00 | 10.00 | 0.00 |
| 12,072.27 | 89.56 | 180.06 | 11,737.00 | -688.63 | 370.30 | 704.47 | 10.00 | 10.00 | 0.00 |
| **LP** | | | | | | | | | |
| 12,080.64 | 90.40 | 180.06 | 11,737.00 | -697.00 | 370.30 | 712.82 | 10.00 | 10.00 | 0.00 |
| 12,100.00 | 90.40 | 180.06 | 11,736.87 | -716.36 | 370.28 | 732.17 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.40 | 180.06 | 11,736.17 | -816.36 | 370.17 | 832.06 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.40 | 180.06 | 11,735.47 | -916.35 | 370.07 | 931.95 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.40 | 180.06 | 11,734.77 | -1,016.35 | 369.96 | 1,031.85 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.40 | 180.06 | 11,734.08 | -1,116.35 | 369.86 | 1,131.74 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.40 | 180.06 | 11,733.38 | -1,216.35 | 369.75 | 1,231.63 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.40 | 180.06 | 11,732.68 | -1,316.34 | 369.65 | 1,331.53 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.40 | 180.06 | 11,731.98 | -1,416.34 | 369.54 | 1,431.42 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.40 | 180.06 | 11,731.28 | -1,516.34 | 369.44 | 1,531.31 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.40 | 180.06 | 11,730.58 | -1,616.34 | 369.33 | 1,631.21 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.40 | 180.06 | 11,729.89 | -1,716.33 | 369.23 | 1,731.10 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.40 | 180.06 | 11,729.19 | -1,816.33 | 369.12 | 1,830.99 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.40 | 180.06 | 11,728.49 | -1,916.33 | 369.02 | 1,930.89 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.40 | 180.06 | 11,727.79 | -2,016.33 | 368.91 | 2,030.78 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.40 | 180.06 | 11,727.09 | -2,116.32 | 368.81 | 2,130.67 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.40 | 180.06 | 11,726.40 | -2,216.32 | 368.70 | 2,230.57 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.40 | 180.06 | 11,725.70 | -2,316.32 | 368.60 | 2,330.46 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.40 | 180.06 | 11,725.00 | -2,416.32 | 368.50 | 2,430.35 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.40 | 180.06 | 11,724.30 | -2,516.31 | 368.39 | 2,530.25 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.40 | 180.06 | 11,723.60 | -2,616.31 | 368.29 | 2,630.14 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.40 | 180.06 | 11,722.91 | -2,716.31 | 368.18 | 2,730.03 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.40 | 180.06 | 11,722.21 | -2,816.31 | 368.08 | 2,829.93 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.40 | 180.06 | 11,721.51 | -2,916.30 | 367.97 | 2,929.82 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.40 | 180.06 | 11,720.81 | -3,016.30 | 367.87 | 3,029.71 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.40 | 180.06 | 11,720.11 | -3,116.30 | 367.76 | 3,129.60 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.40 | 180.06 | 11,719.41 | -3,216.30 | 367.66 | 3,229.50 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.40 | 180.06 | 11,718.72 | -3,316.29 | 367.55 | 3,329.39 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.40 | 180.06 | 11,718.02 | -3,416.29 | 367.45 | 3,429.28 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.40 | 180.06 | 11,717.32 | -3,516.29 | 367.34 | 3,529.18 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.40 | 180.06 | 11,716.62 | -3,616.29 | 367.24 | 3,629.07 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.40 | 180.06 | 11,715.92 | -3,716.28 | 367.13 | 3,728.96 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.40 | 180.06 | 11,715.23 | -3,816.28 | 367.03 | 3,828.86 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.40 | 180.06 | 11,714.53 | -3,916.28 | 366.92 | 3,928.75 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.40 | 180.06 | 11,713.83 | -4,016.28 | 366.82 | 4,028.64 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.40 | 180.06 | 11,713.13 | -4,116.27 | 366.72 | 4,128.54 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.40 | 180.06 | 11,712.43 | -4,216.27 | 366.61 | 4,228.43 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.40 | 180.06 | 11,711.74 | -4,316.27 | 366.51 | 4,328.32 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.40 | 180.06 | 11,711.04 | -4,416.27 | 366.40 | 4,428.22 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.40 | 180.06 | 11,710.34 | -4,516.26 | 366.30 | 4,528.11 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 16,000.00 | 90.40 | 180.06 | 11,709.64 | -4,616.26 | 366.19 | 4,628.00 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.40 | 180.06 | 11,708.94 | -4,716.26 | 366.09 | 4,727.90 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.40 | 180.06 | 11,708.24 | -4,816.26 | 365.98 | 4,827.79 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.40 | 180.06 | 11,707.55 | -4,916.25 | 365.88 | 4,927.68 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.40 | 180.06 | 11,706.85 | -5,016.25 | 365.77 | 5,027.58 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.40 | 180.06 | 11,706.15 | -5,116.25 | 365.67 | 5,127.47 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 90.40 | 180.06 | 11,705.45 | -5,216.25 | 365.56 | 5,227.36 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 90.40 | 180.06 | 11,704.75 | -5,316.24 | 365.46 | 5,327.26 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 90.40 | 180.06 | 11,704.06 | -5,416.24 | 365.35 | 5,427.15 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 90.40 | 180.06 | 11,703.36 | -5,516.24 | 365.25 | 5,527.04 | 0.00 | 0.00 | 0.00 |
| 17,000.00 | 90.40 | 180.06 | 11,702.66 | -5,616.24 | 365.14 | 5,626.94 | 0.00 | 0.00 | 0.00 |
| 17,100.00 | 90.40 | 180.06 | 11,701.96 | -5,716.23 | 365.04 | 5,726.83 | 0.00 | 0.00 | 0.00 |
| 17,200.00 | 90.40 | 180.06 | 11,701.26 | -5,816.23 | 364.93 | 5,826.72 | 0.00 | 0.00 | 0.00 |
| 17,300.00 | 90.40 | 180.06 | 11,700.57 | -5,916.23 | 364.83 | 5,926.62 | 0.00 | 0.00 | 0.00 |
| 17,400.00 | 90.40 | 180.06 | 11,699.87 | -6,016.23 | 364.73 | 6,026.51 | 0.00 | 0.00 | 0.00 |
| 17,500.00 | 90.40 | 180.06 | 11,699.17 | -6,116.22 | 364.62 | 6,126.40 | 0.00 | 0.00 | 0.00 |
| 17,600.00 | 90.40 | 180.06 | 11,698.47 | -6,216.22 | 364.52 | 6,226.30 | 0.00 | 0.00 | 0.00 |
| 17,700.00 | 90.40 | 180.06 | 11,697.77 | -6,316.22 | 364.41 | 6,326.19 | 0.00 | 0.00 | 0.00 |
| 17,800.00 | 90.40 | 180.06 | 11,697.07 | -6,416.22 | 364.31 | 6,426.08 | 0.00 | 0.00 | 0.00 |
| 17,900.00 | 90.40 | 180.06 | 11,696.38 | -6,516.21 | 364.20 | 6,525.97 | 0.00 | 0.00 | 0.00 |
| 18,000.00 | 90.40 | 180.06 | 11,695.68 | -6,616.21 | 364.10 | 6,625.87 | 0.00 | 0.00 | 0.00 |
| 18,100.00 | 90.40 | 180.06 | 11,694.98 | -6,716.21 | 363.99 | 6,725.76 | 0.00 | 0.00 | 0.00 |
| 18,200.00 | 90.40 | 180.06 | 11,694.28 | -6,816.21 | 363.89 | 6,825.65 | 0.00 | 0.00 | 0.00 |
| 18,300.00 | 90.40 | 180.06 | 11,693.58 | -6,916.20 | 363.78 | 6,925.55 | 0.00 | 0.00 | 0.00 |
| 18,400.00 | 90.40 | 180.06 | 11,692.89 | -7,016.20 | 363.68 | 7,025.44 | 0.00 | 0.00 | 0.00 |
| 18,500.00 | 90.40 | 180.06 | 11,692.19 | -7,116.20 | 363.57 | 7,125.33 | 0.00 | 0.00 | 0.00 |
| 18,600.00 | 90.40 | 180.06 | 11,691.49 | -7,216.20 | 363.47 | 7,225.23 | 0.00 | 0.00 | 0.00 |
| 18,700.00 | 90.40 | 180.06 | 11,690.79 | -7,316.19 | 363.36 | 7,325.12 | 0.00 | 0.00 | 0.00 |
| 18,800.00 | 90.40 | 180.06 | 11,690.09 | -7,416.19 | 363.26 | 7,425.01 | 0.00 | 0.00 | 0.00 |
| 18,900.00 | 90.40 | 180.06 | 11,689.40 | -7,516.19 | 363.15 | 7,524.91 | 0.00 | 0.00 | 0.00 |
| 19,000.00 | 90.40 | 180.06 | 11,688.70 | -7,616.19 | 363.05 | 7,624.80 | 0.00 | 0.00 | 0.00 |
| 19,100.00 | 90.40 | 180.06 | 11,688.00 | -7,716.18 | 362.95 | 7,724.69 | 0.00 | 0.00 | 0.00 |
| 19,200.00 | 90.40 | 180.06 | 11,687.30 | -7,816.18 | 362.84 | 7,824.59 | 0.00 | 0.00 | 0.00 |
| 19,300.00 | 90.40 | 180.06 | 11,686.60 | -7,916.18 | 362.74 | 7,924.48 | 0.00 | 0.00 | 0.00 |
| 19,370.37 | 90.40 | 180.06 | 11,686.11 | -7,986.55 | 362.66 | 7,994.78 | 0.00 | 0.00 | 0.00 |
| 19,400.00 | 90.40 | 180.06 | 11,685.90 | -8,016.18 | 362.63 | 8,024.37 | 0.00 | 0.00 | 0.00 |
| 19,500.39 | 90.40 | 180.06 | 11,685.20 | -8,116.56 | 362.53 | 8,124.65 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | STRYKER_EDM | **Local Co-ordinate Reference:** | Well 124H - Slot P30BS 124H SHL |
| **Company:** | XTO Energy | **TVD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Project:** | Eddy County, NM (NAD27) NMEZ Grid | **MD Reference:** | 3382+25 @ 3407.00usft (e101) |
| **Site:** | PLU 30 BS | **North Reference:** | Grid |
| **Well:** | 124H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Lateral | | |
| **Design:** | Plan #1 | | |

**Design Targets**

| Target Name<br>- hit/miss target<br>- Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| P30BS 124H SHL<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 401,231.30 | 659,249.30 | 32° 6' 7.4045 N | 103° 49' 8.5789 W |
| P30BS 124H KOP<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 11,164.06 | -120.04 | 370.90 | 401,111.26 | 659,620.20 | 32° 6' 6.1991 N | 103° 49' 4.2736 W |
| P30BS 124H PBHL_200<br>- plan misses target center by 1.37usft at 19500.32usft MD (11685.20 TVD, -8116.50 N, 362.53 E)<br>- Point | 0.00 | 0.00 | 11,685.20 | -8,116.50 | 363.90 | 393,114.80 | 659,613.20 | 32° 4' 47.0649 N | 103° 49' 4.7992 W |
| P30BS 124H LTP_330F<br>- plan misses target center by 1.14usft at 19370.32usft MD (11686.11 TVD, -7986.50 N, 362.66 E)<br>- Point | 0.00 | 0.00 | 11,686.10 | -7,986.50 | 363.80 | 393,244.80 | 659,613.10 | 32° 4' 48.3514 N | 103° 49' 4.7932 W |
| P30BS 124H FTP_346F<br>- plan misses target center by 0.60usft at 12076.64usft MD (11737.02 TVD, -693.00 N, 370.30 E)<br>- Point | 0.00 | 0.00 | 11,737.00 | -693.00 | 370.90 | 400,538.30 | 659,620.20 | 32° 6' 0.5290 N | 103° 49' 4.3055 W |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 1,171.00 | 1,171.00 | Rustler | | | |
| 1,497.00 | 1,497.00 | Salado | | | |
| 3,976.87 | 3,973.00 | Base of Salt | | | |
| 4,144.23 | 4,140.00 | Delaware | | | |
| 5,123.33 | 5,117.00 | Cherry Canyon | | | |
| 6,759.83 | 6,750.00 | Brushy Canyon | | | |
| 7,862.19 | 7,850.00 | Basal Brushy Canyon | | | |
| 8,088.56 | 8,076.00 | Bone Spring | | | |
| 8,119.57 | 8,107.00 | Bone Spring Lime | | | |
| 9,088.58 | 9,076.00 | 1st Bone Sand | | | |
| 9,409.58 | 9,397.00 | 2nd Bone Lime | | | |
| 9,735.58 | 9,723.00 | 2nd Bone Sand | | | |
| 10,152.58 | 10,140.00 | 3rd Bone Lime | | | |
| 11,054.58 | 11,042.00 | 3rd Bone Sand | | | |
| 11,295.43 | 11,282.00 | Red Hills | | | |
| 11,357.57 | 11,342.00 | Wolfcamp | | | |
| 11,384.08 | 11,367.00 | Wolfcamp X | | | |
| 11,501.75 | 11,472.00 | Wolfcamp Y | | | |
| 11,546.80 | 11,509.00 | Wolfcamp A | | | |
| 12,072.27 | 11,737.00 | LP | | | |