

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.5. Lease Serial No.
NMLC061634B

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 27. If Unit or CA/Agreement, Name and/or No.
891000303X

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.
POKER LAKE UNIT 30 BS 121H

2. Name of Operator

XTO PERMIAN OPERATING LLC

Contact: KELLY KARDOS

E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.

30-015-46941-00-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 2310FNL 425FWL
32.102173 N Lat, 103.824646 W Lon

11. County or Parish, State

EDDY COUNTY, NM

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

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

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

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

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

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

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

Electronic Submission #509441 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 (20PP1894SE)

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 JENNIFER SANCHEZ

Title PETROLEUM ENGINEER

Date 04/27/2020

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 for record

5/1/2020

RWP

Additional data for EC transaction #509441 that would not fit on the form

32. Additional remarks, continued

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:

Casing/Cement Design

Multibowl Diagram

Directional Plan

Revisions to Operator-Submitted EC Data for Sundry Notice #509441

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMLC061634B	NMLC061634B
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 30 BS 121H Sec 30 T25S R31E Mer NMP SWNW 2310FNL 425FWL	POKER LAKE UNIT 30 BS 121H Sec 30 T25S R31E 2310FNL 425FWL 32.102173 N Lat, 103.824646 W Lon

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating, LLC
LEASE NO.:	NMLC-061634B
WELL NAME & NO.:	Poker Lake Unit 30 BS 121H
SURFACE HOLE FOOTAGE:	2310 FNL & 0425 FWL
BOTTOM HOLE FOOTAGE:	0200 FSL & 0330 FWL Sec. 31, T.25 S., R.31 E.
LOCATION:	Section 30, T.25 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit

Medium Cave/Karst

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

Abnormal pressure may be encountered in the 3rd Bone Spring and all subsequent formations.

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **11-3/4** inch surface casing shall be set at approximately **1100** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **5-1/2 X 5** inch production casing is:
 - Cement should tie-back **200 feet** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

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

GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
4. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
5. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
6. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

B. PRESSURE CONTROL

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

2. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer.
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
 - g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

JAM 042720

Poker Lake Unit 30 BS 121H
 Projected TD: 19483' MD / 11724' TVD
 SHL: 2310' FNL & 425' FWL , Section 30, T25S, R31E
 BHL: 200' FSL & 330' FWL , Section 31, T25S, R31E
 Eddy County, NM

Casing Design

The surface fresh water sands will be protected by setting 11-3/4" casing @ 1384' (100' above the salt) and circulating cement back to surface. The 7-5/8" intermediate casing will be set at 10277' 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" 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' – 1384'	11-3/4"	54	BTC	J-55	New	1.32	3.31	11.37
9-7/8"	0' – 10277'	7-5/8"	29.7	BTC	HCL-80	New	1.55	2.10	2.24
6-3/4"	0' – 10177'	5-1/2"	23	Freedom	P-110	New	1.21	2.07	2.76
6-3/4"	10177' - 19483'	5"	18	CDC-HTQ	P-110 RY	New	1.38	2.18	2.74

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

5-1/2" 23 ppf casing will be run from surface to 10,177' and crossed over to 5" 18 ppf casing from 10,177' to TD.

Request to use 5" BTC Float equipment

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: 500 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 4627'

1st Stage

Lead: 1060 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: 40 sxs VersaCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water)

Tail: 590 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' - 1384'	14-3/4"	FW / Native	8.4-8.8	35-40	NC
1384' - 10277'	9-7/8"	Brine / Cut Brine / Direct Emulsion	8.6-9.8	30-32	NC
10277' to 19483'	6-3/4"	Cut Brine / WBM / OBM	11-12	32-36	NC

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

XTO Energy Inc.
Poker Lake Unit 30 BS 121H
Projected TD: 19483' MD / 11724' TVD
SHL: 2310' FNL & 425' FWL , Section 30, T25S, R31E
BHL: 200' FSL & 330' 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	1158'	Water
Top of Salt	1484'	Water
Base of Salt	3960'	Water
Delaware	4127'	Water
Bone Spring	8063'	Water
1st Bone Spring Ss	9063'	Water/Oil/Gas
2nd Bone Spring Ss	9710'	Water/Oil/Gas
3rd Bone Spring Ss	11029'	Water/Oil/Gas
Wolfcamp	11329'	Water/Oil/Gas
Wolfcamp X/Y	11354'	Water/Oil/Gas
Wolfcamp A	11469'	Water/Oil/Gas
Target/Land Curve	11724'	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 @ 1384' (100' above the salt) and circulating cement back to surface. The 7-5/8" intermediate casing will be set at 10277' 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" 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' – 1384'	11-3/4"	54	BTC	J-55	New	1.32	3.31	11.37
9-7/8"	0' – 10277'	7-5/8"	29.7	BTC	HCL-80	New	1.55	2.10	2.24
6-3/4"	0' – 10177'	5-1/2"	23	Freedom	P-110	New	1.21	2.07	2.76
6-3/4"	10177' - 19483'	5"	18	CDC-HTQ	P-110 RY	New	1.38	2.18	2.74

· 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

· 5-1/2" 23 ppf casing will be run from surface to 10,177' and crossed over to 5" 18 ppf casing from 10,177' to TD.

· Request to use 5" BTC Float equipment

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, BTC casing to be set at +/- 1384'

Lead: 500 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 HCL-80, BTC casing to be set at +/- 10277'

ECP/DV Tool to be set at 4627'

1st Stage

Lead: 1060 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", 18 New P-110 RY, CDC-HTQ casing to be set at +/- 19483'

Lead: 40 sxs VersaCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water)

Tail: 590 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 4432 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M). Also a variance is requested to test the 5M annular to 70% of working pressure at 3500 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 70% of the working pressure. When nipping up on the 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. Once surface and intermediate strings are 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. 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.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 1384'	14-3/4"	FW / Native	8.4-8.8	35-40	NC
1384' - 10277'	9-7/8"	Brine / Cut Brine / Direct Emulsion	8.6-9.8	30-32	NC
10277' to 19483'	6-3/4"	Cut Brine / WBM / OBM	11-12	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.

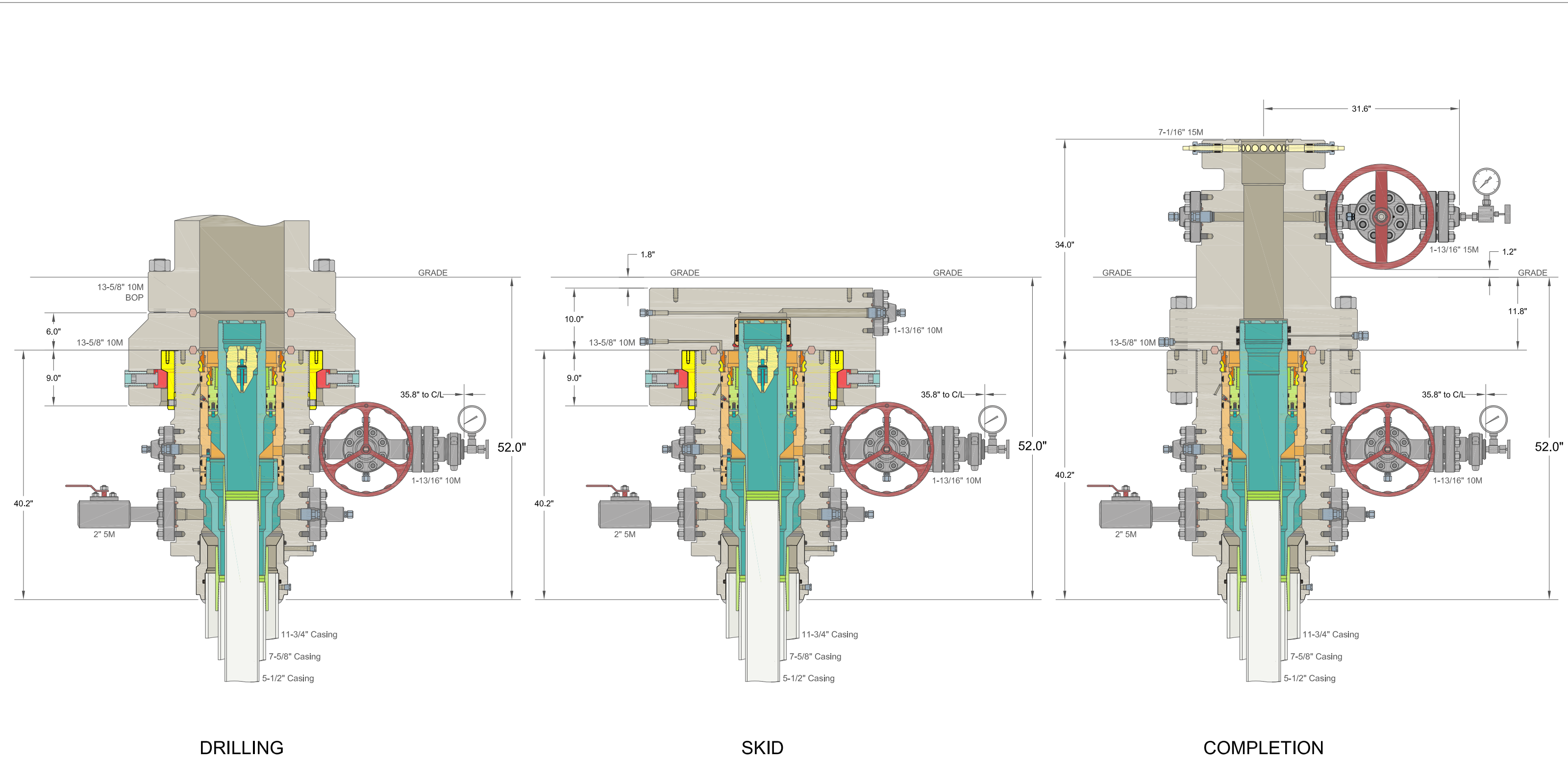
Open hole logging will not be done on this well.

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 7011 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.



INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PERMISSIBLE ONLY AS PROVIDED BY CONTRACT OR AS EXPRESSLY AUTHORIZED BY CACTUS WELLHEAD, LLC.

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



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 1 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Gail Deering
Scale	0.999938	Report Generated	10/Mar/2020 at 12:52
Convergence at slot	0.27° East	Database	WA_HOU_Midland_Defn

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.20	29.90	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W
Facility Reference Pt			657634.30	401220.40	32°06'7.3725"N	103°49'27.3547"W
Field Reference Pt			152400.30	0.00	30°59'42.8458"N	105°26'33.6593"W

WELLPATH DATUM

Calculation method	Minimum curvature	Ensign 121 (RKB) to Facility Vertical Datum	3396.00ft
Horizontal Reference Pt	Slot	Ensign 121 (RKB) to Mean Sea Level	3396.00ft
Vertical Reference Pt	Ensign 121 (RKB)	Ensign 121 (RKB) to Ground Level at Slot (PLU 30 Big Sinks #121H)	26.00ft
MD Reference Pt	Ensign 121 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.03°



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 2 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

WELLPATH DATA (158 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00†	0.000	218.000	0.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
26.00	0.000	218.000	26.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	Tie On
156.00†	0.000	218.000	156.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
286.00†	0.000	218.000	286.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
416.00†	0.000	218.000	416.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
546.00†	0.000	218.000	546.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
676.00†	0.000	218.000	676.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
806.00†	0.000	218.000	806.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
936.00†	0.000	218.000	936.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
1066.00†	0.000	218.000	1066.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
1196.00†	0.000	218.000	1196.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
1326.00†	0.000	218.000	1326.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
1456.00†	0.000	218.000	1456.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	
1500.00	0.000	218.000	1500.00	0.00	0.00	0.00	657664.20	401220.60	32°06'7.3731"N	103°49'27.0071"W	0.00	0.00	0.00	Begin Nudge
1586.00†	1.720	218.000	1585.99	1.02	-1.02	-0.79	657663.41	401219.58	32°06'7.3631"N	103°49'27.0164"W	2.00	2.00	0.00	
1716.00†	4.320	218.000	1715.80	6.42	-6.41	-5.01	657659.19	401214.19	32°06'7.3099"N	103°49'27.0657"W	2.00	2.00	0.00	
1822.50	6.450	218.000	1821.82	14.30	-14.29	-11.16	657653.04	401206.31	32°06'7.2322"N	103°49'27.1376"W	2.00	2.00	0.00	End of Build
1846.00†	6.450	218.000	1845.17	16.38	-16.37	-12.79	657651.41	401204.23	32°06'7.2117"N	103°49'27.1566"W	0.00	0.00	0.00	
1976.00†	6.450	218.000	1974.35	27.89	-27.88	-21.78	657642.42	401192.72	32°06'7.0983"N	103°49'27.2618"W	0.00	0.00	0.00	
2106.00†	6.450	218.000	2103.52	39.40	-39.39	-30.77	657633.43	401181.22	32°06'6.9848"N	103°49'27.3669"W	0.00	0.00	0.00	
2236.00†	6.450	218.000	2232.70	50.91	-50.89	-39.76	657624.44	401169.71	32°06'6.8713"N	103°49'27.4721"W	0.00	0.00	0.00	
2366.00†	6.450	218.000	2361.88	62.43	-62.40	-48.75	657615.45	401158.20	32°06'6.7579"N	103°49'27.5772"W	0.00	0.00	0.00	
2496.00†	6.450	218.000	2491.06	73.94	-73.91	-57.74	657606.46	401146.70	32°06'6.6444"N	103°49'27.6824"W	0.00	0.00	0.00	
2626.00†	6.450	218.000	2620.23	85.45	-85.42	-66.73	657597.47	401135.19	32°06'6.5310"N	103°49'27.7875"W	0.00	0.00	0.00	
2756.00†	6.450	218.000	2749.41	96.96	-96.92	-75.73	657588.48	401123.68	32°06'6.4175"N	103°49'27.8927"W	0.00	0.00	0.00	
2886.00†	6.450	218.000	2878.59	108.48	-108.43	-84.72	657579.49	401112.17	32°06'6.3041"N	103°49'27.9978"W	0.00	0.00	0.00	
2927.50	6.450	218.000	2919.82	112.15	-112.11	-87.59	657576.62	401108.50	32°06'6.2678"N	103°49'28.0314"W	0.00	0.00	0.00	End of Hold
3016.00†	4.680	218.000	3007.90	118.92	-118.87	-92.87	657571.34	401101.74	32°06'6.2012"N	103°49'28.0932"W	2.00	-2.00	0.00	
3146.00†	2.080	218.000	3137.67	124.96	-124.91	-97.59	657566.62	401095.70	32°06'6.1416"N	103°49'28.1484"W	2.00	-2.00	0.00	
3250.00	0.000	180.030	3241.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	2.00	-2.00	0.00	Vertical



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 3 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

WELLPATH DATA (158 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
3276.00†	0.000	180.030	3267.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
3406.00†	0.000	180.030	3397.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
3536.00†	0.000	180.030	3527.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
3666.00†	0.000	180.030	3657.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
3796.00†	0.000	180.030	3787.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
3926.00†	0.000	180.030	3917.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4056.00†	0.000	180.030	4047.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4186.00†	0.000	180.030	4177.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4316.00†	0.000	180.030	4307.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4446.00†	0.000	180.030	4437.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4576.00†	0.000	180.030	4567.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4706.00†	0.000	180.030	4697.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4836.00†	0.000	180.030	4827.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
4966.00†	0.000	180.030	4957.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
5096.00†	0.000	180.030	5087.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
5226.00†	0.000	180.030	5217.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
5356.00†	0.000	180.030	5347.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
5486.00†	0.000	180.030	5477.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
5616.00†	0.000	180.030	5607.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
5746.00†	0.000	180.030	5737.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
5876.00†	0.000	180.030	5867.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6006.00†	0.000	180.030	5997.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6136.00†	0.000	180.030	6127.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6266.00†	0.000	180.030	6257.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6396.00†	0.000	180.030	6387.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6526.00†	0.000	180.030	6517.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6656.00†	0.000	180.030	6647.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6786.00†	0.000	180.030	6777.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
6916.00†	0.000	180.030	6907.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
7046.00†	0.000	180.030	7037.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 4 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

WELLPATH DATA (158 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
7176.00†	0.000	180.030	7167.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
7306.00†	0.000	180.030	7297.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
7436.00†	0.000	180.030	7427.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
7566.00†	0.000	180.030	7557.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
7696.00†	0.000	180.030	7687.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
7826.00†	0.000	180.030	7817.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
7956.00†	0.000	180.030	7947.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8086.00†	0.000	180.030	8077.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8216.00†	0.000	180.030	8207.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8346.00†	0.000	180.030	8337.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8476.00†	0.000	180.030	8467.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8606.00†	0.000	180.030	8597.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8736.00†	0.000	180.030	8727.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8866.00†	0.000	180.030	8857.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
8996.00†	0.000	180.030	8987.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
9126.00†	0.000	180.030	9117.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
9256.00†	0.000	180.030	9247.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
9386.00†	0.000	180.030	9377.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
9516.00†	0.000	180.030	9507.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
9646.00†	0.000	180.030	9637.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
9776.00†	0.000	180.030	9767.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
9906.00†	0.000	180.030	9897.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10036.00†	0.000	180.030	10027.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10166.00†	0.000	180.030	10157.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10296.00†	0.000	180.030	10287.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10426.00†	0.000	180.030	10417.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10556.00†	0.000	180.030	10547.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10686.00†	0.000	180.030	10677.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10816.00†	0.000	180.030	10807.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
10946.00†	0.000	180.030	10937.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 5 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

WELLPATH DATA (158 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
11076.00†	0.000	180.030	11067.64	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	
11159.42	0.000	180.030	11151.06	126.45	-126.40	-98.75	657565.46	401094.21	32°06'6.1270"N	103°49'28.1620"W	0.00	0.00	0.00	Curve KOP
11206.00†	4.658	180.030	11197.59	128.34	-128.29	-98.75	657565.45	401092.32	32°06'6.1082"N	103°49'28.1621"W	10.00	10.00	0.00	
11336.00†	17.658	180.030	11324.86	153.44	-153.39	-98.77	657565.44	401067.22	32°06'5.8598"N	103°49'28.1636"W	10.00	10.00	0.00	
11466.00†	30.658	180.030	11443.22	206.53	-206.48	-98.79	657565.41	401014.13	32°06'5.3345"N	103°49'28.1669"W	10.00	10.00	0.00	
11596.00†	43.658	180.030	11546.61	284.89	-284.84	-98.84	657565.37	400935.78	32°06'4.5591"N	103°49'28.1716"W	10.00	10.00	0.00	
11726.00†	56.658	180.030	11629.71	384.49	-384.44	-98.89	657565.32	400836.19	32°06'3.5735"N	103°49'28.1777"W	10.00	10.00	0.00	
11856.00†	69.658	180.030	11688.29	500.24	-500.18	-98.95	657565.26	400720.45	32°06'2.4281"N	103°49'28.1848"W	10.00	10.00	0.00	
11986.00†	82.658	180.030	11719.32	626.19	-626.14	-99.02	657565.19	400594.50	32°06'1.1817"N	103°49'28.1925"W	10.00	10.00	0.00	
12063.43	90.401	180.030	11724.00	703.41	-703.36	-99.06	657565.15	400517.28	32°06'0.4176"N	103°49'28.1972"W	10.00	10.00	0.00	LP
12116.00†	90.401	180.030	11723.64	755.99	-755.94	-99.09	657565.12	400464.71	32°05'59.8973"N	103°49'28.2004"W	0.00	0.00	0.00	
12246.00†	90.401	180.030	11722.73	885.98	-885.93	-99.16	657565.05	400334.72	32°05'58.6109"N	103°49'28.2083"W	0.00	0.00	0.00	
12376.00†	90.401	180.030	11721.82	1015.98	-1015.93	-99.22	657564.98	400204.74	32°05'57.3246"N	103°49'28.2163"W	0.00	0.00	0.00	
12506.00†	90.401	180.030	11720.91	1145.98	-1145.93	-99.29	657564.91	400074.75	32°05'56.0382"N	103°49'28.2242"W	0.00	0.00	0.00	
12636.00†	90.401	180.030	11720.00	1275.98	-1275.92	-99.36	657564.84	399944.76	32°05'54.7518"N	103°49'28.2321"W	0.00	0.00	0.00	
12766.00†	90.401	180.030	11719.09	1405.97	-1405.92	-99.43	657564.77	399814.77	32°05'53.4654"N	103°49'28.2401"W	0.00	0.00	0.00	
12896.00†	90.401	180.030	11718.18	1535.97	-1535.92	-99.50	657564.71	399684.78	32°05'52.1790"N	103°49'28.2480"W	0.00	0.00	0.00	
13026.00†	90.401	180.030	11717.27	1665.97	-1665.91	-99.57	657564.64	399554.79	32°05'50.8926"N	103°49'28.2559"W	0.00	0.00	0.00	
13156.00†	90.401	180.030	11716.36	1795.96	-1795.91	-99.64	657564.57	399424.81	32°05'49.6062"N	103°49'28.2639"W	0.00	0.00	0.00	
13286.00†	90.401	180.030	11715.45	1925.96	-1925.91	-99.71	657564.50	399294.82	32°05'48.3198"N	103°49'28.2718"W	0.00	0.00	0.00	
13416.00†	90.401	180.030	11714.54	2055.96	-2055.90	-99.78	657564.43	399164.83	32°05'47.0335"N	103°49'28.2798"W	0.00	0.00	0.00	
13546.00†	90.401	180.030	11713.63	2185.95	-2185.90	-99.85	657564.36	399034.84	32°05'45.7471"N	103°49'28.2877"W	0.00	0.00	0.00	
13676.00†	90.401	180.030	11712.72	2315.95	-2315.90	-99.92	657564.29	398904.85	32°05'44.4607"N	103°49'28.2956"W	0.00	0.00	0.00	
13806.00†	90.401	180.030	11711.81	2445.95	-2445.89	-99.99	657564.22	398774.86	32°05'43.1743"N	103°49'28.3036"W	0.00	0.00	0.00	
13936.00†	90.401	180.030	11710.90	2575.94	-2575.89	-100.05	657564.15	398644.87	32°05'41.8879"N	103°49'28.3115"W	0.00	0.00	0.00	
14066.00†	90.401	180.030	11709.99	2705.94	-2705.89	-100.12	657564.08	398514.89	32°05'40.6015"N	103°49'28.3194"W	0.00	0.00	0.00	
14196.00†	90.401	180.030	11709.08	2835.94	-2835.88	-100.19	657564.01	398384.90	32°05'39.3151"N	103°49'28.3274"W	0.00	0.00	0.00	
14326.00†	90.401	180.030	11708.17	2965.93	-2965.88	-100.26	657563.94	398254.91	32°05'38.0287"N	103°49'28.3353"W	0.00	0.00	0.00	
14456.00†	90.401	180.030	11707.26	3095.93	-3095.88	-100.33	657563.88	398124.92	32°05'36.7424"N	103°49'28.3432"W	0.00	0.00	0.00	
14586.00†	90.401	180.030	11706.35	3225.93	-3225.88	-100.40	657563.81	397994.93	32°05'35.4560"N	103°49'28.3512"W	0.00	0.00	0.00	



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 6 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

WELLPATH DATA (158 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
14716.00†	90.401	180.030	11705.44	3355.92	-3355.87	-100.47	657563.74	397864.94	32°05'34.1696"N	103°49'28.3591"W	0.00	0.00	0.00	
14846.00†	90.401	180.030	11704.53	3485.92	-3485.87	-100.54	657563.67	397734.96	32°05'32.8832"N	103°49'28.3670"W	0.00	0.00	0.00	
14976.00†	90.401	180.030	11703.62	3615.92	-3615.87	-100.61	657563.60	397604.97	32°05'31.5968"N	103°49'28.3750"W	0.00	0.00	0.00	
15106.00†	90.401	180.030	11702.71	3745.91	-3745.86	-100.68	657563.53	397474.98	32°05'30.3104"N	103°49'28.3829"W	0.00	0.00	0.00	
15236.00†	90.401	180.030	11701.80	3875.91	-3875.86	-100.75	657563.46	397344.99	32°05'29.0240"N	103°49'28.3908"W	0.00	0.00	0.00	
15366.00†	90.401	180.030	11700.89	4005.91	-4005.86	-100.82	657563.39	397215.00	32°05'27.7376"N	103°49'28.3988"W	0.00	0.00	0.00	
15496.00†	90.401	180.030	11699.98	4135.91	-4135.85	-100.88	657563.32	397085.01	32°05'26.4513"N	103°49'28.4067"W	0.00	0.00	0.00	
15626.00†	90.401	180.030	11699.07	4265.90	-4265.85	-100.95	657563.25	396955.03	32°05'25.1649"N	103°49'28.4146"W	0.00	0.00	0.00	
15756.00†	90.401	180.030	11698.16	4395.90	-4395.85	-101.02	657563.18	396825.04	32°05'23.8785"N	103°49'28.4226"W	0.00	0.00	0.00	
15886.00†	90.401	180.030	11697.25	4525.90	-4525.84	-101.09	657563.11	396695.05	32°05'22.5921"N	103°49'28.4305"W	0.00	0.00	0.00	
16016.00†	90.401	180.030	11696.34	4655.89	-4655.84	-101.16	657563.05	396565.06	32°05'21.3057"N	103°49'28.4384"W	0.00	0.00	0.00	
16146.00†	90.401	180.030	11695.43	4785.89	-4785.84	-101.23	657562.98	396435.07	32°05'20.0193"N	103°49'28.4464"W	0.00	0.00	0.00	
16276.00†	90.401	180.030	11694.52	4915.89	-4915.83	-101.30	657562.91	396305.08	32°05'18.7329"N	103°49'28.4543"W	0.00	0.00	0.00	
16406.00†	90.401	180.030	11693.61	5045.88	-5045.83	-101.37	657562.84	396175.09	32°05'17.4465"N	103°49'28.4622"W	0.00	0.00	0.00	
16536.00†	90.401	180.030	11692.70	5175.88	-5175.83	-101.44	657562.77	396045.11	32°05'16.1601"N	103°49'28.4701"W	0.00	0.00	0.00	
16666.00†	90.401	180.030	11691.79	5305.88	-5305.82	-101.51	657562.70	395915.12	32°05'14.8738"N	103°49'28.4781"W	0.00	0.00	0.00	
16796.00†	90.401	180.030	11690.88	5435.87	-5435.82	-101.58	657562.63	395785.13	32°05'13.5874"N	103°49'28.4860"W	0.00	0.00	0.00	
16926.00†	90.401	180.030	11689.97	5565.87	-5565.82	-101.65	657562.56	395655.14	32°05'12.3010"N	103°49'28.4939"W	0.00	0.00	0.00	
17056.00†	90.401	180.030	11689.06	5695.87	-5695.81	-101.71	657562.49	395525.15	32°05'11.0146"N	103°49'28.5019"W	0.00	0.00	0.00	
17186.00†	90.401	180.030	11688.16	5825.86	-5825.81	-101.78	657562.42	395395.16	32°05'9.7282"N	103°49'28.5098"W	0.00	0.00	0.00	
17316.00†	90.401	180.030	11687.25	5955.86	-5955.81	-101.85	657562.35	395265.18	32°05'8.4418"N	103°49'28.5177"W	0.00	0.00	0.00	
17446.00†	90.401	180.030	11686.34	6085.86	-6085.80	-101.92	657562.28	395135.19	32°05'7.1554"N	103°49'28.5257"W	0.00	0.00	0.00	
17576.00†	90.401	180.030	11685.43	6215.85	-6215.80	-101.99	657562.21	395005.20	32°05'5.8690"N	103°49'28.5336"W	0.00	0.00	0.00	
17706.00†	90.401	180.030	11684.52	6345.85	-6345.80	-102.06	657562.15	394875.21	32°05'4.5826"N	103°49'28.5415"W	0.00	0.00	0.00	
17836.00†	90.401	180.030	11683.61	6475.85	-6475.80	-102.13	657562.08	394745.22	32°05'3.2962"N	103°49'28.5495"W	0.00	0.00	0.00	
17966.00†	90.401	180.030	11682.70	6605.84	-6605.79	-102.20	657562.01	394615.23	32°05'2.0099"N	103°49'28.5574"W	0.00	0.00	0.00	
18096.00†	90.401	180.030	11681.79	6735.84	-6735.79	-102.27	657561.94	394485.25	32°05'0.7235"N	103°49'28.5653"W	0.00	0.00	0.00	
18226.00†	90.401	180.030	11680.88	6865.84	-6865.79	-102.34	657561.87	394355.26	32°04'59.4371"N	103°49'28.5732"W	0.00	0.00	0.00	
18356.00†	90.401	180.030	11679.97	6995.83	-6995.78	-102.41	657561.80	394225.27	32°04'58.1507"N	103°49'28.5812"W	0.00	0.00	0.00	
18486.00†	90.401	180.030	11679.06	7125.83	-7125.78	-102.48	657561.73	394095.28	32°04'56.8643"N	103°49'28.5891"W	0.00	0.00	0.00	



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 7 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

WELLPATH DATA (158 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
18616.00†	90.401	180.030	11678.15	7255.83	-7255.78	-102.55	657561.66	393965.29	32°04'55.5779"N	103°49'28.5970"W	0.00	0.00	0.00	
18746.00†	90.401	180.030	11677.24	7385.83	-7385.77	-102.61	657561.59	393835.30	32°04'54.2915"N	103°49'28.6050"W	0.00	0.00	0.00	
18876.00†	90.401	180.030	11676.33	7515.82	-7515.77	-102.68	657561.52	393705.31	32°04'53.0051"N	103°49'28.6129"W	0.00	0.00	0.00	
19006.00†	90.401	180.030	11675.42	7645.82	-7645.77	-102.75	657561.45	393575.33	32°04'51.7187"N	103°49'28.6208"W	0.00	0.00	0.00	
19136.00†	90.401	180.030	11674.51	7775.82	-7775.76	-102.82	657561.38	393445.34	32°04'50.4323"N	103°49'28.6287"W	0.00	0.00	0.00	
19266.00†	90.401	180.030	11673.60	7905.81	-7905.76	-102.89	657561.32	393315.35	32°04'49.1460"N	103°49'28.6367"W	0.00	0.00	0.00	
19396.00†	90.401	180.030	11672.69	8035.81	-8035.76	-102.96	657561.25	393185.36	32°04'47.8596"N	103°49'28.6446"W	0.00	0.00	0.00	
19483.07	90.401	180.030	11672.08‡	8122.88	-8122.82	-103.01	657561.20	393098.30	32°04'46.9980"N	103°49'28.6499"W	0.00	0.00	0.00	PBHL (200' FSL)

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) PLU 30 Big Sinks #121H BHL	19483.07	11672.08	-8122.82	-103.01	657561.20	393098.30	32°04'46.9980"N	103°49'28.6499"W	rectangle
	2D Rectangle 7438.01 x 100.								
PLU 30 Big Sinks #121H LTP	N/A	11672.09	-7992.81	-103.11	657561.10	393228.30	32°04'48.2845"N	103°49'28.6440"W	point
PLU 30 Big Sinks #121H FTP	N/A	11724.00	-696.94	-96.11	657568.10	400523.70	32°06'0.4809"N	103°49'28.1625"W	point



Planned Wellpath Report

PLU 30 Big Sinks #121H Rev-A.0

Page 8 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO Energy Inc.	Well	PLU 30 Big Sinks #121H
Field	Wolfcamp (Eddy Co., NM)	API/Legal	
Facility	PLU 30 Big Sinks Pad	Wellbore	PLU 30 Big Sinks #121H
Slot	PLU 30 Big Sinks #121H		

SURVEY PROGRAM - Ref Wellbore: PLU 30 Big Sinks #121H Ref Wellpath: PLU 30 Big Sinks #121H Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	11159.14	BH NaviTrak (2019) (Standard)		PLU 30 Big Sinks #121H
11159.14	19483.07	OWSG MWD rev2 + IFR1 + Multi-Station Correction		PLU 30 Big Sinks #121H