

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 abandoned well. Use form 3160-3 (APD) for such proposals.

RECEIVED
REC'D MAR 10 2020
MIDLAND

EMNRD-OC3ARTESIA

5. Lease Serial No.
NMNM120895
6. Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

7. If Unit or CA/Agreement, Name and/or No.
8. Well Name and No.
CHAIN-BLUE LIGHTNING 26 FED 167H

1. Type of Well
 Oil Well Gas Well Other

9. API Well No.
30-015-46646-00-X1

2. Name of Operator
XTO ENERGY INCORPORATED
Contact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com

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
BONE SPRINGS

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 23 T25S R29E SESE 365FSL 523FEL
32.109158 N Lat, 103.948265 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 Change to Original A PD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or 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 Energy Inc. requests permission to change the casing & cement design per the attached drilling program.

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

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 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.

**Carlsbad Field Office
Operator Copy**

All COAs still apply; including pressure equipment

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #502093 verified by the BLM Well Information System
For XTO ENERGY INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 02/06/2020 (20PP1107SE)

Name (Printed/Typed) KELLY KARDOS Title REGULATORY COORDINATOR

Signature (Electronic Submission) Date 02/05/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ALLISON MORENCY Title PETROLEUM ENGINEER Date 02/20/2020

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.

*Accepted
3-18-20 RWP*

Revisions to Operator-Submitted EC Data for Sundry Notice #502093

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM120895	NMNM120895
Agreement:		
Operator:	XTO ENERGY INC. 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO ENERGY INCORPORATED 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:	NM	NM
County:	EDDY	EDDY
Field/Pool:	PURPLE SAGE; WOLFCAMP	BONE SPRINGS
Well/Facility:	CHAIN-BLUE LIGHTNING 26 FED 167H Sec 23 T25S R29E Mer NMP SESE 365FSL 523FEL	CHAIN-BLUE LIGHTNING 26 FED 167H Sec 23 T25S R29E SESE 365FSL 523FEL 32.109158 N Lat, 103.948265 W Lon

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

XTO Energy Inc.
Chain Blue Lightning 26 Fed 167H
Projected TD: 16666' MD / 11366' TVD
SHL: 365' FSL & 523' FEL , Section 23, T25S, R29E
BHL: 200' FSL & 990' FEL , Section 32, T25S, R29E
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	614'	Water
Top of Salt	794'	Water
Base of Salt	3080'	Water
Delaware	3270'	Water
Bone Spring	7065'	Water/Oil/Gas
1st Bone Spring Ss	8008'	Water/Oil/Gas
2nd Bone Spring Ss	8870'	Water/Oil/Gas
3rd Bone Spring Ss	9936'	Water/Oil/Gas
Wolfcamp	10282'	Water/Oil/Gas
Wolfcamp A	10424'	Water/Oil/Gas
Wolfcamp B	10760'	Water/Oil/Gas
Wolfcamp D	11218'	Water/Oil/Gas
Target/Land Curve	11366'	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 16 inch casing @ ' (794' above the salt) and circulating cement back to surface. The salt will be isolated by setting 11-3/4 inch casing at 690' and circulating cement to surface. A 10-5/8 inch vertical hole will be drilled to 10524' and 8-5/8 inch casing ran and cemented 500' into the 11-3/4 inch casing. An 7-7/8 inch curve and lateral hole will be drilled to MD/TD and 5-1/2 casing will be set at TD and cemented back 300' into the 8-5/8 inch 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' - 690'	11-3/4"	47	BTC	J-55	New	1.18	4.21	14.71
10-5/8"	0' - 4130'	8-5/8"	32	BTC	CYP-110	New	1.39	1.29	2.99
10-5/8"	4130' - 10524'	8-5/8"	32	BTC	HCL-80	New	1.01	1.44	2.17
7-7/8"	0' - 16666'	5-1/2"	20	BTC	P-110	New	1.18	1.39	2.49

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

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

· 8-5/8 casing will be a split string with CYP-110 run from surface to 3380' & HCL-80 from 3380' to TD because the 8-5/8" HCL-80 casing fails at SF burst at surface. The split string design passes our internal requirements

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

· Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

WELLHEAD:

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head (RSH System): 11-3/4" SOW bottom x 13-5/8" 5M top flange

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

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

4. Cement Program

Surface Casing: 11-3/4", 47 New J-55, BTC casing to be set at +/- 690'

Lead: 170 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.88 ft3/sx, 9.61 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

Top of Cement: Surface

Intermediate Casing: 8-5/8", 32 New CYP-110, BTC casing to be set at +/- 10524' ECP/DV Tool to be set at 4130'

1st Stage

Lead: 640 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.87 ft3/sx, 9.61 gal/sx water)

Tail: 260 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

2nd Stage

Lead: 1190 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 310 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)

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

Top of Cement: 200' inside previous casing shoe

Production Casing: 5-1/2", 20 New P-110, BTC casing to be set at +/- 16666'

Lead: 1000 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 1000 sxs VersaCem (mixed at 13.2 ppg, 10266 ft3/sx, 8.38 gal/sx water)

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

Top of Cement: 300' inside previous casing shoe

5. Pressure Control Equipment

Once the permanent WH is installed on the 13-3/8 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 10M 3-Ram BOP. MASP should not exceed 5478 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 50% of the working pressure. When nipping up on the 13-5/8" 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When the 11-3/4" and 8-5/8" casing is set, the packoff seals will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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 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.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (scc/qt)	Fluid Loss (cc)
0' to 690'	14-3/4"	FW / Native	8.4-8.8	30-40	NC
690' to 10524'	10-5/8"	Brine / Cut Brine / WBM	8.7-9.8	29-32	NC - 20
10524' to 16666'	7-7/8"	FW / Cut Brine / Polymer/ OBM	13.2-13.8	32-50	NC - 20

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

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

7. Auxiliary Well Control and Monitoring Equipment

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

8. Logging, Coring and Testing Program

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

Open hole logging will include Yes

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 150 to 170 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 7979 psi.

10. Anticipated Starting Date and Duration of Operations

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