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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**EMERALD OGD ARTESIA**

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM120895
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator XTO ENERGY INCORPORATED		8. Lease Name and Well No. CHAIN-BLUE LIGHTNING 26 FED 125H <b>327052</b>
3a. Address 2277 Springwoods Village Parkway Spring TX 77389	3b. Phone No. (include area code) (432)620-6700	9. API Well No. <b>30-015-46650</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE / 330 FSL / 2480 FEL / LAT 32.10907 / LONG -103.954584 At proposed prod. zone SWSE / 200 FSL / 2430 FEL / LAT 32.094114 / LONG -103.954315		10. Field and Pool, or Exploratory PURPLE SAGE WOLFCAMP
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area SEC 23 / T25S / R29E / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>330 feet</b>	16. No of acres in lease <b>1280</b>	12. County or Parish EDDY
17. Spacing Unit dedicated to this well <b>320</b>	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>35 feet</b>	13. State NM
19. Proposed Depth 10601 feet / 15712 feet	20. BLM/BIA Bond No. in file FED: UTB000138	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3080 feet	22. Approximate date work will start* 09/01/2019	23. Estimated duration 90 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) Stephanie Rabadue / Ph: (432)620-6714	Date 06/21/2019
Title Regulatory Coordinator		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 10/11/2019
Title Assistant Field Manager Lands & Minerals Office CARLSBAD		

Application approval 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.  
Conditions of approval, if any, are attached.

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.

**APPROVED WITH CONDITIONS**  
Approval Date: 10/11/2019

## INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

1. SHL: SWSE / 330 FSL / 2480 FEL / TWSP: 25S / RANGE: 29E / SECTION: 23 / LAT: 32.10907 / LONG: -103.954584 ( TVD: 0 feet, MD: 0 feet )  
PPP: NWNW / 330 FNL / 2430 FWL / TWSP: 25S / RANGE: 29E / SECTION: 26 / LAT: 32.107255 / LONG: -103.954415 ( TVD: 10601 feet, MD: 11000 feet )  
BHL: SWSE / 200 FSL / 2430 FEL / TWSP: 25S / RANGE: 29E / SECTION: 26 / LAT: 32.094114 / LONG: -103.954315 ( TVD: 10601 feet, MD: 15712 feet )

## BLM Point of Contact

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: 5752345934

Email: pperez@blm.gov

Approval Date: 10/11/2019

(Form 3160-3, page 3)

### **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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**Approval Date: 10/11/2019**

(Form 3160-3, page 4)

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>XTO Energy, Inc.</b>
<b>LEASE NO.:</b>	<b>NMNM-100554</b>
<b>WELL NAME &amp; NO.:</b>	<b>Chain-Blue Lightning 26 Fed 125H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0330' FSL &amp; 2480' FEL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>0200' FSL &amp; 2430' FEL Sec. 26, T. 25 S., R 29 E.</b>
<b>LOCATION:</b>	<b>Section 23, T. 25 S., R 29 E., NMPM</b>
<b>COUNTY:</b>	<b>County, New Mexico</b>

### A. DRILLING OPERATIONS 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. **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.**
2. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. 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 is located, this does not include the dog house or stairway area.

4. 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.

**B. CASING**

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.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

**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.

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.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water and brine flows in the Salado and Castile.

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

1. The 13-3/8 inch surface casing shall be set at approximately 696 feet (in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet 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 is to include the lead cement slurry.**
- 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.

**Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.**

**Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.**

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

- \_\_\_\_\_
- Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.**

**Centralizers required through the curve and a minimum of one every other joint.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

- Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

4. 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.

**C. 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 53.
  
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
  
3. **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 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. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
  - e. **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.**

**5M 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.**

4. The appropriate BLM office shall be notified a minimum of . 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).
  - a. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
  - b. 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.
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. 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.**
  - e. 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.
  - f. 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.

**D. 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.

**E. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

**F. 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 093019**

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	XTO Energy Incorporated
WELL NAME & NO.:	Chain-Blue Lightning 26 Fed 125H
SURFACE HOLE FOOTAGE:	330'/S & 2480'/E
BOTTOM HOLE FOOTAGE	200'/S & 2430'/W
LOCATION:	Section 23, T.25 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

**TABLE OF CONTENTS**

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Hydrology
  - Texas Hornshell
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

### Hydrology:

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be

taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

### **Texas Hornshell**

Oil and Gas and Associated Infrastructure Mitigation Measures for Zone D – CCA

Boundary Requirements:

- Provide CEHMM with the permit, lease grant, or other authorization form BLM, if applicable.
- Provide CEHMM with plats or other electronic media describing the new surface disturbance for the project.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. EXCLOSURE FENCING (CELLARS & PITS)**

**Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

**G. ON LEASE ACCESS ROADS****Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

**Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

**Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

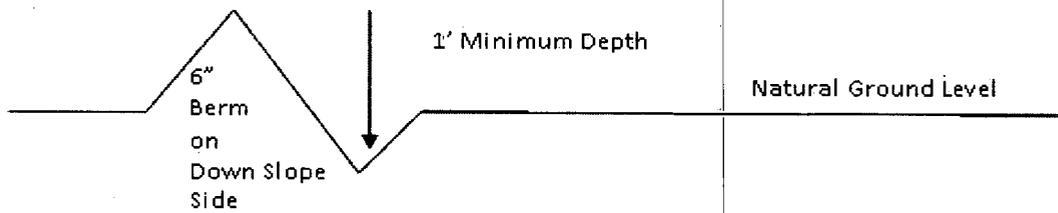
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out-sloping and in-sloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

### Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

### Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

### Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

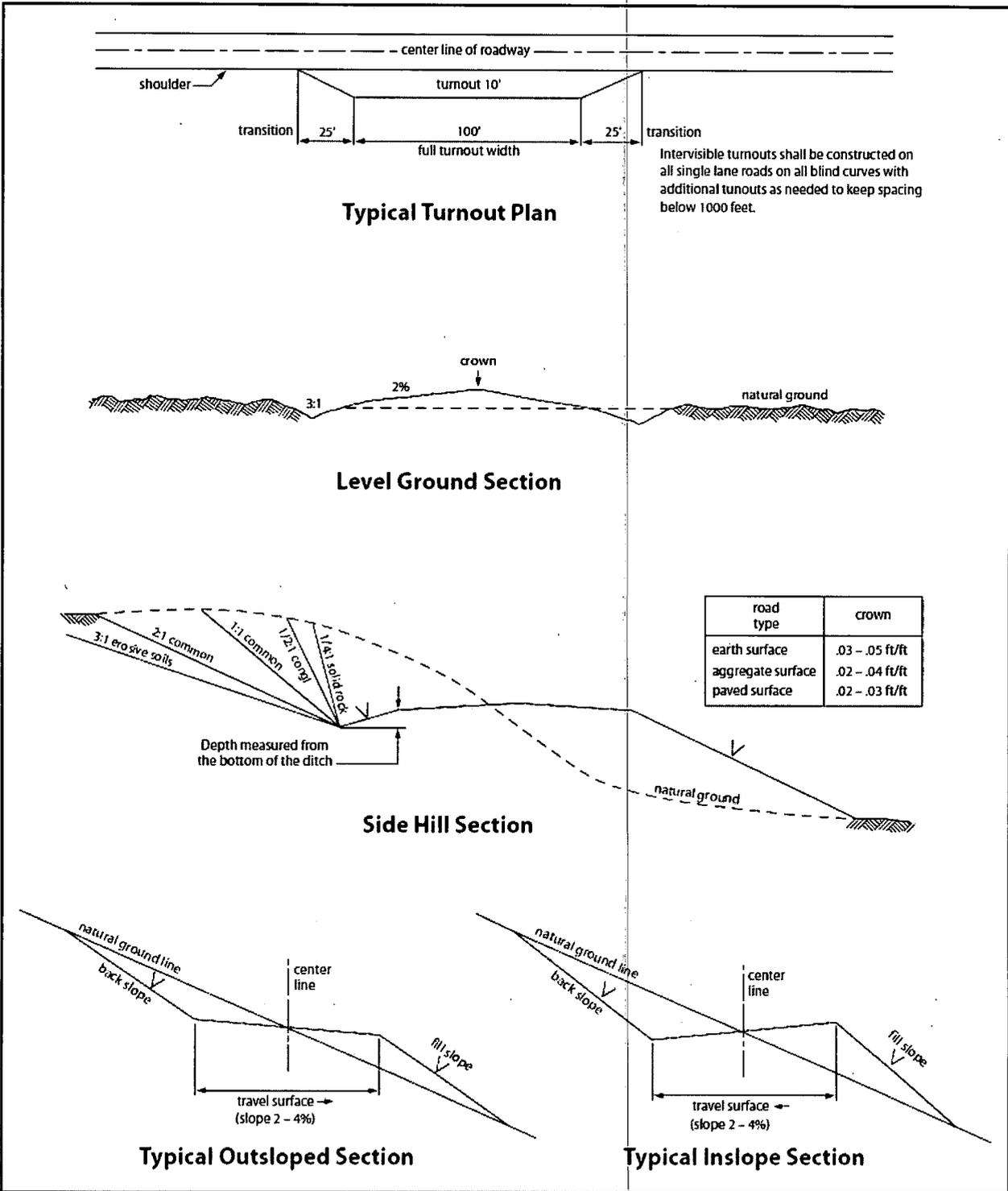


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. PRODUCTION (POST DRILLING)

### A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

**Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

**B. PIPELINES**

**STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
  
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
  
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will

be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

#### BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42

U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |  |  |
|--|--|
| <input type="checkbox"/> seed mixture 1            | <input type="checkbox"/> seed mixture 3          |
| <input checked="" type="checkbox"/> seed mixture 2 | <input type="checkbox"/> seed mixture 4          |
| <input type="checkbox"/> seed mixture 2/LPC        | <input type="checkbox"/> Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information

thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

### **C. ELECTRIC LINES**

#### **STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.
5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to

the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrent shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

## **VIII. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **IX. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# Operator Certification Data Report

12/31/2019

## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Stephanie Rabadue

**Title:** Regulatory Coordinator

**Street Address:**

**City:**

**State:**

**Phone:** (432)620-6714

**Email address:** stephanie\_rabadue@xtoenergy.com

**Signed on:** 05/25/2019

**Zip:**

## Field Representative

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Phone:**

**Email address:**

**Zip:**



APD ID: 10400042184

Submission Date: 06/21/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED

Well Number: 125H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

**Section 1 - General**

APD ID: 10400042184

Tie to previous NOS?

Submission Date: 06/21/2019

BLM Office: CARLSBAD

User: Stephanie Rabadue

Title: Regulatory Coordinator

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM120895

Lease Acres: 1280

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: XTO ENERGY INCORPORATED

Operator letter of designation:

**Operator Info**

Operator Organization Name: XTO ENERGY INCORPORATED

Operator Address: 2277 Springwoods Village Parkway

Zip: 77389

Operator PO Box:

Operator City: Spring

State: TX

Operator Phone: (432)620-6700

Operator Internet Address: Richard\_redus@xtoenergy.com

**Section 2 - Well Information**

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: CHAIN-BLUE LIGHTNING 26 FED

Well Number: 125H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: PURPLE SAGE  
WOLFCAMP

Pool Name:

Is the proposed well in an area containing other mineral resources? USEABLE WATER

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED

Well Number: 125H

Is the proposed well in an area containing other mineral resources? USEABLE WATER

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: CHAIN Number: 3

Well Class: HORIZONTAL

BLUE

Number of Legs: 1

Well Work/Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: DELINEATION

Describe sub-type:

Distance to town:

Distance to nearest well: 35 FT

Distance to lease line: 330 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Chain\_26\_Fed\_125H\_C102\_20190527090113.pdf

Well work start Date: 09/01/2019

Duration: 90 DAYS

### Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

Reference Datum:

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	330	FSL	2480	FEL	25S	29E	23	Aliquot SWSE	32.10907	-103.954584	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 120895	3080	0	0	
KOP Leg #1	330	FSL	2480	FWL	25S	29E	23	Aliquot SWSE	32.10907	-103.954584	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 120895	-5420	8500	8500	
PPP Leg #1-1	330	FNL	2430	FWL	25S	29E	26	Aliquot NWNE	32.107255	-103.954415	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 100554	-7521	11000	10601	

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
EXIT Leg #1	330	FSL	2430	FEL	25S	29E	26	Aliquot SWSE 1	32.094471	-103.954317	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 100554	-7521	15700	10601	
BHL Leg #1	200	FSL	2430	FEL	25S	29E	26	Aliquot SWSE 4	32.094114	-103.954315	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 100554	-7521	15712	10601	



APD ID: 10400042184

Submission Date: 06/21/2019

Highlighted data reflects the most recent changes

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED

Well Number: 125H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

**Section 1 - Geologic Formations**

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
464833	PERMIAN	3080	0	0	OTHER : Quaternary	NONE	Y
464824	RUSTLER	2522	556	556	SILTSTONE	USEABLE WATER	N
464825	TOP SALT	2360	718	718	SALT	NONE	N
464826	BASE OF SALT	112	2966	2966	SALT	NONE	N
464822	DELAWARE	-105	3183	3183	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
464823	BONE SPRING	-3852	6930	6930	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
464821	BONE SPRING 1ST	-4795	7873	7873	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
464820	BONE SPRING 2ND	-5102	8180	8180	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	Y
464836	BONE SPRING 3RD	-5914	8992	8992	SANDSTONE	NATURAL GAS, OIL, OTHER, USEABLE WATER : Produced Water	N
464837	WOLFCAMP	-7073	10151	10151	LIMESTONE, SANDSTONE	NATURAL GAS, OIL, OTHER, USEABLE WATER : produced water	Y

**Section 2 - Blowout Prevention**

Pressure Rating (PSI): 5M

Rating Depth: 10601

**Equipment:** The blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 3179 psi.

**Requesting Variance? YES**

**Variance request:** 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.

**Testing Procedure:** 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" 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 9-5/8", the BOP will be tested to a minimum of 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.

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Choke Diagram Attachment:**

Chain\_26\_Fed\_5MCM\_20190525075930.pdf

**BOP Diagram Attachment:**

Chain\_26\_Fed\_5MBOP\_20190525075937.pdf

**Section 3 - Casing**

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	696	0	696			696	J-55	54.5	ST&C	3.55	1.18	DRY	13.55	DRY	13.55
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	7575	0	7575			7575	HCL-80	40	LT&C	1.32	1.79	DRY	2.4	DRY	2.4
3	PRODUCTION	8.75	5.5	NEW	API	N	0	15712	0	10601			15712	P-110	17	BUTT	1.35	1.12	DRY	2.59	DRY	2.59

**Casing Attachments**

**Casing ID:** 1      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Chain\_26\_Fed\_125H\_Csg\_20190527094524.pdf

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED

Well Number: 125H

**Casing Attachments**

Casing ID: 2      String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Chain\_26\_Fed\_125H\_Csg\_20190527094540.pdf

Casing ID: 3      String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Chain\_26\_Fed\_125H\_Csg\_20190527094604.pdf

**Section 4 - Cement**

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	696	290	1.87	12.9	542.3	100	EconoCem-HLTRRC	None
SURFACE	Tail				300	1.35	14.8	405	100	HalCem-C	2% CaCl
INTERMEDIATE	Lead		0	7575	2090	1.88	12.9	3929.2	100	HalCem-C	2% CaCl
INTERMEDIATE	Tail				230	1.33	14.8	305.9	100	HalCem-C	2% CaCl
PRODUCTION	Lead		0	1569.6	330	2.69	10.5	887.7	30	NeoCem	None

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail				2320	1.61	13.2	3735.2	30	VersaCem	None

**Section 5 - Circulating Medium**

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** The necessary mud products for weight addition and fluid loss control will be on location at all times.

**Describe the mud monitoring system utilized:** A Pason or Totco will be used to detect changes in loss or gain of mud volume.

**Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
7575	1060 1	OTHER : FW / Cut Brine / Polymer	9.8	10.1							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
0	697	OTHER : FW/Native	8.4	8.8							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

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
697	7575	OTHER : Brine/Gel Sweeps	9.8	10.2							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

### Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

Open hole logging to include Density/Neutron/PE/Dual Laterlog/Spectral Gamma from kick-off point to intermediate casing shoe.

**List of open and cased hole logs run in the well:**

CBL,CNL,DS,GR,MUDLOG

**Coring operation description for the well:**

No coring will take place on this well.

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 5567

**Anticipated Surface Pressure:** 3234.78

**Anticipated Bottom Hole Temperature(F):** 170

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

Potential loss of circulation through the Capitan Reef.

**Contingency Plans geohazards description:**

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

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Hydrogen sulfide drilling operations plan:**

Chain\_26\_Fed\_H2S\_Plan\_20190525080701.pdf

Chain\_26\_Fed\_H2S\_Dia\_Pad\_3W\_20190916074632.pdf

**Section 8 - Other Information**

**Proposed horizontal/directional/multi-lateral plan submission:**

Chain\_26\_Fed\_125H\_DD\_20190527090035.pdf

**Other proposed operations facets description:**

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

**Other proposed operations facets attachment:**

Chain\_26\_Fed\_GCPS\_20190525080755.pdf

Chain\_26\_Fed\_GCPN\_20190525080746.pdf

**Other Variance attachment:**

Chain\_26\_Fed\_FH\_20190525080740.pdf

Chain\_26\_Fed\_MBS\_20190916075003.pdf



## HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN

### Assumed 100 ppm ROE = 3000'

100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

#### Emergency Procedures

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - o Detection of H<sub>2</sub>S, and
  - o Measures for protection against the gas,
  - o Equipment used for protection and emergency response.

#### Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

#### Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air = 1	2 ppm	N/A	1000 ppm

#### Contacting Authorities

All XTO location personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

**CARLSBAD OFFICE – EDDY & LEA COUNTIES**

3104 E. Greene St., Carlsbad, NM 88220  
Carlsbad, NM

575-887-7329

**XTO PERSONNEL:**

Kendall Decker, Drilling Manager	903-521-6477
Milton Turman, Drilling Superintendent	817-524-5107
Jeff Raines, Construction Foreman	432-557-3159
Toady Sanders, EH & S Manager	903-520-1601
Wes McSpadden, Production Foreman	575-441-1147

**SHERIFF DEPARTMENTS:**

Eddy County	575-887-7551
Lea County	575-396-3611

**NEW MEXICO STATE POLICE:**

575-392-5588

**FIRE DEPARTMENTS:**

Carlsbad	911
Eunice	575-885-2111
Hobbs	575-394-2111
Jal	575-397-9308
Lovington	575-395-2221
	575-396-2359

**HOSPITALS:**

Carlsbad Medical Emergency	911
Eunice Medical Emergency	575-885-2111
Hobbs Medical Emergency	575-394-2112
Jal Medical Emergency	575-397-9308
Lovington Medical Emergency	575-395-2221
	575-396-2359

**AGENT NOTIFICATIONS:**

**For Lea County:**

Bureau of Land Management – Hobbs	575-393-3612
New Mexico Oil Conservation Division – Hobbs	575-393-6161

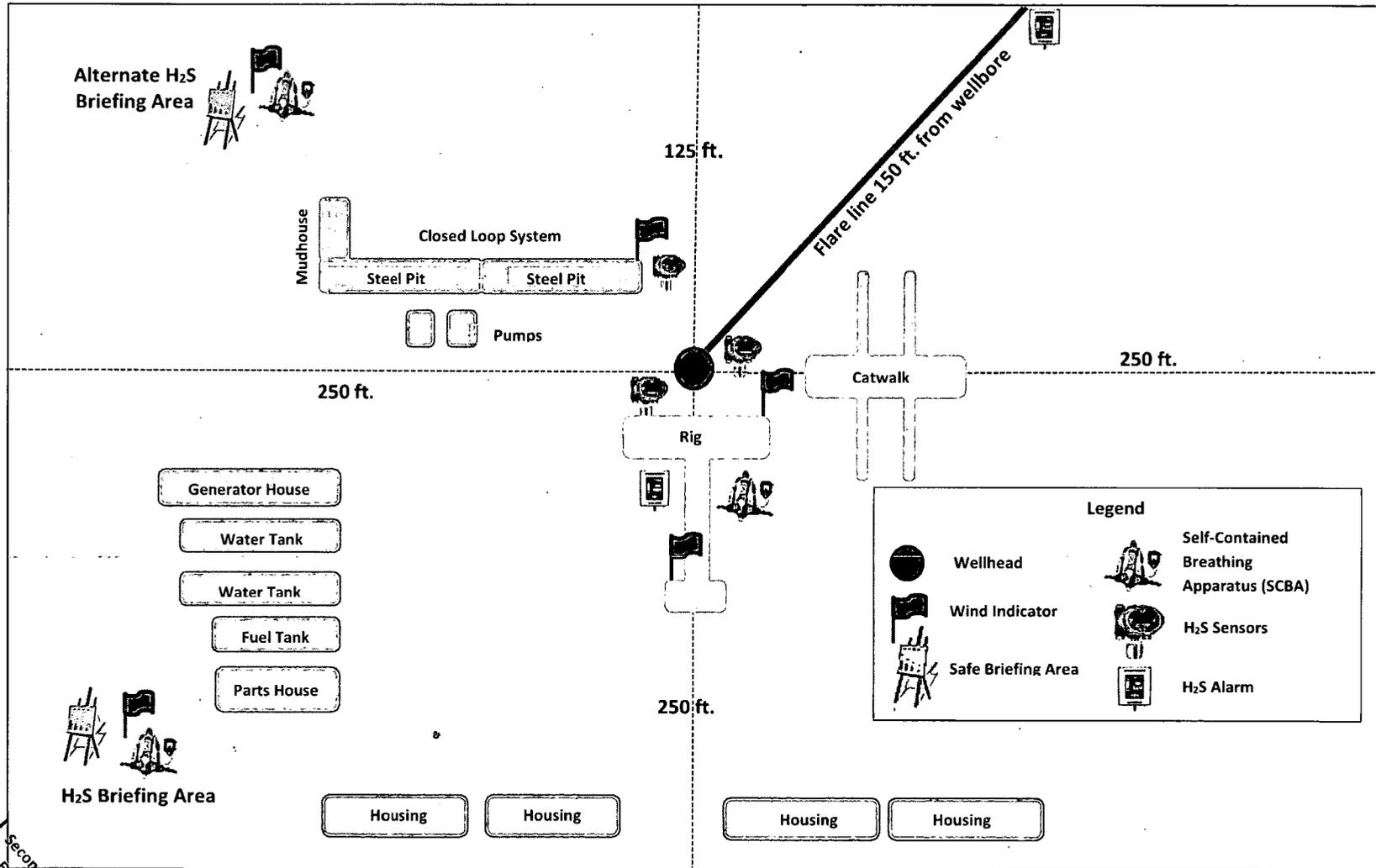
**For Eddy County:**

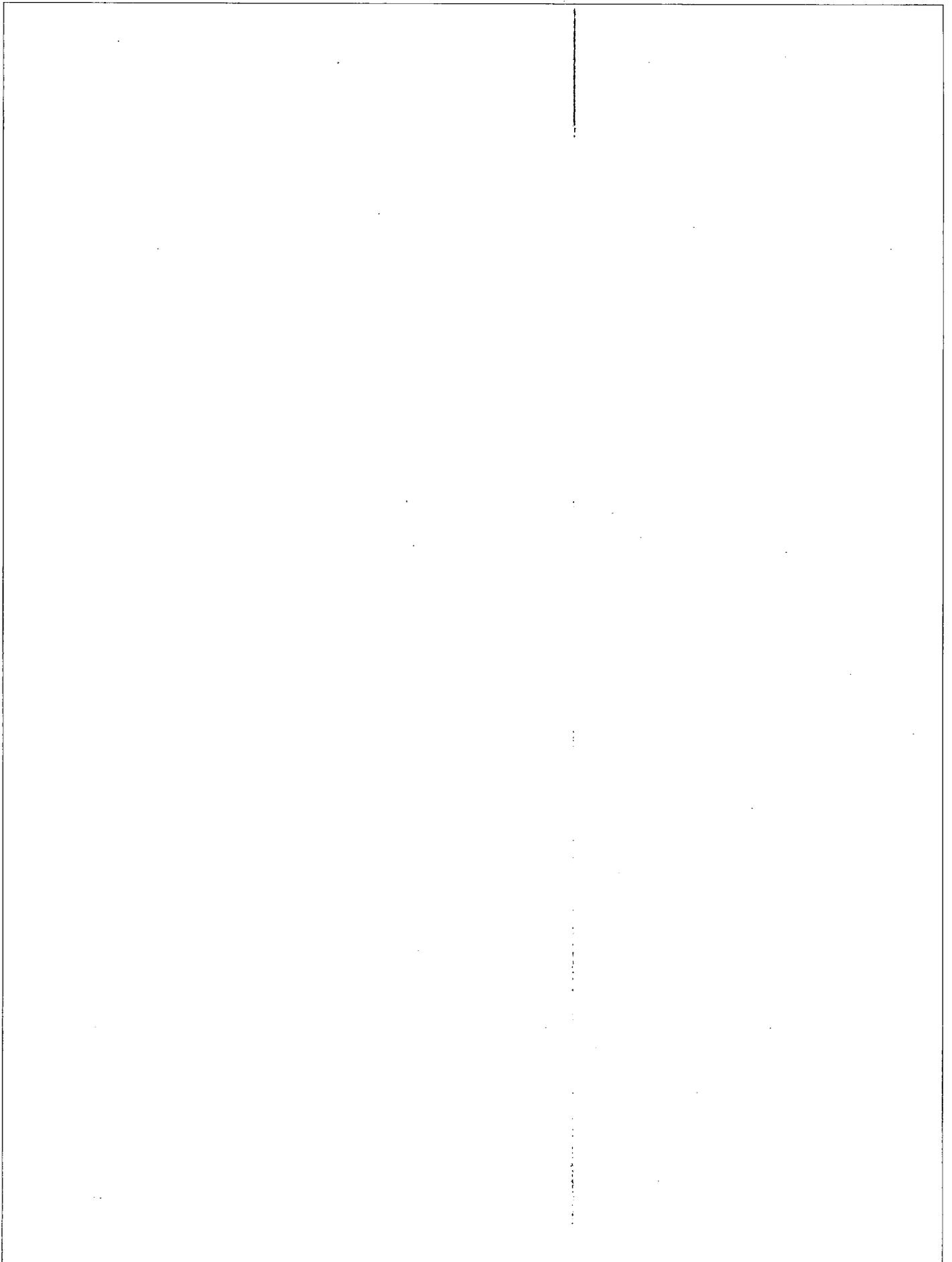
Bureau of Land Management - Carlsbad	575-234-5972
New Mexico Oil Conservation Division - Artesia	575-748-1283



Prevailing Winds  
Direction SW

## H<sub>2</sub>S Briefing Areas and Alarm Locations







## **XTO Energy**

**Eddy County, NM (NAD-27)  
Chain-Blue Lightning 26 Fed  
#125H**

**OH**

**Plan: PERMIT**

# **Standard Planning Report**

**30 April, 2019**



Project: Eddy County, NM (NAD-27)  
 Site: Chain-Blue Lightning 26 Fed  
 Well: #125H  
 Wellbore: OH  
 Design: PERMIT

PROJECT DETAILS: Eddy County, NM (NAD-27)  
 Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: New Mexico East 3001  
 System Datum: Mean Sea Level

WELL DETAILS: #125H  
 Rig Name:  
 Ref GL @ 3080.00usft  
 Ground Level: 3080.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	403563.90	617421.70	32.1089456	-103.9540993

DESIGN TARGET DETAILS

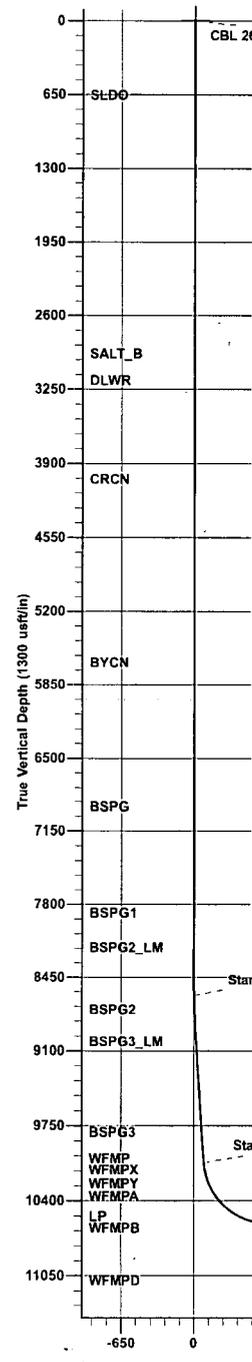
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
CBL 26 FED #125H: SHL (330' FSL/ 2480' FEL)	0.00	0.00	0.00	403563.90	617421.70	32.1089456	-103.9540993	Point
CBL 26 FED #125H: FTP	10601.00	-659.80	54.50	402904.10	617476.20	32.1071313	-103.9539308	Point
CBL 26 FED #125H: LTP	10601.00	-5310.10	101.10	398253.80	617522.80	32.0943472	-103.9538331	Point
CBL 26 FED #125H: PBHL (200' FSL/ 2430' FEL)	10601.00	-5440.10	102.40	398123.80	617524.10	32.0939898	-103.9538304	Point

SECTION DETAILS

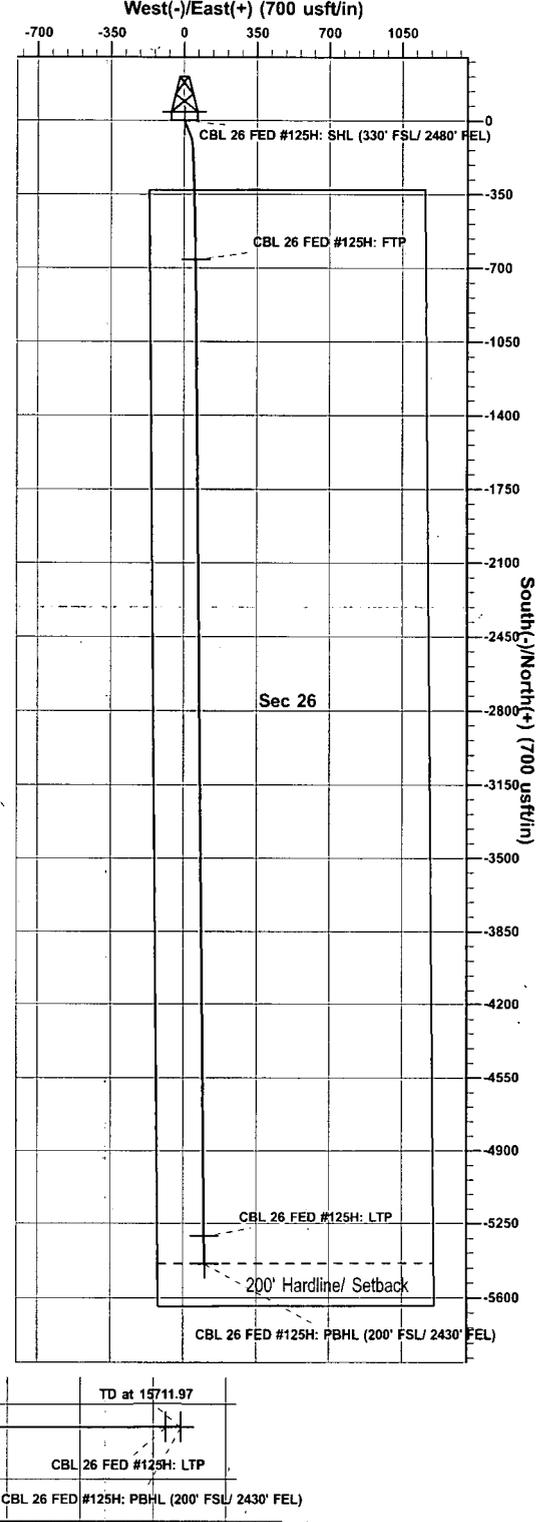
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8608.00	0.00	0.00	8608.00	0.00	0.00	0.00	0.00	0.00
3	8808.16	4.00	158.23	8808.00	-6.49	2.59	2.00	158.23	6.52
4	10068.76	4.00	158.23	10066.51	-88.22	35.23	0.00	0.00	88.57
5	10931.43	90.00	179.43	10601.00	-659.80	54.50	10.00	21.24	860.31
6	15581.96	90.00	179.43	10601.00	-5310.10	101.10	0.00	0.00	5310.84
7	15711.97	90.00	179.43	10601.00	-5440.10	102.40	0.00	0.00	5440.85

FORMATION TOP DETAILS

TVDPath	Formation
721.00	SLDO
3003.00	SALT_B
3238.00	DLWR
4105.00	CRCN
5721.00	BYCN
6999.00	BSPG
7942.00	BSPG1
8249.00	BSPG2_LM
8804.00	BSPG2
9058.00	BSPG3_LM
9872.00	BSPG3
10216.00	WFMP
10248.00	WFMPX
10314.00	WFMPY
10359.00	WFMPA
10601.00	LP



Vertical Section at 179.43° (1300 usft/in)



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information furnished by Prototype are at the sole risk and responsibility of the user.

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name CHAIN-BLUE LIGHTNING 26 FED	
<sup>7</sup> OGRID No. 005380	<sup>8</sup> Operator Name XTO ENERGY, INC.	<sup>6</sup> Well Number 125H <sup>9</sup> Elevation 3,080'

<sup>10</sup> Surface Location

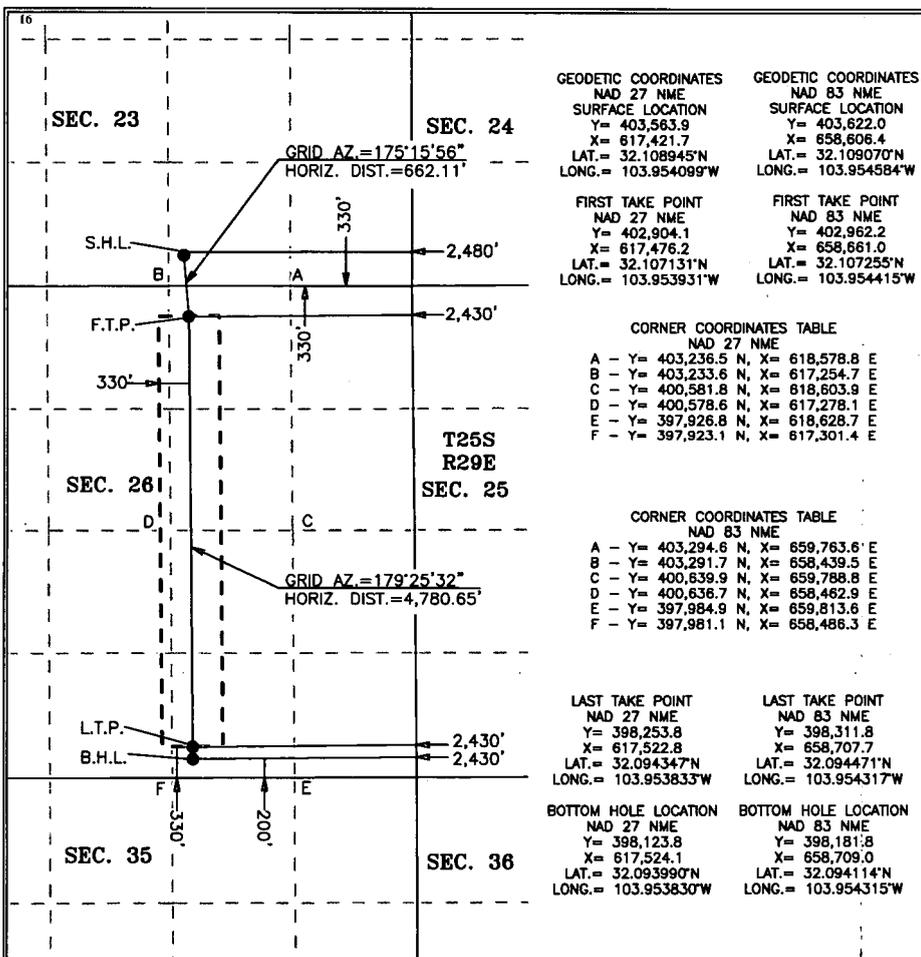
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	23	25 S	29 E		330	SOUTH	2,480	EAST	EDDY

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	26	25 S	29 E		200	SOUTH	2,430	EAST	EDDY

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

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



**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.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

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.

4-4-2019  
Date of Survey

Signature and Seal of Professional Surveyor: \_\_\_\_\_

**PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT**

MARK DILLON HARP 23786  
Certificate Number JC 2018020633



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #125H
Company:	XTO Energy	TVD Reference:	Ref GL @ 3080.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	Ref GL @ 3080.00usft
Site:	Chain-Blue Lightning 26 Fed	North Reference:	Grid
Well:	#125H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Project	Eddy County, NM (NAD-27)		
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	Chain-Blue Lightning 26 Fed		
Site Position:		Northing:	403,525.10 usft
From:	Map	Easting:	615,559.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.1088568
		Longitude:	-103.9601155
		Grid Convergence:	0.20 °

Well	#125H					
Well Position	+N-S	38.80 usft	Northing:	403,563.90 usft	Latitude:	32.1089456
	+E-W	1,862.70 usft	Easting:	617,421.70 usft	Longitude:	-103.9540993
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,080.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	04/30/19	6.92	59.87	47,640

Design	PERMIT			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	179.43

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,608.00	0.00	0.00	8,608.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,808.16	4.00	158.23	8,808.00	-6.49	2.59	2.00	2.00	0.00	158.23	
10,068.75	4.00	158.23	10,065.51	-88.22	35.23	0.00	0.00	0.00	0.00	
10,931.43	90.00	179.43	10,601.00	-659.80	54.50	10.00	9.97	2.46	21.24	CBL 26 FED #125H
15,581.96	90.00	179.43	10,601.00	-5,310.10	101.10	0.00	0.00	0.00	0.00	CBL 26 FED #125H
15,711.97	90.00	179.43	10,601.00	-5,440.10	102.40	0.00	0.00	0.00	0.00	CBL 26 FED #125H



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #125H
Company:	XTO Energy	TVD Reference:	Ref GL @ 3080.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	Ref GL @ 3080.00usft
Site:	Chain-Blue Lightning 26 Fed	North Reference:	Grid
Well:	#125H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
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
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #125H
Company:	XTO Energy	TVD Reference:	Ref GL @ 3080.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	Ref GL @ 3080.00usft
Site:	Chain-Blue Lightning 26 Fed	North Reference:	Grid
Well:	#125H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,608.00	0.00	0.00	8,608.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	1.84	158.23	8,699.98	-1.37	0.55	1.38	2.00	2.00	0.00
8,808.16	4.00	158.23	8,808.00	-6.49	2.59	6.52	2.00	2.00	0.00
8,900.00	4.00	158.23	8,899.61	-12.45	4.97	12.49	0.00	0.00	0.00
9,000.00	4.00	158.23	8,999.37	-18.93	7.56	19.00	0.00	0.00	0.00
9,100.00	4.00	158.23	9,099.13	-25.41	10.15	25.51	0.00	0.00	0.00
9,200.00	4.00	158.23	9,198.88	-31.90	12.74	32.02	0.00	0.00	0.00
9,300.00	4.00	158.23	9,298.64	-38.38	15.32	38.53	0.00	0.00	0.00
9,400.00	4.00	158.23	9,398.39	-44.86	17.91	45.04	0.00	0.00	0.00
9,500.00	4.00	158.23	9,498.15	-51.35	20.50	51.55	0.00	0.00	0.00
9,600.00	4.00	158.23	9,597.91	-57.83	23.09	58.06	0.00	0.00	0.00
9,700.00	4.00	158.23	9,697.66	-64.31	25.68	64.57	0.00	0.00	0.00
9,800.00	4.00	158.23	9,797.42	-70.80	28.27	71.08	0.00	0.00	0.00
9,900.00	4.00	158.23	9,897.17	-77.28	30.86	77.58	0.00	0.00	0.00
10,000.00	4.00	158.23	9,996.93	-83.76	33.45	84.09	0.00	0.00	0.00
10,068.75	4.00	158.23	10,065.51	-88.22	35.23	88.57	0.00	0.00	0.00
10,100.00	7.01	167.55	10,096.61	-91.10	36.04	91.45	10.00	9.61	29.81
10,150.00	11.94	172.56	10,145.92	-99.21	37.37	99.58	10.00	9.87	10.02
10,200.00	16.92	174.65	10,194.33	-111.59	38.72	111.97	10.00	9.95	4.19
10,250.00	21.90	175.82	10,241.47	-128.15	40.08	128.54	10.00	9.97	2.33
10,300.00	26.89	176.57	10,286.99	-148.75	41.43	149.16	10.00	9.98	1.50
10,350.00	31.89	177.10	10,330.54	-173.24	42.78	173.66	10.00	9.99	1.06



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #125H
Company:	XTO Energy	TVD Reference:	Ref GL @ 3080.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	Ref GL @ 3080.00usft
Site:	Chain-Blue Lightning 26 Fed	North Reference:	Grid
Well:	#125H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,400.00	36.88	177.49	10,371.79	-201.44	44.11	201.87	10.00	9.99	0.80
10,450.00	41.88	177.81	10,410.43	-233.13	45.40	233.57	10.00	9.99	0.63
10,500.00	46.87	178.07	10,446.15	-268.06	46.66	268.51	10.00	9.99	0.52
10,550.00	51.87	178.29	10,478.70	-305.98	47.86	306.44	10.00	9.99	0.44
10,600.00	56.87	178.48	10,507.82	-346.59	49.00	347.06	10.00	10.00	0.38
10,650.00	61.87	178.65	10,533.28	-389.59	50.08	390.06	10.00	10.00	0.34
10,700.00	66.87	178.81	10,554.91	-434.64	51.08	435.13	10.00	10.00	0.31
10,750.00	71.86	178.95	10,572.52	-481.41	51.99	481.90	10.00	10.00	0.29
10,800.00	76.86	179.09	10,586.00	-529.53	52.82	530.03	10.00	10.00	0.27
10,850.00	81.86	179.22	10,595.23	-578.65	53.54	579.16	10.00	10.00	0.26
10,900.00	86.86	179.35	10,600.14	-628.39	54.16	628.90	10.00	10.00	0.26
10,931.43	90.00	179.43	10,601.00	-659.80	54.50	660.31	10.00	10.00	0.25
11,000.00	90.00	179.43	10,601.00	-728.37	55.19	728.88	0.00	0.00	0.00
11,100.00	90.00	179.43	10,601.00	-828.37	56.19	828.88	0.00	0.00	0.00
11,200.00	90.00	179.43	10,601.00	-928.36	57.19	928.88	0.00	0.00	0.00
11,300.00	90.00	179.43	10,601.00	-1,028.36	58.19	1,028.88	0.00	0.00	0.00
11,400.00	90.00	179.43	10,601.00	-1,128.35	59.20	1,128.88	0.00	0.00	0.00
11,500.00	90.00	179.43	10,601.00	-1,228.35	60.20	1,228.88	0.00	0.00	0.00
11,600.00	90.00	179.43	10,601.00	-1,328.34	61.20	1,328.88	0.00	0.00	0.00
11,700.00	90.00	179.43	10,601.00	-1,428.34	62.20	1,428.88	0.00	0.00	0.00
11,800.00	90.00	179.43	10,601.00	-1,528.33	63.20	1,528.88	0.00	0.00	0.00
11,900.00	90.00	179.43	10,601.00	-1,628.33	64.20	1,628.88	0.00	0.00	0.00
12,000.00	90.00	179.43	10,601.00	-1,728.32	65.21	1,728.88	0.00	0.00	0.00
12,100.00	90.00	179.43	10,601.00	-1,828.32	66.21	1,828.88	0.00	0.00	0.00
12,200.00	90.00	179.43	10,601.00	-1,928.31	67.21	1,928.88	0.00	0.00	0.00
12,300.00	90.00	179.43	10,601.00	-2,028.31	68.21	2,028.88	0.00	0.00	0.00
12,400.00	90.00	179.43	10,601.00	-2,128.30	69.21	2,128.88	0.00	0.00	0.00
12,500.00	90.00	179.43	10,601.00	-2,228.30	70.22	2,228.88	0.00	0.00	0.00
12,600.00	90.00	179.43	10,601.00	-2,328.29	71.22	2,328.88	0.00	0.00	0.00
12,700.00	90.00	179.43	10,601.00	-2,428.29	72.22	2,428.88	0.00	0.00	0.00
12,800.00	90.00	179.43	10,601.00	-2,528.28	73.22	2,528.88	0.00	0.00	0.00
12,900.00	90.00	179.43	10,601.00	-2,628.28	74.22	2,628.88	0.00	0.00	0.00
13,000.00	90.00	179.43	10,601.00	-2,728.27	75.23	2,728.88	0.00	0.00	0.00
13,100.00	90.00	179.43	10,601.00	-2,828.27	76.23	2,828.88	0.00	0.00	0.00
13,200.00	90.00	179.43	10,601.00	-2,928.26	77.23	2,928.88	0.00	0.00	0.00
13,300.00	90.00	179.43	10,601.00	-3,028.26	78.23	3,028.88	0.00	0.00	0.00
13,400.00	90.00	179.43	10,601.00	-3,128.25	79.23	3,128.88	0.00	0.00	0.00
13,500.00	90.00	179.43	10,601.00	-3,228.25	80.24	3,228.88	0.00	0.00	0.00
13,600.00	90.00	179.43	10,601.00	-3,328.24	81.24	3,328.88	0.00	0.00	0.00
13,700.00	90.00	179.43	10,601.00	-3,428.24	82.24	3,428.88	0.00	0.00	0.00
13,800.00	90.00	179.43	10,601.00	-3,528.23	83.24	3,528.88	0.00	0.00	0.00
13,900.00	90.00	179.43	10,601.00	-3,628.23	84.24	3,628.88	0.00	0.00	0.00
14,000.00	90.00	179.43	10,601.00	-3,728.22	85.25	3,728.88	0.00	0.00	0.00
14,100.00	90.00	179.43	10,601.00	-3,828.22	86.25	3,828.88	0.00	0.00	0.00
14,200.00	90.00	179.43	10,601.00	-3,928.21	87.25	3,928.88	0.00	0.00	0.00
14,300.00	90.00	179.43	10,601.00	-4,028.21	88.25	4,028.88	0.00	0.00	0.00
14,400.00	90.00	179.43	10,601.00	-4,128.20	89.25	4,128.88	0.00	0.00	0.00
14,500.00	90.00	179.43	10,601.00	-4,228.20	90.26	4,228.88	0.00	0.00	0.00
14,600.00	90.00	179.43	10,601.00	-4,328.19	91.26	4,328.88	0.00	0.00	0.00
14,700.00	90.00	179.43	10,601.00	-4,428.19	92.26	4,428.88	0.00	0.00	0.00
14,800.00	90.00	179.43	10,601.00	-4,528.18	93.26	4,528.88	0.00	0.00	0.00
14,900.00	90.00	179.43	10,601.00	-4,628.18	94.26	4,628.88	0.00	0.00	0.00
15,000.00	90.00	179.43	10,601.00	-4,728.17	95.27	4,728.88	0.00	0.00	0.00
15,100.00	90.00	179.43	10,601.00	-4,828.17	96.27	4,828.88	0.00	0.00	0.00



Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #125H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 3080.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3080.00usft
<b>Site:</b>	Chain-Blue Lightning 26 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#125H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,200.00	90.00	179.43	10,601.00	-4,928.16	97.27	4,928.88	0.00	0.00	0.00	
15,300.00	90.00	179.43	10,601.00	-5,028.16	98.27	5,028.88	0.00	0.00	0.00	
15,400.00	90.00	179.43	10,601.00	-5,128.15	99.27	5,128.88	0.00	0.00	0.00	
15,500.00	90.00	179.43	10,601.00	-5,228.15	100.28	5,228.88	0.00	0.00	0.00	
15,581.96	90.00	179.43	10,601.00	-5,310.10	101.10	5,310.84	0.00	0.00	0.00	
15,600.00	90.00	179.43	10,601.00	-5,328.14	101.28	5,328.88	0.00	0.00	0.00	
15,700.00	90.00	179.43	10,601.00	-5,428.14	102.28	5,428.88	0.00	0.00	0.00	
15,711.97	90.00	179.43	10,601.00	-5,440.10	102.40	5,440.85	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
CBL 26 FED #125H: c - hit/miss target - plan hits target center - Shape - Point	0.00	0.00	0.00	0.00	0.00	403,563.90	617,421.70	32.1089456	-103.9540993	
CBL 26 FED #125H: l - plan hits target center - Point	0.00	0.00	10,601.00	-5,310.10	101.10	398,253.80	617,522.80	32.0943472	-103.9538331	
CBL 26 FED #125H: f - plan hits target center - Point	0.00	0.00	10,601.00	-5,440.10	102.40	398,123.80	617,524.10	32.0939898	-103.9538304	
CBL 26 FED #125H: f - plan hits target center - Point	0.00	0.00	10,601.00	-659.80	54.50	402,904.10	617,476.20	32.1071313	-103.9539308	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
721.00	721.00	SLDO				
3,003.00	3,003.00	SALT_B				
3,238.00	3,238.00	DLWR				
4,105.00	4,105.00	CRCN				
5,721.00	5,721.00	BYCN				
6,999.00	6,999.00	BSPG				
7,942.00	7,942.00	BSPG1				
8,249.00	8,249.00	BSPG2_LM				
8,804.15	8,804.00	BSPG2				
9,058.77	9,058.00	BSPG3_LM				
9,874.77	9,872.00	BSPG3				
10,222.80	10,216.00	WFMP				
10,257.06	10,248.00	WFMPX				
10,330.72	10,314.00	WFMPY				
10,384.17	10,359.00	WFMPA				
10,931.43	10,601.00	LP				



Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #125H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 3080.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3080.00usft
<b>Site:</b>	Chain-Blue Lightning 26 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#125H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Original  
to Appropriate  
District Office

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

**GAS CAPTURE PLAN**

Date: 04/26/2019

Original Operator & OGRID No.: XTO Energy, Inc [005380]  
 Amended - Reason for Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

**Well(s)/Production Facility – Name of facility: Chain-Blue CTBS**

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Chain-Blue Lightning 26 Fed 108H		P-23-25S-29E	331'FSL & 273'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 703H		N-23-25S-29E	296'FSL & 2025'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 162H		M-23-25S-29E	366'FSL & 955'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 161H		M-23-25S-29E	366'FSL & 705'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 121H		M-23-25S-29E	331'FSL & 705'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 122H		M-23-25S-29E	331'FSL & 955'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 701H		M-23-25S-29E	296'FSL & 705'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 102H		M-23-25S-29E	296'FSL & 955'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 164H		N-23-25S-29E	366'FSL & 2275'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 163H		N-23-25S-29E	366'FSL & 2025'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 103H		N-23-25S-29E	331'FSL & 2025'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 104H		N-23-25S-29E	331'FSL & 2275'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 124H		N-23-25S-29E	296'FSL & 2275'FWL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Federal 166H		O-23-25S-29E	365'FSL & 2230'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 165H		O-23-25-S29E	365'FSL & 2480'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 125H		O-23-25S-29E	330'FSL & 2480'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 126H		O-23-25S-29E	330'FSL & 2230'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 105H		O-23-25S-29E	295'FSL & 2480'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 705H		O-23-25S-29E	295'FSL & 2230'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 168H		P-23-25S-29E	366'FSL & 273'FEL	2500MCF/D	Flared/Sold	

Chain-Blue Lightning 26 Fed 167H		P-23-25S-29E	365'FSL & 523'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 107H		P-23-25S-29E	330'FSL & 523'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 127H		P-23-25S-29E	295'FSL & 523'FEL	2500MCF/D	Flared/Sold	
Chain-Blue Lightning 26 Fed 708H		P-23-25S-29E	296'FSL & 273'FEL	2500MCF/D	Flared/Sold	

### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enlink and will be connected to Enlink low/high pressure gathering system located in Loving County, Texas. It will require 0' of pipeline to connect the facility to low/high pressure gathering system. XTO Energy, Inc. provides (periodically) to Enlink a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO Energy, Inc. and Enlink have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enlink Processing Plant located in Block 27, Section 4, Loving County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### **Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Enlink system at that time. Based on current information, it is XTO Energy, Inc.'s belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



APD ID: 10400042184

Submission Date: 06/21/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED

Well Number: 125H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Chain\_26\_Fed\_125H\_Road\_20190527085855.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? YES

**ROW ID(s)**

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Chain\_26\_Fed\_Road\_20190525074131.pdf

New road type: RESOURCE

Length: 5470.98 Feet

Width (ft.): 30

Max slope (%): 2

Max grade (%): 3

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along with access road route.

New road access plan or profile prepared? NO

New road access plan attachment:

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Access road engineering design?** NO

**Access road engineering design attachment:**

**Turnout?** N

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Surface material will be native caliche

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil that was stripped will be spread along the edge of the road and within the ditch. The topsoil will be seeded with the proper seed mix designated by the BLM.

**Access other construction information:** Construction, reclamation, and/or routine maintenance will not be conducted during periods when the soil conditions for construction could lead to impacts to the surrounding environment, or when watershed damage is likely to occur as a result of these activities.

**Access miscellaneous information:** The Chain-Blue Lightning 26 Federal development area is accessed from the intersection of Pecos Highway (285) and Longhorn Road. Go Northeast on Longhorn Road approximately 4.2 miles. Turn left (Northeast) onto Pipeline Road Number 1 and go approximately 1.8 miles. Turn left (North) onto the lease road and go approximately 2.2 miles. Turn right (East) at the fork in the road and go approximately 1 mile. Transportation Plan identifying existing roads that will be used to access the project area is included from FSC, Inc. marked as, 'Topographical and Access Road Map.' There are existing access roads to the proposed Chain-Blue Lightning 26 Federal well locations. All equipment and vehicles will be confined to the routes shown on the Topographical and Access Road Map as provided by FSC, Inc. Maintenance of the access roads will continue until abandonment and reclamation of the well pads is completed.

**Number of access turnouts:** 0

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** OTHER

**Drainage Control comments:** The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

**Road Drainage Control Structures (DCS) description:** No drainage control structures were identified at onsite. Drainage control structures will be applied for as-needed and be in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

Chain\_26\_Fed\_1\_Mile\_20190525074210.pdf

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

## Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** Production Facilities. Two CTB pads were staked with the BLM for construction and use as Central Tank Batteries (CTB). The Northern most facility is the Shanghai 26 Fed CTB [600'x600'] and is located in Section 26-T25S-R30E NMPM, Eddy County, New Mexico. The Southernmost facility is the Shanghai 24 Fed CTB [600'x550'] and is located in Section 23-T25S-R30E NMPM, Eddy County, New Mexico. Plats of the proposed facilities are attached. Only the area necessary to maintain facilities will be disturbed. Due to air permitting timeframes and anticipated reserves, two facilities are anticipated to be necessary for full area development. A 3160-5 sundry notification will be submitted after construction with a site-security diagram and layout of the facility with associated equipment. Flowlines. In the event the wells are found productive, 24-8" composite flexpipe or steel flowlines with a maximum safety pressure rating of 1400psi (operating pressure: 750 psi) will be buried within proposed lease road corridors from the proposed wells to the Shanghai 26 Fed CTB & the Shanghai 24 Fed CTB where the oil, gas, and water will be metered and separated. If XTO Energy, Inc. decides to run surface lines, 24-4" or less flexpipe or steel flowlines with a max. safety psi rating of 750 (op. psi: 125psi) will be laid within proposed lease road corridors from the proposed wells to the proposed CTBs. An additional 24-10" or less high pressure gas lines will be buried within the proposed lease road corridor with the flowlines for gas lift, fuel gas, and water. The distance of proposed flowlines per well will be approximately 5,641.54' or less per well based on the location of the well pad in conjunction with the facility location. All flowlines will follow proposed lease road corridors. Gas & Oil Pipeline. A gas purchaser has been identified and will be building separately to the Shanghai CTBs in this application. Disposal Facilities. Produced water will be piped from location to a disposal facility as needed. Once wells are drilled and completed, a 3160-5 sundry notification will be submitted to BLM in compliance with Onshore Order 7. Flare. There will be 2 flares associated with the Chain-Blue Lightning 26 Federal project. The flare stacks will be 50'x50' and located on the production facility locations with no additional surface disturbance. Aboveground Structures. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted earth-tone colors such as 'shale green' that reduce the visual impacts of the built environment. Containment Berms. Containment berms will be constructed completely around any production facilities designed to hold fluids. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas. Electrical. All lines will be primary 12,740 volt to properly run expected production equipment. 14,944.88' of electrical will be run from the anticipated tie-in point with a request for 30' ROW construction and maintenance buffer. This distance is a max. approximation and may vary based on lease road corridors, varying elevations and terrain in the area. A plat of the proposed electrical is attached.

### **Production Facilities map:**

Chain\_26\_Fed\_FL\_20190525074235.pdf

Chain\_26\_Fed\_CTBN\_20190525074220.pdf

Chain\_26\_Fed\_OHE\_20190525074244.pdf

Chain\_26\_Fed\_CTBS1\_20190916074551.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Water source type:** OTHER

**Describe type:** Fresh Water; Section 27-25S-30E

**Water source use type:** SURFACE CASING  
STIMULATION  
INTERMEDIATE/PRODUCTION  
CASING

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT

**Water source transport method:** TRUCKING

**Source land ownership:** FEDERAL

**Source transportation land ownership:** FEDERAL

**Water source volume (barrels):** 335000

**Source volume (acre-feet):** 43.179188

**Source volume (gal):** 14070000

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**Water source type:** OTHER

**Describe type:** Fresh Water; Section 26-25S-29E

**Water source use type:** SURFACE CASING  
STIMULATION  
INTERMEDIATE/PRODUCTION  
CASING

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT

**Water source transport method:** TRUCKING

**Source land ownership:** FEDERAL

**Source transportation land ownership:** FEDERAL

**Water source volume (barrels):** 335000

**Source volume (acre-feet):** 43.179188

**Source volume (gal):** 14070000

---

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Water source and transportation map:**

Chain\_26\_Fed\_125H\_Wtr\_20190527085911.pdf

**Water source comments:** The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck using the existing and proposed roads depicted in the attached exhibits. No water well will be drilled on the location. Water for drilling, completion and dust control will be purchased from the following company: SB Oilfield Services 213 S. Mesa Carlsbad, NM 88220 Anticipated water usage for drilling includes an estimated 30,000 barrels of water to drill a horizontal well in a combination of fresh water and brine as detailed in the mud program in the drilling plans. These volumes are calculated for ~1.5bbls per foot of hole drilled with 40% excess to accommodate any lost circulation or wash out that may occur. Actual water volumes used during operations will depend on the depth of the well, length of horizontal sections, and the losses that may occur during the operation. Well completion is expected to require approximately 50,000 barrels of fresh water per horizontal well. Actual water volumes used during operations will depend on the depth of the well and length of horizontal sections. After production is established, XTO may complete wells with approximately 50,000 barrels of produced water. If this decision is made, the BLM will be notified appropriately, proper permitting will ensue with the New Mexico Oil Conservation division and this surface use plan will be amended as needed.

**New water well?** NO

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

**Section 6 - Construction Materials**

**Using any construction materials:** YES

**Construction Materials description:** Construction, reclamation, and/or routine maintenance will not be conducted during periods when the soil conditions for construction could lead to impacts to the surrounding environment, or when watershed damage is likely to occur as a result of these activities. Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. No construction materials will be removed from federal lands without prior approval from the appropriate surface management agency. All roads and well pads will be constructed of 6" rolled and compacted caliche. Anticipated Caliche Locations: a. Pit 1: Federal

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

Caliche Pit, Section 17-T25S-R30E b. Pit 2: Federal Caliche Pit, Section 34-T25S-R29E

**Construction Materials source location attachment:**

**Section 7 - Methods for Handling Waste**

**Waste type:** DRILLING

**Waste content description:** Fluid

**Amount of waste:** 500 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** Steel mud pits

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY     **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** R360 Environmental Solutions 4507 W Carlsbad Hwy, Hobbs, NM 88240 (575) 393-1079

**Waste type:** DRILLING

**Waste content description:** Cuttings

**Amount of waste:** 2100 pounds

**Waste disposal frequency :** One Time Only

**Safe containment description:** The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes.

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY     **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** R360 Environmental Solutions 4507 W Carlsbad Hwy, Hobbs, NM 88240 (575) 393-1079

**Waste type:** SEWAGE

**Waste content description:** Human Waste

**Amount of waste:** 250 gallons

**Waste disposal frequency :** Weekly

**Safe containment description:** Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to the disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY     **Disposal location ownership:** COMMERCIAL

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Disposal type description:**

**Disposal location description:** A licensed 3rd party contractor will be used to haul and dispose of human waste.

**Waste type:** GARBAGE

**Waste content description:** Garbage, junk and non-flammable waste materials

**Amount of waste:** 250 pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approve sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY      **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** A licensed 3rd party vendor will be contracted to haul and safely dispose of garbage, junk and non-flammable waste materials.

**Reserve Pit**

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)**                      **Reserve pit width (ft.)**

**Reserve pit depth (ft.)**    **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

**Cuttings Area**

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** YES

**Description of cuttings location** Cuttings. The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site. Drilling Fluids. These will be contained in steel mud pits and then taken to a NMOCD approved commercial disposal facility. Produced Fluids. Water produced from the well during completion will be held temporarily in steel tanks and then taken to a NMOCD approved commercial disposal facility. Oil produced during operations will be stored in tanks until sold.

**Cuttings area length (ft.)**    **Cuttings area width (ft.)**

**Cuttings area depth (ft.)**    **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

### Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Chain\_26\_Fed\_125H\_Well\_20190527085934.pdf

**Comments:**

### Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** CHAIN BLUE

**Multiple Well Pad Number:** 3

**Recontouring attachment:**

Chain\_26\_Fed\_IR\_Pad1\_20190526083850.pdf

Chain\_26\_Fed\_IR\_Pad3\_20190526083904.pdf

Chain\_26\_Fed\_IR\_Pad4\_20190526083911.pdf

Chain\_26\_Fed\_IR\_Pad2\_20190526083857.pdf

**Drainage/Erosion control construction:** All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4-6 inches.

**Drainage/Erosion control reclamation:** Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gullying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.

**Well pad proposed disturbance (acres):** 22.96

**Well pad interim reclamation (acres):** 7.68

**Well pad long term disturbance (acres):** 15.28

**Road proposed disturbance (acres):** 3.77

**Road interim reclamation (acres):** 0

**Road long term disturbance (acres):** 3.77

**Powerline proposed disturbance (acres):** 10.29

**Powerline interim reclamation (acres):** 0

**Powerline long term disturbance (acres):** 10.29

**Pipeline proposed disturbance (acres):** 0

**Pipeline interim reclamation (acres):** 0

**Pipeline long term disturbance (acres):** 0

**Other proposed disturbance (acres):** 20.41

**Other interim reclamation (acres):** 0

**Other long term disturbance (acres):** 20.41

**Total interim reclamation:** 7.68

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Total proposed disturbance:** 57.43

**Total long term disturbance:** 49.75

**Disturbance Comments:**

**Reconstruction method:** The original stock piled topsoil will be spread over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors as close as possible to the original topography. The location will then be ripped and seeded.

**Topsoil redistribution:** The original stock piled topsoil will be spread over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors as close as possible to the original topography. The location will then be ripped and seeded.

**Soil treatment:** A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community will be established on the site with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.

**Existing Vegetation at the well pad:** Environmental Setting. Soil area is a combination of Pajarito-Dune land complex, loamy sand with 0-3% slopes, and Potter-Simona complex, shallow sandy soil with 5 to 25% slopes. These soils support grassland dominated by black grama throughout with dropseeds and bluestems more prevalent in the loamier areas. The areas with shallower soil have fewer shrubs and more litter cover with shrubs such as sand sage, shinnery oak and mesquite appearing as the soil presents more loam. Other vegetation such as creosote, mesquite, catclaw, snakeweed, and soapweed yucca grow within the area.

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** Environmental Setting. Soil area is a combination of Pajarito-Dune land complex, loamy sand with 0-3% slopes, and Potter-Simona complex, shallow sandy soil with 5 to 25% slopes. These soils support grassland dominated by black grama throughout with dropseeds and bluestems more prevalent in the loamier areas. The areas with shallower soil have fewer shrubs and more litter cover with shrubs such as sand sage, shinnery oak and mesquite appearing as the soil presents more loam. Other vegetation such as creosote, mesquite, catclaw, snakeweed, and soapweed yucca grow within the area.

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** Environmental Setting. Soil area is a combination of Pajarito-Dune land complex, loamy sand with 0-3% slopes, and Potter-Simona complex, shallow sandy soil with 5 to 25% slopes. These soils support grassland dominated by black grama throughout with dropseeds and bluestems more prevalent in the loamier areas. The areas with shallower soil have fewer shrubs and more litter cover with shrubs such as sand sage, shinnery oak and mesquite appearing as the soil presents more loam. Other vegetation such as creosote, mesquite, catclaw, snakeweed, and soapweed yucca grow within the area.

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** Environmental Setting. Soil area is a combination of Pajarito-Dune land complex, loamy sand with 0-3% slopes, and Potter-Simona complex, shallow sandy soil with 5 to 25% slopes. These soils support grassland dominated by black grama throughout with dropseeds and bluestems more prevalent in the loamier areas. The areas with shallower soil have fewer shrubs and more litter cover with shrubs such as sand sage, shinnery oak and mesquite appearing as the soil presents more loam. Other vegetation such as creosote, mesquite, catclaw, snakeweed, and soapweed yucca grow within the area.

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

**Seed Management**

**Seed Table**

**Seed Summary**

**Total pounds/Acre:**

Seed Type	Pounds/Acre
-----------	-------------

**Seed reclamation attachment:**

**Operator Contact/Responsible Official Contact Info**

**First Name:**

**Last Name:**

**Phone:** (432)620-4349

**Email:** jeffrey\_raines@xtoenergy.com

**Seedbed prep:** Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4-6 inches. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.

**Seed BMP:** If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4-6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

**Seed method:** Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used. If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** Weed control for all phases will be through the use of approved pesticides and herbicides according to applicable State, Federal and local laws.

**Weed treatment plan attachment:**

**Monitoring plan description:** Monitoring of invasive and noxious weeds will be visual and as-needed. If it is determined additional methods are required to monitor invasive and noxious weeds, appropriate BLM authorities will be contacted with a plan of action for approval prior to implementation.

**Monitoring plan attachment:**

**Success standards:** 100% compliance with applicable regulations.

**Pit closure description:** There will be no reserve pit as each well will be drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17.

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**Pit closure attachment:**

**Section 11 - Surface Ownership**

**Disturbance type:** OTHER

**Describe:** Flowline

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** OTHER

**Describe:** Electric

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** OTHER

**Describe:** Central Tank Battery

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

### Section 12 - Other Information

**Right of Way needed?** YES

**Use APD as ROW?** YES

**ROW Type(s):** 281001 ROW - ROADS,288100 ROW – O&G Pipeline,288101 ROW – O&G Facility Sites,288103 ROW – Salt Water Disposal Pipeline/Facility,288104 ROW – Salt Water Disposal ApIn/Fac-FLPMA,289001 ROW- O&G Well Pad,FLPMA (Powerline)

**Operator Name:** XTO ENERGY INCORPORATED

**Well Name:** CHAIN-BLUE LIGHTNING 26 FED

**Well Number:** 125H

**ROW Applications**

**SUPO Additional Information:**

**Use a previously conducted onsite?** NO

**Previous Onsite information:**

**Other SUPO Attachment**

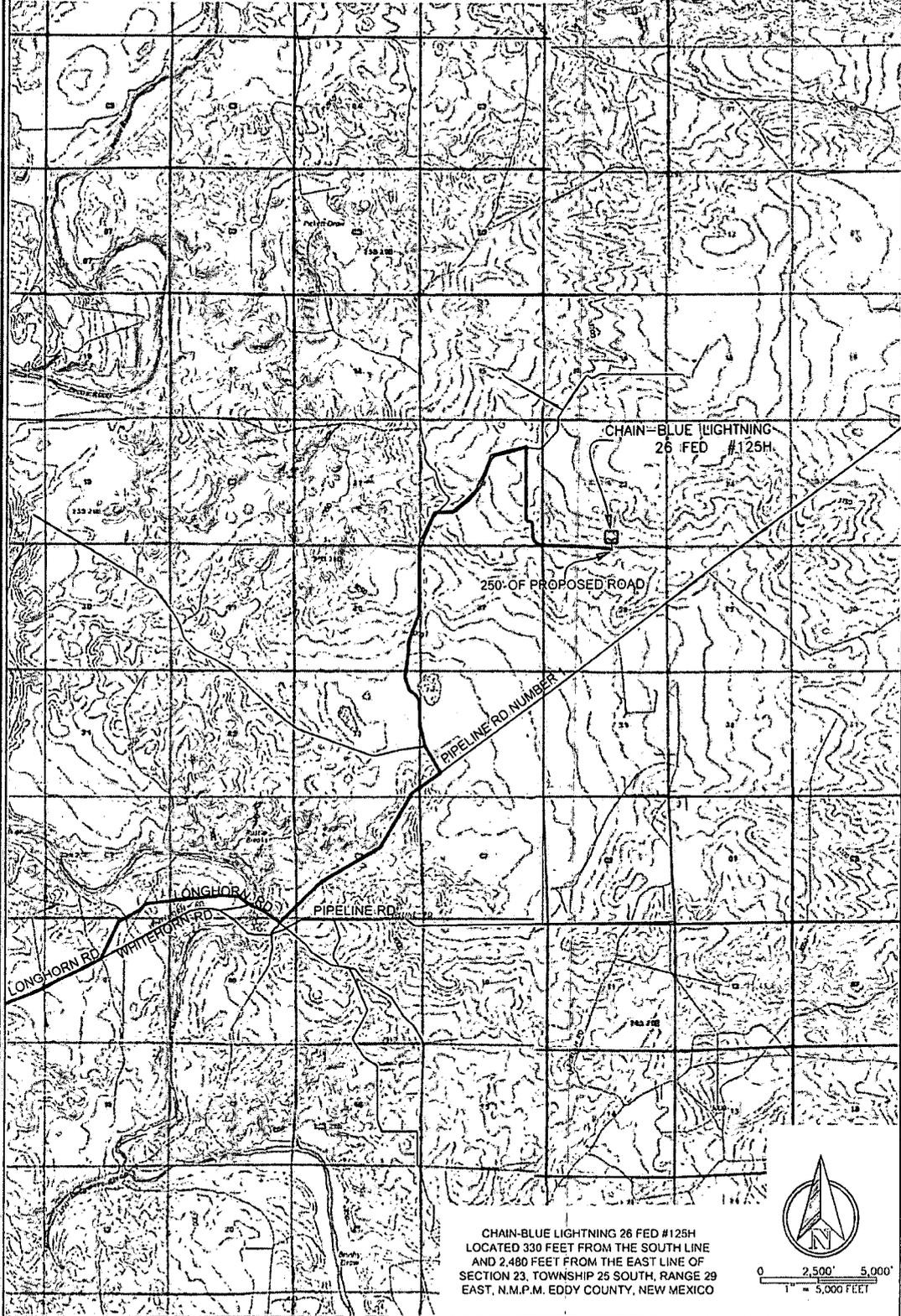
Chain\_26\_Fed\_List\_20190525074827.pdf

Chain\_26\_Fed\_SUPO1\_20190916074604.pdf

# TOPOGRAPHICAL AND ACCESS ROAD MAP

**DIRECTIONS TO THIS LOCATION:**

FROM THE INTERSECTION OF PECOS HIGHWAY (285) AND LONGHORN RD. GO NORTHEAST ON LONGHORN RD APPROX. 4.2 MILES. TURN LEFT (NORTHEAST) ONTO PIPELINE RD NUMBER 1 AND GO APPROX. 1.8 MILES. TURN LEFT (NORTH) ONTO THE LEASE RD AND GO APPROX. 2.2 MILES. TURN RIGHT (EAST) AT FORK IN THE ROAD AND GO APPROX. 1 MILE. TURN RIGHT (SOUTH) ON TO LEASE ROAD AND GO APPROX. 1.2 MILES ARRIVING AT THE PROPOSED ROAD AND LOCATION WILL BE TO THE NORTH.



CHAIN-BLUE LIGHTNING 26 FED #125H  
 LOCATED 330 FEET FROM THE SOUTH LINE  
 AND 2,480 FEET FROM THE EAST LINE OF  
 SECTION 23, TOWNSHIP 25 SOUTH, RANGE 29  
 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

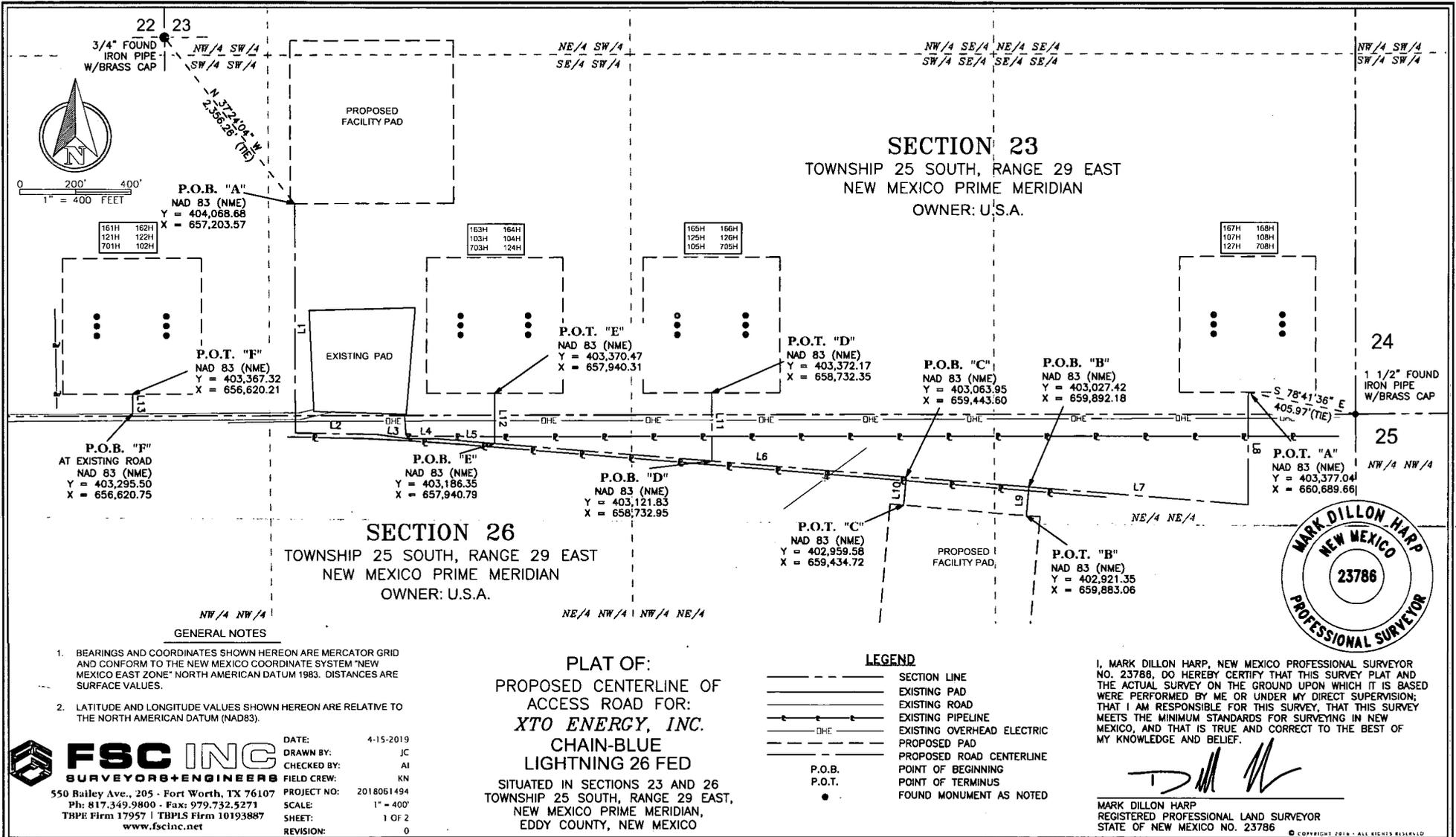


0 2,500' 5,000'  
 1" = 5,000 FEET



550 Bailey Ave., 205 - Fort Worth, TX 76107  
 Ph: 817.349.9800 - Fax: 979.732.5271  
 TDEE Firm 17957 | TDEE Firm 10193887  
 www.fscinc.net

DATE:	04-10-2019	PROJECT NO:	2018020633
DRAWN BY:	AI	SCALE:	1" = 5,000'
CHECKED BY:	DH	SHEET:	1 OF 1
FIELD CREW:	RE/RR	REVISION:	0



**SECTION 23**  
 TOWNSHIP 25 SOUTH, RANGE 29 EAST  
 NEW MEXICO PRIME MERIDIAN  
 OWNER: U.S.A.

**SECTION 26**  
 TOWNSHIP 25 SOUTH, RANGE 29 EAST  
 NEW MEXICO PRIME MERIDIAN  
 OWNER: U.S.A.

**PLAT OF:**  
 PROPOSED CENTERLINE OF  
 ACCESS ROAD FOR:  
**XTO ENERGY, INC.**  
**CHAIN-BLUE**  
**LIGHTNING 26 FED**  
 SITUATED IN SECTIONS 23 AND 26  
 TOWNSHIP 25 SOUTH, RANGE 29 EAST,  
 NEW MEXICO PRIME MERIDIAN,  
 EDDY COUNTY, NEW MEXICO

- LEGEND**
- SECTION LINE
  - EXISTING PAD
  - EXISTING ROAD
  - EXISTING PIPELINE
  - DHE EXISTING OVERHEAD ELECTRIC
  - PROPOSED PAD
  - PROPOSED ROAD CENTERLINE
  - P.O.B. POINT OF BEGINNING
  - P.O.T. POINT OF TERMINUS
  - FOUND MONUMENT AS NOTED

- GENERAL NOTES**
- BEARINGS AND COORDINATES SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.
  - LATITUDE AND LONGITUDE VALUES SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN DATUM (NAD83).

**FSC INC**  
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 THPE Firm 17957 | TBPLS Firm 10193887  
 www.fscinc.net

DATE: 4-15-2019  
 DRAWN BY: JC  
 CHECKED BY: AI  
 FIELD CREW: KN  
 PROJECT NO: 2018061494  
 SCALE: 1" = 400'  
 SHEET: 1 OF 2  
 REVISION: 0



I, MARK DILLON HARP, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23786, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*[Signature]*  
 MARK DILLON HARP  
 REGISTERED PROFESSIONAL LAND SURVEYOR  
 STATE OF NEW MEXICO NO. 23786