Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM120895

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☑ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
CHAIN-BLUE LIGHTNING 26 FED
127H 327052

2. Name of Operator
XTO ENERGY INCORPORATED

9. API Well No.
30-015-46645

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
2277 Springwoods Village Parkway Spring TX 77389	(432)620-6700	PIERCE CROSSING BONE SPRING, EA

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SESE / 295 FSL / 523 FEL / LAT 32.108967 / LONG -103.948263
At proposed prod. zone SESE / 200 FSL / 750 FEL / LAT 32.094111 / LONG -103.94889

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 23 / T25S / R29E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
	EDDY	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
295 feet	1280	320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
35 feet	10631 feet / 15748 feet	FED: UTB000138

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3086 feet	09/01/2019	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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Stephanie Rabadue / Ph: (432)620-6714	06/25/2019

Title
Regulatory Coordinator

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	10/11/2019

Title	Office
Assistant Field Manager Lands & Minerals	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

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 10/11/2019

RWP 1-27-2020

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 I: 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 wen, 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 directionany 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 wen 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 win 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 conects this information to anow 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

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Additional Operator Remarks

Location of Well

1. SHL: SESE / 295 FSL / 523 FEL / TWSP: 25S / RANGE: 29E / SECTION: 23 / LAT: 32.108967 / LONG: -103.948263 (TVD: 0 feet, MD: 0 feet)
   PPP: NENE / 330 FNL / 750 FEL / TWSP: 25S / RANGE: 29E / SECTION: 26 / LAT: 32.107249 / LONG: -103.948989 (TVD: 10631 feet, MD: 11000 feet)
   BHL: SESE / 200 FSL / 750 FEL / TWSP: 25S / RANGE: 29E / SECTION: 26 / LAT: 32.094111 / LONG: -103.94889 (TVD: 10631 feet, MD: 15748 feet)

BLM Point of Contact

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: 5752345934

Email: pperez@blm.gov

Approval Date: 10/11/2019

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.

PECOS DISTRICT DRILLING
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Energy, Inc.**
LEASE NO.:	**NMNM-100554**
WELL NAME & NO.:	**Chain-Blue Lightning 26 Fed 127H**
SURFACE HOLE FOOTAGE:	**0295' FSL & 0523' FEL**
BOTTOM HOLE FOOTAGE	**0200' FSL & 0750' FEL Sec. 26, T. 25 S., R 29 E.**
LOCATION:	**Section 23, T. 25 S., R 29 E., NMPM**
COUNTY:	**County, New Mexico**

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 **697** 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 100719

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO ENERGY INCORPORATED
WELL NAME & NO.:	CHAIN-BLUE LIGHTNING 26 FED 127H
SURFACE HOLE FOOTAGE:	295'/S & 523'/W
BOTTOM HOLE FOOTAGE	200'/S & 750'/W
LOCATION:	Section 23, T.25 S., R29 E., NMP
COUNTY:	Eddy County, New Mexico

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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**
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- 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**

Approval Date: 10/11/2019

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.

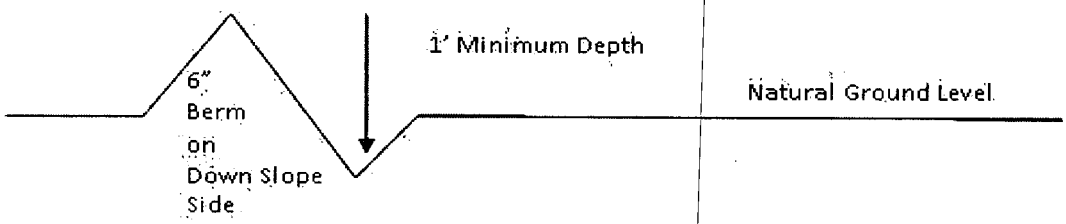
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, 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 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ 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

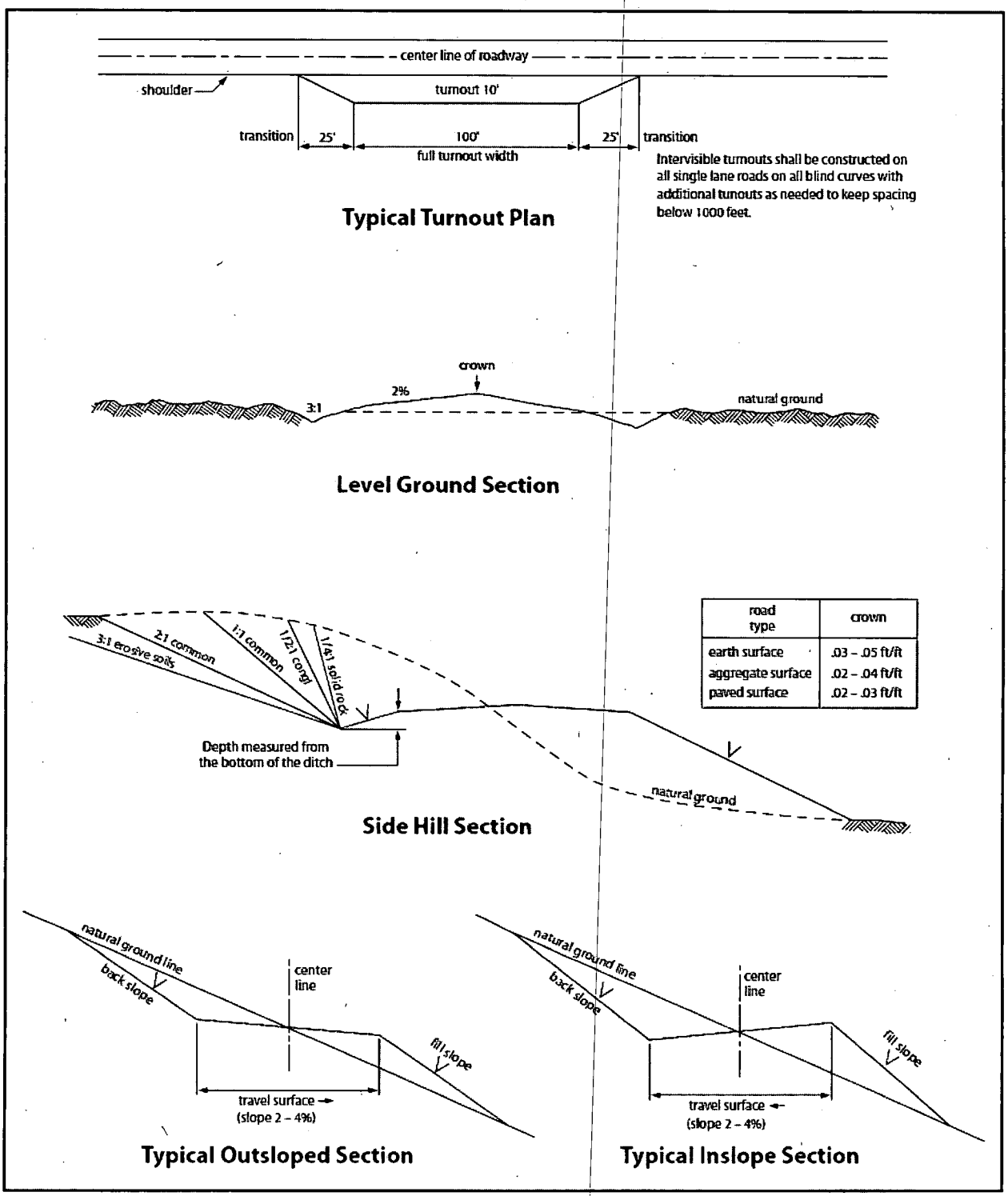


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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 of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then 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.

( ) seed mixture 1 ( ) seed mixture 3

(X) seed mixture 2 ( ) seed mixture 4

( ) seed mixture 2/LPC ( ) 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 deterrence 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 fencé 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:

Species	lb/acre
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

AFMSS

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

Signed on: 05/25/2019

Title: Regulatory Coordinator

Street Address:

City: **State:** **Zip:**

Phone: (432)620-6714

Email address: stephanie_rabadue@xtoenergy.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS

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

Application Data Report

12/31/2019

APD ID: 10400042186
Submission Date: 06/25/2019
Operator Name: XTO ENERGY INCORPORATED
Well Name: CHAIN-BLUE LIGHTNING 26 FED
Well Number: 127H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400042186
Tie to previous NOS?
Submission Date: 06/25/2019
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: 127H
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: PIERCE CROSSING BONE SPRING, EAST
Pool Name:

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED **Well Number:** 127H

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 BLUE **Number:** 4

Well Class: HORIZONTAL **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:** 295 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Chain_26_Fed_127H_C102_20190527091640.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	295	FSL	523	FEL	25S	29E	23	Aliquot SESE	32.108967	-103.948263	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 120895	3086	0	0	
KOP Leg #1	295	FSL	523	FEL	25S	29E	23	Aliquot SESE	32.108967	-103.948263	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 120895	-4714	7800	7800	
PPP Leg #1-1	330	FNL	750	FEL	25S	29E	26	Aliquot NENE	32.107249	-103.948989	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 100554	-7545	11000	10631	

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED **Well Number:** 127H

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	750	FEL	25S	29E	26	Aliquot SESE	32.094468	-103.948892	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 100554	-7545	15700	10631	
BHL Leg #1	200	FSL	750	FEL	25S	29E	26	Aliquot SESE	32.094111	-103.94889	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 100554	-7545	15748	10631	

APD ID: 10400042186 **Submission Date:** 06/25/2019

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED **Well Number:** 127H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
464875	PERMIAN	3086	0	0	OTHER : Quaternary	NONE	Y
464866	RUSTLER	2523	556	556	SILTSTONE	USEABLE WATER	N
464867	TOP SALT	2361	718	718	SALT	NONE	N
464868	BASE OF SALT	113	2966	2966	SALT	NONE	N
464864	DELAWARE	-104	3183	3183	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
464865	BONE SPRING	-3851	6930	6930	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
464863	BONE SPRING 1ST	-4794	7873	7873	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
464862	BONE SPRING 2ND	-5101	8180	8180	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	Y
464878	BONE SPRING 3RD	-5913	8992	8992	SANDSTONE	NATURAL GAS, OIL, OTHER, USEABLE WATER : Produced Water	N
464879	WOLFCAMP	-7072	10151	10151	LIMESTONE, SANDSTONE	NATURAL GAS, OIL, OTHER, USEABLE WATER : produced water	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 10631

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 nippling up on the 13-5/8" 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nippling 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:** 127H

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	697	0	697			697	J-55	54.5	ST&C	3.54	1.18	DRY	13.53	DRY	13.53
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	15748	0	10631			15748	P-110	17	BUTT	1.35	1.12	DRY	2.6	DRY	2.6

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Chain_26_Fed_127H_Csg_20190527091442.pdf

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED **Well Number:** 127H

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Chain_26_Fed_127H_Csg_20190527091449.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Chain_26_Fed_127H_Csg_20190527091457.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	15748	330	2.69	10.5	887.7	30	NeoCem	None

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED **Well Number:** 127H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail				2330	1.61	13.2	3751.3	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	10631	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:** 127H

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: 5583 **Anticipated Surface Pressure:** 3244.18

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 geoharzards 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

Hydrogen sulfide drilling operations plan:

Chain_26_Fed_H2S_Plan_20190525080701.pdf
Chain_26_Fed_H2S_Dia_Pad_4W_20190916075939.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Chain_26_Fed_127H_DD_20190527091616.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

HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, 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_2S 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_2S, 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_2). 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_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = l	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = l	2 ppm	N/A	1000 ppm

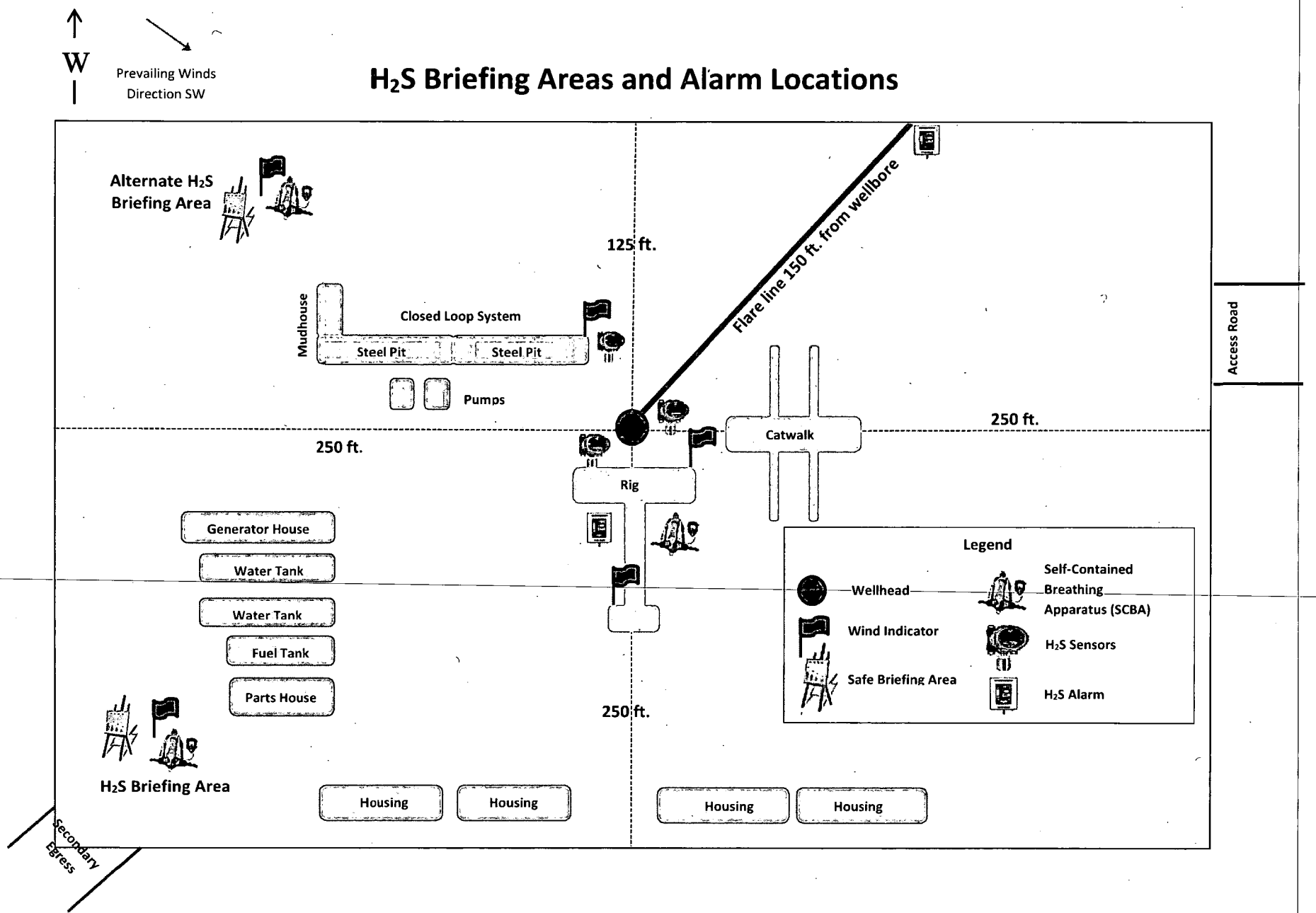
Contacting Authorities

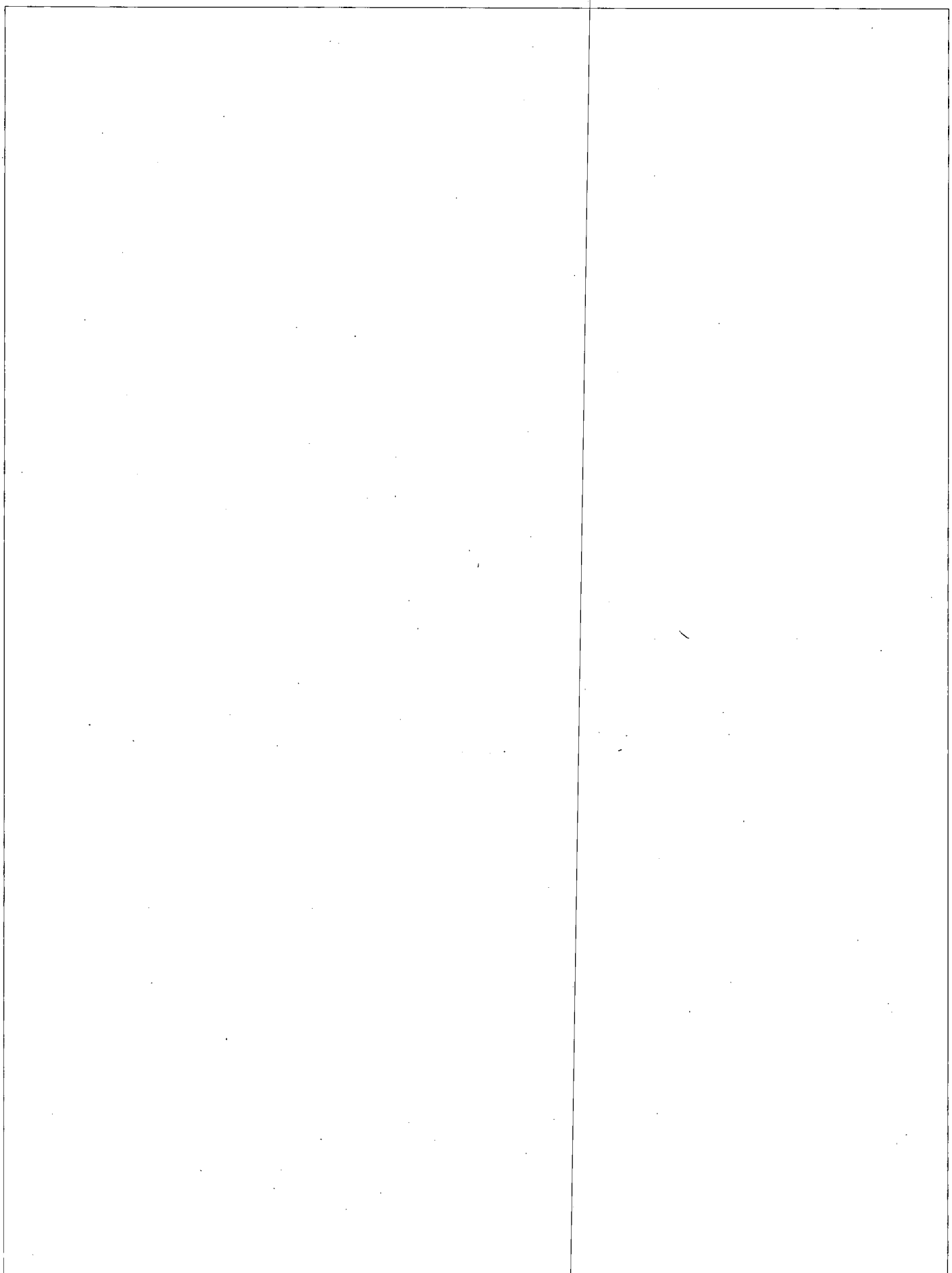
All XTO location personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, 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:	911
Carlsbad	575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359
HOSPITALS:	911
Carlsbad Medical Emergency	575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	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

H_2S Briefing Areas and Alarm Locations





XTO Energy

Eddy County, NM (NAD-27)
Chain-Blue Lightning 26 Fed
#127H

Wellbore #1

Plan: PERMIT

Standard Planning Report

09 May, 2019

XTO ENERGY

Project: Eddy County, NM (NAD-27)
Site: Chain-Blue Lightning 26 Fed
Well: #127H
Wellbore: Wellbore #1
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: #127H

Rig Name:
GL @ 3086.00usft
Ground Level: 3086.00

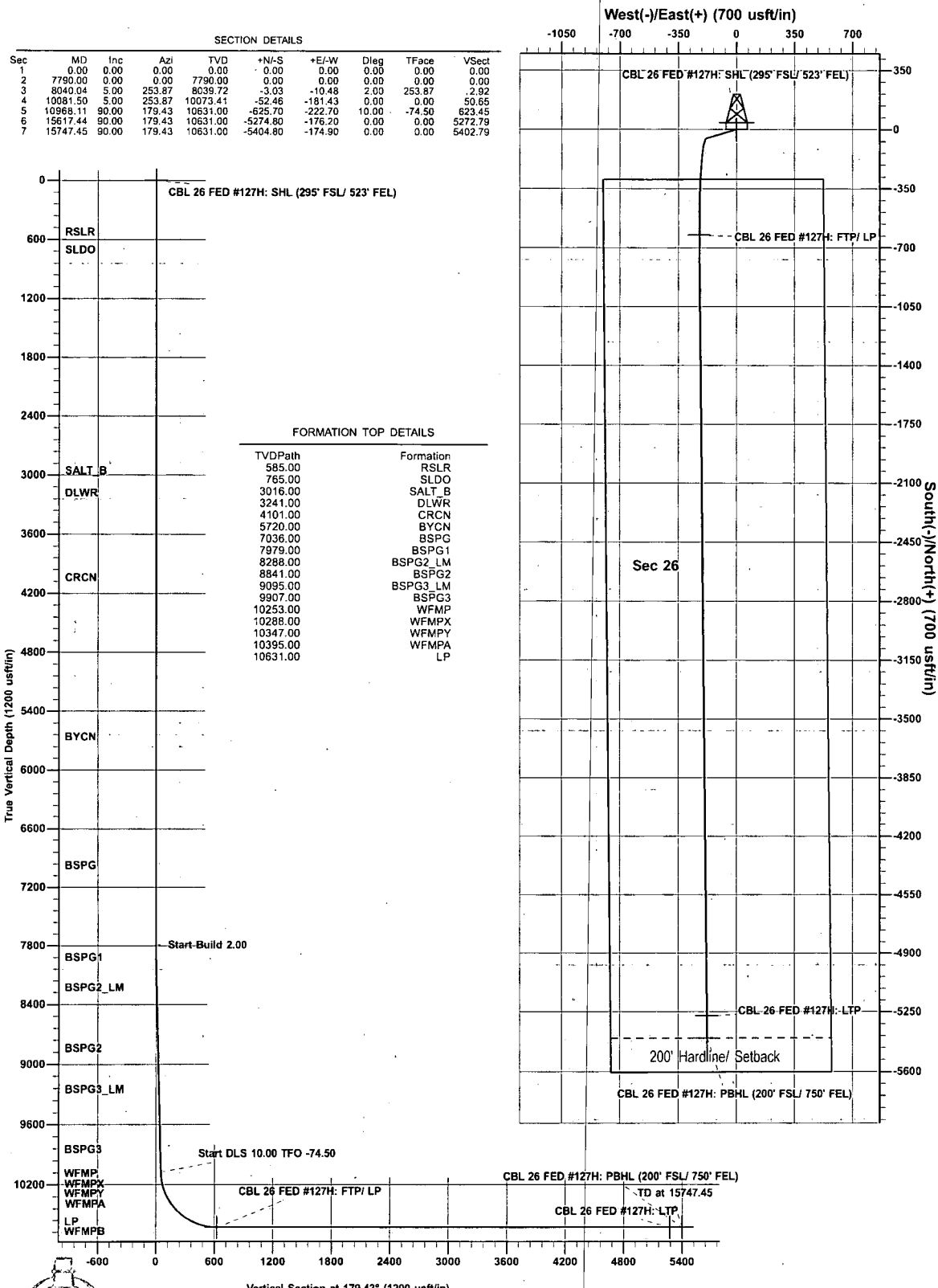
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	403533.40	619379.00	32.1088426	-103.9477783

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
CBL 26 FED #127H: SHL (295' FSL/ 523' FEL)	0.00	0.00	0.00	403533.40	619379.00	32.1088426	-103.9477783	Point
CBL 26 FED #127H: FTP/ LP	10631.00	-625.70	-222.70	402907.70	619156.30	32.1071248	-103.9485048	Point
CBL 26 FED #127H: LTP	10631.00	-5274.80	-176.20	398258.60	619202.80	32.0943440	-103.9484082	Point
CBL 26 FED #127H: PBHL (200' FSL/ 750' FEL)	10631.00	-5404.80	-174.90	398128.60	619204.10	32.0939866	-103.9484055	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7790.00	0.00	0.00	7790.00	0.00	0.00	0.00	0.00	0.00
3	8040.04	5.00	253.87	8039.72	-3.03	-10.48	2.00	253.87	2.92
4	10081.50	5.00	253.87	10073.41	-52.46	-181.43	0.00	0.00	50.65
5	10968.11	90.00	179.43	10631.00	-625.70	-222.70	10.00	-74.50	623.45
6	15617.44	90.00	179.43	10631.00	-5274.80	-176.20	0.00	0.00	5272.79
7	15747.45	90.00	179.43	10631.00	-5404.80	-174.90	0.00	0.00	5402.79



FORMATION TOP DETAILS

TVDPath	Formation
585.00	RSLR
765.00	SLDO
3016.00	SALT_B
3241.00	DLWR
4101.00	CRCN
5720.00	BYCN
7036.00	BSPG
7979.00	BSPG1
8288.00	BSPG2_LM
8841.00	BSPG2
9095.00	BSPG3_LM
9907.00	BSPG3
10253.00	WFMP
10288.00	WFMPX
10347.00	WFMPY
10395.00	WFMPA
10631.00	LP

Plan: PERMIT (#127H/Wellbore #1)

Created By: Prototype Well Planning, LLC Date: 13:35, May 09 2019

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #127H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Chain-Blue Lightning 26 Fed	**North Reference:**	Grid
Well:	#127H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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	**Latitude:**	32.1088568
From:	Map	**Easting:**	615,559.00 usft	**Longitude:**	-103.9601155
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.20 °

Well #127H

Well Position	**+N/-S**	8.30 usft	**Northing:**	403,533.40 usft	**Latitude:**	32.1088427
	+E/-W	3,820.00 usft	**Easting:**	619,379.00 usft	**Longitude:**	-103.9477783
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,086.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	05/09/19	6.92	59.87	47,638

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	
7,790.00	0.00	0.00	7,790.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,040.04	5.00	253.87	8,039.72	-3.03	-10.48	2.00	2.00	0.00	253.87	
10,081.50	5.00	253.87	10,073.41	-52.46	-181.43	0.00	0.00	0.00	0.00	
10,968.11	90.00	179.43	10,631.00	-625.70	-222.70	10.00	9.59	-8.40	-74.50	CBL 26 FED #127H
15,617.44	90.00	179.43	10,631.00	-5,274.80	-176.20	0.00	0.00	0.00	0.00	CBL 26 FED #127H
15,747.45	90.00	179.43	10,631.00	-5,404.80	-174.90	0.00	0.00	0.00	0.00	CBL 26 FED #127H

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #127H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Chain-Blue Lightning 26 Fed	**North Reference:**	Grid
Well:	#127H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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
585.00	0.00	0.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00
RSLR									
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
765.00	0.00	0.00	765.00	0.00	0.00	0.00	0.00	0.00	0.00
SLDO									
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
3,016.00	0.00	0.00	3,016.00	0.00	0.00	0.00	0.00	0.00	0.00
SALT_B									
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
3,241.00	0.00	0.00	3,241.00	0.00	0.00	0.00	0.00	0.00	0.00
DLWR									
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
4,101.00	0.00	0.00	4,101.00	0.00	0.00	0.00	0.00	0.00	0.00
CRCN									
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

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #127H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Chain-Blue Lightning 26 Fed	**North Reference:**	Grid
Well:	#127H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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)
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
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
5,720.00	0.00	0.00	5,720.00	0.00	0.00	0.00	0.00	0.00	0.00
BYCN									
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
7,036.00	0.00	0.00	7,036.00	0.00	0.00	0.00	0.00	0.00	0.00
BSPG									
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
7,790.00	0.00	0.00	7,790.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.20	253.87	7,800.00	0.00	-0.02	0.00	2.00	2.00	0.00
7,900.00	2.20	253.87	7,899.97	-0.59	-2.03	0.57	2.00	2.00	0.00
7,979.14	3.78	253.87	7,979.00	-1.73	-6.00	1.67	2.00	2.00	0.00
BSPG1									
8,000.00	4.20	253.87	7,999.81	-2.14	-7.39	2.06	2.00	2.00	0.00
8,040.04	5.00	253.87	8,039.72	-3.03	-10.48	2.92	2.00	2.00	0.00
8,100.00	5.00	253.87	8,099.45	-4.48	-15.50	4.33	0.00	0.00	0.00
8,200.00	5.00	253.87	8,199.07	-6.90	-23.87	6.66	0.00	0.00	0.00
8,289.27	5.00	253.87	8,288.00	-9.06	-31.35	8.75	0.00	0.00	0.00
BSPG2_LM									
8,300.00	5.00	253.87	8,298.69	-9.32	-32.24	9.00	0.00	0.00	0.00
8,400.00	5.00	253.87	8,398.31	-11.74	-40.62	11.34	0.00	0.00	0.00
8,500.00	5.00	253.87	8,497.93	-14.17	-48.99	13.68	0.00	0.00	0.00
8,600.00	5.00	253.87	8,597.55	-16.59	-57.37	16.02	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #127H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Chain-Blue Lightning 26 Fed	**North Reference:**	Grid
Well:	#127H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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)
8,700.00	5.00	253.87	8,697.17	-19.01	-65.74	18.35	0.00	0.00	0.00
8,800.00	5.00	253.87	8,796.79	-21.43	-74.11	20.69	0.00	0.00	0.00
8,844.38	5.00	253.87	8,841.00	-22.50	-77.83	21.73	0.00	0.00	0.00
BSPG2									
8,900.00	5.00	253.87	8,896.41	-23.85	-82.49	23.03	0.00	0.00	0.00
9,000.00	5.00	253.87	8,996.03	-26.27	-90.86	25.37	0.00	0.00	0.00
9,099.35	5.00	253.87	9,095.00	-28.68	-99.18	27.69	0.00	0.00	0.00
BSPG3_LM									
9,100.00	5.00	253.87	9,095.65	-28.69	-99.24	27.70	0.00	0.00	0.00
9,200.00	5.00	253.87	9,195.27	-31.11	-107.61	30.04	0.00	0.00	0.00
9,300.00	5.00	253.87	9,294.89	-33.54	-115.98	32.38	0.00	0.00	0.00
9,400.00	5.00	253.87	9,394.51	-35.96	-124.36	34.72	0.00	0.00	0.00
9,500.00	5.00	253.87	9,494.13	-38.38	-132.73	37.06	0.00	0.00	0.00
9,600.00	5.00	253.87	9,593.74	-40.80	-141.11	39.39	0.00	0.00	0.00
9,700.00	5.00	253.87	9,693.36	-43.22	-149.48	41.73	0.00	0.00	0.00
9,800.00	5.00	253.87	9,792.98	-45.64	-157.85	44.07	0.00	0.00	0.00
9,900.00	5.00	253.87	9,892.60	-48.06	-166.23	46.41	0.00	0.00	0.00
9,914.45	5.00	253.87	9,907.00	-48.41	-167.44	46.74	0.00	0.00	0.00
BSPG3									
10,000.00	5.00	253.87	9,992.22	-50.48	-174.60	48.74	0.00	0.00	0.00
10,081.50	5.00	253.87	10,073.41	-52.46	-181.43	50.65	0.00	0.00	0.00
10,100.00	5.78	235.87	10,091.83	-53.20	-182.97	51.38	10.00	4.19	-97.32
10,150.00	9.49	209.70	10,141.39	-58.20	-187.10	56.34	10.00	7.43	-52.34
10,200.00	14.03	199.15	10,190.34	-67.51	-191.13	65.61	10.00	9.07	-21.10
10,250.00	18.80	193.77	10,238.29	-81.07	-195.04	79.12	10.00	9.54	-10.76
10,265.61	20.31	192.59	10,253.00	-86.16	-196.23	84.20	10.00	9.68	-7.51
WFMP									
10,300.00	23.66	190.52	10,284.88	-98.77	-198.79	96.78	10.00	9.74	-6.03
10,303.41	23.99	190.35	10,288.00	-100.12	-199.04	98.13	10.00	9.78	-5.15
WFMPX									
10,350.00	28.56	188.33	10,329.77	-120.47	-202.36	118.45	10.00	9.82	-4.32
10,369.81	30.52	187.65	10,347.00	-130.14	-203.71	128.11	10.00	9.85	-3.46
WFMPY									
10,400.00	33.50	186.74	10,372.60	-146.02	-205.71	143.96	10.00	9.87	-3.00
10,427.30	36.20	186.04	10,395.00	-161.52	-207.45	159.44	10.00	9.89	-2.58
WFMPA									
10,450.00	38.45	185.52	10,413.05	-175.21	-208.83	173.12	10.00	9.90	-2.29
10,500.00	43.40	184.54	10,450.82	-207.83	-211.69	205.71	10.00	9.92	-1.96
10,550.00	48.37	183.72	10,485.61	-243.62	-214.26	241.48	10.00	9.93	-1.63
10,600.00	53.34	183.02	10,517.17	-282.32	-216.54	280.15	10.00	9.94	-1.40
10,650.00	58.31	182.41	10,545.24	-323.63	-218.49	321.44	10.00	9.95	-1.23
10,700.00	63.29	181.86	10,569.63	-367.23	-220.11	365.02	10.00	9.95	-1.10
10,750.00	68.27	181.35	10,590.13	-412.80	-221.38	410.58	10.00	9.96	-1.01
10,800.00	73.25	180.88	10,606.60	-459.98	-222.30	457.75	10.00	9.96	-0.94
10,850.00	78.23	180.43	10,618.91	-508.42	-222.85	506.18	10.00	9.96	-0.89
10,900.00	83.21	180.00	10,626.97	-557.75	-223.04	555.51	10.00	9.96	-0.86
10,950.00	88.20	179.58	10,630.72	-607.60	-222.86	605.35	10.00	9.96	-0.85
10,968.11	90.00	179.43	10,631.00	-625.70	-222.70	623.45	10.00	9.96	-0.84
LP									
11,000.00	90.00	179.43	10,631.00	-657.59	-222.38	655.35	0.00	0.00	0.00
11,100.00	90.00	179.43	10,631.00	-757.59	-221.38	755.35	0.00	0.00	0.00
11,200.00	90.00	179.43	10,631.00	-857.58	-220.38	855.35	0.00	0.00	0.00
11,300.00	90.00	179.43	10,631.00	-957.58	-219.38	955.35	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #127H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Chain-Blue Lightning 26 Fed	**North Reference:**	Grid
Well:	#127H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
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)
11,400.00	90.00	179.43	10,631.00	-1,057.57	-218.38	1,055.35	0.00	0.00	0.00
11,500.00	90.00	179.43	10,631.00	-1,157.57	-217.38	1,155.35	0.00	0.00	0.00
11,600.00	90.00	179.43	10,631.00	-1,257.56	-216.38	1,255.35	0.00	0.00	0.00
11,700.00	90.00	179.43	10,631.00	-1,357.56	-215.38	1,355.35	0.00	0.00	0.00
11,800.00	90.00	179.43	10,631.00	-1,457.55	-214.38	1,455.35	0.00	0.00	0.00
11,900.00	90.00	179.43	10,631.00	-1,557.55	-213.38	1,555.35	0.00	0.00	0.00
12,000.00	90.00	179.43	10,631.00	-1,657.54	-212.38	1,655.35	0.00	0.00	0.00
12,100.00	90.00	179.43	10,631.00	-1,757.54	-211.38	1,755.35	0.00	0.00	0.00
12,200.00	90.00	179.43	10,631.00	-1,857.53	-210.38	1,855.35	0.00	0.00	0.00
12,300.00	90.00	179.43	10,631.00	-1,957.53	-209.38	1,955.35	0.00	0.00	0.00
12,400.00	90.00	179.43	10,631.00	-2,057.52	-208.38	2,055.35	0.00	0.00	0.00
12,500.00	90.00	179.43	10,631.00	-2,157.52	-207.38	2,155.35	0.00	0.00	0.00
12,600.00	90.00	179.43	10,631.00	-2,257.51	-206.38	2,255.35	0.00	0.00	0.00
12,700.00	90.00	179.43	10,631.00	-2,357.51	-205.38	2,355.35	0.00	0.00	0.00
12,800.00	90.00	179.43	10,631.00	-2,457.50	-204.38	2,455.35	0.00	0.00	0.00
12,900.00	90.00	179.43	10,631.00	-2,557.50	-203.38	2,555.35	0.00	0.00	0.00
13,000.00	90.00	179.43	10,631.00	-2,657.49	-202.38	2,655.35	0.00	0.00	0.00
13,100.00	90.00	179.43	10,631.00	-2,757.49	-201.38	2,755.35	0.00	0.00	0.00
13,200.00	90.00	179.43	10,631.00	-2,857.48	-200.38	2,855.35	0.00	0.00	0.00
13,300.00	90.00	179.43	10,631.00	-2,957.48	-199.38	2,955.35	0.00	0.00	0.00
13,400.00	90.00	179.43	10,631.00	-3,057.47	-198.38	3,055.35	0.00	0.00	0.00
13,500.00	90.00	179.43	10,631.00	-3,157.47	-197.38	3,155.35	0.00	0.00	0.00
13,600.00	90.00	179.43	10,631.00	-3,257.46	-196.38	3,255.35	0.00	0.00	0.00
13,700.00	90.00	179.43	10,631.00	-3,357.46	-195.38	3,355.35	0.00	0.00	0.00
13,800.00	90.00	179.43	10,631.00	-3,457.45	-194.38	3,455.35	0.00	0.00	0.00
13,900.00	90.00	179.43	10,631.00	-3,557.45	-193.38	3,555.35	0.00	0.00	0.00
14,000.00	90.00	179.43	10,631.00	-3,657.44	-192.38	3,655.35	0.00	0.00	0.00
14,100.00	90.00	179.43	10,631.00	-3,757.44	-191.38	3,755.35	0.00	0.00	0.00
14,200.00	90.00	179.43	10,631.00	-3,857.43	-190.38	3,855.35	0.00	0.00	0.00
14,300.00	90.00	179.43	10,631.00	-3,957.43	-189.38	3,955.35	0.00	0.00	0.00
14,400.00	90.00	179.43	10,631.00	-4,057.42	-188.38	4,055.35	0.00	0.00	0.00
14,500.00	90.00	179.43	10,631.00	-4,157.42	-187.38	4,155.35	0.00	0.00	0.00
14,600.00	90.00	179.43	10,631.00	-4,257.41	-186.38	4,255.35	0.00	0.00	0.00
14,700.00	90.00	179.43	10,631.00	-4,357.41	-185.38	4,355.35	0.00	0.00	0.00
14,800.00	90.00	179.43	10,631.00	-4,457.40	-184.38	4,455.35	0.00	0.00	0.00
14,900.00	90.00	179.43	10,631.00	-4,557.40	-183.38	4,555.35	0.00	0.00	0.00
15,000.00	90.00	179.43	10,631.00	-4,657.39	-182.38	4,655.35	0.00	0.00	0.00
15,100.00	90.00	179.43	10,631.00	-4,757.39	-181.38	4,755.35	0.00	0.00	0.00
15,200.00	90.00	179.43	10,631.00	-4,857.38	-180.38	4,855.35	0.00	0.00	0.00
15,300.00	90.00	179.43	10,631.00	-4,957.38	-179.38	4,955.35	0.00	0.00	0.00
15,400.00	90.00	179.43	10,631.00	-5,057.37	-178.37	5,055.35	0.00	0.00	0.00
15,500.00	90.00	179.43	10,631.00	-5,157.37	-177.37	5,155.35	0.00	0.00	0.00
15,600.00	90.00	179.43	10,631.00	-5,257.36	-176.37	5,255.35	0.00	0.00	0.00
15,617.44	90.00	179.43	10,631.00	-5,274.80	-176.20	5,272.79	0.00	0.00	0.00
15,700.00	90.00	179.43	10,631.00	-5,357.36	-175.37	5,355.35	0.00	0.00	0.00
15,747.45	90.00	179.43	10,631.00	-5,404.80	-174.90	5,402.79	0.00	0.00	0.00

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well #127H
Company:	XTO Energy	**TVD Reference:**	GL @ 3086.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	GL @ 3086.00usft
Site:	Chain-Blue Lightning 26 Fed	**North Reference:**	Grid
Well:	#127H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
CBL 26 FED #127H: S - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	403,533.40	619,379.00	32.1088427	-103.9477783
CBL 26 FED #127H: F - plan hits target center - Point	0.00	0.01	10,631.00	-625.70	-222.70	402,907.70	619,156.30	32.1071248	-103.9485047
CBL 26 FED #127H: L - plan hits target center - Point	0.00	0.01	10,631.00	-5,274.80	-176.20	398,258.60	619,202.80	32.0943440	-103.9484082
CBL 26 FED #127H: F - plan hits target center - Point	0.00	0.01	10,631.00	-5,404.80	-174.90	398,128.60	619,204.10	32.0939867	-103.9484055

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
585.00	585.00	RSLR			
765.00	765.00	SLDO			
3,016.00	3,016.00	SALT_B			
3,241.00	3,241.00	DLWR			
4,101.00	4,101.00	CRCN			
5,720.00	5,720.00	BYCN			
7,036.00	7,036.00	BSPG			
7,979.14	7,979.00	BSPG1			
8,289.27	8,288.00	BSPG2_LM			
8,844.38	8,841.00	BSPG2			
9,099.35	9,095.00	BSPG3_LM			
9,914.45	9,907.00	BSPG3			
10,265.61	10,253.00	WFMP			
10,303.41	10,288.00	WFMPX			
10,369.81	10,347.00	WFMPY			
10,427.30	10,395.00	WFMPA			
10,968.11	10,631.00	LP			

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

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

Submit Original to Appropriate District Office

GAS CAPTURE PLAN

Date: 04/26/2019

☒ Original
☐ Amended - Reason for Amendment:

Operator & OGRID No.: XTO Energy, Inc [005380]

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 CTBN

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: 10400042186 **Submission Date:** 06/25/2019

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED **Well Number:** 127H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Chain_26_Fed_127H_Road_20190527091312.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:

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

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_20190916075904.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

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

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

Water source and transportation map:

Chain_26_Fed_127H_Wtr_20190527091331.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

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

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
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?

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_127H_Well_20190527091348.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: CHAIN BLUE

Multiple Well Pad Number: 4

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
Road proposed disturbance (acres): 3.77
Powerline proposed disturbance (acres): 10.29
Pipeline proposed disturbance (acres): 0
Other proposed disturbance (acres): 20.41

Well pad interim reclamation (acres): 7.68
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 7.68

Well pad long term disturbance (acres): 15.28
Road long term disturbance (acres): 3.77
Powerline long term disturbance (acres): 10.29
Pipeline long term disturbance (acres): 0
Other long term disturbance (acres): 20.41

Operator Name: XTO ENERGY INCORPORATED

Well Name: CHAIN-BLUE LIGHTNING 26 FED **Well Number:** 127H

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) plan 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

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	
Seed Type	**Pounds/Acre**

Total 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:** 127H

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:** 127H

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:** 127H

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 Apln/Fac-FLPMA,289001 ROW- O&G Well Pad,FLPMA (Powerline)