RECEIVED

Form 3160-3
(June 2015)

DEC 17 2018

DISTRICT II-ARTESIA O.C.D.

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.
NMNM0556859A

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.
NASH / NMNM070992X

8. Lease Name and Well No.
NASH UNIT
003H 303152

2. Name of Operator
XTO ENERGY INCORPORATED 5380

9. API Well No.
30-015-21781

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
2277 Springwoods Village Parkway Spring TX 77389	(432)620-6700	PURPLE SAGE WOLFCAMP 98220

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NESW / 1980 FSL / 1988 FWL / LAT 32.317843 / LONG -103.94041

At proposed prod. zone LOT 4 / 200 FNL / 380 FWL / LAT 32.341024 / LONG -103.945659

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 12 / T23S / 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
1988 feet	320	480
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**
366 feet	11079 feet / 18856 feet	FED: COB000050

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
2982 feet	08/30/2018	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	05/29/2018

Title
Regulatory Coordinator

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	12/07/2018
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: 12/07/2018 RWP 12-24-18

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.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: NESW / 1980 FSL / 1988 FWL / TWSP: 23S / RANGE: 29E / SECTION: 12 / LAT: 32.317843 / LONG: -103.94041 (TVD: 0 feet, MD: 0 feet)
   PPP: SWNW / 1980 FNL / 660 FWL / TWSP: 23S / RANGE: 29E / SECTION: 12 / LAT: 32.321576 / LONG: -103.944727 (TVD: 10828 feet, MD: 10950 feet)
   BHL: LOT 4 / 200 FNL / 380 FWL / TWSP: 23S / RANGE: 29E / SECTION: 1 / LAT: 32.341024 / LONG: -103.945659 (TVD: 11079 feet, MD: 18856 feet)

BLM Point of Contact

Name: Katrina Ponder
Title: Geologist
Phone: 5752345969
Email: kponder@blm.gov

Approval Date: 12/07/2018

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.

RECEIVED

DEC 17 2018

DISTRICT II-ARTESIA O.C.D.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Energy Incorporated**
LEASE NO.:	**NMNM0556859A**
WELL NAME & NO.:	**Nash Unit 003H**
SURFACE HOLE FOOTAGE:	**1980'/S & 1988'/W**
BOTTOM HOLE FOOTAGE	**200'/N & 380'/W**
LOCATION:	**Section 12, T.23 S., R.29 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	○ None	○ Secretary	◉ R-111-P
Cave/Karst Potential	○ Low	○ Medium	◉ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. Hydrogen Sulfide

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

B. CASING

- ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings , the cement on the 3rd casing string must come to surface.

1. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

Approval Date: 12/07/2018

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi.)**

GENERAL REQUIREMENTS

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

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

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

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

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on

which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log (one log per well pad is acceptable) run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: 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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. 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.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the

formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. 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.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

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

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

    c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

    d. 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.

    e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

    f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.

    g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 111618

RECEIVED

DEC 17 2018

DISTRICT II-ARTESIA O.C.D.

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Energy Incorporated
LEASE NO.:	NMNM0556859A
WELL NAME & NO.:	Nash Unit 003H
SURFACE HOLE FOOTAGE:	1980'/S & 1988'/W
BOTTOM HOLE FOOTAGE	200'/N & 380'/W
LOCATION:	Section 12, T.23 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

Approval Date: 12/07/2018

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 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.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method 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.

Cave Karst

CONSTRUCTION MITIGATION

In order to mitigate the impacts from construction activities on cave and karst resources, the following Conditions of Approval will apply to this APD or project:

- In the event that any underground voids are encountered during construction activities, construction activities will be halted and the BLM will be notified immediately.
- No blasting – the pad and roads will be constructed and leveled by adding the necessary fill and caliche.
- All pads will be bermed to minimize the impact of any spilled contaminates

DRILLING IMPACT ANALYSIS

During drilling, previously unknown cave and karst features could be encountered. If a void is encountered while drilling and a loss of circulation occurs, lost drilling fluids can directly contaminate groundwater recharge areas, aquifers, and groundwater quality. Drilling operations can also lead to sudden collapse of underground voids. Cementing operations may plug or alter groundwater flow, potentially reducing the water quantity at springs and water wells. Inadequate subsurface cementing, casing, and cave/aquifer protection measures can lead to the migration of oil, gas, drilling fluids, and produced saltwater into cave systems and freshwater aquifers.

DRILLING MITIGATION

Federal regulations and standard Conditions of Approval applied to all APDs require that adequate measures are taken to prevent contamination to the environment. Due to the extreme sensitivity of the cave and karst resources in this project area, the following additional Conditions of Approval will be added to this APD.

To prevent cave and karst resource contamination the following will be required.

- Closed mud system using steel tanks - all fluids and cuttings will be hauled off-site and disposed of properly
- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.
- Directional drilling is only allowed at depths greater than 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
- Lost circulation zones will be logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
- Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See drilling COAs.

PRODUCTION IMPACT ANALYSIS

Production facilities such as tank batteries, pump-jacks, compressors, transfer stations, and pipe may fail and allow contaminants to enter caves and freshwater systems. Downhole casing and cementing failures can allow migration of fluids and/or gas between formations and aquifers. Facilities may also be subject to slow subsidence or sudden collapse of the underlying bedrock.

PRODUCTION MITIGATION

In order to mitigate the impacts from production activities and due to the nature of karst terrane, the following Conditions of Approval will apply to this APD:

- Tank battery locations and facilities will be bermed and lined with a 20 mil thick permanent liner that has a 4 oz. felt backing, or equivalent, to prevent tears or

punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

- Development and implementation of a leak detection system to provide an early alert to operators when a leak has occurred.
- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

RESIDUAL AND CUMULATIVE IMPACT ANALYSIS

Any industrial activities that take place upon or within karst terranes or freshwater aquifer zones have the potential to create both short-term and long-term negative impacts to freshwater aquifers and cave systems. While a number of mitigation measures can be implemented to mitigate many impacts, it is still possible for impacts to occur from containment failures, well blowouts, accidents, spills, and structural collapses. It is therefore necessary to implement long-term monitoring studies to determine if current mitigations measures are sufficient enough to prevent long-term or cumulative impacts.

RESIDUAL AND CUMULATIVE MITIGATION

The operator will perform annual pressure monitoring on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be taken to correct the problem to the BLM's approval.

PLUGGING AND ABANDONMENT IMPACT ANALYSIS

Failure of a plugged and abandoned well can lead to migration of contaminants to karst resources and fresh water aquifers. While this action does not specifically approve plugging and abandonment procedures, the operator should be made aware that additional or special Conditions of Approval may apply at that time.

PLUGGING AND ABANDONMENT MITIGATION

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

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.

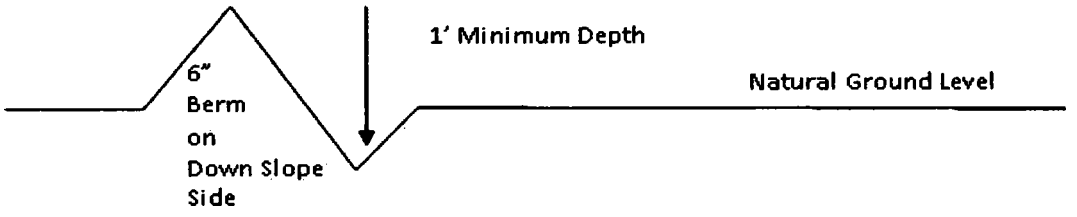
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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:

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

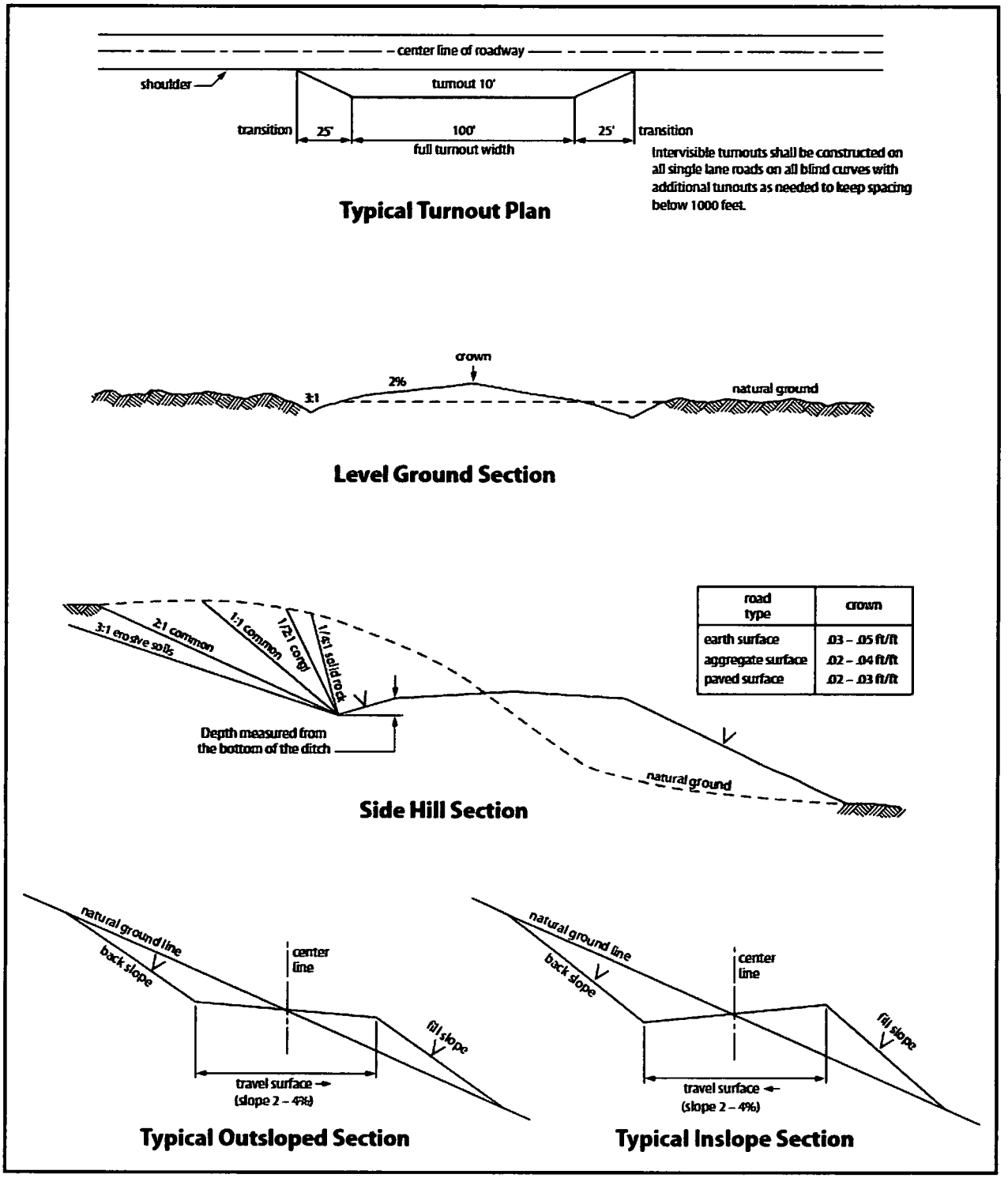


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

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

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

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

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the

activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky 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.

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 for LPC Sand/Shinnery Sites

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 shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall 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). 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. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may 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
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*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

12/14/2018

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:** 05/23/2018

Title: Regulatory Coordinator

Street Address: 500 W. Illinois St, Ste 100

City: Midland **State:** TX **Zip:** 79701

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

12/14/2018

APD ID: 10400030530 **Submission Date:** 05/29/2018

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Reenter

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400030530 **Tie to previous NOS?** **Submission Date:** 05/29/2018

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: NMNM0556859A **Lease Acres:** 320

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? YES **Federal or Indian agreement:** FEDERAL

Agreement number: NMNM070992X

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 **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: NASH UNIT **Well Number:** 003H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** PURPLE SAGE WOLFCAMP **Pool Name:**

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

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** YES **New surface disturbance?** Y

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Reenter

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: DELINEATION

Describe sub-type:

Distance to town: **Distance to nearest well:** 366 FT **Distance to lease line:** 1988 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: Nash_Unit_3H_C1021_20180614132435.pdf

Well work start Date: 08/30/2018 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	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
SHL Leg #1	1980	FSL	1988	FWL	23S	29E	12	Aliquot NESW	32.317843	-103.94041	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 055685 9A	2982	0	0
KOP Leg #1	1980	FSL	1988	FWL	23S	29E	12	Aliquot NESW	32.317843	-103.94041	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 055685 9A	-7556	10538	10538
PPP Leg #1	1980	FNL	660	FWL	23S	29E	12	Aliquot SWNW	32.321576	-103.944727	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 055685 9A	-7846	10950	10828

APD ID: 10400030530 **Submission Date:** 05/29/2018

Highlighted data reflects the most recent changes

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

Show Final Text

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Reenter

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	PERMIAN	2982	0	0	OTHER : Quaternary	NONE	No
2	RUSTLER	2960	22	22	SILTSTONE	USEABLE WATER	No
3	TOP SALT	2385	597	597	SALT	OTHER : Produced Water	No
4	BASE OF SALT	79	2903	2903	SALT	OTHER : Produced Water	No
5	DELAWARE	-193	3175	3175	SANDSTONE	NATURAL GAS,OIL,OTHER : Produced Water	No
6	BONE SPRING	-3899	6881	6881	SANDSTONE	NATURAL GAS,OIL,OTHER : Produced Water	No
7	BONE SPRING 1ST	-4908	7890	7890	SANDSTONE	NATURAL GAS,OIL,OTHER : Produced Water	No
8	BONE SPRING 2ND	-5736	8718	8718	SANDSTONE	NATURAL GAS,OIL,OTHER : Produced Water	No
9	BONE SPRING 3RD	-6065	9047	9047	SANDSTONE	NATURAL GAS,OIL,OTHER : Produced Water	No
10	WOLFCAMP	-7178	10160	10160	SHALE	NATURAL GAS,OIL,OTHER : Produced Water	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 11130

Equipment: The blow out preventer equipment (BOP) required for this well consists of a 13-5/8" 10M Hydril and a 13-5/8" minimum 10M Double Ram BOP. A variance is requested to use a 5M Hydril. MASP should not exceed 5249 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. A variance is requested to use a 5M Hydril. XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
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 11" 10M flange, the BOP test will be limited to 10,000psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

Choke Diagram Attachment:

Nash_Unit_3H_10MCM_20180524070131.pdf

BOP Diagram Attachment:

Nash_Unit_3H_5M10MBOP_20180524070143.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	3122	0	3122			3122	K-55	48	STC	1.36	1.03	DRY	3.38	DRY	3.38
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	10975	0	10975			10975	S-95	40	LTC	1.25	1.5	DRY	1.95	DRY	1.95
3	LINER	8.75	5.5	NEW	API	N	10622	13771	10622	13771			3149	S-95	20	LTC	1.4	1.23	DRY	2.06	DRY	2.06
4	PRODUCTION	8.5	5.5	NEW	API	N	0	18857	0	18857			18857	P-110	20	BUTT	1.44	1.33	DRY	2.67	DRY	2.67

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Nash_Unit_3H_Csg_20180526073633.pdf

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Nash_Unit_3H_Csg_20180526073800.pdf

Casing ID: 3 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Nash_Unit_3H_Csg_20180526073952.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Nash_Unit_3H_Csg_20180526074142.pdf

Section 4 - Cement

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	3122	2320	0	0	0		False-Set BJ Light	2% cc + 7# gilsonite + 1/4# celloflakes -- CEMENT IS EXISTING, REENTRY WELL.
SURFACE	Tail				200	1.34	14.8	268	0	C	2% CaCl
INTERMEDIATE	Lead		0	10975	1025	0	0	0	0	BJ Lite	1% D-19 + 3% Salt + 1/4# Cellofalkes + 0.3% R-5 -- CEMENT IS EXISTING, REENTRY WELL.
INTERMEDIATE	Tail				200	1.18	15.6	236	0	H	02% R-5
LINER	Lead		0	13771	1025	1.18	15.6	1209.5		H	08% Halad 22 + 0.4% CFR-2 + 5# KCL -- CEMENT IS EXISTING-- REENTRY WELL
LINER	Tail				100	1.34	14.8	134	0	C	0.8% Halad 22 + 0.4% CFR-2 + 5# KCL
PRODUCTION	Lead		0	18857	1131	2.69	10.5	3042	30	Tuned Light	+ 0.5 lbm/sk CFR-3 + 1.5 lbm/sk salt + 0.1% HR601 – ONLY NEW CEMENT STRING
PRODUCTION	Tail				1599	1.61	13.2	2574	30	VersaCem PBHS2	+ 0.5% LAP-1 + 0.25 lbm/sk D-air 5000 + 0.2% HR 601 + 0.4% CFR-3 + 1 pps Salt

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

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

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
10538	18857	OIL-BASED MUD	13	13.3							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	317	OTHER : EXISTING CASING STRING	8	8.2							
0	3123	OTHER : EXISTING CASING STRING	8	8.2							
0	10975	OTHER : EXISTING CASING STRING	8	8.3							

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

Coring operation description for the well:

No coring will take place on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7697 **Anticipated Surface Pressure:** 5259.4

Anticipated Bottom Hole Temperature(F): 165

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:

Nash_Unit_3H_H2S_Plan_20180524070445.pdf

Nash_Unit_3H_H2S_Dia_20180524070453.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Nash_Unit_3H_DD_20180523201350.pdf

Other proposed operations facets description:

This is a RE-ENTRY well.

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

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

Other proposed operations facets attachment:

Nash_Unit_3H_GCP_20180524071545.pdf

Nash_Unit_3H_Drill_20180526075356.pdf

Nash_Unit_3H_CWBD_20181015063317.pdf

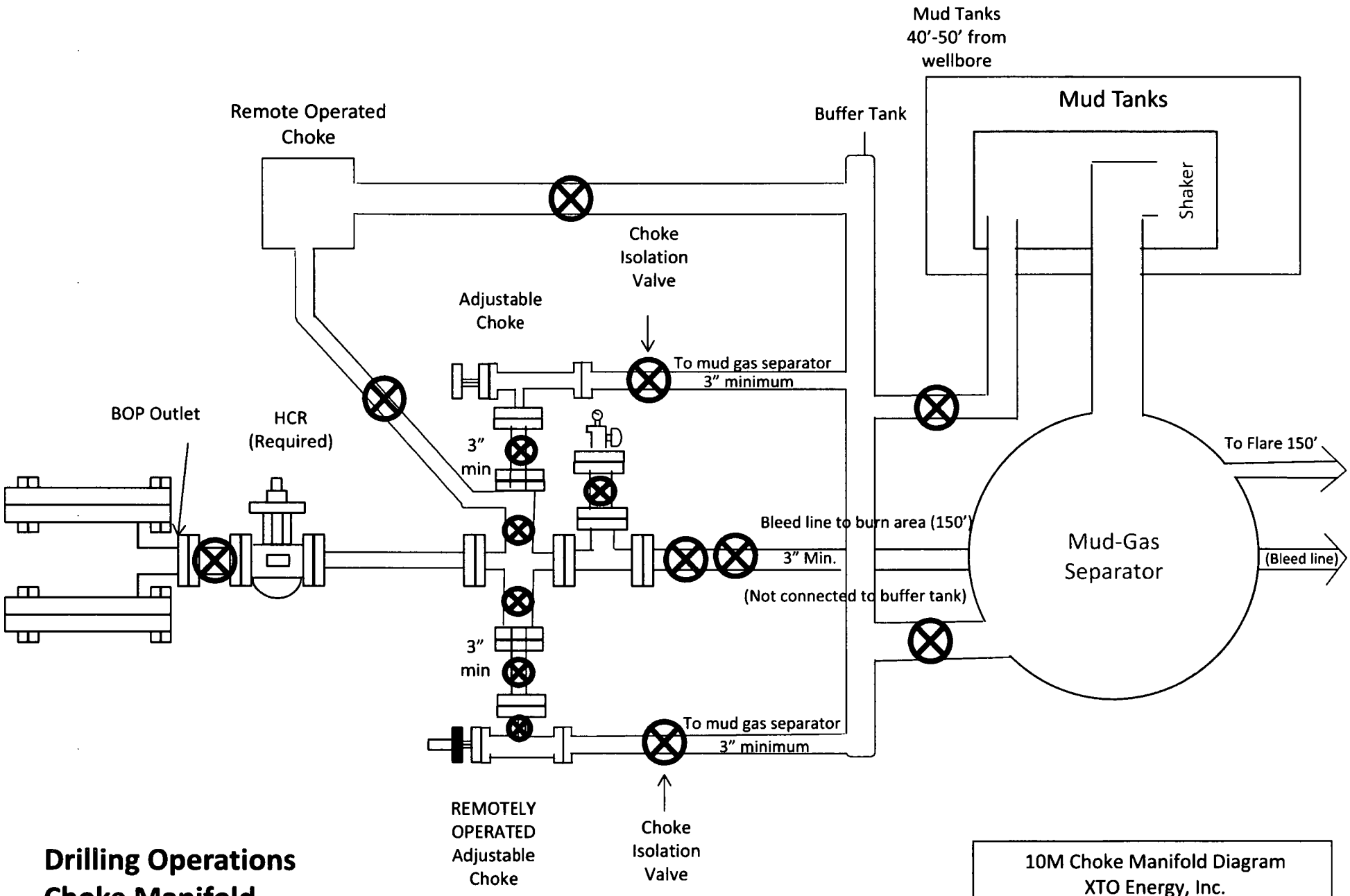
Nash_Unit_3H_PWBD_20181015063329.pdf

Nash_Unit_3H_DProc_20181015065242.pdf

Other Variance attachment:

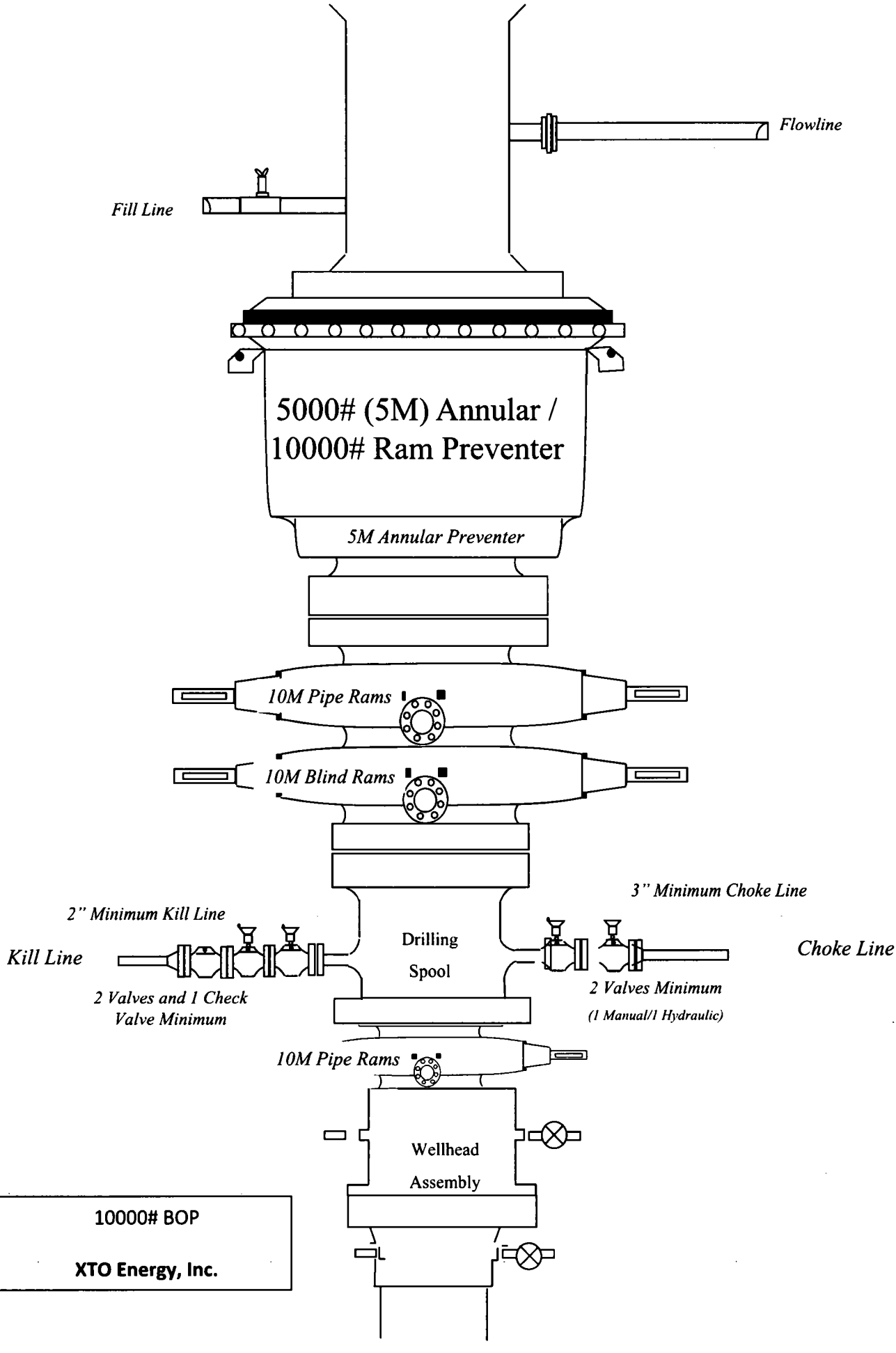
Nash_Unit_3H_FH_20180523201431.pdf

Nash_Unit_3H_WWCP_20181106172802.pdf



Drilling Operations
Choke Manifold
10M Service

10M Choke Manifold Diagram
XTO Energy, Inc.



10000# BOP

XTO Energy, Inc.

DRILLING PLAN (RE-ENTRY/SIDETRACK): BLM COMPLIANCE

XTO Energy Inc.
Nash Unit #3H
Projected TD: 18857' MD / 11130' TVD
SHL: 1980.4' FSL & 1988.1' FWL, SECTION 12, T23S, R29E
BHL: 200' FNL & 380' FWL, SECTION 1, T23S, R29E
Eddy County, NM

The active perfs in the Atoka will be abandoned by setting a CIBP at 12,264' (roughly 50' above the top perf with 40' of cement on top of it). Another CIBP will be set at 10,538', and the 9-5/8" casing will be tested to 1500 psi. A whipstock will then be set on top of the CIBP, and a window will be cut from approximately 10,510' to 10,535'. An 8-1/2" curve lateral hole will then be drilled to MD/TD and 5-1/2" casing will be set at TD and cemented back surface.

CASING PROGRAM:

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0-3122'	13-3/8"	48#	STC	K-55	Existing	1.03	1.36	3.38
12-1/4"	0-10975'	9-5/8"	40#	LTC	S-95	Existing	1.5	1.25	1.95
8-1/2"	10622-13771'	5-1/2"	20#	LTC	S-95	Existing	1.23	1.4	2.06
8-1/2"	0' – 18857'	5-1/2"	20#	BTC	P-110	New	1.33	1.44	2.67

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

The current wellhead will be cut off and the below wellhead system will be installed:

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom
B. Casing Spool: 11" 10M top flange x 13-5/8" 5M bottom flange
C. Tubing Head: 7-1/16" 15M top flange x 11" 10M bottom flange
   - Wellhead will be installed by manufacturer's representatives.
   - Manufacturer will monitor welding process to ensure appropriate temperature of seal.
   - Manufacturer will witness installation of test plug for initial test.
   - Operator will test the 9-5/8" casing per BLM Onshore Order 2

DRILLING PLAN (RE-ENTRY/SIDETRACK): BLM COMPLIANCE

XTO Energy Inc.
Nash Unit #3H
Projected TD: 18857' MD / 11130' TVD
SHL: 1980.4' FSL & 1988.1' FWL, SECTION 12, T23S, R29E
BHL: 200' FNL & 380' FWL, SECTION 1, T23S, R29E
Eddy County, NM

The active perfs in the Atoka will be abandoned by setting a CIBP at 12,264' (roughly 50' above the top perf with 40' of cement on top of it). Another CIBP will be set at 10,538', and the 9-5/8" casing will be tested to 1500 psi. A whipstock will then be set on top of the CIBP, and a window will be cut from approximately 10,510' to 10,535'. An 8-1/2" curve lateral hole will then be drilled to MD/TD and 5-1/2" casing will be set at TD and cemented back surface.

CASING PROGRAM:

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0-3122'	13-3/8"	48#	STC	K-55	Existing	1.03	1.36	3.38
12-1/4"	0-10975'	9-5/8"	40#	LTC	S-95	Existing	1.5	1.25	1.95
8-1/2"	10622-13771'	5-1/2"	20#	LTC	S-95	Existing	1.23	1.4	2.06
8-1/2"	0' – 18857'	5-1/2"	20#	BTC	P-110	New	1.33	1.44	2.67

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

The current wellhead will be cut off and the below wellhead system will be installed:

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom
B. Casing Spool: 11" 10M top flange x 13-5/8" 5M bottom flange
C. Tubing Head: 7-1/16" 15M top flange x 11" 10M bottom flange
   - Wellhead will be installed by manufacturer's representatives.
   - Manufacturer will monitor welding process to ensure appropriate temperature of seal.
   - Manufacturer will witness installation of test plug for initial test.
   - Operator will test the 9-5/8" casing per BLM Onshore Order 2

DRILLING PLAN (RE-ENTRY/SIDETRACK): BLM COMPLIANCE

XTO Energy Inc.
Nash Unit #3H
Projected TD: 18857' MD / 11130' TVD
SHL: 1980.4' FSL & 1988.1' FWL, SECTION 12, T23S, R29E
BHL: 200' FNL & 380' FWL, SECTION 1, T23S, R29E
Eddy County, NM

The active perfs in the Atoka will be abandoned by setting a CIBP at 12,264' (roughly 50' above the top perf with 40' of cement on top of it). Another CIBP will be set at 10,538', and the 9-5/8" casing will be tested to 1500 psi. A whipstock will then be set on top of the CIBP, and a window will be cut from approximately 10,510' to 10,535'. An 8-1/2" curve lateral hole will then be drilled to MD/TD and 5-1/2" casing will be set at TD and cemented back surface.

CASING PROGRAM:

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0-3122'	13-3/8"	48#	STC	K-55	Existing	1.03	1.36	3.38
12-1/4"	0-10975'	9-5/8"	40#	LTC	S-95	Existing	1.5	1.25	1.95
8-1/2"	10622-13771'	5-1/2"	20#	LTC	S-95	Existing	1.23	1.4	2.06
8-1/2"	0' – 18857'	5-1/2"	20#	BTC	P-110	New	1.33	1.44	2.67

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

The current wellhead will be cut off and the below wellhead system will be installed:

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom
B. Casing Spool: 11" 10M top flange x 13-5/8" 5M bottom flange
C. Tubing Head: 7-1/16" 15M top flange x 11" 10M bottom flange
   - Wellhead will be installed by manufacturer's representatives.
   - Manufacturer will monitor welding process to ensure appropriate temperature of seal.
   - Manufacturer will witness installation of test plug for initial test.
   - Operator will test the 9-5/8" casing per BLM Onshore Order 2

DRILLING PLAN (RE-ENTRY/SIDETRACK): BLM COMPLIANCE

XTO Energy Inc.
Nash Unit #3H
Projected TD: 18857' MD / 11130' TVD
SHL: 1980.4' FSL & 1988.1' FWL, SECTION 12, T23S, R29E
BHL: 200' FNL & 380' FWL, SECTION 1, T23S, R29E
Eddy County, NM

The active perfs in the Atoka will be abandoned by setting a CIBP at 12,264' (roughly 50' above the top perf with 40' of cement on top of it). Another CIBP will be set at 10,538', and the 9-5/8" casing will be tested to 1500 psi. A whipstock will then be set on top of the CIBP, and a window will be cut from approximately 10,510' to 10,535'. An 8-1/2" curve lateral hole will then be drilled to MD/TD and 5-1/2" casing will be set at TD and cemented back surface.

CASING PROGRAM:

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0-3122'	13-3/8"	48#	STC	K-55	Existing	1.03	1.36	3.38
12-1/4"	0-10975'	9-5/8"	40#	LTC	S-95	Existing	1.5	1.25	1.95
8-1/2"	10622-13771'	5-1/2"	20#	LTC	S-95	Existing	1.23	1.4	2.06
8-1/2"	0' – 18857'	5-1/2"	20#	BTC	P-110	New	1.33	1.44	2.67

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

The current wellhead will be cut off and the below wellhead system will be installed:

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom
B. Casing Spool: 11" 10M top flange x 13-5/8" 5M bottom flange
C. Tubing Head: 7-1/16" 15M top flange x 11" 10M bottom flange
   - Wellhead will be installed by manufacturer's representatives.
   - Manufacturer will monitor welding process to ensure appropriate temperature of seal.
   - Manufacturer will witness installation of test plug for initial test.
   - Operator will test the 9-5/8" casing per BLM Onshore Order 2

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
  - Detection of H_2S, and
  - Measures for protection against the gas,
  - 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 = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = I	2 ppm	N/A	1000 ppm

Contacting Authorities

XTO Energy Inc's 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).

EUNICE OFFICE – EDDY & LEA COUNTIES

EMSU @ Oil Center, NM, 8/10ths mile west of Hwy 8 on Hwy 175	
Eunice, NM	575-394-2089
XTO ENERGY INC 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:	
Bureau of Land Management	575-393-3612
New Mexico Oil Conservation Division	575-393-6161
CONTRACTORS:	
ABC Rental – Light Towers	575-394-3155
Bulldog Services – Trucking/Forklift	575-391-8543
Champion – Chemical	575-393-7726
Indian Fire & Safety	575-393-3093
Key – Dirt Contractor	575-393-3180
Key Tools – Light Towers	575-393-2415
Sweatt – Dirt Contractor	575-397-4541
RWI – Contract Gang	575-393-5305

October 27, 2017

Jessica Bonilla
XTO Energy Inc.
500 W. Illinois St Ste 100
Midland, TX 79701
432-620-6704
Jessica_Bonilla@xtoenergy.com

Bureau of Land Management
620 E. Greene
Carlsbad, NM 88220
575-887-6544

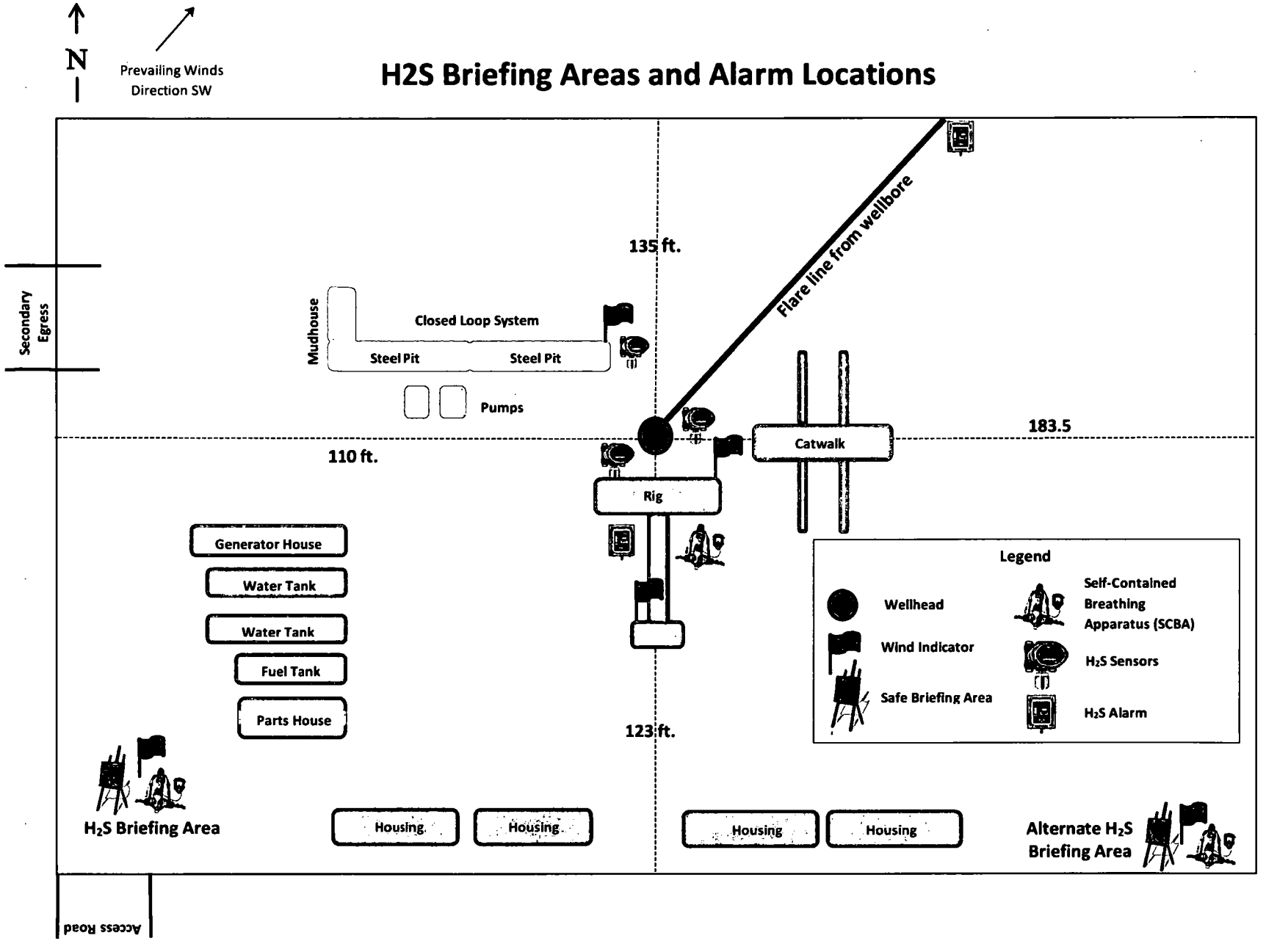
Dear Sirs:

XTO Energy Inc. does not anticipate encountering H2S while drilling the Nash Unit 3H located in Section 12, T23S, R29E, in Eddy County, New Mexico. As a precaution, I have attached an H2S contingency plan along with a gas analysis of our well stream. If you need anything further, please contact me at the telephone number or email listed above.

Thank you,

Jessica Bonilla
Regulatory Analyst

H2S Briefing Areas and Alarm Locations



XTO Energy

Eddy County, NM (NAD-27)
Nash Unit
#3H

OH

Plan: PERMIT

Standard Planning Report

26 January, 2018

XTO ENERGY

Project: Eddy County, NM (NAD-27)
Site: Nash Unit
Well: #3H
Wellbore: OH
Design: PERMIT

PROJECT DETAILS: Eddy County, NM (NAD-27)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: #3H

Rig Name:
RKB = 25' @ 3007.00usft
Ground Level: 2982.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	479526.30	621534.30	32.317721	-103.939919

DESIGN TARGET DETAILS

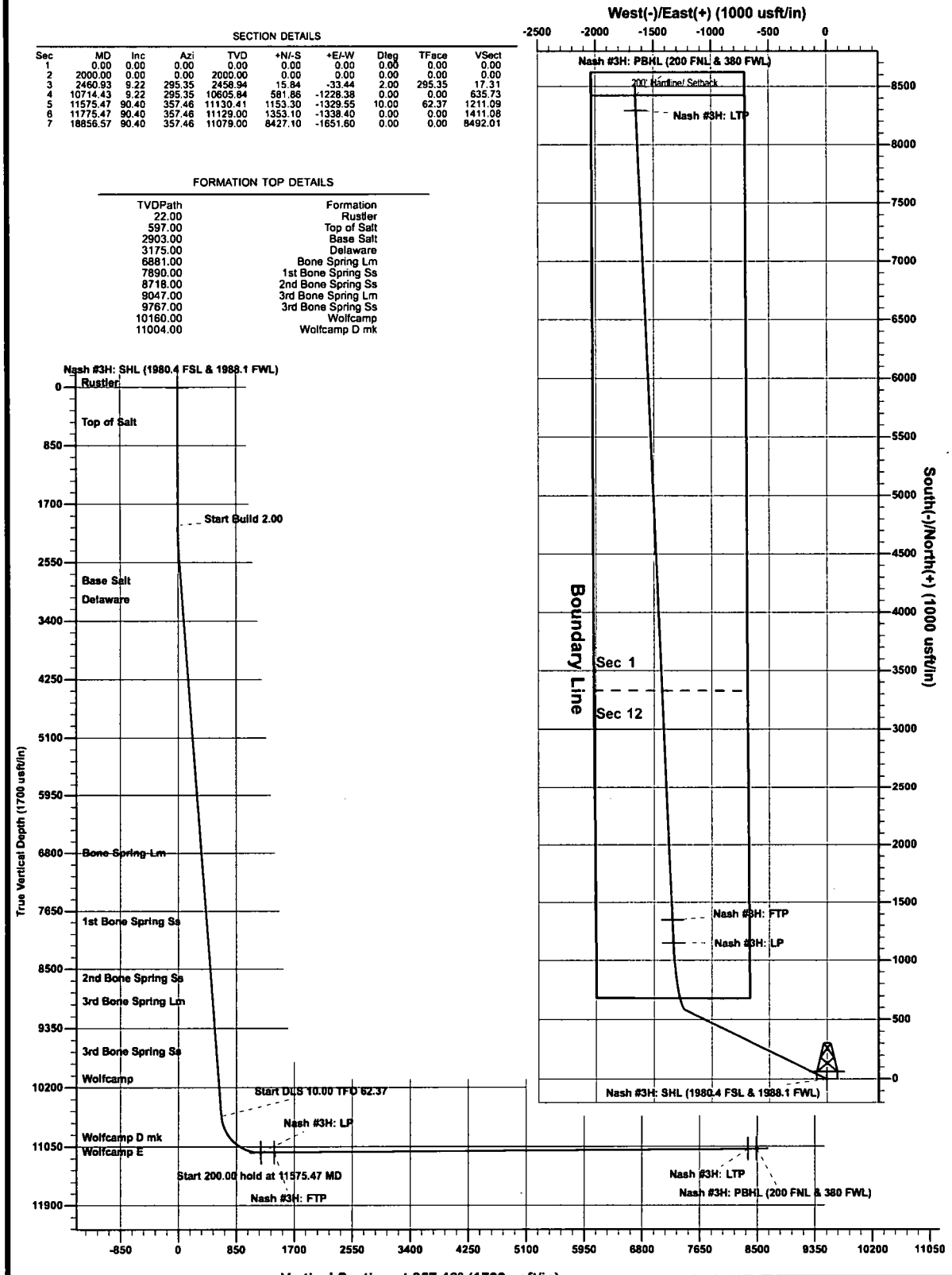
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Nash #3H: SHL (1980.4 FSL & 1988.1 FWL)	0.00	0.00	0.00	479526.30	621534.30	32.317721	-103.939919	Point
Nash #3H: PBHL (200 FNL & 380 FWL)	11079.00	8427.10	-1651.60	487953.40	619882.70	32.340902	-103.945167	Point
Nash #3H: LTP	11079.92	8297.20	-1645.90	487823.50	619888.40	32.340545	-103.945150	Point
Nash #3H: FTP	11129.00	1353.10	-1338.40	480879.40	620195.90	32.321454	-103.944236	Point
Nash #3H: LP	11130.41	1153.30	-1329.55	480679.60	620204.75	32.320904	-103.944209	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	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
3	2460.93	9.22	295.35	2458.94	15.84	-33.44	2.00	295.35	17.31
4	10714.43	9.22	295.35	10605.84	581.86	-1228.38	0.00	0.00	635.73
5	11575.47	90.40	357.46	11130.41	1153.30	-1329.55	10.00	62.37	1211.09
6	11775.47	90.40	357.46	11129.00	1353.10	-1338.40	0.00	0.00	1411.08
7	18856.57	90.40	357.46	11079.00	8427.10	-1651.60	0.00	0.00	8492.01

FORMATION TOP DETAILS

TVDPath	Formation
22.00	Rustler
597.00	Top of Salt
2903.00	Base Salt
3175.00	Delaware
6881.00	Bone Spring Lm
7890.00	1st Bone Spring Ss
8718.00	2nd Bone Spring Ss
9047.00	3rd Bone Spring Lm
9767.00	3rd Bone Spring Ss
10160.00	Wolfcamp
11004.00	Wolfcamp D mk



Plan: PERMIT (#3H/OH)

Created By: Matthew May Date: 6:49, January 26 2018

Note: All Plan details including boundary lines and offset well data is subject to customers approval.

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #3H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3007.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3007.00usft
Site:	Nash Unit	**North Reference:**	Grid
Well:	#3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Project	Eddy County, NM (NAD-27)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Nash Unit				
Site Position:		**Northing:**	479,526.30 usft	**Latitude:**	32.317721
From:	Map	**Easting:**	621,534.30 usft	**Longitude:**	-103.939919
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.21 °

Well	#3H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	479,526.30 usft	**Latitude:**	32.317721
	+E/-W	0.00 usft	**Easting:**	621,534.30 usft	**Longitude:**	-103.939919
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	2,982.00 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	1/26/2018	7.07	60.08	47,895

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	357.46	

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,460.93	9.22	295.35	2,458.94	15.84	-33.44	2.00	2.00	0.00	295.35	
10,714.43	9.22	295.35	10,605.84	581.86	-1,228.38	0.00	0.00	0.00	0.00	
11,575.47	90.40	357.46	11,130.41	1,153.30	-1,329.55	10.00	9.43	7.21	62.37	
11,775.47	90.40	357.46	11,129.00	1,353.10	-1,338.40	0.00	0.00	0.00	0.00	Nash #3H: FTP
18,856.57	90.40	357.46	11,079.00	8,427.10	-1,651.60	0.00	0.00	0.00	0.00	Nash #3H: PBHL (2

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #3H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3007.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3007.00usft
Site:	Nash Unit	**North Reference:**	Grid
Well:	#3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	2.00	295.35	2,099.98	0.75	-1.58	0.82	2.00	2.00	0.00
2,200.00	4.00	295.35	2,199.84	2.99	-6.31	3.26	2.00	2.00	0.00
2,300.00	6.00	295.35	2,299.45	6.72	-14.18	7.34	2.00	2.00	0.00
2,400.00	8.00	295.35	2,398.70	11.93	-25.20	13.04	2.00	2.00	0.00
2,460.93	9.22	295.35	2,458.94	15.84	-33.44	17.31	2.00	2.00	0.00
2,500.00	9.22	295.35	2,497.51	18.52	-39.10	20.23	0.00	0.00	0.00
2,600.00	9.22	295.35	2,596.22	25.38	-53.57	27.73	0.00	0.00	0.00
2,700.00	9.22	295.35	2,694.93	32.23	-68.05	35.22	0.00	0.00	0.00
2,800.00	9.22	295.35	2,793.63	39.09	-82.53	42.71	0.00	0.00	0.00
2,900.00	9.22	295.35	2,892.34	45.95	-97.01	50.20	0.00	0.00	0.00
3,000.00	9.22	295.35	2,991.05	52.81	-111.49	57.70	0.00	0.00	0.00
3,100.00	9.22	295.35	3,089.76	59.67	-125.96	65.19	0.00	0.00	0.00
3,200.00	9.22	295.35	3,188.47	66.52	-140.44	72.68	0.00	0.00	0.00
3,300.00	9.22	295.35	3,287.18	73.38	-154.92	80.18	0.00	0.00	0.00
3,400.00	9.22	295.35	3,385.89	80.24	-169.40	87.67	0.00	0.00	0.00
3,500.00	9.22	295.35	3,484.59	87.10	-183.88	95.16	0.00	0.00	0.00
3,600.00	9.22	295.35	3,583.30	93.96	-198.35	102.66	0.00	0.00	0.00
3,700.00	9.22	295.35	3,682.01	100.81	-212.83	110.15	0.00	0.00	0.00
3,800.00	9.22	295.35	3,780.72	107.67	-227.31	117.64	0.00	0.00	0.00
3,900.00	9.22	295.35	3,879.43	114.53	-241.79	125.13	0.00	0.00	0.00
4,000.00	9.22	295.35	3,978.14	121.39	-256.27	132.63	0.00	0.00	0.00
4,100.00	9.22	295.35	4,076.84	128.25	-270.74	140.12	0.00	0.00	0.00
4,200.00	9.22	295.35	4,175.55	135.10	-285.22	147.61	0.00	0.00	0.00
4,300.00	9.22	295.35	4,274.26	141.96	-299.70	155.11	0.00	0.00	0.00
4,400.00	9.22	295.35	4,372.97	148.82	-314.18	162.60	0.00	0.00	0.00
4,500.00	9.22	295.35	4,471.68	155.68	-328.66	170.09	0.00	0.00	0.00
4,600.00	9.22	295.35	4,570.39	162.54	-343.13	177.58	0.00	0.00	0.00
4,700.00	9.22	295.35	4,669.09	169.39	-357.61	185.08	0.00	0.00	0.00
4,800.00	9.22	295.35	4,767.80	176.25	-372.09	192.57	0.00	0.00	0.00
4,900.00	9.22	295.35	4,866.51	183.11	-386.57	200.06	0.00	0.00	0.00
5,000.00	9.22	295.35	4,965.22	189.97	-401.05	207.56	0.00	0.00	0.00
5,100.00	9.22	295.35	5,063.93	196.83	-415.52	215.05	0.00	0.00	0.00
5,200.00	9.22	295.35	5,162.64	203.68	-430.00	222.54	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #3H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3007.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3007.00usft
Site:	Nash Unit	**North Reference:**	Grid
Well:	#3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	9.22	295.35	5,261.35	210.54	-444.48	230.03	0.00	0.00	0.00
5,400.00	9.22	295.35	5,360.05	217.40	-458.96	237.53	0.00	0.00	0.00
5,500.00	9.22	295.35	5,458.76	224.26	-473.44	245.02	0.00	0.00	0.00
5,600.00	9.22	295.35	5,557.47	231.12	-487.91	252.51	0.00	0.00	0.00
5,700.00	9.22	295.35	5,656.18	237.97	-502.39	260.01	0.00	0.00	0.00
5,800.00	9.22	295.35	5,754.89	244.83	-516.87	267.50	0.00	0.00	0.00
5,900.00	9.22	295.35	5,853.60	251.69	-531.35	274.99	0.00	0.00	0.00
6,000.00	9.22	295.35	5,952.30	258.55	-545.83	282.48	0.00	0.00	0.00
6,100.00	9.22	295.35	6,051.01	265.41	-560.30	289.98	0.00	0.00	0.00
6,200.00	9.22	295.35	6,149.72	272.26	-574.78	297.47	0.00	0.00	0.00
6,300.00	9.22	295.35	6,248.43	279.12	-589.26	304.96	0.00	0.00	0.00
6,400.00	9.22	295.35	6,347.14	285.98	-603.74	312.46	0.00	0.00	0.00
6,500.00	9.22	295.35	6,445.85	292.84	-618.22	319.95	0.00	0.00	0.00
6,600.00	9.22	295.35	6,544.56	299.70	-632.70	327.44	0.00	0.00	0.00
6,700.00	9.22	295.35	6,643.26	306.55	-647.17	334.93	0.00	0.00	0.00
6,800.00	9.22	295.35	6,741.97	313.41	-661.65	342.43	0.00	0.00	0.00
6,900.00	9.22	295.35	6,840.68	320.27	-676.13	349.92	0.00	0.00	0.00
7,000.00	9.22	295.35	6,939.39	327.13	-690.61	357.41	0.00	0.00	0.00
7,100.00	9.22	295.35	7,038.10	333.99	-705.09	364.91	0.00	0.00	0.00
7,200.00	9.22	295.35	7,136.81	340.84	-719.56	372.40	0.00	0.00	0.00
7,300.00	9.22	295.35	7,235.51	347.70	-734.04	379.89	0.00	0.00	0.00
7,400.00	9.22	295.35	7,334.22	354.56	-748.52	387.38	0.00	0.00	0.00
7,500.00	9.22	295.35	7,432.93	361.42	-763.00	394.88	0.00	0.00	0.00
7,600.00	9.22	295.35	7,531.64	368.28	-777.48	402.37	0.00	0.00	0.00
7,700.00	9.22	295.35	7,630.35	375.13	-791.95	409.86	0.00	0.00	0.00
7,800.00	9.22	295.35	7,729.06	381.99	-806.43	417.36	0.00	0.00	0.00
7,900.00	9.22	295.35	7,827.76	388.85	-820.91	424.85	0.00	0.00	0.00
8,000.00	9.22	295.35	7,926.47	395.71	-835.39	432.34	0.00	0.00	0.00
8,100.00	9.22	295.35	8,025.18	402.57	-849.87	439.83	0.00	0.00	0.00
8,200.00	9.22	295.35	8,123.89	409.42	-864.34	447.33	0.00	0.00	0.00
8,300.00	9.22	295.35	8,222.60	416.28	-878.82	454.82	0.00	0.00	0.00
8,400.00	9.22	295.35	8,321.31	423.14	-893.30	462.31	0.00	0.00	0.00
8,500.00	9.22	295.35	8,420.02	430.00	-907.78	469.81	0.00	0.00	0.00
8,600.00	9.22	295.35	8,518.72	436.86	-922.26	477.30	0.00	0.00	0.00
8,700.00	9.22	295.35	8,617.43	443.71	-936.73	484.79	0.00	0.00	0.00
8,800.00	9.22	295.35	8,716.14	450.57	-951.21	492.29	0.00	0.00	0.00
8,900.00	9.22	295.35	8,814.85	457.43	-965.69	499.78	0.00	0.00	0.00
9,000.00	9.22	295.35	8,913.56	464.29	-980.17	507.27	0.00	0.00	0.00
9,100.00	9.22	295.35	9,012.27	471.15	-994.65	514.76	0.00	0.00	0.00
9,200.00	9.22	295.35	9,110.97	478.00	-1,009.12	522.26	0.00	0.00	0.00
9,300.00	9.22	295.35	9,209.68	484.86	-1,023.60	529.75	0.00	0.00	0.00
9,400.00	9.22	295.35	9,308.39	491.72	-1,038.08	537.24	0.00	0.00	0.00
9,500.00	9.22	295.35	9,407.10	498.58	-1,052.56	544.74	0.00	0.00	0.00
9,600.00	9.22	295.35	9,505.81	505.44	-1,067.04	552.23	0.00	0.00	0.00
9,700.00	9.22	295.35	9,604.52	512.29	-1,081.51	559.72	0.00	0.00	0.00
9,800.00	9.22	295.35	9,703.22	519.15	-1,095.99	567.21	0.00	0.00	0.00
9,900.00	9.22	295.35	9,801.93	526.01	-1,110.47	574.71	0.00	0.00	0.00
10,000.00	9.22	295.35	9,900.64	532.87	-1,124.95	582.20	0.00	0.00	0.00
10,100.00	9.22	295.35	9,999.35	539.73	-1,139.43	589.69	0.00	0.00	0.00
10,200.00	9.22	295.35	10,098.06	546.58	-1,153.90	597.19	0.00	0.00	0.00
10,300.00	9.22	295.35	10,196.77	553.44	-1,168.38	604.68	0.00	0.00	0.00
10,400.00	9.22	295.35	10,295.48	560.30	-1,182.86	612.17	0.00	0.00	0.00
10,500.00	9.22	295.35	10,394.18	567.16	-1,197.34	619.66	0.00	0.00	0.00
10,600.00	9.22	295.35	10,492.89	574.02	-1,211.82	627.16	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #3H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3007.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3007.00usft
Site:	Nash Unit	**North Reference:**	Grid
Well:	#3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.00	9.22	295.35	10,591.60	580.87	-1,226.29	634.65	0.00	0.00	0.00
10,714.43	9.22	295.35	10,605.84	581.86	-1,228.38	635.73	0.00	0.00	0.00
10,750.00	11.31	311.62	10,640.85	585.40	-1,233.57	639.50	10.00	5.89	45.75
10,800.00	15.20	325.54	10,689.52	594.07	-1,240.95	648.48	10.00	7.77	27.84
10,850.00	19.58	333.64	10,737.23	606.99	-1,248.38	661.71	10.00	8.77	16.19
10,900.00	24.20	338.80	10,783.62	624.06	-1,255.81	679.10	10.00	9.24	10.33
10,950.00	28.94	342.38	10,828.33	645.16	-1,263.18	700.51	10.00	9.48	7.15
11,000.00	33.75	345.02	10,871.02	670.12	-1,270.44	725.76	10.00	9.62	5.27
11,050.00	38.60	347.06	10,911.37	698.76	-1,277.53	754.69	10.00	9.71	4.09
11,100.00	43.48	348.71	10,949.07	730.85	-1,284.39	787.05	10.00	9.76	3.30
11,150.00	48.38	350.09	10,983.83	766.16	-1,290.98	822.61	10.00	9.80	2.76
11,200.00	53.30	351.27	11,015.40	804.40	-1,297.24	861.10	10.00	9.83	2.36
11,250.00	58.23	352.31	11,043.52	845.30	-1,303.13	902.22	10.00	9.85	2.08
11,300.00	63.16	353.25	11,067.99	888.55	-1,308.60	945.67	10.00	9.87	1.87
11,350.00	68.10	354.10	11,088.62	933.80	-1,313.61	991.10	10.00	9.88	1.71
11,400.00	73.04	354.90	11,105.24	980.72	-1,318.13	1,038.17	10.00	9.89	1.60
11,450.00	77.99	355.66	11,117.75	1,028.95	-1,322.10	1,086.53	10.00	9.89	1.52
11,500.00	82.93	356.39	11,126.03	1,078.12	-1,325.52	1,135.81	10.00	9.90	1.46
11,550.00	87.88	357.10	11,130.03	1,127.87	-1,328.35	1,185.63	10.00	9.90	1.43
11,575.47	90.40	357.46	11,130.41	1,153.30	-1,329.55	1,211.09	10.00	9.90	1.42
11,600.00	90.40	357.46	11,130.24	1,177.81	-1,330.64	1,235.62	0.00	0.00	0.00
11,700.00	90.40	357.46	11,129.53	1,277.71	-1,335.06	1,335.62	0.00	0.00	0.00
11,775.47	90.40	357.46	11,129.00	1,353.10	-1,338.40	1,411.08	0.00	0.00	0.00
11,800.00	90.40	357.46	11,128.83	1,377.61	-1,339.49	1,435.62	0.00	0.00	0.00
11,900.00	90.40	357.46	11,128.12	1,477.51	-1,343.91	1,535.62	0.00	0.00	0.00
12,000.00	90.40	357.46	11,127.41	1,577.41	-1,348.33	1,635.61	0.00	0.00	0.00
12,100.00	90.40	357.46	11,126.71	1,677.31	-1,352.75	1,735.61	0.00	0.00	0.00
12,200.00	90.40	357.46	11,126.00	1,777.21	-1,357.18	1,835.61	0.00	0.00	0.00
12,300.00	90.40	357.46	11,125.30	1,877.11	-1,361.60	1,935.61	0.00	0.00	0.00
12,400.00	90.40	357.46	11,124.59	1,977.01	-1,366.02	2,035.60	0.00	0.00	0.00
12,500.00	90.40	357.46	11,123.88	2,076.91	-1,370.45	2,135.60	0.00	0.00	0.00
12,600.00	90.40	357.46	11,123.18	2,176.81	-1,374.87	2,235.60	0.00	0.00	0.00
12,700.00	90.40	357.46	11,122.47	2,276.71	-1,379.29	2,335.60	0.00	0.00	0.00
12,800.00	90.40	357.46	11,121.77	2,376.61	-1,383.72	2,435.59	0.00	0.00	0.00
12,900.00	90.40	357.46	11,121.06	2,476.51	-1,388.14	2,535.59	0.00	0.00	0.00
13,000.00	90.40	357.46	11,120.35	2,576.41	-1,392.56	2,635.59	0.00	0.00	0.00
13,100.00	90.40	357.46	11,119.65	2,676.30	-1,396.98	2,735.59	0.00	0.00	0.00
13,200.00	90.40	357.46	11,118.94	2,776.20	-1,401.41	2,835.58	0.00	0.00	0.00
13,300.00	90.40	357.46	11,118.24	2,876.10	-1,405.83	2,935.58	0.00	0.00	0.00
13,400.00	90.40	357.46	11,117.53	2,976.00	-1,410.25	3,035.58	0.00	0.00	0.00
13,500.00	90.40	357.46	11,116.82	3,075.90	-1,414.68	3,135.58	0.00	0.00	0.00
13,600.00	90.40	357.46	11,116.12	3,175.80	-1,419.10	3,235.57	0.00	0.00	0.00
13,700.00	90.40	357.46	11,115.41	3,275.70	-1,423.52	3,335.57	0.00	0.00	0.00
13,800.00	90.40	357.46	11,114.70	3,375.60	-1,427.95	3,435.57	0.00	0.00	0.00
13,900.00	90.40	357.46	11,114.00	3,475.50	-1,432.37	3,535.57	0.00	0.00	0.00
14,000.00	90.40	357.46	11,113.29	3,575.40	-1,436.79	3,635.56	0.00	0.00	0.00
14,100.00	90.40	357.46	11,112.59	3,675.30	-1,441.22	3,735.56	0.00	0.00	0.00
14,200.00	90.40	357.46	11,111.88	3,775.20	-1,445.64	3,835.56	0.00	0.00	0.00
14,300.00	90.40	357.46	11,111.17	3,875.10	-1,450.06	3,935.56	0.00	0.00	0.00
14,400.00	90.40	357.46	11,110.47	3,975.00	-1,454.48	4,035.55	0.00	0.00	0.00
14,500.00	90.40	357.46	11,109.76	4,074.90	-1,458.91	4,135.55	0.00	0.00	0.00
14,600.00	90.40	357.46	11,109.06	4,174.80	-1,463.33	4,235.55	0.00	0.00	0.00
14,700.00	90.40	357.46	11,108.35	4,274.70	-1,467.75	4,335.55	0.00	0.00	0.00
14,800.00	90.40	357.46	11,107.64	4,374.60	-1,472.18	4,435.54	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #3H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3007.00usft
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3007.00usft
Site:	Nash Unit	**North Reference:**	Grid
Well:	#3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,900.00	90.40	357.46	11,106.94	4,474.50	-1,476.60	4,535.54	0.00	0.00	0.00
15,000.00	90.40	357.46	11,106.23	4,574.40	-1,481.02	4,635.54	0.00	0.00	0.00
15,100.00	90.40	357.46	11,105.53	4,674.30	-1,485.45	4,735.54	0.00	0.00	0.00
15,200.00	90.40	357.46	11,104.82	4,774.20	-1,489.87	4,835.53	0.00	0.00	0.00
15,300.00	90.40	357.46	11,104.11	4,874.10	-1,494.29	4,935.53	0.00	0.00	0.00
15,400.00	90.40	357.46	11,103.41	4,974.00	-1,498.71	5,035.53	0.00	0.00	0.00
15,500.00	90.40	357.46	11,102.70	5,073.90	-1,503.14	5,135.53	0.00	0.00	0.00
15,600.00	90.40	357.46	11,102.00	5,173.80	-1,507.56	5,235.52	0.00	0.00	0.00
15,700.00	90.40	357.46	11,101.29	5,273.70	-1,511.98	5,335.52	0.00	0.00	0.00
15,800.00	90.40	357.46	11,100.58	5,373.60	-1,516.41	5,435.52	0.00	0.00	0.00
15,900.00	90.40	357.46	11,099.88	5,473.49	-1,520.83	5,535.52	0.00	0.00	0.00
16,000.00	90.40	357.46	11,099.17	5,573.39	-1,525.25	5,635.51	0.00	0.00	0.00
16,100.00	90.40	357.46	11,098.46	5,673.29	-1,529.68	5,735.51	0.00	0.00	0.00
16,200.00	90.40	357.46	11,097.76	5,773.19	-1,534.10	5,835.51	0.00	0.00	0.00
16,300.00	90.40	357.46	11,097.05	5,873.09	-1,538.52	5,935.51	0.00	0.00	0.00
16,400.00	90.40	357.46	11,096.35	5,972.99	-1,542.94	6,035.50	0.00	0.00	0.00
16,500.00	90.40	357.46	11,095.64	6,072.89	-1,547.37	6,135.50	0.00	0.00	0.00
16,600.00	90.40	357.46	11,094.93	6,172.79	-1,551.79	6,235.50	0.00	0.00	0.00
16,700.00	90.40	357.46	11,094.23	6,272.69	-1,556.21	6,335.50	0.00	0.00	0.00
16,800.00	90.40	357.46	11,093.52	6,372.59	-1,560.64	6,435.49	0.00	0.00	0.00
16,900.00	90.40	357.46	11,092.82	6,472.49	-1,565.06	6,535.49	0.00	0.00	0.00
17,000.00	90.40	357.46	11,092.11	6,572.39	-1,569.48	6,635.49	0.00	0.00	0.00
17,100.00	90.40	357.46	11,091.40	6,672.29	-1,573.91	6,735.49	0.00	0.00	0.00
17,200.00	90.40	357.46	11,090.70	6,772.19	-1,578.33	6,835.48	0.00	0.00	0.00
17,300.00	90.40	357.46	11,089.99	6,872.09	-1,582.75	6,935.48	0.00	0.00	0.00
17,400.00	90.40	357.46	11,089.29	6,971.99	-1,587.18	7,035.48	0.00	0.00	0.00
17,500.00	90.40	357.46	11,088.58	7,071.89	-1,591.60	7,135.48	0.00	0.00	0.00
17,600.00	90.40	357.46	11,087.87	7,171.79	-1,596.02	7,235.47	0.00	0.00	0.00
17,700.00	90.40	357.46	11,087.17	7,271.69	-1,600.44	7,335.47	0.00	0.00	0.00
17,800.00	90.40	357.46	11,086.46	7,371.59	-1,604.87	7,435.47	0.00	0.00	0.00
17,900.00	90.40	357.46	11,085.75	7,471.49	-1,609.29	7,535.47	0.00	0.00	0.00
18,000.00	90.40	357.46	11,085.05	7,571.39	-1,613.71	7,635.46	0.00	0.00	0.00
18,100.00	90.40	357.46	11,084.34	7,671.29	-1,618.14	7,735.46	0.00	0.00	0.00
18,200.00	90.40	357.46	11,083.64	7,771.19	-1,622.56	7,835.46	0.00	0.00	0.00
18,300.00	90.40	357.46	11,082.93	7,871.09	-1,626.98	7,935.46	0.00	0.00	0.00
18,400.00	90.40	357.46	11,082.22	7,970.99	-1,631.41	8,035.45	0.00	0.00	0.00
18,500.00	90.40	357.46	11,081.52	8,070.89	-1,635.83	8,135.45	0.00	0.00	0.00
18,600.00	90.40	357.46	11,080.81	8,170.79	-1,640.25	8,235.45	0.00	0.00	0.00
18,700.00	90.40	357.46	11,080.11	8,270.68	-1,644.67	8,335.45	0.00	0.00	0.00
18,800.00	90.40	357.46	11,079.40	8,370.58	-1,649.10	8,435.44	0.00	0.00	0.00
18,856.57	90.40	357.46	11,079.00	8,427.10	-1,651.60	8,492.01	0.00	0.00	0.00

DRILLING PLAN (RE-ENTRY/SIDETRACK): BLM COMPLIANCE

XTO Energy Inc.
Nash Unit #3H
Projected TD: 18857' MD / 11130' TVD
SHL: 1980.4' FSL & 1988.1' FWL, SECTION 12, T23S, R29E
BHL: 200' FNL & 380' FWL, SECTION 1, T23S, R29E
Eddy County, NM

1. GEOLOGIC NAME OF SURFACE FORMATION:

A. Quaternary

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	22'	Water
Top of Salt	597'	Water
Base of Salt	2903'	Water
Delaware	3175'	Water
Bone Spring	6881'	Water/Oil/Gas
1st Bone Spring Ss	7890'	Water/Oil/Gas
2nd Bone Spring Ss	8718'	Water/Oil/Gas
3rd Bone Spring Ss	9767'	Water/Oil/Gas
Wolfcamp	10160'	Water/Oil/Gas
Wolfcamp D	11004'	Water/Oil/Gas
Target/Land Curve	11130'	Water/Oil/Gas

*** Groundwater depth 40' (per NM State Engineers Office).
No other formations are expected to yield oil, gas or fresh water in measurable volumes. The active perfs in the Atoka will be abandoned by setting a CIBP at 12,264' (roughly 50' above the top perf with 40' of cement on top of it). Another CIBP will be set at 10,538', and the 9-5/8" casing will be tested to 1500 psi. A whipstock will then be set on top of the CIBP, and a window will be cut from approximately 10,510' to 10,535'. An 8-1/2" curve lateral hole will then be drilled to MD/TD and 5-1/2" casing will be set at TD and cemented back surface.

3. CASING PROGRAM:

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0-3122'	13-3/8"	48#	STC	K-55	Existing	1.03	1.36	3.38
12-1/4"	0-10975'	9-5/8"	40#	LTC	S-95	Existing	1.5	1.25	1.95
8-1/2"	10622-13771'	5-1/2"	20#	LTC	S-95	Existing	1.23	1.4	2.06
8-1/2"	0' – 18857'	5-1/2"	20#	BTC	P-110	New	1.33	1.44	2.67

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

The current wellhead will be cut off and the below wellhead system will be installed:

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom
B. Casing Spool: 11" 10M top flange x 13-5/8" 5M bottom flange
C. Tubing Head: 7-1/16" 15M top flange x 11" 10M bottom flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Manufacturer will witness installation of test plug for initial test.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2

4. CEMENT PROGRAM:

A. **Production Casing:** 5-1/2", 20#, NEW P-110, BTC casing to be set at ± 18857'. Casing will be cemented to surface.

Lead: 20 bbls FW, then 1131 sx Tuned Light + 0.5 lbm/sk CFR-3 + 1.5 lbm/sk salt + 0.1% HR601 (mixed at 10.5 ppg, 2.69 ft^3/sk, 12.26 gal/sx wtr) Compr Strengths 12 hr – 126 psi 16 hr – 500 psi 48 hr – 1106 psi

Tail: 1599 sx VersaCem PBHS2 + 0.5% LAP-1 + 0.25 lbm/sk D-air 5000 + 0.2% HR 601 + 0.4% CFR-3 + 1 pps Salt (mixed at 13.2 ppg, 1.61 ft^3/sk, 8.38 gal/sx wtr)
Compr Strengths: 12 hr – 1375 psi 24 hr – 2285 psi
***All volumes 30% excess in open hole. Planned top of cement at surface.

5. PRESSURE CONTROL EQUIPMENT:

The blow out preventer equipment (BOP) required for this well consists of a 13-5/8" 10M Hydril and a 13-5/8" minimum 10M Double Ram BOP. A variance is requested to use a 5M Hydril. MASP should not exceed 5249 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 11" 10M flange, the BOP test will be limited to 10,000psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

6. PROPOSED MUD CIRCULATION SYSTEM:

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
10538' to 18856'	8-1/2"	FW / Cut Brine / Polymer	13-13.3	29-32	NC - 20

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

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

A. A Kelly cock will be in the drill string at all times.
B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
C. H2S monitors will be on location when drilling below the 13-3/8" casing.

8. LOGGING, CORING AND TESTING PROGRAM:

Mud Logger: Mud Logging Unit (2 man) on @ 10538'.
Catch 20' samples from 10538' to landing point
Catch 30' samples from landing point to TD/MD.
Send 1 set of dry samples to Midland Sample Library.

9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

None anticipated. BHT of 155 to 175 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

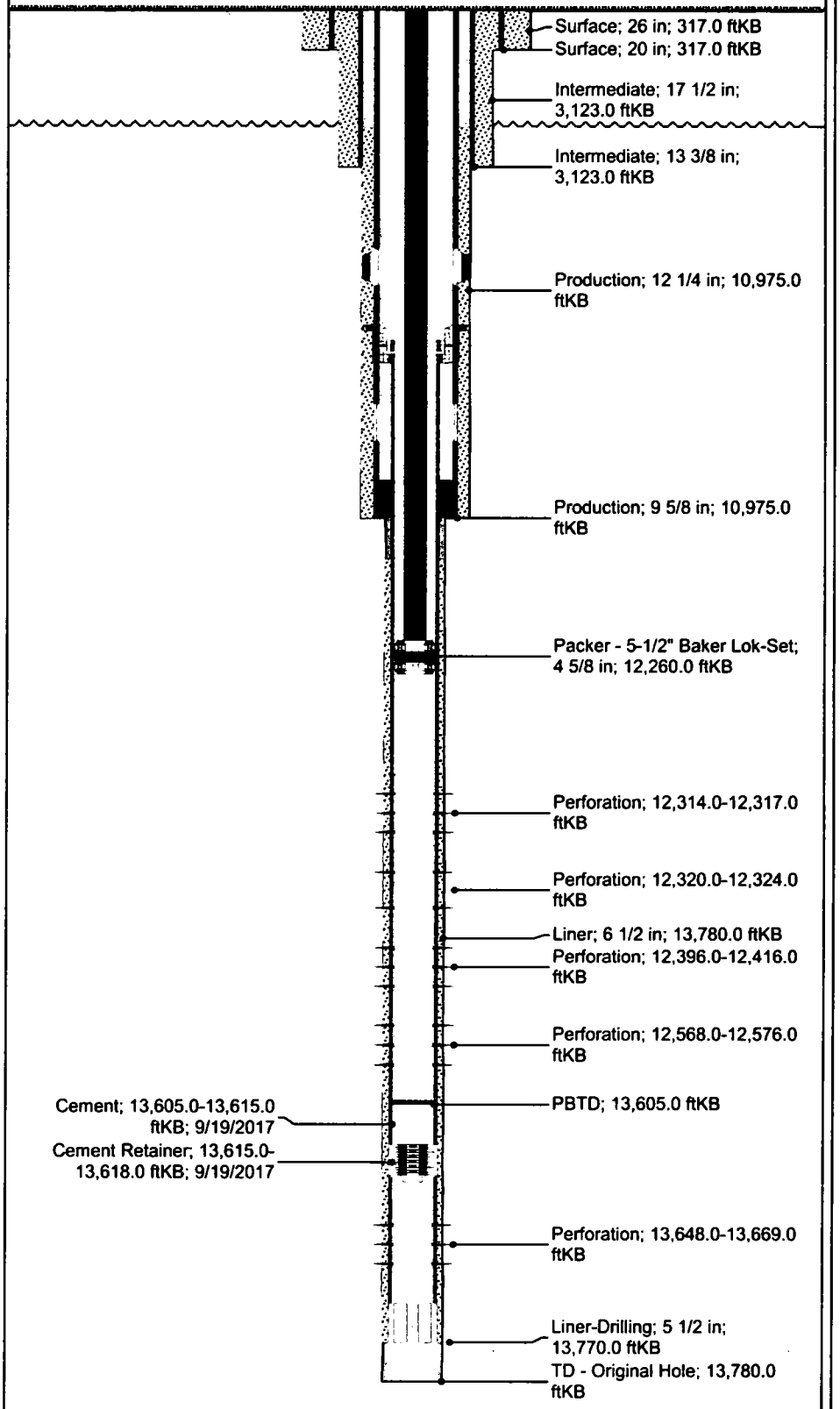
Schematic - Vertical with Perfs

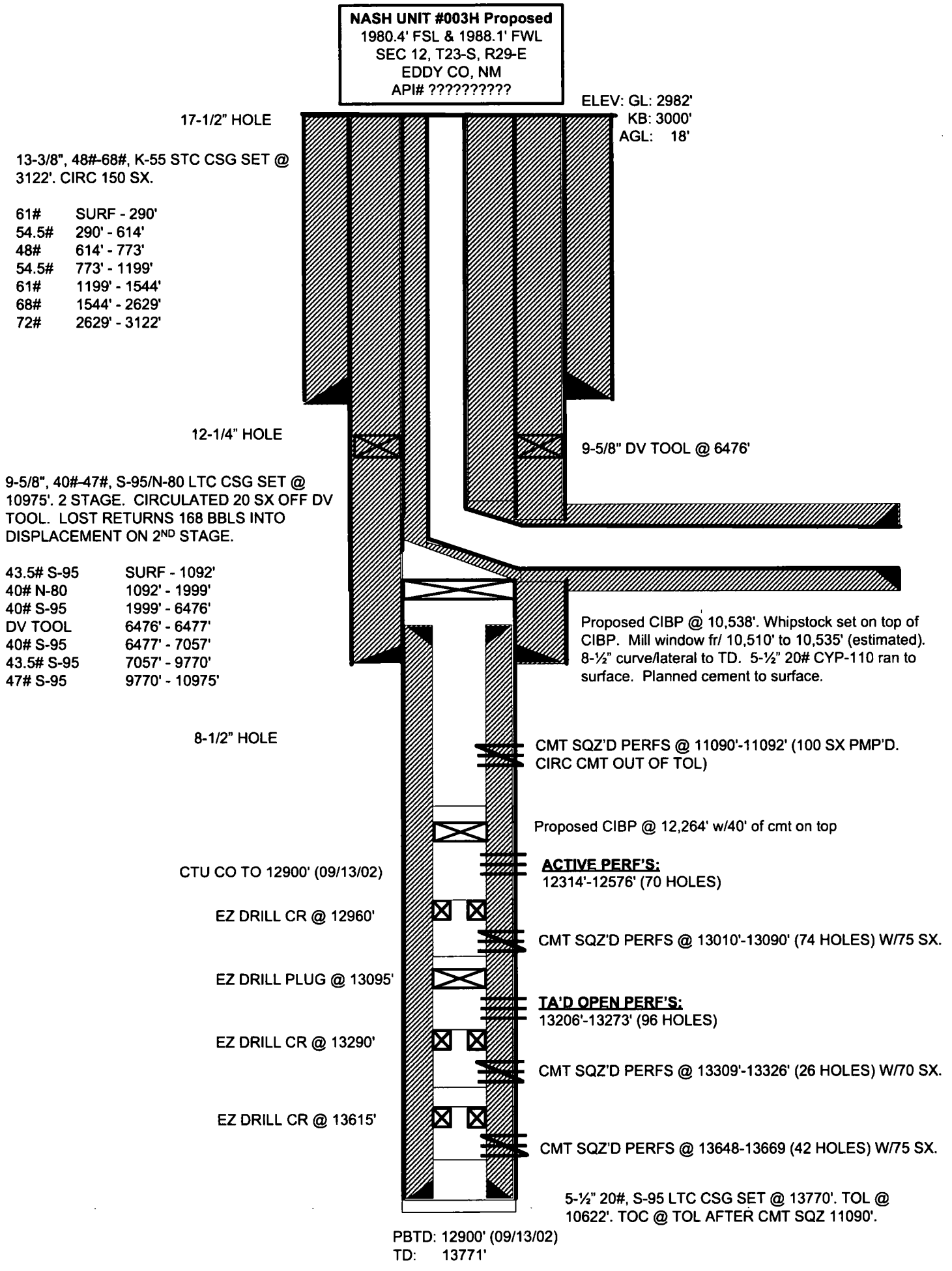
Well Name: NASH UNIT 003

API/UWI	Accounting ID	Permit Number	State/Province	County			
3001521781	116801	3001521781	New Mexico	Eddy			
Surface Location			Spud Date	Original KB Elevation (ft)	Gr Elev (ft)	KB-Ground Distance (ft)	CF Elev (ft)
			5/17/1976 00:00	2,995.00	2,977.00	18.00	

MD (ftKB)	TVD (ftKB)	Incl (°)
18.0	18.0	0.3
316.9	316.9	0.8
1,126.0	1,125.9	0.7
3,100.1	3,099.3	2.4
3,123.0	3,122.2	2.5
6,475.1	6,473.9	0.5
6,507.9	6,506.7	0.5
6,510.2	6,509.0	0.5
10,619.1	10,617.8	0.3
10,622.0	10,620.7	0.3
10,892.7	10,891.4	0.3
10,895.0	10,893.7	0.3
10,972.4	10,971.1	0.3
10,975.1	10,973.8	0.3
11,000.0	10,998.7	0.3
12,245.1	12,243.6	0.7
12,259.8	12,258.4	0.7
12,262.1	12,260.7	0.7
12,276.9	12,275.5	0.7
12,279.9	12,278.4	0.6
12,314.0	12,312.5	0.6
12,316.9	12,315.5	0.6
12,319.9	12,318.4	0.6
12,324.1	12,322.7	0.6
12,396.0	12,394.6	0.5
12,416.0	12,414.6	0.5
12,567.9	12,566.5	0.3
12,576.1	12,574.7	0.3
13,605.0	13,603.4	1.0
13,615.2	13,613.6	1.0
13,618.1	13,616.5	1.0
13,648.0	13,646.4	1.0
13,669.0	13,667.4	1.0
13,736.9	13,735.3	1.0
13,770.0	13,768.4	1.0
13,779.9	13,778.2	1.0

Vertical schematic (actual)




NASH UNIT #003H Proposed
1980.4' FSL & 1988.1' FWL
SEC 12, T23-S, R29-E
EDDY CO, NM
API# ??????????
ELEV: GL: 2982'
KB: 3000'
AGL: 18'
17-1/2" HOLE
13-3/8", 48#-68#, K-55 STC CSG SET @ 3122'. CIRC 150 SX.
61# SURF - 290'
54.5# 290' - 614'
48# 614' - 773'
54.5# 773' - 1199'
61# 1199' - 1544'
68# 1544' - 2629'
72# 2629' - 3122'
12-1/4" HOLE
9-5/8" DV TOOL @ 6476'
9-5/8", 40#-47#, S-95/N-80 LTC CSG SET @ 10975'. 2 STAGE. CIRCULATED 20 SX OFF DV TOOL. LOST RETURNS 168 BBLS INTO DISPLACEMENT ON 2ND STAGE.
43.5# S-95 SURF - 1092'
40# N-80 1092' - 1999'
40# S-95 1999' - 6476'
DV TOOL 6476' - 6477'
40# S-95 6477' - 7057'
43.5# S-95 7057' - 9770'
47# S-95 9770' - 10975'
Proposed CIBP @ 10,538'. Whipstock set on top of CIBP. Mill window fr/ 10,510' to 10,535' (estimated). 8-½" curve/lateral to TD. 5-½" 20# CYP-110 ran to surface. Planned cement to surface.
8-1/2" HOLE
CMT SQZ'D PERFS @ 11090'-11092' (100 SX PMP'D. CIRC CMT OUT OF TOL)
Proposed CIBP @ 12,264' w/40' of cmt on top
CTU CO TO 12900' (09/13/02)
ACTIVE PERF'S:
12314'-12576' (70 HOLES)
EZ DRILL CR @ 12960'
CMT SQZ'D PERFS @ 13010'-13090' (74 HOLES) W/75 SX.
EZ DRILL PLUG @ 13095'
TA'D OPEN PERF'S:
13206'-13273' (96 HOLES)
EZ DRILL CR @ 13290'
CMT SQZ'D PERFS @ 13309'-13326' (26 HOLES) W/70 SX.
EZ DRILL CR @ 13615'
CMT SQZ'D PERFS @ 13648-13669 (42 HOLES) W/75 SX.
5-½" 20#, S-95 LTC CSG SET @ 13770'. TOL @ 10622'. TOC @ TOL AFTER CMT SQZ 11090'.
PBTD: 12900' (09/13/02)
TD: 13771'

RE-ENTRY/SIDETRACK

Re-Entry Procedure

XTO Energy, Inc.
Nash Unit #003H
Projected TD: 18,857' MD / 11,130' TVD
SHL: 1980.4' FSL & 1988.1' FWL, SECTION 12, T23S, R29E
BHL: 200' FNL & 380' FWL, SECTION 1, T23S, R29E
Eddy County, NM

1. MIRU.
2. Set CIBP @ 12,264' w/40' of Class C cmt to abandon Atoka perfs fr/12,314-12,576'.
3. WOC 4 hours. Tag.
4. Set CIBP @ 10,538'.
5. Test 9-5/8" csg to 1500psi.
6. Set whipstock on top of CIBP.
7. Cut csg window fr/10,510-10,535'.
8. Drill 9-1/2" lateral to 18,857'.
9. Set new 5-1/2" 20# CYP-110 BTC csg fr/0-18,857'.
10. Cement 5-1/2" csg w/the following:

    Lead: 20 bbls FW, then 1131 sx Tuned Light + 0.5 lbm/sk CFR-3 + 1.5 lbm/sk salt + 0.1% HR601 (mixed at 10.5 ppg, 2.69 ft^3/sk, 12.26 gal/sx wtr) Compr Strengths 12 hr – 126 psi 16 hr – 500 psi 48 hr – 1106 psi

    Tail: 1599 sx VersaCem PBHS2 + 0.5% LAP-1 + 0.25 lbm/sk D-air 5000 + 0.2% HR 601 + 0.4% CFR-3 + 1 pps Salt (mixed at 13.2 ppg, 1.61 ft^3/sk, 8.38 gal/sx wtr)
    Compr Strengths: 12 hr – 1375 psi 24 hr – 2285 psi

    ***All volumes 30% excess in open hole. Planned top of cement at surface.

11. RDMO Drilling Rig.

Existing Casing

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0-3122'	13-3/8"	48#	STC	K-55	Existing	1.03	1.36	3.38
12-1/4"	0-10975'	9-5/8"	40#	LTC	S-95	Existing	1.5	1.25	1.95
8-1/2"	10622-13771'	5-1/2"	20#	LTC	S-95	Existing	1.23	1.4	2.06

New Casing

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
8-1/2"	0' – 18857'	5-1/2"	20#	BTC	P-110	New	1.33	1.44	2.67

GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

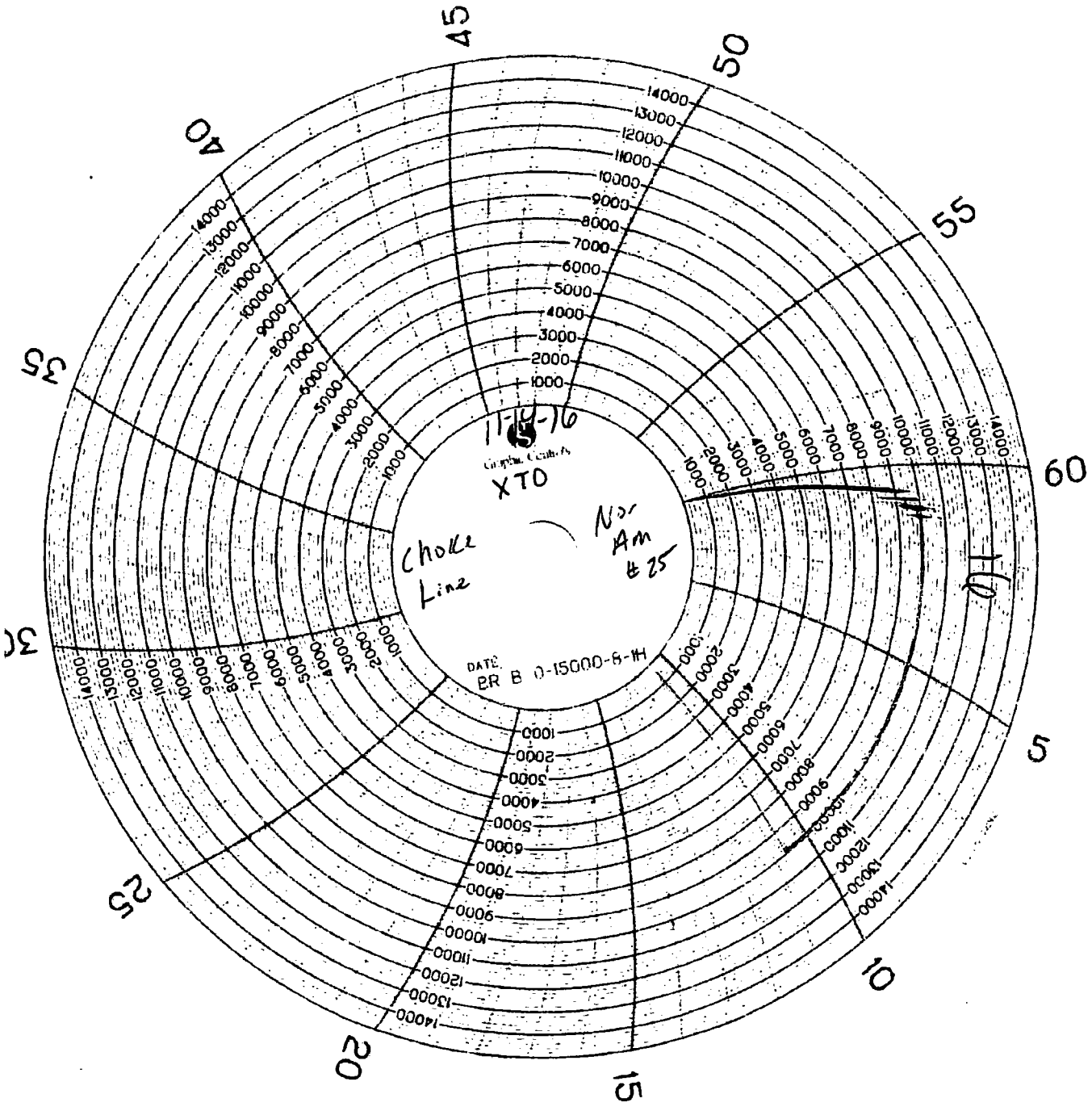
Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	NORMA

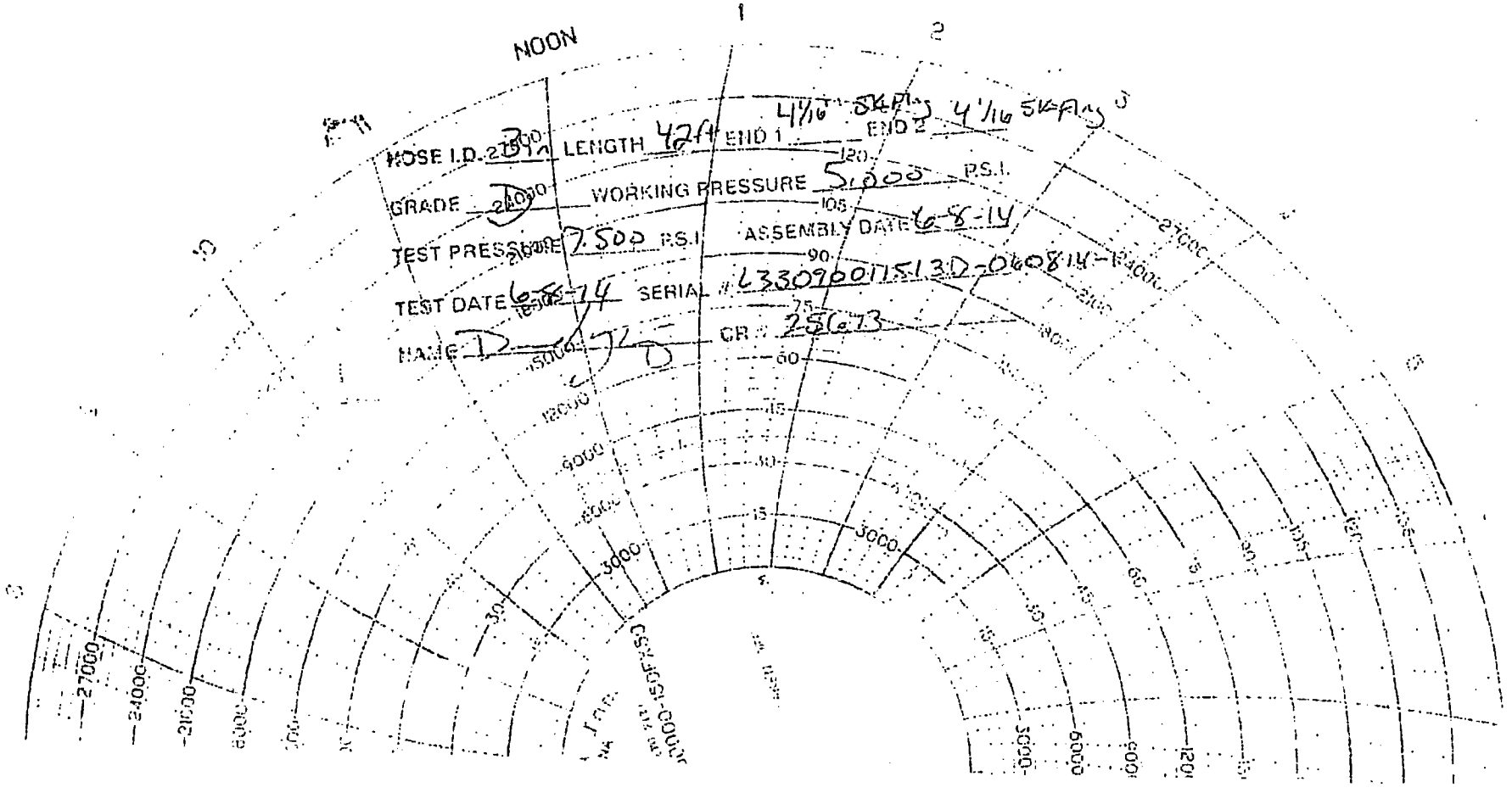
Product Description:	FD3.042.0R41/16.5KFLGE/E LE

End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality:	QUALITY	Technical Supervisor :	PRODUCTION
Date :	6/8/2014	Date :	6/8/2014
Signature :		Signature :	


11-4-16
XTO
Choke Line
Nor Am #25
DATE
BR B 0-15000-8-HH


NOON
HOSE I.D. 2 1/2
LENGTH 42ft
END 1 4 1/16 SKFLS
END 2 4 1/16 SKFLS
GRADE D
WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I.
ASSEMBLY DATE 6-8-14
TEST DATE 6-8-14
SERIAL # 633096011513D-060814-
NAME D
CR # 25673

10,000 PSI Annular BOP Variance Request

XTO Energy/XTO Permian Op. request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOPL).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

8-1/2" Production Hole Section 10M psi Requirement					
Component	**OD**	**Primary Preventer**	**RWP**	**Alternate Preventer(s)**	**RWP**
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

<u>General Procedure While Drilling</u>

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:
    a. Perform flow check. If flowing, continue to (b).
    b. Sound alarm (alert crew)
    c. Stab full-opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper variable bore rams
    e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP & SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
    a. Sound alarm (alert crew)
    b. Stab crossover and full-opening safety valve and close
    c. Space out drill string with upset just beneath the upper variable bore rams
    d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP & SICP

ii. Pit gain
iii. Time

h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
   a. Sound alarm (alert crew)
   b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
   c. If impossible to pull string clear of the stack:
   d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
   e. Space out drill string with tooljoint just beneath the upper variable bore ram
   f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
   g. Confirm shut-in
   h. Notify toolpusher/company representative
   i. Read and record the following:
      i. SIDPP & SICP
      ii. Pit gain
      iii. Time
   j. Regroup and identify forward plan

APD ID: 10400030530 **Submission Date:** 05/29/2018

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Reenter

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Nash_Unit_3H_Road_20180523201538.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? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Nash_Unit_3H_1_mile_20180524071055.pdf

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: No additional Central Tank Battery will be needed or applied for. Production from the completed well will go to the existing Nash Unit 39 tank battery located within .5 miles of the existing active well. In the event the well is found productive, 1 - 4" composite flexpipe or steel flowlines with a maximum safety pressure rating of 750psi (operating pressure: 125psi) will be laid on the surface within existing lease road corridors from the proposed well to the Nash Unit 39 CTB where the oil, gas, and water will be metered and appropriately separated. The distance of proposed flowline will be +/- 1200' or less based on the location of the well pad in conjunction with the facility location. All flowlines will follow proposed lease road corridors. A map of the proposed flowline route for the well is attached. 1 - 4" composite flexpipe or steel gas lift line with a maximum safety pressure rating of 750psi (operating pressure: 125psi) will be laid on the surface within existing lease road corridors from the Nash Unit 39 CTB to the Nash Unit 003H location carrying gas. The distance of proposed line will be +/- 1200' or less based on the location of the well pad in conjunction with the facility location. The line will follow proposed lease road corridors. A map of the proposed route is attached. No gas pipeline will be necessary. The Nash Unit 39 CTB has an existing gas sales line connection. Produced water will be hauled from location to a commercial 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. No flare will be necessary. The Nash Unit 39 CTB has an existing flare on location.. 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 have been constructed completely around the production facilities designed to hold fluids. The containment berms are constructed of compacted subsoil, sufficiently impervious, and hold 1 ½ times the capacity of the largest tank and away from cut or fill areas. One additional electrical pole will be required for this location. Current OHE is in place, following the existing lease road corridor. The single pole will be located on the non-interim reclaimed area of the existing well pad from the SW corner.

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING
Describe type: Fresh Water; in Section 6, T25S-R29E

Water source type: OTHER

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT,PRIVATE CONTRACT,PRIVATE CONTRACT
Source land ownership: FEDERAL

Water source transport method: TRUCKING,TRUCKING,TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 335000

Source volume (acre-feet): 43.179188

Source volume (gal): 14070000

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

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

Describe type: Fresh Water; Section 21-23S-30E

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: FEDERAL

Water source transport method: TRUCKING

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:

Nash_Unit_3H_Vic_20180524064207.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 a 3rd party vendor and hauled to the anticipated pit in Section 13 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: Select Energy Services [Rockhouse Water] Water for drilling, completion and dust control will be supplied by Select Energy Services for sale to XTO Energy, inc. from Section 21-23S-30E, Eddy County, New Mexico. In the event that Select Energy Services does not have the appropriate water for XTO at time of drilling and completion, then XTO water will come from Intrepid Potash Company with the location of the water being in Section 6, T25S-R29E, Eddy County, New Mexico. Anticipated water usage for drilling includes an estimated 35,000 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 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. Temporary water flowlines will be permitted via ROW approval letter and proper grants as-needed based on drilling and completion schedules as needed. Well completion is expected to require approximately 300,000 barrels of water per horizontal well. Actual water volumes used during operations will depend on the depth of the well and length of horizontal sections.

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

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: Pit 1: State Caliche Pit 613-Eddy, Sec-2-24S-33E Pit 2: Federal Caliche Pit, Section 34-T23S-R29E
Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

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: 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: 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:

Nash_Unit_3H_Well_20180523201814.pdf

Comments: Current well site exists. This application is for re-entry of a current active well with an uphole recompletion. Application is for a pad expansion only.

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:**

Multiple Well Pad Number:

Recontouring attachment:

Nash_Unit_3H_Int_Rec_20180524064058.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.

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

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): 0.7972
Road proposed disturbance (acres): 0
Powerline proposed disturbance (acres): 0
Pipeline proposed disturbance (acres): 0
Other proposed disturbance (acres): 0.826
Total proposed disturbance: 1.6232

Well pad interim reclamation (acres): 0.7972
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 0.7972

Well pad long term disturbance (acres): 0
Road long term disturbance (acres): 4.67
Powerline long term disturbance (acres): 0
Pipeline long term disturbance (acres): 0
Other long term disturbance (acres): 0.826
Total long term disturbance: 5.496

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. There is no vegetation located near the well site. Vegetation in the area is a sparse grass over of three-awn, grama, bluestem, dropseed, burrograss, muhly and miscellaneous native grasses. Plants are sparse mesquite, yucca, sage, shinnery oak brush, broomweed and cacti with miscellaneous weeds. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, and quail all typical of the semi-desert land. Traffic. No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. 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 the access road route. Water. There is no permanent or live water in the immediate or within the project area.
Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Environmental Setting. There is no vegetation located near the well site. Vegetation in the area is a sparse grass over of three-awn, grama, bluestem, dropseed, burrograss, muhly and miscellaneous native grasses. Plants are sparse mesquite, yucca, sage, shinnery oak brush, broomweed and cacti with miscellaneous weeds. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, and quail all typical of the semi-desert land. Traffic. No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. 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 the access road route. Water. There is no permanent or live water in the immediate or within the project area.
Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Environmental Setting. There is no vegetation located near the well site. Vegetation in the area is a sparse grass over of three-awn, grama, bluestem, dropseed, burrograss, muhly and miscellaneous native grasses. Plants are sparse mesquite, yucca, sage, shinnery oak brush, broomweed and cacti with miscellaneous weeds. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, and quail all typical of the semi-

desert land. Traffic. No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. 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 the access road route. Water. There is no permanent or live water in the immediate or within the project area.
Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Environmental Setting. There is no vegetation located near the well site. Vegetation in the area is a sparse grass over of three-awn, grama, bluestem, dropseed, burrograss, muhly and miscellaneous native grasses. Plants are sparse mesquite, yucca, sage, shinnery oak brush, broomweed and cacti with miscellaneous weeds. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, and quail all typical of the semi-desert land. Traffic. No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. 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 the access road route. Water. There is no permanent or live water in the immediate or within the project 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 type: **Seed source:**

Seed name:

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre: **Proposed seeding season:**

Seed Summary	
Seed Type	**Pounds/Acre**

Total pounds/Acre:

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Jeff **Last Name:** Raines

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.
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:

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

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:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

Operator Name: XTO ENERGY INCORPORATED

Well Name: NASH UNIT **Well Number:** 003H

ROW Applications

SUPO Additional Information:

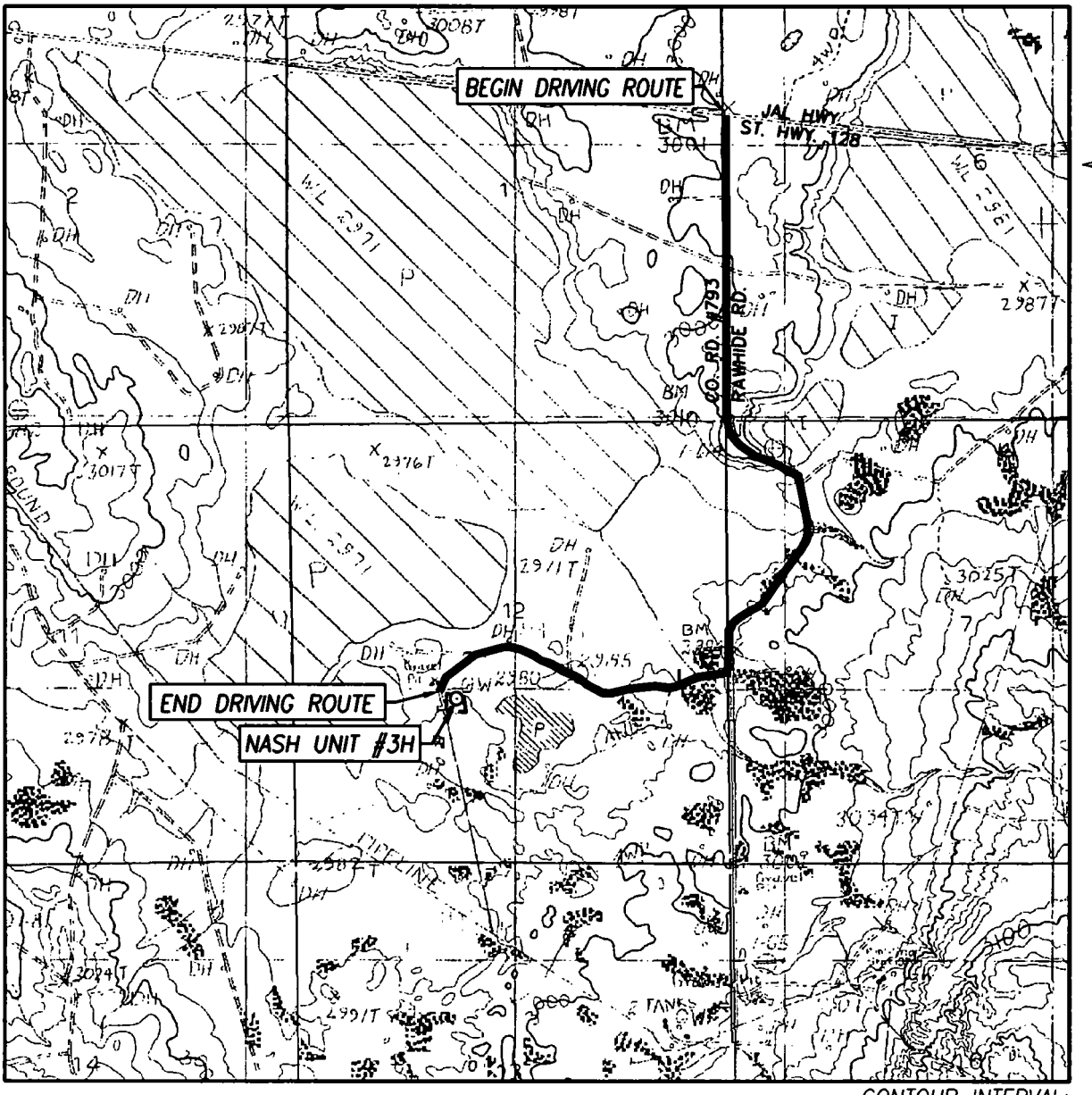
Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

Nash_Unit_3H_SUPO_20180526093353.pdf

TOPOGRAPHIC AND ACCESS ROAD MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
REMUDA BASIN, N.M. - 10'

SEC. 12 TWP. 23-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1980.4' FSL & 1988.1' FWL

ELEVATION 2982'

OPERATOR XTO ENERGY

EDDYSE NASH UNIT

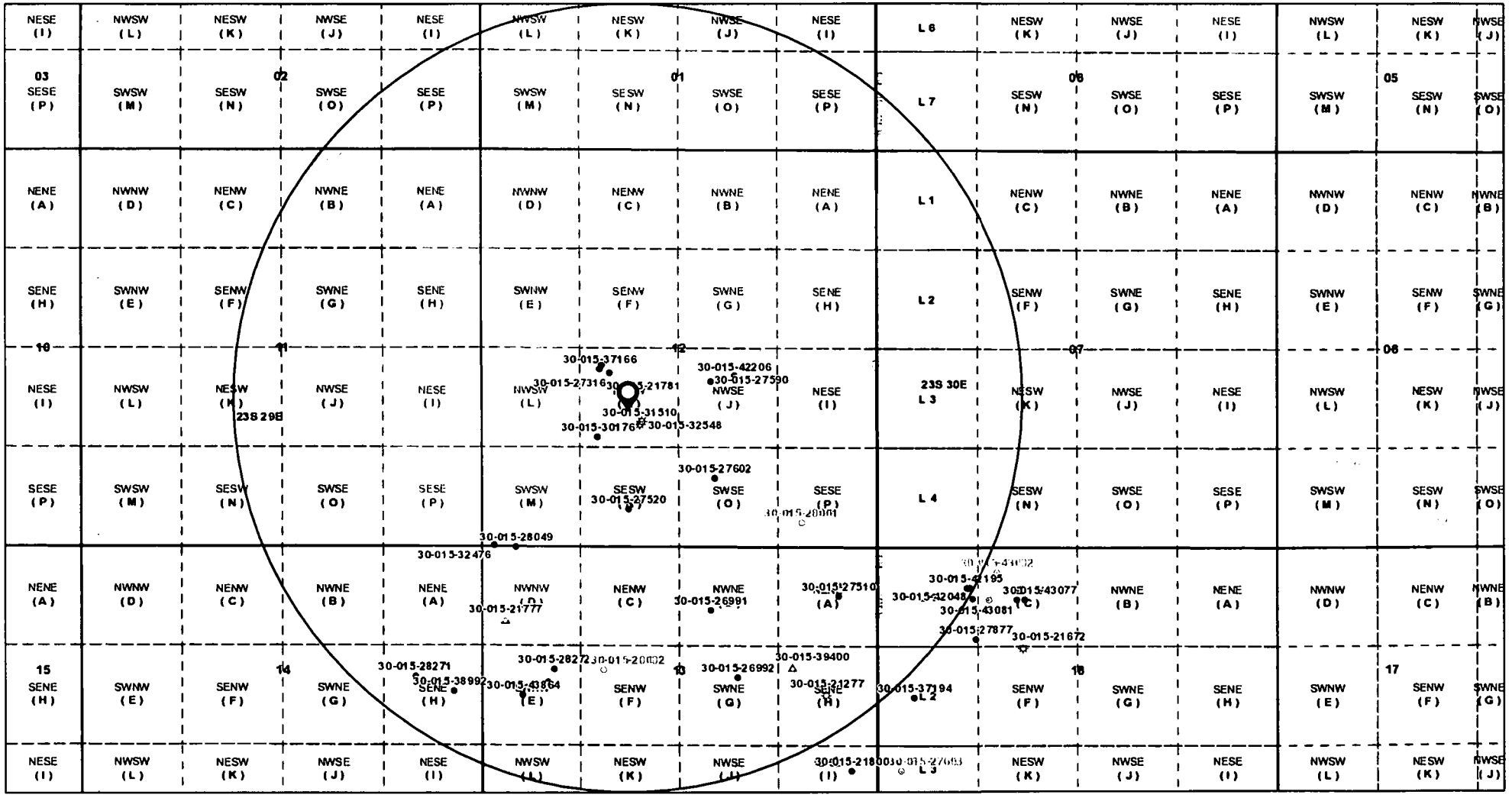
U.S.G.S. TOPOGRAPHIC MAP
REMUDA BASIN, N.M.

DIRECTIONS TO LOCATION:

FROM THE INTERSECTION OF ST. HWY. 128 AND RAWHIDE RD., GO SOUTH ON RAWHIDE FOR 2 MILES. TURN RIGHT AT THE LEASE RD. AND GO WESTERLY 0.8 MILES TO THE EXISTING WELL PAD.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Nash Unit 3H - 1 Mile Radius



May 24, 2018

1:15,274

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, OCD, BLM

Well Locations - Small Scale
- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned

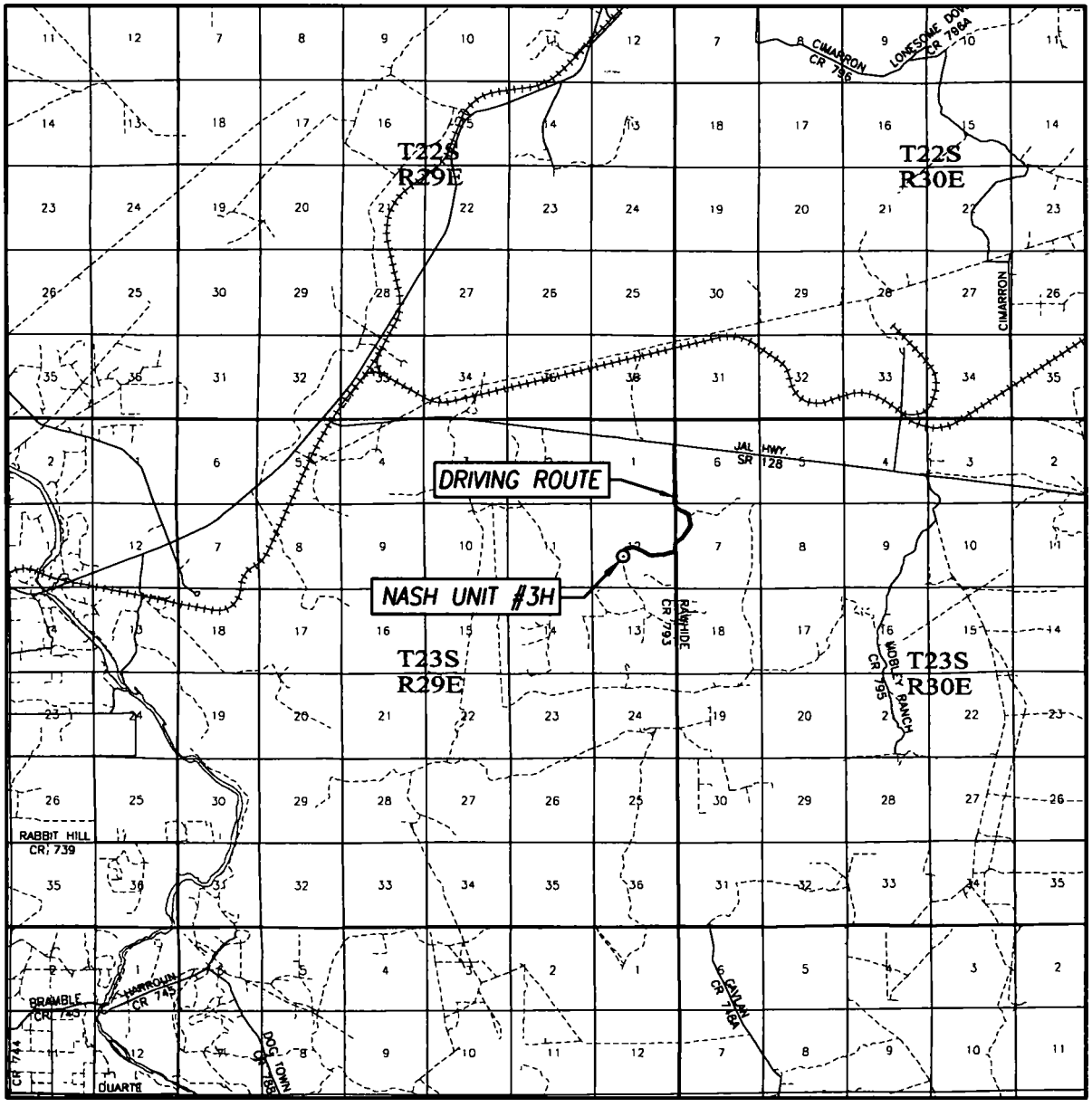
Well Locations - Large Scale
- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2, Plugged

- CO2, Temporarily Abandoned
- Gas Active
- Gas, Cancelled, Never Drilled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active
- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abondoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New
- Salt Water Injection, Plugged
- Salt Water InjectionTemporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/: New Mexico Oil Conservation Division

VICINITY MAP



SCALE: 1" = 2 MILES

DRIVING ROUTE: SEE TOPOGRAPHICAL AND ACCESS ROAD MAP

SEC. 12 TWP. 23-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1980.4' FSL & 1988.1' FWL

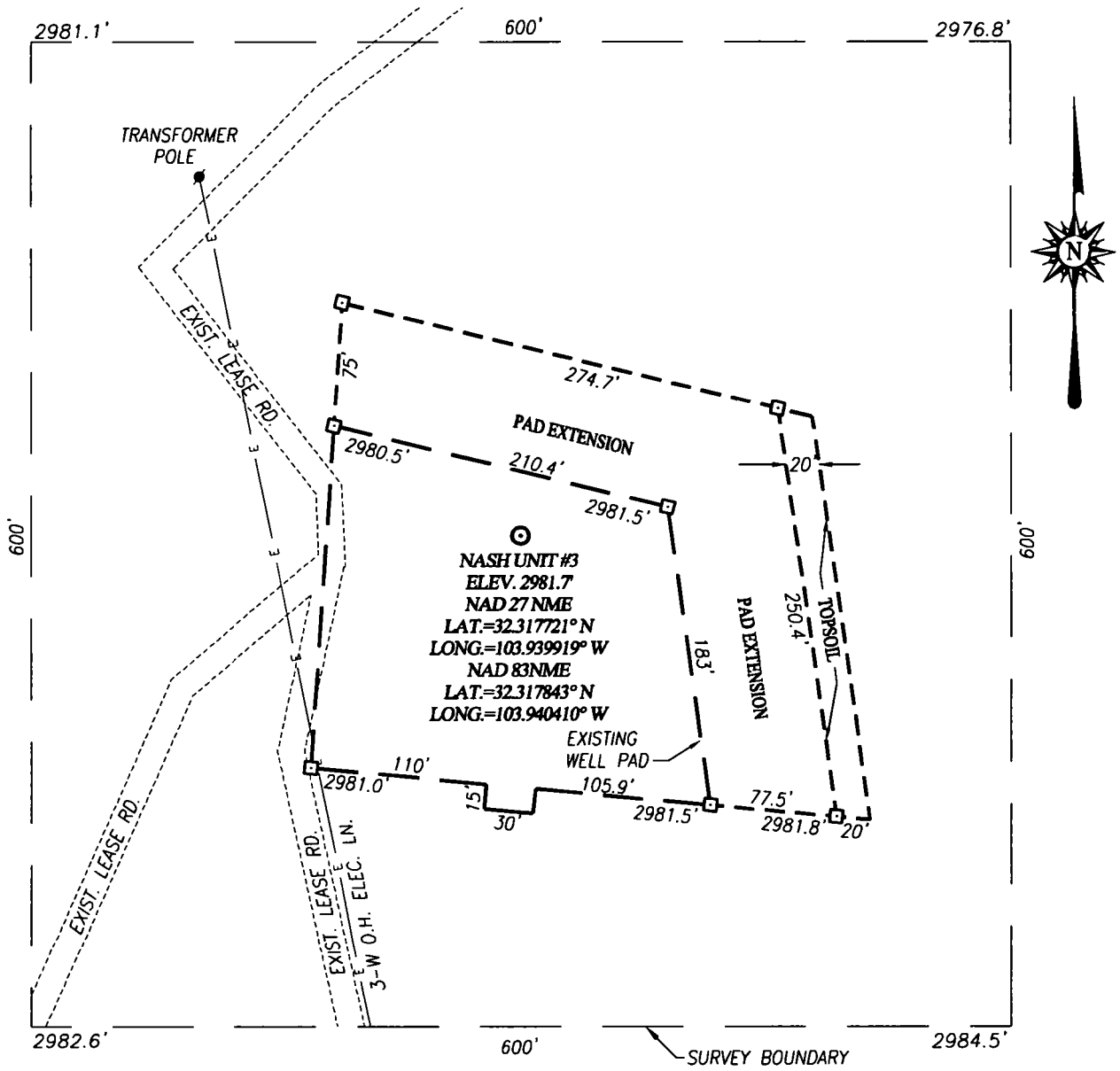
ELEVATION 2982'

OPERATOR XTO ENERGY

LEASE NASH UNIT

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

WELL SITE PLAN



NOTE:
SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR PROPOSED ROAD LOCATION.

100 0 100 200 Feet

Scale: 1"=100'

DIRECTIONS TO LOCATION:

FROM THE INTERSECTION OF ST. HWY. 128 AND RAWHIDE RD., GO SOUTH ON RAWHIDE FOR 2 MILES. TURN RIGHT AT THE LEASE RD. AND GO WESTERLY 0.8 MILES TO THE EXISTING WELL PAD.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

XTO ENERGY

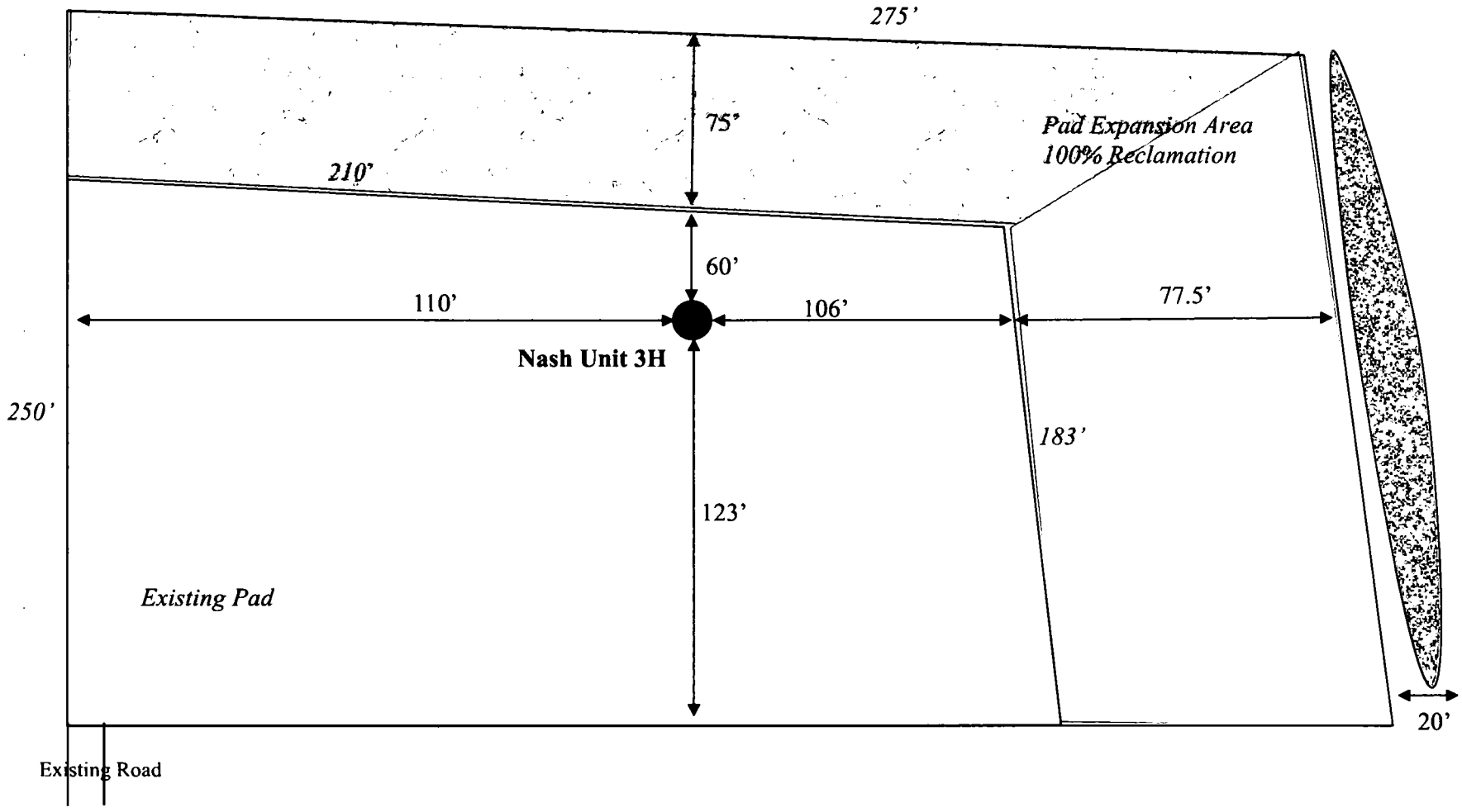
NASH UNIT #3H WELL LOCATED 1980.4 FEET FROM THE SOUTH LINE AND 1988.1 FEET FROM THE WEST LINE OF SECTION 12, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 10/09/17	CAD Date: 12/18/17	Drawn By: ACK
W.O. No.: 17110976	Rev: .	Rel. W.O.:	Sheet 1 of 1

Interim Reclamation Diagram

Nash Unit 3H

V-Door East



LEGEND

N

Wellbore

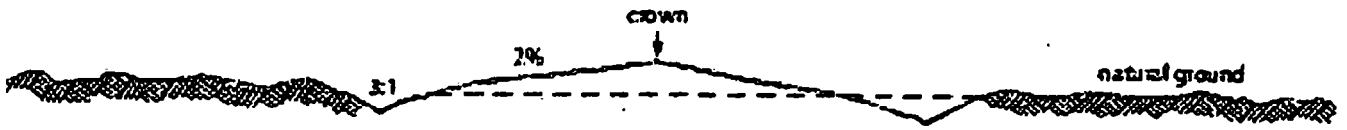
Interim Reclamation

Ditch & Berm

Topsoil

1. **Existing Roads**
   A. From the intersection of State Hwy 128 and Rawhide Road, go South on Rawhide for 2 miles. Turn right at the lease road and go Westerly 0.8 miles to the existing well pad.
   B. There are existing access roads to the proposed Nash Unit 003H well locations. All equipment and vehicles will be confined to the routes shown on the Vicinity Map as provided by John West Surveying. Maintenance of the access roads will continue until abandonment and reclamation of the well pad is completed.

2. **New or Upgraded Access Roads**
   A. **New Roads**. There are no new roads needed to access the Nash Unit 003H well location. The Nash Unit 003H is an existing and active well location. Application is for pad expansion and flowline only.
   B. **Well Pads**. The well pad selected for development has determined that the existing road does not require upgrades. No new road is required or will need to be built to access the well pad.
   C. **Anticipated Traffic**. After well completion, travel to each well site will included one lease operator truck to travel to the well site to monitor the working order of the well and to check well equipment for proper operation. Additional traffic will include one maintenance truck periodically throughout the year for pad upkeep and weed removal. Well service trips will include only the traffic necessary to work on the wells or provide chemical treatments periodically and as needed throughout the year.
   D. **Routing**. All equipment and vehicles will be confined to the travel routes laid out in the vicinity map provided by John West Surveying unless otherwise approved by the BLM and applied for by XTO Energy, Inc.
   E. **Road Dimensions**. The maximum width of the driving surface of new roads will be 14 feet. The roads will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.



Level Ground Section

   F. **Surface Material**. Surface material will be native caliche. The average grade of all roads will be approximately 3%.
   G. **Fence Cuts**: No.
   H. **Fences**: No.
   I. **Cattle Guards**: No.
   J. **Turnouts**: No.
   K. **Culverts**: No.
   L. **Cuts and Fills**: Not significant.
   M. **Topsoil**. 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.
   N. **Maintenance**. 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.

O. **Drainage**. 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.

3. Location of Existing Wells

A. See attached 1-mile radius well map.

4. Ancillary Facilities

A. **Ancillary Facilities**. No off-pad ancillary facilities are planned during the exploration phase including, but not limited to: campsites, airstrips or staging areas.

5. Location of Proposed Production Facilities

A. **Production Facilities**. No additional Central Tank Battery will be needed or applied for. Production from the completed well will go to the existing Nash Unit 39 tank battery located within .5 miles of the existing active well.

B. **Surface Flowlines**. In the event the well is found productive, 1 - 4" composite flexpipe or steel flowlines with a maximum safety pressure rating of 750psi (operating pressure: 125psi) will be laid on the surface within existing lease road corridors from the proposed well to the Nash Unit 39 CTB where the oil, gas, and water will be metered and appropriately separated. The distance of proposed flowline will be +/- 1200' or less based on the location of the well pad in conjunction with the facility location. All flowlines will follow proposed lease road corridors. A map of the proposed flowline route for the well is attached.

C. **Gas Lift Line**: 1 - 4" composite flexpipe or steel gas lift line with a maximum safety pressure rating of 750psi (operating pressure: 125psi) will be laid on the surface within existing lease road corridors from the Nash Unit 39 CTB to the Nash Unit 003H location carrying gas. The distance of proposed line will be +/- 1200' or less based on the location of the well pad in conjunction with the facility location. The line will follow proposed lease road corridors. A map of the proposed route is attached.

D. **Gas Pipeline**. No gas pipeline will be necessary. The Nash Unit 39 CTB has an existing gas sales line connection.

E. **Disposal Facilities**. Produced water will be hauled from location to a commercial 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.

F. **Flare**. No flare will be necessary. The Nash Unit 39 CTB has an existing flare on location.

G. **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.

H. **Containment Berms**. Containment berms have been constructed completely around the production facilities designed to hold fluids. The containment berms are constructed of compacted subsoil, sufficiently impervious, and hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.

I. **Electrical**. One additional electrical pole will be required for this location. Current OHE is in place, following the existing lease road corridor. The single pole will be located on the non-interim reclaimed area of the existing well pad from the SW corner.

6. Location and Types of Water Supply

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from a 3rd party vendor and hauled to the anticipated pit in Section 13 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:

Select Energy Services [Rockhouse Water]

Water for drilling, completion and dust control will be supplied by Select Energy Services for sale to XTO Energy, inc. from Section 21-23S-30E, Eddy County, New Mexico. In the event that Select Energy Services does not have the appropriate water for XTO at time of drilling and completion, then XTO water will come from Intrepid Potash Company with the location of the water being in Section 6, T25S-R29E, Eddy County, New Mexico.

Anticipated water usage for drilling includes an estimated 35,000 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 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.

Temporary water flowlines will be permitted via ROW approval letter and proper grants as-needed based on drilling and completion schedules as needed. Well completion is expected to require approximately 300,000 barrels of water per horizontal well. Actual water volumes used during operations will depend on the depth of the well and length of horizontal sections.

7. **Construction Activities**
    A. 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.
    B. 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.
    C. Anticipated Caliche Locations:
        a. Pit 1: State Caliche Pit 613-Eddy, Sec-2-24S-33E
        b. Pit 2: Federal Caliche Pit, Section 34-T23S-R29E

8. **Methods for Handling Waste**
    - **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.
    - **Sewage**. 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.
    - **Garbage and Other Waste Materials.** 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.
    - **Debris**. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash cage will be cleaned and removed from the well location. No potential adverse materials or substances will be left on location.

- **Hazardous Materials.**
    i. All drilling wastes identified as hazardous substances by the Comprehensive Environmental Response Compensation Liability Act (CERCLA) removed from the location and not reused at another drilling location will be disposed of at a hazardous waste facility approved by the U.S. Environmental Protection Agency (EPA).
    ii. BOPCO, L.P. and its contractors will comply with all applicable Federal, State and local laws and regulations, existing or hereafter enacted promulgated, with regard to any hazardous material, as defined in this paragraph, that will be used, produced, transported or stored on the oil and gas lease. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the CERCLA of 1980, as amended, 42 U.S.C 9601 et seq., and its regulation. The definition of hazardous substances under CERLCA includes any 'hazardous waste" as defined in the RCRA of 1976, as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous material also includes any nuclear or nuclear by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.C.S. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101 (14) U.S.C. 9601 (14) nor does the term include natural gas.
    iii. No hazardous substances or wastes will be stored on the location after completion of the well.
    iv. Chemicals brought to location will be on the Toxic Substance Control Act (TSCA) approved inventory list.
    v. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in Notice to Lessees (NTL) 3A will be reported to the BLM Carlsbad Field Office. Major events will be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days.

9. Well Site Layout

A. **Rig Plat Diagrams**: The well location is existing. Application is for a pad expansion of 75' North and 78' East. This will allow enough space for cuts and fills, topsoil storage, and storm water control. Interim reclamation of this pad is anticipated after the drilling and completion of the well
B. **Closed-Loop System**: 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.
C. **V-Door Orientation**: The anticipated V-Door orientation is East.
D. A 600' x 600' area has been staked and flagged around the well pad. A plat for the well has been attached.
E. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad and topsoil storage areas).

10. Plans for Surface Reclamation:

Non-Commercial Well (Not Productive), Interim & Final Reclamation:

Definition: Reclamation includes disturbed areas where the original landform and a natural vegetative community will be restored and it is anticipated the site will not be disturbed for future development.

Reclamation Standards:

The portions of the pad not essential to production facilities or space required for workover operations will be reclaimed and seeded as per BLM requirements for interim reclamation. (See Interim Reclamation plats attached).

All equipment and trash will be removed, and the surfacing material will be removed from the well pad and road and transported to the original caliche pit or used to maintain other roads. The location will then be ripped and seeded.

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

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.

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.

The site will be free of State-or County-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds will be controlled.

Seeding:

- Seedbed Preparation: 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.
- 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 Application. 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.

11. Surface Ownership

A. 100% of the surface is under the administrative jurisdiction of the Bureau of Land Management.
B. The surface is multiple-use with the primary uses of the region for grazing and for the production of oil and gas.

12. Other Information

Surveying

- **Well Sites.** Well pad location has been staked. Surveys of the proposed well pad location have been completed by John West Surveying, a registered professional land surveyor. Center stake surveys have been completed on Federal lands.

- **Cultural Resources – Archaeology**: A Class III Cultural Resources Examination has not been completed on the well. XTO Energy, Inc will pay into the Programmatic Agreement with review by Bruce Boeke, BLM Archaeologist.

- **Dwellings and Structures.** There are no dwellings or structures within 2 miles of this location.

Soils and Vegetation

- **Environmental Setting.** There is no vegetation located near the well site. Vegetation in the area is a sparse grass over of three-awn, grama, bluestem, dropseed, burrograss, muhly and miscellaneous native grasses.

Plants are sparse mesquite, yucca, sage, shinnery oak brush, broomweed and cacti with miscellaneous weeds. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, and quail all typical of the semi-desert land.

- **Traffic**. No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. 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 the access road route.

- **Water**. There is no permanent or live water in the immediate or within the project area.

13. Bond Coverage

Bond Coverage is Nationwide. Bond Number: UTB000138

Operator's Representatives:

The BOPCO, L.P. representatives for ensuring compliance of the surface use plan are listed below:

Surface:

Jimie Scott
Contract Construction Lead
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-488-9955
james_scott@xtoenergy.com

Jeff Raines
Construction Superintendent
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-620-4349
jeff_raines@xtoenergy.com

AFMSS

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

PWD Data Report

12/14/2018

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

12/14/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: COB000050

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: