

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-14  
July 21, 200

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

**Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application**

BGT1 Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
**Existing BGT** ☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

**Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request**

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances

1. Operator: XTO Energy, Inc. OGRID #: 5380  
Address: #382 County Road 3100, Aztec, NM 87410  
Facility or well name: RIO ARRIBA # 1  
API Number: 30-039-25272 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr M Section 14 Township 29N Range 05W County: Rio Arriba  
Center of Proposed Design: Latitude 36.721720 Longitude 107.331640 NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2. ☐ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☐ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L \_\_\_\_\_ x W \_\_\_\_\_ x D \_\_\_\_\_

3. ☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4. ☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: 120 bbl Type of fluid: Produced Water  
Tank Construction material: Steel  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other Visible sidewalls, vaulted, automatic high-level shut off, no liner  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

5. ☐ **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6.

**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☒ Alternate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing

7.

**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☐ Screen ☐ Netting ☒ Other Expanded metal or solid vaulted top
- ☐ Monthly inspections (If netting or screening is not physically feasible)

8.

**Signs:** Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☒ Signed in compliance with 19.15.3.103 NMAC

9.

**Administrative Approvals and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

*Please check a box if one or more of the following is requested, if not leave blank:*

- ☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

*Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.*

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**11. Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- ☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

**12. Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- ☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_
- ☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

**13. Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

**14. Proposed Closure:** 19.15.17.13 NMAC  
**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Below-grade Tank ☐ Closed-loop System  
☐ Alternative
- Proposed Closure Method: ☒ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☐ In-place Burial ☐ On-site Trench Burial  
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

**15. Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)

**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_  
 Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?  
☐ Yes (If yes, please provide the information below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

- |   |   |
|---|---|
| Ground water is less than 50 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 500 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within the area overlying a subsurface mine.<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within an unstable area.<br>- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within a 100-year floodplain.<br>- FEMA map   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |

18.

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)  
☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC



19.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Kim Champlin Title: Environmental Representative  
Signature: Kim Champlin Date: 11/21/08  
e-mail address: kim\_champlin@xtoenergy.com Telephone: (505) 333-3100

20.

**OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Victoria Venegas Approval Date: 07/07/2022  
Title: Environmental Specialist OCD Permit Number: BGT1

21.

**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

**Instructions:** Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ Closure Completion Date: \_\_\_\_\_

22.

**Closure Method:**

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

23.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

**Instructions:** Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

24.

**Closure Report Attachment Checklist:** Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Proof of Closure Notice (surface owner and division)  
☐ Proof of Deed Notice (required for on-site closure)  
☐ Plot Plan (for on-site closures and temporary pits)  
☐ Confirmation Sampling Analytical Results (if applicable)  
☐ Waste Material Sampling Analytical Results (required for on-site closure)  
☐ Disposal Facility Name and Permit Number  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique  
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: ☐ 1927 ☐ 1983

25.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

CONFIDENTIAL - TIGHT HOLE

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

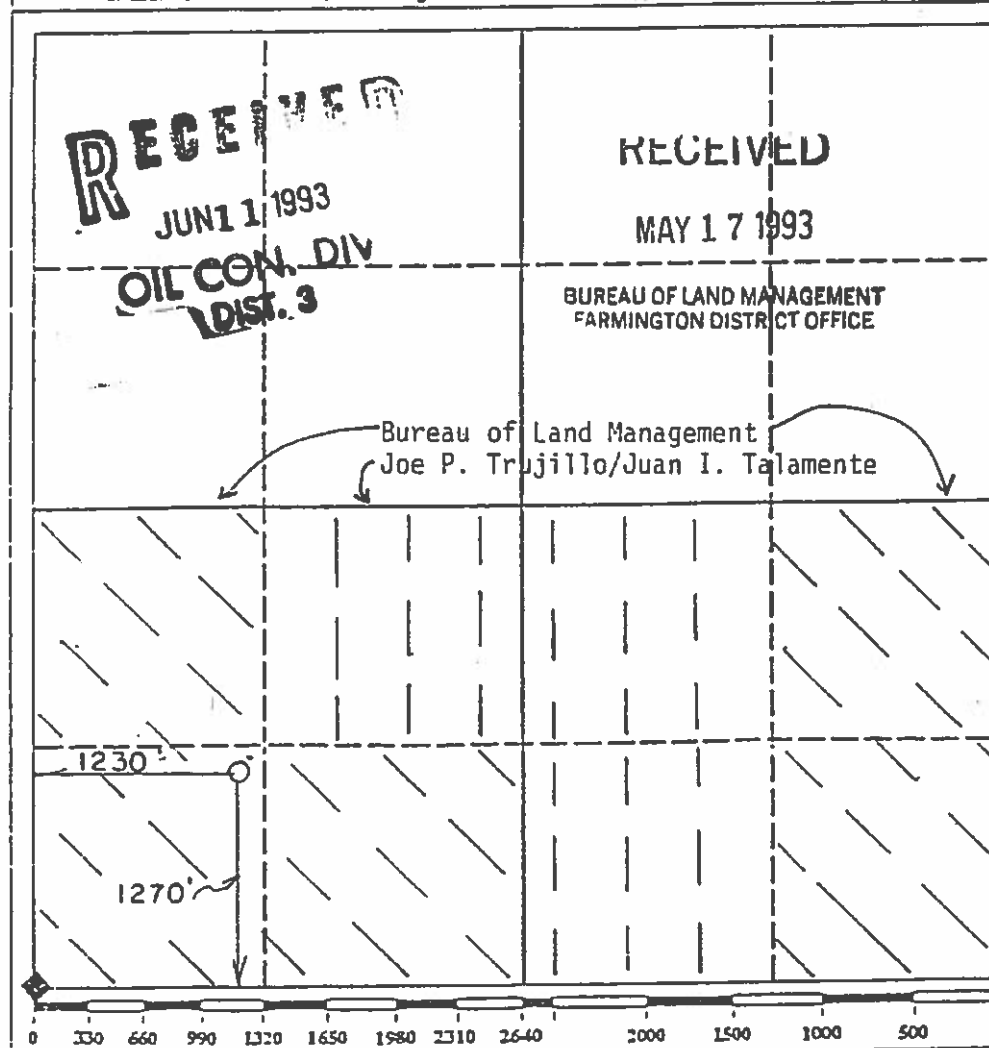
DISTRICT III  
1000 Rio Brazos Rd., Alamo, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator <b>TEXAKOMA O &amp; G CO.</b>			Lease <b>RIO ARRIBA</b>		Well No. <b>#1</b>
U.S. Letter <b>M</b>	Section <b>14</b>	Township <b>29 N.</b>	Range <b>5 W.</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>1270</b> feet from the <b>South</b> line and <b>1230</b> feet from the <b>West</b> line					
Ground level Elev. <b>6714'</b>	Producing Formation <b>Fruitland Coal</b>		Pool	Dedicated Acreage: <b>320</b> Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.? ☒ Yes ☐ No If answer is "yes" type of consolidation Communitization  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)  
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature Lisa L. Smith  
Printed Name **LISA L. SMITH**  
Position **Consultant for**  
Company **Texakoma Oil & Gas Corp.**  
Date **5/13/93**

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed **5/13/93**  
Signature of Surveyor [Signature]  
Professional Seal **REGISTERED LAND SURVEYOR**  
Certificate No. **6779**



# **Pit Permit Siting Criteria Information Sheet**

Client:	XTO Energy
Project:	tank permitting
Revised:	8-Nov-08
Prepared by:	Trevor Ycas

API#:	30-039-25272	USPLSS:	29N 05W 14 M
Name:	RIO ARRIBA No. 001	Lat/Long:	36.721720°, -107.331640°
Depth to groundwater:	50' < depth < 100'	Geologic formation:	San Jose Formation (Tsj), alluvium
Distance to closest continuously flowing watercourse:	13 miles NW to 'San Juan River' at 'Navajo Reservoir'/'La Jara Canyon'	Site Elevation:	2054m/6739'
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	1475' E to 'La Jara Canyon'		
Permanent residence, school, hospital, institution or church within 300'	NO	Soil Type:	Rockland/ Aridisols
Domestic fresh water well or spring within 500'	NO	Annual Precipitation:	Navajo Dam: 12.95", Gobernador: 11.98", Capulin Rgr Stn.: 14.98", Otis: 10.41"
Any other fresh water well or spring within 1000'	NO	Precipitation Notes:	Historical daily max. precip.: 4.19" (Bloomfield)
Within incorporated municipal boundaries	NO	Attached Documents:	28N04W_iWaters.pdf, 28N05W_iWaters.pdf, 28N06W_iWaters.pdf, 29N04W_iWaters.pdf, 29N05W_iwaters.pdf, 29N06W_iwaters.pdf, 30N04W_iWaters.pdf, 30N05W_iWaters.pdf, 30N06W_iWaters.pdf
Within defined municipal fresh water well field	NO		30-039-25272_gEarth-PLS.jpg, 30-039-25272_topo-PLS.jpg, 30-039-25272_topo-PLS.jpg, 30-039-25272_gEarth-iWaters.jpg
Wetland within 500'	NO	Mining Activity:	None Near
Within unstable area	NO		NM_NRD-MMD_MinesMillQuarries_30-039-25272.jpg
Within 100 year flood plain	UNMAPPED AREA: see note below		
<b>Additional Notes:</b> <div style="display: flex; justify-content: space-between;"> <div> <p>FEMA ZONE 'X' likely, based on large elevation difference between site and nearest stream channel</p> <p>drains to 'La Jara Canyon'</p> </div> <div> <p>located in 'La Jara Canyon', SW of 'Mestenas Mesa', W of 'Dry Point' &amp; NW of 'Pueblita Canyon'</p> </div> </div>			

## **Rio Arriba A #1 Below Grade Tank Hydrogeologic Report for Siting Criteria**

### **General Geology and Hydrology**

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be located in the central La Jara Canyon region of the San Juan Basin overlooking La Jara Canyon and southwest of Mestenas Mesa. The predominant geologic formation is the San Jose Formation of Tertiary age, which underlies surface soils and is often exposed (Dane and Bachman, 1965). Deposits of Quaternary alluvial and aeolian sands occur prominently near the surface of the area, especially near streams and washes.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aquifers in the San Juan basin (Stone et al., 1983). In most of the proposed area, the San Jose Formation lies at the surface and overlies the Nacimiento Formation. Thickness of the San Jose ranges from 200 to 2700 feet, thickening from west to east across the region of interest (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the San Jose Formation are between 0 and 2700' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows north, toward the San Juan River. Little specific hydrogeologic data is available for the San Jose Formation system, but "numerous wells and springs used for stock and domestic supplies" draw their water from the San Jose Formation (Stone et al, 1983).

The prominent soil type at the proposed site are entisols and aridisols, which are defined as soils exhibiting little to no profile development ([www.emnrd.state.nm.us](http://www.emnrd.state.nm.us)). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area and prohibits effective recharge to the underlying aquifers.

Regional weather further prohibit active recharge. The climate is arid, averaging just over 12 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center [www.wrcc.dri.edu](http://www.wrcc.dri.edu)).

The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).



## Site Specific Hydrogeology

Depth to groundwater is estimated to be between 50 and 100'. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography, proximity to adjacent channels & spring features at similar elevations nearby are also taken into consideration.

Beds of water-yielding sandstone are present in the San Jose Formation, which are fluvial in origin and are interbedded with mudstone, siltstone & shale. "Extensive intertonguing" of different members of this formation is reported. (Stone et al, 1983). Porous sandstones form the principal aquifers, while relatively impermeable shales and mudstones form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the San Jose Formation at depths greater than 100 feet and thicknesses of the aquifer can be up to several hundred feet (USGS, Groundwater Atlas of the US) (Stone et al, 1983).

The site in question is located on relatively flat ground several hundred feet above La Jara Canyon, southwest of Mestenas Mesa, and east of Gobernador (Governador), at an elevation of approximately 6740 feet and approximately 1475' southwest of the main La Jara Canyon wash channel, the nearest significant watercourse. This site drains to La Jara Canyon, eventually to the San Juan River at Navajo Reservoir. This region is deeply incised by canyons, washes, gullies and arroyos, with large, flat-topped mesas the predominant topographic feature. The mesas are composed of cliff-forming sandstone, and systems of dry washes and their tributaries composed of alluvium are evident on the attached aerial image. Groundwater is expected to be shallow within Cereza and La Jara Canyons and within major tributary systems. Additionally, the La Jara Canyon area has many surface springs at varying elevations, including at least 4 within 5 miles of this site.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. Groundwater data is extremely limited in this region; the nearest iWaters data point (Amarante Spring) lies 1.6 miles southeast (SP 04335). Bubbling Spring is located approx. 2.3 miles east (SP03623). Additionally, there is a spring located approx. 2.2 miles southeast (Burro Spring) (SP03624) & 'Skousen Spring' is located 216 miles southeast of the site in question. Other nearby springs are found at elevations above, below and similar to the site in question. Additionally, this area has not been mapped by the FEMA; no floodplain data is available for this region; this site is not likely to be located in a 100-year floodplain.

Wells located at similar elevations nearby contain groundwater at depths of 50 feet and deeper, occasionally in excess of 300 feet. However, there exist numerous surface springs in the PLSS section 29N/30N, 04W/05W. The exact topography, multiple nearby springs, and elevation relative to nearby surface spring features are not enough to be certain that groundwater is deeper than 100 feet. A map showing the location of wells in reference to the proposed pit location is attached.







New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 30N Range: 05W Sections: \_\_\_\_\_  
NAD27 X: \_\_\_\_\_ Y: \_\_\_\_\_ Zone: \_\_\_\_\_ Search Radius: \_\_\_\_\_  
County: \_\_\_\_\_ Basin: \_\_\_\_\_ Number: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Owner Name: (First) \_\_\_\_\_ (Last) \_\_\_\_\_ ☐ Non-Domestic ☒ Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form IWATERS Menu Help

WATER COLUMN REPORT 08/12/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
SJ 03556	30N	05W	06	4	2	4				450	250	200	
SJ 02771	30N	05W	17	1	1	2				325	137	188	

Record Count: 2



New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 30N Range: 04W Sections: \_\_\_\_\_  
NAD27 X: \_\_\_\_\_ Y: \_\_\_\_\_ Zone: \_\_\_\_\_ Search Radius: \_\_\_\_\_  
County: \_\_\_\_\_ Basin: \_\_\_\_\_ Number: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Owner Name: (First) \_\_\_\_\_ (Last) \_\_\_\_\_ ☐ Non-Domestic ☐ Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form IWATERS Menu Help

WATER COLUMN REPORT 08/12/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
SJ 02384	30N	04W	07	3	1	3				185	95	90	
SJ 01291	30N	04W	25	1	4					500	250	250	
SJ 03742 POD1	30N	04W	26	3	4	4				480	210	270	
SJ 00042	30N	04W	28	1						62			

Record Count: 4

New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 30N Range: 03W Sections:   
NAD27 X  Y  Zone:  Search Radius:   
County:  Basin:  Number:  Suffix:   
Owner Name: (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All  
POD / Surface Data Report Avg Depth to Water Report Water Column Report  
Clear Form WATERS Menu Help

POD / SURFACE DATA REPORT 11/06/2008

DB File Nbr: (acre ft per annum)  
Use Diversion Owner  
No Records found, try again

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are biggest to smallest)  
Source Twp Rng Sec q q q Zone X Y are in Feet

POD Number:

UTM are in Meters)  
UTM\_Zone Easting Northing Date

Start Date  
Finish Date  
Depth Well 1



New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 29N Range: 05W Sections: \_\_\_\_\_  
NAD27 X: \_\_\_\_\_ Y: \_\_\_\_\_ Zone: \_\_\_\_\_ Search Radius: \_\_\_\_\_  
County: \_\_\_\_\_ Basin: \_\_\_\_\_ Number: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Owner Name: (First) \_\_\_\_\_ (Last) \_\_\_\_\_ ☐ Non-Domestic ☒ Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form iWATERS Menu Help

WATER COLUMN REPORT 08/12/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
SJ 02339	29N	05W	29	3	3	3			350	108	242	
SJ 00422	29N	05W	31	2					239	135	104	
SJ 00056	29N	05W	31	2	3	1			142	50	92	
SJ 00057	29N	05W	31	2	3	1			158	57	101	
SJ 03208	29N	05W	31	3	3	3			220	160	60	
SJ 02383	29N	05W	32	1	1	1			300	100	200	

Record Count: 6



New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 29N Range: 04W Sections: \_\_\_\_\_  
NAD27 X: \_\_\_\_\_ Y: \_\_\_\_\_ Zone: \_\_\_\_\_ Search Radius: \_\_\_\_\_  
County: \_\_\_\_\_ Basin: \_\_\_\_\_ Number: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Owner Name: (First) \_\_\_\_\_ (Last) \_\_\_\_\_ ☐ Non-Domestic ☒ Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form iwATERS Menu Help

WATER COLUMN REPORT 08/12/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are biggest to smallest)

POD Number  
SJ 00037

Tws 29N  
Rng 04W  
Sec q 04  
q 2

Depth  
Well Y

Depth  
Water X

373

Record Count: 1

New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 29N Range: 03W Sections: \_\_\_\_\_  
NAD27 X: \_\_\_\_\_ Y: \_\_\_\_\_ Zone: \_\_\_\_\_ Search Radius: \_\_\_\_\_  
County: \_\_\_\_\_ Basin: \_\_\_\_\_ Number: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Owner Name: (First) \_\_\_\_\_ (Last) \_\_\_\_\_ ☐ Non-Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form iwATERS Menu Help

WATER COLUMN REPORT 08/12/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are biggest to smallest)

POD Number  
SJ 01575

Tws 29N  
Rng 03W  
Sec 08  
q 4  
q 2

Depth 306

Water Column

Record Count: 1

New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 28N Range: 06W Sections:

NAD27 X  Y  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

Owner Name: (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form WATERS Menu Help

POD / SURFACE DATA REPORT 10/11/2008

DB File Mbr		Use	Diversion	Owner	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest)										UTM are in Meters)		Start Date	Finish Date	Depth Well
						Source	Tws	Rng	Sec	q	q	q	q	q	q	UTM Zone	East	North		
SD 07849	PDL	3		ROSA B. MARTINEZ	SD 07849	Artesian	28N	06W	13	2	4	1				13	284303	4060381	05/23/1967	1551
SJ 00200	OFM	20		BURLINGTON RESOURCES OIL & GAS	SJ 00200	Shallow	28N	06W	23	3	3	1				13	281564	4057870	08/10/2000	245
SJ 03005	STK	3		DON SCHREIBER	SJ 03005	Shallow	28N	06W	21	4	2	2				13	279663	4058421	09/01/2000	290
SJ 03043	STK	3		JANE SCHREIBER	SJ 03043	Shallow	28N	06W	21	4	2	2				13	279663	4058421	09/02/2000	290
SJ 03091	STK	3		JANE SCHREIBER	SJ 03091	Shallow	28N	06W	29	2	3	3				13	277834	4057437	05/17/2001	150
SJ 03443	STK	0		TON SCHREIBER	SJ 03443	Shallow	28N	06W	22	3	3	3				13	279854	4057809	11/08/2005	300
SJ 03675	DOM	3		ANTONIO R. SANCHEZ	SJ 03675	Shallow	28N	06W	14	4	3	4				13	282528	4059346	11/10/2005	420
SJ 03700	STK	3		JANE SCHREIBER	SJ 03700	Shallow	28N	06W	12	2	4	4				13	282528	4059346	02/25/2006	450

Record Count: 8

New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 28N Range: 05W Section: 13  
NAD27 X: 13 Y: 13 Search Radius: 13  
County: Basin: Number: Suffix:  
Owner Name: (First) (Last) Non-Domestic Domestic All  
POD / Surface Data Report Avg Depth to Water Report Water Column Report  
Clear Form IWATERS Menu Help

POD / SURFACE DATA REPORT 10/11/2008

DS File No.	Use	Diversion	Owner	POD Number
SD 07850	PDL	3	ROSA B. MARTINEZ	SD 07850
SD 07851	PDL	3	ROSA B. MARTINEZ	SD 07851
SD 07852	PDL	3	ROSA B. MARTINEZ	SD 07852
SJ 00036	IHD	65	BURLINGTON RESOURCES OIL & GAS	SJ 00036
SJ 00047	NOT	0	HAMIE MANGUM	SJ 00047
SJ 01893	STK	3	ROSA B. OR JUAN L. MARTINEZ	SJ 01893
SJ 03806	STK	3	ROSA B. MARTINEZ	SJ 03806

Record Count: 7

(quarters are 1st 2nd 3rd 4th)

(quarters are biggest to smallest)

Source

Twp Rng Sec q q q

28N 05W 18 2 3 4

28N 05W 18 2 1

28N 05W 18 2 1

28N 05W 18 2 1

Shallow

Shallow

Shallow

28N 05W 18 4

28N 05W 07 4 2

UTM are in Meters

UTM Zone

Eastings

Northing

13

285663

4060122

13

285228

4060731

13

285579

4060759

13

288156

4056298

13

288568

4056700

13

285827

4059576

13

286111

4061033

Start Date

Finish Date

Depth

Well

1

06/27/1953

06/27/1953

303

07/30/1953

08/04/1953

465

09/14/1964

10/12/1964

399



New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 28N Range: 04W Sections:   
NAD27 X:  Y:  Zone:  Search Radius:   
County:  Basin:  Number:  Suffix:   
Owner Name: (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All

POD / SURFACE DATA REPORT 10/19/2008

(quarters are 1-NW 2-NE 3-SE 4-SW 4-SE)									
(quarters are biggest to smallest)									
DB File Nbr	Use	Division	Owner	Source	Twp	Rng	Sec	q	q
SJ 00045	IND	0	U.S. GOVERNMENT	Shallow	28N	04W	07	1	1
SJ 02385	STK	3	CARSON NATIONAL FOREST	Shallow	28N	04W	06	1	1
SP 03618	STK	1.88	UNITED STATES OF AMERICA		28N	04W	09	3	1
SP 03619	STK	0.36	UNITED STATES OF AMERICA		28N	04W	21	4	4
SP 03620	STK	0.36	UNITED STATES OF AMERICA		28N	04W	22	1	4
SP 03621	STK	0.58	UNITED STATES OF AMERICA		28N	04W	29	2	2
SP 03622	STK	0.36	UNITED STATES OF AMERICA		28N	04W	33	4	4
SP 03808	STK	1.67	CARSON NATIONAL FOREST		28N	04W	17	3	1
SP 03809	STK	1.67	CARSON NATIONAL FOREST		28N	04W	17	4	4
SP 03811	STK	1.67	CARSON NATIONAL FOREST		28N	04W	14	1	1
SP 03972	STK	0	CARSON NATIONAL FOREST		28N	04W	36	3	3
SP 04028	STK	0.85	CARSON NATIONAL FOREST		28N	04W	32	2	4

UTM Zone	Easting	Northing	Start Date	Finish Date	Depth Well
13	295235	4061453	08/04/1952	09/10/1952	600
13	300818	4057064			160
13	297832	4061209			
13	298924	4057416			
13	299736	4058240			
13	297324	4057019			
13	298821	4054927			
13	296199	4059551			
13	297378	4059116			
13	300944	4060310			
13	302344	4053996			
13	297271	4054953			

Record Count: 12

New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 28N Range: Q3W Sections:   
NAD27 X:  Y:  Zone:  Search Radius:   
County:  Basin:  Number:  Suffix:   
Owner Name: (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form WATERS Menu Help

POD / SURFACE DATA REPORT 10/19/2008

DB File Nbr (acre ft per annum)  
Use Diversion Owner  
No Records found, try again

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are biggest to smallest)  
Source Tss Avg Sec q q q

POD Number

UTM are in Meters) UTM\_Zone Easting Northing Date Start Date Finish Date Depth Well 1

New Mexico Office of the State Engineer  
POD Reports and Downloads

Township: 30N Range: 06W Sections: \_\_\_\_\_  
NAD27 X: \_\_\_\_\_ Y: \_\_\_\_\_ Zone: \_\_\_\_\_ Search Radius: \_\_\_\_\_  
County: \_\_\_\_\_ Basin: \_\_\_\_\_ Number: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Owner Name: (First) \_\_\_\_\_ (Last) \_\_\_\_\_ ☐ Non-Domestic ☒ Domestic ☒ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form iwATERS Menu Help

WATER COLUMN REPORT 08/12/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
SJ 00741	30N	06W	17	4	2	3			2038	300	1738	
SJ 00041	30N	06W	28	3	2	3			349			
SJ 00040	30N	06W	28	3	2	3			420			

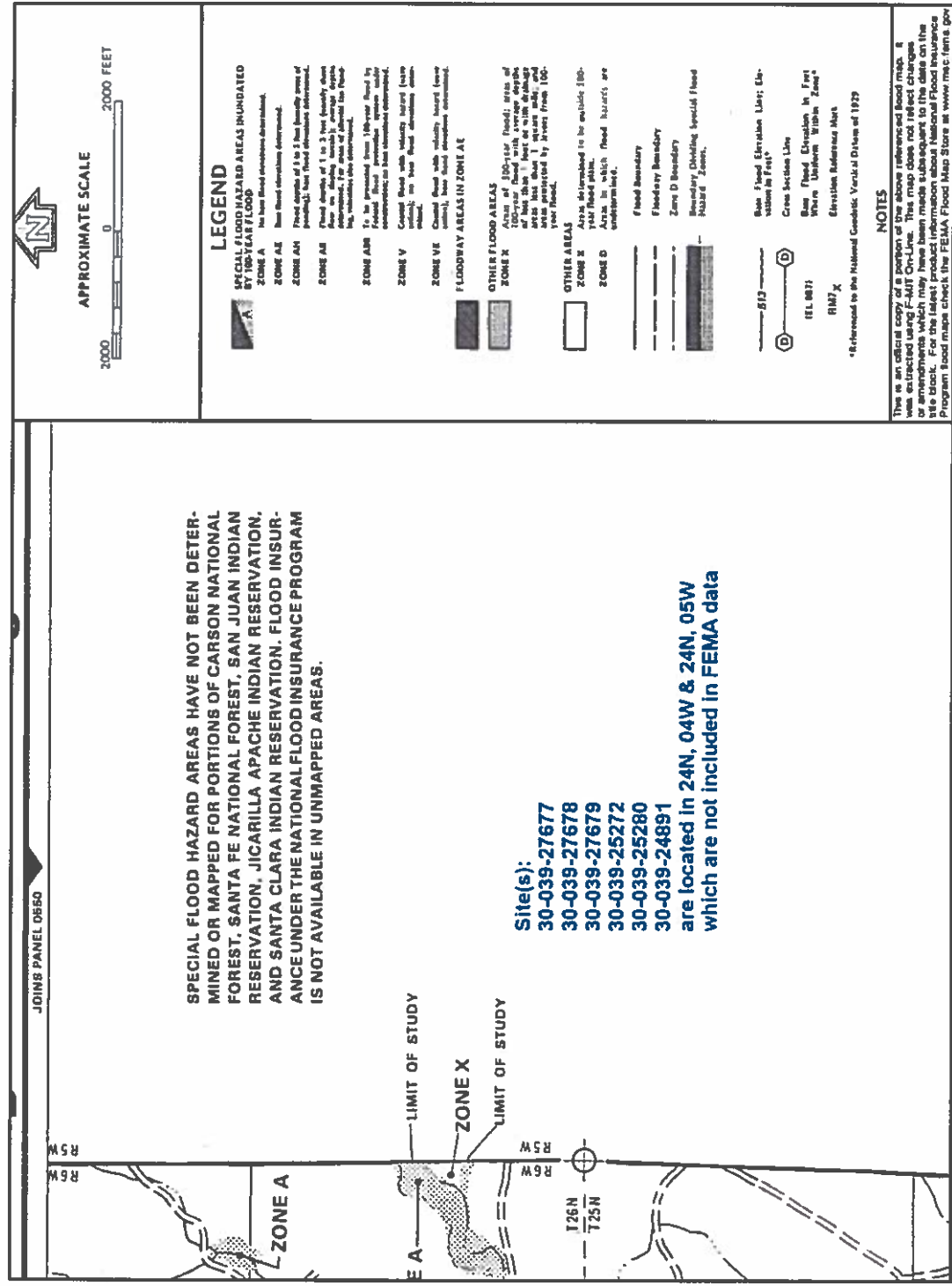
Record Count: 3





## Mines, Mills and Quarries Web Map





**XTO Energy Inc.**  
**San Juan Basin (Northwest New Mexico)**  
**General Design and Construction Plan**  
**For Below-Grade Tanks**

In accordance with Rule 19.15.17.11 NMAC the following information describes the design and construction of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

**General Plan**

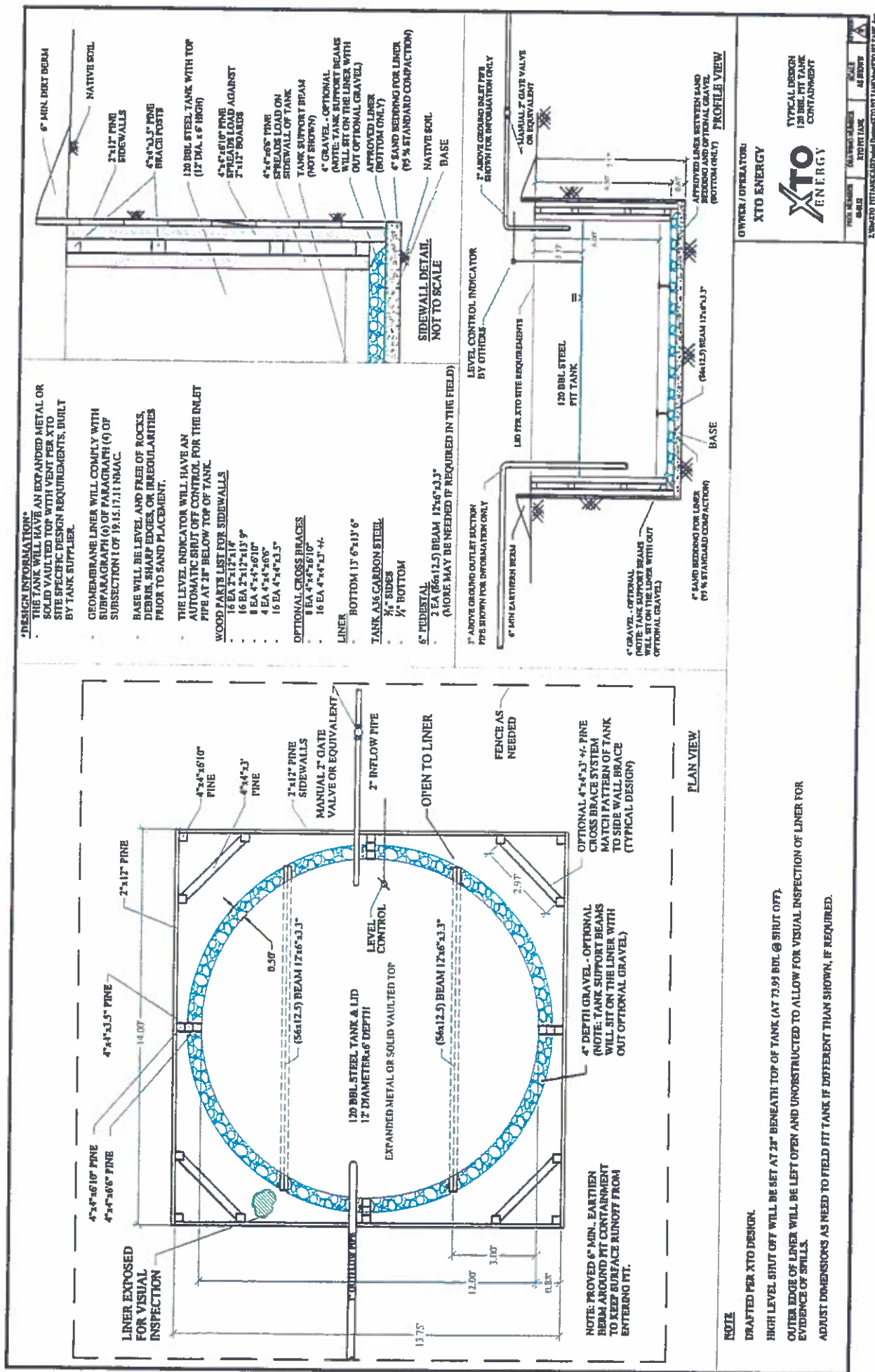
1. XTO will design and construct below-grade tanks to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the existing well site operated by XTO where the existing below-grade tank is located. The sign will list the Operator on record as the operator, the location of the well site by unit letter, section, township, range, and emergency telephone numbers.
3. XTO is requesting approval of an alternative fencing to be used on below-grade tank locations. Below-grade tank locations will be fenced utilizing 48" steel mesh field-fence (hogwire) with pipe railing along the top. A 6' chain link fence will be utilized around the well pad if the well site is within a city limits or ¼ mile of a permanent residence, school, hospital, institution or church. Below-grade tanks located within 1000' of a permanent residence, school, hospital, institution or church will be fenced by 6' chain link fence with at least two strands of barbed wire at the top. All gates associated with below-grade tanks will remain closed and locked when responsible individuals are not on site.
4. XTO shall construct below-grade tanks with an expanded metal covering or solid vaulted top on the top of the below-grade tank.
5. XTO will ensure that below-grade tanks are constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight. Tanks will be constructed of A36 carbon steel with 3/16" sides and ¼" bottom. (See attached drawing).
6. The below-grade tank system will have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom. Sand bedding (4") will be placed on top of a level foundation to ensure prevention of punctures, cracks or indentations of the liner or tank bottom.
7. XTO will construct a berm and/or diversion ditch in a manner that prevents the collection of surface water run-on. Below-grade tanks will be equipped with automatic high level shut-off devices as well as manually operated shut-off valves. (See attached drawing).
8. XTO will construct and use below-grade tanks that do not have double walls. The below-grade tank sidewalls will be open for visual inspection for leaks. The sidewalls of the cellar will be constructed with 2" X 12" pine sidewalls and 4" X 4" pine brace posts. The below-grade tank

XTO Energy Inc.  
San Juan Basin (Northwest New Mexico)  
General Design and Construction Plan  
For Below-Grade Tanks  
Page 2

bottom will be elevated a minimum of 6" above the underlying ground surface and the below-grade tank will be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected. (See attached drawing)

9. XTO will equip below-grade tanks designed in this manner with a properly functioning automatic high-level shut-off control device and manual controls to prevent overflows. (See attached drawing).
10. XTO will demonstrate to the OCD that the geomembrane liner complies with the specifications of Subparagraph (a) of Paragraph (4) of Subsection I of 19.15.17.11 NMAC and obtain approval from OCD prior to the installation of the design. The geomembrane liner shall have a hydraulic conductivity no greater than  $1 \times 10^{-9}$  cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acids and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A. (See attached drawing).
11. The general specifications for design and construction are attached.





**XTO Energy Inc.  
San Juan Basin (Northwest New Mexico)  
General Maintenance and Operating Plan  
For Below-Grade Tanks**

In accordance with Rule 19.15.17.12 NMAC the following information describes the operation and maintenance of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

**General Plan**

1. XTO will operate and maintain below-grade tanks to contain liquids and solids, maintain the integrity of the liner and secondary containment system, prevent contamination of fresh water and protect public health and the environment. Fluid levels will be monitored weekly and high levels will be removed as necessary. Monthly inspections will be conducted to monitor integrity of below-grade tank systems and below-grade tanks will be equipped with automatic high-level shut-off devices.
2. XTO will not allow below-grade tanks to overflow and will use berms and/or diversion ditch to prevent surface run on to enter the below-grade tank. Below-grade tanks will be equipped with automatic high-level shut-off control devices as well as manually operated shut-off valves. See attached drawing for vault design and placement of diversion berms and shut-off devices.
3. XTO will continuously remove any visible or measurable layer of oil from the fluid surface of below-grade tanks in order to prevent significant accumulation of oil.
4. XTO will inspect the below-grade tank monthly and maintain written records for five years. Monthly inspections will consist of documenting the following: (see attached template),
  - Well Name
  - API #
  - Sec., Twn., Rng.
  - XTO Inspector's name
  - Inspection date and time
  - Visible tears in liner
  - Visible signs of tank overflow
  - Collection of surface run on
  - Visible layer of oil
  - Visible signs of tank leak
  - Estimated freeboard
5. XTO will maintain adequate freeboard to prevent over topping of the below-grade tank. High level shut-off devices control the freeboard at an average of 28" beneath the top of the tank.
6. XTO will not discharge into or store any hazardous waste in any below-grade tank.
7. If a below-grade tank develops a leak, or if any penetration of a below-grade tank occurs below the liquids surface, XTO will remove all liquids above the damage or leak line within 48 hours,



XTO Energy Inc.  
San Juan Basin (Northwest New Mexico)  
General Maintenance and Operating Plan  
For Below-Grade Tanks  
Page 2

notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the below-grade tank. If an existing below-grade tank does not meet current requirements of Paragraphs 1-4 of Subsection I of 19.15.17.11 NMAC the tank will be modified or retrofitted to comply. If compliance can not be achieved XTO will implement the approved closure plan.

# MONTHLY BELOW GRADE TANK INSPECTION FORM

**Well Name:**

**API No.:**

## Legals

Sei

Township:

**Range:**

[illegible]

**Notes:**

Provide Detailed Description:

**Misc:**

**XTO Energy Inc.  
San Juan Basin (Northwest New Mexico)  
General Closure Plan  
For Below-Grade Tanks**

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

**General Plan**

1. XTO will close below-grade tanks within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.
2. XTO will close a below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
3. XTO will close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.
4. XTO will remove liquids and sludge from below-grade tanks prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility. Approved facilities and waste streams include:
  - Envirotech Permit No. NM01-0011 and IEI Permit No. NM 01-0010B
  - Soil contaminated by exempt petroleum hydrocarbons
  - Produced sand, pit sludge and contaminated bottoms from storage of exempt wastes
  - Basin Disposal Permit No. NM01-005
  - Produced water
5. XTO will remove the below-grade tank and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office has approved prior to removal. Any associated liners will be removed, properly cleaned and disposed of per 19.15.9.712 NMAC at San Juan County Landfill. Documentation of the final disposition will be included in the closure report.
6. XTO will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose.
7. XTO will test the soils beneath the below-grade tank to determine whether a release has occurred. At a minimum 5 point composite sample will be collected along with individual grab samples from any area that is wet, discolored or showing other evidence of a release. Samples will be

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analyzed for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100mg/kg, and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. XTO will notify the division of its results on form C-141.

8. If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.
9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, XTO will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.
10. Notice of Closure operations will be given to the Aztec Division District III office between 72 hours and one week prior to the start of closure activities via email or verbally.  
 The notification will include the following:
  - i. Operator's name
  - ii. Well Name and API Number
  - iii. Location by Unit Letter, Section, Township, and Range

The surface owner shall also be notified prior to the implementation of any closure operations of below-grade tanks as per the approved closure plan using certified mail, return receipt requested.

11. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
12. A minimum of 4 feet of cover shall be achieved and the cover shall include 1 foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. Soil cover will be constructed to the site's existing grade and ponding of water and erosion of the cover material will be prevented with drainage control, natural drainages and silt traps where needed.
13. XTO will seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

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14. All closure activities will include proper documentation and be available for review upon request and will be submitted in closure report form to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on form C-144 and incorporate the following:
- i. Proof of closure notice to division and surface owner;
  - ii. Details on capping and covering, where applicable;
  - iii. Inspection reports;
  - iv. Confirmation sampling analytical results;
  - v. Disposal facility name(s) and permit number(s);
  - vi. Soil backfilling and cover installation;
  - vii. Re-vegetation application rates and seeding techniques, (or approved alternative to re-vegetation requirements if applicable);
  - viii. Photo documentation of the site reclamation.

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**District III**

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**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 95963

**QUESTIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 95963
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

**QUESTIONS**

<b>Facility and Ground Water</b>	
<i>Please answer as many of these questions as possible in this group. More information will help us identify the appropriate associations in the system.</i>	
Facility or Site Name	RIO ARRIBA 1
Facility ID (##), if known	Not answered.
Facility Type	Below Grade Tank - (BGT)
Well Name, include well number	RIO ARRIBA 1
Well API, if associated with a well	30-039-25272
Pit / Tank Type	Not answered.
Pit / Tank Name or Identifier	Not answered.
Pit / Tank Opened Date, if known	Not answered.
Pit / Tank Dimensions, Length (ft)	Not answered.
Pit / Tank Dimensions, Width or Diameter (ft)	Not answered.
Pit / Tank Dimensions, Depth (ft)	Not answered.
Ground Water Depth (ft)	Not answered.
Ground Water Impact	No
Ground Water Quality (TDS)	Not answered.

**Below-Grade Tank**

Subsection I of 19.15.17.11 NMAC

Volume / Capacity (bbls)	120
Type of Fluid	Produced Water
Pit / Tank Construction Material	Steel
Secondary containment with leak detection	Not answered.
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Not answered.
Visible sidewalls and liner	Not answered.
Visible sidewalls only	Not answered.
Tank installed prior to June 18, 2008	True
Other, Visible Notation. Please specify	Not answered.
Liner Thickness (mil)	Not answered.
HDPE (Liner Type)	Not answered.
PVC (Liner Type)	Not answered.
Other, Liner Type. Please specify (Variance Required)	Not answered.



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Action 95963

**QUESTIONS (continued)**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID:	372171
	Action Number:	95963
	Action Type:	[C-144] Legacy Below Grade Tank Plan (C-144LB)

**QUESTIONS**

<b>Fencing</b>	
<i>Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)</i>	
Chain link, six feet in height, two strands of barbed wire at top <i>(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)</i>	Not answered.
Four foot height, four strands of barbed wire evenly spaced between one and four feet	Not answered.
Alternate, Fencing. Please specify (Variance Required)	4' steel mesh

<b>Netting</b>	
<i>Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)</i>	
Screen	Not answered.
Netting	Not answered.
Other, Netting. Please specify (Variance May Be Needed)	expanded metal or solid vaulted top

<b>Signs</b>	
<i>Subsection C of 19.15.17.11 NMAC (If there are multiple operators at a site, each operator must have their own sign in compliance with Subsection C of 19.15.17.11 NMAC.)</i>	
12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	Not answered.
Signed in compliance with 19.15.16.8 NMAC	True

<b>Variances and Exceptions</b>	
<i>Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.</i>	
<b>Please check a box if one or more of the following is requested, if not leave blank:</b>	
Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.	Not answered.
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	Not answered.

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QUESTIONS, Page 3

Action 95963

**QUESTIONS (continued)**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 95963
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

**QUESTIONS**

<b>Siting Criteria (regarding permitting)</b>
19.15.17.10 NMAC

**Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.**

<b>Siting Criteria, General Siting</b>	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank	No
NM Office of the State Engineer - iWATERS database search	True
USGS	Not answered.
Data obtained from nearby wells	Not answered.

<b>Siting Criteria, Below Grade Tanks</b>	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lakebed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark)	Yes
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption	Yes

<b>Proposed Closure Method</b>	
Below-grade Tank	Below Grade Tank - (BGT)
Waste Excavation and Removal	Not answered.
Alternate Closure Method. Please specify (Variance Required)	Not answered.

<b>Operator Application Certification</b>	
Registered / Signature Date	11/21/2008

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ACKNOWLEDGMENTS  
  
Action 95963

**ACKNOWLEDGMENTS**

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	Action Number: 95963
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	I acknowledge that I have received prior approval from the OCD to submit documentation of a legacy below-grade tank on behalf of my operator.
<input checked="" type="checkbox"/>	I hereby certify that the information submitted with this documentation is true, accurate and complete to the best of my knowledge and belief.

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CONDITIONS  
  
Action 95963

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 95963
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

CONDITIONS

Created By	Condition	Condition Date
vvenegas	None	7/7/2022