

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-144  
June 24, 2008

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** **RCVD JUL 18 '08**  
**Proposed Alternative Method Permit or Closure Plan Application** **Oil Cons. Div.**

Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method **Dist. 3**  
☐ Closure of a 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

Operator: XTO Energy, Inc. OGRID #: 5380  
Address: #382 County Road 3100, Aztec, NM 87410  
Facility or well name: OH Randel #16S  
API Number: 30-045-33135 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr \_\_\_\_\_ Section 15E Township 26N Range 11W County: San Juan  
Center of Proposed Design: Latitude 36.4899722 Longitude 107.9965000 NAD: ☒ 1927 ☐ 1983  
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☒ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ Steel Pit  
☒ Lined ☐ Unlined  
Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC  
☐ Other \_\_\_\_\_ ☒ String-Reinforced  
Seams: ☒ Welded ☒ Factory ☐ Other \_\_\_\_\_  
Volume: 1389 bbl Dimensions: L 65 x W 15 x D 8

☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
☐ Drying Pad ☐ Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined  
Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC  
☐ Other \_\_\_\_\_  
Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_  
Volume: \_\_\_\_\_ bbl \_\_\_\_\_ yd<sup>3</sup>  
Dimensions: Length \_\_\_\_\_ x Width \_\_\_\_\_

☒ **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 \_\_\_\_\_  
Liner type: Thickness 60 mil ☒ HDPE ☐ PVC  
☐ Other \_\_\_\_\_

**Fencing:** Subsection D of 19.15.17.11 NMAC  
☐ Chain link, six feet in height, two strands of barbed wire at top  
☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet  
**Netting:** Subsection E of 19.15.17.11 NMAC  
☐ Screen ☒ Netting ☐ Other \_\_\_\_\_  
☒ Monthly inspections  
**Signs:** Subsection C of 19.15.17.11 NMAC  
☐ 12"x24", 2' lettering, providing Operator's name, site location, and emergency telephone numbers  
☒ Signed in compliance with 19.15.3.103 NMAC

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

**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. **Fencing- Hogwire**  
☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

**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

☐ Yes ☒ 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

☐ Yes ☒ 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

☐ Yes ☒ No  
☐ 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

☐ Yes ☐ No  
☒ 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

☐ Yes ☒ 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

☐ Yes ☒ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☒ No

**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 - 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: \_\_\_\_\_

**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 (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations (required 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 - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_

**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

**Proposed Closure:** 19.15.17.13 NMAC

Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ 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)

**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.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No  
☐ NA

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No  
☐ NA

Ground water is more than 100 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☒ Yes ☐ No  
☐ 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).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☒ 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.

- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site

☐ Yes ☒ 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

☐ Yes ☒ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☒ No

**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

**Waste Removal Closure For Closed-loop Systems That Utilize 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.*

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

**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 and Design of Burial Trench (if applicable) 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

**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: July 18, 2008

e-mail address: kim\_champlin@xtoenergy.com Telephone: (505) 333-3100

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

OCD Representative Signature: Brunson Powell Approval Date: 7-29-08

Title: Env. ro / spec OCD Permit Number: \_\_\_\_\_

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

☐ Closure Completion Date: \_\_\_\_\_

**Closure Method:**

- ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method
- ☐ If different from approved plan, please explain.

**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
- ☐ Proof of Deed Notice (if applicable)
- ☐ Plot Plan
- ☐ Confirmation Sampling Analytical Results
- ☐ Waste Material Sampling Analytical Results
- ☐ 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

**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: \_\_\_\_\_

DISTRICT I  
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DISTRICT IV  
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                |                                  |            |                     |
|----------------|----------------------------------|------------|---------------------|
| *API Number    |                                  | *Pool Code | *Pool Name          |
| *Property Code | *Property Name<br>O.H. RANDEL    |            | *Well Number<br>16S |
| *OGRID No.     | *Operator Name<br>XTO ENERGY INC |            | *Elevation<br>6337' |

<sup>10</sup> Surface Location

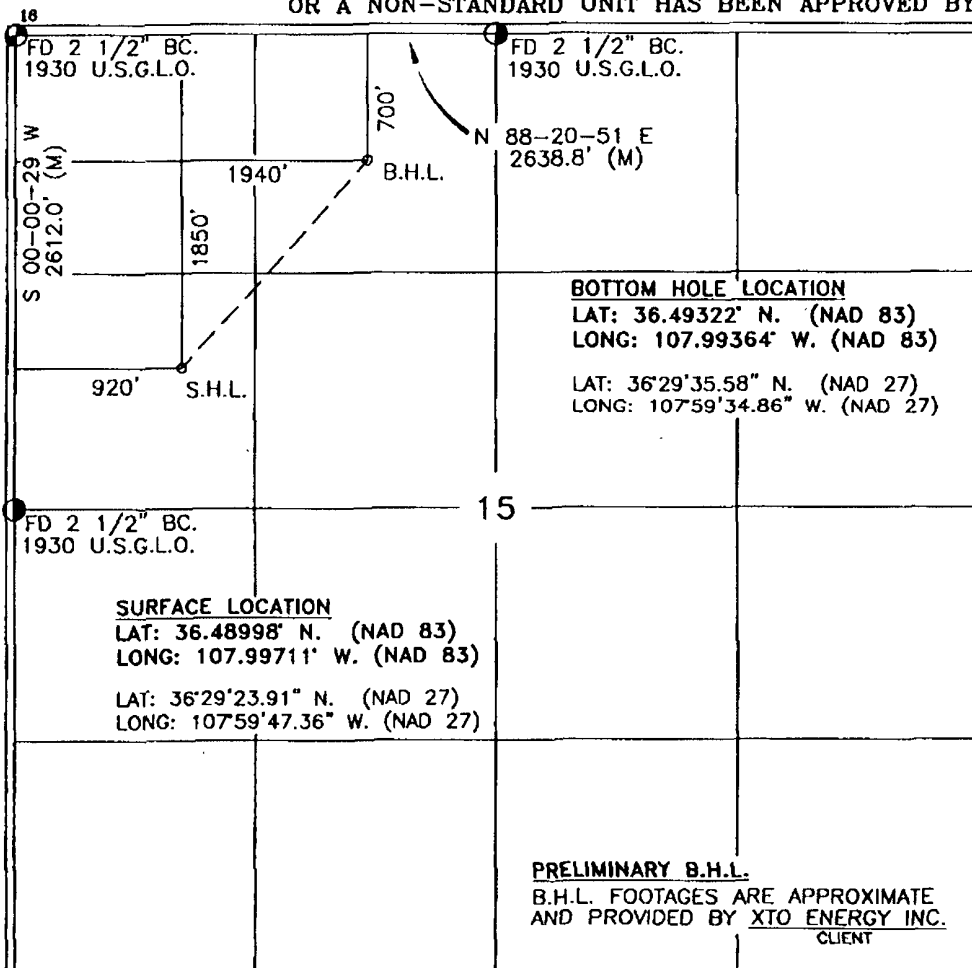
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| E             | 15      | 26-N     | 11-W  |         | 1850          | NORTH            | 920           | WEST           | SAN JUAN |

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

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| C             | 15      | 26-N     | 11-W  |         | 700           | NORTH            | 1940          | WEST           | SAN JUAN |

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

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature

Date

Printed Name

18 SURVEYOR CERTIFICATION

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

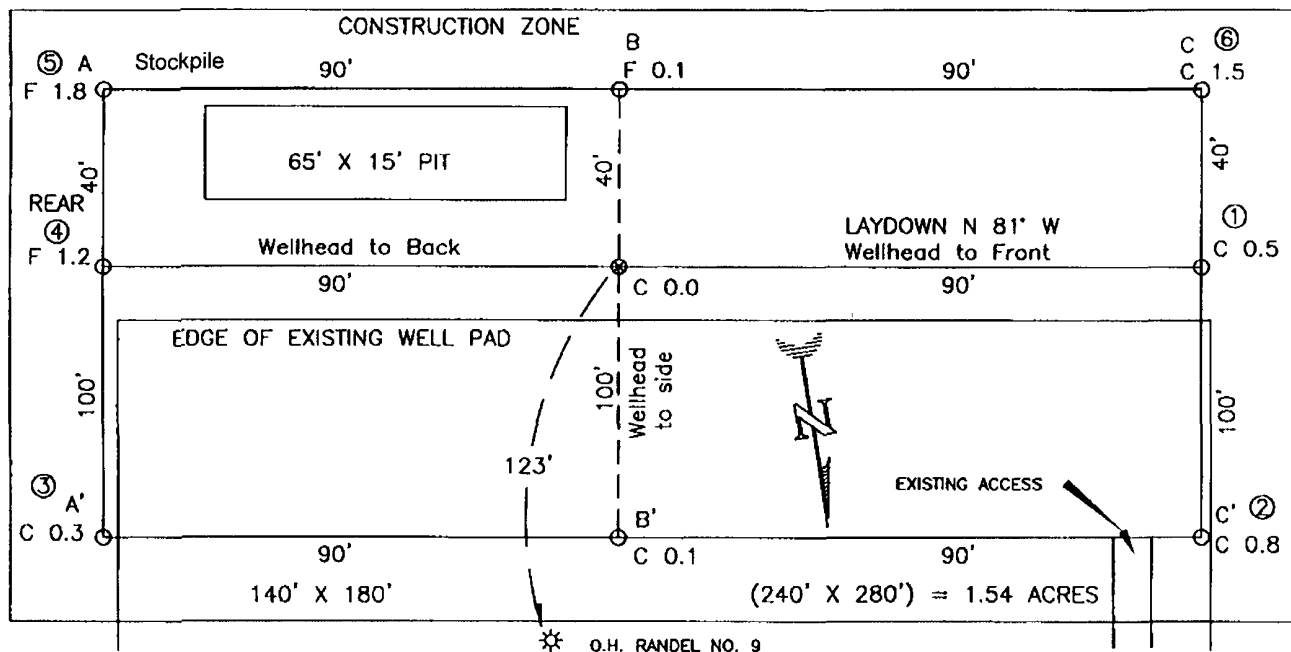
MAY 27, 2008  
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number

XTO ENERGY INC.  
 O.H. RANDEL NO. 16S 1850' FNL 920' FWL  
 SECTION 15, T26N, R11W, N.M.P.M., SAN JUAN COUNTY, N. M.  
 GROUND ELEVATION: 6337', DATE: NOVEMBER 23, 2004

LAT. = 36°29'23.9" N  
 LONG. = 107°59'47.4" W  
 NAD 27



RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).  
 BLOW PIT: OVERFLOW PIPE HALFWAY BETWEEN TOP AND BOTTOM AND TO EXTEND OVER PLASTIC LINER AND INTO BLOW PIT.

NOTE: DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

ELEV. A-A'

C/L

|      |  |  |  |  |  |
|------|--|--|--|--|--|
| 6350 |  |  |  |  |  |
| 6340 |  |  |  |  |  |
| 6330 |  |  |  |  |  |
| 6320 |  |  |  |  |  |

ELEV. B-B'

C/L

|      |  |  |  |  |  |
|------|--|--|--|--|--|
| 6350 |  |  |  |  |  |
| 6340 |  |  |  |  |  |
| 6330 |  |  |  |  |  |
| 6320 |  |  |  |  |  |

ELEV. C-C'

C/L

|      |  |  |  |  |  |
|------|--|--|--|--|--|
| 6350 |  |  |  |  |  |
| 6340 |  |  |  |  |  |
| 6330 |  |  |  |  |  |
| 6320 |  |  |  |  |  |

NOTE: CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

|                  |         |             |
|------------------|---------|-------------|
| REVISION         | DATE    | REVISION BY |
| RESTAKE LOCATION | 5/27/08 | JAMES G     |

**Daggett Enterprises, Inc.**  
 Surveying and Oil Field Services  
 P. O. Box 15068 Farmington, NM 87401  
 Phone (505) 326-1772 Fax (505) 326-6019  
 NEW MEXICO L.S. No. 8894  
 CADFILE: CR339\_CFB  
 DATE: 08/25/04

Drawn by: A.G.  
 Rev'd: CR339

## **Hydrogeological Report for OH Randel #16S (30-045-33135)**

### **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. The proposed pit location will be located in the northernmost Bisti region of the San Juan Basin. The predominant geologic formation is the Nacimiento Formation of Tertiary age, which underlies surface soils and is occasionally 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.

The Cretaceous and Tertiary sandstones, as well as the Quaternary alluvial deposits, serve as the primary aquifers in the San Juan Basin (Stone et al., 1983). Porous sandstones form the principal aquifers, while relatively impermeable shales form confining units between the aquifers. Beds of water-yielding sandstone are present in the Nacimiento Formation, which are fluvial in origin and are interbedded with siltstone, shale and coal. The thickness of the primary aquifer within the Nacimiento Formation generally increases toward the central part of the basin and can be up to 3500 feet thick (Groundwater Atlas of the United States). Groundwater behavior specific to this site is discussed in the *Siting Criteria* section of this permit.

The prominent soil type at the proposed site is aridisols, which are desert soils with little to no profile unless gypsum or carbonate is present ([www.emnrd.state.nm.us](http://www.emnrd.state.nm.us)). 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, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes soils that cover the area.

The climate of the Bisti region is arid, averaging just over 10 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from July through October. The heaviest rainfall occurs in the summer in isolated, intense cloud bursts. 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 [wrcc@dri.edu](mailto:wrcc@dri.edu)).

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

#### **Siting Requirements for OH Randel #16S (30-045-33135)**

- Depth to Groundwater: Depth to groundwater is estimated to be greater than 100 feet.
  - Local aquifers exist within the Nacimiento Formation at depths greater than 100' (USGS, Groundwater Atlas of the US).
  - This rural site location does not contain an abundant amount of groundwater elevation data. The closest public groundwater data available in the NM State Engineer's iWaters Database exists approximately 1.2-miles away in T26N, R11W, Section 16, Quarter Section M. This location is labeled on the attached topographic map, as is the proposed location of the temporary pit. The groundwater well indicates groundwater depth at 200'.
  - A general comparison of site topography between the existing groundwater well and the proposed pit location suggests similar properties.
- Surface Water: No continuously flowing watercourse exists within several miles of the proposed location. Gallegos Wash is located approximately 2.3 miles southwest of the site as shown on the attached topographic map.
- Private and Public Buildings: An aerial photo is attached and it is clear that no residences, schools, hospitals, public institutions or churches are located within 300' of the site.
- Private or Public Water Sources: The pit will not be located near any private fresh water well or spring. No water well was found within 2 miles of the proposed site on the NM State Engineer's iWaters database, and no freshwater spring is identified on the topographic map.
- Municipal Boundaries: The well site is not located within any incorporated municipal boundaries or municipal fresh water well field.
- Wetlands: No wetlands can be identified through inspection of the topographic map.
- Subsurface Mines: A NM Bureau of Geology and Mineral Resources map is attached showing the location of any mines, mills or quarries that may be nearby the proposed site. There are no such operations within 20 miles of the location.
- Site Stability: The site is not located in an unstable area, as is evident on the attached topographic map.
- Floodplain: A FEMA floodplain map is attached, indicating the site is located in a zone that is defined as outside of the 500-year flood plain.
- Excavated Material: No excavated material will be placed within 300 feet of a flowing water course or within 200 feet of any other defined water course.

**New Mexico Office of the State Engineer**  
**POD Reports and Downloads**

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|                                                                                                          |     |                          |              |           |                           |                          |                |         |  |
|----------------------------------------------------------------------------------------------------------|-----|--------------------------|--------------|-----------|---------------------------|--------------------------|----------------|---------|--|
| Township:                                                                                                | 26N | Range:                   | 11W          | Sections: |                           |                          |                |         |  |
| NAD27                                                                                                    | X:  |                          | Y:           |           | Zone:                     | <input type="checkbox"/> | Search Radius: |         |  |
| County:                                                                                                  |     | <input type="checkbox"/> | Basin:       |           | <input type="checkbox"/>  | Number:                  |                | Suffix: |  |
| Owner Name: (First) _____ (Last) _____ <input type="radio"/> Non-Domestic <input type="radio"/> Domestic |     |                          |              |           |                           |                          |                |         |  |
| <input checked="" type="radio"/> All                                                                     |     |                          |              |           |                           |                          |                |         |  |
| POD / Surface Data Report                                                                                |     |                          |              |           | Avg Depth to Water Report |                          |                |         |  |
| Water Column Report                                                                                      |     |                          |              |           |                           |                          |                |         |  |
| Clear Form                                                                                               |     |                          | iWATERS Menu |           |                           | Help                     |                |         |  |

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**AVERAGE DEPTH OF WATER REPORT 07/09/2008**

| Bsn | Tws | Rng | Sec | Zone | X | Y | Wells | (Depth Water in Feet) |     |     |
|-----|-----|-----|-----|------|---|---|-------|-----------------------|-----|-----|
|     |     |     |     |      |   |   |       | Min                   | Max | Avg |
| SJ  | 26N | 11W | 16  |      |   |   | 1     | 200                   | 200 | 200 |
| SJ  | 26N | 11W | 35  |      |   |   | 1     | 165                   | 165 | 165 |

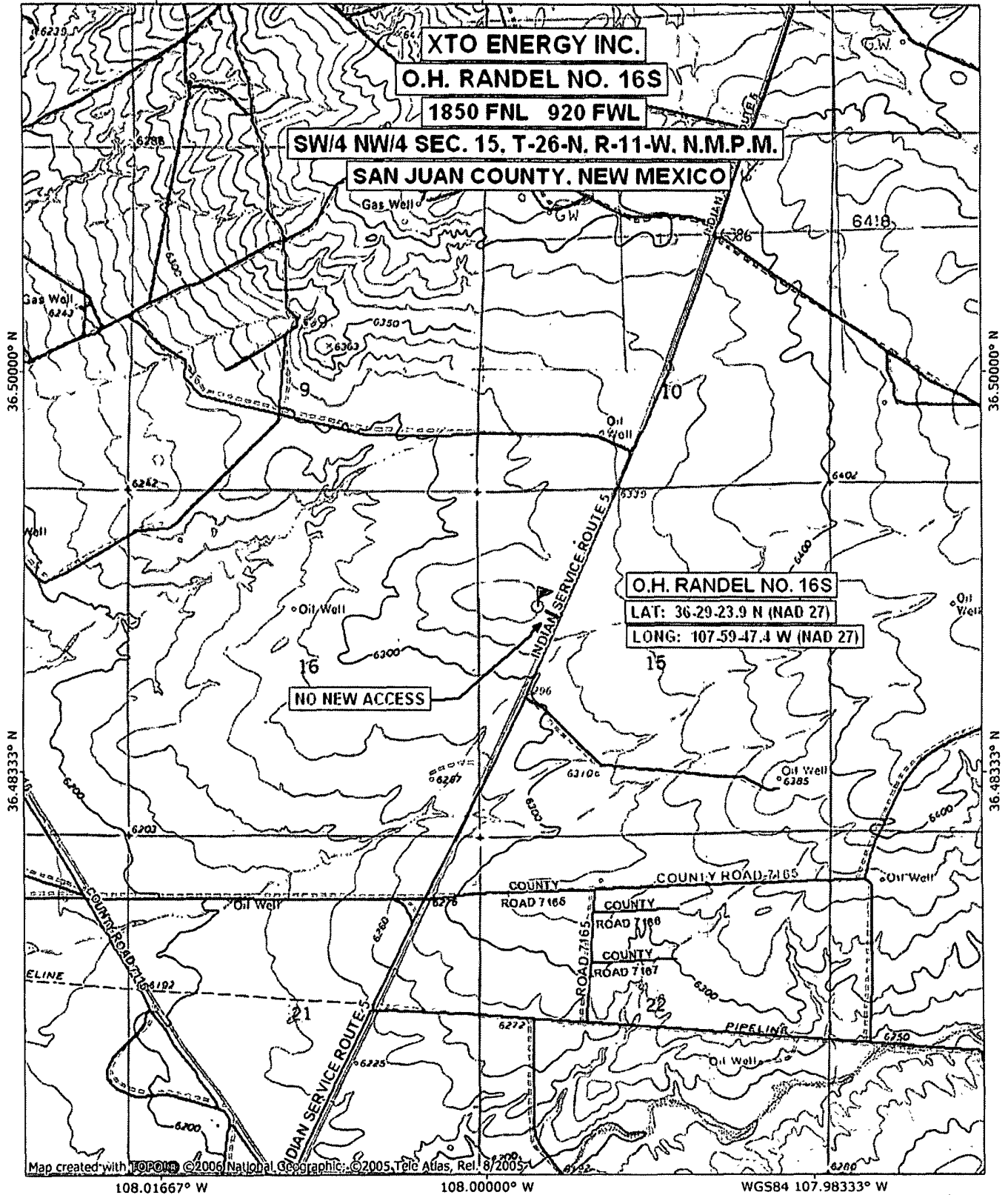
Record Count: 2

TOPO! map printed on 05/30/08 from "CR339\_QM.TPO"

108.01667° W

108.00000° W

WGS84 107.98333° W



108.01667° W

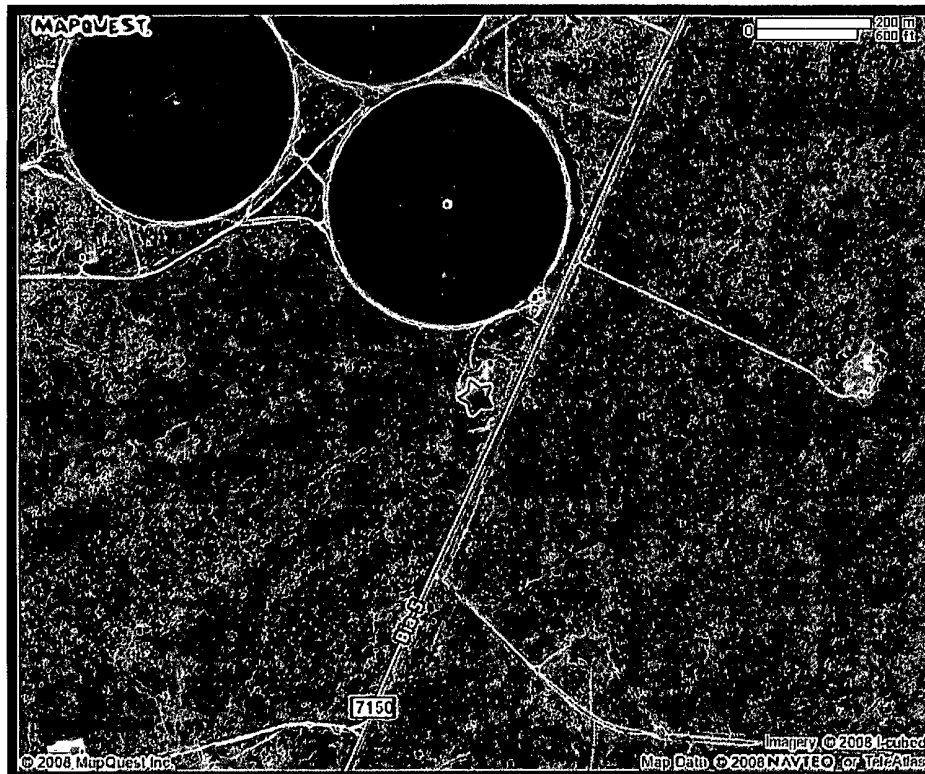
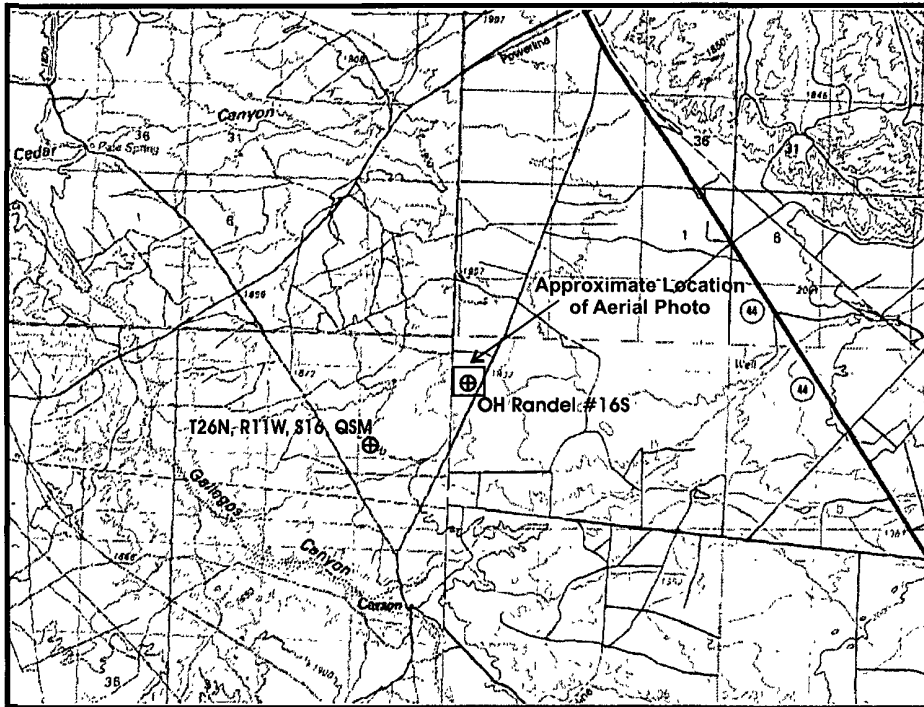
108.00000° W

WGS84 107.98333° W

 NATIONAL  
GEOGRAPHIC

0.0 0.5 miles  
0.0 0.5 1.0 km

TN MN  
10 1/2°  
05/30/08



Lodestar Services, Inc  
PO Box 3861  
Farmington, NM 87499

OH Randel #16S  
SEC. 15, T26N, R11W  
SAN JUAN COUNTY, NEW MEXICO

PROJECT: Pit Permits  
DRAWN BY: ALA  
REVISED: 07/08/2008

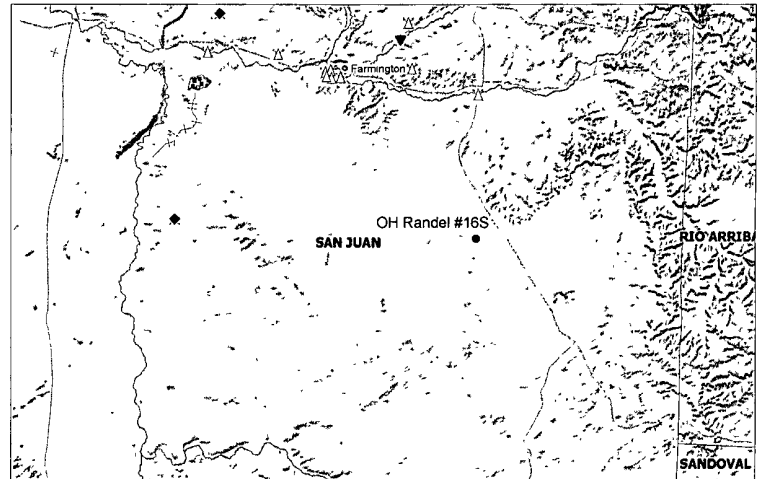
TOPOGRAPHIC MAP  
AND  
AERIAL PHOTOGRAPH

# MMQonline Public Version

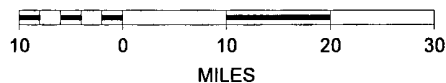
## Mines, Mills & Quarries Commodity Groups

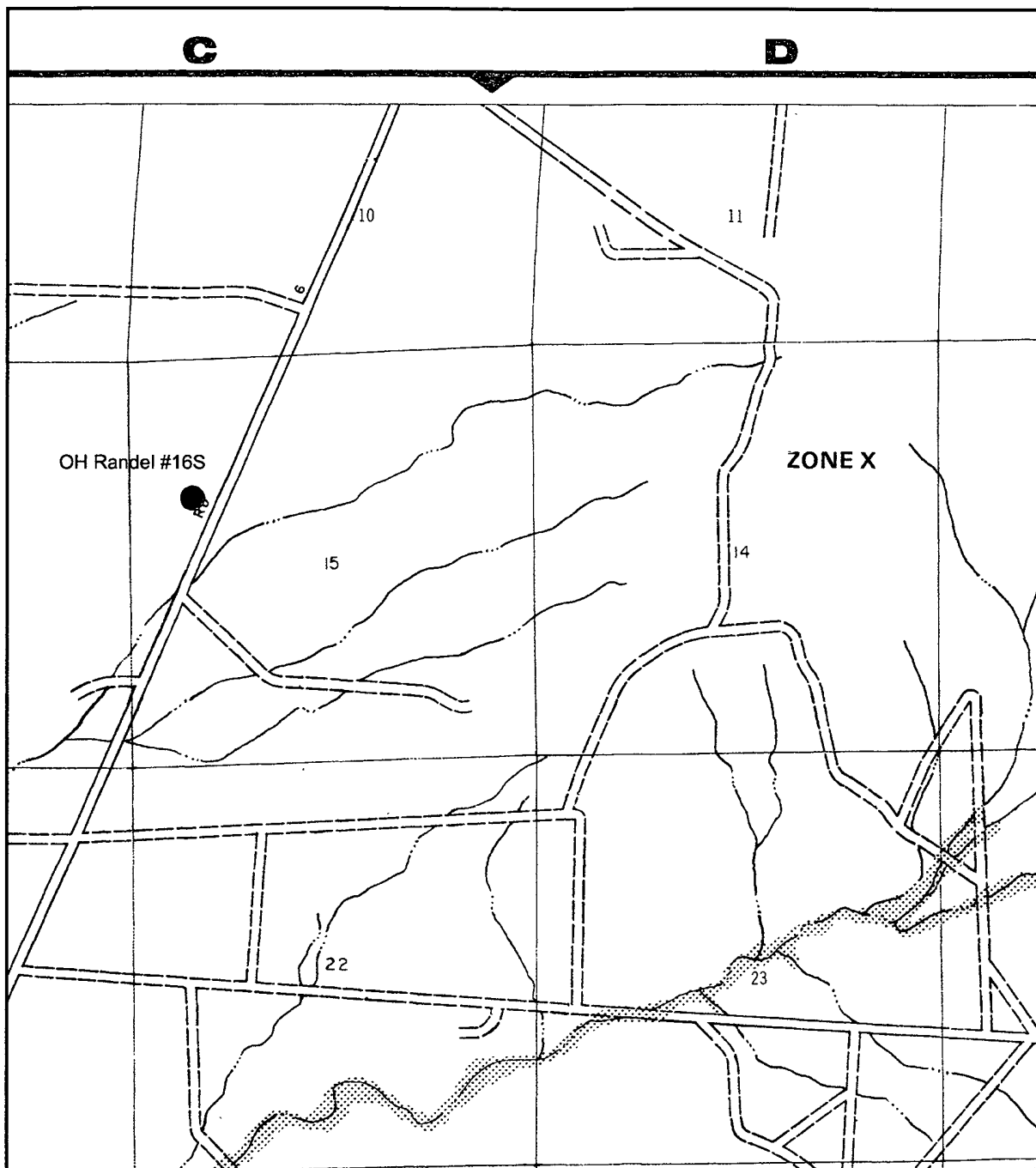
-  Aggregate & Stone Mines
-  Coal Mines
-  Industrial Minerals Mines
-  Industrial Minerals Mills
-  Metal Mines and Mill Concentrate
-  Potash Mines & Refineries
-  Smelters & Refinery Ops.
-  Uranium Mines
-  Uranium Mills

Mines, Mills & Quarries Status



SCALE 1 : 1,091,980







**APPROXIMATE SCALE**

2000 0 2000 FEET

**LEGEND**

 **SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD**

**ZONE A** No base flood elevations determined

**ZONE AE** Base flood elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

**ZONE A0** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.

**ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.

**ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined

 **FLOODWAY AREAS IN ZONE AE**

 **OTHER FLOOD AREAS**

**ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

 **OTHER AREAS**

**ZONE X** Areas determined to be outside 500-year flood plain.

**ZONE D** Areas in which flood hazards are undetermined.

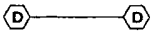
 Flood Boundary

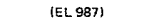
 Floodway Boundary

 Zone D Boundary

 Boundary Dividing Special Flood Hazard Zones

 513 Base Flood Elevation Line; Elevation in Feet\*

 Cross Section Line

 (EL 987) Base Flood Elevation in Feet Where Uniform Within Zone\*

 RM7<sub>X</sub> Elevation Reference Mark

\*Referenced to the National Geodetic Vertical Datum of 1929

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

**XTO Energy Inc.**  
**San Juan Basin**  
**Pit Design and Construction Plan**

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

**General Plan**

1. XTO will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. Prior to constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration.
3. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the well site prior to construction of the temporary pit. 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.
4. XTO shall construct all new fences utilizing 48" steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes.
4. XTO shall construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure.
5. XTO shall construct the pit so that the slopes are no steeper than two horizontal feet to one vertical foot.
6. Pit walls will be walked down by a crawler type tractor following construction.
7. All temporary pits will be lined with a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements.
9. Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided.
10. All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep.
11. XTO will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used when possible. XTO will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. XTO will minimize the number of field seams in corners and irregularly shaped areas.
12. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
13. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some areas.
14. The volume of the pit shall not exceed 10 acre-feet, including freeboard.

**XTO Energy Inc.**  
**San Juan Basin**  
**Maintenance and Operating Plan**

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

**General Plan**

1. XTO will operate and maintain a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. XTO will conserve drilling fluids by transmitting liquids to pits ahead of the rigs whenever possible. All drilling fluids will be disposed at Basin Disposal Inc, Permit # NM-01-005.
3. XTO will not discharge or store any hazardous waste in any temporary pit.
4. If any pit liner integrity is compromised, or if any penetration of the liner occurs above the liquid surface, then XTO shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner.
5. If a leak develops below the liquid level, XTO shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. XTO shall notify the Aztec Division office by phone or email within 48 hours of the discovery for leaks less than 25 barrels. XTO shall notify the Aztec Division office as required pursuant to Subsection B of 19.15.3.116 NMAC within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19.15.3.116 NMAC shall be reported to the division's Environmental Bureau Chief.
6. The liner shall be protected from any fluid force or mechanical damage through the use of mud pits slides, or a manifold system.
7. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
8. XTO shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from pits surface. An oil absorbent boom will be stored on-site until closure of pit.
9. Only fluids generated during the drilling or workover process will be discharged into a temporary pit.
10. XTO will maintain the temporary pit free of miscellaneous solid waste or debris.
11. During drilling or workover operations, XTO will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged and logs maintained for review. XTO will file this log with the Aztec Division office upon closure of the pit.
12. After drilling or workover operations, XTO will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at XTO's office electronically and will be filed with the Aztec Division office upon closure of the pit.
13. XTO shall maintain at least two feet of freeboard for a temporary pit.
14. XTO shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling or workover rig.

## **XTO Energy Inc. San Juan Basin Closure Plan**

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

All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of pit closure. Closure report will be filed on C-144 and incorporate the following:

- Details on Capping and Covering, where applicable.
- Plot Plan (Pit Diagram)
- Inspection Reports
- Sampling Results
- C-105
- Copy of Deed Notice will be filed with County Clerk

### **General Plan:**

1. All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility or recycled, reused, or reclaimed in a manner that the Aztec Division office approves.
2. The preferred method of closure for all temporary pits will be on-site, in-place burial, assuming that all criteria listed in sub-section (B) of 19.15.17.13 are met.
3. The surface owner shall be notified of XTO proposed closure plan using a means that provides proof of notice i.e., Certified mail, return receipt requested.
4. Within 6 months of the Rig Off status occurring XTO will ensure that temporary pits are closed, re-contoured, and reseeded.
5. Notice of Closure will be given to the Aztec Division office between 72 hours and one week of closure via email, or verbally. The notification of closure will include the following:
  - i. Operators Name
  - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
6. Liner of temporary pit shall be removed above "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "ALL" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at a licensed disposal facility.
7. Pit contents shall be mixed with non-waste containing, earthen material in order to achieve appropriate solidification. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
8. A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul. Disposal facility to be utilized should this method be required will be Envirotech, Permit No. NM01-0011 or IEI, Permit No. NM01-0010B.

| Components | Test Method               | Limit (mg/Kg)     |
|------------|---------------------------|-------------------|
| Benzene    | EPA SW-846 8021B or 8260B | 0.2               |
| BTEX       | EPA SW-846 8021B or 8260B | 50                |
| TPH        | EPA SW-846 418.1          | 2500              |
| GRO/DRO    | EPA SW-846 8015M          | 500               |
| Chlorides  | EPA 300.1                 | 500 or background |

9. Upon completion of solidification and testing, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, ponding prevention, and erosion prevention. 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.
11. Notification will be sent to OCD when the reclaimed area is seeded.
12. XTO shall 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 of 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.
13. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time all wells on the pad are abandoned. The operator's information will include the following: Operators Name, Lease Name, Well Name and Number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.



Kim Champlin/FAR/CTOC

07/18/2008 11:52 AM

To mark\_kelly@blm.gov

cc Kim Champlin/FAR/CTOC@CTOC

bcc

Subject Notice- OH Randel #15S & #16S Well Sites

RE: OH Randel #15S Gas Well API #30-045-32949  
Sec. 10J- T26N- R11W, San Juan County  
OH Randel #16S Gas Well API #30-045-33135  
Sec. 15E- T26N- R11W, San Juan County

Dear Mr. Kelly:

This submittal is pursuant to Rule 19.15.17.13 requiring operators to notify surface owners of on site burial of temporary pits. XTO Energy Inc. (XTO) is hereby providing written documentation of our intention to close the temporary pit associated with the aforementioned location by means of in place on site burial.

Should you have any questions or require additional information please feel free to contact me at your earliest convenience (505) 333-3100.

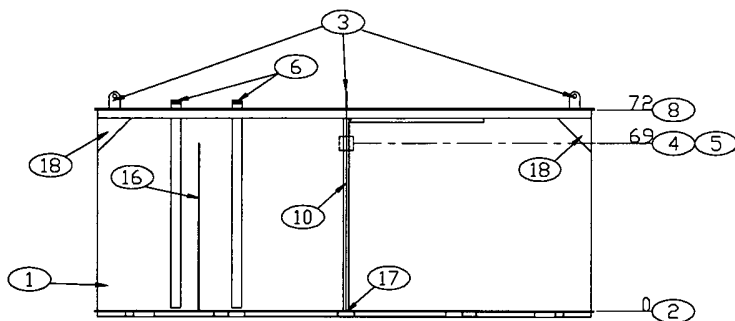
Kim Champlin  
Environmental Representative  
XTO Energy  
San Juan Division  
(505) 333-3207 Office  
(505)330-8357 Cell  
(505) 333-3280 Fax

**XTO Energy Inc.**  
**San Juan Basin**  
**Below Grade Tank Design and Construction Plan**

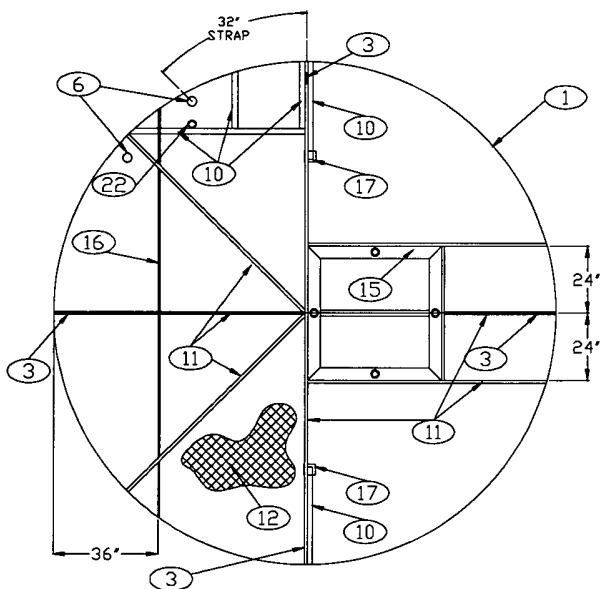
In accordance with Rule 19.15.17.11 NMAC the following information describes the design and construction of below grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below grade tanks. A separate plan will be submitted for any below grade tank (BGT) which does not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

**General Plan**

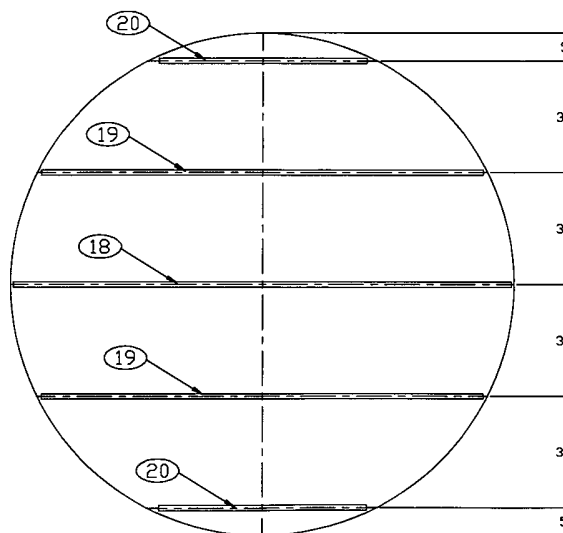
1. XTO will design and construct a BGT to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. Prior to constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration.
3. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the well site prior to construction of the BGT. 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.
4. XTO shall construct all new fences utilizing 48" steel mesh field-fence (hogwire) on the bottom with two strands of barbed wire on top, or with a pipe top rail. A 6' chain link fence topped with three strands of barbed wire will be used if the well location is within 1000' of a permanent residence, school, hospital, institution or church.
5. XTO shall construct an expanded metal covering on top of the BGT.
6. XTO will ensure that a BGT is constructed of materials resistant to the BGT's particular contents and resistant to damage from sunlight.
7. The BGT 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.
8. XTO will construct and use BGT that does not have double walls. The BGT sidewalls will be open for visual inspection for leaks, the BGT bottom will be elevated a minimum of 6" above the underlying ground surface and the BGT will be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.
9. XTO will equip BGT's designed in this manner with a properly functioning automatic high-level shut-off control device and manual controls to prevent overflows.
10. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate division district office approves. The geomembrane liner shall have a hydraulic conductivity 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 acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.
11. The general specifications for design and construction are attached.



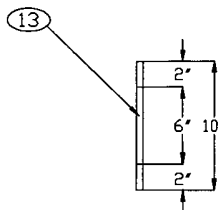
SIDE VIEW



TOP VIEW



BOTTOM VIEW



# MATERIAL SPECIFICATION

| ITEM | QTY.   | PART #    | DESCRIPTION                                  | GRADE |
|------|--------|-----------|----------------------------------------------|-------|
| 1    | 1      | RR-316612 | ROLLED RING 3/16" X 8'-0" X 12'-0"           | X     |
| 2    | 1      | BOI-1412  | BOTTOM TANK 1/4" X 12'-2" OD                 | X     |
| 3    | 4      | LE-3846   | EYE-LIFTING 3/8" PLATE 4" X 8"               | X     |
| 4    | 1      | X         | NAME PLATE BRACKET                           | X     |
| 5    | 1      | T-NMPLBET | TANK MODEL NUMBER NAME PLATE                 | X     |
| 6    | 2      | X         | PIPE-USED 3-1/2" OD X 216" WALL X 6"-8" TOE  | X     |
| 7    | X      | X         | X                                            | X     |
| 8    | 2      | RA21412   | ROLLED ANGLE 2" X 2" X 1/4" X 12'-0" OD      | X     |
| 9    | X      | X         | X                                            | X     |
| 10   | 35'-0" | SA2214    | ANGLE, 2" X 2" X 1/4"                        | X     |
| 11   | 24'-0" | SC341     | CHANNEL 3" X 4 1/8"                          | X     |
| 12   | 144 SF | EX648612R | EXPANDED METAL 3/4" #9 RAISED 6'-0" X 12'-0" | X     |
| 13   | 1'-0"  | RD12      | ROUND 1/2" HOT ROLLED                        | X     |
| 14   | 2      | M1-A      | HINGE-4" WITH 1/2" PIN                       | X     |
| 15   | 1      | MUF-445   | MUFFLER 48" X 48" (DRG. # BET-A-35)          | X     |
| 16   | 1      | X         | BAFFLE 5'-0" TALL X 10'-0" LG                | X     |
| 17   | 3      | PD-86     | PAD 1/4" X 6" X 6"                           | X     |
| 18   | 2      | GUS88     | PLATE 1/4" X 6" X 6"                         | X     |
| 19   | 1      | SC682     | CHANNEL 6" X 8 2/3" X 144" LG                | X     |
| 20   | 2      | SC682     | CHANNEL 6" X 8 2/3" X 123'-1/2" LG           | X     |
| 21   | 8      | SC682     | CHANNEL 6" X 8 2/3" X 41'-3/8" LG            | X     |
| 22   | 1      | X         | FS CPLIC 2" 3000# FULL                       | X     |

## GENERAL NOTES

CUSTOMER: ---  
**BENCHMARK EQUIPMENT & TANK**  
 326 N. BERGIN LANE  
 BLOOMFIELD, N.M. 87413  
 (505)-632-9030

ALL INFORMATION CONTAINED IN THIS DRAWING WHETHER PATENTABLE OR NON-PATENTABLE IS OF A PROPRIETARY NATURE AND IS THE SOLE PROPERTY OF BET INC. REPRODUCTION OR ANY OTHER USE WITHOUT THE EXPRESSED WRITTEN CONSENT OF BET INC IS STRICTLY PROHIBITED.

OWN BY:CHK BY:GC BY:ENG DATE: 08-16-07 DRAWING # BET-071

TITLE: 120 BBL PIT TANK  
 BAFFLE WITH MUFFLER  
 AND 6" 8 2/3" CHANNE  
 REV: 2  
 SCALE: X"=12"

BET PART #: ---

**XTO Energy Inc.**  
**San Juan Basin**  
**Below Grade Tank Maintenance and Operating Plan**

In accordance with Rule 19.15.17.11 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 (BGT) which does not conform to this plan.

**General Plan**

1. XTO will operate and maintain a BGT to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. XTO will not allow a BGT to overflow or allow surface water run-on to enter the BGT.
3. XTO will continuously remove any visible or measurable layer of oil from the fluid surface of a BGT in order to prevent significant accumulation of oil.
4. XTO will inspect the BGT monthly and maintain written records for five years.
5. XTO will maintain adequate freeboard to prevent overtopping of the BGT.

**XTO Energy Inc.**  
**San Juan Basin**  
**Below Grade Tank Closure Plan**

In accordance with Rule 19.15.17.11 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 (BGT) which does not conform to this plan.

**General Plan**

1. XTO will close a BGT 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 an existing BGT 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 BGT within 60 days of cessation of the BGT'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 a BGT prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility.
5. XTO will remove the BGT and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.
6. XTO will remove any on-site equipment associated with a BGT unless the equipment is required for some other purpose.
7. XTO will test the solids beneath the BGT 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 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 will be given to the Aztec Division District III office between 72 hours and one week of closure via email or verbally. The notification will include the following:
  - i. Operator's name
  - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.

11. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the BGT. Closure report will be filed on form C-144 and incorporate the following:
  - i. Details on capping and covering, where applicable
  - ii. Inspection reports
  - iii. Sampling results
12. 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.
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.
14. A minimum of 4' of cover shall be achieved and the cover shall include 1' of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
15. The surface owner shall be notified of XTO's proposal to close the BGT as per the approved closure plan using certified mail, return receipt requested.