

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.

2009 JAN 20 PM 1 46

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

- 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
BGT1 ☒ 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: Ute Mountain Tribal H Gas Com #1
API Number: 30-045-11670 OCD Permit Number: _____
U/L or Qtr/Qtr K Section 01 Township 31N Range 14W County: San Juan
Center of Proposed Design: Latitude 36.928630 Longitude 108.263060 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 _____

☐ **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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	
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).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- Topographic map; Visual inspection (certification) of the proposed site	
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)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<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)	<input type="checkbox"/> Yes <input type="checkbox"/> No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	
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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- Written confirmation or verification from the municipality; Written approval obtained from the municipality	
Within 500 feet of a wetland.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	
Within the area overlying a subsurface mine.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	
Within an unstable area.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	
Within a 100-year floodplain.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
- 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 H₂S, 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.

- 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

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: 01/05/2009
 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: Jaclyn Burdine Approval Date: 08/12/2022
 Title: Environmental Specialist-A 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 indentify 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: _____

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-100
Supersedes C-122
Effective 1-1-55

All distances must be from the outer boundaries of the Section.

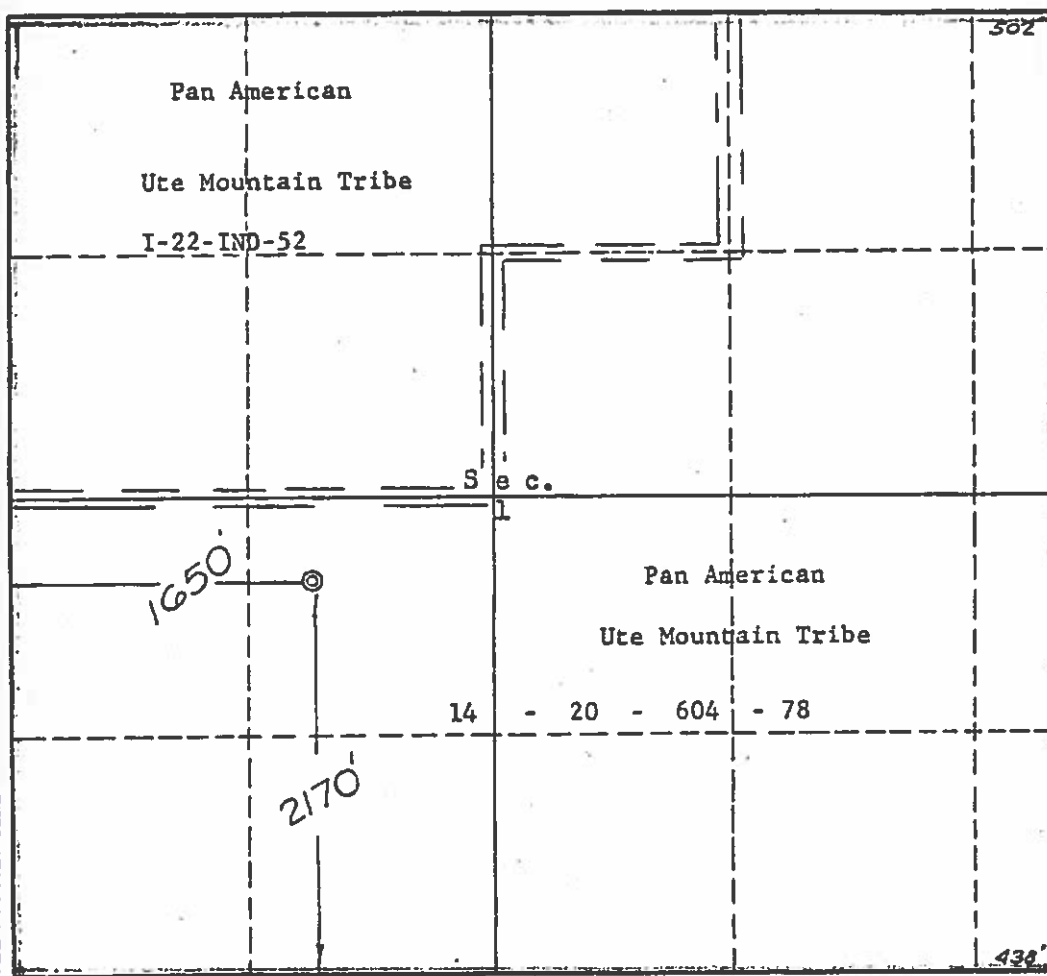
Operator Pan American Petroleum Corporation			Lease Ute Mountain Tribal "H"		Well No. 1
Unit Letter K	Section 1	Township 31 North	Range 14 West	County San Juan	
Actual Footage Location of Well:					
2170		feet from the South	line and 1650	feet from the West	line
Ground Level Elev. Report later	Producing Formation Paradox		Pool Ute Dome Paradox	Dedicated Acreage 697	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Communitization being prepared
100% Pan American owned

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, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



Scale, 1" = 1000'

CERTIFICATION

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

G. W. Eaton, Jr.

Name

G. W. Eaton, Jr.

Position

Area Engineer

Company

PAN AMERICAN PETROLEUM CORP.

Date

August 20, 1965

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

August 18, 1965

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No. **3602**

AUG 24 1965

CON. COM. DIST. 3



Pit Permit Siting Criteria Information

Client:	XTO Energy
Project:	tank permitting
Revised:	17-Dec-08
Prepared by:	Trevor Ycas

API#: 30-045-11670

USPLSS: 31N 14W 1 K

Name: UTE MOUNTAIN TRIBAL H GAS COM No. 001

Lat/Long: 36.928630°, -108.263060°

Depth to groundwater: depth >100"

Geologic formation: Cliff House Sandstone (Kch)

Distance to closest continuously flowing watercourse: 4.1 miles E to 'La Plata River'

site elevation:
1840m/6034'

Distance to closest significant watercourse, lakebed, playa lake, or sinkhole: ~530' WSW to 'Craig Arroyo' (intermittent stream)

Permanent residence, school, hospital, institution or church within 300' NO

Soil Type: Entisol / Rockland/ alluvial valley fill

Domestic fresh water well or spring within 500' NO

Annual Precipitation: Shiprock: 6.90", Fruitland: 7.38", Farmington (FAA): 8.21"

Any other fresh water well or spring within 1000' NO

Precipitation Notes: Historical daily max. precip.: 2.9" (Shiprock)

Within incorporated municipal boundaries NO
Within defined municipal fresh water well field NO

Attached Documents: 31N13W_iWaters.pdf, 31N14W_iWaters.pdf, 31N15W_iWaters.pdf, 32N13W_iWaters.pdf, 32N14W_iwaters.pdf, 32N15W_iwaters.pdf, 33N13W_iWaters.pdf, 33N14W_iWaters.pdf, 33N15W_iWaters.pdf
30-045-11670_gEarth-iWaters.jpg, 30-045-11670_gEarth-PLS.jpg, 30-045-11670_topo-PLS.jpg

Wetland within 500' NO

Mining Activity: None Near

Within unstable area NO

NM_NRD-MMD_MinesMillQuarries_30-045-11670.jpg
NM_NRD-MMD_UTE_COALBNDs_prox.jpg

Within 100 year flood plain unmapped area: see note below

Additional Notes:

drains to 'La Plata River' via 'Craig Arroyo'

in 'Craig Arroyo', SW of 'Coalbank Canyon' and E of 'Barker Arroyo'

Ute Mountain Tribal H GC #1 Below Grade Tank Siting Criteria and Closure Plan

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 below ground tank location will be located in the northwest corner of the San Juan Basin, where the Hogback monocline ends. Thicker sequences common throughout the central basin begin to pinch out and older units of Cretaceous Age are exposed, specifically the Menefee Formation and Cliff House Sandstone (Brister and Hoffman, 2002). The resistant Cliff House sandstones form prominent cliff bands, while shales and smaller sandstones of the Menefee Formation are exposed at lower elevations. The stratigraphic section reflects deposition in a coastal plain environment and consists of gray, brownish and tan sandstone interbedded with dark, carbonaceous shales and coal beds. Also, deposits of Quaternary alluvial and aeolian sands occur prominently near the surface, 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). Within the Cliff House Sandstone, sandstone beds range in thickness from 20 to 245 feet near the edge of the San Juan Basin. In general, the water from Cretaceous aquifers is minimal (less than 5 gpm), and transmissivity values for the unit average about 2 ft²/d (Stone et al., 1983). Aquifer depths range from very shallow depths to over 150 feet below ground surface. Groundwater within these aquifers flows toward the nearby La Plata River, which is a tributary of the San Juan River.

The prominent soil type at the proposed site is rockland, which are basically little to no soils that do not show any profile development. Soils that are present are unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the La Plata River (www.emnrd.state.nm.us). 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.

Dry and arid weather further prohibit active recharge. The climate of the region is arid, averaging just over 8 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).

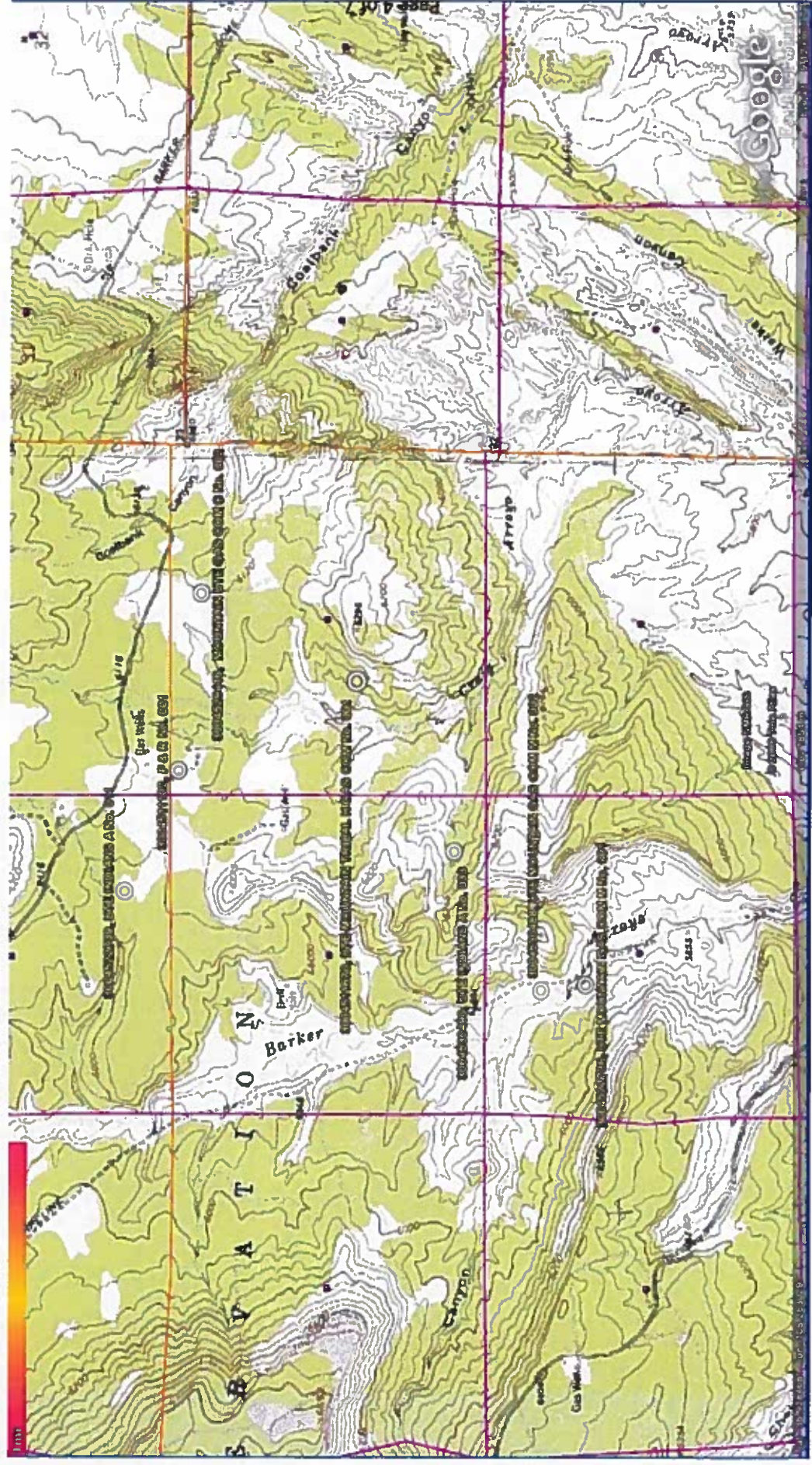
The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

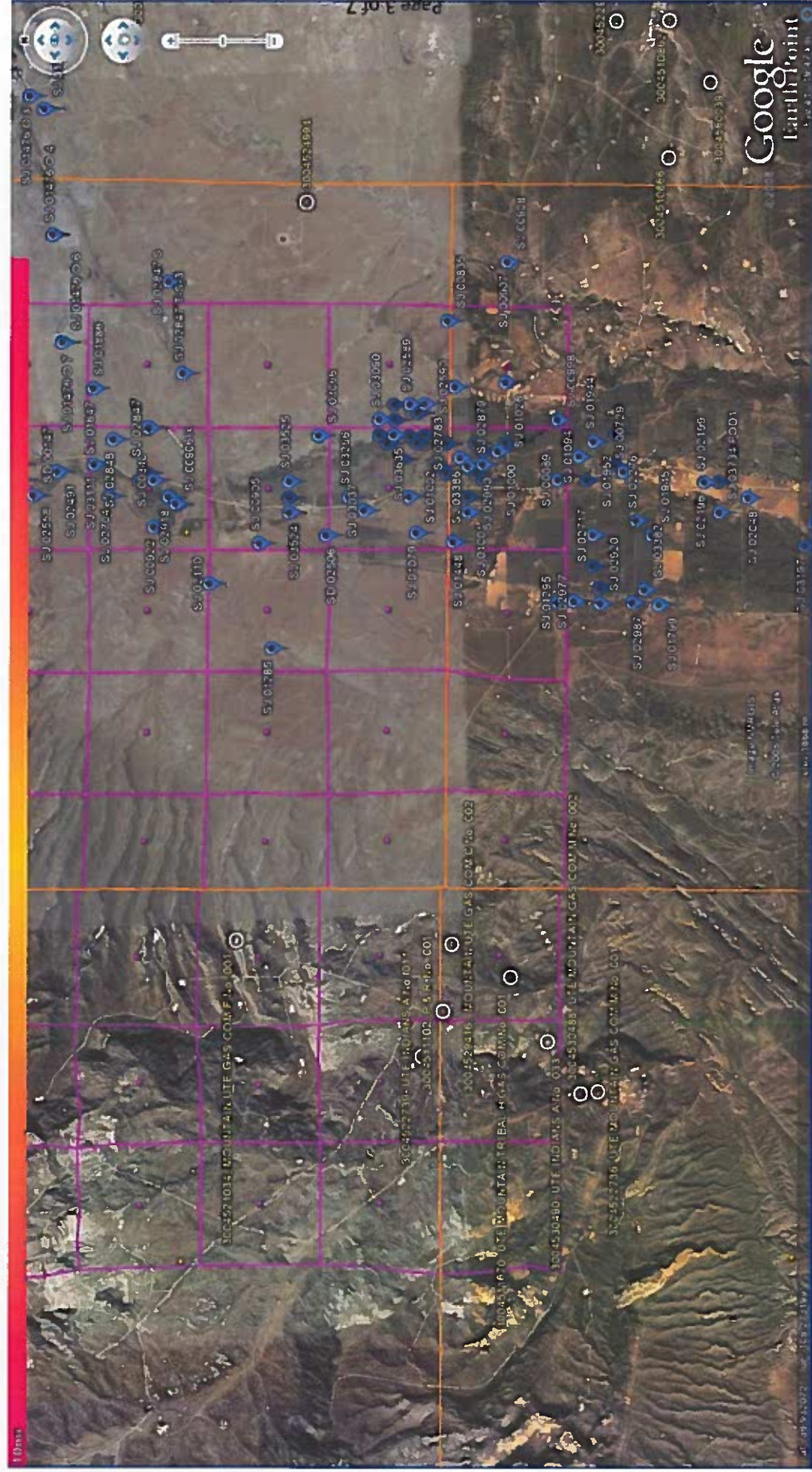
Site Specific Hydrogeology

Depth to groundwater is estimated to be greater than 100 feet. This estimation is based on data from Stone and others, 1983 and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration.

Local aquifers exist within the Cliff House Sandstone, which range from shallow depths to over 150 feet deep in this area (Stone et al., 1983). The site in question is located on a thin band of outcrop dissected by shallow arroyos and canyons. The outcrop is 250 feet high and the proposed site sits near the top surface. Nearby canyons include Barker Arroyo to the west. The floor of Barker Arroyo, where groundwater may be shallow, is almost 200 feet below the proposed site.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the location of wells in reference to the proposed pit location is attached. Pinpoints show locations of wells and the labels for each pinpoint indicate depth to groundwater in feet. Wells are clustered near populated areas along the La Plata River east of the proposed site. These sites contain shallow groundwater, but topographic and hydrographic conditions are not representative of the site in question. Many data points exist east of the site and indicate groundwater at 10-180 feet in depth. These groundwater wells are located approximately 500 feet lower in elevation than the proposed site, suggesting groundwater is greater than 100 feet deep at the proposed location.





New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 32N Range: 14W 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

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WATER COLUMN REPORT 08/11/2008

(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 Water Depth Water (in feet) Column

No Records found, try again

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: Range: 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](#)

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WATER COLUMN REPORT 08/11/2008

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

POD Number	Tws	Rng	Sec	q	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
SJ 01187 CLW226675	32N	13W	10	3	4	4					24	9	15	
SJ 01187	32N	13W	10	3	4	4					24	9	15	
SJ 01353	32N	13W	10	4	3							38		
SJ 01439	32N	13W	10	4	3							25	20	
SJ 02068	32N	13W	15	2							45	16	29	
SJ 01549	32N	13W	15	2	1						47	28	19	
SJ 02985	32N	13W	15	2	1	2					47	25	22	
SJ 02350	32N	13W	15	2	3	1					26			
SJ 02865	32N	13W	15	2	3	2					44	29	15	
SJ 02558	32N	13W	15	3	2	4					41	23	18	
SJ 02934	32N	13W	15	4	1	1					34	18	16	
SJ 02890	32N	13W	15	4	1	2					55	30	25	
SJ 02705	32N	13W	22	1	4	2					25	12	13	
SJ 02704	32N	13W	22	1	4	2					25	12	13	
SJ 03111	32N	13W	22	2	1	4					19	6	13	
SJ 02848	32N	13W	22	2	4	3					608	50	558	
SJ 00922	32N	13W	22	3	1	4					27	12	15	
SJ 00906 X	32N	13W	22	3	4						86	26	60	
SJ 02918	32N	13W	22	3	4	2					51	30	21	
SJ 00736	32N	13W	22	4	1						40	15	25	
SJ 00339	32N	13W	22	4	1	1					50	12	38	

<u>SJ 00340</u>	32N	13W	22	4	1	3
<u>SJ 02847</u>	32N	13W	22	4	4	1
<u>SJ 03123</u>	32N	13W	27	3	4	1
<u>SJ 03524</u>	32N	13W	27	3	4	1
<u>SJ 03525</u>	32N	13W	27	4	3	1
<u>SJ 01285</u>	32N	13W	28	3	1	4
<u>SJ 03256</u>	32N	13W	34	1	4	2
<u>SJ 03037</u>	32N	13W	34	1	4	3
<u>SJ 03066</u>	32N	13W	34	2	2	2
<u>SJ 01079</u>	32N	13W	34	3	3	
<u>SJ 01943</u>	32N	13W	34	4		
<u>SJ 02901</u>	32N	13W	34	4	2	2
<u>SJ 03635</u>	32N	13W	34	4	2	4
<u>SJ 02577</u>	32N	13W	34	4	4	
<u>SJ 03090</u>	32N	13W	35	3	1	1
<u>SJ 02589</u>	32N	13W	35	3	3	2
<u>SJ 02783</u>	32N	13W	35	3	3	4

Record Count: 38

50	12	38
1255		1255
30		
33	10	23
71	12	59
27		
21	6	15
100		
41	28	13
100	30	70
8	3	5
50		
44	35	9
30	15	15
59	47	12
60	35	25
62	48	14

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: Range: 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](#)
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WATER COLUMN REPORT 08/11/2008

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

POD Number

Tw	Rng	Sec	q	q	q	Zone	X

Y	Depth	Depth	Water	Water
	Well	Water	Column	

No Records found, try again

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

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[Avg Depth to Water Report](#)
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WATER COLUMN REPORT 08/11/2008

(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	Well	Water	Column
RG 37716	31N	14W	05			C	727700	2164700	47		
RG 37737	31N	14W	35			C	736990	2151000	54	27	27

Record Count: 2

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 31N Range: 13W 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

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WATER COLUMN REPORT 08/11/2008

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

POD Number	Tws	Ring	Sec	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
SJ 02590	31N	13W	02	1	2	3			114	70	44	
SJ 00835	31N	13W	02	2	2				34	19	15	
SJ 03386	31N	13W	03	2					80	11	69	
SJ 02879	31N	13W	03	2	3	2			30			
SJ 03137	31N	13W	03	2	3	3			50			
SJ 02990	31N	13W	03	2	3	4			100	22	78	
SJ 01295	31N	13W	09	2	1	1			230	180	50	
SJ 02977	31N	13W	09	2	1	3			325	124	201	
SJ 02920	31N	13W	09	2	3	3			85			
SJ 02755	31N	13W	09	2	3	4			60	40	20	
SJ 02987	31N	13W	09	4	1	3			250	87	163	
SJ 03382	31N	13W	09	4	3	2			50			
SJ 02717	31N	13W	10	1	3				42	22	20	
SJ 01094	31N	13W	10	2					130	60	70	
SJ 00798	31N	13W	10	2					125	65	60	
SJ 00089	31N	13W	10	2	1	1			80	18	62	
SJ 01952	31N	13W	10	2	4				16	6	10	
SJ 01944	31N	13W	10	2	4				20	4	16	
SJ 02276	31N	13W	10	3					24	19	5	
SJ 01945	31N	13W	10	3	3				31	16	15	
SJ 00729	31N	13W	10	4	1				43	10	33	

SJ 01950	31N	13W	10	4	1	21	11	10
SJ 02637	31N	13W	10	4	2	20	6	14
SJ 03734 POD1	31N	13W	15	1	4	40	10	30
SJ 02048	31N	13W	15	3	2	54	24	30
SJ 00398	31N	13W	21			104	6	98
SJ 00965	31N	13W	22	1		115	30	85
SJ 03197	31N	13W	22	1	1	11	5	6
SJ 01820	31N	13W	22	3	1	50	20	30
SJ 02737	31N	13W	22	3	3	78	40	38
SJ 02836	31N	13W	22	3	3	100	30	70
SJ 03797 POD1	31N	13W	22	3	3	220	20	200
SJ 03611	31N	13W	23	1	3	24	14	10
SJ 02729	31N	13W	27	1	1	100	70	30
SJ 02753	31N	13W	27	1	1	74	40	34
SJ 02832	31N	13W	27	1	1	80	20	60
SJ 03191	31N	13W	27	1	3	100		
SJ 03351	31N	13W	27	1	4	42	20	22
SJ 02761	31N	13W	27	3	3	80	40	40
SJ 02294	31N	13W	28	4	2	42	15	27
SJ 02724	31N	13W	28	4	2	40	5	35
SJ 03730 POD1	31N	13W	28	4	3	190	70	120
SJ 02811	31N	13W	28	4	4	50	2	48
SJ 02766	31N	13W	28	4	4	50	12	38
SJ 03284	31N	13W	33	1	3	160		
SJ 02072	31N	13W	33	1	4	42	18	24
SJ 01591	31N	13W	33	3	1	70	56	14
SJ 02618	31N	13W	33	3	2	500		
SJ 03083	31N	13W	33	3	2	25	14	11
SJ 02374	31N	13W	33	3	2	18	6	12

Record Count: 50

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 30N Range: 15W 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 00815 EXPLOR-2	30N	15W	22	3	3	4				240			
SJ 00815 O-EXPLORE	30N	15W	27	4	3	1				231			
SJ 00815 EXPLORE-1	30N	15W	27	4	3	1				234			
SJ 00815 O	30N	15W	27	4	3	3				231			
SJ 03798 POD1	30N	15W	29	4	2	2	254738	2105417		35	12	23	
SJ 00971 EXPLORE-2	30N	15W	36	1	4	3	W 342253	2100399		524	131	393	
SJ 00971 EXPLORE-1	30N	15W	36	1	4	3	W 342253	2100399		532	102	430	

Record Count: 7

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 30N Range: 14W 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	Well	Water	Column
SY 00944	30N	14W	03	1	3				61	5	56

Record Count: 1

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 30N Range: 13W 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 08/11/2008

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

POD Number	Tws	Rng	Sec	q	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
RG 22431	30N	13W	30	2							100	45	55	
SJ 01344	30N	13W	01	4	1	2					42	27	15	
SJ 03283	30N	13W	05	2	4	2					20	8	12	
SJ 00132	30N	13W	05	3	4	4					100	46	54	
SJ 01101	30N	13W	08	1							41	26	15	
SJ 03326	30N	13W	08	1	3	3					55	30	25	
SJ 00328	30N	13W	08	2							33	21	12	
SJ 02268	30N	13W	08	2							30	21	9	
SJ 01463	30N	13W	08	2							52	30	22	
SJ 00877	30N	13W	08	2							60	30	30	
SJ 00293	30N	13W	08	2							50	30	20	
SJ 00855	30N	13W	08	2	1						50	25	25	
SJ 01068	30N	13W	08	2	1						53	28	25	
SJ 02326	30N	13W	08	2	1	3					42	35	7	
SJ 02735	30N	13W	08	2	3	4					43	23	20	
SJ 00587	30N	13W	08	3	4	2					72	48	24	
SJ 03195	30N	13W	08	4	1	1					60	35	25	
SJ 03328	30N	13W	08	4	1	1					60			
SJ 03196	30N	13W	08	4	1	2					41	20	21	
SJ 03160	30N	13W	08	4	1	4					60	8	52	
SJ 00374	30N	13W	08	4	2								56	

SJ 02919	30N	13W	08	4	3	4	45	15	16
SJ 02397	30N	13W	08	4	4	4	31	10	20
SJ 02396	30N	13W	08	4	4	4	30		
SJ 02823	30N	13W	08	4	4	3	40		
SJ 02787	30N	13W	09	1	3	1	235	140	95
SJ 00818	30N	13W	09	3	1	1	130	32	98
SJ 02725	30N	13W	09	3	1	1	110	100	10
SJ 02647	30N	13W	11	4	3	4	76	58	18
SJ 02943	30N	13W	17	2	1	2	60		
SJ 03029	30N	13W	17	2	2	1	65	45	20
SJ 03017	30N	13W	17	2	4	2	37	20	17
SJ 02574	30N	13W	17	2	4	4	26	9	17
SJ 01736	30N	13W	26	1	4	3	332	300	32
SJ 01119	30N	13W	26	1	4	4	370	300	70
SJ 01454	30N	13W	26	3	1	1	400	350	50
SJ 01117	30N	13W	26	3	1	4	360	300	60
SJ 02225	30N	13W	26	3	2	2	339	300	39
SJ 01895	30N	13W	26	3	2	4	370	250	120
SJ 01181	30N	13W	26	3	3	3	257	230	27
SJ 01503	30N	13W	26	4	2	2	310	260	50
SJ 02674	30N	13W	27	3	4	4	270	250	20
SJ 00992	30N	13W	28	2	1	1	624	306	318
SJ 00992 CLW303071	30N	13W	28	2	1	2	624	306	318
SJ 00868	30N	13W	29	2			49	25	24
SJ 00262	30N	13W	29	2			38	25	13
SJ 01357	30N	13W	29	2	2		71	56	15
SJ 01040	30N	13W	29	2	2		49	20	29
SJ 03046	30N	13W	29	2	2	4	80	30	50
SJ 01502	30N	13W	29	4			47	20	27
SJ 00448	30N	13W	29	4			45	20	25
SJ 00215	30N	13W	29	4	3		55	35	20
SJ 02159	30N	13W	29	4	3		40	15	25
SJ 02754	30N	13W	29	4	4	4	65	65	
SJ 00467	30N	13W	30	4	4		36	21	15
SJ 01150	30N	13W	32	1	4		37	16	21
SJ 00156	30N	13W	32	3			44	18	26
SJ 00217	30N	13W	32	3			40	10	30
SJ 01359	30N	13W	32	3	1		25	10	15
SJ 02391	30N	13W	35	1	1	1	260	200	60

Record Count: 60

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 12N Range: 15W 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 12/07/2008

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

(quarters are 1-6W 2-6E 3-6W 4-6E)
(quarters are biggest to smallest)
Source Tvs Rng Sec q q q

POD Number

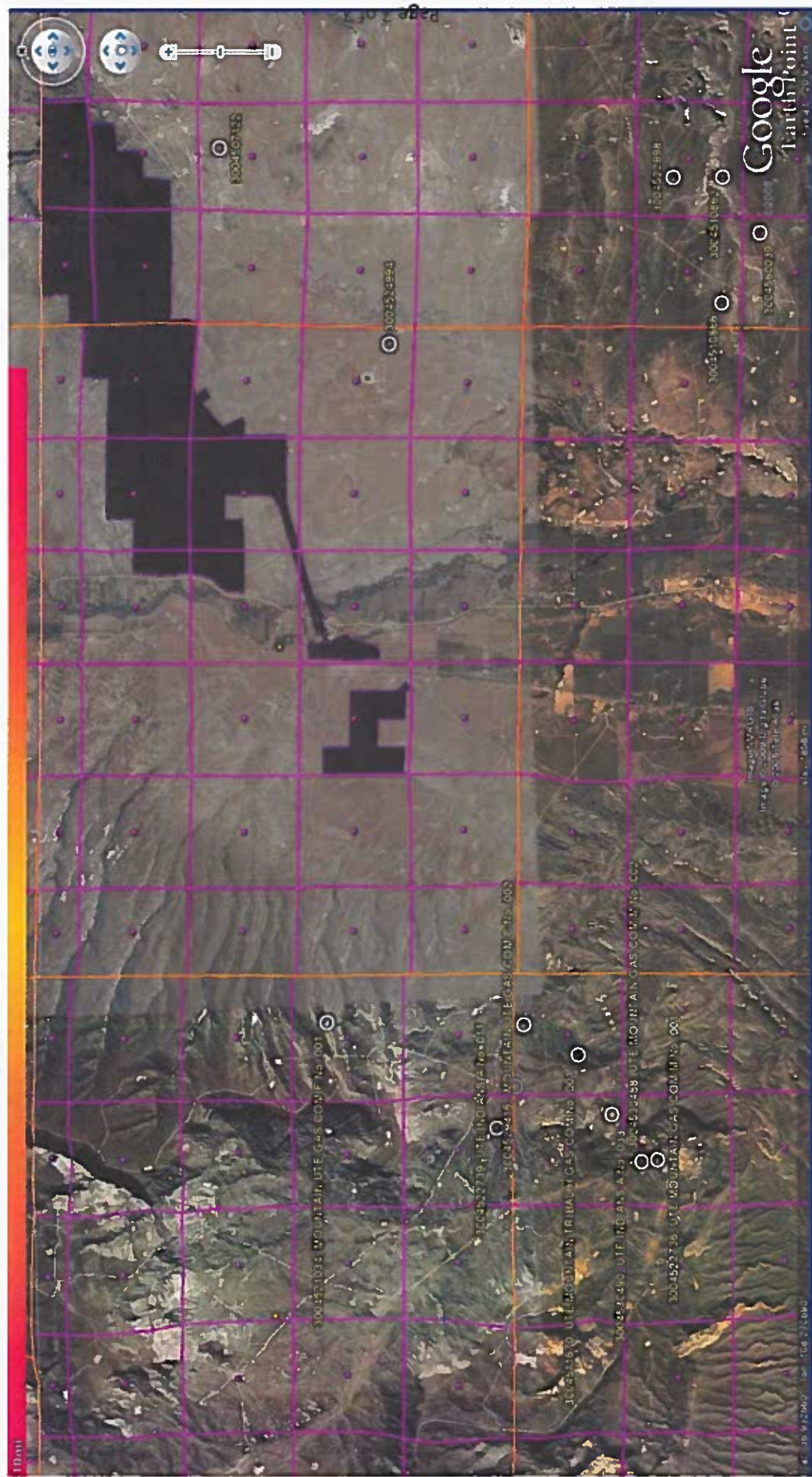
X Y are in Feet
Zone X

UTM are in Meters
UTM Zone Easting Northing

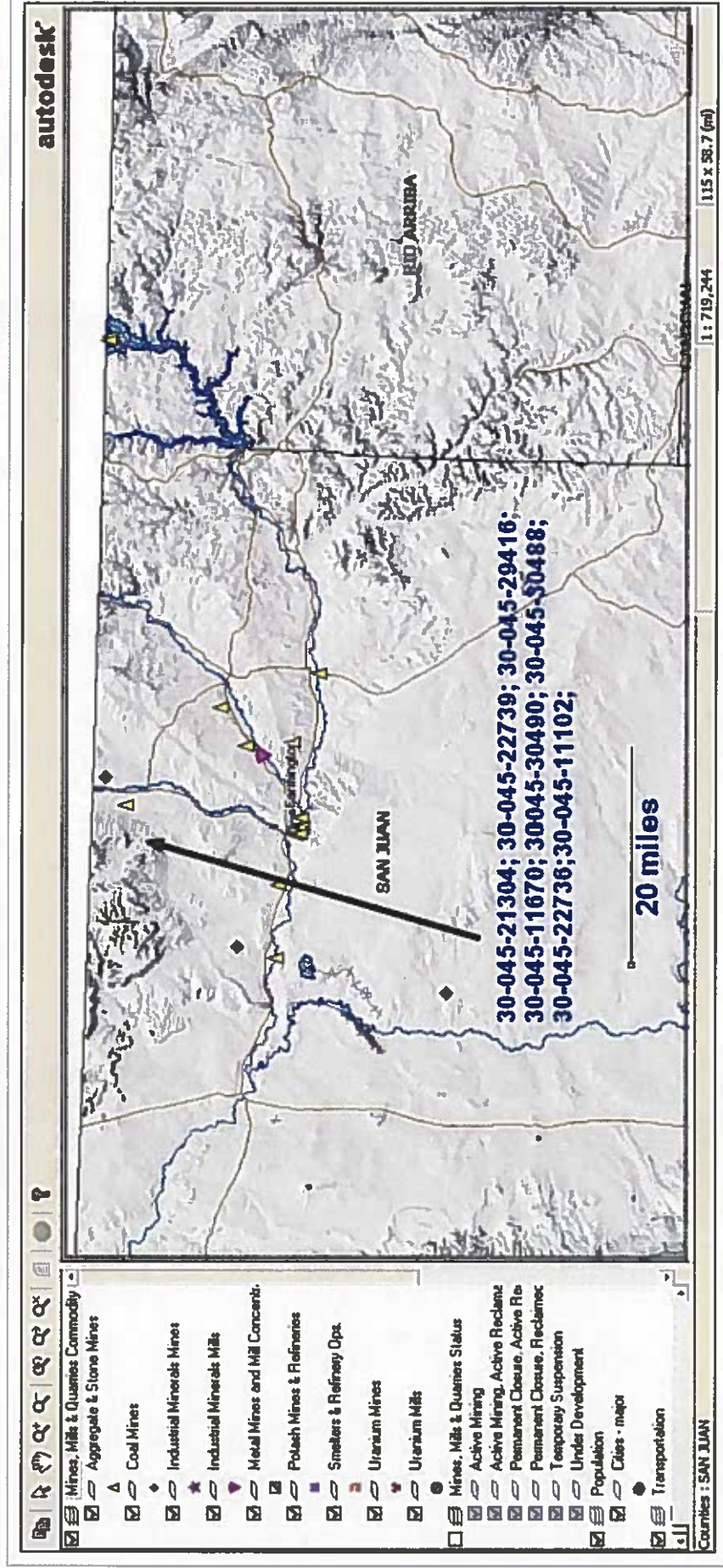
Start Date

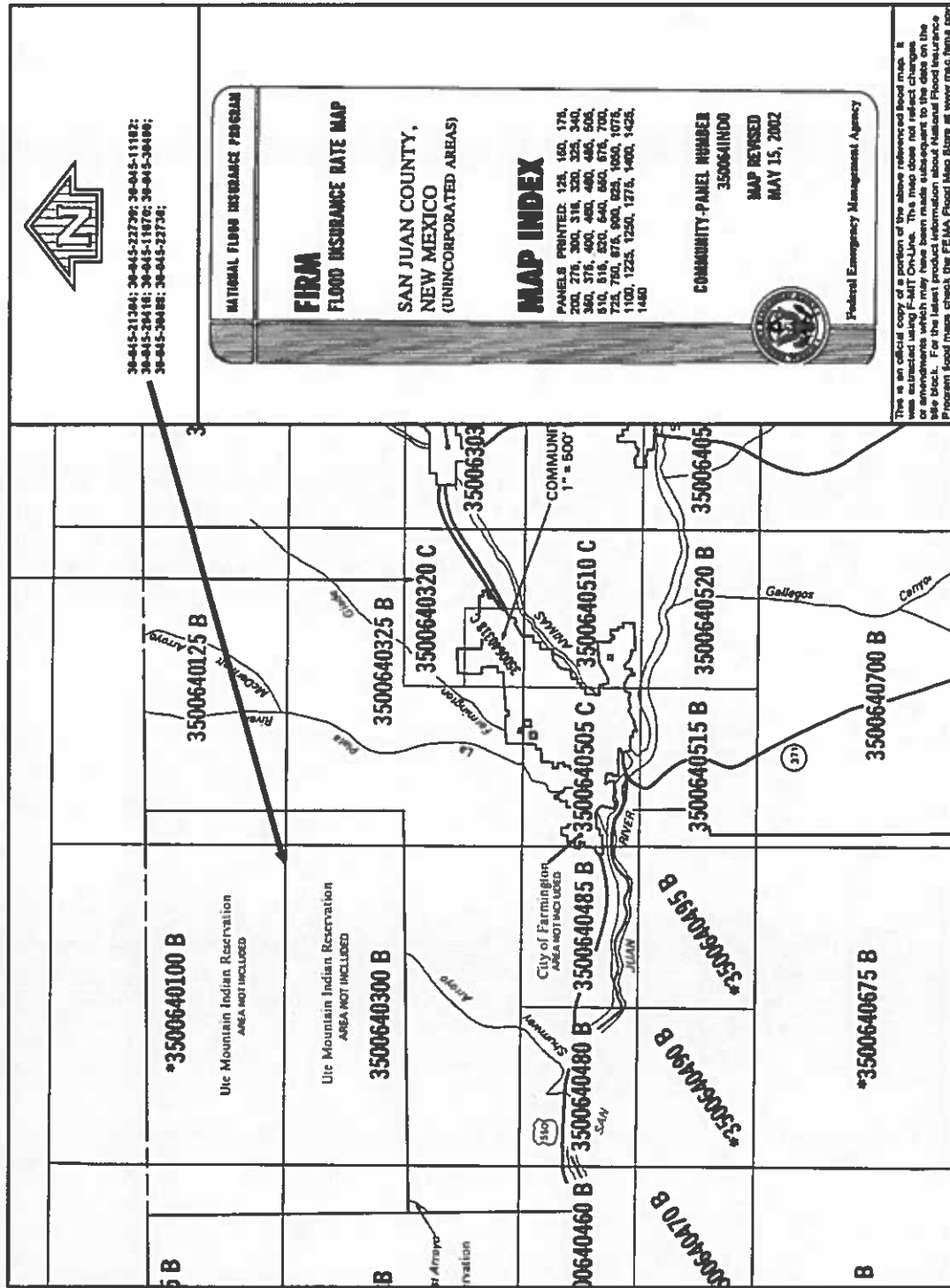
Finish Date

Depth Well



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.

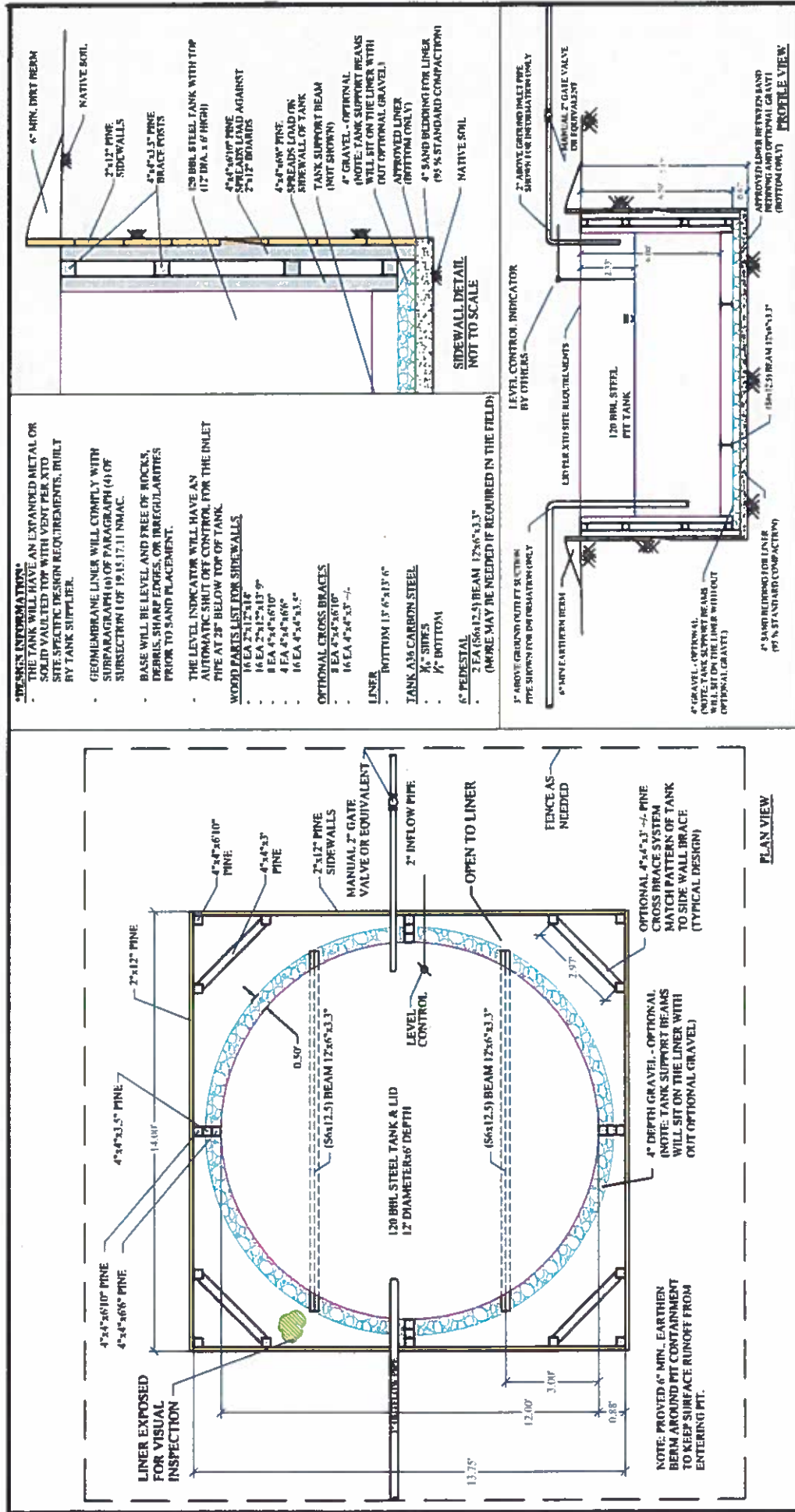
General Plan

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 1×10^{-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.



NOTE

DRAFTED PER XTO DESIGN.

HIGH LEVEL SHUT OFF WILL BE SET AT 28" DENEATH TOP OF TANK (AT 71.95 INCH (6 SHUT OFF)).

OUTER EDGE OF LINER WILL BE LEFT OPEN AND UNINSTRUCTED TO ALLOW FOR VISUAL INSPECTION OF LINER FOR EVIDENCE OF SPILLS.

ADJUST DIMENSIONS AS NEED TO FIELD FIT TANK IF DIFFERENT THAN SHOWN, IF REQUIRED.

OWNER / OPERATION:

STO ENERGY



**TYPICAL DESIGN
120 GALLON TANK
CONTAINMENT**

100% A-1000000 (100% A-1000000)	SCALE AS SHOWN	100% A-1000000 (100% A-1000000)
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THE PITTSBURGH CASH REPLY CENTER

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.

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

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

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.

XTO Energy Inc.
San Juan Basin (Northwest New Mexico)
General Closure Plan
For Below-Grade Tanks
Page 3

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.

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 109004

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 109004
	Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

QUESTIONS

Facility and Ground Water	
<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	Ute Mountain Tribal H Gas Com 1
Facility ID (##), if known	Not answered.
Facility Type	Below Grade Tank - (BGT)
Well Name, include well number	Ute Mountain Tribal H Gas Com 1
Well API, if associated with a well	30-045-11670
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	Not answered.
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	True
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)	no liner

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QUESTIONS, Page 2

Action 109004

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID:	372171
	Action Number:	109004
	Action Type:	[C-144] Legacy Below Grade Tank Plan (C-144LB)

QUESTIONS

Fencing	
<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 hogwire

Netting	
<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

Signs	
<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

Variances and Exceptions	
<i>Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.</i>	
Please check a box if one or more of the following is requested, if not leave blank:	
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 109004

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID:	372171
	Action Number:	109004
	Action Type:	[C-144] Legacy Below Grade Tank Plan (C-144LB)

QUESTIONS

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. Siting criteria does not apply to drying pads or above-grade tanks.

Siting Criteria, General Siting	
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.

Siting Criteria, Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lakebed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark)	No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption	No

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

Operator Application Certification	
Registered / Signature Date	01/05/2009

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ACKNOWLEDGMENTS

Action 109004

ACKNOWLEDGMENTS

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	Action Number: 109004
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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 109004

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CONDITIONS

Created By	Condition	Condition Date
jburdine	None	8/12/2022