District I 1625 N French Dr , Hobbs, NM 88240 District II 1301 W Grand Avenue, Artesia, NM 88210 District III 1000 Rto 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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

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

1 toposed Attendative Mediod I	errific of Closure Fran Application
Existing BGT	stem, below-grade tank, or proposed alternative method system, below-grade tank, or proposed alternative method rmit or an existing permitted or non-permitted pit, closed-loop system,
below-grade tank, or proposed alternative method	
••	lividual pit, closed-loop system, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of habitanyironment. Nor does approval relieve the operator of its responsibility to comply	of the should operations result in pollution of surface water, ground water or the y 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: Dryden LS #2	
	OCD Permit Number:
U/L or Qtr/Qtr Section 12G Township 2	27N Range 8W County: San Juan
Center of Proposed Design: Latitude 36 59097	Longitude NAD:1927 1983
Surface Owner: X Federal State Private Tribal Trust or Indian Al	llotment
2.	
<u>Pit</u> : Subsection F or G of 19.15.17.11 NMAC	
Temporary:  Drilling  Workover	
Permanent Emergency Cavitation P&A	
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE	HDPE PVC Other
☐ String-Reinforced	
Liner Seams:	Volume: bbl Dimensions: L x W x D
3.	
Closed-loop System: Subsection H of 19.15.17.11 NMAC	
	ing (Applies to activities which require prior approval of a permit or notice of
intent)	G1617181920273
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other ☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLI	DEC HODE DAY DAY
	RECEIVED B
Liner Seams: Welded Factory Other	
4.	er OHE CONS. DIV. DIST. 3
Below-grade tank: Subsection I of 19.15.17.11 NMAC	OIL CONS. DIV. DIO.
Volume: 120 bbl Type of fluid: Produced W	ater
Tank Construction material: Steel	12581-1800
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner,	, o men mit and automatic overnow shat on
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other Visib	
Liner type: Thicknessmil	Other
5.	
Alternative Method:	
Submittal of an exception request is required. Exceptions must be submitted	d to the Santa Fe Environmental Bureau office for consideration of approval.

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, institution or church)  Four foot height, four strands of barbed wire evenly spaced between one and four feet  Alternate. Please specify	hospital,
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)  Screen Netting Other  Monthly inspections (If netting or screening is not physically feasible)	
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	
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 consideration of approval. Fencing- Hogwire  Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	office for
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 accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying above-grade tanks associated with a closed-loop system.	priate district pproval.
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 X 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 (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)
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   Preeboard 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   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 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)
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 G of 19.15.17.13 NMAC

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.)  Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if 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 ser  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 G of 19.15.17.13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	C
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 sour provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate disting considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Just demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	rict office or may be
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
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
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure public 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 19.15.17.13 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 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 G of 19.15.17.13 NMAC	.15.17.11 NMAC

Operator Application Certification:  I hereby certify that the information submitted with this application is true, accurate	te and complete to the best of my knowledge and belief.
Name (Print): Kim Champlin	Title: Environmental Representative
Signature: Kim Champlin	Date:August 14, 2008
e-mail address: kim_champlin@xtoenergy.com	Telephone: (505) 333-3100
20. OCD Approval:   →Permit Application (including closure plan)   Closure Pla	n (only) OCD Conditions (see attachment)
OCD Representative Signature: Brandon Doubl	Approval Date: 8-26-08
Title: Emiro /spec	OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K Instructions: Operators are required to obtain an approved closure plan prior to The closure report is required to be submitted to the division within 60 days of the section of the form until an approved closure plan has been obtained and the closure plan has been obtained.	implementing any closure activities and submitting the closure report. e completion of the closure activities. Please do not complete this
Closure Method:  Waste Excavation and Removal On-Site Closure Method Alternation of the Indian of th	ive Closure Method  Waste Removal (Closed-loop systems only)
	ing fluids and drill cuttings were disposed. Use attachment if more than  Disposal Facility Permit Number:
Disposal Facility Name:	Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or i  Yes (If yes, please demonstrate compliance to the items below)  No	n areas that will not be used for future service and operations?
Required for impacted areas which will not be used for future service and operation  Site Reclamation (Photo Documentation)  Soil Backfilling and Cover Installation  Re-vegetation Application Rates and Seeding Technique	ns:
Closure Report Attachment Checklist: Instructions: Each of the following item 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  Longitum	ns must be attached to the closure report. Please indicate, by a check  de NAD:    1927    1983
25. Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this closure repelief. I also certify that the closure complies with all applicable closure requirements.	port is true, accurate and complete to the best of my knowledge and ents and conditions specified in the approved closure plan.
Name (Print):	Title:
Signature:	Date:
e-mail address:	Telenhone:

### State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised August 15, 2000

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV

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

OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

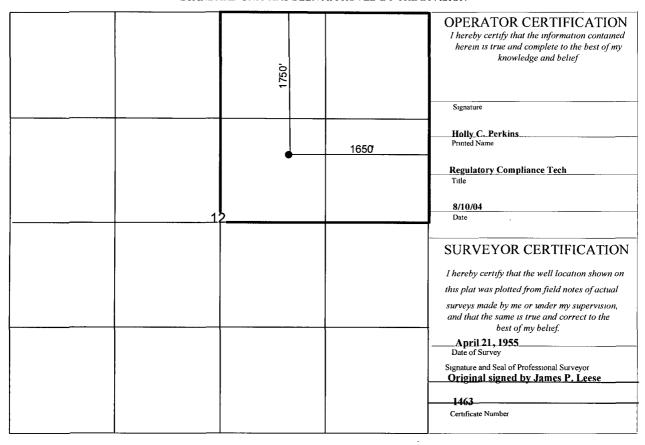
**AMENDEDED** 

REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

1	API Numbe	r		<sup>2</sup> Pool Code			<sup>3</sup> Pool Na	ne	
3	0-045-06	673		71629		BAS	IN FRUITLAN	ND COAL	
4 Property C	ode				5 Property	Name		6	Well Number
					DRY	YDEN			2
7 OGRID	No.				8 Operas Name				<sup>9</sup> Elevation
16700	57				XTO ENERG				6676' GR
					<sup>10</sup> Surface L	ocation			
UL or lot no.	Section 12	Township 27N	Range 08W	Lot Idn	Feet from the	North/South line	Feet from the	East/West line EAST	County SAN JUAN
	L		<sup>11</sup> Bott	tom Hole	Location If	Different Fron	1 Surface		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	3 Joint or	r Infill 4 C	onsolidation	Code 5 Or	der 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



### Dryden LS #2 Existing Below Grade Tank (30-045-06673)

### General Geology and Hydrology

The San Juan Basin is a typical asymmetrical 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 site is located near Largo Canyon. Regional topography of Largo Canyon is composed of mesas dissected by deep, narrow canyons and arroyos. The cliff-forming sandstones are more resistant than the shales, but eventually weather into their composite sands; the shale weathers into silts and clays, resulting in a highly erodible landscape and an abundant sediment supply (Brister and Hoffman, 2002). Accumulations of talus and colluvial sediment at the base of the canyon walls form steep to gentle slopes that transition into flat-bottomed arroyos within the canyons.

The predominant geologic formation in the Largo Canyon region is the Nacimiento Formation of Tertiary age, which underlies surface soils (Dane and Bachman, 1965). The Nacimiento Formation is made up of fluvial sandstones interbedded with siltstones and shales. The more resistant San Jose Formation caps the Nacimiento Formation in topographically high areas of the Largo Canyon region. The San Jose Formation is a sequence of alluvial interbedded sandstones and mudstones. Deposits of Quaternary alluvial and aeolian sands occur prominently near the surface of Largo Canyon, especially near streams and washes.

The San Jose and Nacimiento 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. Groundwater at the location is associated with the alluvial sandstone aquifers within the San Jose Formation. Specific groundwater behavior at the site is discussed in the Siting Criteria section.

The large expanses of exposed bedrock that characterize the area contain thin and rocky soils, if any. Most soils within the canyons are deep and well drained, formed from alluvial or residual materials derived from sandstone, siltstone and shale of the bedrock outcrops, slopes and mesa surfaces (Brister and Hoffman, 2002). Slopes within the canyon are a mixture of the two. Soils commonly consist of unconsolidated silts, sands and clays with deposition controlled by local ephemeral washes or arroyos. Acolian sediments are also present. These consist of well-sorted sands and silts that interrupt the fluvial sequences. The variable fluvial and aeolian influences contribute to irregular grain sizes and thicknesses of subsurface soil layers. The sudden influx of water from storm events easily erodes soils that cover the area.

The climate of the Largo Canyon watershed is arid, averaging less than 10 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from July through September. The heaviest rainfall occurs in the summer in isolated, intense cloud bursts during which some recharge occurs

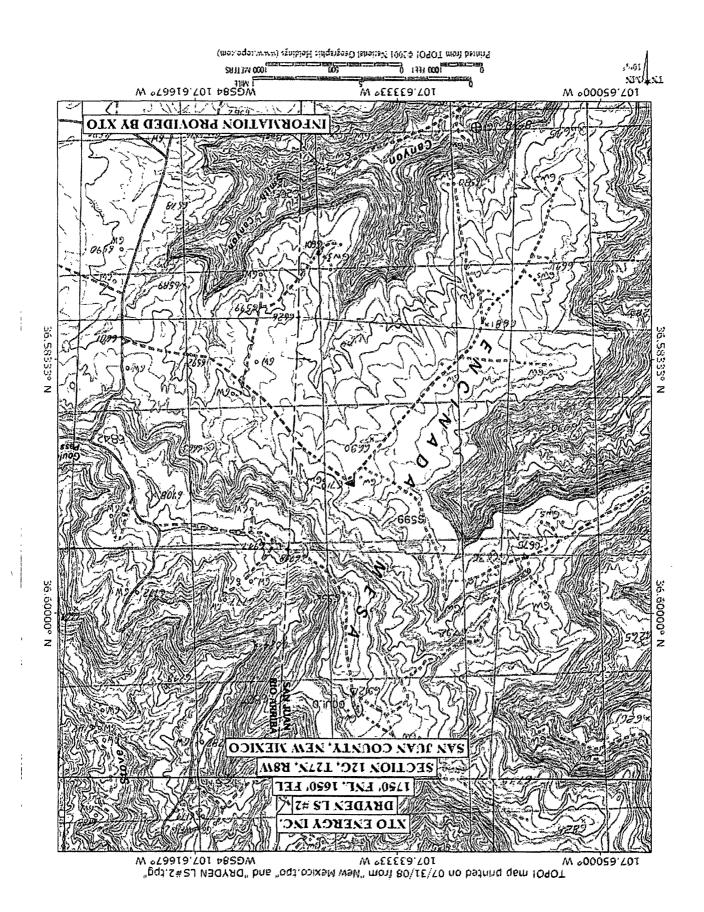
where intermittent streams flow across sandstone outcrops. Water moves down the dip of sandstone beds along the channels of major streams through seeps and springs and along the walls of canyon cut by the streams. October through June is relatively dry. Snow generally falls from December to mid-February 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 Region Climate Center, 2004).

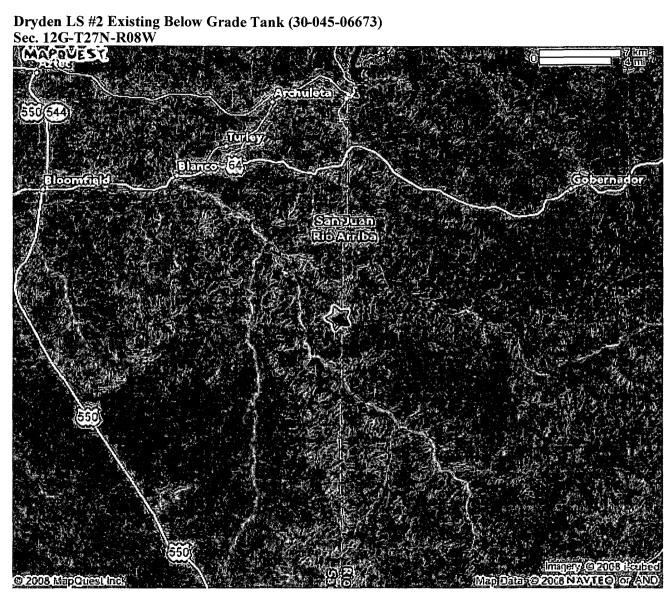
The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association. Riparian vegetation, including cottonwood and willow are observed along larger tributary canyons (Dick-Peddie, 1993).

### Dryden LS #2 Existing Below Grade Tank (30-045-06673)

### **Siting Criteria**

- Depth to Groundwater: Depth to groundwater is estimated to be greater than 100 feet based on the following observations:
  - This rural site location does not contain an abundant amount of groundwater elevation data. The closest public groundwater data exists approximately two miles away in T27N, R7W, section 17. A single data point from the NM State Engineer's Office iWaters database indicates groundwater at 320' in Section 17. A general comparison of site topography suggests similar properties. Both sections are characterized by shallow alluvial fans spreading onto a mesa top. The surface elevation is 6709.6 feet at the proposed pit location and 6687 feet at the site of groundwater data.
  - As shown on the topographic map, Largo Wash is the closest surface water (intermittent surface water). Groundwater is estimated to be very near the ground surface within the wash. Largo Wash is approximately 2 miles from the location. The elevation change between Largo Wash and the location is approximately 236 feet. Cereza Wash (another ephemeral stream) is approximately 2.25 miles to the north of the proposed site. The elevation change is 224' based on topographic contours.
- Surface Water: No continuously flowing watercourse exists within 13 miles of the location. Largo and Cereza washes are ephemeral, and are located almost 2 miles away, as measured on the 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 near 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 site on the iWaters database, and no freshwater spring or seep 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 are identified on the topographic map.
- Subsurface Mines: A NM Bureau of Geology and Mineral Resources map is attached showing the location of the site and any mines, mills or quarries nearby. There is no such operation within at least a 15-mile radius of the site.
- Site Stability: The site is located on an alluvial fan that gently spreads onto a mesa, and analysis of the topographic map indicates the area is stable.
- 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.





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

Township: 27N	Range: 07W	Sections:		
NAD27 X:	Y:	Zone:	Search Radius:	
County:	Basin:		Number:	Suffix:
Owner Name: (First)	(La	st) ⊚All	ONon-Domestic	ODomestic
POD / Sur	face Data Report Wate	Avg er Column Report	Depth to Water Report	כ
(	Clear Form	iWATERS Me	nu Help	

### AVERAGE DEPTH OF WATER REPORT 07/10/2008

							(Depth	Water in	Feet)
Bsn	Tws	Rng Sec	Zone	x	Y	Wells	Min	Max	Avg
RG	27N	07W 35				1	465	465	465
SJ	27N	07W 15				1	500	500	500
SJ	27N	07W 17				1	320	320	320
SJ	27N	07W 21				1	300	300	300
SJ	27N	07W 35				1	250	250	250

Record Count: 5

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

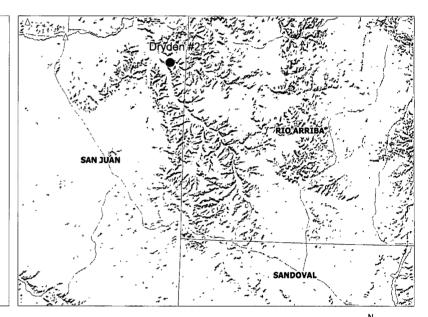
AVERAGE DEPTH OF WATER REPORT 07/31/2008

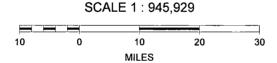
(Depth Water in Feet) Y Wells Bsn Tws Rng Sec Zone Min

No Records found, try again

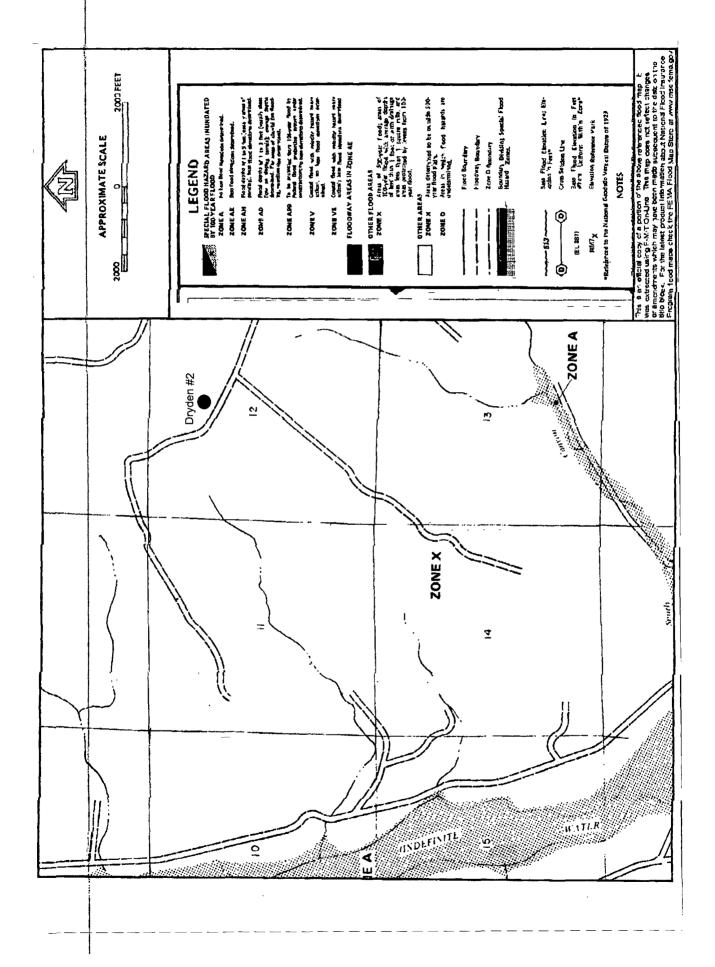
### **MMQonline Public Version**

Mines, Mills	& Quarries Commodity Groups
Δ	Aggregate & Stone Mines
•	Coal Mines
*	Industrial Minerals Mines
•	Industrial Minerals Mills
	Metal Mines and Mill Concentrate
	Potash Mines & Refineries
2	Smelters & Refinery Ops.
*	Uranium Mines
•	Uranium Mills
Population	
	Cities - major
Transportation	on







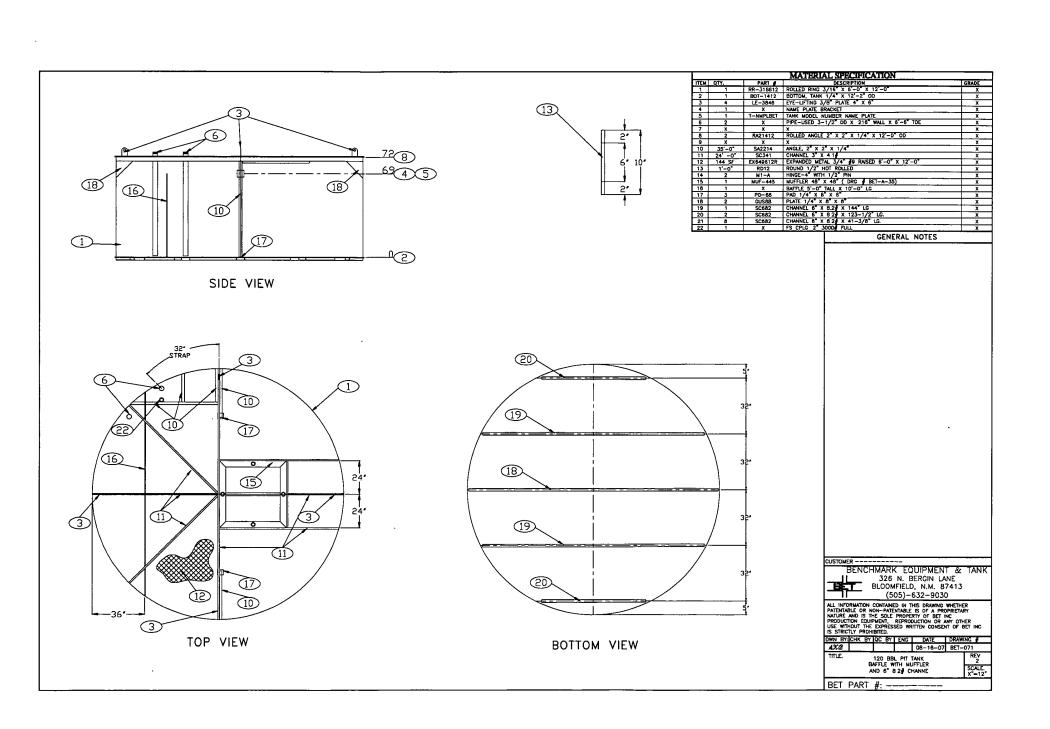


# XTO Energy Inc. San Juan Basin Below Grade Tank Design and Construction Plan

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 heath and environment.
- 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 stands 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.
- XTO will construct a berm and/or diversion ditch in a manner that prevents the collection of surface water run-on.
- 9. 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.
- 10. 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.
- 11. 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 that 1 x 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.
- 12. The general specifications for design and construction are attached.



# 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 the environment.
- 2. XTO will not allow a BGT to overflow and will use berms and/or diversion ditch to prevent surface 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 over topping 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
  - 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.