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

State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr.

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.

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

Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application
Type of action: Existing BGT Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system,
below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request clease 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 nvironment. 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 #: 53.80
Address: #382 County Road 3100, Aztec, NM 87410
Facility or well name: LC Kelly #1
API Number: 3004509815 OCD Permit Number:
U/L or Qtr/Qtr M Section 05 Township 30N Range 12W County: San Juan
Center of Proposed Design: Latitude36.09815 Longitude108.12557 NAD: ☐ 1927 ☐ 1983
Surface Owner: Federal State Private Tribal Trust or Indian Allotment
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
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 RECEIVED
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off Visible sidewalls and liner Visible sidewalls, secondary containment, automatic overflow shut off Liner type: Thickness mil HDPE PVC Other
s. Alternative Method: Submittal of an exception request is required. Exceptions must be submitted 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 Chain link, six feet in height, two strands of barbed wire at top (Required if located within institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify		nospital,
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open Screen Netting Other Monthly inspections (If netting or screening is not physically feasible)	top tanks)	
Signs: Subsection C of 19.15.17.11 NMAC ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone ☐ Signed in compliance with 19.15.3.103 NMAC	numbers	
9. Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NM 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 disconsideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office	strict or the Santa Fe Environmental Bureau o	office for
Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in to material are provided below. Requests regarding changes to certain siting criteria may requestive or may be considered an exception which must be submitted to the Santa Fe Environm Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guida above-grade tanks associated with a closed-loop system.	iire administrative approval from the approp nental Bureau office for consideration of ap	oriate district oproval.
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the State Engineer - iWATERS database search; USGS; Data obtained for the USGS database search; USGS database	ow-grade tank. from nearby wells	☐ Yes ⊠ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant wa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	tercourse or lakebed, sinkhole, or playa	☐ Yes ⊠ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	e at the time of initial application.	☐ Yes ☑ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in exister (Applies to permanent pits)	nce at the time of initial application.	☐ Yes ☐ No ☑ NA
 Visual inspection (certification) of the proposed site; Aerial photo; Satellite image Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in ex NM Office of the State Engineer - iWATERS database search; Visual inspection (cert 	distence at the time of initial application.	☐ Yes ☑ No
Within incorporated municipal boundaries or within a defined municipal fresh adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained		☐ Yes ⊠ No
Within 500 feet of a wetland: - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspectio		☐ Yes ⊠ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Miner	ral Division	☐ Yes ⊠ No
Within an unstable area. - Engineering measures incorporated into the design; NM Burcau of Geology & Minera Society; Topographic map	nl Resources; USGS; NM Geological	☐ Yes 🖾 No
Within a 100-year floodplain FEMA map		☐ Yes ⊠ No

1 orm C-144

Oil Conservation Division

Page 2 of 5

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:
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 Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ 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.D Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if m facilities are required.	NMAC) nore than two									
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										
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 provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justific demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	ict 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☐ 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									
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan 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 cannol 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	5.17.11 NMAC									

19,		
Operator Application Certification: I hereby certify that the information submitted with this application is true, according to the content of the content	urate and complete to t	he best of my knowledge and belief.
Name (Print): Kim Champlin		Environmental Representative
Signature: Kim Champlin	Date:	9-8-08
e-mail address: kim_champlin@xtoenergy.com	Telephone:	(505) 333-3100
20. OCD Approval: Permit Application (including closure plan) Closure	Plan (only) 🔲 OCE	Conditions (see attachment)
OCD Representative Signature: Bold Hell		Approval Date:
Title: Enviro/spec	OCD Permit Num	ber:
Closure Report (required within 60 days of closure completion): Subsection Instructions: Operators are required to obtain an approved closure plan prior The closure report is required to be submitted to the division within 60 days of section of the form until an approved closure plan has been obtained and the	r to implementing any f the completion of the closure activities have	closure activities and submitting the closure report. closure activities. Please do not complete this
22. Closure Method: Waste Excavation and Removal On-Site Closure Method Alter If different from approved plan, please explain.	native Closure Method	☐ Waste Removal (Closed-loop systems only)
Closure Report Regarding Waste Removal Closure For Closed-loop System Instructions: Please indentify the facility or facilities for where the liquids, du two facilities were utilized. Disposal Facility Name: Were the closed-loop system operations and associated activities performed on a Yes (If yes, please demonstrate compliance to the items below) No Required for impacted areas which will not be used for future service and opera Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique	rilling fluids and drill of Disposal Facility F Disposal Facility F or in areas that will not	cuttings were disposed. Use attachment if more than ermit Number: ermit Number:
Closure Report Attachment Checklist: Instructions: Each of the following 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 Long	e)	·
25. Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure belief. I also certify that the closure complies with all applicable closure require	e report is true, accurat	e and complete to the best of my knowledge and
Name (Print):		
Signature:	Date:	
	Talanhanai	

NEW MEXICO OIL CONSERVATION CORMISSION

Well Location and Acreage Dedication Plat

Operator PAN AMERICAN PETHOLEUM COI		ьза "L. Ç. Ķī		A. E. Species at the specifical section of the species of the spec	
Well No. 1 Unit Letter M Sec	tion 5	ee Townsbij	30 NORTH R	ange 12 WEST	L N
Located 790 Feet From the SOI	DEPORT LAT	22	eet From the	MEST.	,I
County SAN JUAN G. L. Elevation BAK			ed Acreages BASIN		
1. Is the Operator the only owner in the dedice					
Yes X No					
2 If the answer to question one is "no", h agreement or otherwise? Yes N					itiz
2. If the answer to question two is "no", his	(al) the (where an	d their respect	ve interests beli	>% ;	
<u>Owner</u>		La	nd Description		
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Section. B.	Note: All dista	nces must be i	abnucd retuo mo	es of section.	```'' 7
This is to certify that the information	40,30 Ac.	40.32 Ac.	40.36 Ac.	40.38 Ac.	
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Permission New Mexic				rand or Land Sox. Reg. No.	



Pit Permit Siting Criteria Information Sheet

Client:	XTO Energy
Project:	Pit Permits
Revised:	2-Sep-08
Prepared by:	Brooke Herb

V	Information Sheet	Prepared by:	Brooke Herb
API#:	3004509815	USPLSS:	T30N,R12W,S05M
Name:	KELLY LC - 1	Lat/Long:	36.83687, -108.12557
Depth to groundwater:	> 100 ft	Geologic formation:	Nacimiento Formation
Distance to closest continuously flowing watercourse:	3.8 miles to the Animas River; 5.2 miles to La Plata River		
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	1.6 miles to Farmington Glade		
Permanent residence, school, hospital, institution or church within 300'	No	Soil Type:	Entisols
		Annual Precipitation:	8.21 inches average annual
Domestic fresh water well or spring within 500'	No	Precipitation Notes:	no significant precip events
Any other fresh water well or spring within 1000'	No	,	_
Within incorporated municipal boundaries	No	Attached Documents:	KellyLC-1_attachments.pdf
Within defined municipal fresh water well field	No		KellyLC-1_report.doc
Wetland within 500'	No	Mining Activity:	none near 1.87 miles to Materials Pit
Within unstable area	No		1.67 miles to Materials Pit
Within 100 year flood plain	No		
Additional Notes:			

KELLY LC #1 Below Ground TankSiting Criteria and Closure Plan

Well Site Location

Legals: T30N, R12W, Section 05, Quarter Section M Latitude/Longitude: approximately 36.83687, -108.12557

County: San Juan County, NM General Description: near Glade Run

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 on the flanks of the Farmington Glade between Aztec and La Plata, New Mexico. Within the Farmington Glade, the Tertiary Nacimiento Formation is exposed, along with Quaternary alluvial and aeoloian sands surrounding the center of the wash.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aquifers in the San Juan basin (Stone et al., 1983). In most of the proposed area, the Nacimiento Formation lies at the surface. Thickness of the Nacimiento ranges from 418 to 2232 feet (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the Nacimiento Formation are between 0 and 1000' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows toward the nearby San Juan River and its tributaries.

The prominent soil type at the proposed site is entisols, which are defined as soils that do not show any profile development. Soils are basically 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 soils that cover the area.

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).

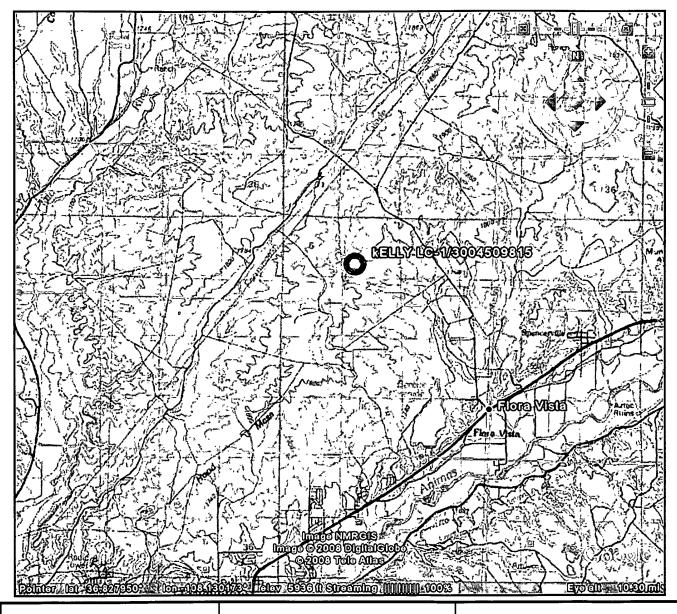
The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

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.

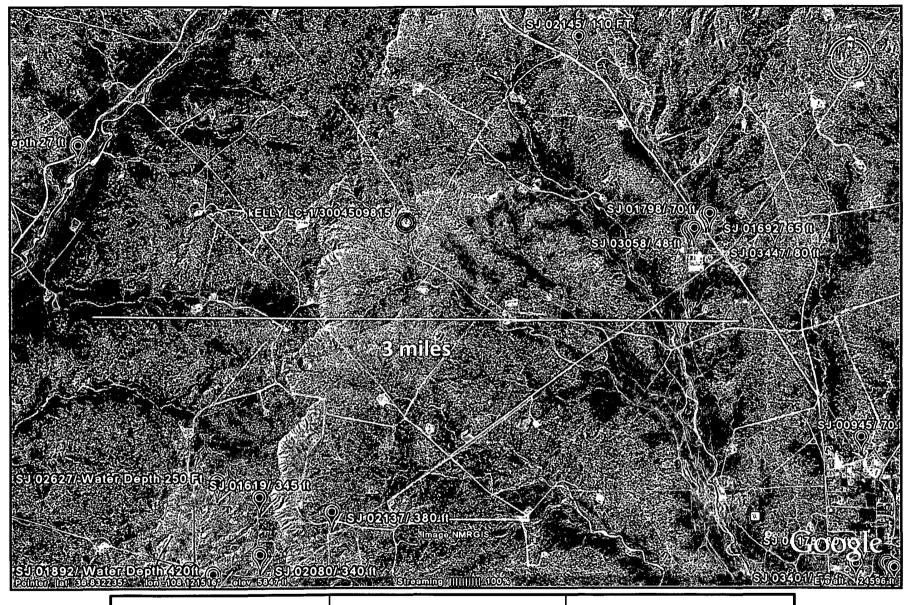
Local aquifers include sandstones within the Nacimiento Formation, which ranges from 0 to 1000 feet deep in this area, as well as shallow aquifers within Quaternary alluvial deposits (Stone et al., 1983). The 1000-foot depth range for Nacimiento aquifers covers an area over 20 miles wide, and depth decreases towards the margin of the San Juan Basin. The site in question is more centrally located, and depth to the aquifer is expected to be closer to 1000 feet. It is well known that groundwater close to the Farmington Glade can be shallow, as the Quaternary deposits near the wash itself form shallow aquifers. However, the proposed site is situated over a mile to the east and approximately 80 feet higher in elevation from Glade Wash (Google Earth).

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 also included. Pinpoints show locations of wells and the labels for each pinpoint indicate depth to groundwater in feet. A cluster of wells to the east of the site in question has a depth to groundwater range of 39 feet to 109 feet; these wells are approximately 120 feet lower in elevation. Several wells are clustered to the south of the site, depth to groundwater within the wells ranges from 250 to 420 feet below ground surface. These wells have a similar elevation to that of the proposed site.



KELLY LC-1 T30N, R12W, S05M San Juan County, NM

Topographic Map



KELLY LC-1 T30N, R12W, S05M San Juan County, NM

iWaters Groundwater Data Map

New Mexico Office of the State Engineer POD Reports and Downloads

Township: 308 Range: 127 Sections 04

POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

WATER COLUMN REPORT 09/02/2008

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

	-						smalles			Depth	Depth	Water	(in feet)
POD Number	Tws	Rng	Sec	Œ	q	Œ.	Zone	x	Y	Well	Water	Column	
SJ 02145	30%	127	04	1	1	1				160	110	50	
SJ 01692	30N	127	04	4	3					18€	€5	91	
SJ 01898	3 00%	1277	04	4	3					140	58	52	
SJ 01798	30%	127	04	4	3					150	70	35	
SJ 02341	30%	12W	04	4	3					8.8	39	46	
SJ 01792	30N	12W	04	4	3					155	109	46	
SJ 03058	30%	129	04	4	3	3				120	49	72	
SJ 03447	30%	12W	04	4	4	4				120	30	40	

Record Count: 8

New Mexico Office of the State Engineer POD Reports and Downloads

Township: 30h Range: 12V Sections: 15

POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

WATER COLUMN REPORT 09/02/2008

	(quarter:									Depth	Depth	Water	(in	feet)
POD Number	Tws	Rng	Sec	q	q	ą.	Zone	X	Y	Well	Water	Column		
SJ 02627	30%	127	15	1	2	2				354	250	104		
SJ 03808 POD1	30%	12W	18	1	3	1		266399	2116162	42	Э	33		
SJ 02697	30%	32W	18	1	4	3				360	290	70		
SJ 01892	30%	12W	18	1	1	4				465	420	45		
SJ 01619 X	30N	12W	18	2	1					380	350	30		
SJ 01619	30%	12W	19	2	1					398	345	50		
SJ 02137	30%	12W	18	2	2	4				460	380	80		
SJ 02080	30%	127	16	2	3					370	340	30		
SJ 01737	30%	12W	18	2	3					540				
SJ 01014	30%	32W	18	Ξ						30€	250	5€		
SJ 01013	30%	129	19	3						310	280	€0		
SJ 01080	30%	120	18	3	1					308	265	4.0		
SJ 00575	30N	12W	18	3	3	1				420	390	30		
SJ 01514	30%	12W	18	Ē	4	3				430	380	50		
SJ 01971	30%	12W	18	4						408	345	60		
SJ 02035	30%	129	18	4						500	190	310		
SJ 02040	30%	127	19	4	1	4				460	400	60		
SJ 02247	30%	12W	18	4	3					468	375	90		
SJ 01283	30%	127	18	4	3					42 €	330	45		
SJ 01896	30%	129	18	4	÷					418	372	43		
SJ 01809	30%	12W	18	4	4					371	317	54		

Record Count: 23

New Mexico Office of the State Engineer POD Reports and Downloads

				
Township	30N Range:	127	Sections:	10
TOWER.		•	occirons.	,

POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

WATER COLUMN REPORT 09/02/2008

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

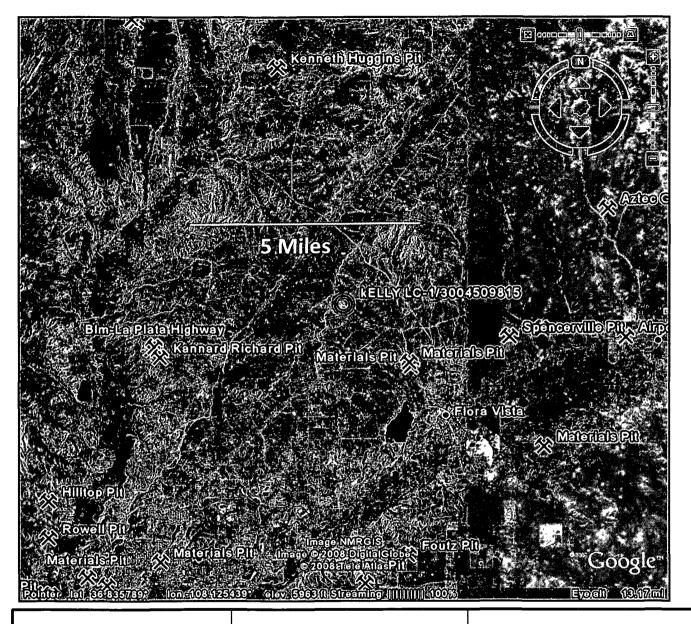
	(quarter	s are	e biç	gge	st	: to	smal	lest)		Depth	Depth	Water	(in feet)
POD Number	Tws	Rng	Sec	Œ	q	Œ	Zone	X	Y	Well	Water	Column	
SJ 03767 POD1	3 097	32W	10	2	4	2		285151	2121325	268	E2	188	
SJ 02128	30%	12W	10	3	4					140	80	30	
SJ 00945	30%	129	10	3	4					130	70	60	
SJ 00421	50%	12W	10	4	1					12€	43	83	

Record Count: 4



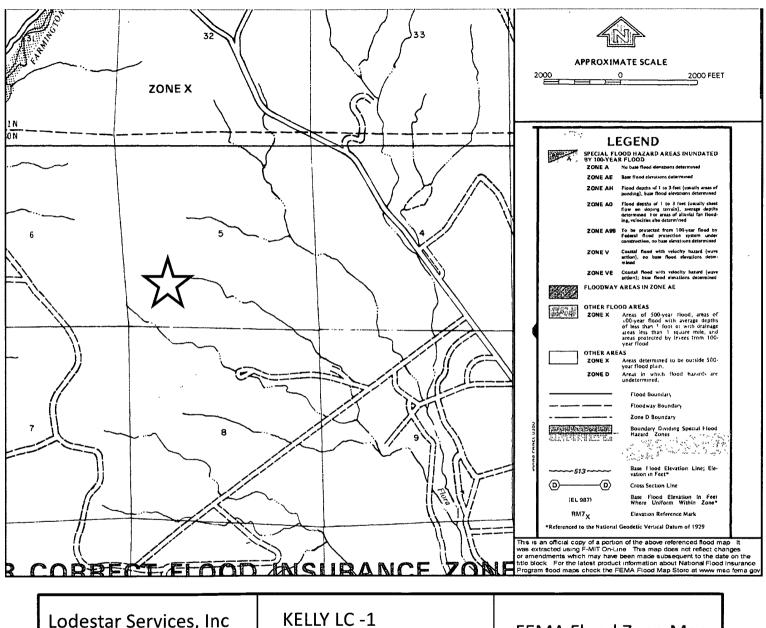
KELLY LC-1 T30N, R12W, S05M San Juan County, NM

Aerial Photograph



KELLY LC -1 T30N, R12W, S05M San Juan County, NM

Mines, Mills, and Quarries Map



KELLY LC -1 T30N, R12W, S05M San Juan County, NM

FEMA Flood Zone Map

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.
- 2. Prior to constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration.
- 3. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the well site prior to construction of the BGT. The sign will list the Operator on record as the operator, the location of the well site by unit letter, section, township, range, and emergency telephone numbers.
- 4. XTO shall construct all new fences utilizing 48" steel mesh field-fence (hogwire) on the bottom with two strands of barbed wire on top, or with a pipe top rail. A 6' chain link fence topped with three 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

- XTO will close a BGT within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.
- 2. XTO will close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
- 3. XTO will close a permitted BGT within 60 days of cessation of the BGT's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.
- 4. XTO will remove liquids and sludge from a BGT prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility.
- 5. XTO will remove the BGT and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.
- 6. XTO will remove any on-site equipment associated with a BGT unless the equipment is required for some other purpose.
- 7. XTO will test the solids beneath the BGT to determine whether a release has occurred. At a minimum 5 point composite sample will be collected along with individual grab samples from any area that is wet, discolored or showing other evidence of a release. Samples will be analyzed for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. XTO will notify the division of its results on form C-141.
- 8. If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.
- 9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, XTO will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.
- 10. Notice of Closure will be given to the Aztec Division District III office between 72 hours and one week of closure via email or verbally. The notification will include the following:
 - i. Operator's name
 - ii. Location by Unit Letter, Section, Township, and Range. Well name and API

- 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.