1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 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.

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.

Santa Fe, NM 87505

			FORM DEP IS L	11 7 00		
				elow-Grade Tai		
	Propo	sed Alternative I	Method Permi	<u>t or Closure Pla</u>	<u>n Application</u>	
BGT1	Type of action:  Existing BGT  Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  Modification to an existing permit  Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method					
Instruc	ctions: Please submi	t one application (Form (	C-144) per individual	pit, closed-loop system,	below-grade tank or alternative request	
					ollution of surface water, ground water or the nmental authority's rules, regulations or ordinance	
L.	r does approvar renew	the operator of its response	ionity to comply with a	ny outer appricable gover	internal audions 3 rules, regulations of ordinals	
Operator: XI	ΓΟ Energy, Inc.			OGRID #:	5380	
Address:	#382 County Road 3	100, Aztec, NM 87410				
		EDERAL # 1E				
					San Juan	
					NAD: 🔲 1927 🔀 1983	
Surface Owner:	: 🛛 Federal 🔲 State	Private Tribal Tru	st or Indian Allotment	:		
String-Reini Liner Seams:   Closed-loop Type of Operati intent) Drying Pad Lined U	p System: Subsectition: P&A Dr	on H of 19.15.17.11 NMArilling a new well Wor	Volution No.	plies to activities which	Dimensions: L x W x D require prior approval of a permit or notice of	
4.					-	
>		1 I of 19.15.17.11 NMAC	Denduned Weter			
Volume:1	tion material:	bbl Type of fluid:	rroduced Water		<del></del>	
1	·	ik detection   Visible s	idewalls liner 6-inch	lift and automatic overf	low shut-off	
					c high-level shut off, no liner	
Liner type: Thi	_	•	E PVC Other		THE PART SHALLOW NO THINK	
-						
5. Alternative	Method:					
		required. Exceptions mu	st be submitted to the	Santa Fe Environmenta	Bureau office for consideration of approval.	
2	Form C-144		Oil Conservation [	Division	Page 1 of 5	

	2:	
Fencing: Subsection D of 19.15.17.11 NMAC (Applies I	to permanent pits, temporary pits, and below-grade tanks)	
Chain link, six feet in height, two strands of barbed w institution or church)	ire at top (Required if located within 1000 feet of a permanent residence, school	l, hospital,
Four foot height, four strands of barbed wire evenly s	paced between one and four feet	
☐ Alternate. Please specify Four foot height, steel mesl	h field fence (hogwire) with pipe top railing	
7.		
Netting: Subsection E of 19.15.17.11 NMAC (Applies to Screen ☐ Netting ☒ Other Expanded metal or so		
Monthly inspections (If netting or screening is not phy		
8.		_
Signs: Subsection C of 19.15.17.11 NMAC	all and an artist are also to the second sec	
☐ 12"x 24", 2" lettering, providing Operator's name, site ☐ Signed in compliance with 19.15.3.103 NMAC	e location, and emergency telephone numbers	
9.		<u>_</u>
Administrative Approvals and Exceptions:  Justifications and/or demonstrations of equivalency are re	equired. Please refer to 19.15.17 NMAC for guidance	
Please check a box if one or more of the following is req	quested, if not leave blank:	
consideration of approval.	omitted to the appropriate division district or the Santa Fe Environmental Bureau	office for
Exception(s): Requests must be submitted to the	Santa Fe Environmental Bureau office for consideration of approval.	o de la composición dela composición de la composición dela composición de la compos
material are provided below. Requests regarding chang office or may be considered an exception which must be	nce for each siting criteria below in the application. Recommendations of acc ses to certain siting criteria may require administrative approval from the appo submitted to the Santa Fe Environmental Bureau office for consideration of sefer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dr	opriate district approval. ying pads or
Ground water is less than 50 feet below the bottom of the - NM Office of the State Engineer - iWATERS dat	temporary pit, permanent pit, or below-grade tank. tabase search; USGS; Data obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercourse, or lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification	r 200 feet of any other significant watercourse or lakebed, sinkhole, or playa n) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hosp (Applies to temporary, emergency, or cavitation pits and Visual inspection (certification) of the proposed s		Yes No
Within 1000 feet from a permanent residence, school, hos (Applies to permanent pits)  - Visual inspection (certification) of the proposed s	spital, institution, or church in existence at the time of initial application.	Yes No
Within 500 horizontal feet of a private, domestic fresh wa watering purposes, or within 1000 horizontal feet of any of	ater well or spring that less than five households use for domestic or stock other fresh water well or spring, in existence at the time of initial application. tabase search; Visual inspection (certification) of the proposed site	☐ Yes ⊠ No
adopted pursuant to NMSA 1978, Section 3-27-3, as ame	fined municipal fresh water well field covered under a municipal ordinance nded. nicipality; Written approval obtained from the municipality	☐ Yes ⊠ No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map	y; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ⊠ No
<b>t</b>	the NM EMNRD-Mining and Mineral Division	☐ Yes ⊠ No
Within the area overlying a subsurface mine.  Written confirmation or verification or map from Within an unstable area.  Engineering measures incorporated into the desig Society; Topographic map	n; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	☐ Yes ⊠ No
Within a 100-year floodplain FEMA map  Form C-144		☐ Yes ☑ No
		☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No
Form C-144	Oil Conservation Division Page 2 of	5

2			
Instructions: Each of the fattached.  ☐ Hydrogeologic Report ☐ Hydrogeologic Data ( ☐ Siting Criteria Compli ☐ Design Plan - based u ☐ Operating and Mainte ☐ Closure Plan (Please cand 19.15.17.13 NMAC	deliberation items must be attached to the temperature (Below-grade Tanks) - based upon the appropriate requirements and experiments and experiments and experiments and experiments are plan - based upon the appropriate Boxes 14 through 18, in the temperature of the temperature o	pon the requirements of Paragraph ( based upon the requirements of Paragraph ( based upon the requirements of Paragraph ( based upon the requirements of I sof 19.15.17.11 NMAC ropriate requirements of 19.15.17.12 f applicable) - based upon the appropriate requirements of 19.15.17.12	
		at i ramber.	of 1 Chilit Number:
Instructions: Each of the fattached.  Geologic and Hydrog Siting Criteria Compl Design Plan - based u Operating and Mainte Closure Plan (Please and 19.15.17.13 NMAC Previously Approved Design Previously Approved Operations	collowing items must be attached eologic Data (only for on-site cliance Demonstrations (only for ipon the appropriate requirement mance Plan - based upon the appropriate Boxes 14 through 18, it esign (attach copy of design) perating and Maintenance Plan	osure) - based upon the requirement on-site closure) - based upon the apps of 19.15.17.11 NMAC propriate requirements of 19.15.17.11 f applicable) - based upon the appro	s of Paragraph (3) of Subsection B of 19.15.17.9 propriate requirements of 19.15.17.10 NMAC  NMAC priate requirements of Subsection C of 19.15.17.9 NMAC
above ground steet tanks or	naut-ojj otns ana propose to imp	nemeni wasie removal jor ciosurej	
Instructions: Each of the fattached.  Hydrogeologic Report Siting Criteria Complement Climatological Factor Certified Engineering Dike Protection and State Detection Designation Leak Detection Designation Control/Qualty Control/Qua	t - based upon the requirements iance Demonstrations - based upon the assessment Design Plans - based upon the astructural Integrity Design - based n - based upon the appropriate rend Compatibility Assessment - laty Assurance Construction and I mance Plan - based upon the appring Prevention Plan - based upon the appring Pr	of Paragraph (1) of Subsection B of pon the appropriate requirements of appropriate requirements of 19.15.17 d upon the appropriate requirements equirements of 19.15.17.11 NMAC based upon the appropriate requirements of 19.15.17.12 no constallation Plan propriate requirements of 19.15.17.13 pon the appropriate requirements of 19.15.17.13 pon the appropriate requirements of	19.15.17.10 NMAC 7.11 NMAC 8 of 19.15.17.11 NMAC Hents of 19.15.17.11 NMAC 2 NMAC 19.15.17.11 NMAC
Proposed Closure: 19.15.1 Instructions: Please compl		14 through 18, in regards to the pro	oposed closure plan.
Type: Drilling Worl	Waste Excavation and Remo Waste Removal (Closed-loo On-site Closure Method (Or	oval  properties only)  properties only)  properties only only on the properties only only on the properties of the properties on the properties of the prop	Below-grade Tank Closed-loop System
Closure plan. Please indica  ☐ Protocols and Procede ☐ Confirmation Samplin ☐ Disposal Facility Nam ☐ Soil Backfill and Cov ☐ Re-vegetation Plan - I	noval Closure Plan Checklist: te, by a check mark in the box, ares - based upon the appropriate ag Plan (if applicable) - based up the and Permit Number (for liquider er Design Specifications - based based upon the appropriate requi	(19.15.17.13 NMAC) Instructions: that the documents are attached. e requirements of 19.15.17.13 NMA bon the appropriate requirements of 19.15, drilling fluids and drill cuttings)	Each of the following items must be attached to the C Subsection F of 19.15.17.13 NMAC of Subsection H of 19.15.17.13 NMAC
Form C-1	44	Oil Conservation Division	Page 3 of 5

16.					
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.1 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 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 G of 19.15.17.13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	С				
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 dist considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications 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				
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					
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					
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					
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					
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division					
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map					
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. 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 19.15.17.13 NMAC  Protocols and Procedures - based upon the appropriate requirements of Subsection F 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  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					

Form C-144

Operator Application Certification:		
I hereby certify that the information submitted with this application is true, acc	urate and complete to the	he best of my knowledge and belief.
Name (Print): Kim Champlin	Title:	Environmental Representative
Signature: Kim Champlin	Date:	11-25-08
e-mail address: kim_champlin@xtoenergy.com	Telephone:	(505) 333-3100
20.		
OCD Approval:  Permit Application (including closure plan)  Closure		
OCD Representative Signature: <u>Victoria Venegas</u>		
Title: Environmental Specialist	OCD Permit Num	ber:BGT1
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 and submitting the closure report. closure activities. Please do not complete this been completed.
22.		
Closure Method:  ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alter ☐ If different from approved plan, please explain.	mative 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, of two facilities were utilized.  Disposal Facility Name:  Disposal Facility Name:  Were the closed-loop system operations and associated activities performed on Yes (If yes, please demonstrate compliance to the items below) No 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	Disposal Facility P Disposal Facility P Disposal Facility P or in areas that will not	ermit Number: be used for future service and operations?
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 Lon	e) gitude	NAD: □1927 □ 1983
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 requires Name (Print):	ements and conditions s	specified in the approved closure plan.
Signature:		
e-mail address:	Telephone:	

Form C-144 Oil Conservation Division

Page 5 of 5

2040 South Pocheco, Sonto Fe, NM 87505 Property Code 2275 OCRED No. UL or lot no. Section UL or let no. Dedicated Acres 318.58

DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT III 1000 Rio Brusos Rd., Aztec, N.M. 87410

Township

27-N

1

DISTRICT B 811 South First, Artesia, N.M. 88210

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102 Revised August 15, 2000

Submit to Appropriate District Office

State Lease — 4 Copies Fee Lease — 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco Santa Fe, NM 87505

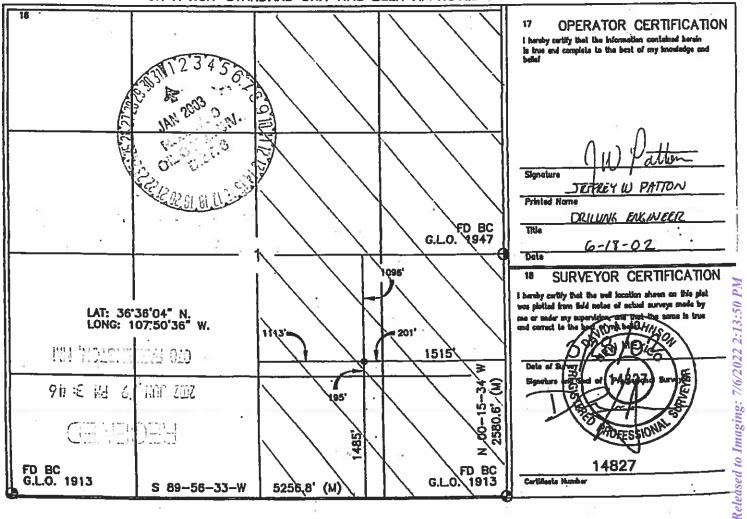
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT <sup>3</sup>Pool Name Pod Code BASIN DAKOTA 30-045-• Well Number Property Name KUTZ "J" FEDERAL 1E • Elevation \*Operator Name 167067 6395 XTO ENERGY INC. 10 Surface Location

East/West line Feet from the County North/South line Feet from the Range **EAST** SAN JUAN SOUTH 1515' 10-W 1485"

11 Bottom Hole Location If Different From Surface East/West line North/South Bne Feet from the Township Feet from the County #Order No. Joint or Infil <sup>14</sup> Cansalidation Code  $\mathcal{I}^{-}$ 

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



Lodestar Services, Inc. PO Box 4465, Durango, CO 81302		Pit Permit Siting Criteria Information She	et	Client: Project: Revised: Prepared by:	XTO Energy Pit Permits 21-Oct-08 Devin Hencmann
API#:		3004531135		USPLSS:	27N, 10W, 01J
Name:	KU	TZ J FEDERAL #1E		Lat/Long:	36.60111/-107.84333
Depth to groundwater:		>100'		Geologic formation:	Naciemento
Distance to closest continuously flowing watercourse:		N to the 'San Juan River'			
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:		s W to Armenta Canyon wash			
Permanent residence, school, hospital, institution or church within 300'		No		Soil Type:	Entisols
				Annual Precipitation:	Bloomfield: 8.71", Farmington: 8.21", Otis: 10.41"
Domestic fresh water well or spring within 500'		No		Precipitation Notes:	Historical daily max: Bloomfield (4.19")
Any other fresh water well or spring within 1000'		No			
Within incorporated municipal boundaries		No		Attached Documents:	27N 11W i-Waters pdf,27N 12W i-Waters pdf
Within defined municipal fresh water well field		No			Topo map pdf, Aerial pdf, Mines and Quarries Map pdf,i-Waters Ground Water Data Map pdf, FEMA flood zone map pdf
Wetland within 500'		No	1000	Mining Activity:	None
Within unstable area		No			
Within 100 year flood plain	l Na	o-FEMA Zone 'X'			
Additional Notes:					

# **KUTZ J FEDERAL #1E Below Ground Tank** Hydrogeologic Report for Siting Criteria

# General Geology and Hydrology

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

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aquifers in the San Juan basin (Stone et al., 1983). In most of the proposed area, the Nacimiento Formation lies at the surface and grades into the Animas Formation to the west. Thickness of the Nacimiento ranges from 418 to 2232 feet (Stone et al., 1983). Aguifers 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 San Juan River.

The prominent soil type at the proposed site are entisols and aridisols, which are defined as soils that exhibit little to no any profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area. 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 8 to 12 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc,dri.edu).

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

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# Site Specific Hydrogeology

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

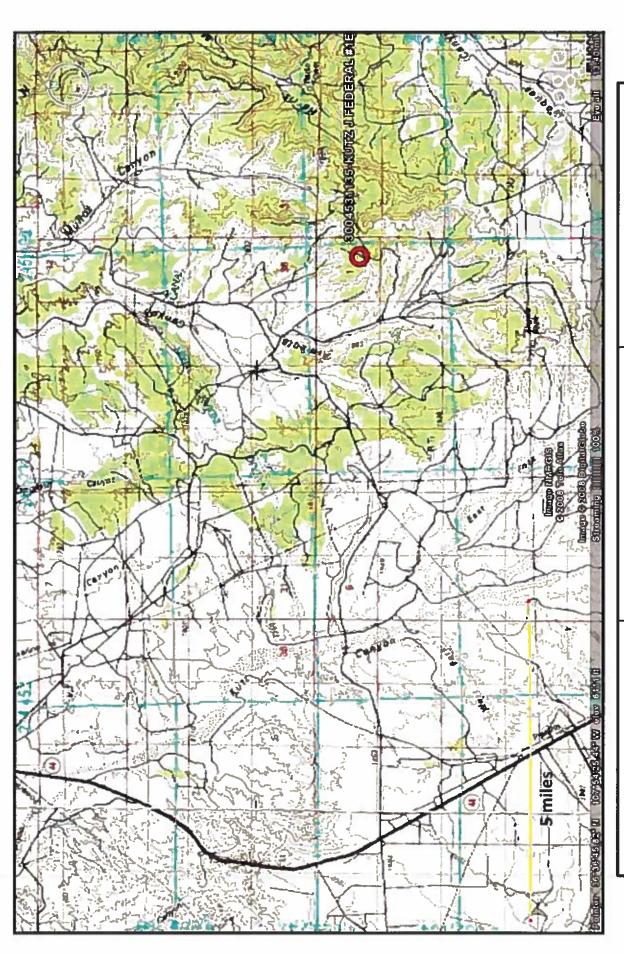
Beds of water-yielding sandstone are present in the Nacimiento Formation, which are fluvial in origin and are interbedded with siltstone, shale and coal. Porous sandstones form the principal aquifers, while relatively impermeable shales form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the Nacimiento Formation at depth s greater than 100 feet and thicknesses of the aquifer can be up to 3500 feet (USGS, Groundwater Atlas of the US).

The site in question is located near the edge of Kutz Canyon, where deeply eroded sandstone-capped mesas and slope-forming mudstones occur in a sparsely vegetated and arid badlands-type setting. Broad shalely hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are evident on the attached aerial image.

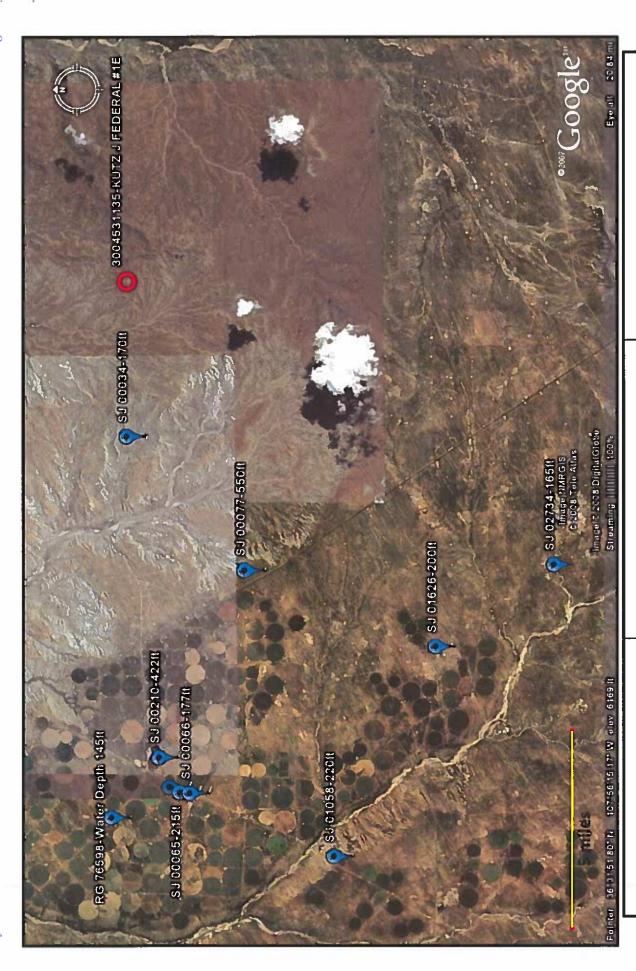
The pit will be located on a relatively flat mesa top at an elevation of approximately 6392 feet near the head of Kutz Wash. It will be approximately 2.8 miles from the Kutz Canyon tributary system and 5.7 miles east of Kutz Wash, Groundwater is expected to be shallow within Kutz Wash. But the significant distance between the Canyon and the site, as well as an elevation difference of over 500 feet suggest groundwater is greater than 100 feet at the proposed site.

State iWaters data points are sparsely distributed in this region, but there is an iWaters data point approximately 3.8 miles to the southwest of the site. Depth to groundwater at the site is 170 feet. A map showing the location of wells in reference to the proposed pit location is attached (SJ00034).

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**TOPOGRAPHIC MAP** San Juan county, NM KUTZ J FEDERAL #1E T27N, R10W, S01J Lodestar Services, Inc Durango, CO 81302 PO Box 4465



San Juan county, NM KUTZ J FEDERAL #1E T27N, R10W, S01J Lodestar Services, Inc Durango, CO 81302 PO Box 4465

i-Waters Ground Water Data Map

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

POD / Surface Data ReportAvg Depth to Water ReportWater Cohumn Report

# WATER COLUMN REPORT 03/22/2008

Depth Depth Water (in feet)	Well Water Column		1102 550 552
	≱ı		
(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are higgest to smallest)	Tws Rng Sec q q q Zone X	27n 11w 07 2 2	27N 11W 26 2 1 3
	POD Number	SJ 01787	SJ 00077

Record Count: 2

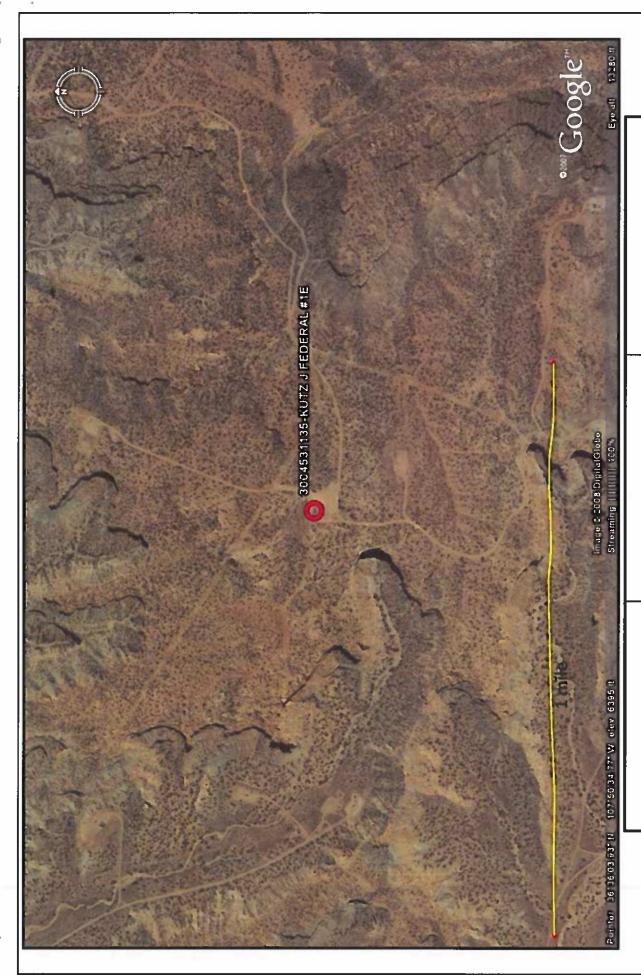
# WATER COLUMN REPORT 09/23/2008

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

# WATER COLUMN REPORT 08/22/2008

Water (in feet)	Column	80	233	295	456	573
Depth	Water	145	408	422	215	177
Depth	Well	225	641	717	671	750
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3=SW 4=SE smallest	Zone					
高な	ש		ci.	CI.	H	el
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Η Δ	23	8	6	3	63	-
re 1	g Se	70 24	¥ 13	¥ 13	W 13	3
s are 1	Rng Se	12W 02	12W 13	126 13	12W 13	12W 1
(quarters are 1=NW 2=NE 3=SW 4=SE)	Tws Rng Se	27N 12W 02	27N 12W 13	27N 12W 13	27N 12W 13	27N 12W 1

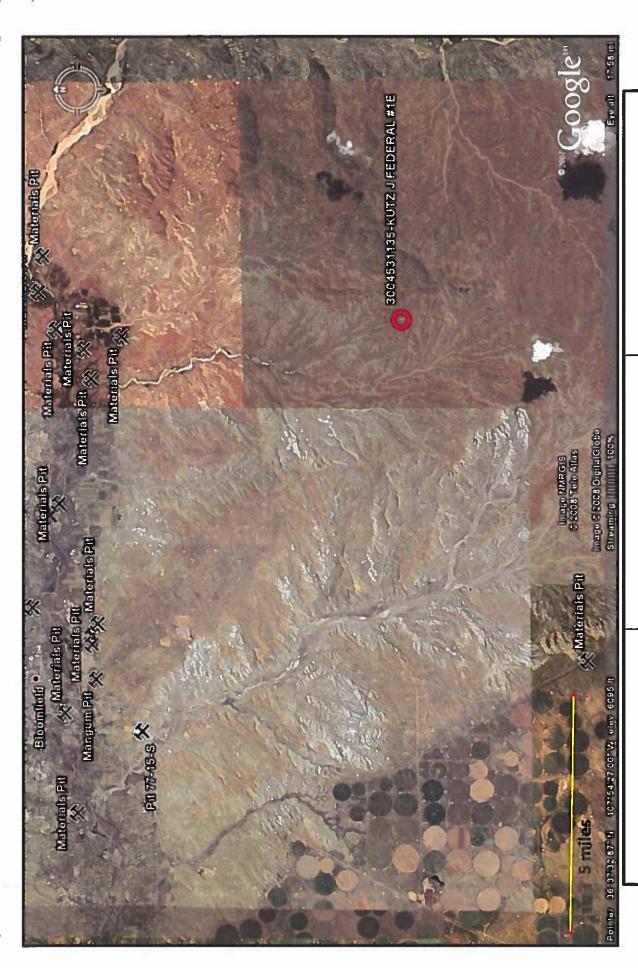
Record Count:



**AERIAL PHOTOGRAPH** 

Lodestar Services, Inc PO Box 4465 Durango, CO 81302

KUTZ J FEDERAL #1E T27N, R10W, S01J San Juan county, NM



Mines and Quarries Map

San Juan county, NM

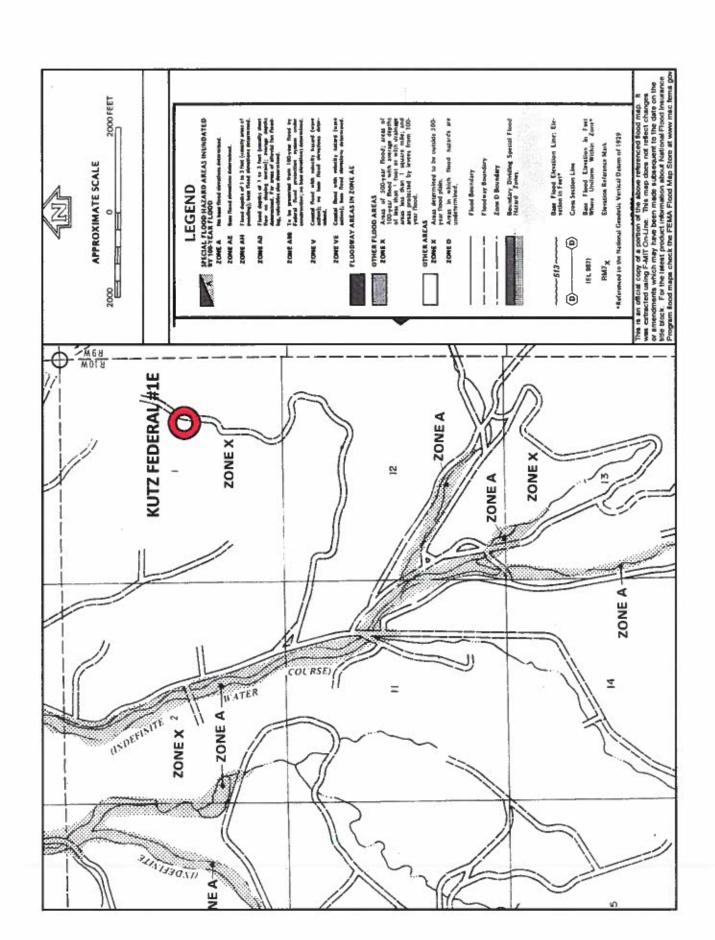
**Durango, CO 81302** 

PO Box 4465

T27N, R10W, S01J

KUTZ J FEDERAL #1E

Lodestar Services, Inc



# 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

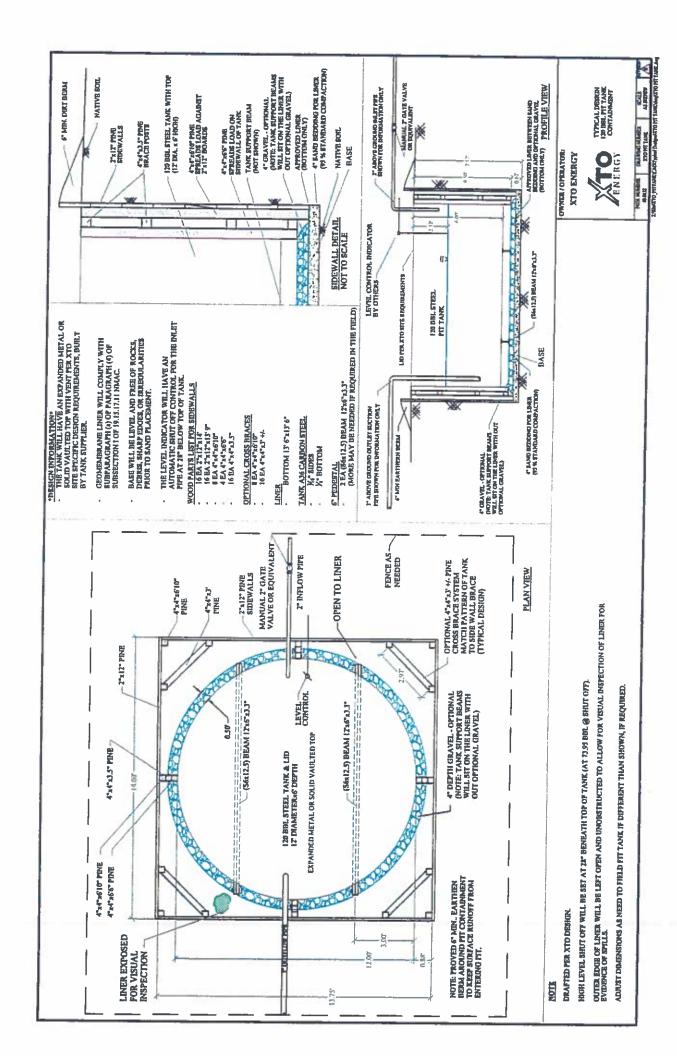
- XTO will design and construct below-grade tanks to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the existing well site
  operated by XTO where the existing below-grade 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.
- 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 4" 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

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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 belowgrade tank will be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected. (See attached drawing).

- 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 x 10-9 cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidics 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).
- The general specifications for design and construction are attached.



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

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

## General Plan

- La 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,

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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

- L 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

- XTO will remove the below-grade tank and dispose of it in a division approved facility or 5. recycle, reuse, or reclaim it in a manner that the appropriate division district office has approved prior to removal. Any associated liners will be removed, properly cleaned and disposed of per 19.15.9.712 NMAC at San Juan County Landfill. Documentation of the final disposition will be included in the closure report.
- 6. XTO will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose.
- 7. XTO will test the soils beneath the below-grade tank to determine whether a release has occurred. At a minimum 5 point composite sample will be collected along with individual grab samples from any area that is wet, discolored or showing other evidence of a release. Samples will be

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XTO Energy Inc.
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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.

- 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:
  - 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

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 94251

# **QUESTIONS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	94251
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

## QUESTIONS

Spellity and Ground Water				
Facility and Ground Water				
Please answer as many of these questions as possible in this group. More information will help us identify the appropriate associations in the system.				
Facility or Site Name	KUTZ J FEDERAL 1E			
Facility ID (f#), if known	Not answered.			
Facility Type	Below Grade Tank - (BGT)			
Well Name, include well number	KUTZ J FEDERAL 1E			
Well API, if associated with a well	30-045-31135			
Pit / Tank Type	Not answered.			
Pit / Tank Name or Identifier	Not answered.			
Pit / Tank Opened Date, if known	Not answered.			
Pit / Tank Dimensions, Length (ft)	Not answered.			
Pit / Tank Dimensions, Width or Diameter (ft)	Not answered.			
Pit / Tank Dimensions, Depth (ft)	Not answered.			
Ground Water Depth (ft)	Not answered.			
Ground Water Impact	No			
Ground Water Quality (TDS)	Not answered.			

Below-Grade Tank	
Subsection I of 19.15.17.11 NMAC	
Volume / Capacity (bbls)	120
Type of Fluid	Produced Water
Pit / Tank Construction Material	Steel
Secondary containment with leak detection	Not answered.
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Not answered.
Visible sidewalls and liner	Not answered.
Visible sidewalls only	Not answered.
Tank installed prior to June 18. 2008	True
Other, Visible Notation. Please specify	Not answered.
Liner Thickness (mil)	Not answered.
HDPE (Liner Type)	Not answered.
PVC (Liner Type)	Not answered.
Other, Liner Type. Please specify (Variance Required)	Not answered.

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

QUESTIONS, Page 2

Action 94251

QUESTIONS (continued)			
Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171 Action Number: 94251 Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)		
QUESTIONS			
Fencing			
Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tank	(s)		
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)	Not answered.		
Four foot height, four strands of barbed wire evenly spaced between one and four feet	Not answered.		
Alternate, Fencing. Please specify (Variance Required)	4' steel mesh		
Netting			
Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)  Screen	Not assumed		
Netting	Not answered.  Not answered.		
Totaling	not answered.		
Other, Netting. Please specify (Variance May Be Needed)	expanded metal or solid vaulted top		
Signs			
Subsection C of 19.15.17.11 NMAC (If there are multiple operators at a site, each operator must have	e their own sign in compliance with Subsection C of 19.15.17.11 NMAC.)		
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			
Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for Please check a box if one or more of the following is requested, if not leave blank:	guidance.		
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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1111 Travis Street Houston, TX 77002

HILCORP ENERGY COMPANY

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

QUESTIONS, Page 3

Action 94251

QUESTIONS (continued)	
	OGRID:
	372171
	A -4: N1

94251

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

Operator:

# 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	Not answered.
Alternate Closure Method. Please specify (Variance Required)	Not answered.

Operator Application Certification	
Registered / Signature Date	11/25/2008

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

ACKNOWLEDGMENTS

Action 94251

## **ACKNOWLEDGMENTS**

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

## **ACKNOWLEDGMENTS**

V	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.
V	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 94251

# **CONDITIONS**

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1111 Travis Street	Action Number:
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	[C-144] Legacy Below Grade Tank Plan (C-144LB)

## CONDITIONS

Created By		Condition Date
vvenegas	None	7/6/2022