District 1 1625 N French Dr , Hobbs, NM 88240 District II
1301 W Grand Avenue, Artesia, NM 88210
District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S St Francis Dr , Santa Fe, NM 87505

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

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.

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# Pit, Closed-Loop System, Below-Grade Tank, or

Proposed Alternative Method Permit or Closure Plan Application
Type of action:  Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method 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
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: XTO Energy, Inc. OGRID #: 5380
Address: #382 County Road 3100, Aztec, NM 87410
Facility or well name: Gardner C #6
API Number: 30-045-27998 OCD Permit Number:
U/L or Qtr/Qtr B Section 25 Township 32N Range 9W County: San Juan
Center of Proposed Design: Latitude         36.95941         Longitude         107.72789         NAD: ▼1927 □ 1983
Surface Owner: X Federal State Private Tribal Trust or Indian Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC   Temporary:
Drying Pad Above Ground Steel Tanks Haul-off Bins Other
Lined Unlined Liner type: Thicknessmil
Drying Pad
5.
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 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.  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 acceptant material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approoffice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry 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 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 Previously Approved Design (attach copy of design) API Number:  or Permit Number:
12. Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9  Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC  Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number:
Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
13.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC   Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.   Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC   Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC   Climatological Factors Assessment   Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC   Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC   Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC   Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC   Quality Control/Quality Assurance Construction and Installation Plan   Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC   Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC   Nuisance or Hazardous Odors, including 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 Instructions: Please indentify the facility or facilities for the disposal of liquids, a facilities are required.		
	Disposal Facility Permit Number:	
	Disposal Facility Permit Number:	
Will any of the proposed closed-loop system operations and associated activities of ☐ Yes (If yes, please provide the information below) ☐ No		vice and operations?
Required for impacted areas which will not be used for future service and operation  Soil Backfill and Cover Design Specifications based upon the appropriate  Re-vegetation Plan - based upon the appropriate requirements of Subsection  Site Reclamation Plan - based upon the appropriate requirements of Subsection	requirements of Subsection H of 19.15.17.13 NMA/I 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 provided below. Requests regarding changes to certain siting criteria may requir considered an exception which must be submitted to the Santa Fe Environmental demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC f	e administrative approval from the appropriate dist Bureau office for consideration of approval. Justi	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 ☐ 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	a obtained from nearby wells	X Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signals (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	nificant watercourse or lakebed, sinkhole, or playa	☐ Yes 🗶 No
Within 300 feet from a permanent residence, school, hospital, institution, or church - Visual inspection (certification) of the proposed site; Aerial photo; Satellite		☐ Yes 🗓 No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less watering purposes, or within 1000 horizontal feet of any other fresh water well or spring that less NM Office of the State Engineer - iWATERS database; Visual inspection (	pring, in existence at the time of initial application.	☐ Yes 🏿 No
Within incorporated municipal boundaries or within a defined municipal fresh wate adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approve		☐ Yes 🛛 No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visua	al 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 Society; Topographic map	& Mineral Resources; USGS; NM Geological	☐ 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 by a check mark in the box, that the documents are attached.  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Construction/Design Plan of Burial Trench (if applicable) based upon the ap Construction/Design Plan of Temporary Pit (for in-place burial of a drying p. Protocols and Procedures - based upon the appropriate requirements of 19.15 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection I Soil Cover Design - based upon the appropriate requirements of Subsection I Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	airements of 19.15.17.10 NMAC Subsection F of 19.15.17.13 NMAC propriate requirements of 19.15.17.11 NMAC ad) - based upon the appropriate requirements of 19. 17.13 NMAC airements of Subsection F of 19.15.17.13 NMAC Subsection F of 19.15.17.13 NMAC rill cuttings or in case on-site closure standards cann 1 of 19.15.17.13 NMAC 1 of 19.15.17.13 NMAC	15.17.11 NMAC

19. Operator Application Certification:					
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and be	elief.				
Name (Print): Kim Champlin Title: Sr. Environmental Representative	<u>e</u>				
Signature: Nim Champler Date: April 29, 2009					
e-mail address: kim_champlin@xtoenergy.com Telephone: (505) 333-3100					
20.  OCD Approval:  Permit Application (including closure plan)  Gosure Plan (only)  OCD Conditions (see attachment)					
OCD Representative Signature: Brund Sell Approval Date: 6	29-09				
Title: GCD Permit Number:					
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC  Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.					
Closure Completion Date:					
Closure Method:  Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-If different from approved plan, please explain.	-loop systems only)				
23. <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use att two facilities were utilized.</u>					
Disposal Facility Name: Disposal Facility Permit Number:					
Disposal Facility Name: Disposal Facility Permit Number:					
Were the closed-loop system operations and associated activities performed on or in areas that <i>will not</i> be used for future service and operations?  Yes (If yes, please demonstrate compliance to the items below) No					
Required for impacted areas which will not be used for future service and operations:  Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique					
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please 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	·				
25. Operator Closure Certification:	,				
I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.					
Name (Print):					
Signature: Date:					
e-mail address: Telephone:					

### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

### SUNDRY NOTICES AND REPORTS ON WELLS

FORM APPROVED	
OM B No 1004-0137	
Expires March 31, 2007	ļ

į	Lease Senal No
	NMNM013642

Oo not use this form for proposals to drill or to re-enter an	6	If Indian, Allottee or Tribe Name
shandoned well. Use Form 3160 - 3 (APD) for such proposals		NI.A

abandoned well. U		(APD) for such pro	posals.	NA	
SUBMIT IN TRIPLIC	ATE- Other ins	tructions on rever	se side.		/Agreement, Name and/or No
1 Type of Well Oil Well ○ Fi	& P Company, L.L.C	35 Phone No Tinclude	area code)	NA  8 Well Name at Gardner C  9 API Well N 30-045-279	6 0 98
1301 McKinney, Ste. 3200 Houston, Texas 77010 713-890-3600 2008  Location of Well (Footage, Sec., T., R., M., or Survey Description)					ol, or Exploratory Area
4	FNL & 1820' FEL (B)	Bureau of Land Farmington F	Management	11 County or Pa	nish, State New Mexico
12. CHECK APPROP	RIATE BOX(ES) TO	INDICATE NATUR	E OF NOTICE, RE	EPORT, OR OT	HER DATA
TYPE OF SUBMISSION		TYP	E OF ACTION		
Notice of Intent  Subsequent Report  Final A handonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (Star Reclamation Recomplete Temporarily Aba Water Disposal	7	Water Shut-Off Well Integrity Other Clean out & repair. Possible

Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection )

Production as agian substantually decrease (-1500 mcf/d) from this well due to coal fines. We plan to construct a water pit 50' L x 40' W x 10' D (lined w/min. 8 mil plastic) and a unlined flare pit w/ drainage to water pit. Pit will be fenced until recalimed and reseaded to approved BLM specifications.

- 1. Cleaning out the well bore with air to TD. Possible removal of 5 1/2" liner. (if liner is removed, well will be cavitated)
- 2. Re-run 5 1/2" pre-perforated, tapped, & plugged liner (6spf)

- 3. Re-run 2 3/8" tubing
- 4. Re-Run 1 1/2" downhole sucker rod pump & rods
- 5. Return well to production . .

RCUD APR 11'08 OIL CONS. DIV. DIST. 3

# SEE ATTACHED FOR CONDITIONS OF APPROVAL

(Instructions on page 2) Pit Permit Required By OCD form C-103-on- C-144) NMOCD

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102 Revised 1-1-19

DISTRICT! P.O. BOX 1910, HOBBE, NM 88240 OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

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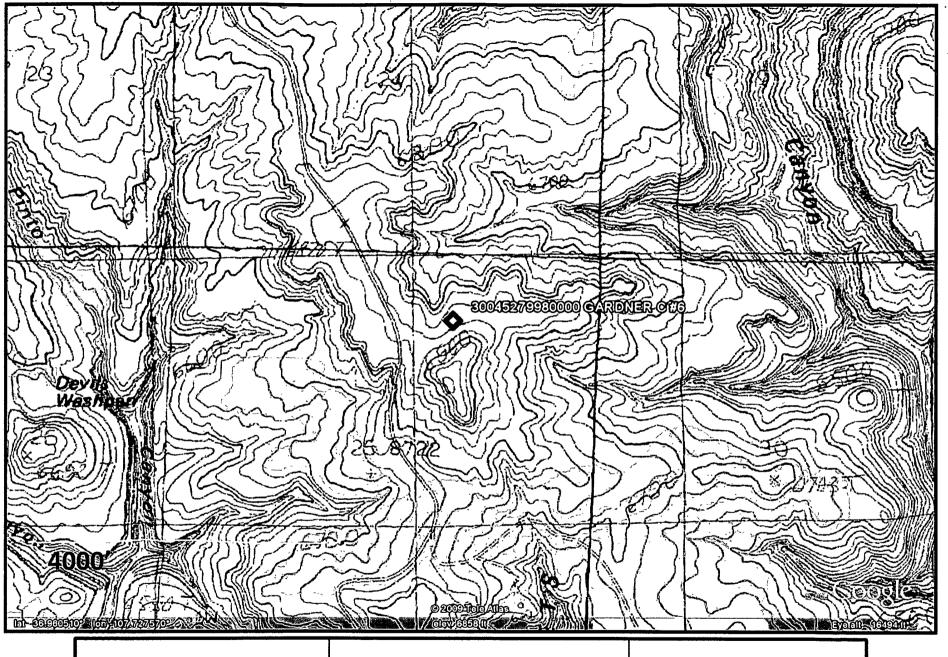
DISTRICT I. P.O. Drawer DD, Artosia, NM 88210

DISTRICT []]
1000 Rao Brizos Rd., Aziec, NM 87410

### WELL LOCATION AND ACREÁGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator			Laste			<del></del>	Wall No.	<del></del> -
Kosh Explorat	ion Company			dner			6 C	
Una Lotter Section	Townsup		Range			County	<u> </u>	<del></del> -
В	25 32 Vo	orth	9 4	/est	NMPM		ı Juan	* !
Actual Footage Location of W	/ell:					<del></del>		
1120 / feet from		line and	99	:C	feet from	East دامه	line .	
Ground level Elev.	Producing Formation		Pool				Dedicated Acresgs.	
68 '0			Basin	Fruitlan	d Coa	1	320 Acres	
1. Outline the acrea	ige dedicated to the subject well	by callared pea	of propries	with so the pull below	₩.			
2 If more than one	lease is dedicated to the well, o	utine such and	identify the care	sension themsof flecials	u to workir	no interest and i	me alto)	i
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Gardner C #6 T32N, R09W, S25B San Juan County, NM

Topographic Map

### Pit Permit Siting Criteria nformation Sheet

Client:	XTO Energy	
Project:	Pit Permits	
Revised:	3-Mar-09	
Prepared by:	Brooke Herb	

PU BOX 4463, Durang	30, CU 013UZ	Information Shee	Prepared by:	Brooke Herb
API#:		30-045-27998	USPLSS:	T32N,R09W,S25B
Name:		Gardner C #6	Lat/Long:	36.960156, -107.728255
Depth to groundwater:		> 100'	Geologic formation:	San Jose Formation
Distance to closest continuously flowing watercourse:	6.92 mil	es W of Los Pinos River		
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	Rattlesnak Pockets; 35	f a first order tributary of e Canyon; 3087' N of Devil's 30' E of 1st order tributary of nyon; 5050' NE of Devil's Washpan		
			Soil Type:	Entisols
Permanent residence, school, hospital, institution or church within 300'		No		
			Annual	12.95 inches (Navajo Dam)
Domestic fresh water well or spring within 500'		No	Precipitation: Precipitation Notes:	no significant precip events
Any other fresh water well or spring within 1000'		No		
Within incorporated municipal boundaries		No	Attached Documents:	Groundwater report and Data; FEMA Flood Zone Map
Within defined municipal fresh water well field		No		Aerial Photo, Topo Map, Mines Mills and Quarries Map
Wetland within 500'	L	No	Mining Activity:	Nove Nove
Within unstable area		No		None Near
Within 100 year flood plain	l No-⊩	EMA Flood Zone 'X'		
Additional Notes:	***************************************			

### Gardner C #6 Below Ground Tank Hydrogeologic Report

### 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 north central San Juan Basin near Navajo Lake. The predominant geologic formation is the San Jose Formation of Tertiary age, which underlies surface soils and is often exposed (Dane and Bachman, 1965). Deposits of Quaternary alluvial and aeolian sands occur 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 San Jose Formation lies at the surface and overlies the Nacimiento Formation. Thickness of the San Jose ranges from 200 to 2700 feet, thickening from west to east across the region of interest (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the San Jose Formation are between 0 and 2700' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows southwest, toward the San Juan River. Little specific hydrogeologic data is available for the San Jose Formation system, but "numerous wells and springs used for stock and domestic supplies" draw their water from the San Jose Formation (Stone et al, 1983).

The prominent soil type(s) at the proposed site are entisols and aridisols, which are defined as soils exhibiting little to no 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 and prohibits effective recharge to the underlying aquifers.

Regional weather further prohibit active recharge. The climate is arid, averaging just over 11 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 cloudbursts. September 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), 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, proximity to adjacent channels & spring features at similar elevations nearby are also taken into consideration. Groundwater data is extremely limited in this region; the nearest iWaters data point lies 5825 feet to the south (SP 04523); this source is an evaporation pond. The closest water well is 2.58 miles to the west (SJ 03131).

Beds of water-yielding sandstone are present in the San Jose Formation, which are fluvial in origin and are interbedded with mudstone, siltstone & shale. "Extensive intertonguing" of different members of this formation is reported (Stone et al, 1983). Porous sandstones form the principal aquifers, while relatively impermeable shales and mudstones form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the San Jose Formation at depths greater than 100 feet and thicknesses of the aquifer can be up to several hundred feet (USGS, Groundwater Atlas of the US; Stone et al, 1983).

A site visit to this location determined that there is a playa lake approximately 1.88 miles to the west of the site. Within the cleared area of the playa lake, there are vegetated patches and some man-made berms for stock ponds. Approximately 1.68 miles to the west of the below grade tank site there is an area cleared for agriculture or livestock. Approximately 5050 feet to the west is a drainage basin or Playa Lake named Devil's Washpan. This topographic depression can fill with rainwater.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the existing below grade tank are attached. A water well to the northwest is approximately 165 feet lower in elevation then the proposed site. Depth to groundwater within the well is 580 feet below ground surface. Distance to groundwater at the site is estimated to be greater than 100 feet below the ground surface.



Gardner C #6 T32N, R09W, S25B San Juan County, NM

iWaters Groundwater Data Map

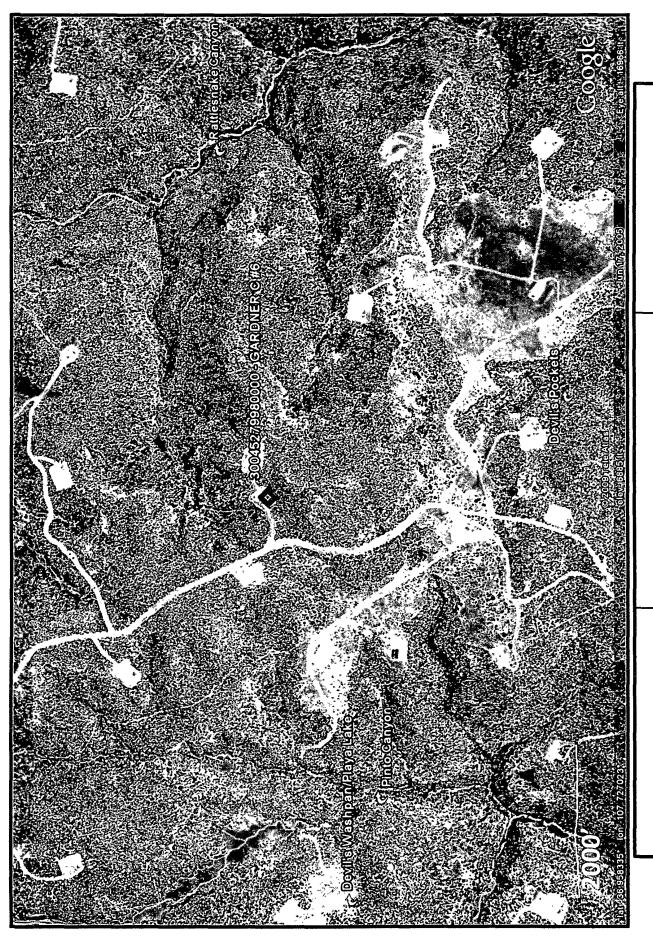
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New Mexico Office of the State Engineer

alda:

# Water Column/Average Depth to Water

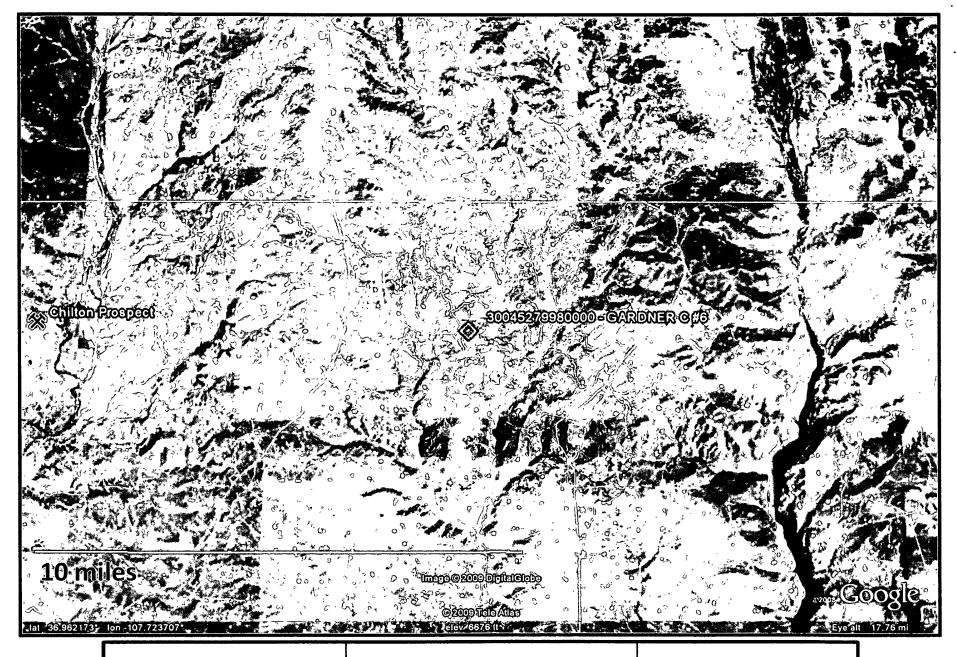
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						Maxinaun Depth:	Depth:	580 feet	



| Aerial Photograph

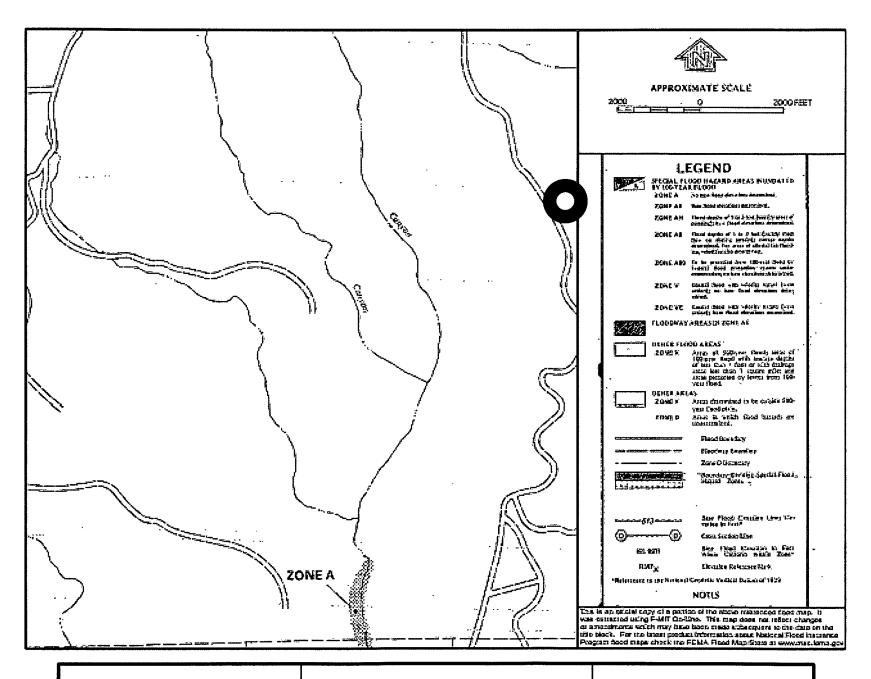
Lodestar Services, Inc PO Box 4465 Durango, CO 81302

Gardner C #6 T32N, R09W, S25B San Juan County, NM



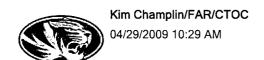
Gardner C #6 T32N, R09W, S25B San Juan County, NM

Mines, Mills, and Quarries Map



Gardner C #6 T32N, R09W, S25B San Juan County, NM

FEMA Flood Zone Map



To mark\_kelly@blm.gov

СС

bcc

Subject Notice-Gardner C #6 Well Site

RE:

Gardner C #6 Gas Well API# 30-045-27998 Sec. 25B- T32N- R09W, San Juan County

Dear Mr. Kelly:

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

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

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

## XTO Energy Inc. San Juan Basin Closure Plan

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

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

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

### General Plan:

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

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

- 9. Upon completion of solidification and testing, the pit area will be backfield with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
- 10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, ponding prevention, and erosion prevention. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
- 11. Notification will be sent to OCD when the reclaimed area is seeded.
- 12. XTO shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM of Forest Service stipulated seed mixes will be used on Federal Lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.
- 13. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time all wells on the pad are abandoned. The operator's information will include the following: Operators Name, Lease Name, Well Name and Number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.