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

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

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

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.

Proposed Alternative Method Permit or Closure Plan Application
Type of action:    X   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. Breech D #685F
API Number         30-039-31015         OCD Permit Number
U/L or Qtr/Qtr K Section 11 Township 26N Range 6W County. Rio Arriba
Center of Proposed Design Latitude 36.49951 Longitude 107 43954 NAD 1927 X 1983
Center of Proposed Design Latitude 36.49951 Longitude 107 43954 NAD 1927 1983  Surface Owner: Federal State Private Tribal Trust or Indian Allotment
Zero   Zero
Liner Seams. Welded X Factory Other Volume. bbl Dimensions. b 200 x W 80 x D 8-12
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)   To be used during completion operations     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
Below-grade tank: Subsection I of 19.15.17.11 NMAC   Volumebbl Type of fluid:   Tank Construction material   Secondary containment with leak detection   Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off   Visible sidewalls and liner   Visible sidewalls only   Other   Liner type: Thickness   mil   HDPF   PVC   Other

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval

Alternative Method:

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	hospital,
Alternate Please specify	
Netting: Subsection E of 19 15.17 11 NMAC (Applies to permanent pits and permanent open top tanks)  Screen Netting Other  Monthly inspections (If netting or screening is not physically feasible)	
Signs: Subsection C of 19 15.17 11 NMAC  ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  ☐ Signed in compliance with 19.15.3 103 NMAC	
Administrative Approvals and Exceptions:  Justifications and/or demonstrations of equivalency are required. Please refer to 19 15 17 NMAC for guidance  Please check a box if one or more of the following is requested, if not leave blank:  Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval. Fencing-Hogwire  Exception(s). Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	office for
Siting Criteria (regarding permitting): 19.15 17 10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the 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 drying above-grade tanks associated with a closed-loop system.	priate district pproval.
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank - NM Office of the State Engineer - iWATERS database search; USGS, Data obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  (Applies to temporary, emergency, or cavitation pits and below-grade tanks)  - Visual inspection (certification) of the proposed site, Aerial photo, Satellite image	☐ Yes ☐ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application (Applies to permanent pits)  - Visual inspection (certification) of the proposed site; Aerial photo, Satellite image	☐ Yes ☐ No ☐ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.  NM Office of the State Engineer - iWATERS database search, Visual inspection (certification) of the proposed site	Yes 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
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design, NM Bureau of Geology &amp; Mineral Resources, USGS; NM Geological Society; Topographic map</li> </ul>	☐ Yes ☐ No
Within a 100-year floodplain - FEMA map	☐ Yes ☐ No

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19 15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.    Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC   Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15 17 9 NMAC   Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17 10 NMAC
Design Plan - based upon the appropriate requirements of 19 15.17.11 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17 12 NMAC  Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 15.17.9 NMAC and 19.15.17 13 NMAC
Previously Approved Design (attach copy of design) API Number or Permit Number:
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17 9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19 15 17.10 NMAC  □ Design Plan - based upon the appropriate requirements of 19 15.17.11 NMAC  □ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15 17.12 NMAC  □ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 15 17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design)  API Number:
Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17 9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  Climatological Factors Assessment  Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC  Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC  Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC  Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC  Quality Control/Quality Assurance Construction and Installation Plan  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.18 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  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.
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 Groun Instructions: Please indentify the facility or facilities for the disposal of liquid facilities are required.										
Disposal Facility Name: Envirotech	Disposal Facility Permit Number.	NM01-0011								
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. Yes (If yes, please provide the information below) \( \otimes\) No										
Required for impacted areas which will not be used for future service and operated 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 Subsections.	ate requirements of Subsection H of 19.1 on I of 19.15.17 13 NMAC	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 provided below. Requests regarding changes to certain siting criteria may requested an exception which must be submitted to the Santa Fe Environment demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC	ne closure plan. Recommendations of a uire administrative approval from the ap tal Bureau office for consideration of a	ppropriate district office or may b								
Ground water is less than 50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; D	ata 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, D	ata 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, D	ata obtained from nearby wells	☐ Yes☐ No☐ NA								
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other slake (measured from the ordinary high-water mark).  - Topographic map, Visual inspection (certification) of the proposed site	significant watercourse or lakebed, sinkh	nole, or playa Yes No								
Within 300 feet from a permanent residence, school, hospital, institution, or chur - Visual inspection (certification) of the proposed site, Aerial photo, Satell		lication Yes 🖾 No								
Within 500 horizontal feet of a private, domestic fresh water well or spring that I watering purposes, or within 1000 horizontal feet of any other fresh water well o  NM Office of the State Engineer - iWATERS database, Visual inspectio	r spring, in existence at the time of initia									
Within incorporated municipal boundaries or within a defined municipal fresh w adopted pursuant to NMSA 1978, Section 3-27-3, as amended  - Written confirmation or verification from the municipality, Written appr	•	al ordinance Yes X No								
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map, Topographic map; Vis	sual inspection (certification) of the prop	posed site								
Within the area overlying a subsurface mine  Written confirmation or verification or map from the NM EMNRD-Mine	ing and Mineral Division	☐ Yes 🛛 No								
Within an unstable area - Engineering measures incorporated into the design, NM Bureau of Geold Society, Topographic map	ogy & Mineral Resources; USGS, NM G	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 by a check mark in the box, that the documents are attached.  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements Construction/Design Plan of Burial Trench (if applicable) based upon the Construction/Design Plan of Temporary Pit (for in-place burial of a drying Protocols and Procedures - based upon the appropriate requirements of 19 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements Waste Material Sampling Plan - based upon the appropriate requirements Disposal Facility Name and Permit Number (for liquids, drilling fluids and Soil Cover Design - based upon the appropriate requirements of Subsection Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	equirements of 19.15 17.10 NMAC of Subsection F of 19.15.17.13 NMAC appropriate requirements of 19 15.17.11 g pad) - based upon the appropriate requirements of Subsection F of 19.15.17 of Subsection F of 19.15.17 13 NMAC d drill cuttings or in case on-site closure on H of 19.15.17.13 NMAC on I of 19.15.17 13 NMAC	1 NMAC prements of 19 15.17 11 NMAC 7 13 NMAC								

Operator Application Certification:  I hereby certify that the information submitted with this application is true, accurate	te and complete to the best of my knowledge and belief
Name (Print). Malia Villers	Title: Permitting Tech
,	Date: Q-2-11
e-mail address malía_villers@xtoenergy.com	Telephone(505) 333-3100
	OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K Instructions: Operators are required to obtain an approved closure plan prior to The closure report is required to be submitted to the division within 60 days of the section of the form until an approved closure plan has been obtained and the closure	C of 19.15 17.13 NMAC implementing any closure activities and submitting the closure report. we completion of the closure activities. Please do not complete this
	Closure Completion Date.
22.  Closure Method:  Waste Excavation and Removal On-Site Closure Method Alternation  If different from approved plan, please explain	ive Closure Method  Waste Removal (Closed-loop systems only)
23. Closure Report Regarding Waste Removal Closure For Closed-loop Systems Instructions: Please indentify the facility or facilities for where the liquids, drillitwo facilities were utilized.	
<del>-</del>	Disposal Facility Permit Number:
	Disposal Facility Permit Number.
Were the closed-loop system operations and associated activities performed on or i  Yes (If yes, please demonstrate compliance to the items below)  No	
Required for impacted areas which will not be used for future service and operatio  Site Reclamation (Photo Documentation)  Soil Backfilling and Cover Installation  Re-vegetation Application Rates and Seeding Technique	ons:
Closure Report Attachment Checklist: Instructions: Each of the following iter mark in the box, that the documents are attached.	ms must be attached to the closure report. Please indicate, by a check
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)	nde NAD. □1927 □ 1983
	de NAD.
Operator Closure Certification:  I hereby certify that the information and attachments submitted with this closure rebelief. I also certify that the closure complies with all applicable closure requirements.	
Name (Print):	Title:
Signature	
e-mail address:	Telephone:

### Pit Permit Siting Criteria Information Sheet

Well Name	Breech D #685	F
Date	August 30, 2011	
Prepared By	K. Wilson	

API#	N/A	USPLSS:[	T26N, R6W, 11J
Depth to groundwater:	Greater than 50 feet	Lat/Long:[	36.49951, -107.43954
Distance to closest continuously flowing watercourse:	26 Miles NE to San Juan River	Geologic formation:	San Jose Formation
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	289 ft SE of a 1st order tributary of		;
Permanent residence, school, hospital, institution or church within 300':	мо	Soil Type:	Entisols
		Annual Precipitation:	8.21" - Farmington; 10.41" - Otis, 8.71" - Bloomfield
Domestic fresh water well or spring within 500':	NO	Precipitation Notes:	No significant precipitation events on record.
Any other fresh water well or spring within 1000':	NO		ı
Within incorporated municipal boundaries:	NO	Attached Documents:	Hydrogeologic Report  Figure 1: Topographical Map  Figure 2 <sup>-</sup> Aerial Mpa
Within defined municipal fresh water well field:	NO		Figure 3: FEMA Flood Zone Map  XTO Water Well Data
Wetland within 500':	NO, 1340 ft NW of wetlands	Mining Activity:	
	associated with Albert Lake		None Identified in the vicinity
Within unstable area:	NO		
Within 100 year flood plain:	NO		, , ,
Additional Notes:			•

DISTRICT I 1525 N French Dr., Hobbs, N.M. 88240

DISTRICT II 1301 W Grand Ave , Artesia, N.M. 88210

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

State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-10 Revised October 12, 200

Submit to Appropriate District Offic State Lease - 4 Copie

Fee Lease - 3 Copie

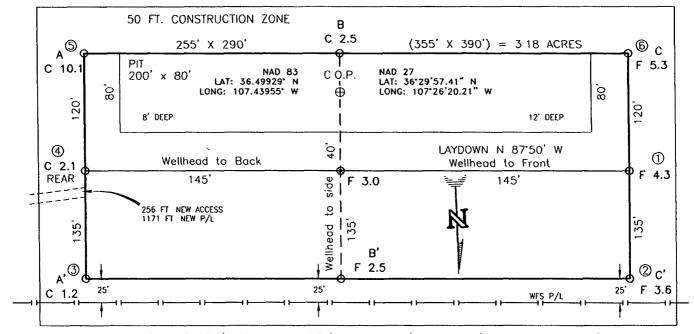
☐ AMENDED REPOR

DISTRICT IV 1220 South St. Francis Dr., Santa Fe, NM 87505

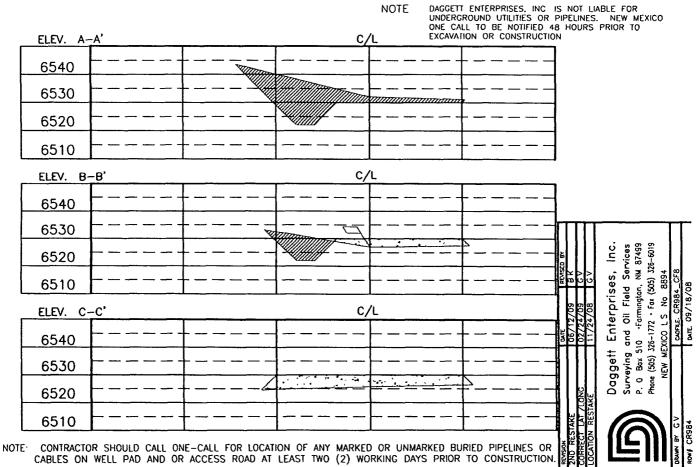
		/	WELL LOCATION AND ACREAGE DEDICATION PL							ΑT		
¹ API	Number		<sup>3</sup> Pool Code									
*Property Co	de				Propert BREE				Number 685F			
OGRID No			<del></del>		or N	<sup>9</sup> Elevation			Elevation			
					XTO ENE	RG\	/ INC					6527'
			<sup>10</sup> Surface Location									
UL or lot no K	Section 11	Township 26-N	Range 6-W	Lot idn	Feet from the 1827	:	North/South line SOUTH	1	from the	East/We: WE		County RIO ARRIBA
	1 ''	20-14					l			1445	.31	RIO ARRIBA
UL or lot no	Section	Township	Range	om Hole	Feet from the		Different Fre		from the	East/We	est line	County
<sup>12</sup> Dedicated Acres	s		13 Joint or I	nfill	1º Consolidatio	n Co	de	15 Ord	er No	<u> </u>		
NO ALLOV	VABLE V	WILL BE	<u>.I</u> ASSIGNEI	D TO THI	I IS COMPLE	ETIC	ON UNTIL ALL	INTE	RESTS H	HAVE B	EEN CO	DNSOLIDATE
		OR A	NON-ST	ANDARD	UNIT HAS	В	EEN APPROVE	D BY	THE DI	VISION	,,	
									is true and belief, and to interest or including the right to drill contract wit interest, or	complete to that this orgo- unleased mine proposed by this well at the an owner of to a voluntar	the best of anization either eral interest is ottom hole to this location of such a mirry pooling agr	cation or has a pursuant to a neral or working
									Signatur	e		Date
FD 3 1/4" BC. 1957 BLM				1					Printed	Name		
N 00'43'32" E 2678.34' (M)	1910'	6	1827'	LAT LON LAT	IG: 107.439 36°29'58 20	954 )" N	i. (NAD 83) * W. (NAD 83) i. (NAD 27) " W (NAD 27)		I hereby cer was plotted me or under and correct  Date of S	tily that the from field not my supervisite to the best of APRIL and Seal of the seal of t	well location : tes of actual ion, and that of my knowled to Modern the contract of the contra	RUJE ON E
FD 3 1/4" BC. 1957 BLM		S 89°45 2651 7		FD 3 1/ 1957 B.L					Certificate	Number	SE FEIGH	a uno

XTO ENERGY INC.
BREECH D No. 685F, 1827 FSL 1910 FWL
SECTION 11, T26N, R6W, N.M.P.M., RIO ARRIBA COUNTY, N.M.
GROUND ELEVATION: 6527' DATE: APRIL 7, 2009

NAD 83 LAT. = 36.49951° N LONG. = 107.43954° W NAD 27 LAT. = 36'29'58.20° N LONG. = 107'26'20.17" W



RESERVE PIT DIKE TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE)
BLOW PIT OVERFLOW PIPE HALFWAY BETWEEN TOP AND BOTTOM AND TO EXTEND OVER PLASTIC LINER AND INTO BLOW PIT





### Breech D #685 F

### Hydrogeologic Report for Siting Criteria

### General Geologic 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 the surficial geology. The proposed pit location will be situated on the undulating surface of Ensenada Mesa near the head of Ice Canyon (figure 1). The predominant geologic formation is the San Jose Formation, which underlines surface soils or is exposed as sandstone outcrops. The San Jose Formation occurs in both New Mexico and Colorado and its outcrop forms the land surface over much of the eastern half of the central basin.

Cretaceous and Tertiary sandstones and Quaternary alluvial deposits serve as the primary aquifers in the San Juan Basin. In the proposed area, the San Juan Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and shale. Groundwater is associated with alluvial and fluvial sandstone aquifers. Porous sandstones form the principal aquifers, while relatively impermeable shales and mudstones form confining units between the aquifers. The aquifers are found between 0 and 2700 feet. The reported or measured discharge from numerous water wells completed in the formation range from 0.15 to 61 gallons per minute (gpm) of production, with a median of 5 gpm. Most of the wells provide water for livestock and domestic purposes.

The formation is suitable for recharge from precipitation due to the sandy nature of overlying soils, which are highly permeable and absorbent. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the formation by the San Juan River and its main tributaries all tend to reduce the effective recharge of the formation. Most recharge occurs during the inter months during snowmelt periods within the upper elevations (Western Regional Climate Center, www.wrcc.dri.edu).

The predominate vegetation is sagebrush and grasses with a more restricted pinon-juniper association.

### Site-Specific Hydrology

Ensenada Mesa lies to the north of Largo Canyon. It consists of shales and sandstones of the San Jose Formation. The site in question is located near the center of Ensenada Mesa at an elevation of approximately 6,580 feet above sea level (Figures 1 and 2). The immediate surrounding area consists of shallow washed and canyons that have eroded through the sandstone into underlying shale units. The washes drain to Dogie Canyon, a major tributary of Largo Canyon.



A Subsidiary of ExxonMobil

Depth to groundwater is estimated to be greater than 50 feet. This estimation is based on data from existing XTO water wells within the near vicinity, 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.

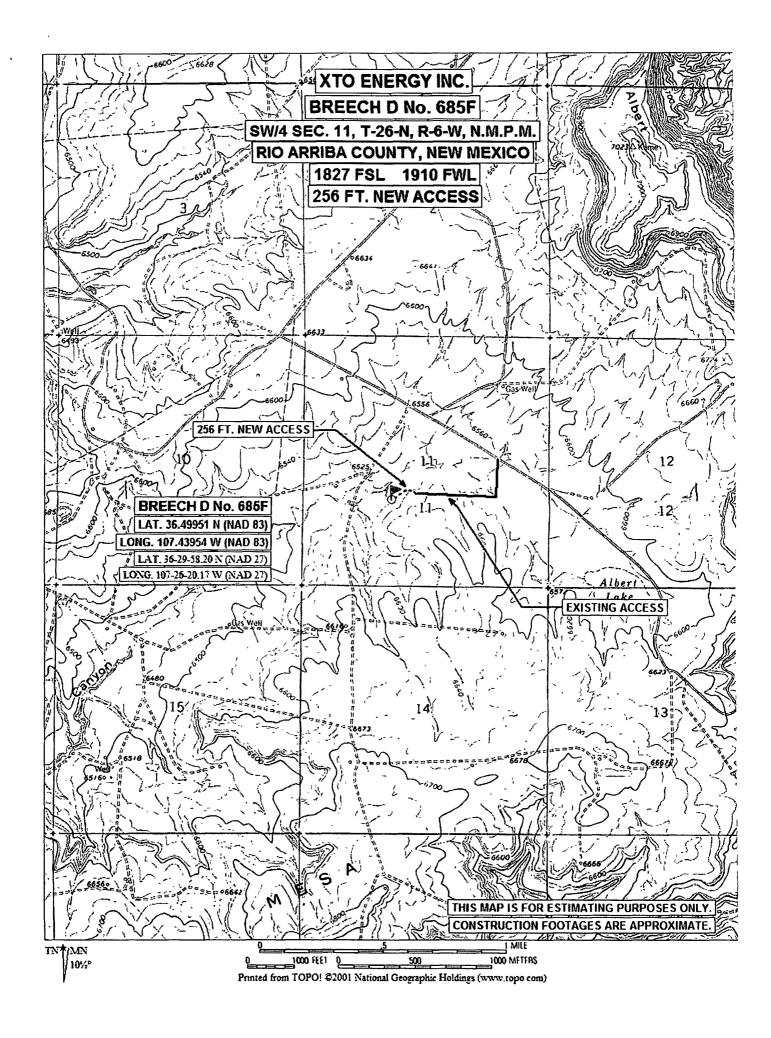
Ground water data available from water well logs for wells within the near vicinity is attached. The Calkins # 1 Water Well is located within an approximate 2 mile radius of the proposed pit, water logs for this well show depth to ground water at 265 feet to 303 feet (attached XTO Water Well Data). There are 7 additional fresh water wells within an approximate 5 to 6 mile radius. The information included within the attached XTO Water Well Data will show that all 8 wells within a 5 to 7 mile proximity of the proposed pit location do not have the presence of ground water above 50 feet.

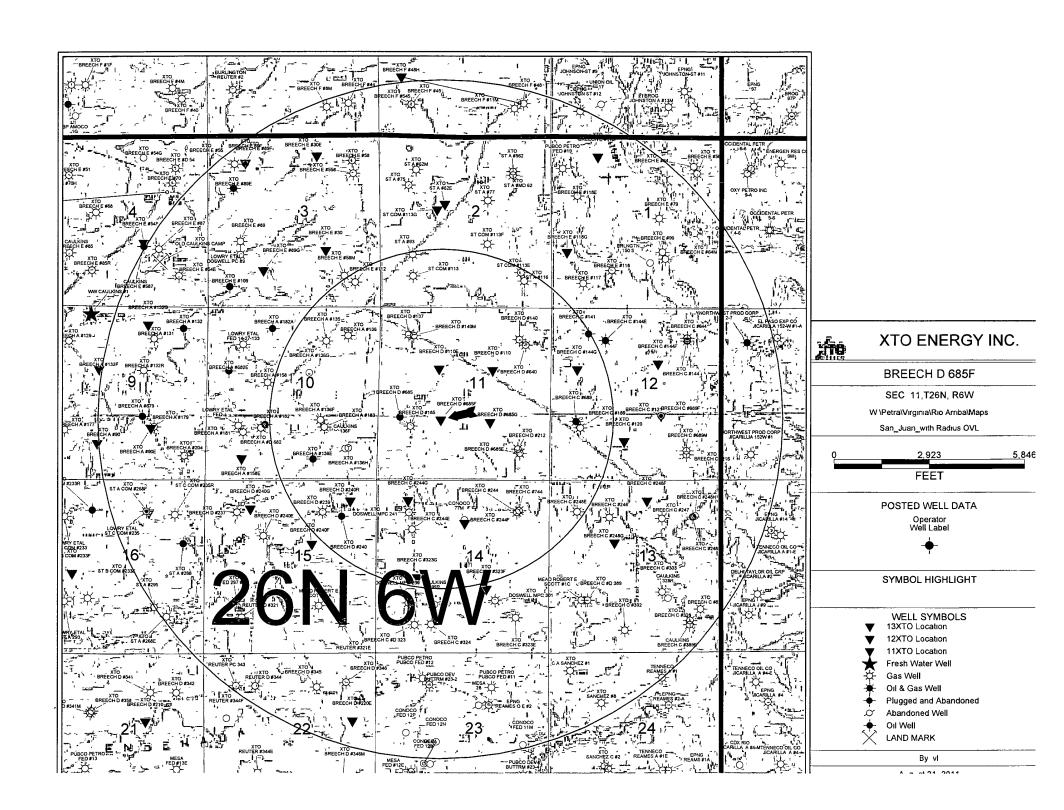
The proposed pit location is approximately 1,350 feet northwest of the Albert Lake and an adjacent small pond. The distance between the proposed pit location and the water bodies plus the topography features surrounding area suggests that ground water would not be present at 50 feet.

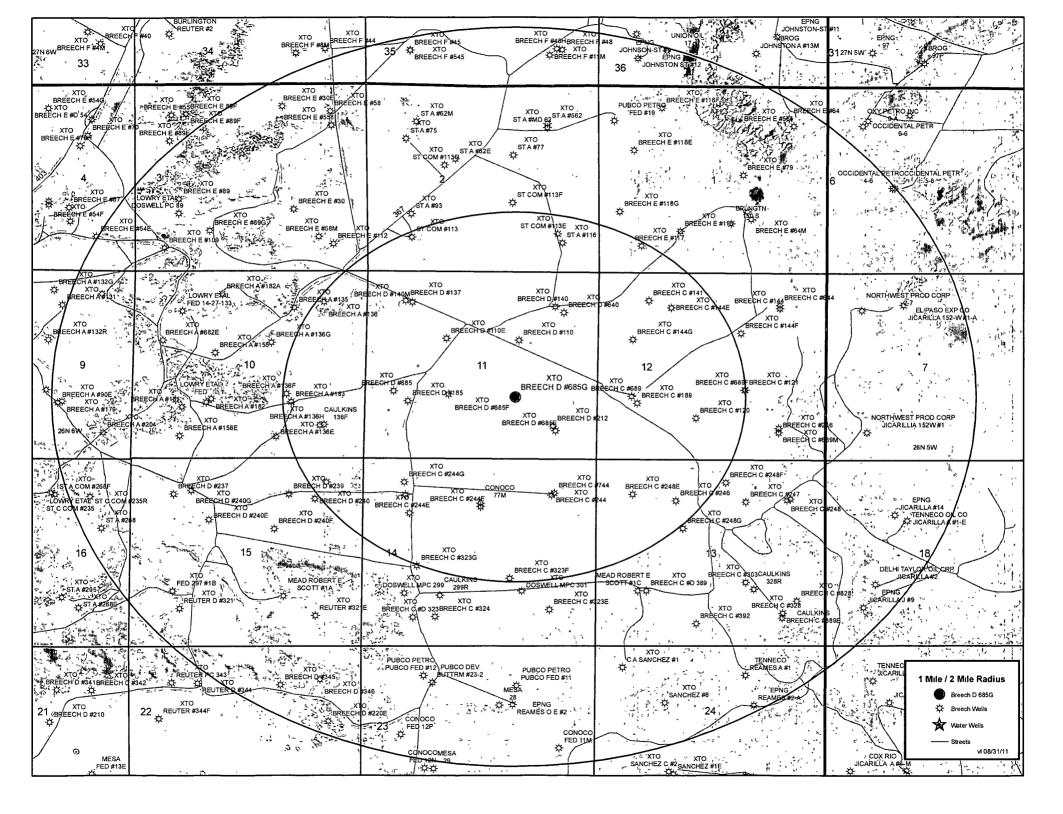
### References:

USDA-NRCS, Web Soil Survey: (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm)

USDA-NRCS, Plants Data Base: (http://plants.usda.gov/java/)

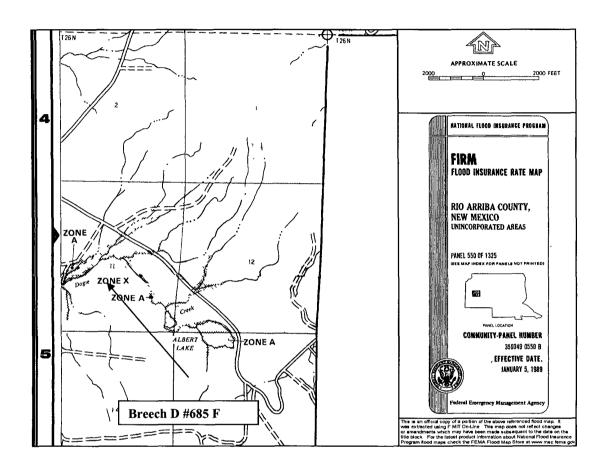






### Breech D #685 F Section 11, T26N, R6W

### **FEMA Flood Zone Map**



# tresh water wells

6-18-96.

se!/ Location hu. news Depth. Present Condition SE/4 NE/4 4-26-6 70

NE/1 NE/4 16-26-6 204 PTR 2. Plugged w/ sand + Dirt Sw/ 5w/ 4-26-6 321 Rencher tumpsig Equipment in we.

Kever Pumped after

Cenknown Sept 1952. 3 ? Nw/ Sw/4 4.26-6 68E Nw/4 5w/4 9.26-6 204M. *3*73 assume in Good Shape. 348 1918 F/s 118 F/w. 11-26-6 685 345 925 F/S 1122 F/E 4-26-6 S4E for Camp 456 Plugged Takendoned. 7. foz & CAMP In us t.

Charles Darque

>120' water comme 1' - 20 - 70' water com 120 reas - 1/ Tool, you may writing a non-set Form 9-331a (March 1942)

(SUBMIT IN TRIPLICATE)

## Lease No.

### UNITED STATES DEPARTMENT OF THE INTERIOR

### GEOLOGICAL SURVEY

### SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING.
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF REDRILLING OR REPAIR.
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	Complete
	water ueli
(INDICATE ABOVE BY CHECK MAI	RK NATURE OF REPORT, NOTICE, OR OTHER DATA)
•	4/6/57
<u> </u>	, 19
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### INTER OFFICE CORRESPONDE CE

To C. Wilson Moore

Date May June 1, 1951

Subject

1/3c, 146

Please send us a copy of the USGS on the Federal "B" Lease Water Well.

Also the record of the total depth and depth of water producing formation, and casing record of this well.

Thank you,

touis D. Gibbons

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Budget Bureau 42-R358 2. Approval expires 12-31-52.

Form 9-331a (Feb 1951)

(SUBMIT IN TRIPLICATE)

### **UNITED STATES**

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office SE	_
Loase No. 079035-A	
Unit	-

### SUNDRY NOTICES AND REPORTS ON WELLS

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NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING.	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF REDRILLING OR REPAIR.	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.	SUBSEQUENT REPORT OF ABANDONMENT	well #5
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY.	
NOTICE OF INTENTION TO ABANDON WELL		
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(INDICATE ABOVE BY CHECK MARK NATE	URE OF REPORT, NOTICE, OR OTHER DATA)	
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T-T		
Water Well No5 is located 1955 ft. from	line and 173 ft from line of sec. 9	

Water Well No5 is loc	ated 1955.ft.	from ${S}$ line a	nd $173$ ft. from $\left\{\begin{matrix} \mathbb{E}X\\ \mathbb{W} \end{matrix}\right\}$ I	ine of sec9
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Wildcat	Rio Arri	ba	New Mexi	ထ
(Field)	(Cot	inty or Subdivision)	(State or T	erritory)
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The elevation of the derrick floor above sea level is \_\_\_\_\_ft. Not Known

Spudded 9-25-51

DETAILS OF WORK

Completed 10-2-51

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)'

0	28	Surface Sand	
28	39	Sand Rock	
39	60	Blue Shale	
60	105	Sandy Shale	7" OD perforated casing ran.
105	175	Sand Rock	No cement.
175	181	Water Sand	
181	266	Blue Sandy Shale	
266	311	Gray Sandy Shale	
311	338	Blue Shale	Estimated to Produce 30 GPM
338	340	Sandy Shale	4
340	348	Water Sand	

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Lowry et at vieraving notomie	***************************************
Address Room 215	
616 East Central Avenue	By Elichandson  E. R. Richardson
Albuquerque, New Mexico	Title Business Manager

(SUBMIT IN TRIPLICATE)

### **UNITED STATES**

### DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

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SUNDRY NOTICES AND RE	EPORTS ON WELLS	ċ
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Budget Bureau 42-R358.2. Approval expires 12-31-52.

(SUBMIT IN TRIPLICATE)

### Lease No.

### UNITED STATES

### DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

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Lease No.	03551
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### SUNDRY NOTICES AND REPORTS ON WELLS

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Albuquerque, New Mexico

Title Business Hanager

(SUBMIT IN TRIPLICATE)

### **UNITED STATES**

### DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

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Land Office

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### SUNDRY NOTICES AND REPORTS ON WELLS

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			<i></i>	B. R. Richardson	1
AT	moneron	e. New Mexico	Title_	Business Manager	
			# 1UC		



To Mark Kelly

CC

bcc

Subject Breech D #685F

RE: Breech D #685F

Sec. 11 (K), T26N-R6W, Rio Arriba 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 intention to close the temporary pit associated with the aforementioned location by means of in place burial.

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

Malia Villers XTO Energy a subsidiary of ExxonMobil

Office. 505-333-3698 Cell: 505-787-7700 Fax: 505-333-3284

malia\_villers@xtoenergy.com

## XTO Energy Inc. San Juan Basin Pit Design and Construction Plan

In accordance with Rule 19 15 17 11 NMAC the following information describes the design and construction 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.

### General Plan

- 1. XTO will design and construct a temporary pit 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 temporary pit. 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 a single strand of barbed wire on top T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post Temporary pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes
- 5. XTO shall construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure
- XTO shall construct the pit so that the slopes are no steeper than two horizontal feet to one vertical foot.
- 7. Pit walls will be walked down by a crawler type tractor following construction
- 8. All temporary pits will be lined with a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements
- Geotextule will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided.
- All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep
- XTO will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used when possible XTO will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope XTO will minimize the number of field seams in corners and irregularly shaped areas
- 12. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system
- 13. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some areas.
- 14. The volume of the pit shall not exceed 10 acre-feet, including freeboard.

## XTO Energy Inc. San Juan Basin Maintenance and Operating Plan

In accordance with Rule 19 15.17 12 NMAC the following information describes the operation and maintenance of temporary pits on XTO Energy Inc. 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.

### General Plan

- 1 XTO will operate and maintain a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment
- 2 XTO will conserve drilling fluids by transmitting liquids to pits ahead of the rigs whenever possible. All drilling fluids will be disposed at Basin Disposal Inc, Permit # NM-01-005
- 3. XTO will not discharge or store any hazardous waste in any temporary pit.
- 4. If any pit liner integrity is compromised, or if any penetration of the liner occurs above the liquid surface, then XTO shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner
- 5. If a leak develops below the liquid level, XTO shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner XTO shall notify the Aztec Division office by phone or email within 48 hours of the discovery for leaks less than 25 barrels XTO shall notify the Aztec Division office as required pursuant to Subsection B of 19.15 3 116 NMAC within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19 15 3 116 NMAC shall be reported to the division's Environmental Bureau Chief
- The liner shall be protected from any fluid force or mechanical damage through the use of mud pits slides, or a manifold system
- The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases
- 8. XTO shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from pits surface. An oil absorbent boom will be stored on-site until closure of pit.
- 9. Only fluids generated during the drilling or workover process will be discharged into a temporary pit
- 10 XTO will maintain the temporary pit free of miscellaneous solid waste or debris.
- During drilling or workover operations, XTO will inspect the temporary pit at least once daily to ensure compliance with this plan Inspections will be logged and logs maintained for review.

  XTO will file this log with the Aztec Division office upon closure of the pit.
- After drilling or workover operations, XTO will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at XTO's office electronically and will be filed with the Aztec Division office upon closure of the pit.
- 13 XTO shall maintain at least two feet of freeboard for a temporary pit
- 14. XTO shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling or workover rig.

### 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:

- 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.
- 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
- 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 0f 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, nonwaste 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
- 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.

## XTO Energy Inc. San Juan Basin Closed-Loop System Design and Construction Plan

In accordance with Rule 19 15.17 11 NMAC the following information describes the design and construction of closed-loop systems on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all closed-loop systems. A separate plan will be submitted for any closed-loop system which does not conform to this plan.

### General Plan

Our closed-loop system will not entail a drying pad, temporary pit, below grade tank or sump. It will entail an above ground tank suitable for holding the cuttings and fluids for rig operations. The tank will be of sufficient volume to maintain a safe free board between disposal of the liquids and solids from rig operations.

- Fencing is not required for an above ground closed-loop system
- 2. It will be signed in compliance with 19.15.3.103 NMAC

## XTO Energy Inc. San Juan Basin Closed-Loop Systems Maintenance and Operating Plan

In accordance with Rule 19 15 17 11 NMAC the following information describes the operation and maintenance of closed-loop systems on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all closed-loop systems. A separate plan will be submitted for any closed-loop system which does not conform to this plan.

### General Plan

The closed-loop tank will be operated and maintained, to contain liquids and solids, to aid in the prevention of contamination of fresh water sources, in order to protect public health and the environment To attain the goal the following steps will be followed.

- 1. The liquids will be vacuumed out and disposed of at the Basin Disposal, Inc. facility (Permit Number NM01-005). An alternative if available for liquids disposal, will be to move the liquids forward to a XTO temporary pit constructed in accordance with all specifications in NMAC Rule 19 15 17 for a well yet to be drilled All specifications, limitations, and rules within the New Mexico Administrative Code regulating this transfer of liquids will be strictly adhered to As a third alternative, if Basin Disposal turns away the fluids because of capacity reasons, and the second transfer option is not available, XTO may elect to haul fluids to IEI (Permit Number NM01-0010B) for final disposition.
- Solids in the closed-loop tank will be vacuumed out and disposed of at Envirotech (Permit Number NM01-0011) or IEI (Permit Number NM01-0010B) on a periodic basis to prevent over topping
- 3. No hazardous waste, miscellaneous solids, waste, or debris will be discharged into, or stored in the tank. Only fluids or cutting used or generated by rig operations will be placed or stored in the tank.
- 4. The division district office will be notified within 48 hours of the discovery of compromised integrity of the closed-loop tank. Upon discovery of the compromised tank, repairs will be enacted immediately
- All of the above operations will inspected and a log will be signed and dated daily during rig
  operations.

## XTO Energy Inc. San Juan Basin Closed-Loop System Closure Plan

In accordance with Rule 19.15.17.11 NMAC the following information describes the closure requirements of closed-loop systems on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all closed-loop systems. A separate plan will be submitted for any closed-loop system which does not conform to this plan

### General Plan

XTO will close a drying pad used for a closed-loop system within six months from the date that XTO released the drilling or workover rig. XTO will not the date of the drilling or workover rig's release on form C-105 or C-103, riled with the division, upon the well's or workover's completion.

The closed-loop tank will be closed in accordance with 19.15.17.13 NMAC. This will be done by transporting cuttings and all remaining sludges to Envirotech (Permit Number NM01-0011) or IEI (Permit Number NM01-0010B) immediately following rig operations.

All remaining liquids will be transported and disposed of at the Basin Disposal, Inc facility (Permit Number NM 01-005) As an alternative (in the event Basin Disposal refused liquids because of capacity considerations, and if proper inventory space is available for liquids transfer while meeting free board requirements), the liquids will be moved forward to a XTO temporary pit constructed in accordance with all specifications in NMAC Rule 19.15.17 for a well yet to be drilled. All specifications, limitations, and rules within the New Mexico Administrative Codes regulating this transfer of liquids will be strictly adhered to As a third alternative, if Basin Disposal turns away the fluids because of capacity reasons, and the second transfer option is not available, XTO may elect to haul the fluids to IEI (Permit Number 01-0010B) for final disposition.

The tanks will be removed from the location as part of the rig move. At the time of well abandonment the site will be reclaimed and re-vegetated to pre-existing conditions when possible

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