## Jones, Brad A., EMNRD

From:

Kurt\_Hoekstra@xtoenergy.com

Sent:

Monday, August 27, 2012 10:16 AM

To:

Jones, Brad A., EMNRD

Subject:

Request for closure plan

#### Brad.

Please accept this email as a request for approval of the closure plan only for the BGT at the Bandy # 1 location (API # 30-045-09820) located in Unit N, Section 3, Township 30N, Range 11W, San Juan County, New Mexico. Our records show that this closure plan was submitted to your office on 12-12-2008. This BGT is being closed due to the plugging and abandoning of this wellsite. Thank you for your time in regards to this matter.

Kurt Hoekstra Sr. Environmental Technician XTO Energy 505-333-3202 Office 505-486-9543 Cell Kurt Hoekstra@xtoenergy.com

## District I District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410

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

State of New Mexico 1625 N. French Dr., Hobbs, NM 88240 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.

2008 DEC 12 PM 4 12

# 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
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

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

vironment. Nor does approval relieve the operator of its responsibility to comply with a	y other applicable govern	imental authority's rules, regulations of oldmance
Operator: XTO Energy, Inc.	OGRID #:	5380
Address: #382 County Road 3100, Aztec, NM 87410		
acility or well name: _ Bandy #1		
	Number:	
U/L or Qtr/Qtr N Section 03 Township 30N Range		
Center of Proposed Design: Latitude 36.83708 Longitud	107.98043	NAD: □1927 ⊠ 1983
Surface Owner: 🔲 Federal 🔲 State 🔀 Private 🔲 Tribal Trust or Indian Allotment		
Pit: Subsection F or G of 19.15.17.11 NMAC		
emporary: Drilling Workover		
Permanent Emergency Cavitation P&A		
Lined Unlined Liner type: Thicknessmil LLDPE HE	PE 🔲 PVC 🔲 Other	
String-Reinforced		
iner Seams: Welded Factory Other Volume	me:bbl D	imensions: L x W x D
Closed-loop System: Subsection H of 19.15.17.11 NMAC		
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Apparent)	lies to activities which r	require prior approval of a permit or notice of
Drying Pad Above Ground Steel Tanks Haul-off Bins Other		
Lined Unlined Liner type: Thicknessmil LLDPE	HDPE 🔲 PVC 🔲 Ot	her
iner Seams:		
Below-grade tank: Subsection I of 19.15.17.11 NMAC		
/olume: 120 bbl Type of fluid: Produced Water		
Sank Construction material: Steel		
Secondary containment with leak detection Visible sidewalls, liner, 6-inch		
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other _Visible side		
iner type: Thicknessmil		
Alexander Make de	*****	
Alternative Method:		D C' Constitution of
submittal of an exception request is required. Exceptions must be submitted to the	anta re Environmental	Bureau office for consideration of approval.

6.  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)	hospital,
Four foot height, four strands of barbed wire evenly spaced between one and four feet	
☐ Alternate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing	
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)  Screen Netting Other Expanded metal or solid vaulted top  Monthly inspections (If netting or screening is not physically feasible)	
8.  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 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 dry above-grade tanks associated with a closed-loop system.	opriate district approval.
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
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 19.15.17.12 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: 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   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   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)
<ul> <li>☐ On-site Closure Method (Only for temporary pits and closed-loop systems)</li> <li>☐ In-place Burial</li> <li>☐ On-site Trench Burial</li> <li>☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)</li> </ul>
15.  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,		
facilities are required.	Discoul Facility Down to Number	
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 o  ☐ Yes (If yes, please provide the information below) ☐ No	ccur on or in areas that will not be used for future serv	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	e requirements of Subsection H of 19.15.17.13 NMA I of 19.15.17.13 NMAC	C
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may required 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	re administrative approval from the appropriate dist I 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; Database search; USG	a 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; Database search;	a 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; Database search; US	a obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	mificant 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; Satellit		☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that les watering purposes, or within 1000 horizontal feet of any other fresh water well or - NM Office of the State Engineer - iWATERS database; Visual inspection	spring, in existence at the time of initial application.	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh wat adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approx	-	☐ Yes ☐ No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visu	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	g and Mineral Division	☐ Yes ☐ No
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map	y & 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 a Construction/Design Plan of Temporary Pit (for in-place burial of a drying protocols and Procedures - based upon the appropriate requirements of 19.1 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 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	quirements of 19.15.17.10 NMAC  f Subsection F of 19.15.17.13 NMAC  ppropriate requirements of 19.15.17.11 NMAC  pad) - based upon the appropriate requirements of 19.  5.17.13 NMAC  quirements of Subsection F of 19.15.17.13 NMAC  Subsection F of 19.15.17.13 NMAC  drill cuttings or in case on-site closure standards cann  H of 19.15.17.13 NMAC  T of 19.15.17.13 NMAC	15.17.11 NMAC

Operator Application Certification:	
I hereby certify that the information submitted with this application is true, accurate and complete t	
/ . /	Environmental Representative
Signature: him Champlin Date:	120808
e-mail address: kim_champlin@xtoenergy.com Telephone:	(505) 333-3100
20.  OCD Approval: Permit Application (including closure plan) Closure Plan (only)	CD C III ( W L w)
	Approval Date:
Title: OCD Permit No	ımber:
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 Instructions: Operators are required to obtain an approved closure plan prior to implementing a The closure report is required to be submitted to the division within 60 days of the completion of t section of the form until an approved closure plan has been obtained and the closure activities has Closure Co	ny closure activities and submitting the closure report. The closure activities. Please do not complete this
22.	
Closure Method:  ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Meth ☐ If different from approved plan, please explain.	od  Waste Removal (Closed-loop systems only)
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize About Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drive two facilities were utilized.	
Disposal Facility Name: Disposal Facility	y Permit Number:
	y Permit Number:
Were the closed-loop system operations and associated activities performed on or in areas that will a Yes (If yes, please demonstrate compliance to the items below) \( \subseteq \text{No} \)	not be used for future service and operations?
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	
24.  Closure Report Attachment Checklist: Instructions: Each of the following items must be attack 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: LatitudeLongitude	NAD: □1927 □ 1983
Operator Closure Certification:  I hereby certify that the information and attachments submitted with this closure report is true, accur belief. I also certify that the closure complies with all applicable closure requirements and condition.	ns specified in the approved closure plan.
Signature: Date:	
e-mail address:	

# OIL CONSERVATION COMMISSION

		Date May 5, 1954
. P. CARR	BANDY	Well No
Operator	Lease	Well No.
e of Producing Fo	rmation leturen Culsi	Pool AZTEC PICTURED
	o the Well 160	<del></del>
eate land status an	d show ownershipTOWNSHIP	RANGE
ECTION		
		DEC 3 1954 OIL CON COMP DIST. 3
·-		
40 ac. C S.O. 4 MARGARET	25 au. Litrence E. a glviq G. Sipe	
R.O. & MARGARET		
HayNie	Ž	·
10au.	44.56 ev. *	
2000 FW. a	· ]	
CATHERIDE CAMPBELL W	H & Esther &	,
Ruce - 10ac. F	BANDY 1/64 3000	
Hazel ore Maud M ALTERS & John B	J.FLOTANCE 3	
AUSTIN	63/64 OF 18	

(over)



# Pit Permit Siting Criteria Information Sheet

Client:	XTO Energy	
Project:	Pit Permits	
Revised:	18-Nov-08	
Prepared by:	Brooke Herb	/

V	Information Sheet	Prepared by:	Brooke Herb
		<b>-</b>	
API#:	3004509820	USPLSS:	T30N,R11W,S03N
Name:	BANDY #1	Lat/Long:	36.83708, -107.98043
Depth to groundwater:	< 50'	Geologic	Nacimiento Formation
	<u> </u>	formation:	
Distance to closest			
continuously flowing	3386' E of the Animas River		
watercourse:			
Distance to closest		<u> </u>	
gnificant watercourse,	12FLW of Lawren Andreas Bitch		
lakebed, playa lake, or	125' W of Lower Animas Ditch		
sinkhole:	. !		
		Soil Type:	Entisols
Permanent residence,			
school, hospital,	Yes - 185' S of Permanent		
institution or church	Residence		
within 300'	·		
		Annual Precipitation:	9.77 inches (Aztec)
Domestic fresh water		1	and the state of t
well or spring within	No	Precipitation	no significant precip events
500'	!	Notes:	
Any other fresh water	Yes -592' SE of iWaters well	\	
well or spring within	SJ01440; 750' E of SJ00402; 784'		
1000'	S of SJ00762 & SJ01734		
	1		
Within incorporated	No	Attached	Groundwater report and Data; FEMA Flood Zone Map
municipal boundaries		Documents:	, , , , , , , , , , , , , , , , , , , ,
Within defined			
municipal fresh water	No		Aerial Photo, Topo Map, Mines Mills and Quarries Map
well field	i e		
	Š.		
Wetland within 500'	No	Mining Activity:	
	a		2400' W of a Materials Pit
Within unstable area	No v		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ę		
Within 100 year flood	No - FEMA Flood Zone 'X'		
plain			
Additional Notes:	; 		
	•		

## **BANDY #1 Below Ground Tank Siting Criteria and Closure Plan**

#### Well Site Location

Legals: T30N, R11W, Section 03, Quarter Section N Latitude/Longitude: approximately 36.83708, -107.98043

County: San Juan County, NM General Description: near Aztec

#### General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits dominate surficial geology (Dane and Bachman, 1965). The proposed below ground tank location will be located near Callaway Canyon between the Animas and San Juan rivers. The Nacimiento Formation of Tertiary Age is exposed, along with Quaternary alluvial and aeoloian sands within dry washes and arroyos.

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

The prominent soil type at the proposed site is entisols, which are defined as soils that do not show any profile development. Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the La Plata River (www.emnrd.state.nm.us). These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes soils that cover the area.

The climate of the region is arid, averaging just over 8 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu).

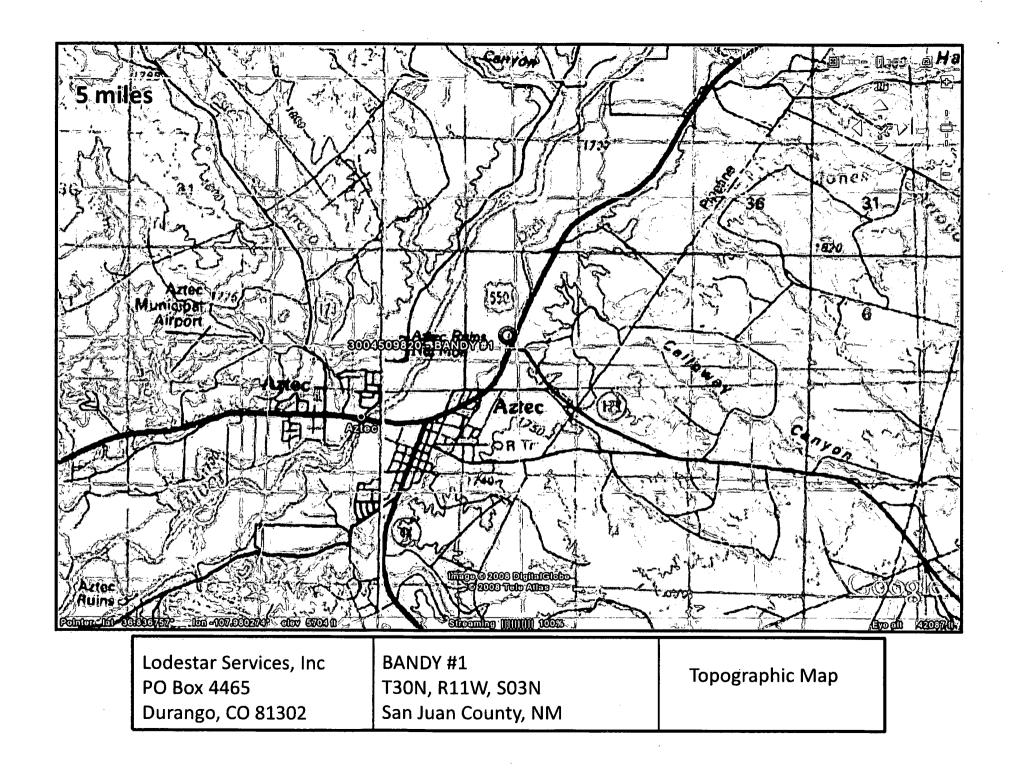
The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

## Site Specific Hydrogeology

Depth to groundwater is estimated to be less than 50 feet. This estimation is based on data from Stone and others, 1983 and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration.

Local aquifers include sandstone's within the Nacimiento Formation, which ranges from 0 to 1000 feet deep in this area, as well as shallow aquifers within Quaternary alluvial deposits (Stone et al., 1983). The 1000-foot depth range for Nacimiento aquifers covers an area over 20 miles wide, and depth decreases towards the margin of the San Juan Basin. The site in question is more centrally located, and depth to the aquifer is expected to be closer to 1000 feet. It is well known that groundwater close to the Animas River can be shallow, as the Quaternary deposits near the river itself form shallow aquifers. The proposed site is situated 3386 feet to the east of the Animas River, and is approximately 50 feet higher in elevation (Google Earth).

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the location of wells in reference to the proposed pit location is also included. Pinpoints show locations of wells and the labels for each pinpoint indicate depth to groundwater in feet. Depth to groundwater within the nearby wells ranges from 5 feet to 38 feet below ground surface. The closest well to the proposed site is located approximately 582 feet to the northwest, and is approximately 19 feet lower in topographic elevation (Google Earth). Depth to groundwater within the well is 21 feet below ground surface. A well to the northwest is approximately the 20 feet lower in elevation then the proposed site, and has a depth to groundwater of 18 feet below ground surface.





Lodestar Services, Inc PO Box 4465 Durango, CO 81302 BANDY #1 T30N, R11W, S03N San Juan County, NM

iWaters Groundwater Data Map

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

Township: 30N Range: 111A	Sections:
rownsmp	Sections: I

## POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

### WATER COLUMN REPORT 09/29/2008

	(quarter	s are	e 1=	NW	2=	=NE	3=SW 4=9	SE)						
	(quarter	s are	e bi	gge	est	t to	o smalle:	st)		Depth	Depth	Water	(in	feet)
POD Number	Tws	Rng	Sec	4	q	q	Zone	X	Y	Well	Water	Column		
RG 50669	30%	110	27			-				360	310	50		
SJ 02765	30N	110	02	1	3					54	20	34		
SJ 00975	30%	110	02	1	3					60	20	40		
SJ 01217	30%	11W	02	1	3					€0	30	30		
SJ 02837	30%	110	02	3	4	ì				150				
SJ 01437	30%	110	03	1						40	28	12		
SJ 03121	30%	11W	03	1	2	쥳				3€	12	24		
SJ 02049	30%	117	03	1	3					2€	8	18		
SJ. 01339	30%	11W	03	1	3	<u>i</u>				40	15	25		
SJ 02814	30%	11W	03	1	3	2				31	8	23		
SJ 00350	30%	11W	03	1	3	2				46	12	34		
SJ 01441	30%	11W	03	1	3	2				48	20	28		
SJ 02835	30%	117	03	1	3	2				2€	8	18		
SJ 01387	30%	11W	03	1	4					40	18	22		
SJ 03698 POD1	30N	11W	03	1	4	1				40	5	35		
SJ 02785	30%	117	03	1	4	2				31	5	26		
SJ 01313	30%	11W	03	2						70	58	12		
SJ 01805	30%	110	03	2						35	20	15		
SJ 01807	30%	110	03	2	1					50	30 ,	20		
SJ 01202	30%	117	03	2	1	2				35	8	27		
SJ 02781	30%	117	03	2	1	2				4.6	23	25		
SJ 03758 POD1	30%	117	03	2	1	2	26	68158	2127473	49	21	28		
SJ 03765 POD1	30%	117	03	2	1	2	2 :	68163	2127605	43	20	23		

	SJ 03756 POD1		110 03			268179	2127870	41	20	21			
	SJ 02786	_	11W 03					51	24	27			
	SJ 01901							60	26	34			
	SJ 00698		11W 03					44	14	30			
	SJ 01261		11W 03						20				
	SJ 02930 SJ 02798		11W 03					81	64	17			
	SJ 00402		11W 03					60	61	19			
	SJ 01734		11W 03					32 33	18 3	14 28			
	SJ 00762		11W 03					47 .	22	25			
	SJ 01440		11W 03					41	21	20			
	SJ 01020		110 03					27	5	22			
	SJ 03242	_	110 03					23	9	14			
	SJ 03732 POD1	_	11W 03					38	ý	29			
	SJ 03239		11W 03					33	12	21			
	SJ 01238		110 03					95	38	57			
	SJ 02245		110 03					66	30	3€			
	SJ 01043	30%	11W 03	4 1 4				50			•		
•	SJ 01249	3.08	110 03	4 2				52	22	30			
	SJ 02563	30%	11W 03	4 2 1				96	60	3€			
	SJ 02824	30%	11W 03	4 2 1				70	50	20			
	SJ 03153	30%	11W 03	4 2 1				80	60	20			
	SJ 03454		11W 03					100					
	SJ 03291		11W 03					38	18	20			
	SJ 00366	_	31M 03					33	18	15			
	SJ 01364		11W 04					115	S <b>6</b>	29			
	SJ 03076	_	11W 04					44	10	34			
	SJ 02903 SJ 03039		11W 04					49	31	18			
		_	11W 04					53	40	13			
	SJ 01450 SJ 02941		11W 04 11W 04	43 432				45	20	25			
	SJ 01367		11W 04					58 48	37 20	21 28			
	SJ 03407	_	11W 04		W	452700	2124100	30	20 3	26 25			
	SJ 03267		11W 05		••	422100	2124100	30 83	£0	23			
	SJ 03245	_	110 06					80	65	15			
	SJ 02194		11W 07					59	22	37			
	SJ 02140	_	11W 07	1 1 1				70	60	10			
	SJ 00689		110 07		•			78	65	13			
	SJ 00690		31W 07					60					
	SJ 00882	30%	11W 07	1 4 3				60	50	10			
		<del></del>											
	(					•							
•													

	SJ 00889	30%	11W 07	1 4 3			35			
	SJ 00806		110 07	1 4 3			3.9	20	18	
	SJ 00739		11W 07	1 4 3			70	58	12	
	SJ 00389		110 07				53	0.5		
	SJ 00688		110 07				70	58	12	
	SJ 00358			1 4 3			61	38	23	
	SJ 00397		110 07				56	35	21	
	SJ 00415		110 07	1 4 3			53	40	13	
	SJ 00387		110 07	1 4 3			53	40	13	
	SJ 00748		110 07				60	4.1	1.5	
							eu	41	. 19	
•	SJ 03271		110 07	232			4.0	25	22	
	SJ 01475		110 07				49	27	22	
	SJ 03465		110 07				80	3.0	1.0	
	SJ 00259		110 07				25	12	13	
,	SJ-01492		41W 07				60	22	- 38	
	SJ 03794 POD1		11W 07		266272	2119520	44	27	17	
	SJ 01172		11W 07	3 2			50	30	20	
	SJ 01310		11% 07	3 3			80	50	30	
	SJ 01484		11W 07	33			61	10	51	
	SJ 03630	30%	11W 07	333			68	24	44	
	SJ 01425	30N	110 07	3 4			55	25	30	
	SJ 01468	30%	11W 07	3 4			€0	25	35	
	SJ 02006	30%	11W 07	3 4 2			50	24	2€	
	SJ 03484	30%	110 07	3 4 3			75			
	SJ 02005	30%	11W 07				55	20	35	
	SJ 02715		11W 07				68	20	48	
	SJ 00135	30%	11W 07	4 1			180	23	157	
	SJ 00769			4 1			50	14	36	
	SJ 01406		11W 07	4 1			45	12	33	
	SJ 02936		11W 07	411			38	30	8	
	SJ 00679		110 07				48	22	2€	
	SJ 00620		11W 07					22 35		
							52		17	
	SJ 00329		110 07	4 1 3			63	20	43	
	SJ 00162		11W 07				58	23	35	
	SJ 02906		11W 07	4 1 4			45	24	21	
	SJ 00893		11W 07				80	40	40	
	SJ 01667		11W 07	43			43	21	20	
	SJ 01404		11W 07	43			40	15	25	
	SJ 00919		11W 07				35	12	23	
	SJ 00604	30%	11W 07	432			3.8	22	16	

SJ 00601	30%	11W 07	4	3 2		40	22	18		
SJ 00918	30%	110 07	-	3 2		35	14	21		
SJ 00920	- 30N	11W 07		3 2		35	12	23	•	
SJ 01567	- 30%	11W 07		4 2		35	14	21		
SJ 00183	30%	11W 08		1		360	300	60		
SJ 03154	30%	117 08		1 4		40	300	60		
SJ 03431	- 30N	11W 08		4		50 50				
SJ 00332	- 30N	117 08		. 2		52	34	18		
SJ 01451	- 30N	11W 08		2		64 64	34	16 30		
SJ 01968	30%	11W 08		. 2		40	25	15		
SJ 01999	- 30N	11W 08								
SJ 01939	30N	11W 08		2		61 52	45	16		
SJ 03398	- 30N	11W 08					10	42		
SJ 03210	- 30N	11W 08		2 1 2 2		60	20	60 22		
SJ 03098	- 30N	11W 08				60	30	30		
SJ 03381	_					€3	23	40		
	— 30N	11W 08				50·				
SJ 03240	_ 30N	11W 08		2 2		50				
SJ 00220	30%	11W 08	_	2 3		60	36	24		
SJ 03639	30%	11W 08	2		·	€0	24	36		
SJ 01115	30%	11W 08	2			35	26	9		
SJ 03653	30%	31W 08				€2	26	36		
SJ 03646	30%	11W 08			•	61	24	37		
SJ 00228	30%	11W 08				67	38	29		
SJ 03202	30N	11W 08	2			45				
SJ 03030	_ 30N	11W 08	2			56	40	16		
SJ 03305	30%	119 08				50				
SJ 03378	30%	11W 08				50				
SJ 02331	30%	11W 08				53	35	18		
SJ 03303	30%	11W 08	2			85	30	25		
SJ 02293	30%	11W 08				50	35	15		
SJ 00249	30%	11W 08				46	30	16		
SJ 01368	30%	11W 08		2		59	39	20		
SJ 03089	30%	11W 08		2 4		4.8	36	12		
SJ 03480	30%	11% 08	3	2 4		50				
SJ 03199	30%	11W 08	3	4 1		40	20	20		
SJ 02413	30%	11W 08	3	4 1		40	31	9		
SJ 02915	30%	11W 08	3	4 1		45				
SJ 03367	30%	11W 08	3	4 4		29	5	24		
SJ 01570	30%	11W 08	4	1		59	37	22		
SJ 00925	30%	11W 08	4	1 2		32	20	12		

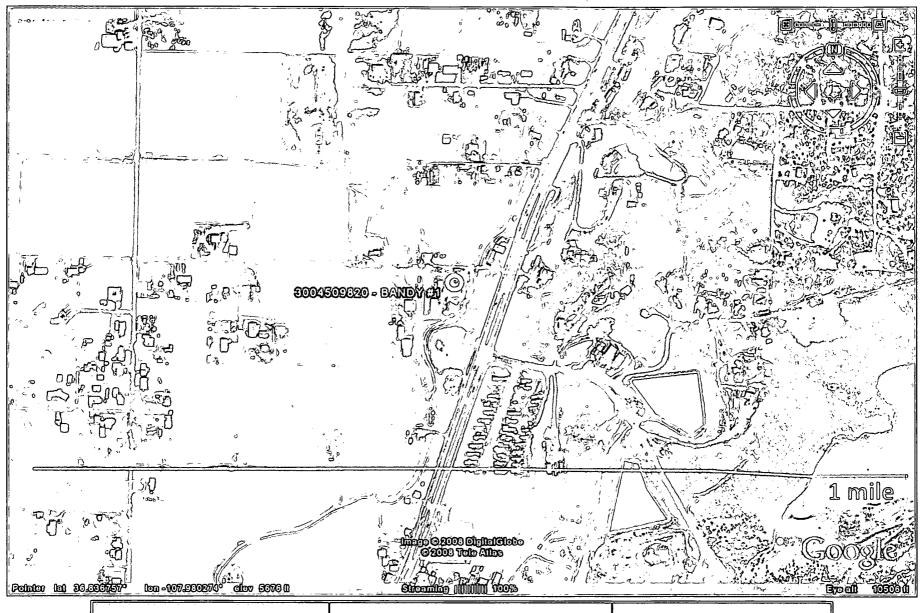
SJ 03642	30%	11M 08	4	1 2	58	32	26
SJ 01520	30N	11W 08	4	1 2	58	18	40
SJ 03313	30N	11W 08	4	1 4	58	20	38
SJ 02485	30N	11W 08	4	1 4	49	30	19
SJ 02261	30%	11W 08	4	3 2			
SJ 03419	30%	11W 08	4	4 2	41	9	32
SJ 02241	30%	110 09			39	27	12
SJ 01560	30N	11W 09	1	1	36	26	10
SJ 01585	30N	11W 09			40	28	12
SJ 03499	30N	11W 09	1	1 i	53 '	12	41
SJ 02236	30%	110 09	1	1 1	35	17	18
SJ 03304	308	11W 09	1	1 2	88	30	25
SJ 03209	30%	11W 09	1	1 3	49	32	17
SJ 03726 POD1	30N	110 09	1	1 3	47	30	17
SJ 03342	30%	11W 09	1	1 3	50	31	19
SJ 03225	30%	11W 09	1	1 4	50	•	•
SJ 03229	30%	11W 09	1	1 4	50		
SJ 00924	30N	11W 09	1	2 2	46	16	30
SJ 00438	30N	11W 09	1	2 3	29	19	10
SJ 01169	308	11W 09	1	3	5€	33	23
SJ 01574	30%	11W 09	1	3	46	27	19
SJ 02237	30%	11W 09	1	3 1	40	28	20
SJ 03019	30N	11W 09	1	3 1	50	30	20
SJ 02493	30%	11W 09	1	3 1	49	2€	23
SJ 03724 POD1	30%	11W 09	1	3 1	47	36	11
SJ 03031	30%	11W 09	1	3 1	<b>35</b>	35	20
SJ 01465	30%	11W 09	1	3 2	47		
SJ 02336	30N	11W 09	1	3 2	4 €	11	35
SJ 03482	30%	11W 09	1	3 2	50		
SJ 03423	30%	11W 09	1	3 3	50	20	30
SJ 00750	30N	11W 09	1	4	2€	6	20
SJ 02975	30N	11W 09	2	1 4	37	12	25
SJ 03268	30%	11W 09	2	2 2	61	10	51
SJ 00364	30%	11W 09	2	3 2	50	20	30
SJ 03128	30%	110 09	2	3 2	50		
SJ 00364 CLW263561	30N	11W 09	2	3 2	33	11	22
SJ 01955	30%	110 09	2	4	40	11	29
SJ 02528	30%	11W 09	2	4	60	28	32
SJ 02290	30%	11W 09	2	4 2	45	15	30
SJ 00347	30%	11W 09	4		3€	19	17

SJ 01436	30%	110 0	9	4 1				210	50	160
SJ 03471	30%		19		1			20	5	15
SJ 03223	30%		)9	4 2	_			59	25	34
SJ 03263	30%	21W C	-	4 2	_			63	35	28
SJ 03374	30%	119 0		4 3				44	29	15
SJ 02796	388	217 0		43				100		
SJ 03214	3038	11W 0	-	4 4	_			93	€3	30
SJ 03213	30%	11% 0		4 4				100	• • •	
SJ 02176	308	110 1	-	13				57	37	20
SJ 03356	- 30%	110 1			1			55	30	25
SJ 03258	30N	110 1		13				55	10	45
SJ 03444	- 30N	11W 1		13				60	÷ ~	
SJ 03248	_ 30N	110 1		13				90	30	60
SJ 03354	30%	110 1		13				80	30	50
SJ 00348	30%	119 1		13	_			72	24	48
SJ 03032	- 30N	110 1		14				80	30	50
SJ 02819	— 30%	110 1	-	23				140	40	100
SJ 03282	30%	110 1		23				70	30	40
SJ 03281	— 30N	1177 1	-	23	_			62	32	30
SJ 03572	30%	1177 1		3 1				70		0.5
SJ 03218	30%	110 1		33				50	30	20
SJ 01720	30%	110 1		J 3	3			225	90	135
SJ 03745 POD1	30%	110 1		1 1	2			325	150	178
SJ 01693	- 30%	1177 1		13				225	89	136
SJ 01672	30N	117 1		13				180	80	100
SJ 01294	- 30N	117/1	-	13				92	52	40
SJ 02773	302	117 1		1 1				4€	25	21
SJ 00410	30%	117 1		12				61	45	16
SJ 03010	30%	1177 1	-	13				80	40	40
SJ 03257	30%	117 1		13				80	40	40
SJ 02923	— 30%	1177 1		13				75	40	38
SJ 03265	30%	117 1		13	-			90	70	20
SJ 03310	- 30X	110 1	_	13	_			55 55	20	35
SJ 01082	- 30%	110 1	_	2 2				80	34	46
SJ 01722	30%	110 1		1	_			20	8	12
SJ 01528	30%	1177 1		1 1				26	10	16
SJ 03373	- 30N	11W 1		11	3			50	35	15
SJ 01948	30%	117/1		12				21	3	18
SJ 02817	30%	110 1		12				15	-	
SJ 01722 POD2	30%	11W 1		12		266967	.2116417	17	3	14
				_		• •			-	

SJ 01899	30%	110 17	1 3	2			27	7	20
SJ 03771 POD1	30%	11W 17	1 3		266811	211517	20	έ	14
SJ 03750 POD1	30%	11W 17	1 3	3	286811	211517	20	6	14
SJ 03319	30N	11W 17	1 3				55	31	24
SJ 03266	30%	11W 17	1 4	3			30	10	20
SJ 03436	30N	11W 17	1 4				20		
SJ 00745	30%	11W 17	2	•			54	30	24
SJ 00665	30%	117 17	2 1				28	14	14
SJ 01342	30%	11W 17	2 1				26	5	21
SJ 00166	308	11W 17	2 3				48	11	37
SJ 01057	3 097	11W 17	2 3				€3	28	35
SJ 01060	30%	11W 17	2 3				58	23	35
SJ 03241	30%	110 17	2 3				75	20	55
SJ 03269	3027	11W 17	2 3			•	60	10	70
SJ 01200	30%	110 17	2 4				50 50	20_	30
SJ 03219	30%	11W 17	2 4				68	20_ 38	30
SJ 00159	30%	110 17	3 1	-			35	8	27
SJ 03276	30%	11W 17	3 1	Δ			55 60	20	
SJ 01296	30%	11W 17	3 2				50 50	20 10	40 40
SJ 03249	30%	11W 17	3 2				55		43
SJ 01810	30%	11W 17	3 4					12	
SJ 00411	30%	117 17	4 1				29	.9 	20
SJ 00234	30N	110 17	4 1				60 1 a	25	35 33
SJ 01847	30%	11W 17	4 1				54 30	23	31
SJ 00457	30%	117 17	4 1	•				6	24
SJ 00650	30%	117 17	4 1				52 49	18	34
SJ 02018	30%	11W 17						18	31
SJ 00136			4 2				100	40	60
SJ 00136 SJ 03718 POD1	30%	110 17	4 2				€9	35	34
	30%	110 17	4 2				68	41	27
SJ 03261	30N	11W 17	4 2				8.8	50	38
SJ 03215	30%	11W 18	1 1				52	9	43
SJ 01316	30%	11M 18	1 1				4 €	12	34
SJ 03152	30%	11W 18	1 1				52	22	30
SJ 02805	30%	11W 18	1 2				€0		
SJ 03463	30%	11W 18	1 2				70	20	50
SJ 02996	30%	11W 18	1 2				50	25	25
SJ 00932	30%	110 18	1 2	4			32	15	17
SJ 01738	30%	110 18	1 3				33	€	27
SJ 01733	30%	11W 18	1 3				29	9	20
SJ 01786	3036	11W 18	1 3				3.5	10	25

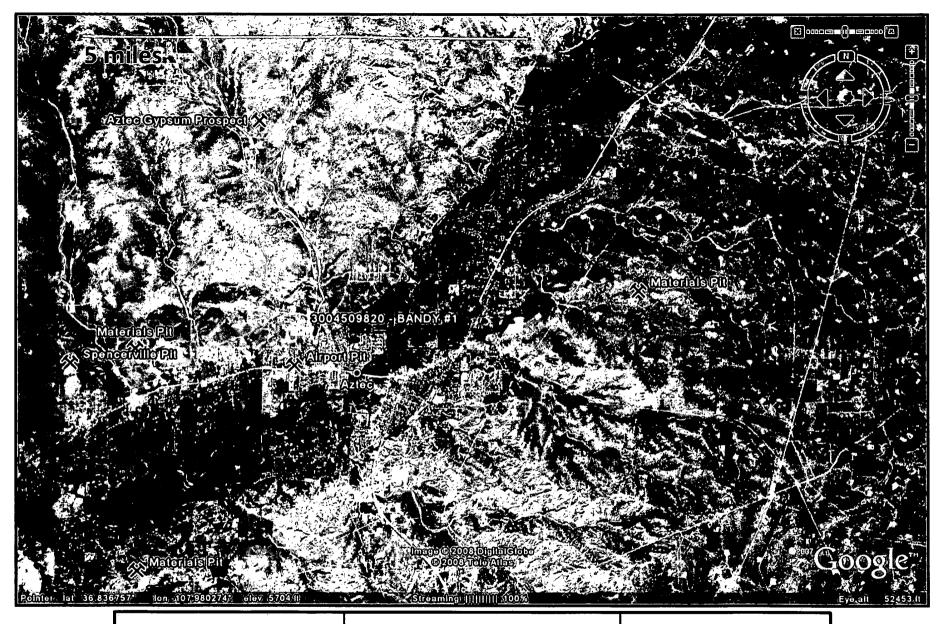
•

SJ 01401	30%	11W 18		13			44	12	32			
SJ 03526	30M	11W 18		131			40					
SJ 03176	30%	11W 18		141			48	20	28			
SJ 03177	30%	11W 18		1 4 2			37	15	. 22			
SJ 03344	3.054	11W 18	3	1 4 2			100	€	92			
SJ 03801 POD1	30%	14W 18	3 :	2 2	266702	2116449	21	ě	15			
SJ 03800 POD1	30N	11W 18	3 2	2 2	266718	2116651	21	€	15			
SJ 01639	30%	11W 18	₿ :	2 2 2			40	18	22			
SJ 02098	30%	11W 18	3 2	24			2 3	7	14			
SJ 02109	30%	110 16	8 2	2 4			19	4	15			
SJ 02123	30%	11W 18	3 2	24			22	8	14			•
SJ 03290	30%	11W 18	3 2	2 4 4			40	10	30			
SJ 02045	30%	11W 18	3 4	4			480	200	280			
SJ 03322	30%	11W 18	3 4	4 4 i			40	10	30			
SJ 03320	30N	11W 16	\$ 4	4 4 3			€0					
SJ 03321	30%	119 18	3 4	4 4 3			80					
SJ 02193	30%	110 19	€					105				
SJ 03403	30%	110 19	9 :	1 2 2			400					
SJ 00638	30%	110 19	9 :	2 1			130	79	60			
SJ 01073	30N	11W 19	9 3	2 1			100	38	€2			
SJ 03615	30N	110 19	9 :	2 1 1			105	35	70			
SJ 03434	30N	11W 19		2 1 4			140					
SJ 03088	30N	11W 19	÷ :	1 4		•	120	80	40			
SJ 01636	30N	11W 19	9 2	2 2			70	25	45			
SJ 02862	30N	11W 19	9 :	2 2 3			20					
SJ 00284	30N	21W 19	9 :	2 4			200	35	165			
SJ 03645	30%	110 19	€ ;	3 1 l			60	20	40	•		
SJ 03533	30N	11W 19	÷ :	3 1 3			20					
SJ 01621	30%	110 19	} ;	3 2			40	36	2			
SJ 02692	30N	110 19	9 :	3 2 2			52	12	40		=	
SJ 02968	30%	11W 19		3 2 2			75	5	70			
SJ 02812	30N	210 19	9 :	3 2 2			50					
SJ 01123	30%	11W 19	، ∈	4 1			40	15	25			
SJ 03437	30N	11W 19	9 4	4 1 2			30					
SJ 03315	30%	110 19	9 4	1 1 2			60	54	6			
SJ 00284 CLW222415	30%	119 19	9 4	44			200	35	165			
SJ 03224	30N	11W 30	) :	1 2 4			80	30	50			
SJ 03077	30%	11W 30	3 :	2 1 2			75	70	5			
SJ 03668	30N	11W 30	3 3	2 1 2			380	280	100			
SJ 03251	30%	11W 32	2 (	3 4 4			150	77	73			
	•											
					•	•						



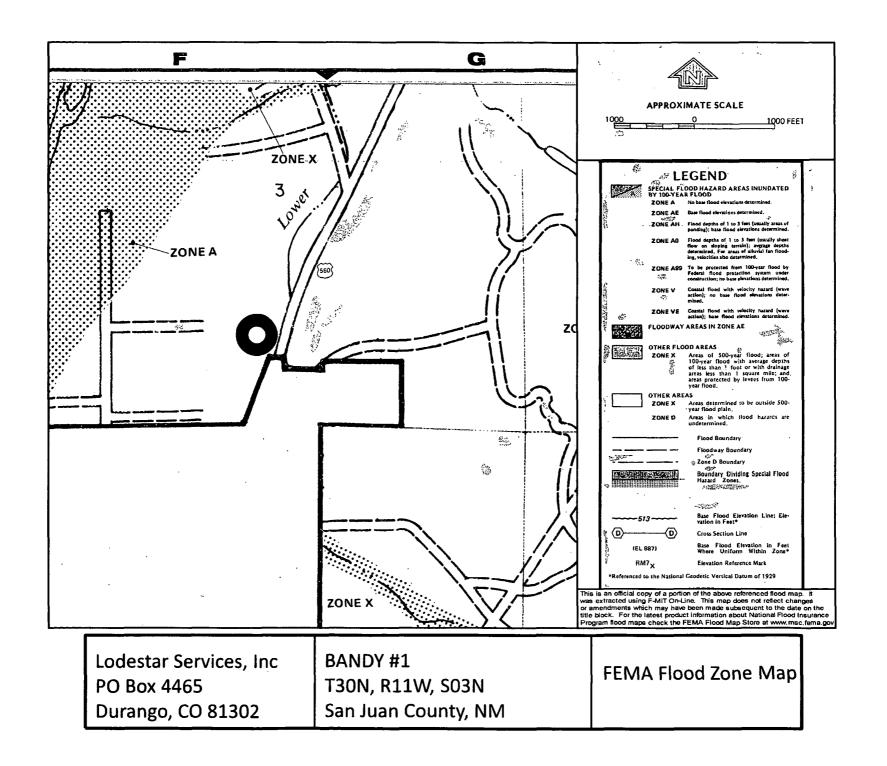
Lodestar Services, Inc PO Box 4465 Durango, CO 81302 BANDY #1 T30N, R11W, S03N San Juan County, NM

Aerial Photograph



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 BANDY #1 T30N, R11W, S03N San Juan County, NM

Mines, Mills, and Quarries Map



# 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**

- 1. 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

Basin Disposal Permit No. NM01-005 Produced water

- 5. XTO will remove the below-grade tank and dispose of it in a division approved facility or 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

XTO Energy Inc. San Juan Basin (Northwest New Mexico) 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.

- 8. If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.
- 9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, XTO will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.
- 10. Notice of Closure 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:
  - i. 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.

# 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.

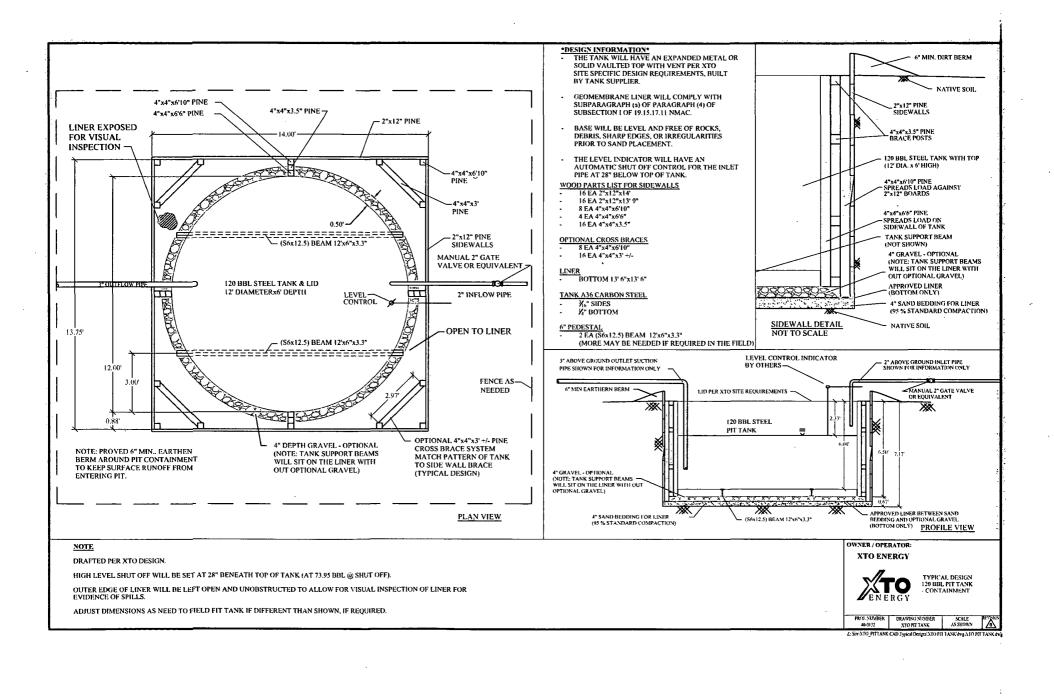
### General Plan

- 1. 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.
- 2. 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.
- 4. 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 ¼" 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

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

- 9. 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).
- 11. 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

- 1. 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,

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

Well Nan	ne:		· · · · · · · · · · · · · · · · · · ·		API No.:			
egals	Sec:	<u> </u>	Township:		Range:			
XTO Inspector's Name	Inspection Date	Inspection Time	Any visible liner tears (Y/N)	Any visible signs of tank overflows (Y/N)	Collection of surface run on (Y/N)	Visible layer	Any visible signs of a tank leak (Y/N)	Freeboa Est. (ft
ıvame	Date	rime	tears (Y/N)	tank overnows (Y/N)	run on (Y/N)	OI OII (Y/IN)	or a tank leak (Y/N)	Est. (II
								, <sub>(**</sub>
otes:	Provide De	tailed Descri	ption:					-
					<del></del>			
isc:								
							·····	