

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

Form C-144
July 21, 2008

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.

6215
**Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application**

- Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
☐ Modification to an existing permit
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

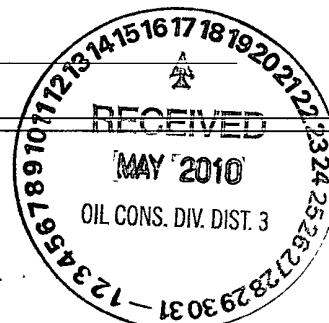
1.
Operator: XTO Energy, Inc. OGRID #: 5380
Address: #382 County Road 3100, Aztec, NM 87410
Facility or well name: Grassy Canyon #8
API Number: 36-045-35067 OCD Permit Number: _____
U/L or Qtr/Qtr B Section 31 Township 32N Range 07W County: San Juan
Center of Proposed Design: Latitude 36.94329 Longitude 107.60833 NAD: ☐ 1927 ☒ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☒ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☒ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L 175 x W 60 x D 8-12

3.
☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) **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 _____

4.
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: _____ bbl 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 ☐ HDPE ☐ PVC ☐ Other _____

5.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.



6.	<p>Fencing: Subsection D of 19.15.17.11 NMAC (<i>Applies to permanent pits, temporary pits, and below-grade tanks</i>)</p> <p><input type="checkbox"/> Chain link, six feet in height, two strands of barbed wire at top (<i>Required if located within 1000 feet of a permanent residence, school, hospital, institution or church</i>)</p> <p><input checked="" type="checkbox"/> Four foot height, four strands of barbed wire evenly spaced between one and four feet</p> <p><input type="checkbox"/> Alternate. Please specify _____</p>																																								
7.	<p>Netting: Subsection E of 19.15.17.11 NMAC (<i>Applies to permanent pits and permanent open top tanks</i>)</p> <p><input type="checkbox"/> Screen <input type="checkbox"/> Netting <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Monthly inspections (If netting or screening is not physically feasible)</p>																																								
8.	<p>Signs: Subsection C of 19.15.17.11 NMAC</p> <p><input type="checkbox"/> 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers</p> <p><input checked="" type="checkbox"/> Signed in compliance with 19.15.3.103 NMAC</p>																																								
9.	<p>Administrative Approvals and Exceptions:</p> <p>Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.</p> <p>Please check a box if one or more of the following is requested, if not leave blank:</p> <p><input checked="" type="checkbox"/> Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval. Fencing- Hogwire</p> <p><input type="checkbox"/> Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.</p>																																								
10.	<p>Siting Criteria (regarding permitting): 19.15.17.10 NMAC</p> <p>Instructions: <i>The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 85%; padding: 5px;">Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.</td> <td style="width: 15%; text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</td> <td></td> </tr> <tr> <td style="padding: 5px;">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).</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- Topographic map; Visual inspection (certification) of the proposed site</td> <td></td> </tr> <tr> <td style="padding: 5px;">Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>)</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> NA</td> </tr> <tr> <td style="padding: 5px;">Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>)</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> NA</td> </tr> <tr> <td style="padding: 5px;">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.</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</td> <td></td> </tr> <tr> <td style="padding: 5px;">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.</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- Written confirmation or verification from the municipality; Written approval obtained from the municipality</td> <td></td> </tr> <tr> <td style="padding: 5px;">Within 500 feet of a wetland.</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</td> <td></td> </tr> <tr> <td style="padding: 5px;">Within the area overlying a subsurface mine.</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</td> <td></td> </tr> <tr> <td style="padding: 5px;">Within an unstable area.</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map</td> <td></td> </tr> <tr> <td style="padding: 5px;">Within a 100-year floodplain.</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 5px;">- FEMA map</td> <td></td> </tr> </table>	Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.	<input type="checkbox"/> Yes <input type="checkbox"/> No	- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells		Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	<input type="checkbox"/> Yes <input type="checkbox"/> No	- Topographic map; Visual inspection (certification) of the proposed site		Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> NA	Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No	- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site		Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.	<input type="checkbox"/> Yes <input type="checkbox"/> No	- Written confirmation or verification from the municipality; Written approval obtained from the municipality		Within 500 feet of a wetland.	<input type="checkbox"/> Yes <input type="checkbox"/> No	- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site		Within the area overlying a subsurface mine.	<input type="checkbox"/> Yes <input type="checkbox"/> No	- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division		Within an unstable area.	<input type="checkbox"/> Yes <input type="checkbox"/> No	- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map		Within a 100-year floodplain.	<input type="checkbox"/> Yes <input type="checkbox"/> No	- FEMA map	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells																																									
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- Topographic map; Visual inspection (certification) of the proposed site																																									
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> NA																																								
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site																																									
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- Written confirmation or verification from the municipality; Written approval obtained from the municipality																																									
Within 500 feet of a wetland.	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site																																									
Within the area overlying a subsurface mine.	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division																																									
Within an unstable area.	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map																																									
Within a 100-year floodplain.	<input type="checkbox"/> Yes <input type="checkbox"/> No																																								
- FEMA map																																									

11.

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: _____

12.

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

☐ Previously Approved Operating and Maintenance Plan API Number: _____ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H₂S, 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

14.

Proposed Closure: 19.15.17.13 NMAC**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☒ Closed-loop System

☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal

☒ Waste Removal (Closed-loop systems only)

☒ On-site Closure Method (Only for temporary pits and closed-loop systems)

☒ In-place Burial ☐ On-site Trench Burial

☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

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 I of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16. **Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: Envirotech Disposal Facility Permit Number: NM01-001
Disposal Facility Name: IEI Disposal Facility Permit Number: NM01-0010B

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No

Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17. **Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

18. **On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☒ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ 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
☒ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
☒ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Malia Villers Title: Permitting Tech.

Signature: Malia Villers Date: May 14, 2010

e-mail address: malia_villers@xtoenergy.com Telephone: (505) 333-3100

20.

OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Branch Bell Approval Date: 7/21/10

Title: Env. Ins. Spec OCD Permit Number: _____

21.

Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ Closure Completion Date: _____

22.

Closure Method:

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
☐ If different from approved plan, please explain.

23.

Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

24.

Closure Report Attachment Checklist: *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Proof of Closure Notice (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure)
☐ Plot Plan (for on-site closures and temporary pits)
☐ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (required for on-site closure)
☐ Disposal Facility Name and Permit Number
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

25.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____



LT Environmental Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301
T 970-385-1096
F 970.385 1873

Pit Permit Siting Criteria Information Sheet

Client:	XTO Energy
Project:	Pit Permits
Revised:	5/12/2010
Prepared by:	Brooke Herb

API#: NA

USPLSS: T32N, R07W, S31B

Name: Grassy Canyon #8

Lat/Long: 36.943290, -107.608330

Depth to groundwater: >100 feet

Geologic formation: San Jose Formation

Distance to closest continuously flowing watercourse: 2165 feet west of Navajo Reservoir

Distance to closest significant watercourse, lakebed, playa lake, or sinkhole: 1356 feet south of Grassy Canyon

Permanent residence, school, hospital, institution or church within 300': NO

Soil Type: Entisols

Domestic fresh water well or spring within 500': NO

Annual Precipitation: 8.21" - Farmington; 10.41" Otis; 8.71" Bloomfield

Any other fresh water well or spring within 1000': NO

Precipitation Notes: no significant precipitation events on record

Within incorporated municipal boundaries: NO
Within defined municipal fresh water well field: NO

Attached Documents: Site Visit Survey
Hydrogeologic Report
Topographic Map
Aerial Photo
Mines, Mills and Quarries Map
FEMA Flood Zone Map

Wetland within 500': NO

Mining Activity: None identified in the vicinity

Within unstable area: NO

Within 100 year flood plain: NO

Additional Notes:

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name GRASSY CANYON	⁶ Well Number 8
⁷ GRID No.	⁸ Operator Name XTO ENERGY INC.	⁹ Elevation 6807'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	31	32-N	7-W		915	NORTH	2430	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

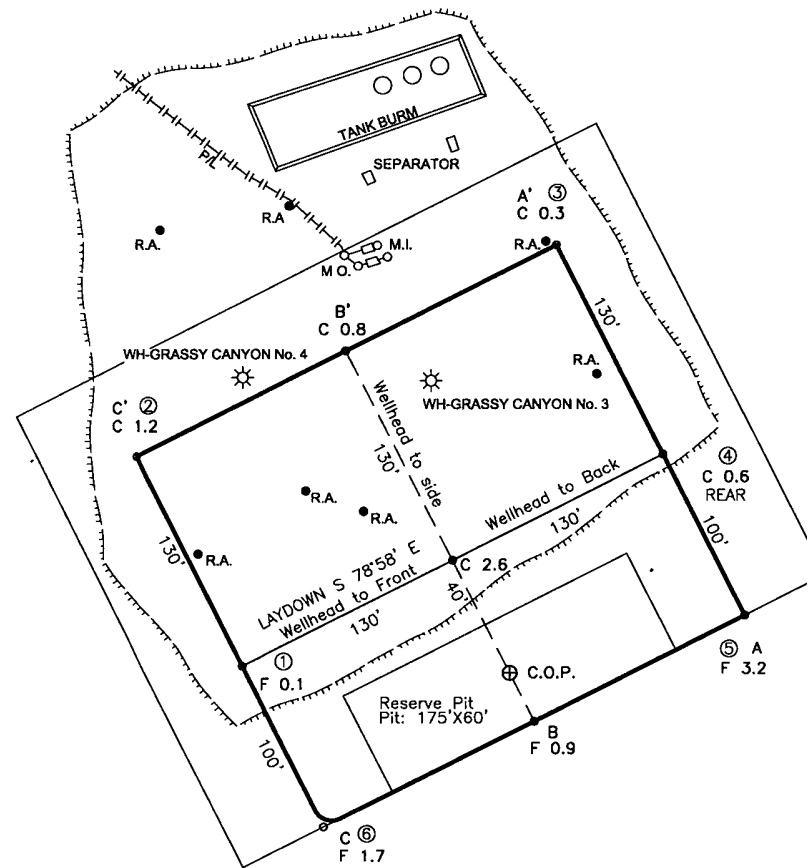
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	31	32-N	7-W		2189	SOUTH	1968	EAST	SAN JUAN
¹² Dedicated Acres			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>16</p> <p>(19.60)</p> <p>(20.37)</p> <p>LOT 1</p> <p>FD. 3 1/4" BC. 1962 B.L.M.</p> <p>(39.28)</p> <p>LOT 2</p> <p>SURFACE LOCATION: LAT: 36.94329° N. (NAD 83) LONG: 107.60833° W. (NAD 83) LAT: 36°56'35.86" N. (NAD 27) LONG: 107°36'30.00" W. (NAD 27)</p> <p>LOT 3</p> <p>BOTTOM HOLE LOCATION: LAT: 36.93805° N. (NAD 83) LONG: 107.60692° W. (NAD 83) LAT: 36°56'16.96" N. (NAD 27) LONG: 107°36'22.72" W. (NAD 27)</p> <p>(39.45)</p> <p>LOT 4</p> <p>(19.42)</p> <p>(20.23)</p> <p>PRELIMINARY B.H.L. B.H.L. FOOTAGES ARE APPROXIMATE AND PROVIDED BY XTO ENERGY INC. CLIENT</p> <p>FD. 2 1/2" BC. 1914 G.L.O.</p> <p>LOT 5</p> <p>(37.36 AC.)</p> <p>LOT 6</p> <p>(38.08 AC.)</p> <p>LOT 7</p> <p>(38.05 AC.)</p> <p>LOT 8</p> <p>(38.14 AC.)</p> <p>LOT 9</p> <p>(38.11 AC.)</p> <p>LOT 10</p> <p>(38.11 AC.)</p> <p>LOT 11</p> <p>(38.11 AC.)</p> <p>LOT 12</p> <p>(38.11 AC.)</p> <p>LOT 13</p> <p>(38.11 AC.)</p> <p>LOT 14</p> <p>(38.11 AC.)</p> <p>LOT 15</p> <p>(38.11 AC.)</p> <p>LOT 16</p> <p>(38.11 AC.)</p> <p>LOT 17</p> <p>(38.11 AC.)</p> <p>LOT 18</p> <p>(38.11 AC.)</p> <p>LOT 19</p> <p>(38.11 AC.)</p> <p>LOT 20</p> <p>(38.11 AC.)</p> <p>LOT 21</p> <p>(38.11 AC.)</p> <p>LOT 22</p> <p>(38.11 AC.)</p> <p>LOT 23</p> <p>(38.11 AC.)</p> <p>LOT 24</p> <p>(38.11 AC.)</p> <p>LOT 25</p> <p>(38.11 AC.)</p> <p>LOT 26</p> <p>(38.11 AC.)</p> <p>LOT 27</p> <p>(38.11 AC.)</p> <p>LOT 28</p> <p>(38.11 AC.)</p> <p>LOT 29</p> <p>(38.11 AC.)</p> <p>LOT 30</p> <p>(38.11 AC.)</p> <p>LOT 31</p> <p>(38.11 AC.)</p> <p>LOT 32</p> <p>(38.11 AC.)</p> <p>LOT 33</p> <p>(38.11 AC.)</p> <p>LOT 34</p> <p>(38.11 AC.)</p> <p>LOT 35</p> <p>(38.11 AC.)</p> <p>LOT 36</p> <p>(38.11 AC.)</p> <p>LOT 37</p> <p>(38.11 AC.)</p> <p>LOT 38</p> <p>(38.11 AC.)</p> <p>LOT 39</p> <p>(38.11 AC.)</p> <p>LOT 40</p> <p>(38.11 AC.)</p> <p>LOT 41</p> <p>(38.11 AC.)</p> <p>LOT 42</p> <p>(38.11 AC.)</p> <p>LOT 43</p> <p>(38.11 AC.)</p> <p>LOT 44</p> <p>(38.11 AC.)</p> <p>LOT 45</p> <p>(38.11 AC.)</p> <p>LOT 46</p> <p>(38.11 AC.)</p> <p>LOT 47</p> <p>(38.11 AC.)</p> <p>LOT 48</p> <p>(38.11 AC.)</p> <p>LOT 49</p> <p>(38.11 AC.)</p> <p>LOT 50</p> <p>(38.11 AC.)</p> <p>LOT 51</p> <p>(38.11 AC.)</p> <p>LOT 52</p> <p>(38.11 AC.)</p> <p>LOT 53</p> <p>(38.11 AC.)</p> <p>LOT 54</p> <p>(38.11 AC.)</p> <p>LOT 55</p> <p>(38.11 AC.)</p> <p>LOT 56</p> <p>(38.11 AC.)</p> <p>LOT 57</p> <p>(38.11 AC.)</p> <p>LOT 58</p> <p>(38.11 AC.)</p> <p>LOT 59</p> <p>(38.11 AC.)</p> <p>LOT 60</p> <p>(38.11 AC.)</p> <p>LOT 61</p> <p>(38.11 AC.)</p> <p>LOT 62</p> <p>(38.11 AC.)</p> <p>LOT 63</p> <p>(38.11 AC.)</p> <p>LOT 64</p> <p>(38.11 AC.)</p> <p>LOT 65</p> <p>(38.11 AC.)</p> <p>LOT 66</p> <p>(38.11 AC.)</p> <p>LOT 67</p> <p>(38.11 AC.)</p> <p>LOT 68</p> <p>(38.11 AC.)</p> <p>LOT 69</p> <p>(38.11 AC.)</p> <p>LOT 70</p> <p>(38.11 AC.)</p> <p>LOT 71</p> <p>(38.11 AC.)</p> <p>LOT 72</p> <p>(38.11 AC.)</p> <p>LOT 73</p> <p>(38.11 AC.)</p> <p>LOT 74</p> <p>(38.11 AC.)</p> <p>LOT 75</p> <p>(38.11 AC.)</p> <p>LOT 76</p> <p>(38.11 AC.)</p> <p>LOT 77</p> <p>(38.11 AC.)</p> <p>LOT 78</p> <p>(38.11 AC.)</p> <p>LOT 79</p> <p>(38.11 AC.)</p> <p>LOT 80</p> <p>(38.11 AC.)</p> <p>LOT 81</p> <p>(38.11 AC.)</p> <p>LOT 82</p> <p>(38.11 AC.)</p> <p>LOT 83</p> <p>(38.11 AC.)</p> <p>LOT 84</p> <p>(38.11 AC.)</p> <p>LOT 85</p> <p>(38.11 AC.)</p> <p>LOT 86</p> <p>(38.11 AC.)</p> <p>LOT 87</p> <p>(38.11 AC.)</p> <p>LOT 88</p> <p>(38.11 AC.)</p> <p>LOT 89</p> <p>(38.11 AC.)</p> <p>LOT 90</p> <p>(38.11 AC.)</p> <p>LOT 91</p> <p>(38.11 AC.)</p> <p>LOT 92</p> <p>(38.11 AC.)</p> <p>LOT 93</p> <p>(38.11 AC.)</p> <p>LOT 94</p> <p>(38.11 AC.)</p> <p>LOT 95</p> <p>(38.11 AC.)</p> <p>LOT 96</p> <p>(38.11 AC.)</p> <p>LOT 97</p> <p>(38.11 AC.)</p> <p>LOT 98</p> <p>(38.11 AC.)</p> <p>LOT 99</p> <p>(38.11 AC.)</p> <p>LOT 100</p> <p>(38.11 AC.)</p> <p>LOT 101</p> <p>(38.11 AC.)</p> <p>LOT 102</p> <p>(38.11 AC.)</p> <p>LOT 103</p> <p>(38.11 AC.)</p> <p>LOT 104</p> <p>(38.11 AC.)</p> <p>LOT 105</p> <p>(38.11 AC.)</p> <p>LOT 106</p> <p>(38.11 AC.)</p> <p>LOT 107</p> <p>(38.11 AC.)</p> <p>LOT 108</p> <p>(38.11 AC.)</p> <p>LOT 109</p> <p>(38.11 AC.)</p> <p>LOT 110</p> <p>(38.11 AC.)</p> <p>LOT 111</p> <p>(38.11 AC.)</p> <p>LOT 112</p> <p>(38.11 AC.)</p> <p>LOT 113</p> <p>(38.11 AC.)</p> <p>LOT 114</p> <p>(38.11 AC.)</p> <p>LOT 115</p> <p>(38.11 AC.)</p> <p>LOT 116</p> <p>(38.11 AC.)</p> <p>LOT 117</p> <p>(38.11 AC.)</p> <p>LOT 118</p> <p>(38.11 AC.)</p> <p>LOT 119</p> <p>(38.11 AC.)</p> <p>LOT 120</p> <p>(38.11 AC.)</p> <p>LOT 121</p> <p>(38.11 AC.)</p> <p>LOT 122</p> <p>(38.11 AC.)</p> <p>LOT 123</p> <p>(38.11 AC.)</p> <p>LOT 124</p> <p>(38.11 AC.)</p> <p>LOT 125</p> <p>(38.11 AC.)</p> <p>LOT 126</p> <p>(38.11 AC.)</p> <p>LOT 127</p> <p>(38.11 AC.)</p> <p>LOT 128</p> <p>(38.11 AC.)</p> <p>LOT 129</p> <p>(38.11 AC.)</p> <p>LOT 130</p> <p>(38.11 AC.)</p> <p>LOT 131</p> <p>(38.11 AC.)</p> <p>LOT 132</p> <p>(38.11 AC.)</p> <p>LOT 133</p> <p>(38.11 AC.)</p> <p>LOT 134</p> <p>(38.11 AC.)</p> <p>LOT 135</p> <p>(38.11 AC.)</p> <p>LOT 136</p> <p>(38.11 AC.)</p> <p>LOT 137</p> <p>(38.11 AC.)</p> <p>LOT 138</p> <p>(38.11 AC.)</p> <p>LOT 139</p> <p>(38.11 AC.)</p> <p>LOT 140</p> <p>(38.11 AC.)</p> <p>LOT 141</p> <p>(38.11 AC.)</p> <p>LOT 142</p> <p>(38.11 AC.)</p> <p>LOT 143</p> <p>(38.11 AC.)</p> <p>LOT 144</p> <p>(38.11 AC.)</p> <p>LOT 145</p> <p>(38.11 AC.)</p> <p>LOT 146</p> <p>(38.11 AC.)</p> <p>LOT 147</p> <p>(38.11 AC.)</p> <p>LOT 148</p> <p>(38.11 AC.)</p> <p>LOT 149</p> <p>(38.11 AC.)</p> <p>LOT 150</p> <p>(38.11 AC.)</p> <p>LOT 151</p> <p>(38.11 AC.)</p> <p>LOT 152</p> <p>(38.11 AC.)</p> <p>LOT 153</p> <p>(38.11 AC.)</p> <p>LOT 154</p> <p>(38.11 AC.)</p> <p>LOT 155</p> <p>(38.11 AC.)</p> <p>LOT 156</p> <p>(38.11 AC.)</p> <p>LOT 157</p> <p>(38.11 AC.)</p> <p>LOT 158</p> <p>(38.11 AC.)</p> <p>LOT 159</p> <p>(38.11 AC.)</p> <p>LOT 160</p> <p>(38.11 AC.)</p> <p>LOT 161</p> <p>(38.11 AC.)</p> <p>LOT 162</p> <p>(38.11 AC.)</p> <p>LOT 163</p> <p>(38.11 AC.)</p> <p>LOT 164</p> <p>(38.11 AC.)</p> <p>LOT 165</p> <p>(38.11 AC.)</p> <p>LOT 166</p> <p>(38.11 AC.)</p> <p>LOT 167</p> <p>(38.11 AC.)</p> <p>LOT 168</p> <p>(38.11 AC.)</p> <p>LOT 169</p> <p>(38.11 AC.)</p> <p>LOT 170</p> <p>(38.11 AC.)</p> <p>LOT 171</p> <p>(38.11 AC.)</p> <p>LOT 172</p> <p>(38.11 AC.)</p> <p>LOT 173</p> <p>(38.11 AC.)</p> <p>LOT 174</p> <p>(38.11 AC.)</p> <p>LOT 175</p> <p>(38.11 AC.)</p> <p>LOT 176</p> <p>(38.11 AC.)</p> <p>LOT 177</p> <p>(38.11 AC.)</p> <p>LOT 178</p> <p>(38.11 AC.)</p> <p>LOT 179</p> <p>(38.11 AC.)</p> <p>LOT 180</p> <p>(38.11 AC.)</p> <p>LOT 181</p> <p>(38.11 AC.)</p> <p>LOT 182</p> <p>(38.11 AC.)</p> <p>LOT 183</p> <p>(38.11 AC.)</p> <p>LOT 184</p> <p>(38.11 AC.)</p> <p>LOT 185</p> <p>(38.11 AC.)</p> <p>LOT 186</p> <p>(38.11 AC.)</p> <p>LOT 187</p> <p>(38.11 AC.)</p> <p>LOT 188</p> <p>(38.11 AC.)</p> <p>LOT 189</p> <p>(38.11 AC.)</p> <p>LOT 190</p> <p>(38.11 AC.)</p> <p>LOT 191</p> <p>(38.11 AC.)</p> <p>LOT 192</p> <p>(38.11 AC.)</p> <p>LOT 193</p> <p>(38.11 AC.)</p> <p>LOT 194</p> <p>(38.11 AC.)</p> <p>LOT 195</p> <p>(38.11 AC.)</p> <p>LOT 196</p> <p>(38.11 AC.)</p> <p>LOT 197</p> <p>(38.11 AC.)</p> <p>LOT 198</p> <p>(38.11 AC.)</p> <p>LOT 199</p> <p>(38.11 AC.)</p> <p>LOT 200</p> <p>(38.11 AC.)</p> <p>LOT 201</p> <p>(38.11 AC.)</p> <p>LOT 202</p> <p>(38.11 AC.)</p> <p>LOT 203</p> <p>(38.11 AC.)</p> <p>LOT 204</p> <p>(38.11 AC.)</p> <p>LOT 205</p> <p>(38.11 AC.)</p> <p>LOT 206</p> <p>(38.11 AC.)</p> <p>LOT 207</p> <p>(38.11 AC.)</p> <p>LOT 208</p> <p>(38.11 AC.)</p> <p>LOT 209</p> <p>(38.11 AC.)</p> <p>LOT 210</p> <p>(38.11 AC.)</p> <p>LOT 211</p> <p>(38.11 AC.)</p> <p>LOT 212</p> <p>(38.11 AC.)</p> <p>LOT 213</p> <p>(38.11 AC.)</p> <p>LOT 214</p> <p>(38.11 AC.)</p> <p>LOT 215</p> <p>(38.11 AC.)</p> <p>LOT 216</p> <p>(38.11 AC.)</p> <p>LOT 217</p> <p>(38.11 AC.)</p> <p>LOT 218</p> <p>(38.11 AC.)</p> <p>LOT 219</p> <p>(38.11 AC.)</p> <p>LOT 220</p> <p>(38.11 AC.)</p> <p>LOT 221</p> <p>(38.11 AC.)</p> <p>LOT 222</p> <p>(38.11 AC.)</p> <p>LOT 223</p> <p>(38.11 AC.)</p> <p>LOT 224</p> <p>(38.11 AC.)</p> <p>LOT 225</p> <p>(38.11 AC.)</p> <p>LOT 226</p> <p>(38.11 AC.)</p> <p>LOT 227</p> <p>(38.11 AC.)</p> <p>LOT 228</p> <p>(38.11 AC.)</p> <p>LOT 229</p> <p>(38.11 AC.)</p> <p>LOT 230</p> <p>(38.11 AC.)</p> <p>LOT 231</p> <p>(38.11 AC.)</p> <p>LOT 232</p> <p>(38.11 AC.)</p> <p>LOT 233</p> <p>(38.11 AC.)</p> <p>LOT 234</p> <p>(38.11 AC.)</p> <p>LOT 235</p> <p>(38.11 AC.)</p> <p>LOT 236</p> <p>(38.11 AC.)</p> <p>LOT 237</p> <p>(38.11 AC.)</p> <p>LOT 238</p> <p>(38.11 AC.)</p> <p>LOT 239</p> <p>(38.11 AC.)</p> <p>LOT 240</p> <p>(38.11 AC.)</p> <p>LOT 241</p> <p>(38.11 AC.)</p> <p>LOT 242</p> <p>(38.11 AC.)</p> <p>LOT 243</p> <p>(38.11 AC.)</p> <p>LOT 244</p> <p>(38.11 AC.)</p> <p>LOT 245</p> <p>(38.11 AC.)</p> <p>LOT 246</p> <p>(38.11 AC.)</p> <p>LOT 247</p> <p>(38.11 AC.)</p> <p>LOT 248</p> <p>(38.11 AC.)</p> <p>LOT 249</p> <p>(38.11 AC.)</p> <p>LOT 250</p> <p>(38.11 AC.)</p> <p>LOT 251</p> <p>(38.11 AC.)</p> <p>LOT 252</p> <p>(38.11 AC.)</p> <p>LOT 253</p> <p>(38.11 AC.)</p> <p>LOT 254</p> <p>(38.11 AC.)</p> <p>LOT 255</p> <p>(38.11 AC.)</p> <p>LOT 256</p> <p>(38.11 AC.)</p> <p>LOT 257</p> <p>(38.11 AC.)</p> <p>LOT 258</p> <p>(38.11 AC.)</p> <p>LOT 259</p> <p>(38.11 AC.)</p> <p>LOT 260</p> <p>(38.11 AC.)</p> <p>LOT 261</p> <p>(38.11 AC.)</p> <p>LOT 262</p> <p>(38.11 AC.)</p> <p>LOT 263</p> <p>(38.11 AC.)</p> <p>LOT 264</p> <p>(38.11 AC.)</p> <p>LOT 265</p> <p>(38.11 AC.)</p> <p>LOT 266</p> <p>(38.11 AC.)</p> <p>LOT 267</p> <p>(38.11 AC.)</p> <p>LOT 268</p> <p>(38.11 AC.)</p> <p>LOT 269</p> <p>(38.11 AC.)</p> <p>LOT 270</p> <p>(38.11 AC.)</p> <p>LOT 271</p> <p>(38.11 AC.)</p> <p>LOT 272</p> <p>(38.11 AC.)</p> <p>LOT 273</p> <p>(38.11 AC.)</p> <p>LOT 274</p> <p>(38.11 AC.)</p> <p>LOT 275</p> <p>(38.11 AC.)</p> <p>LOT 276</p> <p>(38.11 AC.)</p> <p>LOT 277</p> <p>(38.11 AC.)</p> <p>LOT 278</p> <p>(38.11 AC.)</p> <p>LOT 279</p> <p>(38.11 AC.)</p> <p>LOT 280</p> <p>(38.11 AC.)</p> <p>LOT 281</p> <p>(38.11 AC.)</p> <p>LOT 282</p> <p>(38.11 AC.)</p> <p>LOT 283</p> <p>(38.11 AC.)</p> <p>LOT 284</p> <p>(38.11 AC.)</p> <p>LOT 285</p> <p>(38.11 AC.)</p> <p>LOT 286</p> <p>(38.11 AC.)</p> <p>LOT 287</p> <p>(38.11 AC.)</p> <p>LOT 288</p> <p>(38.11 AC.)</p> <p>LOT 289</p> <p>(38.11 AC.)</p> <p>LOT 290</p> <p>(38.11 AC.)</p> <p>LOT 291</p> <p>(38.11 AC.)</p> <p>LOT 292</p> <p>(38.11 AC.)</p> <p>LOT 293</p> <p>(38.11 AC.)</p> <p>LOT 294</p> <p>(38.11 AC.)</p> <p>LOT 295</p> <p>(38.11 AC.)</p> <p>LOT 296</p> <p>(38.11 AC.)</p> <p>LOT 297</p> <p>(38.11 AC.)</p> <p>LOT 298</p> <p>(38.11 AC.)</p> <p>LOT 299</p> <p>(38.11 AC.)</p> <p>LOT 300</p> <p>(38.11 AC.)</p> <p>LOT 301</p> <p>(38.11 AC.)</p> <p>LOT 302</p> <p>(38.11 AC.)</p> <p>LOT 303</p> <p>(38.11 AC.)</p> <p>LOT 304</p> <p>(38.11 AC.)</p> <p>LOT 305</p> <p>(38.11 AC.)</p> <p>LOT 306</p> <p>(38.11 AC.)</p> <p>LOT 307</p> <p>(38.11 AC.)</p> <p>LOT 308</p> <p>(38.11 AC.)</p> <p>LOT 309</p> <p>(38.11 AC.)</p> <p>LOT 310</p> <p>(38.11 AC.)</p> <p>LOT 311</p> <p>(38.11 AC.)</p> <p>LOT 312</p> <p>(38.11 AC.)</p> <p>LOT 313</p> <p>(38.11 AC.)</p> <p>LOT 314</p> <p>(38.11 AC.)</p> <p>LOT 315</p> <p>(38.11 AC.)</p> <p>LOT 316</p> <p>(38.11 AC.)</p> <p>LOT 317</p> <p>(38.11 AC.)</p> <p>LOT 318</p> <p>(38.11 AC.)</p> <p>LOT 319</p> <p>(38.11 AC.)</p> <p>LOT 320</p> <p>(38.11 AC.)</p> <p>LOT 321</p> <p>(38.11 AC.)</p> <p>LOT 322</p> <p>(38.11 AC.)</p> <p>LOT 323</p> <p>(38.11 AC.)</p> <p>LOT 324</p> <p>(38.11 AC.)</p> <p>LOT 325</p> <p>(38.11 AC.)</p> <p>LOT 326</p> <p>(38.11 AC.)</p> <p>LOT 327</p> <p>(38.11 AC.)</p> <p>LOT 328</p> <p>(38.11 AC.)</p> <p>LOT 329</p> <p>(38.11 AC.)</p> <p>LOT 330</p> <p>(38.11 AC.)</p> <p>LOT 331</p> <p>(38.11 AC.)</p> <p>LOT 332</p> <p>(38.11 AC.)</p> <p>LOT 333</p> <p>(38.11 AC.)</p> <p>LOT 334</p> <p>(38.11 AC.)</p> <p>LOT 335</p> <p>(38.11 AC.)</p> <p>LOT 336</p> <p>(38.11 AC.)</p> <p>LOT 337</p> <p>(38.11 AC.)</p> <p>LOT 338</p> <p>(38.11 AC.)</p> <p>LOT 339</p> <p>(38.11 AC.)</p> <p>LOT 340</p> <p>(38.11 AC.)</p> <p>LOT 341</p> <p>(38.11 AC.)</p> <p>LOT 342</p> <p>(38.11 AC.)</p> <p>LOT 343</p> <p>(38.11 AC.)</p> <p>LOT 344</p> <p>(38.11 AC.)</p> <p>LOT 345</p> <p>(38.11 AC.)</p> <p>LOT 346</p> <p>(38.11 AC.)</p> <p>LOT 347</p> <p>(38.11 AC.)</p> <p>LOT 348</p> <p>(38.11 AC.)</p> <p>LOT 349</p> <p>(38.11 AC.)</p> <p>LOT 350</p> <p>(38.11 AC.)</p> <p>LOT 351</p> <p>(38.11 AC.)</p> <p>LOT 352</p> <p>(38.11 AC.)</p> <p>LOT 353</p> <p>(38.11 AC.)</p> <p>LOT 354</p> <p>(38.11 AC.)</p> <p>LOT 355</p> <p>(38.11 AC.)</p> <p>LOT 356</p> <p>(38.11 AC.)</p> <p>LOT 357</p> <p>(38.11 AC.)</p> <p>LOT 358</p> <p>(38.11 AC.)</p> <p>LOT 359</p> <p>(38.11 AC.)</p> <p>LOT 360</p> <p>(38.11 AC.)</p> <p>LOT 361</p> <p>(38.11 AC.)</p> <p>LOT 362</p> <p>(38.11 AC.)</p> <p>LOT 363</p> <p>(38.11 AC.)</p> <p>LOT 364</p> <p>(38.11 AC.)</p> <p>LOT 365</p> <p>(38.11 AC.)</p> <p>LOT 366</p> <p>(38.11 AC.)</p> <p>LOT 367</p> <p>(38.11 AC.)</p> <p>LOT 368</p> <p>(38.11 AC.)</p> <p>LOT 369</p> <p>(38.11 AC.)</p> <p>LOT 370</p> <p>(38.11 AC.)</p> <p>LOT 371</p> <p>(38.11 AC.)</p> <p>LOT 372</p> <p>(38.11 AC.)</p> <p>LOT 373</p> <p>(38.11 AC.)</p> <p>LOT 374</p> <p>(38.11 AC.)</p> <p>LOT 375</p> <p>(38.11 AC.)</p> <p>LOT 376</p> <p>(38.11 AC.)</p> <p>LOT 377</p> <p>(38.11 AC.)</p> <p>LOT 378</p> <p>(38.11 AC.)</p> <p>LOT 379</p> <p>(38.11 AC.)</p> <p>LOT 380</p> <p>(38.11 AC.)</p> <p>LOT 381</p> <p>(38.11 AC.)</p> <p>LOT 382</p> <p>(38.11 AC.)</p> <p>LOT 383</p> <p>(38.11 AC.)</p> <p>LOT 384</p> <p>(38.11 AC.)</p> <p>LOT 385</p> <p>(38.11 AC.)</p> <p>LOT 386</p> <p>(38.11 AC.)</p> <p>LOT 387</p> <p>(38.11 AC.)</p> <p>LOT 388</p> <p>(38.11 AC.)</p> <p>LOT 389</p> <p>(38.11 AC.)</p> <p>LOT 390</p> <p>(38.11 AC.)</p> <p>LOT 391</p> <p>(38.11 AC.)</p> <p>LOT 392</p> <p>(38.11 AC.)</p> <p>LOT 393</p> <p>(38.11 AC.)</p> <p>LOT 394</p> <p>(38.11 AC.)</p> <p>LOT 395</p> <p>(38.11 AC.)</p> <p>LOT 396</p> <p>(38.11 AC.)</p> <p>LOT 397</p> <p>(38.11 AC.)</p> <p>LOT 398</p> <p>(38.11 AC.)</p> <p>LOT 399</p> <p>(38.11 AC.)</p> <p>LOT 400</p> <p>(38.11 AC.)</p> <p>LOT 401</p> <p>(38.11 AC.)</p> <p>LOT 402</p> <p>(38.11 AC.)</p> <p>LOT 403</p> <p>(38.11 AC.)</p> <p>LOT 404</p> <p>(38.11 AC.)</p> <p>LOT 405</p> <p>(38.11 AC.)</p> <p>LOT 406</p> <p>(38.11 AC.)</p> <p>LOT 407</p> <p>(38.11 AC.)</p> <p>LOT 408</p> <p>(38.11 AC.)</p> <p>LOT 409</p> <p>(38.11 AC.)</p> <p>LOT 410</p> <p>(38.11 AC.)</p> <p>LOT 411</p> <p>(38.11 AC.)</p> <p>LOT 412</p> <p>(38.11 AC.)</p> <p>LOT 413</p> <p>(38.11 AC.)</p> <p>LOT 414</p> <p>(38.11 AC.)</p> <p>LOT 415</p> <p>(38.11 AC.)</p> <p>LOT 416</p> <p>(38.11 AC.)</p> <p>LOT 417</p> <p>(38.11 AC.)</p> <p>LOT 418</p> <p>(38.11 AC.)</p> <p>LOT 419</p> <p>(38.11 AC.)</p> <p>LOT 420</p> <p>(38.11 AC.)</p> <p>LOT 421</p> <p>(38.11 AC.)</p> <p>LOT 422</p> <p>(38.11 AC.)</p> <p>LOT 423</p> <p>(38.11 AC.)</p> <p>LOT 424</p> <p>(38.11 AC.)</p> <p>LOT 425</p> <p>(38.11 AC.)</p> <p>LOT 426</p> <p>(38.11 AC.)</p> <p>LOT 427</p> <p>(38.11 AC.)</p> <p>LOT 428</p> <p>(38.11 AC.)</p> <p>LOT 429</p> <p>(38.11 AC.)</p> <p>LOT 430</p> <p>(38.11 AC.)</p> <p>LOT 431</p> <p>(38.11 AC.)</p> <p>LOT 432</p> <p>(38.11 AC.)</p> <p>LOT 433</p> <p>(38.11 AC.)</p> <p>LOT 434</p> <p>(38.11 AC.)</p> <p>LOT 435</p> <p>(38.11 AC.)</p> <p>LOT 436</p> <p>(38.11 AC.)</p> <p>LOT 437</p> <p>(38.11 AC.)</p> <p>LOT 438</p> <p>(38.11 AC.)</p> <p>LOT 439</p> <p>(38.11 AC.)</p> <p>LOT 440</p> <p>(38.11 AC.)</p> <p>LOT 441</p> <p>(38.11 AC.)</p> <p>LOT 442</p> <p>(38.11 AC.)</p> <p>LOT 443</p> <p>(38.11 AC.)</p> <p>LOT 444</p> <p>(38.11 AC.)</p> <p>LOT 445</p> <p>(38.11 AC.)</p> <p>LOT 446</p> <p>(38.11 AC.)</p> <p>LOT 447</p> <p>(38.11 AC.)</p> <p>LOT 448</p> <p>(38.11 AC.)</p> <p>LOT 449</p> <p>(38.11 AC.)</p> <p>LOT 450</p> <p>(38.11 AC.)</p> <p>LOT 451</p> <p>(38.11 AC.)</p> <p>LOT 452</p> <p>(38.11 AC.)</p> <p>LOT 453</p> <p>(38.11 AC.)</p> <p>LOT 454</p> <p>(38.11 AC.)</p> <p>LOT 455</p> <p>(38.11 AC.)</p> <p>LOT 456</p> <p>(38.11 AC.)</p> <p>LOT 457</p> <p>(38.11 AC.)</p> <p>LOT 458</p> <p>(38.11 AC.)</p> <p>LOT 459</p> <p>(38.11 AC.)</p> <p>LOT 460</p> <p>(38.11 AC.)</p> <p>LOT 461</p> <p>(38.11 AC.)</p> <p>LOT 462</p> <p>(38.11 AC.)</p> <p>LOT 463</p> <p>(38.11 AC.)</p> <p>LOT 464</p> <p>(38.11 AC.)</p> <p>LOT 465</p> <p>(38.11 AC.)</p> <p>LOT 466</p> <p>(38.11 AC.)</p> <p>LOT 467</p> <p>(38.11 AC.)</p> <p>LOT 468</p> <p>(38.11 AC.)</p> <p>LOT 469</p> <p>(38.11 AC.)</p> <p>LOT 470</p> <p>(38.11 AC.)</p> <p>LOT 471</p> <p>(38.11 AC.)</p> <p>LOT 472</p> <p>(38.11 AC.)</p> <p>LOT 473</p> <p>(38.11 AC.)</p> <p>LOT 474</p> <p>(38.11 AC.)</p> <p>LOT 475</p> <p>(38.11 AC.)</p> <p>LOT 476</p> <p>(38.11 AC.)</p> <p>LOT 477</p> <p>(38.11 AC.)</p> <p>LOT 478</p> <p>(38.11 AC.)</p> <p>LOT 479</p> <p>(38.11 AC.)</p> <p>LOT 480</p> <p>(38.11 AC.)</p> <p>LOT 481</p> <p>(38.11 AC.)</p> <p>LOT 482</p> <p>(38.11</p>
--

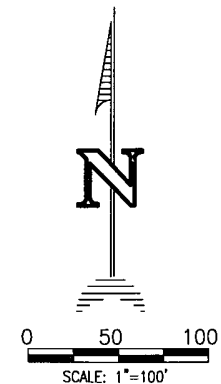
XTO ENERGY INC.
GRASSY CANYON No. 8, 915 FNL 2430 FEL
SECTION 31, T-32-N, R-7-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6807', DATE: JULY 8, 2008

NAD 83
 LAT. = 36.94329° N.
 LONG. = 107.60833° W.
 NAD 27
 LAT. = 36°56'35.86" N.
 LONG. = 107°36'30.00" W.



CENTER OF PIT

NAD 83
 LAT. = 36.94312° N.
 LONG. = 107.60823° W.
 NAD 27
 LAT. = 36°56'35.24" N.
 LONG. = 107°36'29.61" W.




NOTE:

DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. UTILITY NOTIFICATION CENTER OF NEW MEXICO TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

NOTE:

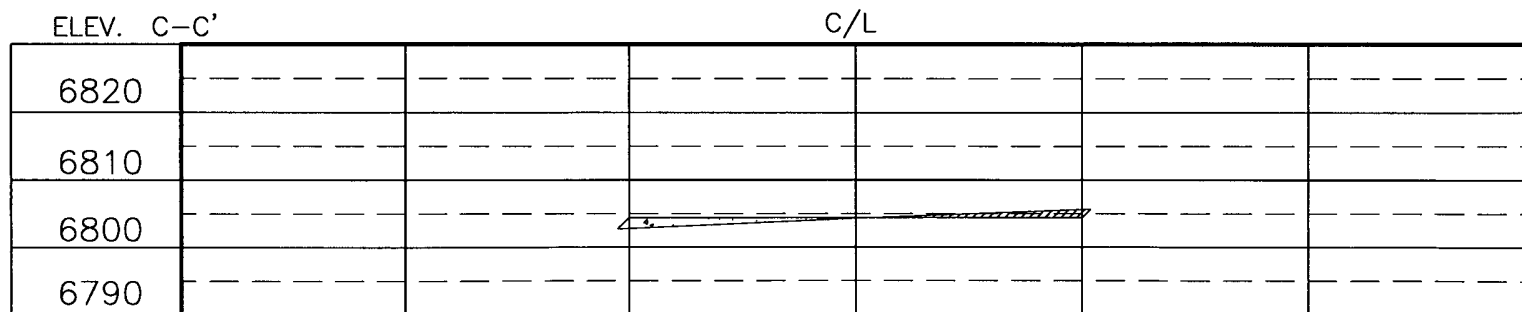
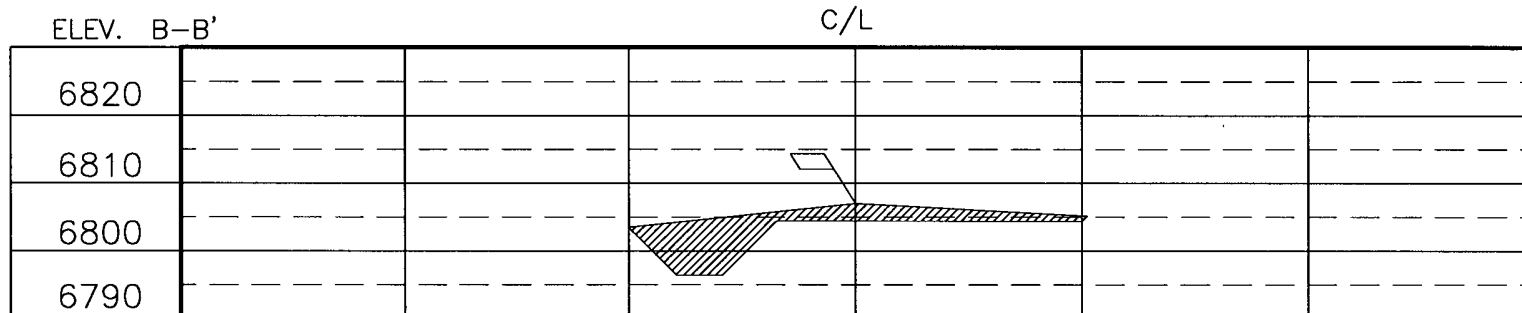
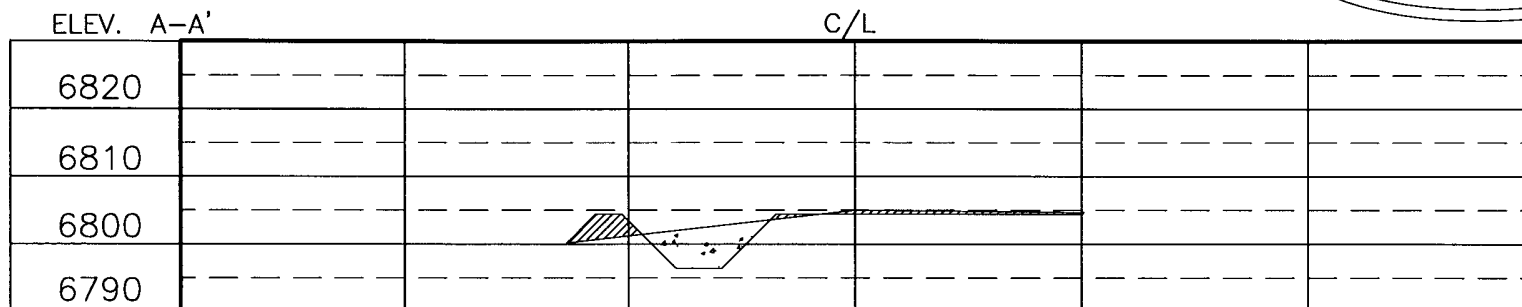
CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING PRIOR TO CONSTRUCTION.

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.


REVISION:	DATE:	REVISED BY:
CHANGE FORMAT PER ONSITE	09/16/09	B.K.
 Daggett Enterprises, Inc. Surveying and Oil Field Services P. O. Box 510 • Farmington, NM 87499 Phone (505) 326-1772 • Fax (505) 326-6019 NEW MEXICO L.S. 8894		
DRAWN BY: B.K.	CADFILE: CR1053_PL8	
ROW#: CR1053	DATE: 11/11/08	

XTO ENERGY INC.
GRASSY CANYON No. 8, 915 FNL 2430 FEL
SECTION 31, T-32-N, R-7-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6807', DATE: JULY 8, 2008

NAD 83
LAT. = 36.94329° N.
LONG. = 107.60833° W.
NAD 27
LAT. = 36°56'35.86" N.
LONG. = 107°36'30.00" W.



NOTE:
DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND
UTILITIES OR PIPELINES. UTILITY NOTIFICATION CENTER OF
NEW MEXICO TO BE NOTIFIED 48 HOURS PRIOR TO
EXCAVATION OR CONSTRUCTION.

REVISION:	DATE:	REVISED BY:
CHANGE FORMAT PER ONSITE	09/17/09	B.K.
 Daggett Enterprises, Inc. Surveying and Oil Field Services P. O. Box 510 • Farmington, NM 87499 Phone (505) 326-1772 • Fax (505) 326-6019 NEW MEXICO L.S. 8894		
DRAWN BY: B.K.	CADFILE: CR1053_CFB	
ROW#: CR1053	DATE: 11/11/08	

**Grassy Canyon #8
Below Ground Tank
Hydrogeologic Report for Siting Criteria**

General Geology and Hydrology

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

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits, serve as the primary aquifers in the San Juan Basin (Stone et al., 1983). In most of the proposed area, the San Jose Formation lies at the surface and overlies the Nacimiento Formation. Thickness of the San Jose ranges from 200 to 2700 feet, thickening from west to east across the region of interest (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the San Jose Formation are between 0 and 2700' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows regionally to the southwest, toward the San Juan River. More locally, groundwater flow is controlled by Navajo Lake. Little specific hydrogeologic data is available for the San Jose Formation system, but "numerous wells and springs used for stock and domestic supplies" draw their water from the San Jose Formation (Stone et al, 1983).

The prominent soil types at the proposed site are entisols and aridisols, which are defined as soils exhibiting little to no profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area and prohibits effective recharge to the underlying aquifers.

Regional weather further prohibits active recharge. The climate is arid, averaging almost 13 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from July through September. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. September through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. The most active recharge occurs during the winter 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

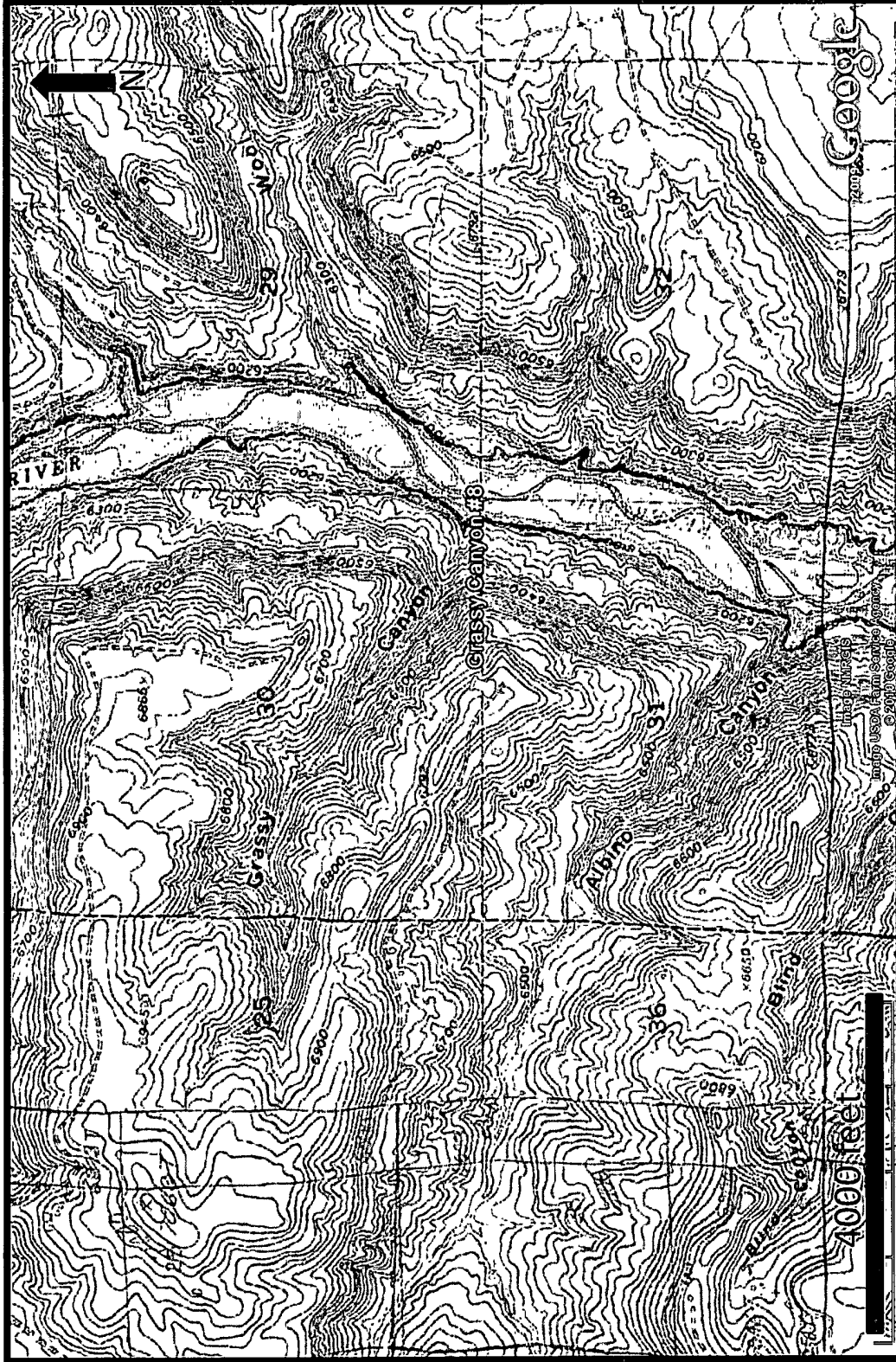
Depth to groundwater at the site is estimated to be greater than 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography, proximity to adjacent channels and springs and observations made during a site visit are also taken into consideration.

The region is dominated by Navajo Lake and its associated canyons and gullies as evidenced on the attached topographic map and aerial photo. Relatively large, flat-topped mesas composed of thick sandstone sequences surround the perimeter of the lake and are often over 200 feet higher in elevation than the lake. Canyons and gullies erode into the sandstone and are filled with alluvium. This particular site is located on a mesa top only 2165 feet west of Navajo Lake, but over 700 feet higher in elevation than the surface of the lake water. To the north lies Grassy Canyon, a first order tributary to the lake.

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

Depth to groundwater data is extremely limited in this region. Groundwater data available from the NM State Engineer's iWaters Database for wells near the below grade tank are attached and are plotted on the iWaters Groundwater Data Map. The nearest permitted well lies 2.08 miles east (SJ 02726). The water is used for livestock watering, as are many others in the surrounding area. Depth to groundwater in the permitted water well is recorded as 300 feet. Other wells located near Navajo Lake at similar elevations to the site in question contain groundwater at depths in excess of 400 feet.

The elevation difference of over 700 feet between the site and Navajo Lake, the lack of other surface water features and groundwater depths greater than 400 feet deep in nearby permitted water wells is enough to suggest that groundwater at the site is greater than 100 feet.



LT Environmental Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301
T 970-385-1096
F 970-385-1873

Grassy Canyon #8
T32N, R07W, S31B
San Juan County, NM

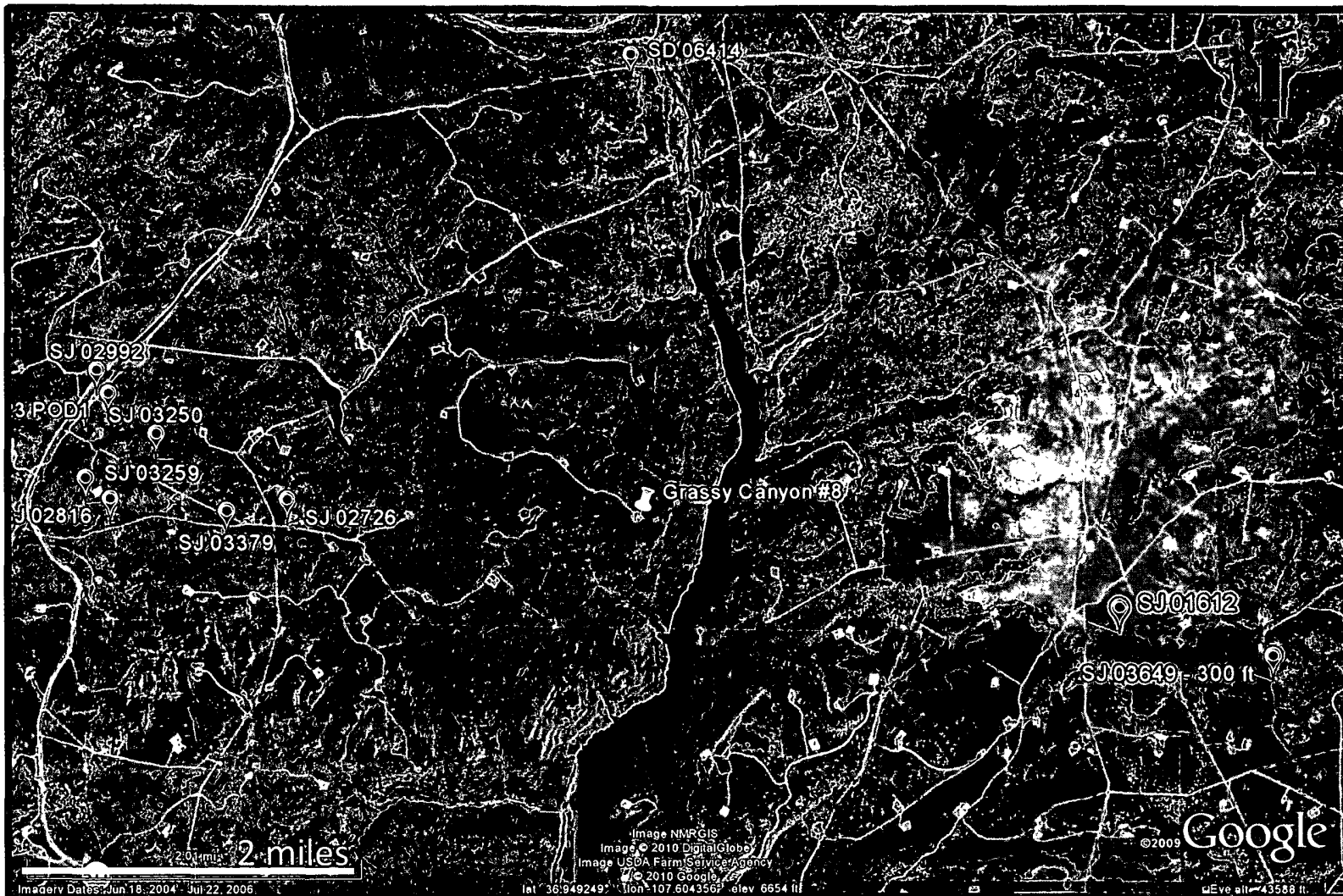
Topographic Map



LT Environmental Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301
T 970-385-1096
F 970.385.1873

Grassy Canyon #8
T32N, R07W, S31B
San Juan County, NM

Aerial Photograph



LT Environmental Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301
 T 970-385-1096
 F 970.385.1873

Grassy Canyon #8
 T32N, R07W, S31B
 San Juan County, NM

iWaters
 Groundwater
 Data Map



New Mexico Office of the State Engineer

Wells with Well Log Information

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)														(in feet)	
POD Number	Sub basin	Use	County	Source	4 4 4	116 4	Sec	Two	Range	X	Y	Start Date	Log File Finish Date Date	Depth Well	Depth Water
<u>SJ01812</u>		STK	SJ			3	34	32N	07W	272046	4090671*	08/20/1982	08/24/1982 08/06/1982	800	
<u>SJ03117 POD1</u>		DOL	SJ	Shallow	2 2 2	07	32N	07W		268539	4097977	03/30/2009	04/04/2009 04/14/2009	150	120
<u>SJ03820 POD1</u>		WUL	SJ	Shallow	2 2 4	07	32N	07W		268651	4097445	04/06/2008	04/08/2009 05/20/2009	150	100
<u>SJ03907 POD1</u>		DOL	SJ	Shallow	2 2 4	07	32N	07W		268606	4097353	11/19/2009	11/20/2009 11/25/2009	22	5

Record Count: 4

Basin/County Search:

Basin: San Juan

County: San Juan

PLSS Search:

Township: 32N

Range: 07W

Usage Filter:

Use: All Usages

*UTM location was derived from PLSS - see Help

The data is furnished by the NM/OSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/13/10 9:45 AM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION



New Mexico Office of the State Engineer Wells with Well Log Information

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

POD Number	Sub basin	Use	County	Source	Q1	Q2	Q3	Q4	Sec	Twp	Range	X	Y	Start Date	Finish Date	Log File	Depth Well	Depth Water
<u>SJ02726</u>			SAN	SJ	Shallow	2	4	1	35	32N	09W	264385	4091811*	07/27/1999	07/29/1999	08/04/1999	300	300
<u>SJ02992</u>			DOW	SJ	Shallow	1	2	3	27	32N	09W	262631	4093068*	06/25/2000	06/01/2000	06/08/2000	330	230
<u>SJ03250</u>			DOW	SJ	Shallow	4	3	4	27	32N	09W	263222	4092454*	08/28/2002	09/05/2002	09/19/2002	400	375
<u>SJ03379</u>			DOW	SJ	Shallow	1	3	1	35	32N	09W	263899	4091901	06/30/2004	06/30/2004	07/08/2009	710	510
<u>SJ03423 POD1</u>			DOL	SJ	Shallow	3	2	3	27	32N	09W	262557	4092875	04/10/2008	04/23/2008	05/09/2008	380	290
<u>SJ03497 POD1</u>			STK	SJ	Shallow	4	4	2	34	32N	09W	263618	4091724	09/25/2009	09/30/2009	10/06/2009	780	490

Record Count: 6

Basin/County Search:

Basin: San Juan

County: San Juan

PLSS Search:

Township: 32N

Range: 09W

Usage Filter:

Use: All Usages

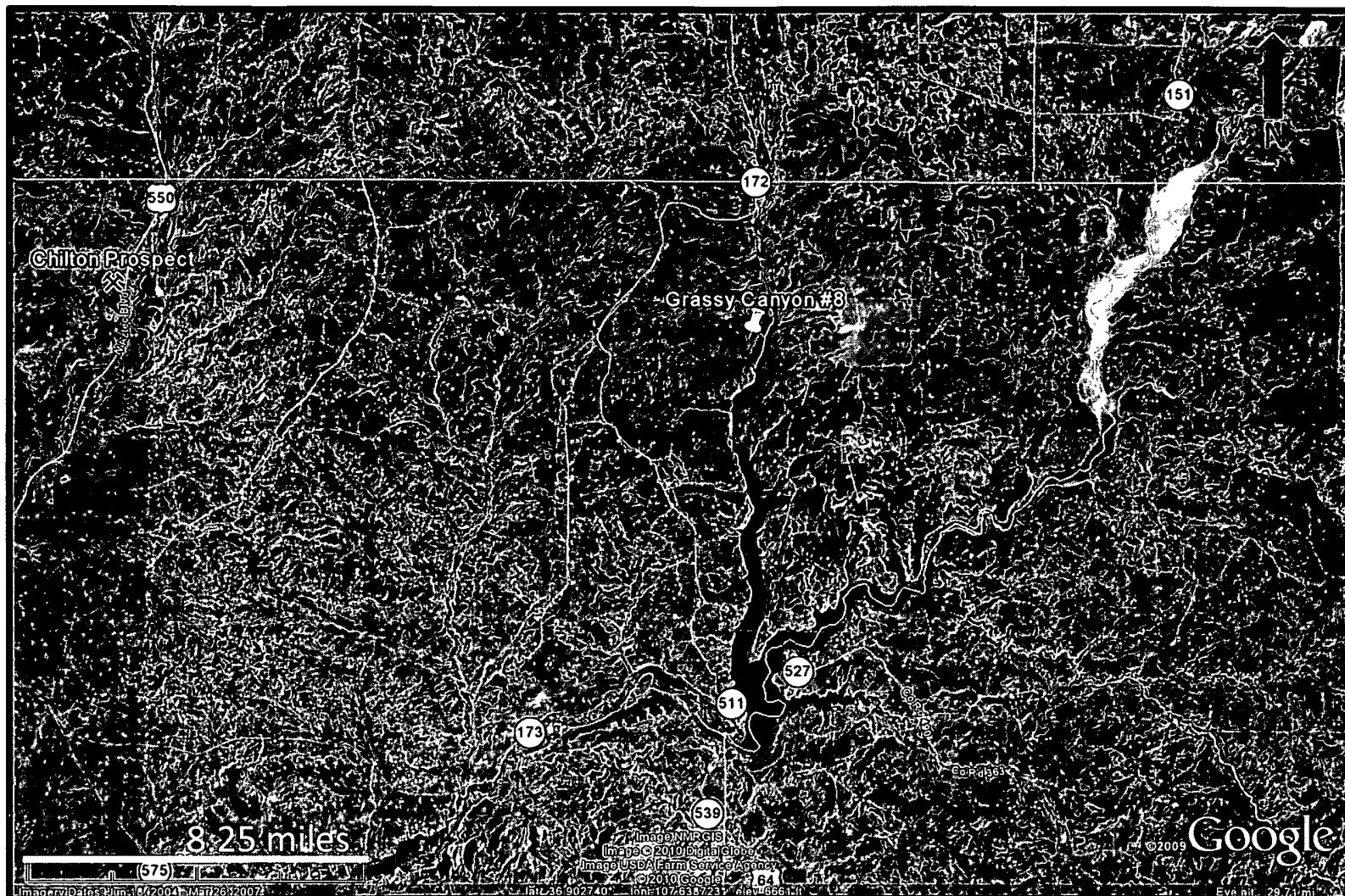
*UTM location was derived from PLSS - see Help

The data is furnished by the NM/OS&ISC and is accepted by the recipient with the expressed understanding that the OS&ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/13/10 9:45 AM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION



LT Environmental Inc.
 2243 Main Avenue, Suite 3
 Durango, Colorado 81301
 T 970-385-1096
 F 970.385.1873

Grassy Canyon #8
T32N, R07W, S31B
San Juan County, NM

Mines, Mills and
Quarries Map





Malia Villers /FAR/CTOC

05/07/2010 02:05 PM

To mark.kelly@blm.gov

cc

bcc

Subject Notice - Grassy Canyon #8 Well Site

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 locatoin by means of in place burial.

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

Malia Villers
Permitting Tech.
XTO Energy Inc.
505-333-3100
Direct: 505-333-3698
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 health 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.
6. 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.
9. Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided.
10. All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep.
11. 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.
6. The liner shall be protected from any fluid force or mechanical damage through the use of mud pits slides, or a manifold system.
7. 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.
11. 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.
12. 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:

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

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

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

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.

1. 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.
2. 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.
5. 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, filed 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.