

District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
811 S First St., 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  
Revised August 1, 2011

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOC District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOC District Office

9795  
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: <u>XTO Energy Inc.</u>	OGRID #: <u>5380</u>
Address: <u>382 Road 3100, Aztec, NM 87410</u>	
Facility or well name: <u>Haynie #3</u>	
API Number: <u>30-045-35363</u>	OCD Permit Number: _____
U/L or Qtr/Qtr <u>NWNE</u>	Section <u>4</u> Township <u>30N</u> Range <u>11W</u> County <u>San Juan</u>
Center of Proposed Design Latitude <u>36.84638</u>	Longitude <u>107.99333</u> NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983
Surface Owner <input type="checkbox"/> Federal <input type="checkbox"/> State <input checked="" type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment	

2	
<input checked="" type="checkbox"/> <b>Pit:</b> Subsection F or G of 19.15.17.11 NMAC	RCVD MAR 16 '12 OIL CONS. DIV. DIST. 3
Temporary: <input checked="" type="checkbox"/> Drilling <input type="checkbox"/> Workover	
<input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> P&A	
<input checked="" type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type Thickness <u>20</u> mil <input checked="" type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
<input checked="" type="checkbox"/> String-Reinforced	
Liner Seams <input checked="" type="checkbox"/> Welded <input checked="" type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl Dimensions L <u>200</u> x W <u>80</u> x D <u>8-12</u>	

3	
<input checked="" type="checkbox"/> <b>Closed-loop System:</b> Subsection H of 19.15.17.11 NMAC	
Type of Operation: <input type="checkbox"/> P&A <input checked="" type="checkbox"/> Drilling a new well <input type="checkbox"/> Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) To be used during completion operations	
<input type="checkbox"/> Drying Pad <input checked="" type="checkbox"/> Above Ground Steel Tanks <input type="checkbox"/> Haul-off Bins <input type="checkbox"/> Other _____	
<input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____	

4	
<input type="checkbox"/> <b>Below-grade tank:</b> Subsection I of 19.15.17.11 NMAC	
Volume: _____ bbl Type of fluid _____	
Tank Construction material: _____	
<input type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	
<input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____	
Liner type Thickness _____ mil <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	

5	
<input type="checkbox"/> <b>Alternative Method:</b>	
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	

6.	<p><b>Fencing:</b> 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><b>Netting:</b> 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><b>Signs:</b> 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 19.15.16 8 NMAC</p>																				
9.	<p><b>Administrative Approvals and Exceptions:</b></p> <p>Justifications and/or demonstrations of equivalency are required Please refer to 19.15.17 NMAC for guidance.</p> <p><b>Please check a box if one or more of the following is requested, if not leave blank:</b></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.</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><b>Siting Criteria (regarding permitting):</b> 19.15.17.10 NMAC</p> <p><b>Instructions:</b> <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: 80%; vertical-align: top;"> <p>Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.</p> <p>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</p> </td> <td style="width: 20%; text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td style="vertical-align: top;"> <p>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).</p> <p>- Topographic map, Visual inspection (certification) of the proposed site</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td style="vertical-align: top;"> <p>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>)</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> NA </td> </tr> <tr> <td style="vertical-align: top;"> <p>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>)</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> NA </td> </tr> <tr> <td style="vertical-align: top;"> <p>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.</p> <p>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td style="vertical-align: top;"> <p>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</p> <p>- Written confirmation or verification from the municipality; Written approval obtained from the municipality</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td style="vertical-align: top;"> <p>Within 500 feet of a wetland</p> <p>- US Fish and Wildlife Wetland Identification map; Topographic map, Visual inspection (certification) of the proposed site</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td style="vertical-align: top;"> <p>Within the area overlying a subsurface mine.</p> <p>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td style="vertical-align: top;"> <p>Within an unstable area.</p> <p>- Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS, NM Geological Society; Topographic map</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td style="vertical-align: top;"> <p>Within a 100-year floodplain.</p> <p>- FEMA map</p> </td> <td style="text-align: right; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> </table>	<p>Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.</p> <p>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>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).</p> <p>- Topographic map, Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. 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(<i>Applies to permanent pits</i>)</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	<p>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.</p> <p>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>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</p> <p>- Written confirmation or verification from the municipality; Written approval obtained from the municipality</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Within 500 feet of a wetland</p> <p>- US Fish and Wildlife Wetland Identification map; Topographic map, Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Within the area overlying a subsurface mine.</p> <p>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Within an unstable area.</p> <p>- Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS, NM Geological Society; Topographic map</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Within a 100-year floodplain.</p> <p>- FEMA map</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
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<p>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>)</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA																				
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<p>Within a 100-year floodplain.</p> <p>- FEMA map</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No																				

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

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

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

13.

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

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ 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 identify 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: EnvirotechDisposal Facility Permit Number: NM01-0011Disposal Facility Name: IEIDisposal 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

☐ Yes ☒ No  
☐ NA

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search, USGS; Data obtained from nearby wells

☒ Yes ☐ No  
☐ NA

Ground water is more than 100 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS, Data obtained from nearby wells

☒ Yes ☐ No  
☐ 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

☐ Yes ☒ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo, Satellite image

☐ Yes ☒ 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

☐ 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

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): Cherylene CharleyTitle: Sr. Permitting TechnicianSignature: Cherylene CharleyDate: 3-15-12e-mail address: cherylene\_charley@xtoenergy.comTelephone: 505-333-3190

20.

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

OCD Representative Signature: Jonathan D. KellyApproval Date: 3/19/2012Title: Compliance Officer

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: \_\_\_\_\_

# PIT PERMIT SITING CRITERIA INFORMATION SHEET

API #: N/A  
 Well Name: Haynic #3  
 Operator: XTO Energy, Inc  
 USPLSS: T30N, R11W, S4  
 Lat/Long: 36.8463N, 107.99269W

Client: Nelson Reveg  
 Project: Pit Siting Permits  
 Date: 2/8/2012  
 Prepared by: Sarah Read

- 1.) Depth to Groundwater: 50 feet - 100 feet
- 2a.) Distance to closest continuously flowing watercourse: 1200 feet East to Animas River
- 2b.) Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:  
 330 feet East to Farmers Ditch (Farm Land Irrigation)  
 542 feet West to Farmer Arroyo
- 3.) Permanent residence, school, hospital, institution or church within 300'? NO
- 4a.) Domestic fresh water well or spring within 500'? NO
- 4b.) Any other fresh water well or spring within 1000'?  
 Yes - 615 feet SE to SJ 01364,  
 696 feet SE to SJ 03076, & 911  
 feet South To SJ 02903
- 5a.) Within incorporated municipal boundaries? NO
- 5b.) Within defined municipal fresh water well field? NO
- 6.) Wetland within 500'? NO
- 7.) Within the area overlying a subsurface mine? NO
- 8.) Within unstable area? NO
- 9.) Within 100 year flood plain? NO

Attached Documents: Hydrogeologic Report  
 Figure 1: Topographic Map  
 Figure 2: Aerial Photo  
 Figure 3: Mines, Mills and Quarries  
 Figure 4: Water Well and Surface Water Features  
 Figure 5: Municipal Boundaries Map  
 Figure 6: FEMA Flood Zone Map  
 iWaters Data

Additional Notes: Geologic Formation: Nacimiento Formation  
 Soil Type: Entisols  
 Annual Precipitation: Aztec = 9.77"



**GEMAT** INC

915 Malta Avenue ♦ Farmington, NM 87401 ♦ Tel (505) 327-7928 ♦ Fax (505) 326-5721

### **HAYNIE #3**

## **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 shale, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be located on the flanks of the Farmington Glade between Aztec and La Plata, New Mexico. Within the Farmington Glade, the Tertiary Nacimiento Formation is exposed, along with Quaternary alluvial and aeolian sands surrounding the center of the wash.

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 feet deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows toward the nearby Animas and San Juan Rivers and their 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 Animas and San Juan Rivers ([www.cmrld.state.nm.us](http://www.cmrld.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 the 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 Region Climate Center [www.wrcc.dri.edu](http://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 the groundwater is estimated to be between 50 and 100 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.

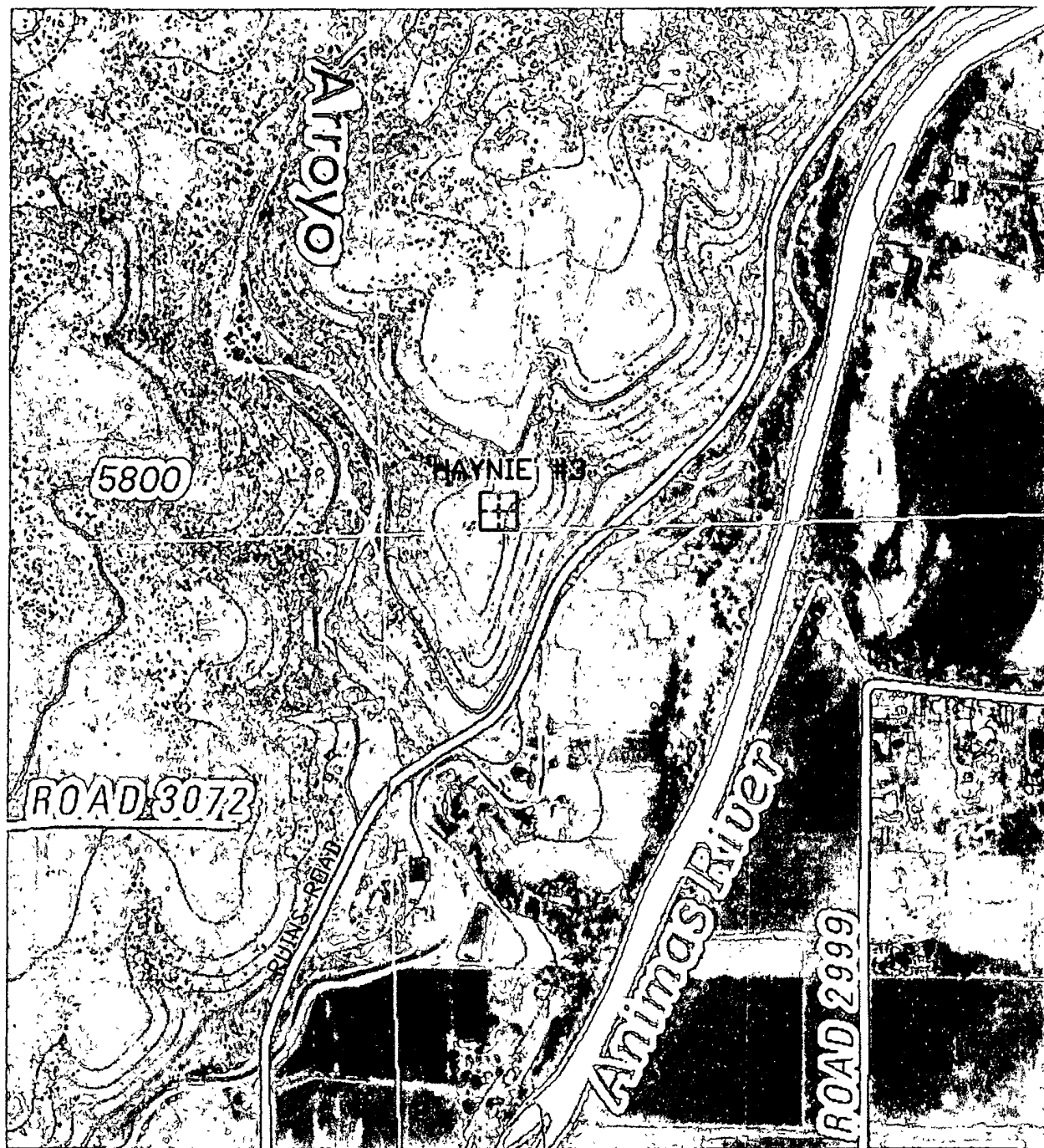
Local aquifers include sandstones within the Nacimiento Formation, which range from 0 to 1000 feet deep in this area, as well as shallow aquifers within Quaternary alluvial deposits (Stone et al., 1983). The 1000 foot depth range for Nacimiento aquifers covers an area over 20 miles wide, and depth decreases 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 1200 feet to the west of the Animas River, and is approximately 160 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 attached. The closest well to the proposed site, SJ 01364, is located 615 feet the southeast and is 110 feet lower in topographic elevation. Depth to groundwater within the well is 86 feet. A well to the southeast, SJ 03076, has a depth to groundwater of 10 feet below ground surface. This well is approximately 130 feet lower in elevation than the proposed site. Two wells to the north, SJ 02993 and SJ 02994, are approximately 80 feet higher in elevation. Depth to groundwater within the wells is 160 and 200 feet below ground surface. Therefore, depth to groundwater is estimated to be between 50 and 100 feet at the proposed site.



## References

- Brister, B.S. and Hoffman, G.K., 2002, Fundamental Geology of San Juan Basin Energy Resources in New Mexico's Energy, Present and Future: New Mexico Bureau of Geology and Mineral Resources Decision-Makers Conference 2002, San Juan Basin, p.20-25.
- Dane, C.H. and Bachman, G. O., 1965, Geologic Map of New Mexico: U.S. Geological Survey, 1 sheet, scale 1:500,000.
- Dick-Peddie, W.A., 1993, New Mexico Vegetation – Past, Present, Future: Albuquerque, New Mexico. University of New Mexico Press, 244p.
- Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H. and Padgett, E.T., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: HR-6 New Mexico Bureau of Geology and Mineral Resources Hydrology Report 6.
- USGS, Groundwater Atlas of the United State: Arizona, Colorado, New Mexico, Utah, HA-730-C: (<http://www.pubs.usgs.gov>).
- Western Region Climate Center, 2008, New Mexico Climate Summaries: Desert Research Institute at <http://www.wrcc.dri.edu/summary/climsmnm.html>.
- New Mexico Energy, Minerals and Natural Resources Department, [www.emnrd.state.nm.us](http://www.emnrd.state.nm.us)



0 500 1000  
FEET



# LEGEND


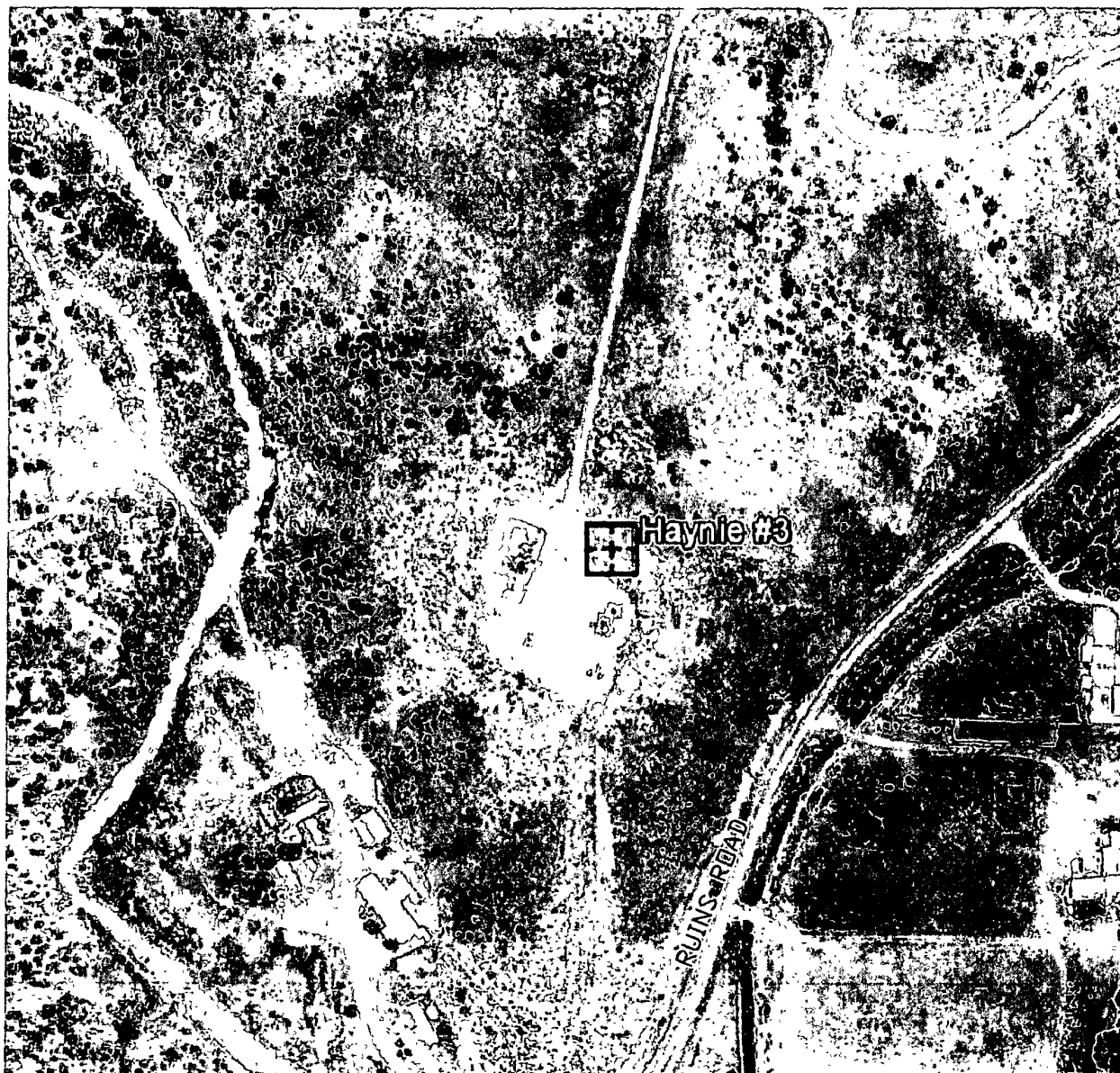
 WELL PERMIT



FIGURE 1  
TOPOGRAPHIC MAP  
HAYNIE #3  
SEC 4 T30N R11W  
SAN JUAN COUNTY, NEW MEXICO




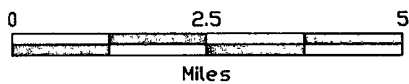
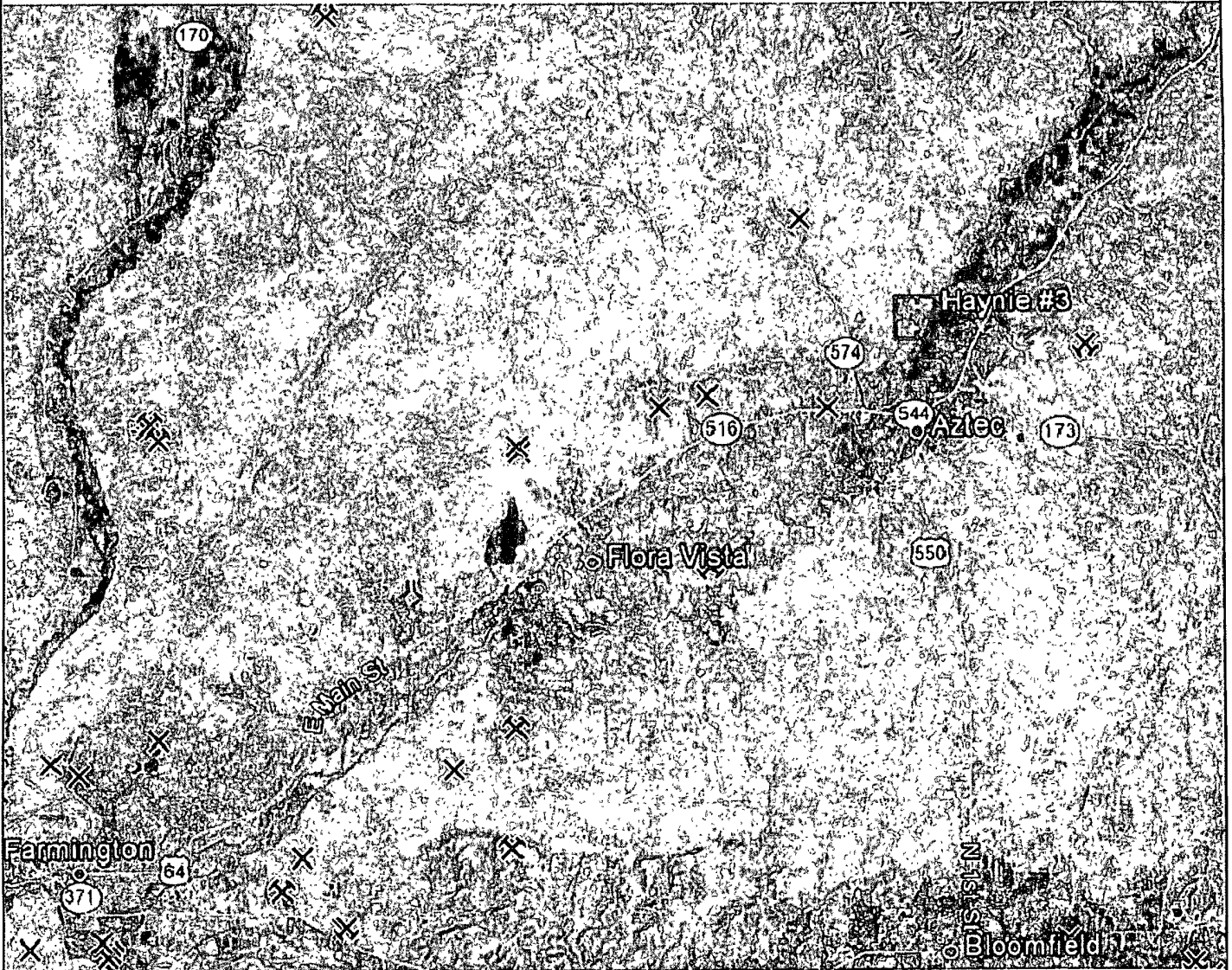
0 250 500  
Feet



FIGURE 2  
AERIAL PHOTOGRAPHIC MAP  
HAYNIE #3  
SEC 4 T30N R11W  
SAN JUAN COUNTY, NEW MEXICO

LEGEND


 WELL PERMIT



# LEGEND

 WELL PERMIT

 Mine

 Closed Mine


 Occurrence, Prospect, or Unknown



FIGURE 3  
MINES, MILL AND QUARRIES MAP  
HAYNIE #3  
SEC 4 T30N R11W  
SAN JUAN COUNTY, NEW MEXICO

NEAREST OPERATIONAL MINE/PIT IS 1.87 MILES AWAY



0 2000 4000  
FEET



# LEGEND



WELL PERMIT



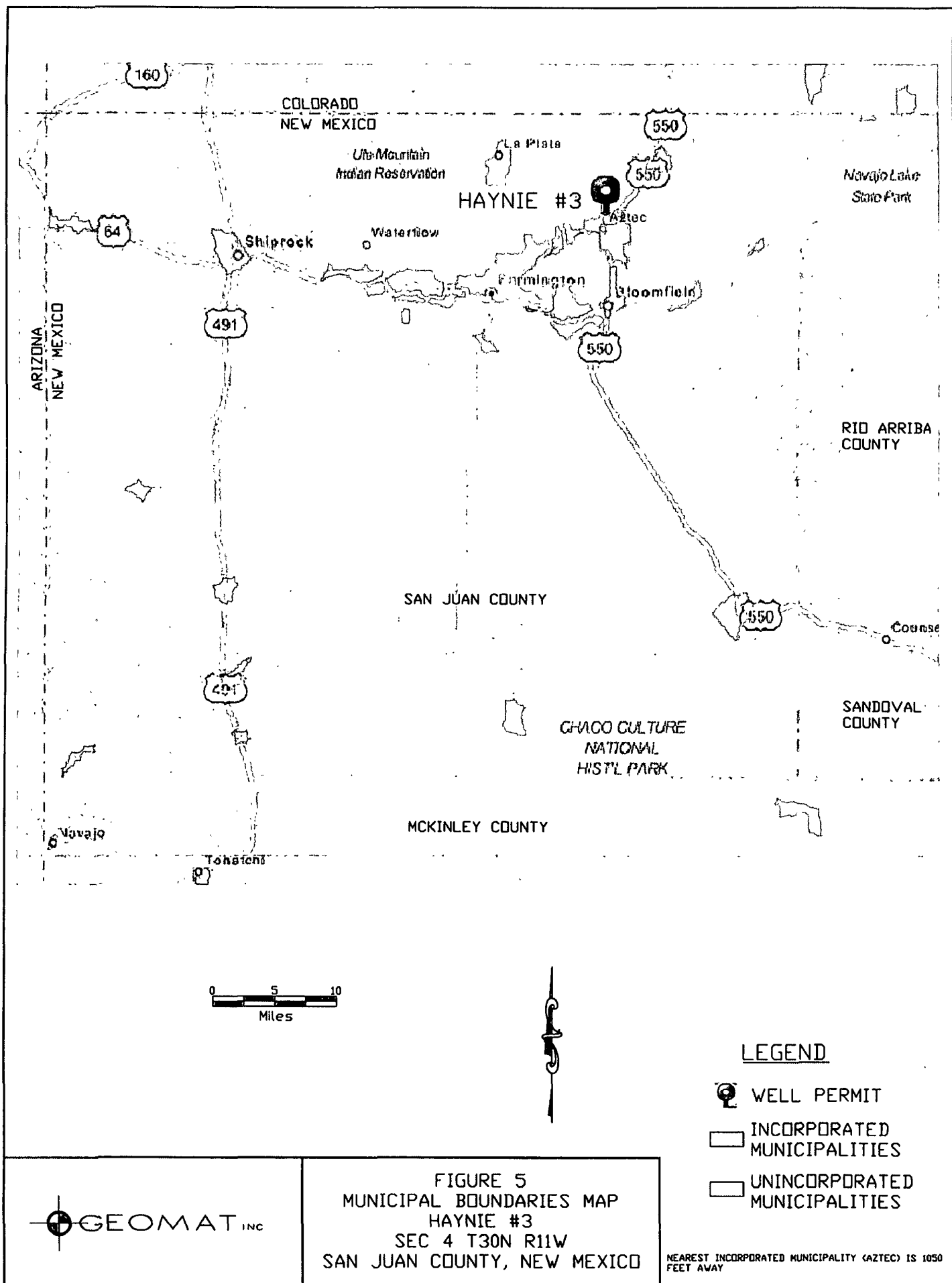
WATER WELL

T30N, R11W, SECTION 4 & 5  
T31N, R11W, SECTION 32 & 33



FIGURE 4  
NEARBY WATER WELL MAP  
HAYNIE #3  
SEC 4 T30N R11W  
SAN JUAN COUNTY, NEW MEXICO

NEAREST SURFACE WATER (FARMERS DITCH) IS 330 FEET AWAY





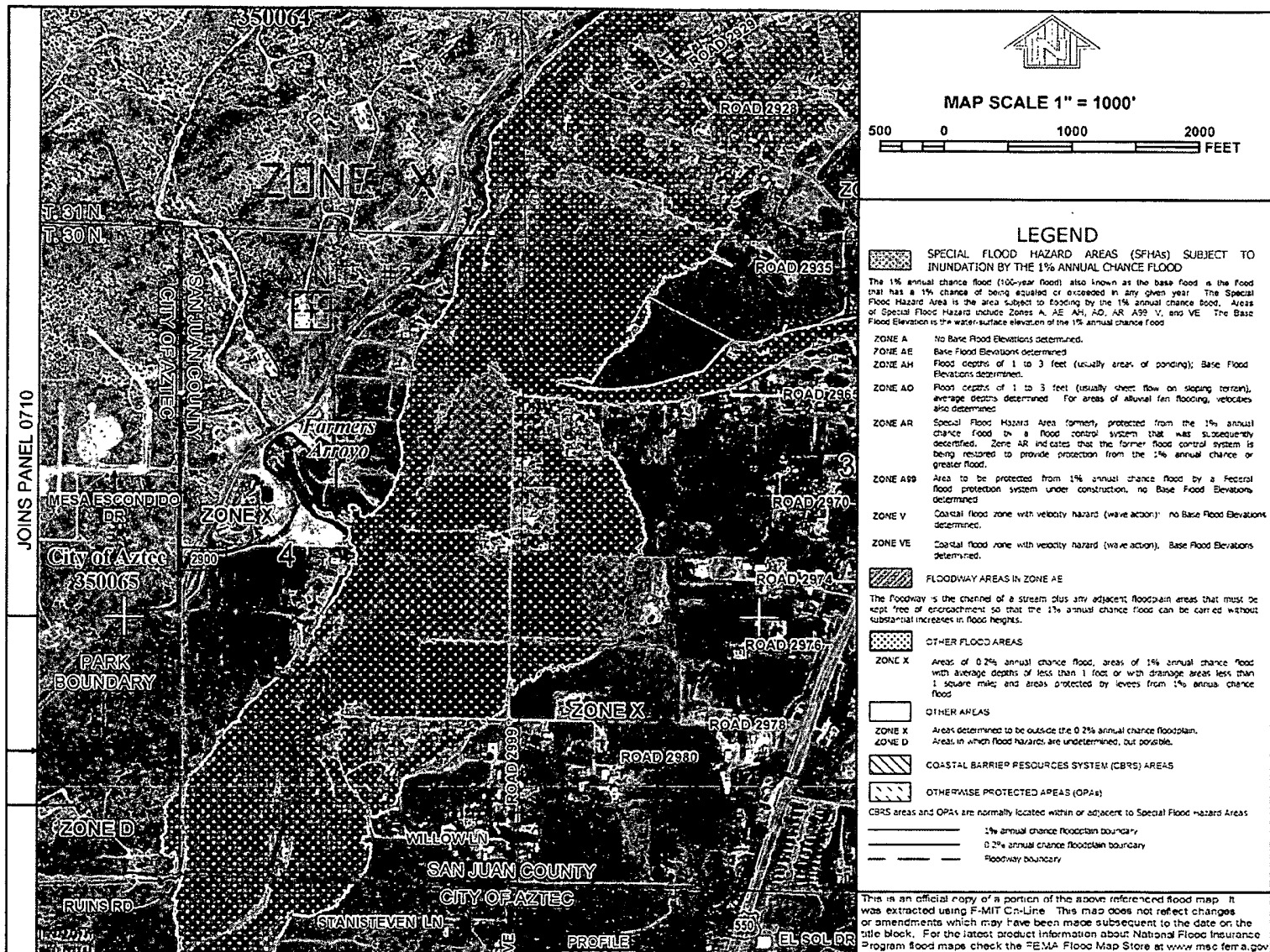
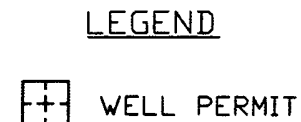


FIGURE 6  
FEMA FLOOD ZONE MAP  
HAYNIE #3  
SEC 4 T30N R11W  
SAN JUAN COUNTY, NEW MEXICO





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

(A CLW##### in the  
POD suffix indicates  
the POD has been  
replaced & no longer  
serves a water right  
file.)

(R=POD has  
been replaced.  
O=orphaned.  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(in feet)

POD Number	POD Code Subbasin	County	Source	q q q	6416 4	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File	Depth Well	Depth Water	Driller	License Number
<u>SJ 01364</u>		SJ	Shallow			2	04	30N 11W	233229	4081846*	03/10/1981	03/14/1981	03/25/1981	115	86	D.K.MCDONALD	725
<u>SJ 01367</u>		SJ	Shallow	1 4 4		04	30N	11W	233294	4080925*	04/30/1981	05/05/1981	07/29/1981	48	20	D.K.MCDONALD	725
<u>SJ 01450</u>		SJ	Shallow	3 4		04	30N	11W	232999	4080846*	05/06/1981	05/10/1981	07/29/1981	45	20	MCDONALD, D K.	725
<u>SJ 02903</u>		SJ	Shallow	2 3 2		04	30N	11W	233127	4081744*	02/20/1999	02/24/1999	02/26/1999	49	31	TERRY HOOD	717
<u>SJ 02941</u>		SJ	Shallow	2 3 4		04	30N	11W	233098	4080945*	11/01/1999	11/02/1999	11/05/1999	58	37	TERRY HOOD	717
<u>SJ 03039</u>		SJ	Shallow	2 1 4		04	30N	11W	233112	4081344*	10/10/2000	12/29/2000	01/10/2001	53	40	T.G. HOOD	717
<u>SJ 03076</u>		SJ	Shallow	3 2 2		04	30N	11W	233339	4081916*	02/12/2003	02/12/2003	02/21/2003	44	10	DEE GILES	1479
<u>SJ 03407</u>		SJ	Shallow	4 4 4		04	30N	11W	233168	4081010	09/03/2003	09/22/2003	11/24/2003	30	5	B.C. DALTON	1190

**Record Count:** 8

**PLSS Search:**

Section(s): 4

Township: 30N

Range: 11W

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/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.

2/7/12 4:51 PM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION





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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(in feet)

POD Number	POD Code	Subbasin	County	Source	q	q	q	6416 4	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File	Depth Well	Depth Water	Driller	License Number
SJ 03267			SJ	Shallow	3	1	2	05		30N	11W	231359	4081993'	09/18/2002	09/22/2002	09/27/2002	83	60		1508

**Record Count:** 1

**PLSS Search:**

Section(s): 5

Township: 30N

Range: 11W

\*UTM location was derived from PLSS - see Help

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2/8/12 9:17 AM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION



# New Mexico Office of the State Engineer

## Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced.  
O=orphaned.  
C=the file is closed)

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

POD Number	POD Code	Subbasin	County	Source	q	q	q	6416 4	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
<u>SJ 01137</u>			SJ	Shallow	4	4	4	33	31N	11W		233553	4082312'	05/30/1980	06/08/1980	06/16/1980	37	19	HOOD, TERRY	717
<u>SJ 02993</u>			SJ	Shallow	2	3	4	33	31N	11W		233155	4082527'	06/20/2000	06/23/2000	06/29/2000	280	160	DEE GILES	1479
<u>SJ 02994</u>			SJ	Shallow	2	3	4	33	31N	11W		233155	4082527'	06/20/2000	08/31/2000	09/01/2000	300	200		1479
<u>SJ 03885 POD3</u>			SJ	Shallow	2	3	1	33	31N	11W		237547	4087396	06/08/2009	06/11/2009	07/06/2009	25	17	CAIN, MATTHEW	1210

**Record Count: 4**

**PLSS Search:**

Section(s): 33

Township: 31N

Range: 11W

\*UTM location was derived from PLSS - see Help

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WELLS WITH WELL LOG INFORMATION



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

(A CLW##### in the  
POD suffix indicates  
the POD has been  
replaced & no longer  
serves a water right  
file.)

(R=POD has  
been replaced.  
O=orphaned.  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(in feet)

POD Number	POD	Code	Subbasin	County	Source	q	q	q	6416 4	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File	Depth	Depth	Well	Water	Driller	License
SJ 03937				SJ	Shallow	4	1	3	32	31N	11W		230722	4082828	11/19/2010	11/22/2010	11/30/2010	67	52		TERRY HOOD	717	

**Record Count: 1**

**PLSS Search:**

Section(s): 32

Township: 31N

Range: 11W

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Page 1 of 1

WELLS WITH WELL LOG INFORMATION

**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 I	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300 I	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: Operator's 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 be 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.