

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  
June 24, 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.

**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

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

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

Operator: <b>BP AMERICA PRODUCTION COMPANY</b>	OGRID #: <b>778</b>
Address: <b>200 ENERGY COURT, FARMINGTON, NM 87410</b>	<b>RCVD JUL 16 '08</b> <b>OIL CONS. DIV.</b>
Facility or well name: <b>NEIL LS 001</b>	<b>DIST. 3</b>
API Number: <b>3004510775</b>	OCD Permit Number: <b>DIST. 3</b>
U/L or Qtr/Qtr <b>A</b> Section <b>14</b> Township <b>31.0N</b> Range <b>11W</b> County: <b>San Juan</b>	
Center of Proposed Design: Latitude <b>36.8849333</b> Longitude <b>-107.9525833</b> NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983	
Surface Owner: <input checked="" type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment	

<input type="checkbox"/> <b>Pit:</b> Subsection F or G of 19.15.17.11 NMAC Temporary: <input type="checkbox"/> Drilling <input type="checkbox"/> Workover <input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> Steel Pit <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 _____ <input type="checkbox"/> String-Reinforced Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____	<input type="checkbox"/> <b>Closed-loop System:</b> Subsection H of 19.15.17.11 NMAC <input type="checkbox"/> Drying Pad <input type="checkbox"/> 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 _____ Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl _____ yd <sup>3</sup> Dimensions: Length _____ x Width _____
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<input checked="" type="checkbox"/> <b>Below-grade tank:</b> Subsection I of 19.15.17.11 NMAC Volume: <b>95</b> bbl Type of fluid: <b>PRODUCED WATER</b> Tank Construction material: <b>STEEL</b> <input checked="" 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 _____	<input type="checkbox"/> <b>Fencing:</b> Subsection D of 19.15.17.11 NMAC <input type="checkbox"/> Chain link, six feet in height, two strands of barbed wire at top <input type="checkbox"/> Four foot height, four strands of barbed wire evenly spaced between one and four feet <input checked="" type="checkbox"/> <b>Netting:</b> Subsection E of 19.15.17.11 NMAC <input checked="" type="checkbox"/> Screen <input type="checkbox"/> Netting <input type="checkbox"/> Other _____ <input type="checkbox"/> Monthly inspections <input checked="" type="checkbox"/> <b>Signs:</b> Subsection C of 19.15.17.11 NMAC <input type="checkbox"/> 12"x24", 2' lettering, providing Operator's name, site location, and emergency telephone numbers <input checked="" type="checkbox"/> Signed in compliance with 19.15.3.103 NMAC
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<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.	<b>Administrative Approvals and Exceptions:</b> Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. <b>Please check a box if one or more of the following is requested, if not leave blank:</b> <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. ( <b>Fencing in Design Plan</b> ) <input type="checkbox"/> Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.
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**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of 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.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.

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

☐ Yes ☒ No

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

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

(Applies to temporary, emergency, or cavitation pits and below-grade tanks)

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

☐ Yes ☒ No

☐ NA

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

(Applies to permanent pits)

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

☐ Yes ☐ No

☒ NA

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society, Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☒ No

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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

**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations (required 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 - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

NMAC

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

**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

**Proposed Closure:** 19.15.17.13 NMAC

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ 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)

**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.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><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).<br>- Topographic map; Visual inspection (certification) of the proposed site  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  | <input type="checkbox"/> Yes <input 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.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input 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.<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 500 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within the area overlying a subsurface mine.<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within an unstable area.<br>- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within a 100-year floodplain.<br>- FEMA map   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |

**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

**Waste Removal Closure For Closed-loop Systems That Utilize 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.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

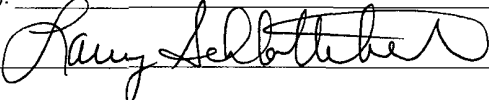
**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ 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 and Design of Burial Trench (if applicable) 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

**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): LARRY SCHLOTTERBACK Title: ENVIRONMENTAL COORDINATOR

Signature:  Date: JULY 15, 2008

e-mail address: \_\_\_\_\_ Telephone: (505) 326-9200

**OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only)

**OCD Representative Signature:** \_\_\_\_\_ **Approval Date:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **OCD Permit Number:** \_\_\_\_\_

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

☐ **Closure Completion Date:** \_\_\_\_\_

**Closure Method:**

- ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method
- ☐ If different from approved plan, please explain.

**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
- ☐ Proof of Deed Notice (if applicable)
- ☐ Plot Plan
- ☐ Confirmation Sampling Analytical Results
- ☐ Waste Material Sampling Analytical Results
- ☐ 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

**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: \_\_\_\_\_

# BP AMERICA PRODUCTION COMPANY

## San Juan Basin in Northwest New Mexico

### Below-Grade Tank General Design and Construction Plan

Pursuant to Rule 19.15.17.11 NMAC, BP America Production Company (BP) shall construct a below-grade tank (BGT) with the following guidelines. Any deviations from this plan will be addressed with the submittal of the New Mexico Oil Conservation Division's (NMCOD) form C-144 at the time of the pit permit application.

- 1) The BGT will be constructed to contain liquids and prevent contamination of fresh water and protect public health and the environment.
- 2) Prior to constructing a BGT, top soil will be stripped for use as a final cover or fill at the time of closure.
- 3) An upright sign, not less than 12" x 24" with lettering not less than 2" height will be placed on the fence surrounding the BGT. Alternatively, a well sign in compliance with 19.15.3.103 NMAC will be posted at the well site. The sign will give BP's name, location by quarter-quarter or unit letter, section, township, range, and emergency phone numbers.
- 4) BP will fence or enclose a BGT in a manner that prevents unauthorized access and shall maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including a BGT.
- 5) BP will fence or enclose a BGT located within 1,000 feet of a permanent residence, school, hospital, institution or church with a chain link security fence, at least six (6) feet in height with at least two (2) strands of barbed wire at the top. BP will ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site.
- 6) BP will fence any other BGT to exclude livestock with a four (4) foot fence that has at least four (4) strands of barbed wire evenly spaced in the interval between one (1) foot and four (4) feet above ground level. It is understood that the NMOCD District III office may approve an alternative to this requirement if BP can demonstrate that an alternative provides equivalent or better protection. BP also recognizes that the NMOCD District III office may impose additional fencing requirements for protection of wildlife in particular areas.
- 7) The following requirements adhere to Subsection I of 19.15.17.11 NMAC.
  - a. BP will ensure that a BGT is constructed of materials resistant to the BGT's particular contents and resistant to damage from sunlight.
  - b. A BGT system shall have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom.
  - c. The BGT will be constructed to prevent overflow and the collection of surface water run-on.
  - d. Construction and usage of a BGT that does not have double walls provided that the BGT's side walls are open for visual inspection for leaks, the BGT's bottom is elevated a minimum of six (6) inches above the underlying ground surface and the BGT is underlain with a geomembrane liner, which may be covered with gravel, to divert leaked liquid to a location that can be visually inspected. BP will equip BGTs designed in this manner with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the NMOCD District III office approves. The geomembrane liner shall have a hydraulic conductivity no greater than  $1 \times 10^{-9}$  cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility will comply with EPA SW-846 method 9090A..
  - e. Any other BGT, in which the side walls are not open for visible inspection for leaks shall be double

walled with leak detection capability.

- f. It is understood BP may construct a BGT according to an alternative system that the NMOCD District III office approves based upon the demonstration that the alternative provides equivalent or better protection.
- g. BP's BGTs constructed and installed prior to June 16, 2008 that have the side walls open for visual inspection and are placed upon a geomembrane liner but does not meet all the requirements in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC are not required to equip or retrofit the BGT to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC so long as the BGTs demonstrate integrity. If the existing BGTs do not demonstrate integrity, then BP will promptly remove those BGT and install a BGT that do comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
- h. BP's BGTs constructed and installed prior to June 16, 2008 that do not comply with Paragraph (1) through (4) of Subsection I of 19.15.17.11 NMAC or do not comply with Paragraph (5) of Subsection I of 19.15.17.11 NMAC will equip or retrofit the BGT to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within five (5) years after June 16, 2008. If existing BGTs do not demonstrate integrity, BP will promptly remove those BGTs and install a BGT that do comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.

**BP AMERICA PRODUCTION COMPANY**  
**San Juan Basin in Northwest New Mexico**  
**Below-Grade Tank General Operating and Maintenance Plan**

Pursuant to Rule 19.15.17.12 NMAC, America Production Company (BP) shall maintain and operate a below-grade tank (BGT) with the following guidelines. Any deviations from this plan will be addressed with the submittal to the New Mexico Oil Conservation Division's (NMOCD) form C-144 at the time of the BGT permit application.

- 1) The BGT will be operated and maintained to contain liquids and prevent contamination of fresh water, protect public health and the environment.
- 2) The fluids contents will be re-used, recycled or disposed in a manner to protect fresh water, public health and the environment. Disposal is addressed in the "Closure Plan" for the site.
- 3) No hazardous waste will be discharged or stored in a BGT.
- 4) If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then BP will notify the NMOCD's District III office within 48 hours of the discovery and repair the damage or replace the liner.
- 5) If a BGT develops a leak, or if any penetration of the pit liner or BGT occurs below the liquid's surface, then BP will remove all liquid above the damage or leak line within 48 hours, notify the NMOCD's District III office within 48 hours of the discovery and repair the damage or replace the pit liner and/or BGT.
- 6) BP will install a BGT to prevent the collection of surface water run-on.
- 7) The following requirements adhere to Subsection D of 19.15.17.12 NMAC.
  - a. BP will not allow its BGTs to overflow or allow surface water run-on to enter into its BGTs.
  - b. BP will remove any visible or measurable layer of oil from the fluid surface of any of its BGTs.
  - c. BP will inspect BGTs at least monthly and maintain a written record of each inspection for five (5) years.
  - d. BP will maintain adequate freeboard to prevent overtopping of its BGT.

# BP AMERICA PRODUCTION COMPANY

## SAN JUAN BASIN, NORTHWEST NEW MEXICO

### BELOW-GRADE TANK GENERAL CLOSURE PLAN

As stipulated in Rule 19.15.17.13 NMAC, the following information adheres to the requirements established in closing below-grade tanks (BGTs) on BP America Production Company (BP) well sites. This plan will address the standard protocols and procedures for closure of below grade tanks. If deviations from this plan are necessary, any specific changes will be included with New Mexico Oil Conservation Division (NMOCD) form C-144.

BP shall close its existing BGTs that do not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five (5) years after June 16, 2008, if not retrofitted to comply with Paragraph (1) through (4) of Subsection I of 19.15.17.11 NMAC. BP shall close its permitted BGTs within 60 days of cessation of the BGTs operation or as required by the transitional provisions of Subsection B, of 19.15.17.17 NMAC in accordance with this closure plan after receiving NMOCD's division District III office approval.

The following outline addresses all requirements for closure of BP's BGTs;

1. Notification to the surface owner by certified mail, with return receipt request, will be given prior to BP's intent on conducting, with NMOCD's pre-approval, confirmation sampling for closure. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is understood to demonstrate compliance with this requirement.
2. In addition, notification will also be given to the division District III office verbally or by other means at least 72 hours, but not more than one (1) week, prior to any closure operation. The notice shall include the well name and number to be closed, legal description utilizing unit letter, section, township, range, and API number.
3. Remove liquids and sludge from the BGTs prior to implementing a closure method and dispose of the liquids and sludge in a NMOCD's division-approved facility. A list of BP approved disposal facilities are included at the end of this document.
4. Remove the BGTs and dispose of it in a NMOCD's division-approved facility or recycle, reuse, or reclaim it in a manner that the NMOCD's division District III office approves.
5. Remove any on-site equipment associated with a BGTs unless the equipment is required for some other purpose.
6. BP will test the soils beneath the BGTs to determine whether a release has occurred. At a minimum, a five (5) point composite sample and individual grab samples from any area that is wet, discolored or showing other evidence of a release will be analyzed for BTEX, TPH and chlorides. The testing methods and closure standards for those constituents are as follows;

Constituents	Testing Method	Closure Standards (mg/Kg)
Benzene	US EPA Method SW-846 8021B or 8260B	0.2
Total BTEX	US EPA Method SW-846 8021B or 8260B	50
TPH	US EPA Method SW-846 418.1	100
Chlorides	US EPA Method 300.1	250 or background

**Notes:** mg/Kg = milligram per kilogram, BTEX = benzene, toluene, ethylbenzene, and total xylenes, TPH = total petroleum hydrocarbons. Other EPA method that the division approves may be applied to all constituents listed. Chloride closure standards will be determined by which ever concentration level is greatest.

7. BP will notify the division District III office of its results on form C-141. It is understood that the NMOCD may require additional delineation upon review of the results.
8. If it is determined that a release has occurred, then BP will comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.
9. If the confirmation sampling demonstrates that a release has not occurred or that any release does not exceed the concentrations specified above, then BP will backfill the excavation, with NMOCD's pre-approval, with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The NMOCD prescribed soil cover, recontouring and re-vegetation requirements shall comply with Subsections G, H and I of 19.15.17.13 NMAC.



10. Within 60 days of closure completion, submittal of a closure report on NMOCD's form C-144, with necessary attachments to document all closure activities including sampling results; information required by 19.15.17 NMAC; a plot plan; and details on back-filling, capping and covering, where and if applicable, will be furnished. BP will certify that all information in the report and attachments is accurate, truthful, and compliant with all applicable closure requirements and conditions specified in the approved closure plan
11. Reclamation will follow 19.15.17.13G (1) and (2).
  - a. Once the BGT has been approved for closure by NMOCD, the BGT location and all areas associated with the BGT including associated access roads will be reclaimed to a safe and stable condition that blends with the surrounding undisturbed area. It is understood that BP shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19.15.17.13 NMAC, recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC.
12. Soil cover will follow 19.15.17.13H (1) and (3).
  - a. The soil cover for closures where the BGT has been removed or remediated to the NMOCD's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.
  - b. The soil cover will be constructed to the site's existing grade and all possible efforts will be conducted to prevent ponding of water and erosion of the cover material.
13. Revegetation will follow 19.15.17.13I (1), (2), (3), (4) and (5).
  - a. Revegetation of the pit location and any associated access road(s) will be attempted during the first growing season after closure of the pit with seeding or planting of the disturbed areas. Seeding will be accomplished by tilling/plowing on the contour whenever practical or by other division-approved methods. Vegetative cover will be, at a minimum, 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation), consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.
  - b. Seeding or planting will be repeated until it successfully achieves the required vegetative cover.
  - c. When conditions are not favorable for the establishment of vegetation, such as periods of drought, it is understood that the division may allow sufficient time to delay seeding or planting until soil moisture conditions become favorable. In addition, the division may require BP to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing or other practices.
  - d. Notification will be given to the division District III office when seeding or planting has been successfully achieved.

Proposed waste disposal sites:

BP Crouch Mesa Landfarm, Permit NM-02-003  
JFJ Landfarm, Permit NM-01-010(B)  
Basin Disposal, Permit NM-01-0005  
BP Operated E.E. Elliott SWD #1, API 30-045-27799  
BP Operated 13 GCU SWD #1, API 30-045-28601  
BP Operated GCU 259 SWD, API 30-045-20006  
BP Operated GCU 306 SWD, API 30-045-24286  
BP Operated GCU 307 SWD, API 30-045-24248  
BP Operated GCU 328 SWD, API 30-045-24735  
BP Operated Pritchard SWD #1, API 30-045-28351

# ***BLAGG ENGINEERING, INC.***

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

July 15, 2008

BP America Production Company

Neil LS #1

(A) Section 14 – T31N – R11W

API #: 30-045-10775

San Juan County, New Mexico

## **Hydrogeology Report**

**(Pursuant to NMAC 19.15.17.9, Subsection B, Paragraph 4)**

1) Topography: The well site is located between Kiffen and Deer Canyon washes north of Aztec, New Mexico. The proposed below-grade tank (BGT) is located on a flat portion on the north side of the well pad butted against a sandstone ledge. The site surroundings consist of exposed sandstone with a thin layer of coarse grained sand.

2) Soils: Surface soil at the proposed pit site is comprised primarily of a coarse grained sand. The thickness of this sand at the site is approximately 0-4 feet and overlies a dense sandstone surface that outcrops throughout the region (see Geology, below).

3) Geology: Review of geologic maps published by the New Mexico Bureau of Geology and Mineral Resources, 2003, indicates the outcrop at the site is the Nacimiento Formation of Paleocene age. This formation is described as a gray and brown shale and tan, medium grained and conglomeratic sandstone with a thickness as much as 240 meters. Its origin developed from fluvial and lacustrine type environments.

4) Surface Hydrology: Surface run off at the western perimeter of the well pad is towards the southwest in the direction of an unnamed drainage feeding into the Deer Canyon wash with a southeast flow direction (see attached topography map). Visual inspection of the site did present past evidence of historical precipitation that could have impaired the integrity of existing on-site BGTs, but that engineered countermeasures have been instituted that include berming of the northern well pad perimeter to control surface run on/runoff. Routine inspection and maintenance of this berming may be necessary following severe storm events. In addition, no new manmade ponds, ditches, or any other surface depressions for surface water accumulation purposes were observed.

5) Groundwater Hydrology: Information researched in the New Mexico State Engineer's well database indicated that depth to groundwater in a water well reportedly about 1,000 feet east of the well pad is less than 50 feet below grade. However, the exact elevation and location of the water well is not clearly defined (see attached topography map). Visual inspection and review of areal photography of the area did not reveal any such well to be present, indicating a possible error in the State Engineer's records. With bedrock sandstone being exposed at the site's surface (inspected at the on-site BGT areas) and surroundings, it is difficult to ascertain the exact depth to groundwater. The well site ground elevation was recorded at 5,917 feet above mean sea level and the surface of the Deer Canyon wash in the down slope direction from the nearby surface drainage is

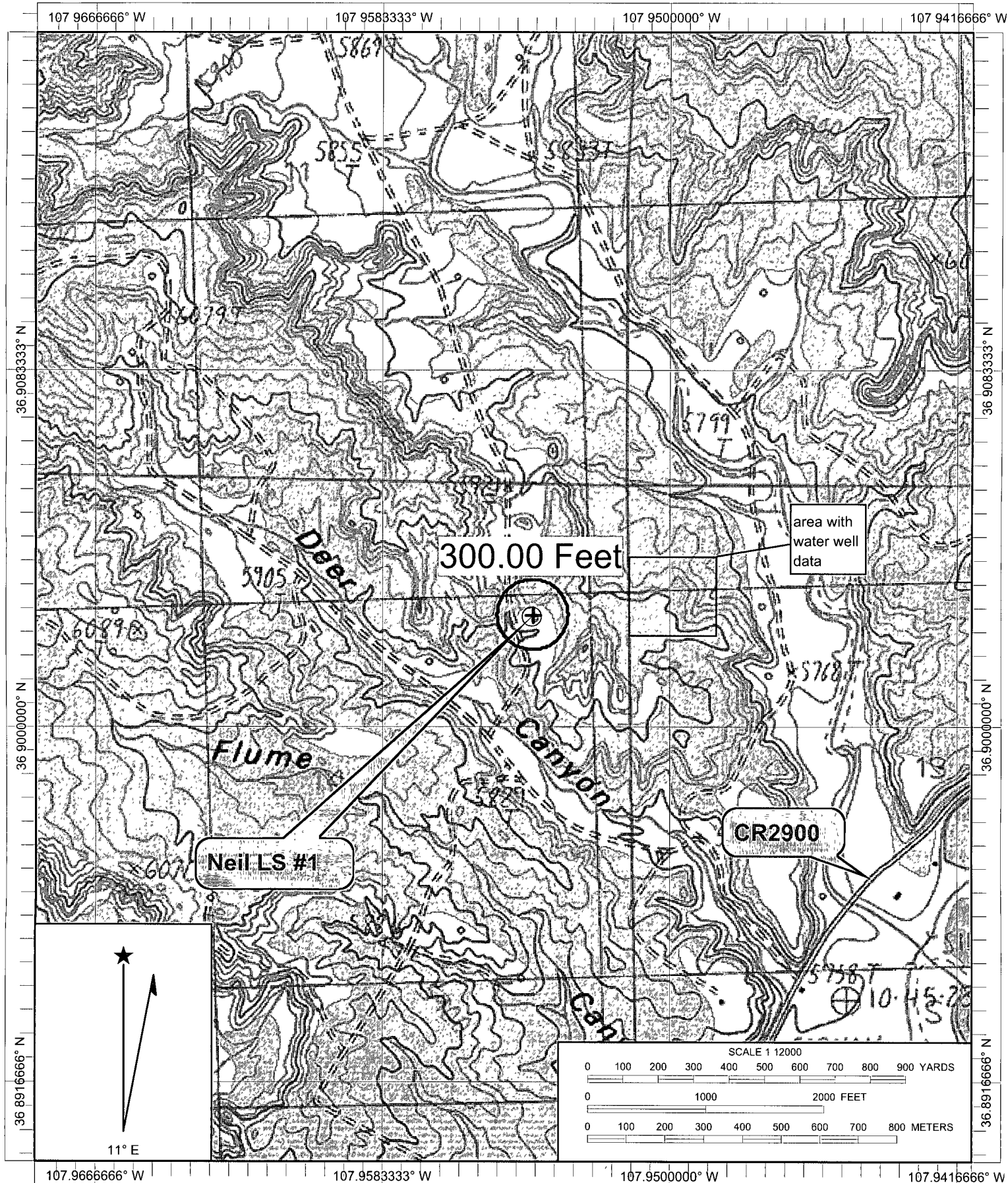
approximately at

5,840 feet, for a mean difference of 77 feet. A site inspection of the unnamed drainage did not indicate any signs of perched or seeping groundwater. It is the opinion of Blagg Engineering that groundwater at the BGT site is greater than 77 feet below grade.

6) Ground Stability: The well pad's pit position is located on soils atop a sandstone outcrop of the Nacimiento Formation. Visual inspection of the site did not show any faulting, fracturing, sink holes or erosional features that would indicate an unstable area. However, as previously noted, surface run on/runoff from any severe storm(s) may compromise the berm following such an event(s) and will call for continued inspection and maintenance.

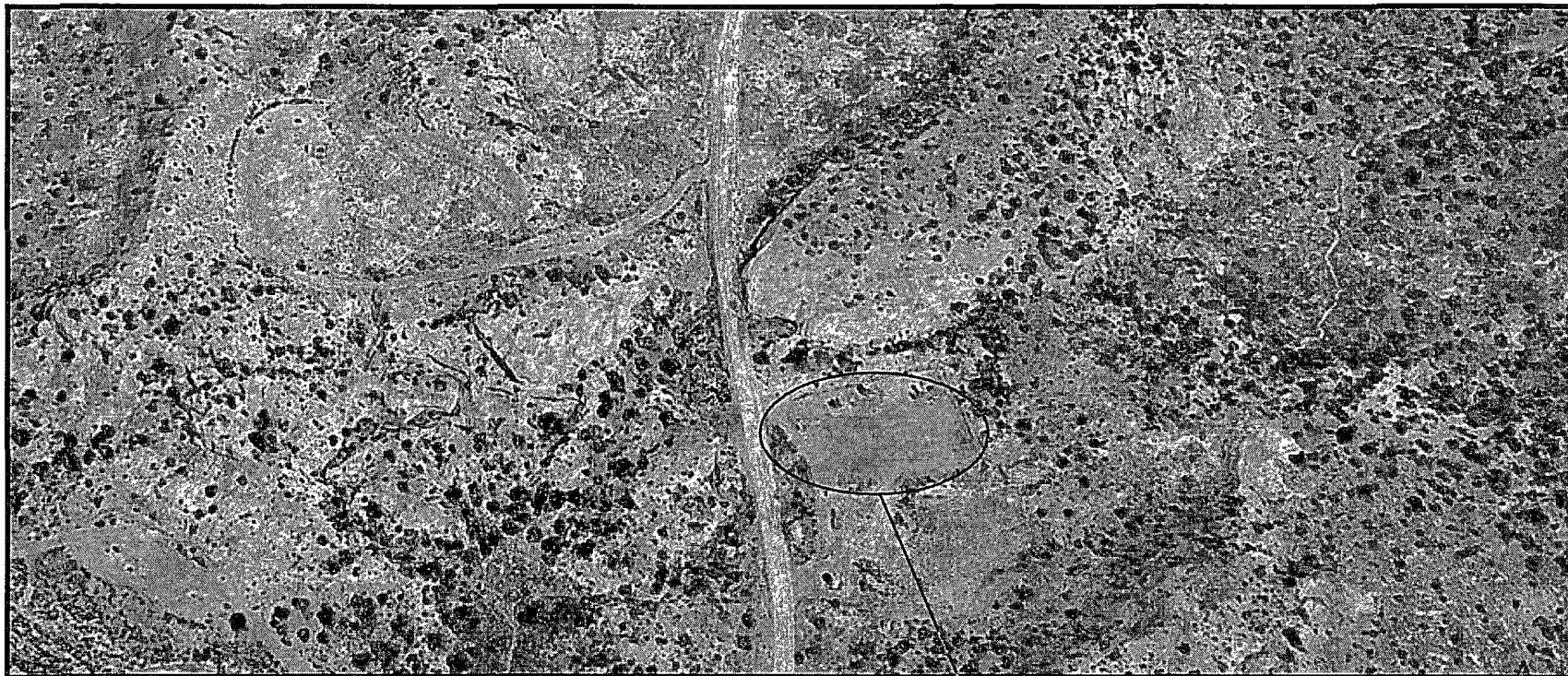
7) Wetlands, FEMA Flood Zones, and Mines: U. S. Fish and Wildlife Wetlands Maps, FEMA FIRM Flood Zone Maps and New Mexico Office of Mines, Mills and Quarry maps were reviewed to identify any such zones in the area of the proposed below-grade tank. No such wetlands, flood zones or mines/mills/quarry's were identified within the NMOCD stipulated distances from the site. Maps of the data search are attached.

8) Private residences, wells, springs, schools, hospitals, institutions, churches: The site was inspected for evidences of buildings, wells, etc. and no such structures were evident within a half (½) mile of the site. The NM Office of State Engineer records were reviewed for well data. No such data was found within one (1) mile down gradient of the site (records search attached).



Name: CEDAR HILL  
Date: 7/14/2008  
Scale: 1 inch equals 1000 feet

Location: 036.9030454° N 107.9548498° W  
Caption: Neil LS #1  
Unit A, Sec. 14, T31N, R11W



BP - Neil LS #1  
Unit A, Sec. 14, T31N, R11W  
San Juan County, NM  
36.90297267/-107.9541622

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

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Township:	<input type="text" value="31N"/>	Range:	<input type="text" value="11W"/>	Sections:	<input type="text" value="14"/>			
NAD27	X:	<input type="text"/>	Y:	<input type="text"/>	Zone:	<input type="text" value="N"/>	Search Radius:	<input type="text"/>
County:	<input type="text" value="Santa Fe"/>	Basin:	<input type="text" value="San Juan"/>	Number:	<input type="text"/>	Suffix:	<input type="text"/>	
Owner Name:	(First) <input type="text"/>	(Last) <input type="text"/>	<input type="radio"/> Non-Domestic <input type="radio"/> Domestic <input checked="" type="radio"/> All					
<input type="button" value="POD / Surface Data Report"/>		<input type="button" value="Avg Depth to Water Report"/>		<input type="button" value="Water Column Report"/>				
<input type="button" value="Clear Form"/>		<input type="button" value="iWATERS Menu"/>		<input type="button" value="Help"/>				

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**WATER COLUMN REPORT 07/14/2008**

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

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in feet) Column
No Records found, try again												

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

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

Owner Name: (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All

**WATER COLUMN REPORT 07/14/2008**

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

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in feet) Column
SJ 02978	31N	11W	23	2	1	3				800		
SJ 02129	31N	11W	23	2	4					72	35	37
SJ 01817	31N	11W	23	2	4					65	20	45
SJ 02161	31N	11W	23	3	4					40	25	15

Record Count: 4

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

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

Owner Name: (First)  (Last)  ☐ Non-Domestic ☐ Domestic ☒ All

**WATER COLUMN REPORT 07/14/2008**

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

POD Number	Tw	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in feet) Column
SJ 02395	31N	11W	13	1	1	3				95	35	60
SJ 00560	31N	11W	13	2	4					39	25	14
SJ 01551	31N	11W	13	2	4					64	42	22
SJ 01640	31N	11W	13	2	4					32	7	25
SJ 01729	31N	11W	13	2	4					48	28	20
SJ 01539	31N	11W	13	3						52	30	22
SJ 01541	31N	11W	13	3						52	30	22
SJ 00946	31N	11W	13	3	3					135	100	35



**Back**



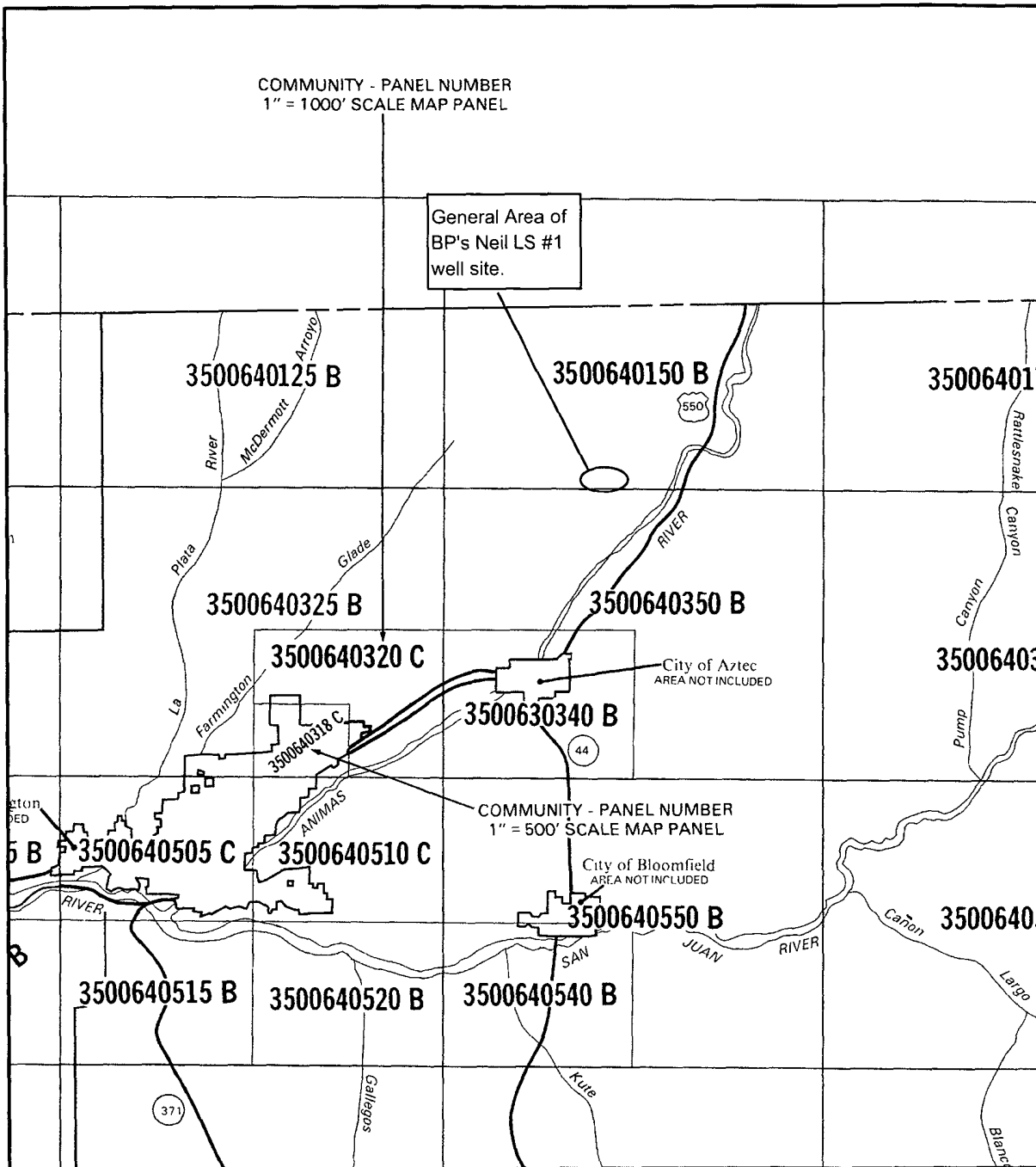
Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD  
Primary Status: PMT Permit  
Total Acres: 0  
Total Diversion: 3  
Owner: [REDACTED]

Doc	File/Act	Status	1	2	3	Trans	Desc	From/To	Acres	Diversion	Consumptive
-----	----------	--------	---	---	---	-------	------	---------	-------	-----------	-------------



72121\_08/28/1992 PMT LOG ABS SJ 02395 T 0 3

Point of Diversion	(qtr are 1=NW 2=NE 3=SW 4=SE) (qtr are biggest to smallest)							X Y are in Feet			UTM are in Meters)				
POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y	UTM_Zone	Easting	Northing	Latitude	Longitude
SJ_02395	Shallow	31N	11W	13	1	1	3				13	237155	4088191	0 0 0	0 0 0



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

SAN JUAN COUNTY,  
NEW MEXICO  
(UNINCORPORATED AREAS)

**MAP INDEX**

PANELS PRINTED: 125, 150, 175,  
200, 275, 300, 318, 320, 325, 340,  
350, 375, 400, 460, 480, 485, 505,  
510, 515, 520, 540, 550, 575, 700,  
725, 750, 875, 900, 925, 1050, 1075,  
1100, 1225, 1250, 1275, 1400, 1425,  
1450

COMMUNITY-PANEL NUMBER  
350064IND0

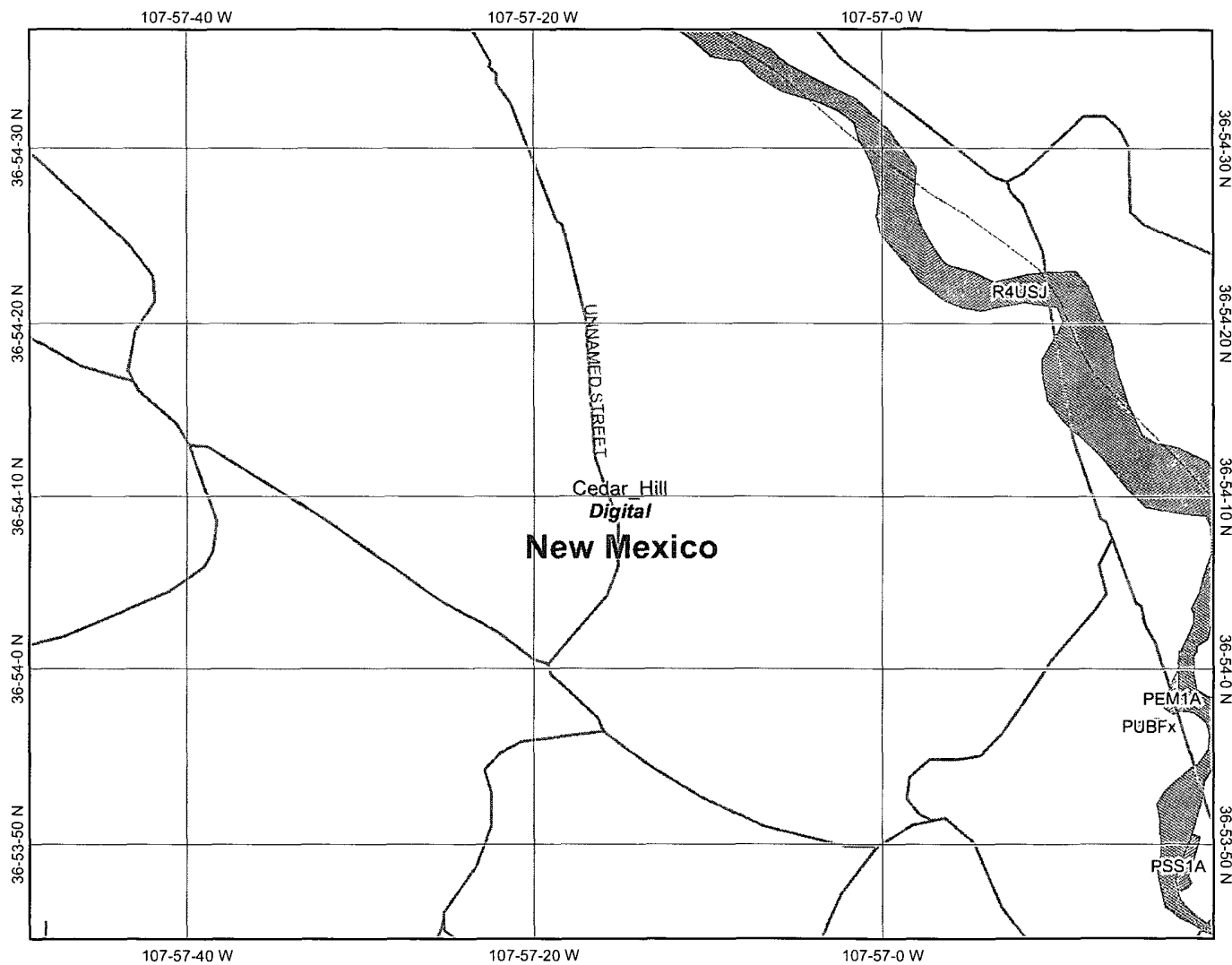
MAP REVISED  
MAY 15, 2002



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

# BP - Neil LS #1



Map center: 36° 54' 11" N, 107° 57' 15" W



## Legend

Ohio\_wet\_scan

- 0
- 1
- Out of range
- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America



Scale: 1:11,314

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes: Unit A, Sec. 14, T31N, R11W  
San Juan Co., NM

Site @ map center.

# BP - Neil LS #1 Mines, Mills, & Quarry Web Map

## Mines, Mills & Quarries Commodity Groups

- △ Aggregate & Stone Mines
- ◆ Coal Mines
- ★ Industrial Minerals Mines
- ▼ Industrial Minerals Mills
- ▣ Metal Mines and Mill Concentrate
- Potash Mines & Refineries
- ⌘ Smelters & Refinery Ops.
- ✱ Uranium Mines
- ⊕ Uranium Mills

## Mines, Mills & Quarries Status

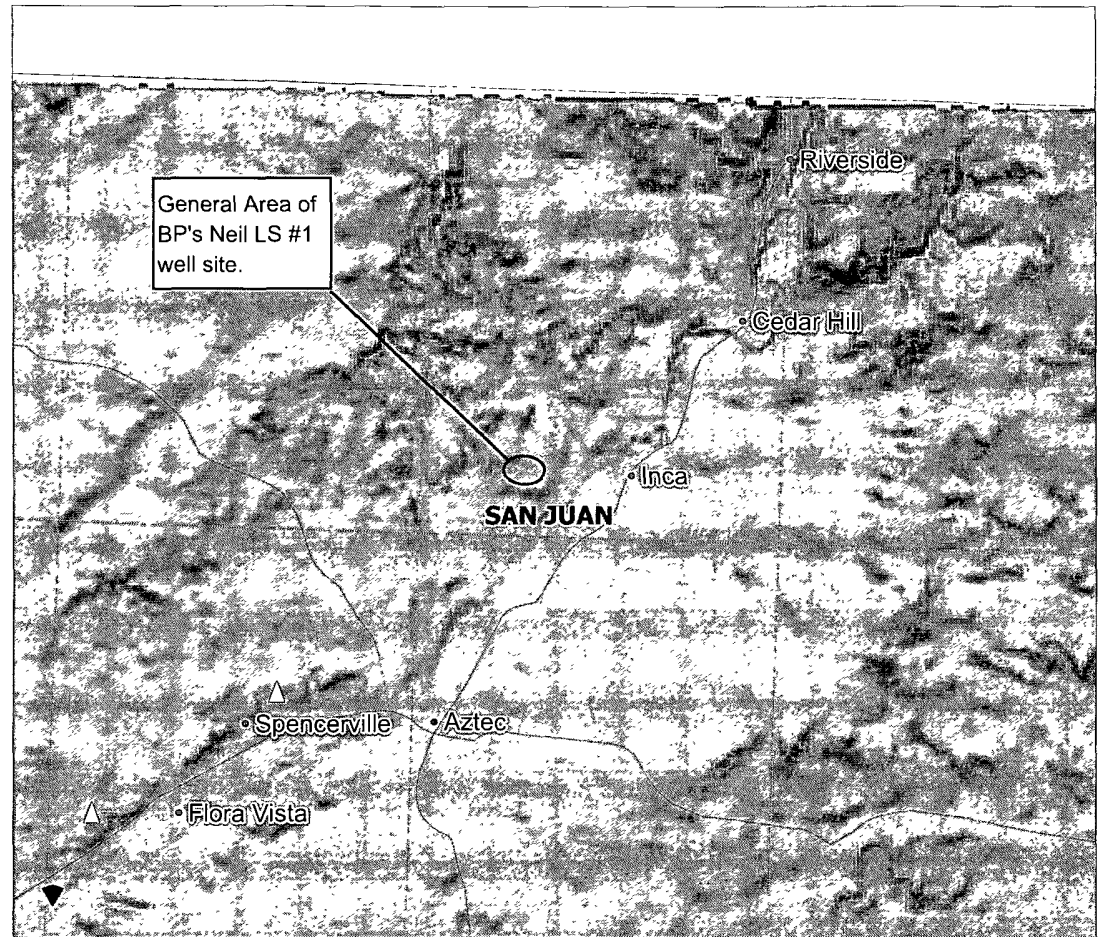
- × Active Mining
- ▲ Active Mining, Active Reclamation
- ◆ Permanent Closure, Active Reclamation
- ⊙ Permanent Closure, Reclaimed Awaiting Bond Release
- ⌘ Temporary Suspension
- ⊙ Under Development

## Population

- ⊙ Cities (2000 Census)

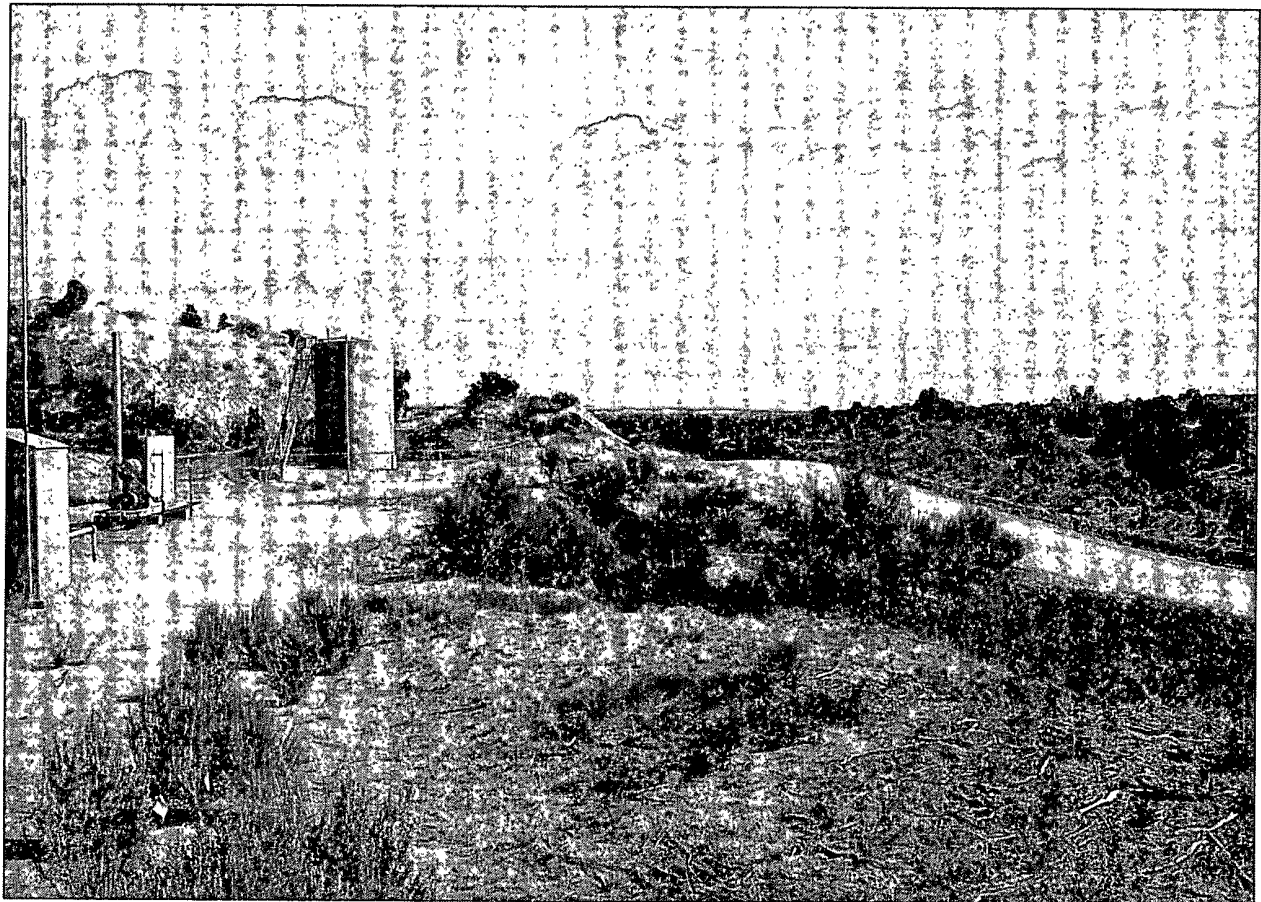
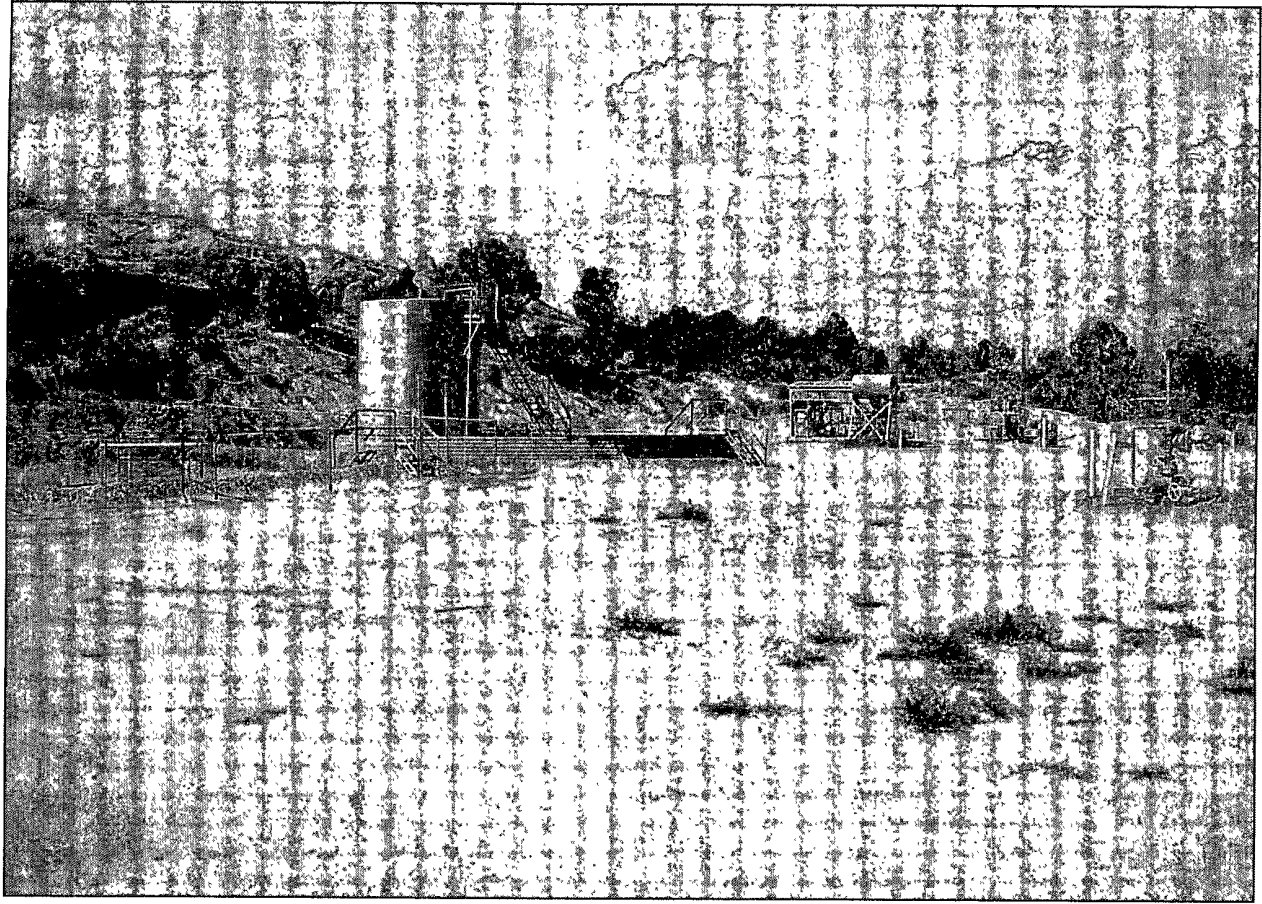
## Transportation

- ||| Railways



SCALE 1 : 220,625







**BP America Production Company**  
200 Energy Court  
Farmington, NM 87401  
Phone: (505) 326-9200

July 15, 2008

Bureau of Land Management  
1235 La Plata Highway  
Farmington, NM 87401

RE: Notice of Proposed Below Grade Tank Construction  
Neil LS 1  
Unit A, Section 14, Township 31N, Range 11W

Dear Mr. Herman Lujan:

In regards to the captioned subject and requirements of the new NMOCD pit rule, this letter is notification that BP America Production Company is planning to install a Below Grade Tank (BGT) that will be used for daily operations on this location.

Should you have any questions, please feel free to contact me at 326-9425 in our Farmington office.

Sincerely,

Larry Schlotterback  
Field Environmental Coordinator