

District I

1625 N French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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

State of New Mexico  
Energy Minerals and Natural Resources

Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144

July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office

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>Burlington Resources Oil &amp; Gas Company, LP</u>	OGRID#: <u>14538</u>
Address: <u>PO Box 4289, Farmington, NM 87499</u>	
Facility or well name: <u>Heaton #101S</u>	
API Number: <u>30-045-34359</u>	OCD Permit Number: <u>DIST. 3</u>
U/L or Qtr/Qtr: <u>D(NWNW)</u> Section: <u>33</u> Township: <u>31N</u> Range: <u>11W</u> County: <u>San Juan</u>	
Center of Proposed Design: Latitude: <u>36.86076400' N</u> Longitude: <u>108.00176700' W</u> 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	

2	
<input checked="" type="checkbox"/> <b>Pit:</b> Subsection F or G of 19.15.17.11 NMAC	
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: <u>7000</u> bbl Dimensions L <u>120'</u> x W <u>55'</u> x D <u>12'</u>	

3	
<input type="checkbox"/> <b>Closed-loop System:</b> Subsection H of 19.15.17.11 NMAC	
Type of Operation: <input type="checkbox"/> P&A <input 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)	
<input type="checkbox"/> Drying Pad <input 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"/> PVD <input type="checkbox"/> Other _____	
Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____	

4	
<input checked="" type="checkbox"/> <b>Below-grade tank:</b> Subsection I of 19.15.17.11 NMAC	
Volume: <u>120</u> bbl	Type of fluid: <u>Produced Water</u>
Tank Construction material: <u>Metal</u>	
<input type="checkbox"/> Secondary containment with leak detection <input checked="" 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 <u>30</u> mil	<input checked="" 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' **Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pit, temporary pits, and below-grade tanks*)

☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☒ Alternate. Please specify Please See Design Plan

7 **Netting:** Subsection E of 19.15.17 11 NMAC (*Applies to permanent pits and permanent open top tanks*)

☒ Screen ☐ Netting ☐ Other \_\_\_\_\_

☒ Monthly inspections (*If netting or screening is not physically feasible*)

8 **Signs:** Subsection C of 19.15.17.11 NMAC

☐ 12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15 3.103 NMAC

9 **Administrative Approvals and Exceptions:**  
Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

*Please check a box if one or more of the following is requested, if not leave blank:*

☐ Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration of approval

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval

<p>10 <b>Siting Criteria (regarding permitting):</b> 19.15.17.10 NMAC</p> <p><i>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.</i></p> <p><b>Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.</b> - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</p> <p><b>Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).</b> - Topographic map; Visual inspection (certification) of the proposed site</p> <p><b>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</b> (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p> <p><b>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</b> (<i>Applied to permanent pits</i>) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p> <p><b>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.</b> - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.</p> <p><b>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</b> - Written confirmation or verification from the municipality. Written approval obtained from the municipality</p> <p><b>Within 500 feet of a wetland.</b> - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</p> <p><b>Within the area overlying a subsurface mine.</b> - Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division</p> <p><b>Within an unstable area.</b> - Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</p> <p><b>Within a 100-year floodplain</b> - FEMA map</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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**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 \_\_\_\_\_ or Permit \_\_\_\_\_

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**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 \_\_\_\_\_

☐ Previously Approved Operating and Maintenance Plan API \_\_\_\_\_

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**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

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**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 (Below-grade Tank)  
☐ Waste Removal (Closed-loop systems only)  
☒ On-site Closure Method (only for temporary pits and closed-loop systems)  
☒ In-place Burial ☐ On-site Trench  
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

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**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 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 \_\_\_\_\_ Disposal Facility Permit #: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit #: \_\_\_\_\_

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

☐ Yes (If yes, please provide the information) ☐ No

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

☐ Soil Backfill and Cover Design Specification - 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

**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

☐ N/A

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

☐ N/A

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

☐ N/A

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

☐ 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 the 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

**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

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**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): Crystal Tafoya Title: Regulatory Technician  
 Signature: *Crystal Tafoya* Date: 7/28/2008  
 e-mail address: crystal.tafoya@conocoPhillips.com Telephone: 505-326-9837

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**OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)OCD Representative Signature: *Bob Pelt* Approval Date: 8-4-08Title: Enviro Spec OCD Permit Number: \_\_\_\_\_

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

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**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.

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**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

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**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 (if applicable)  
☐ 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

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

**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 07/25/2008**

(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 Column
SJ 01437	30N	11W	03	1						40	28	1
SJ 03121	30N	11W	03	1	2	4				36	12	2
SJ 02049	30N	11W	03	1	3					26	8	1
SJ 01339	30N	11W	03	1	3	1				40	15	2
SJ 02835	30N	11W	03	1	3	2				26	8	1
SJ 00350	30N	11W	03	1	3	2				46	12	3
SJ 02814	30N	11W	03	1	3	2				31	8	2
SJ 01441	30N	11W	03	1	3	2				48	20	2
SJ 01387	30N	11W	03	1	4					40	18	2
SJ 03698 POD1	30N	11W	03	1	4	1				40	5	3
SJ 02785	30N	11W	03	1	4	2				31	5	2
SJ 01805	30N	11W	03	2						35	20	1
SJ 01313	30N	11W	03	2						70	58	1
SJ 01807	30N	11W	03	2	1					50	30	2
SJ 02781	30N	11W	03	2	1	2				48	23	2
SJ 01202	30N	11W	03	2	1	2				35	8	2
SJ 03758 POD1	30N	11W	03	2	1	2		268158	2127473	49	21	2
SJ 03765 POD1	30N	11W	03	2	1	2		268163	2127605	43	20	2
SJ 03756 POD1	30N	11W	03	2	1	2		268179	2127870	41	20	2
SJ 02786	30N	11W	03	2	3	1				51	24	2
SJ 01901	30N	11W	03	2	3	2				60	26	3
SJ 00698	30N	11W	03	2	3	3				44	14	3
SJ 01261	30N	11W	03	2	3	4					20	
SJ 02930	30N	11W	03	2	4	4				81	64	1
SJ 02798	30N	11W	03	2	4	4				80	61	1
SJ 00402	30N	11W	03	3						32	18	1
SJ 00762	30N	11W	03	3	2					47	22	2
SJ 01734	30N	11W	03	3	2					33	5	2

<u>SJ 01440</u>	30N	11W	03	3	2	3	41	21	2
<u>SJ 01020</u>	30N	11W	03	3	3		27	5	2
<u>SJ 03242</u>	30N	11W	03	3	3	1	23	9	1
<u>SJ 03732 POD1</u>	30N	11W	03	3	3	1	38	9	2
<u>SJ 03239</u>	30N	11W	03	3	3	3	33	12	2
<u>SJ 01238</u>	30N	11W	03	4	1		95	38	5
<u>SJ 02245</u>	30N	11W	03	4	1	3	66	30	3
<u>SJ 01043</u>	30N	11W	03	4	1	4	50		
<u>SJ 01249</u>	30N	11W	03	4	2		52	22	3
<u>SJ 02824</u>	30N	11W	03	4	2	1	70	50	2
<u>SJ 02563</u>	30N	11W	03	4	2	1	96	60	3
<u>SJ 03153</u>	30N	11W	03	4	2	1	80	60	2
<u>SJ 03454</u>	30N	11W	03	4	2	4	100		
<u>SJ 03291</u>	30N	11W	03	4	3	2	38	18	2
<u>SJ 00366</u>	30N	11W	03	4	4	4	33	18	1
<u>SJ 01364</u>	30N	11W	04	2			115	86	2
<u>SJ 03076</u>	30N	11W	04	2	2	3	44	10	3
<u>SJ 02903</u>	30N	11W	04	2	3	2	49	31	1
<u>SJ 03039</u>	30N	11W	04	4	1	2	53	40	1
<u>SJ 01450</u>	30N	11W	04	4	3		45	20	2
<u>SJ 02941</u>	30N	11W	04	4	3	2	58	37	2
<u>SJ 01367</u>	30N	11W	04	4	4	1	48	20	2
<u>SJ 03407</u>	30N	11W	04	4	4	4	30	5	2
<u>SJ 03267</u>	30N	11W	05	2	1	3	83	60	2

Record Count: 52

**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

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

**WATER COLUMN REPORT 07/25/2008**

(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 Column
SJ 02482	31N	11W	27	4	1	2				75	55	2
SJ 03540	31N	11W	27	4	2	1				40	21	1
SJ 03600	31N	11W	27	4	2	1				51	39	1
SJ 03772 POD1	31N	11W	27	4	2	1		268239	2135717	41	30	1
SJ 02468	31N	11W	27	4	2	3				49	30	1
SJ 02914	31N	11W	27	4	2	3				25	15	1
SJ 02871	31N	11W	27	4	2	4				22	11	1
SJ 02656	31N	11W	27	4	2	4				21	9	1
SJ 02676	31N	11W	27	4	3					19	7	1
SJ 02215	31N	11W	27	4	3					54	23	3
SJ 03247	31N	11W	27	4	3	1				70		
SJ 02549	31N	11W	27	4	3	3				49	30	1
SJ 03505	31N	11W	27	4	3	3				50	14	3
SJ 02853	31N	11W	27	4	3	4				22	6	1
SJ 03181	31N	11W	27	4	4	1				19	10	
SJ 02984	31N	11W	27	4	4	1				20		
SJ 02994	31N	11W	33	4	3	2				300	200	10
SJ 02993	31N	11W	33	4	3	2				280	160	12
SJ 01137	31N	11W	33	4	4	4				37	19	1
SJ 02277	31N	11W	34	1	2					16	7	
SJ 01533	31N	11W	34	1	4					58	40	1
SJ 02167	31N	11W	34	1	4					83	69	1
SJ 01251	31N	11W	34	1	4					79	65	1
SJ 03211	31N	11W	34	1	4	1				24	14	1
SJ 01125	31N	11W	34	1	4	2				59	42	1
SJ 00632	31N	11W	34	2						25	7	1
SJ 01656	31N	11W	34	2						20	6	1
SJ 00656	31N	11W	34	2						30	8	2



SJ 01657	31N	11W	34	2		20	6	1
SJ 01675	31N	11W	34	2		33	7	2
SJ 00631	31N	11W	34	2		30	11	1
SJ 01618	31N	11W	34	2	1	28	8	2
SJ 03448	31N	11W	34	2	1	41	21	2
SJ 01267	31N	11W	34	2	1	65	45	2
SJ 03316	31N	11W	34	2	1	30	10	2
SJ 00660	31N	11W	34	2	1	50	30	2
SJ 01840	31N	11W	34	2	1	65	25	4
SJ 01721	31N	11W	34	2	2	22	10	1
SJ 01768	31N	11W	34	2	2	20	6	1
SJ 03172	31N	11W	34	2	2	19	7	1
SJ 03047	31N	11W	34	2	2	19	6	1
SJ 02119	31N	11W	34	2	3	11	3	
SJ 00659	31N	11W	34	2	3	33	11	2
SJ 02113	31N	11W	34	2	3	12	4	
SJ 00661	31N	11W	34	2	3	52	32	2
SJ 02972	31N	11W	34	2	3	15	5	1
SJ 03107	31N	11W	34	2	4	18	8	1
SJ 03106	31N	11W	34	2	4	25		
SJ 03183	31N	11W	34	2	4	19	6	1
SJ 03780 POD1	31N	11W	34	3	1	28	12	1
SJ 02859	31N	11W	34	3	1	22	6	1
SJ 02856	31N	11W	34	3	2	24	6	1
SJ 02852	31N	11W	34	3	2	23	7	1
SJ 03025	31N	11W	34	3	2	22	5	1
SJ 03065	31N	11W	34	3	2	22	7	1
SJ 02967	31N	11W	34	3	2	20	5	1
SJ 03014	31N	11W	34	3	2	30	5	2
SJ 03002	31N	11W	34	3	2	22		
SJ 02861	31N	11W	34	3	3	21	7	1
SJ 03220	31N	11W	34	3	3	20	6	1
SJ 03710 POD1	31N	11W	34	3	3	20	4	1
SJ 03042	31N	11W	34	3	3	23	6	1
SJ 03048	31N	11W	34	3	3	21	4	1
SJ 02857	31N	11W	34	3	4	23	6	1
SJ 03492	31N	11W	34	3	4	30		
SJ 03357	31N	11W	34	3	4	22	6	1
SJ 03631	31N	11W	34	3	4	27	6	2
SJ 03493	31N	11W	34	3	4	25	15	1
SJ 03609	31N	11W	34	3	4	27	6	2
SJ 03260	31N	11W	34	3	4	41	3	3
SJ 01608	31N	11W	34	4		48	17	3
SJ 03720 POD1	31N	11W	34	4	1	21	6	1
SJ 03402	31N	11W	34	4	1	25		
SJ 03497	31N	11W	34	4	1	30	10	2
SJ 03377	31N	11W	34	4	2	20	2	1
SJ 03739 POD1	31N	11W	34	4	3	25	3	2
SJ 03016	31N	11W	34	4	3	35		
SJ 02966	31N	11W	34	4	3	48	20	2
SJ 00985	31N	11W	34	4	4	40	16	2

267922 2130341

Record Count: 79

P-33-31N-11W

# Ground Bed Drilling Log

Company: Burlington Resource

Well: Heaton # 1 A

Date: 3/1/2005

Location: Sec. ~~B-28-84-18W~~

Dual Well: Oliver # 3

State: N.M.

Ground Bed Depth: 300 ft

Diameter: 6 3/4"

Indicate Water Zone Depth: 100' wet sand

Isolation Plugs Set: NO

If So Where:

Coke: 2400 lbs.

Type: Loresco SWS

Total Weight: 2400 lbs

Anodes: 10

Type: Silicon Iron Type D

Weight: 45 lbs.

Perforate Pipe: 105' -- 300'

Coke Depth: 105' -- 300'

Power Source: Battery

Volts: 13.6

Amps: 21.4

Resistance: .64

CASNG: 80' of Steel Casing

Depth Drilling Log

Anodes Log

Remarks

Ft

Logged

Coked

Depth

00'-80' River Boulders/Gravel

80'-100' Sand Stone

100'-120' Shale

120'-160' Shale w/ Sand

160'-200' Sand Stone

200'-220' Shale w/ Sand

220'-240' Shale

240'-250' Sand Stone

250'-290' Shale

290'-300' Sand Stone

175'

1.9

180'

1.9

185'

2.1

190'

1.6

195'

1.8

200'

1.5

3.6

# 10

205'

1.4

210'

2.5

5.1

# 9

215'

2.6

220'

2.6

5.3

# 8

225'

2.2

230'

1.9

4.9

# 7

235'

2.4

240'

2.3

5.3

# 6

245'

2.2

250'

2.2

5.8

# 5

255'

2.1

260'

2

4.7

# 4

265'

2.2

270'

3.3

5.7

# 3

275'

3.4

280'

3.6

6

# 2

285'

3.3

290'

3.1

5

# 1

295'

3.3

300'

3.2

RECEIVED DEC 12 1977

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be given the number and units of the fraction.

Oil well No. 33 Section 33 Township 33 NORTH Range 11 WEST County SAN JUAN  
Producing formation SOUTH Section 1190 Township EAST Range 11  
Producing formation SOUTH Section 1190 Township EAST Range 11

Outline the acreage dedicated to the subject well by enclosing it with an enclosure mark on the plat below.

2. If more than one lease is dedicated to the well, list the well and acreage for each ownership interest (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, forced-pooling, etc.?

4. Yes ☐ No ☐ If answer is "yes," type of consolidation.

If answer is "no," list the wells and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

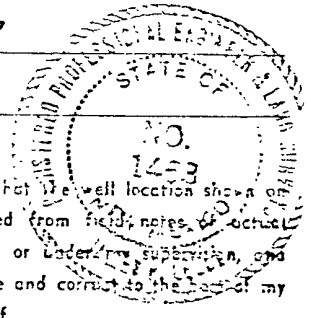
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a unitization or forced-pooling, eliminating such interests, has been approved by the Commission.

CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

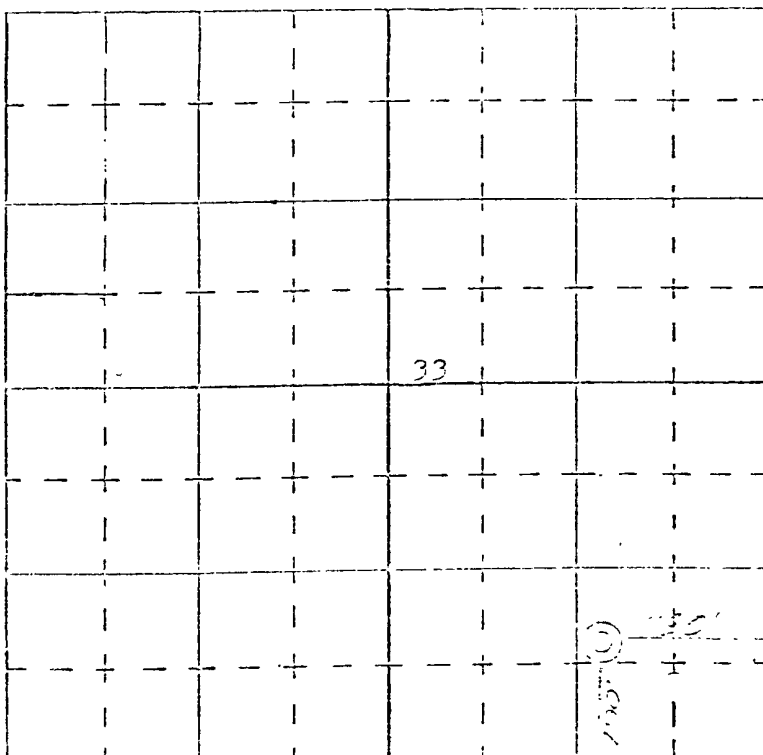
Name D. W. B. Kline  
Position Surveyor

Company J. B. 77  
Date 12-5-77



I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed 16 November 1977  
Registered Professional Engineer  
and/or Land Surveyor James P. Inese



SCALE—1 INCHES EQUALS 1 MILE

REC 1 ED DEC 12 1977

NO. OF COPIES RECEIVED	
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SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease

STATE ☐ PEE ☒

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		8. Farm or Lease Name Heaton	
2. Name of Operator W. P. Carr		9. Well No. 1 A	
3. Address of Operator 6700 Forest Lane, Dallas, Texas 75230		10. Field and Pool, or Wildcat Blanco-Mesaverde	
4. Location of Well UNIT LETTER <u>P</u> LOCATED <u>790</u> FEET FROM THE <u>South</u> LINE AND <u>1190</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>33</u> TWP. <u>31 N</u> RGE. <u>11 W</u> NMPM		12. County San Juan	
19. Proposed Depth 4500		19A. Formation Mesaverde	
20. Rotary or C.T. Rotary		21. Elevations (Show whether DF, RT, etc.) 5841 G.L.	
21A. Kind & Status Plug. Bond Blanket		21B. Drilling Contractor Young Drilling Co.	
22. Approx. Date Work will start 1/2/78			

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 $\frac{1}{4}$	8 $\frac{5}{8}$	32	200	200	Surface
8 $\frac{3}{4}$	7	17	2650	150	
6 $\frac{1}{4}$	4 $\frac{1}{2}$	9.5	2500 - 4500	150	

Plan to drill through the Mesaverde, perforate and fracture treat as a gas well.

BOP equipment to be furnished by the contractor.

Gas is dedicated.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

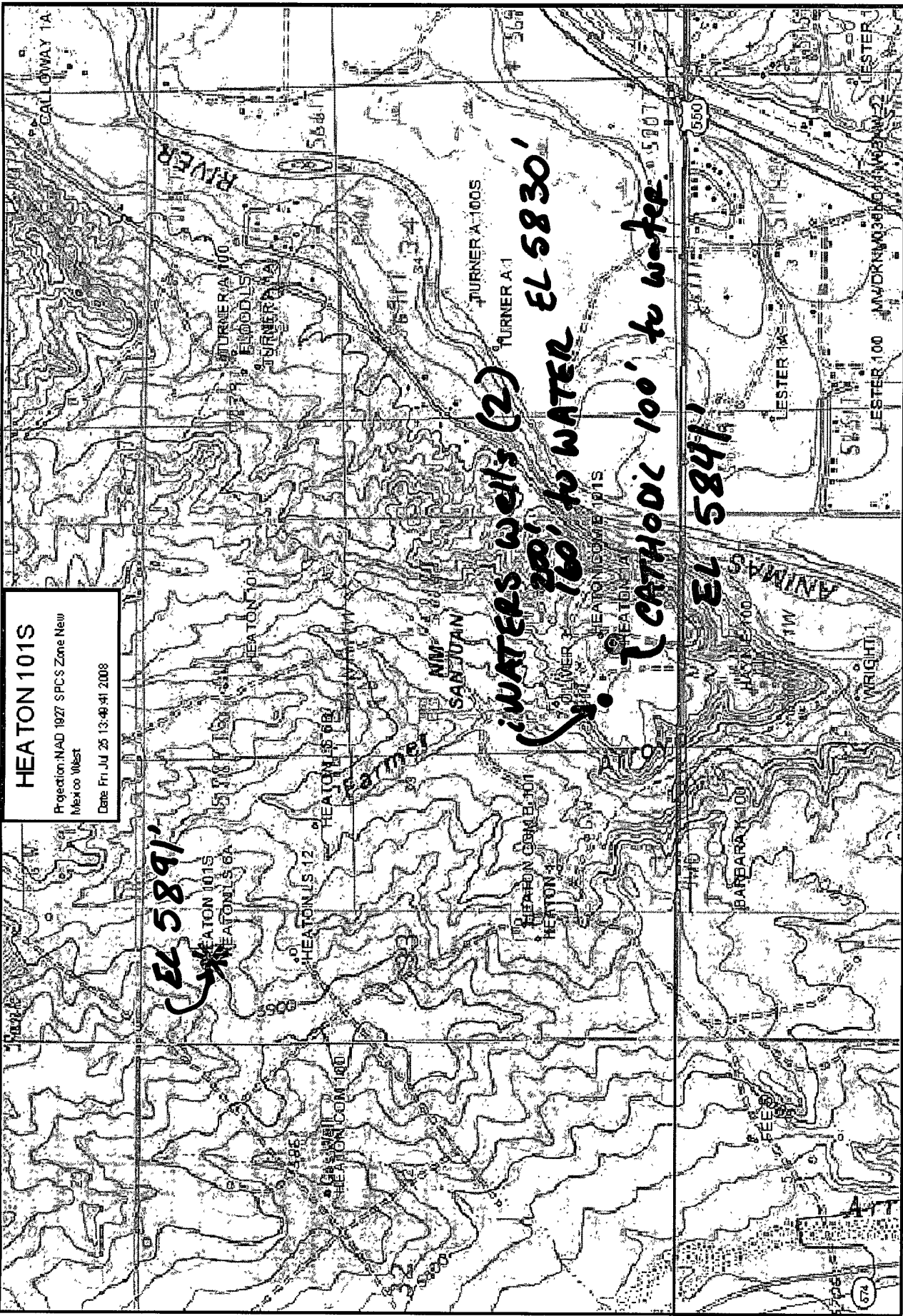
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

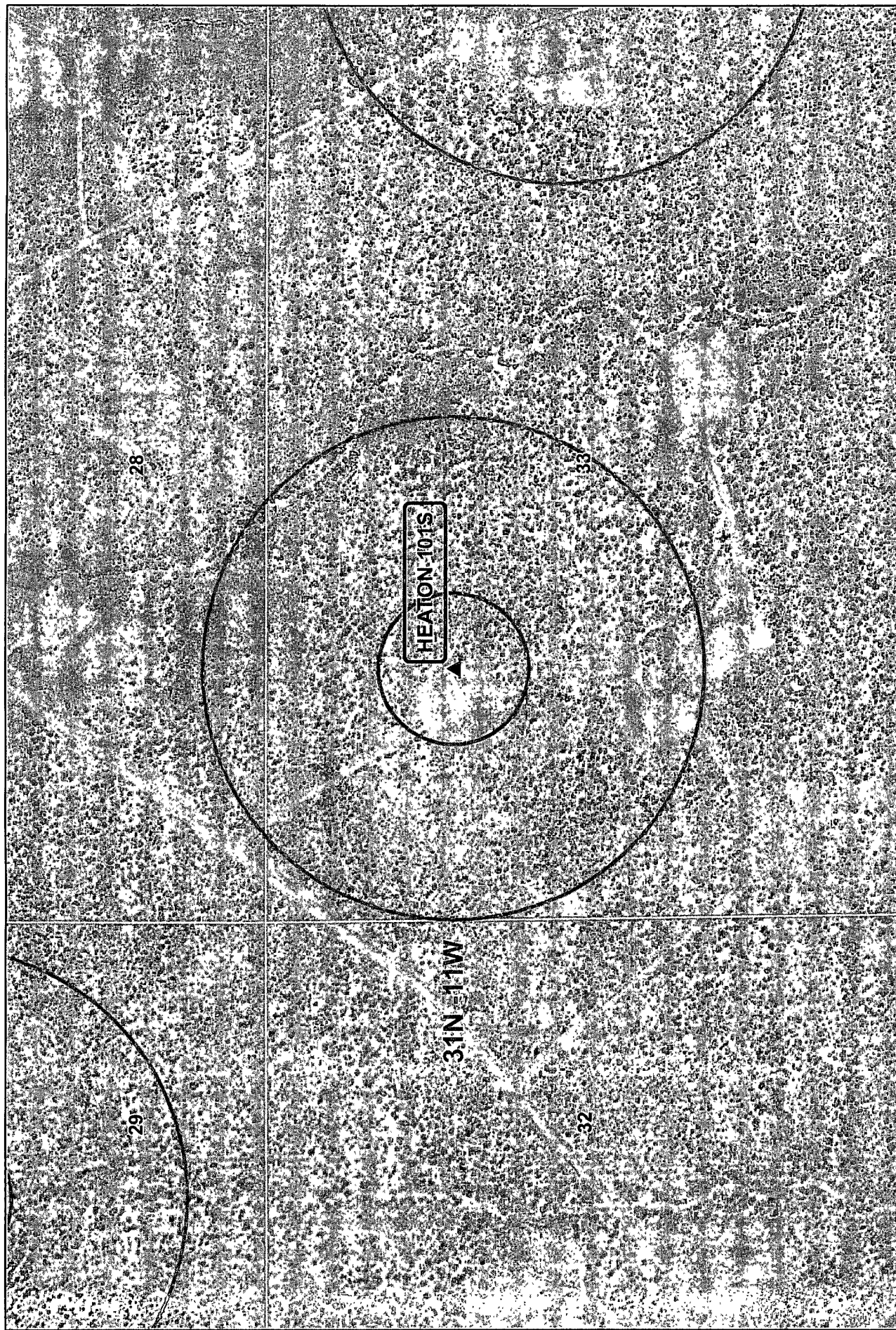
Signed [Signature] Title Agent Date 12/8/77

(This space for State Use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

[illegible][illegible][illegible]



Data Source  
Aerial flown locally Sedgewick in 2005.

1000ft 300ft

0 500 1,000 Feet  
1:6,000

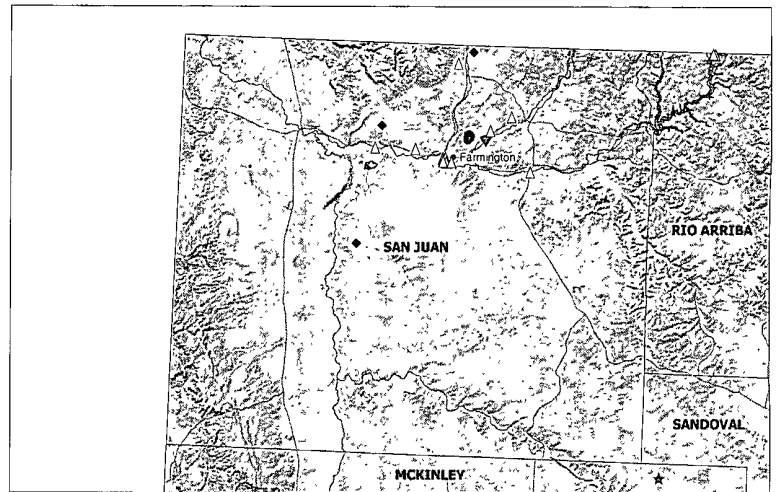
NAD\_1983\_SP  
NM West\_FIPS\_3003  
7/08



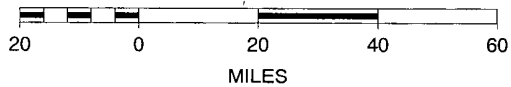
# Heaton #101S Mines, Mills and Quarries Web Map

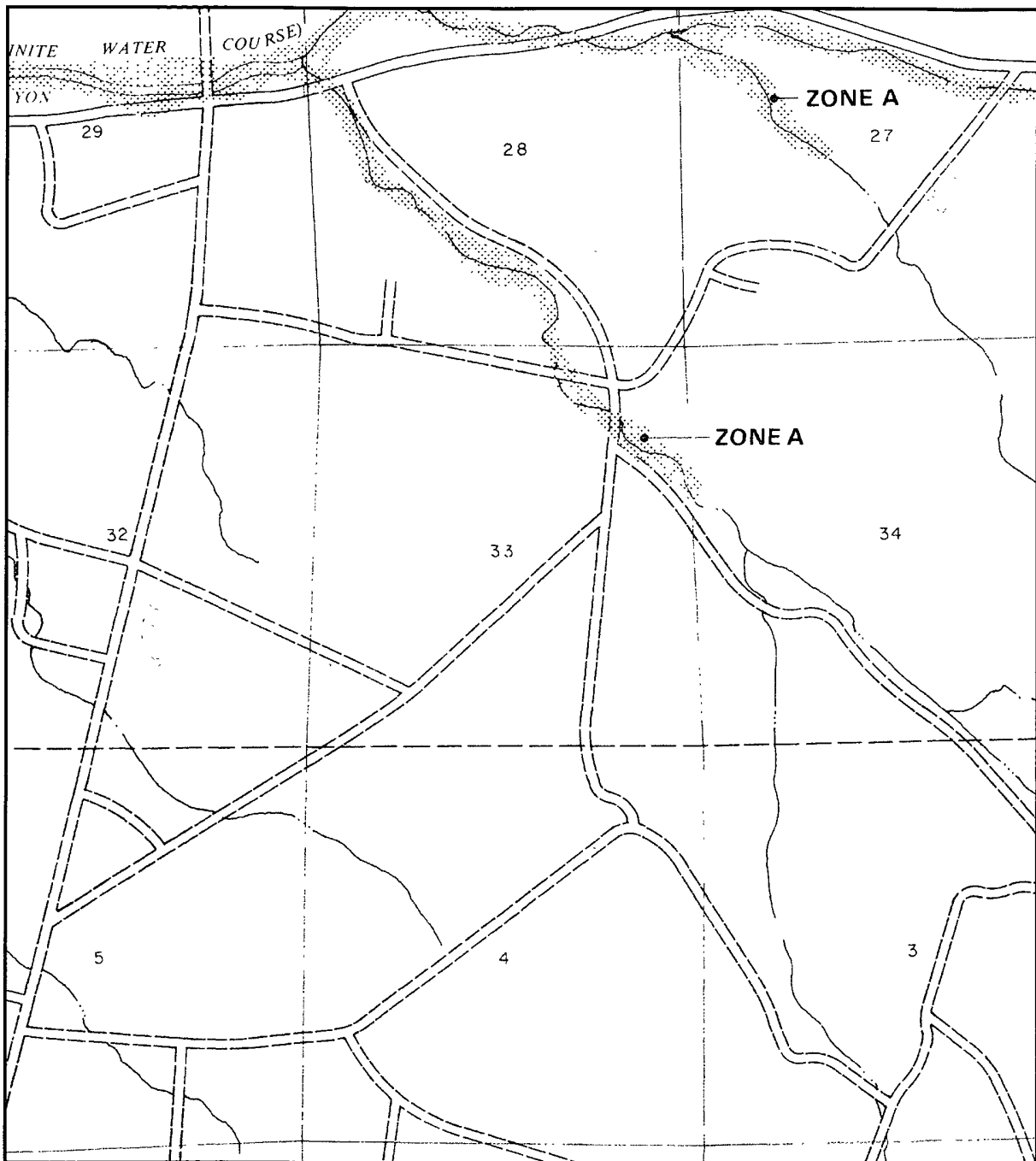
## Mines, Mills & Quarries Commodity Groups

-  **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**

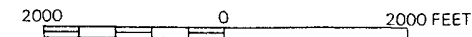


SCALE 1 : 1,976,356





APPROXIMATE SCALE

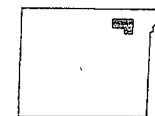


NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

SAN JUAN COUNTY,  
NEW MEXICO  
UNINCORPORATED AREAS

PANEL 350 OF 1450  
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER  
350064 0350 B

EFFECTIVE DATE:  
AUGUST 4, 1988



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)



### **Siting Criteria Compliance Demonstrations**

The Heaton #101S is not located in an unstable area. The location is not over a mine and is not on the side of a hill. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other watercourse.

## ***Hydrogeological report for Heaton #101S***

### **Regional Geological context:**

Quaternary and recent deposits in the San Juan Basin include stream-deposited alluvium and older terrace deposits, landslide deposits, and Aeolian sand. Most Quaternary and younger deposits are unconsolidated and form a thin covering over older bedrock sediments.

Stream-deposited alluvium and older terrace deposits are associated with major streams and rivers in the San Juan Basin. The alluvium consists of unconsolidated sediments that range from silt to cobbles in size but predominantly are sand and gravel. Along major streams the alluvium is varied in composition, depending on the mix of material from the various erosional source areas and fluvially-driven sorting. Alluvial deposits also occur as a thin veneer of fine-grained sediments in the valleys of intermittent streams.

Landslide deposits are mapped on the northeastern flank of the Chuska Mountains and locally in the San Juan Mountains. These colluvial deposits consist of material derived from the topographically higher source areas. The landslide material on the flank of Chuska Mountains consists of reworked sand from the Chuska Sandstone; the deposits in the San Juan Mountains primarily are derived from volcanic or volcanoclastic sources.

Unconsolidated wind-blown deposits are common in the central part of the basin, although they generally are not mapped on small scale geologic maps. Typically, these deposits are very thin, but local dunes near dry washes, which are excellent sources of fine-grained material, may reach heights of 20 feet. These recent Aeolian deposits are not known to yield water to wells.

### **Hydraulic Properties:**

In the absence of other sources of water, alluvial deposits, where present, are commonly relied upon as a source of water for domestic and livestock use. Along the major rivers and streams, wells are of conventional vertical design, whereas in the valleys of intermittent streams, where the hydraulic conductivities and saturated thickness are generally small, most wells are constructed as galleries of horizontal drains feeding to a central collector. Reported well yields range from less than 1 gallon per minute to as much as 1,100 gallons per minute. The median yield of 48 wells is 15 gallons per minute.

Hydraulic conductivities of sand and gravel can vary from 10 to 1,000,000 gallons per day per foot squared (roughly 1 to 100,000 feet per day) (Freeze and Cherry, 1979, table 2.2.) but a more typical range is from 15 feet per day for fine sand to about 1,000 feet per day for coarse gravel (Lohman, 1972, table 17). Tests along the San Juan River upstream from Farmington indicate that the hydraulic conductivity of alluvium ranges from 0.006 to 220 feet per day (Peter et al, 1987, p. 29). The thickness of alluvium at this site was reported to range from about 14 to 61 feet, and the saturated thickness was less than 25 feet in all 13 test holes. Water occurs in the alluvium under unconfined conditions. No tests have been made where the storage coefficient of the alluvium was determined.

However, a typical specific yield for moderate to well-sorted unconsolidated sediments would be in the range of 0.1 to 0.25.

No known hydraulic data exists for the landslide and recent Aeolian deposits in the basin.

No instances are known where these deposits are used as a source of water.

**References:**

Freeze, R.A., and Cherry, J.A., 1979, Groundwater: Englewood cliffs, N.J., Prentice-Hall, Inc., 604 p.

Lohman, S.W., 1972, Ground-water hydraulics: U.S.G.S. Professional Paper 708, 70 p.

Peter, K.D., Williams, R.A., and King, K.W., 1987, Hydrogeologic characteristics of the Lee Acres landfill area, San Juan County, New Mexico: U.S.G.S. Water Resources Investigations Report 87-4246, 69 p.

## Tafoya, Crystal

---

**From:** Tafoya, Crystal  
**Sent:** Monday, July 28, 2008 9:54 AM  
**To:** 'mark\_kelly@nm.blm.gov'  
**Subject:** Surface Notification

The following temporary pits will be closed on-site. The new OCD Pit Rule 17 requires the surface owner to be notified. Please feel free to contact me at any time if you have any questions. Thank you!

Heaton #101  
Heaton #101S

Thanks,

Crystal L. Tafoya  
Regulatory Technician  
**ConocoPhillips Company**  
San Juan Business Unit  
Phone: (505) 326-9837  
Email: Crystal.Tafoya@conocophillips.com

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

DISTRICT II  
1301 West Grand Avenue, Artesia, N.M. 88210

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

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-34359		<sup>2</sup> Pool Code 71629/	<sup>3</sup> Pool Name BASIN FRUITLAND COAL
<sup>4</sup> Property Code 7105	<sup>5</sup> Property Name HEATON		<sup>6</sup> Well Number 101S
<sup>7</sup> GRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL AND GAS, LP		<sup>9</sup> Elevation 5891'

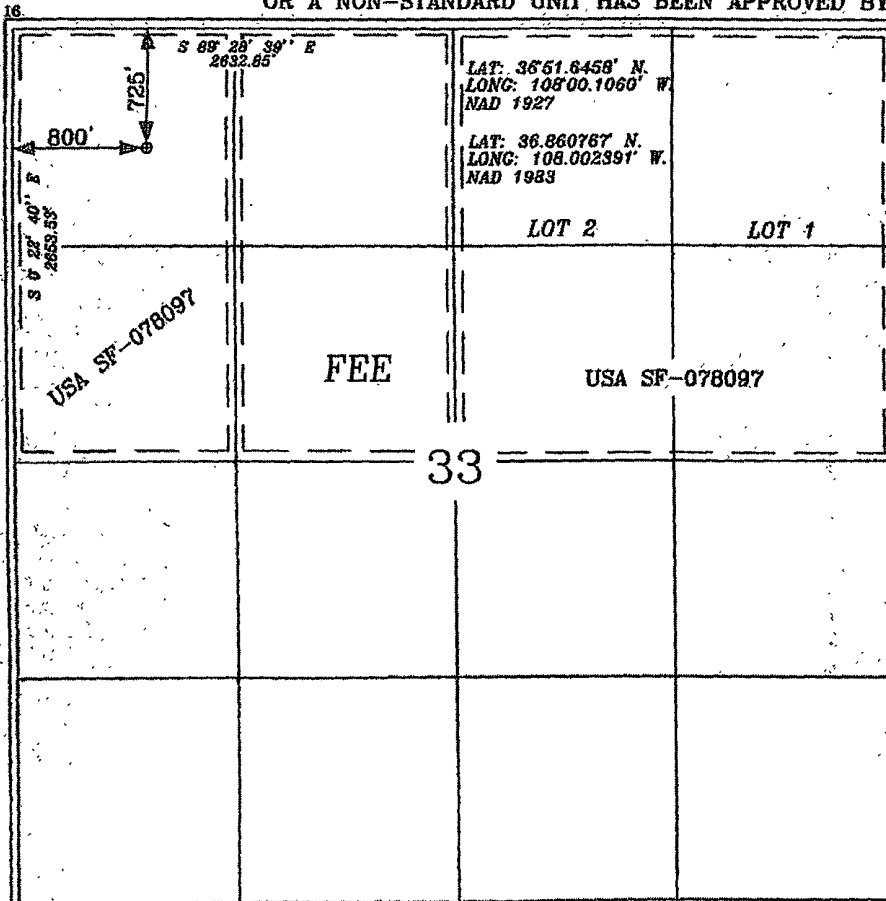
#### <sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	33	31-N	11-W		725'	NORTH	800'	WEST	SAN JUAN

#### <sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D									
<sup>12</sup> Dedicated Acres FC 320.00 ACRES N 1/2			<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.		

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



#### 17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location, or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or a working interest or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Sasha Spangler*  
Signature  
Sasha Spangler 01-21-08  
Printed Name

#### 18 SURVEYOR CERTIFICATION

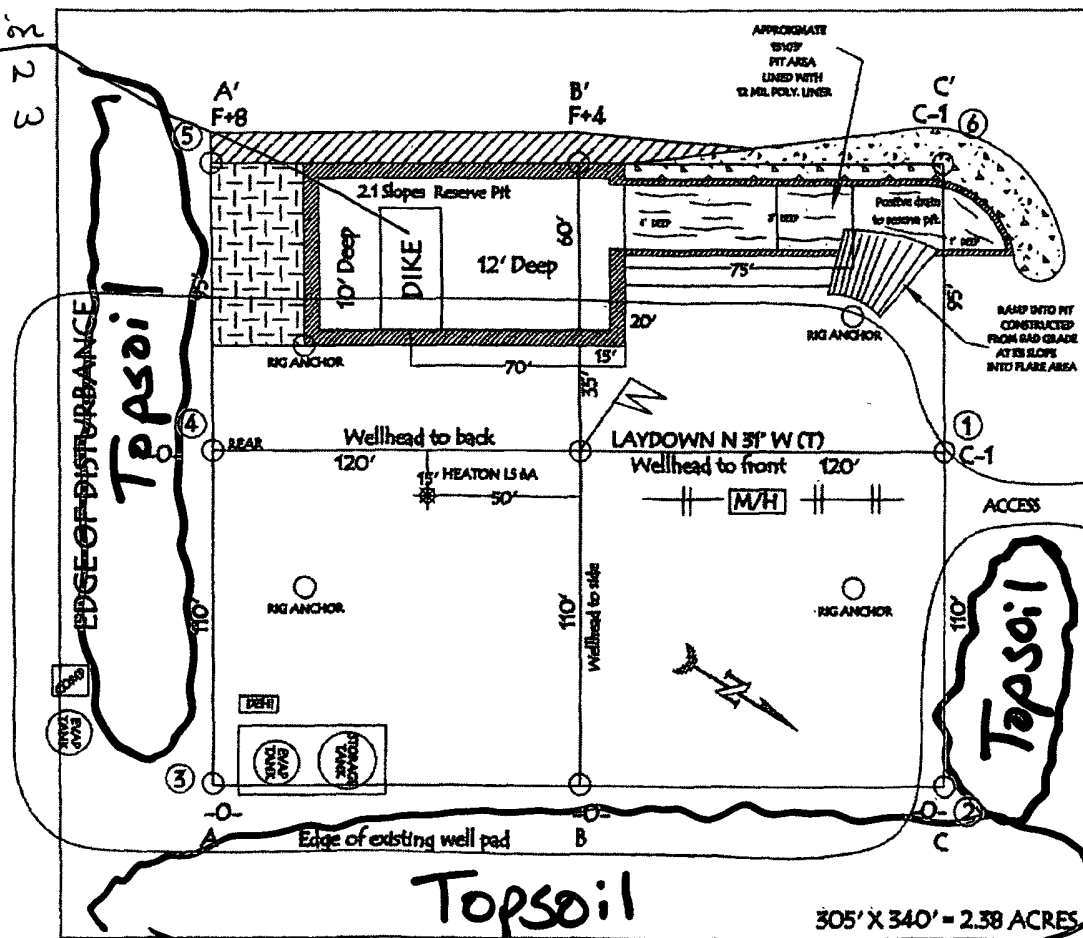
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

1-7-RUSG28  
Date of Survey  
Signature  
NEW MEXICO  
LICENSED PROFESSIONAL SURVEYOR  
15703  
Certificate Number 15703

BURLINGTON RESOURCES OIL & GAS COMPANY LP  
 HEATON 100S, 725' FNL & 800' FWL  
 SECTION 33, T-31-N, R-11-W, NMPM, SAN JUAN COUNTY, NM  
 GROUND ELEVATION: 5891', DATE: MARCH 14, 2007

Pit Location  
 36.8501' N  
 107.99152' W  
 NAD 83

RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE 9' SHALLOW SIDE).



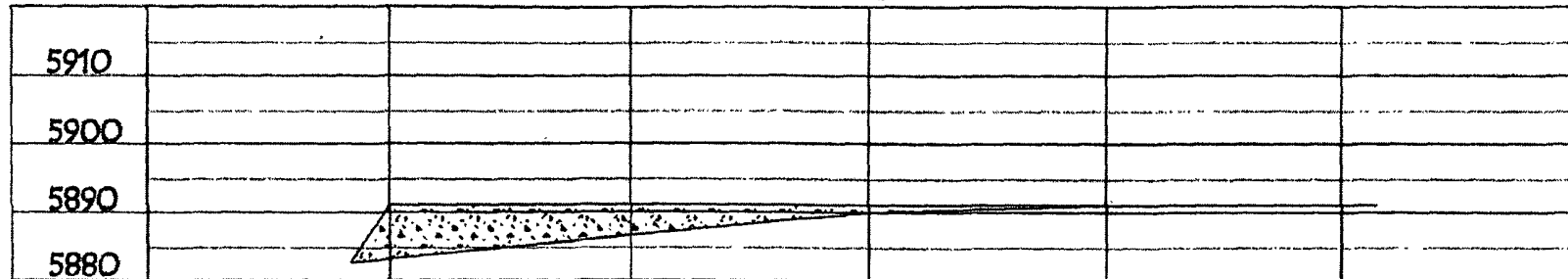
LATITUDE: 36° 51.6458' N LONGITUDE: 108° 00.1060' W NAD27

NOTE: VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.  
 CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED  
 PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

BURLINGTON RESOURCES OIL & GAS COMPANY LP  
 HEATON 1005, 725' FNL & 800' FWL  
 SECTION 33, T-31- N, R-11-W, NMPM, SAN JUAN COUNTY, NM  
 GROUND ELEVATION: 5891', DATE: MARCH 14, 2007

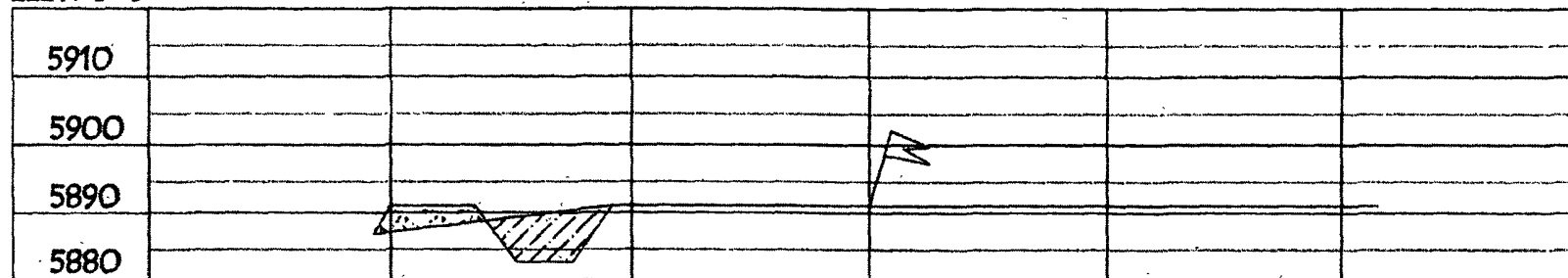
ELEV. A'-A

CL



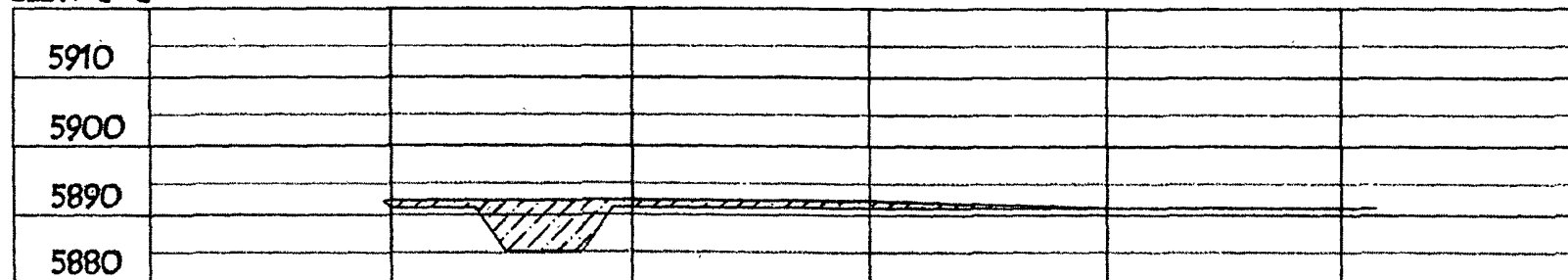
ELEV. B'-B

CL



ELEV. C'-C

CL



NOTE: VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.  
 CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED  
 PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

**Burlington Resources Oil & Gas Company, LP**  
**San Juan Basin**  
**Pit Design and Construction Plan**

In accordance with Rule 19.15.17 the following information describes the design and construction of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR'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. BR 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. BR will post a well sign, not less than 12" by 24", 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. BR 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. BR 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. BR shall construct the pit so that the slopes are no steeper than two horizontal feet to 1 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. BR will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. BR 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. BR 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 cases.
14. The volume of the pit shall not exceed 10 acre-feet, including freeboard.
15. Temporary blow pits will be constructed to allow gravity flow to discharge into lined drill pit.
16. The lower half of the blow pit (nearest lined pit) will be lined with the same 20 mil liner. The upper half of the blow pit will remain unlined as allowed in Rule 19.15.17.11 F.11.
17. BR will not allow freestanding liquids to remain on the unlined portion of a temporary blow pit.



**Burlington Resources Oil & Gas Company, LP**  
**San Juan Basin**  
**Maintenance and Operating Plan**

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR'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. BR 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. BR will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed at Basin Disposal Inc., permit # NM-01-005.
3. BR will not discharge or store any hazardous waste in any temporary pit.
4. If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then BR 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's level, BR shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. BR shall notify the Aztec Division office by phone or email within 48 hours of the discovery for leaks less than 25 barrels BR shall notify the Aztec Division office as required pursuant to Subsection B of 19.15.3.116 NMAC shall be reported 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 pit 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. BR 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 the pit's surface. An oil absorbent boom will stored on-site until closure of pit.
9. Only fluids generated during the drilling or workover process may be discharged into a temporary pit.
10. BR will maintain the temporary pit free of miscellaneous solid waste or debris.
11. During drilling or workover operations, BR will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC reports. BR will file this log with the Aztec Division office upon closure of the pit.
12. After drilling or workover operations, BR will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at BR's office electronically and will be filed with the Aztec Division office upon closure of the pit.
13. BR shall maintain at least two feet of freeboard for a temporary pit.
14. BR shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling rig.
15. BR shall remove all free liquids from a cavitation pit within 48 hours after completing cavitation. BR may request additional time to remove liquids from the Aztec Division office if it is not feasible to remove liquids within 48 hours.

# **Burlington Resources Oil & Gas Company, LP**

## **San Juan Basin**

### **Closure Plan**

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR'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 closure 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 recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.
2. The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 are met.
3. The surface owner shall be notified of BR's closing of the temporary pit as per the approved closure plan using certified mail, return receipt requested.
4. Within 6 months of the Rig Off status occurring BR 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. Operator's 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 the solidification process. 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.

<b>Components</b>	<b>Tests Method</b>	<b>Limit (mg/Kg)</b>
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	1000/500

9. Upon completion of solidification and testing standards being passed, 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. If standard testing fails BR will dig and haul all contents pursuant to 19.15.17.13.i.a. After doing such, confirmation sampling will be conducted to ensure a release has not occurred.
10. During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
11. Dig and Haul Material will be transported to the Envirotech Land Farm located 16 miles south of Bloomfield on Angel Peak Road, CR 7175. Permit # NM010011
12. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place 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.
13. Notification will be sent to OCD when the reclaimed area is seeded.
14. BR 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 or Forest Service stipulated seed mixes will 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.

Type	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	3.0
Indian ricegrass	Paloma or Rimrock	3.0
Slender wheatgrass	San Luis	2.0
Crested wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

**Species shall be planted in pounds of pure live seed per acre:**

**Present Pure Live Seed (PLS) = Purity X Germination/100**

**Two lots of seed can be compared on the basis of PLS as follows:**

Source No. One (poor quality)	Source No. two (better quality)
Purity 50 percent	Purity 80 percent
Germination 40 percent	Germination 63 percent
Percent PLS 20 percent	Percent PLS 50 percent
<b>5 lb. bulk seed required to make 1 lb. PLS</b>	<b>2 lb. bulk seed required to make 1 lb. PLS</b>

15. 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 of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.

**Burlington Resources Oil & Gas Company, LP**  
**San Juan Basin**  
**Below Grade Tank Design and Construction**

In accordance with NMAC 19.15.17 the following information describes the design and construction of below grade tanks on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all below grade tanks (BGT). A separate plan will be submitted for any BGT which does not conform to this plan.

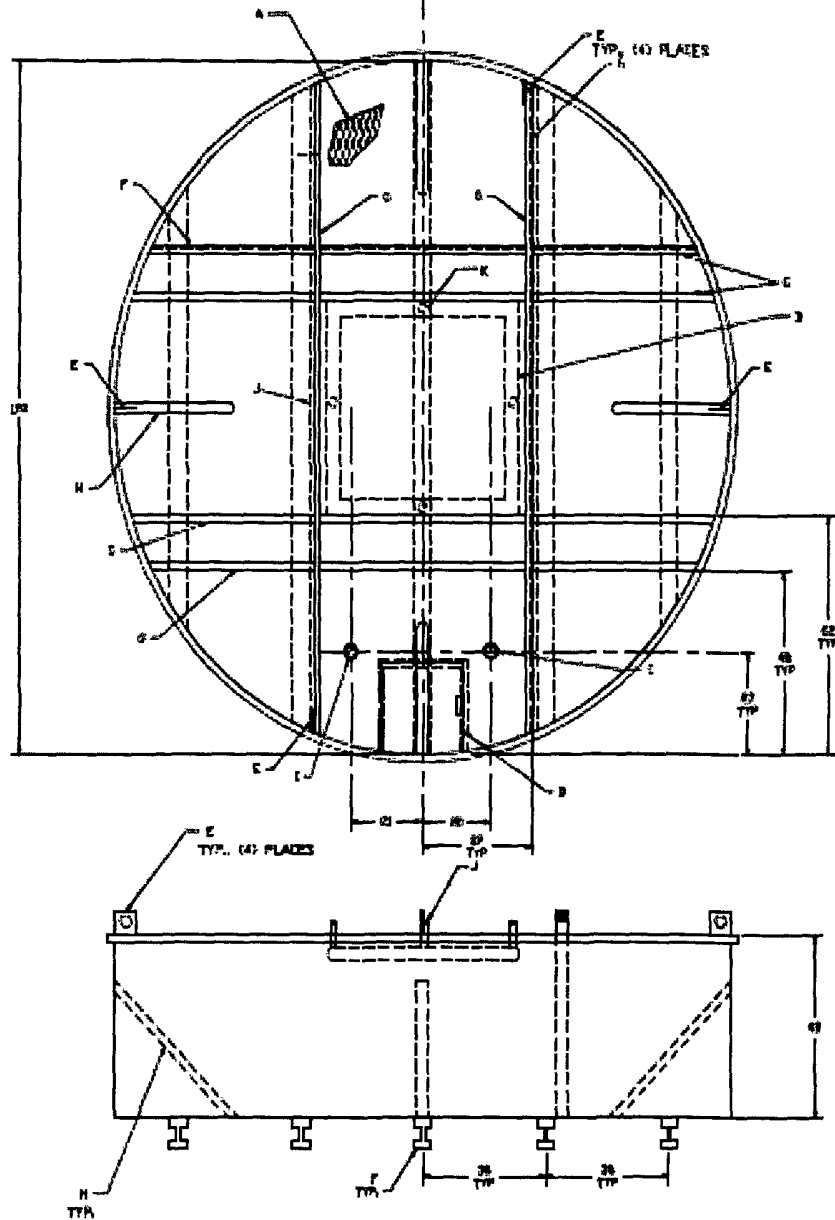
General Plan:

1. BR will design and construct a BGT to contain liquids and to prevent contamination of fresh water and protect public health and environment.
2. BR will use the general location sign posted on location. If no general sign is posted a separate sign at the location of the BGT will be provided.
3. BR shall construct fencing around the BGT using 4 foot hog wire fencing topped with two strands of barbed wire, or with a pipe top rail. A six foot chain link fence topped with three strands of barbed wire will be use if the well location is within 1000 feet of permanent residence, school, hospital, institution or church.
4. BR will construct a expanded metal covering on the top of the BGT
5. BR shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight.
6. The BR below-grade tank 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.
7. BR shall construct a below-grade tank to prevent overflow and the collection of surface water run-on.
8. BR will construct and use a below-grade tank that does not have double walls. The below-grade tank's side walls will be open for visual inspection for leaks, the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and the below-grade tank is underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.
9. BR shall equip below-grade tanks designed in this manner with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows.
10. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate division district 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 shall comply with EPA SW-846 method 9090A.

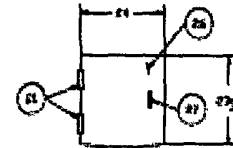
11. The general specification for design and construction are attached in the BR document.

**120 BBL PIT TANKS**  
**AUTOCAD DRAWING - ELEMENTS**



Question (1991)	Answer	Spoken English
A	Standard 200 27 answered correct cases	25.47
B	Answer case	42.00 + 2.0
C	Standard 200 27 answered correct cases	4.4
D	Standard 200 27 answered correct cases	4.3
E	Answer case	7
F	Standard 200 27 answered correct cases	6
G	Standard 200 27 answered correct cases	42.00 + 2.0
H	Answer case	4.4
I	Standard 200 27 answered correct cases	4.4
J	Standard 200 27 answered correct cases	4.20
K	Standard 200 27 answered correct cases	4.20
L	Standard 200 27 answered correct cases	4.7
M	Standard 200 27 answered correct cases	4.7

NOZZLE SCHEDULE		
ITEM	SIZE	DESCRIPTION
2	1"	RAU LINE CONNECTION
1	2"	WASTEWATER LEAK CONNECTION
1	2"	NON-APPLY CONNECTION
2	2"	WASTEWATER CONNECTION

[illegible]

**ConocoPhillips**

SAN JUAN BUSINESS UNIT

ISD DUL  
FIT TANK

SHEET NO.	SHEET TOTAL	DATE AND BY NAME
CADDED BY NAME	SCALE DRAWN BY	PROJECT NAME & NUMBER
DATE	SHEET NO.	SHEET TOTAL
	120-PT-PEVA	9 OF 1

**Burlington Resources Oil & Gas Company, LP**  
**San Juan Basin**  
**Below Grade Tank Maintenance and Operating Plan**

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of Below Grade Pit (BGT) on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all BGT. A separate plan will be submitted for any BGT which does not conform to this plan.

**General Plan:**

1. BR will operate and maintain a BGT to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. BR shall not allow a below-grade tank to overflow or allow surface water run-on to enter the below-grade tank.
3. BR shall continuously remove any visible or measurable layer of oil from the fluid surface of a below-grade tank in an effort to prevent significant accumulation of oil overtime.
4. BR shall inspect the below-grade tank at least monthly and maintain a written record of each inspection for five years.
5. BR shall maintain adequate freeboard to prevent overtopping of the below-grade tank.

**Burlington Resources Oil & Gas Company, LP**  
**San Juan Basin**  
**Below Grade Tank Closure Plan**

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of Below Grade Tanks (BGTs) on Burlington Resources Oil & Gas Company, LP locations hereinafter known as BR locations. This is BR's standard procedure for all BGTs. A separate plan will be submitted for any BGT which does not conform to this plan.

General Requirements:

1. BR shall close a below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.
2. BR shall close an existing below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
3. BR shall close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on C-144
4. BR shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility.
5. BR shall remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.
6. If there is any on-site equipment associated with a below-grade tank, then BR shall remove the equipment, unless the equipment is required for some other purpose.
7. BR shall test the soils beneath the below-grade tank to determine whether a release has occurred. BR shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100



mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. BR shall notify the division of its results on form C-141.

8. If BR or the division determines that a release has occurred, then BR shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.
9. If contamination is confirmed by field sampling. BR will follow the Guidelines For Remediation Of Leaks, Spills, and Releases NMOCD August 1993 when remediating contaminants identified
10. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then BR shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.
11. 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. Operator's name
  - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
12. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on C-144 and incorporate the following:
  - Details on Capping and Covering, where applicable.
  - Inspection Reports
  - Sampling Results
13. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place 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.
14. BR 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 or Forest Service stipulated seed mixes will 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.

15. 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.
16. The surface owner shall be notified of BR's closing of the below-grade tank as per the approved closure plan using certified mail, return receipt requested.