

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
July 21, 2008

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

40607

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.

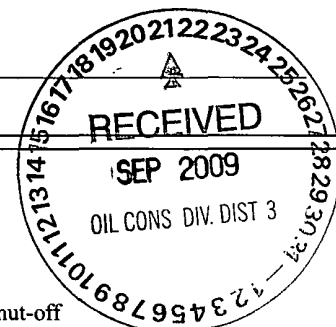
1.  
Operator: Black Hills Gas Resources OGRID #: 013925  
Address: P.O. Box 249 / 3200 North First Street Bloomfield, NM 87413  
Facility or well name: Jicarilla 29-02-26 #21  
API Number: 30-039-30576 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr Unit E / SW/NW Section 26 Township 29 North Range 2 West County: Rio Arriba  
Center of Proposed Design: NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

2.  
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☒ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☒ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: 8,425 bbl Dimensions: L 86' x W 55' x D 10'

3.  
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4.  
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Tank Construction material: \_\_\_\_\_  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

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



6.

**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☐ Alternate. Please specify: \_\_\_\_\_

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 or 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.

10.

**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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<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. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; 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. - 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. - 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. - 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. - 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. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

11.

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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

12.

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

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

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

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

13.

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

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

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

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

☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal

☐ Waste Removal (Closed-loop systems only)

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

☒ In-place Burial ☐ On-site Trench Burial

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

15.

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

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)

**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

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

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

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

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

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

- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

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

Ground water is less than 50 feet below the bottom of the buried waste.

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

☐ Yes ☐ No  
☐ NA

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

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

☐ Yes ☐ No  
☐ NA

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

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

☐ Yes ☐ No  
☐ NA

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

Within 500 feet of a wetland.

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

☐ Yes ☐ No

Within the area overlying a subsurface mine.

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

☐ Yes ☐ No

Within an unstable area.

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

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

18.

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

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

19.

**Operator Application Certification:**

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

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

20.

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

OCD Representative Signature: *Joseph D. Kelly* Approval Date: 1/12/2012

Title: Compliance Officer OCD Permit Number: \_\_\_\_\_

21.

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

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

☒ Closure Completion Date: August 12, 2009

22.

**Closure Method:**

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

23.

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

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

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

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

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

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

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

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

24.

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

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

On-site Closure Location: Latitude 36.697615° N Longitude 107.017224° W NAD: ☐ 1927 ☒ 1983

25.

**Operator Closure Certification:**

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

Name (Print): Daniel Manus Title: Regulatory Technician

Signature: *Daniel Manus* Date: August 21, 2009

e-mail address: daniel.manus@blackhillscorp.com Telephone: 505-634-1111 ext 28



## **Black Hills Gas Resources**

**Jicarilla 29-02-26 #21**

Surface Location: 2,200' FNL 1,200' FWL (SW/NW) Unit E

Rio Arriba County, New Mexico

Lease: MDA 701-98-0013, Tract 4

### **Closure Report Compliance Demonstrations**

- **Pit closure date**
  - Pit was closed on August 12, 2009
- **Proof of Closure Notification**
  - See attached letter and certified mail return receipt
- **Proof of Deed Notice**
  - The pit is located on Jicarilla Apache Reservation.
- **Plot Plan**
  - See attached Plot Plan for the pit and the well location map.
- **Confirmation Sampling**
  - See attached supporting analytical results
    - Benzene measured ND below the *detection limit of 0.2 mg/kg*
    - BTEX measured ND mg/kg total, below the *detection limit of 50 mg/kg total*
    - TPH measured 100 mg/kg below the *detection limit of 2500 mg/kg*
    - GRO measured ND mg/kg below the *detection limit of 500 mg/kg*
    - DRO measured 100 mg/kg below the *detection limit of 500 mg/kg*
    - Chloride measured 169 below the *detection limit of 1000 mg/kg*
- **Soil Backfilling and Cover Installation**
  - The pit was closed using BHGR previously approved closure plan.
    - Highlights
      - The pit contents were blended 3 to 1 and sampled
      - Four-foot of soil cover was used to cover the pit contents.
      - Topsoil was applied to the thickness of background topsoil.
      - Seeds were applied using a Land Pride drill seeder set at approximately 21 pounds per acre. Approximately 1.5 acres including the pit were reclaimed and re-seeded with a total of approximately 32 pounds of seed used.
    - See BHGR typical pit closure design
- **Re-vegetation Application Rate**
  - The approved Jicarilla / BIA seed mix was applied at a rate of 21 pounds per acre.
  - See attached Forest Service seed mixture and application rates.
- **Site Reclamation**
  - See attached after photos of the pit.
- **Pit inspection**
  - See attached.

*Siting Criteria for Jicarilla 29-02-26 #21*



# Black Hills Gas Resources, Inc.

A subsidiary of Black Hills Exploration and Production, Inc.

3200 N 1<sup>st</sup> Street – PO Box 249 Bloomfield, NM 87413

Daniel Manus  
Regulatory Technician

Bus: (505) 634-1111 ext. 28  
Fax: (505) 634-1116  
[daniel.manus@blackhillscorp.com](mailto:daniel.manus@blackhillscorp.com)

September 3, 2009

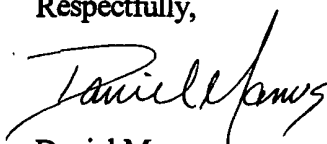
Manuel Myore, Realty Officer  
Bureau of Indian Affairs  
Jicarilla Agency  
P.O. Box 167  
Dulce, NM 87528

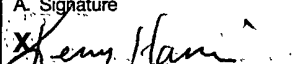
Manuel Myore:

In accordance with the State of New Mexico Rule 19.15.17.12 NMAC, Surface Owner Notification, Black Hills Gas Resources (BHGR) has closed the drilling pit for the Jicarilla 29-02-26 #21 gas well. The pit was closed on August 15, 2009. Attached are a site map and the Plot Plan indicating the location and the closed pit in reference to the well-head.

If there are any questions contact Daniel Manus (505) 634-1111 extensions 28.

Respectfully,

  
Daniel Manus  
Regulatory Technician

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"><li>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li><li>■ Print your name and address on the reverse so that we can return the card to you.</li><li>■ Attach this card to the back of the mailpiece, or on the front if space permits.</li></ul>		<p>A. Signature  <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) Kenneth Harrison</p> <p>C. Date of Delivery 9-8-09</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, enter delivery address below:</p> <p>RECEIVED SEP 10 2009</p>	
1. Article Addressed to:  Bureau of Indian Affairs Jicarilla Agency Branch of Realty Property P.O. Box 167 Dulce, NM 87528		3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
2. 7007 0220 0004 0187 4495		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

CERTIFIED MAIL 7007 0220 0004 0187 4495

CC File  
Brandon Powell NMOCD

WELL PAD DIAGRAM

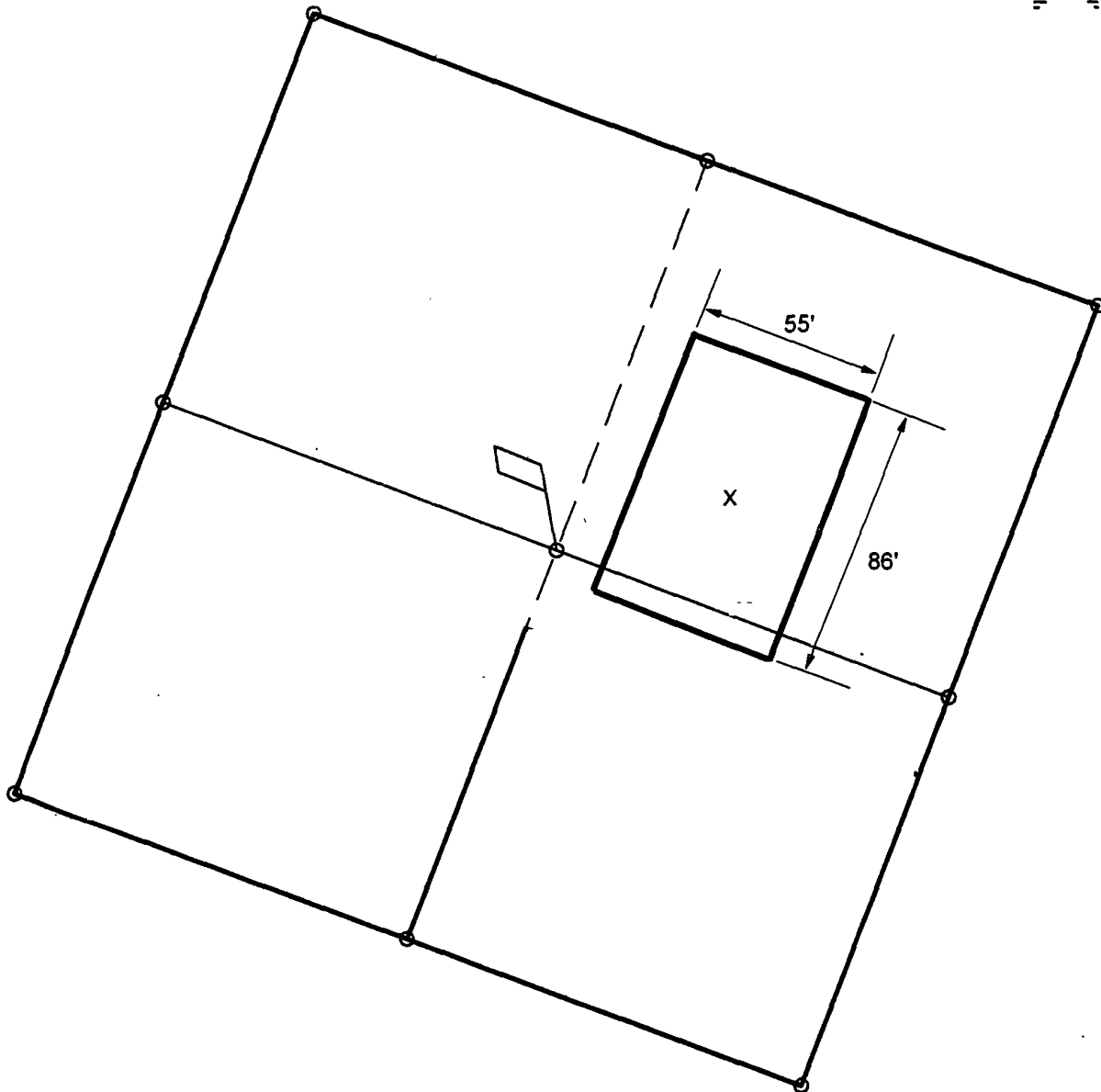
COMPANY: BLACK HILLS GAS RESOURCES

LEASE: JICARILLA 29-02-26 No. 21

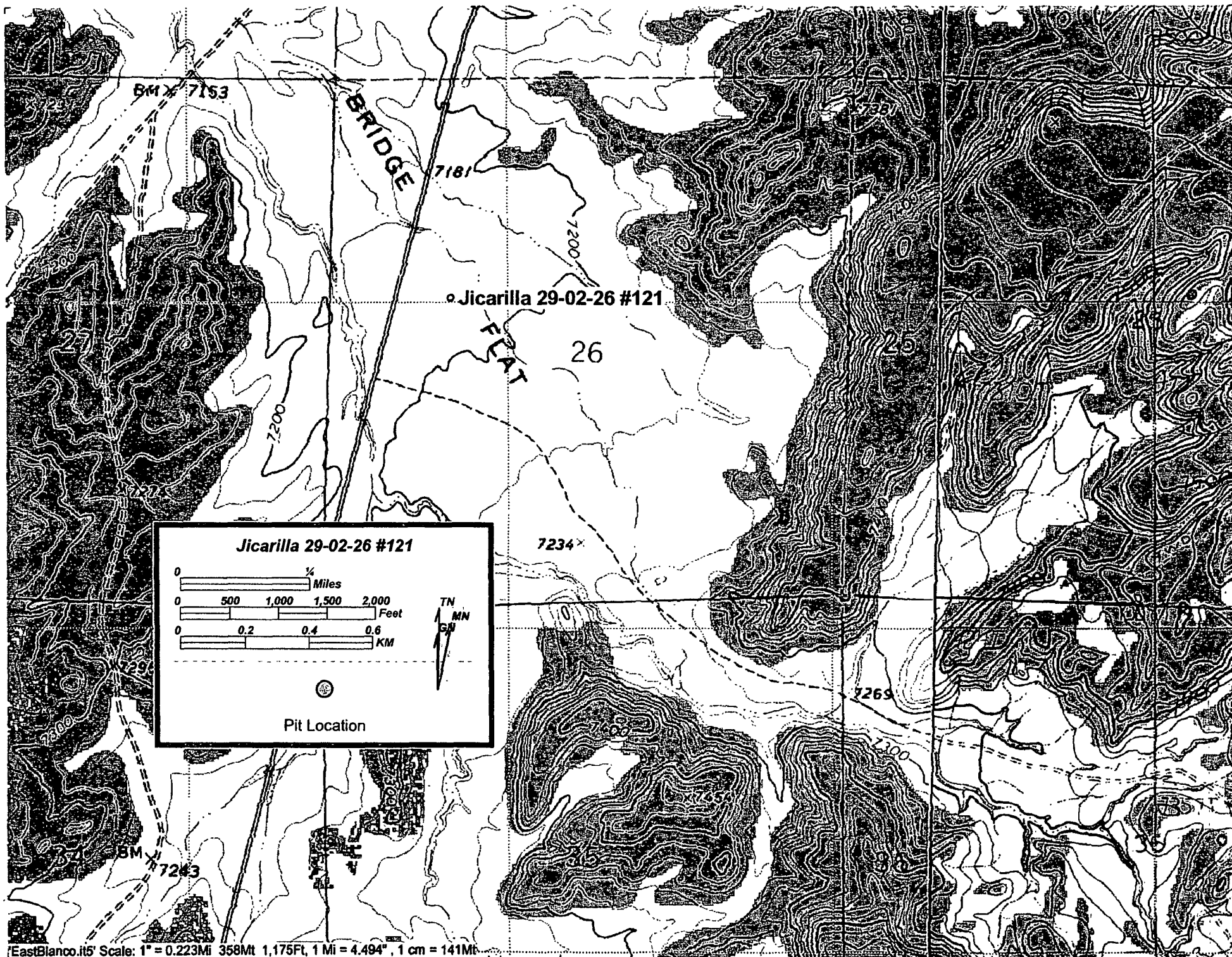
FOOTAGE: 2200 FNL 1200 FWL

SEC.: 26 TWN: 29-N RNG: 2-W NMPM

ELEVATION: 7189'



X = Center of Pit  
Latitude: 36.697615°N  
Longitude: 107.017224°W





[Contact Us](#) | [Download Soils Data](#) | [Archived Soil Surveys](#) | [Preferences](#) | [Logout](#) | [Help](#)

| A | A | A |

**Area of Interest (AOI)**

[Soil Map](#)

[Soil Data Explorer](#)

[Shopping Cart](#)

**Area of Interest Interactive Map**



[View Extent](#) [Continental U.S.](#)

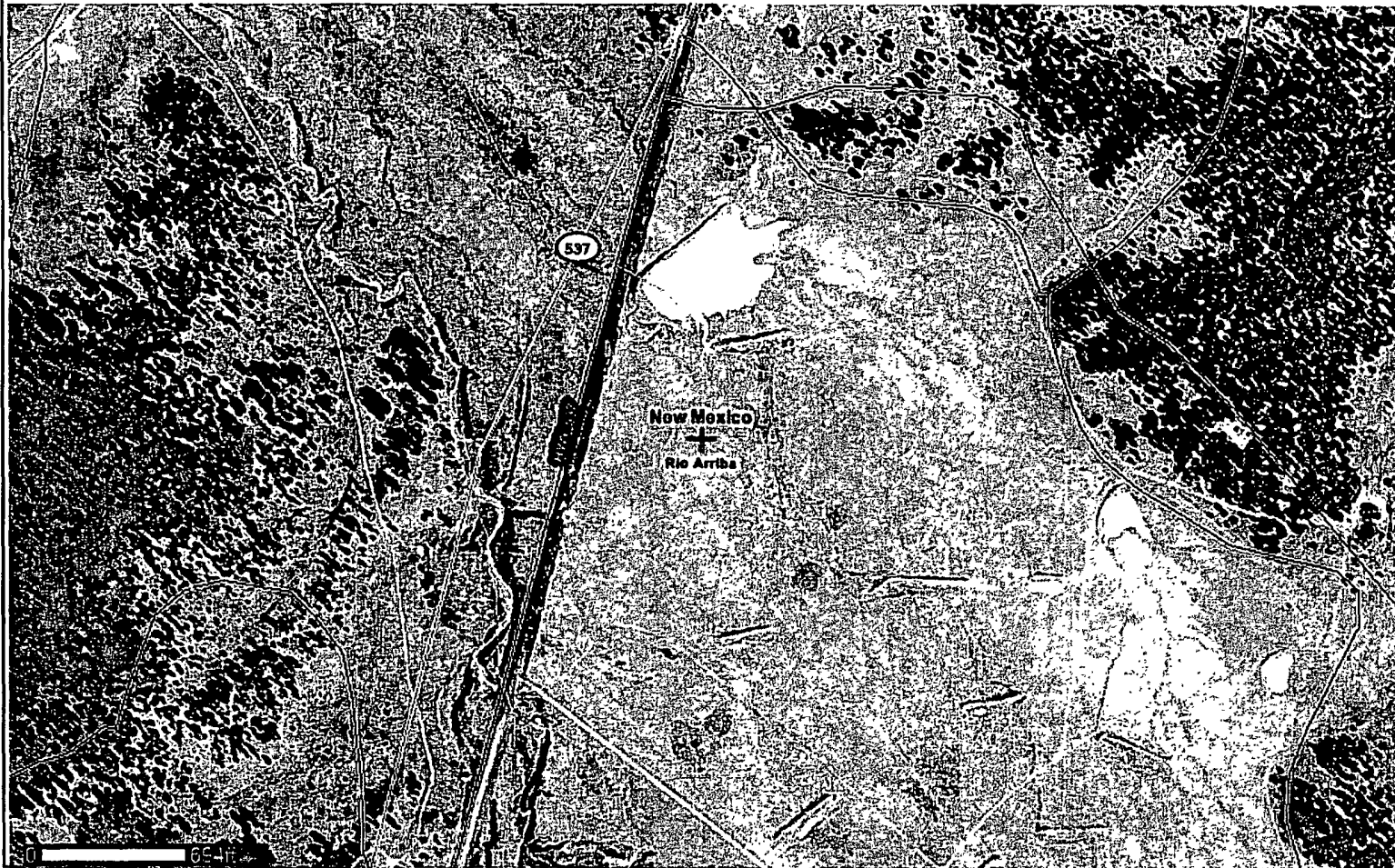


**Scale**

1:5,830



± 1 %





## Sample Analysis Report

**CLIENT:** Black Hills Gas Resources  
3200 North 1st Street  
PO Box 249  
Bloomfield, NM 87413

**Date Reported:** 6/22/2009

**Report ID:** O0906034001

**Project:** Pit Closure 61209  
**Lab ID:** O0906034-002  
**Client Sample ID:** Jic 29-2-26#21  
**Matrix:** Soil

**Work Order:** O0906034  
**Collection Date:** 6/12/2009 11:35:00 AM  
**Date Received:** 6/16/2009 10:30:00 AM  
**COC:** 116969

Analyses	Result	RL	Limits	Qual	Units	Date Analyzed/Init
<b>8260B MBTEXN-Soil</b>						
						<b>Prep Date: 6/16/2009</b>
Benzene	ND	0.5			mg/Kg	06/17/2009 ECS
Toluene	ND	0.5			mg/Kg	06/17/2009 ECS
Ethylbenzene	ND	0.5			mg/Kg	06/17/2009 ECS
m,p-Xylenes	ND	1.0			mg/Kg	06/17/2009 ECS
o-Xylene	ND	0.5			mg/Kg	06/17/2009 ECS
GRO by 8260 (nC6-nC10)	ND	10			mg/Kg	06/17/2009 ECS
Surr: 4-Bromofluorobenzene	84.3		74-124		%REC	06/17/2009 ECS
<b>8015B Diesel Range Organics-Soil</b>						
						<b>Prep Date: 6/18/2009</b>
Diesel Range Organics (nC10-nC32)	100	20			mg/Kg	06/21/2009 ECS
Surr: o-Terphenyl	87.1		25-126		%REC	06/21/2009 ECS

**These results apply only to the samples tested.**

**RL - Reporting Limit**

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D Diluted out of recovery limit	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	M	Matrix Effect
	ND Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Reviewed by:

*Ed Scruton*  
Ed Scruton, Analytical Chemist



### Sample Analysis Report

**CLIENT:** Black Hills Gas Resources  
3200 North 1st Street; P.O. Box 249  
Bloomfield, NM 87413

**Date Reported:** 6/23/2009  
**Report ID:** S0906314001

**Project:** Pit Closure 61209  
**Lab ID:** S0906314-002  
**Client Sample ID:** Jic29-2-26#21  
**COC:** 116969

**Work Order:** S0906314  
**Collection Date:** 6/12/2009 11:35:00 AM  
**Date Received:** 6/16/2009  
**Sampler:** DM  
**Matrix:** Soil

Analyses	Result	RL	Qual	Units	Date Analyzed/Init	Method
<b>General Parameters-Soil</b>						
TPH 418.1	100	100		ppm	06/19/2009 000 SNS	418.1
<b>Soil Anions</b>						
Chloride	169	0.01		ppm	06/22/2009 000 KO	USDA 60-3a

**These results apply only to the samples tested.**

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- S Spike Recovery outside accepted recovery limits

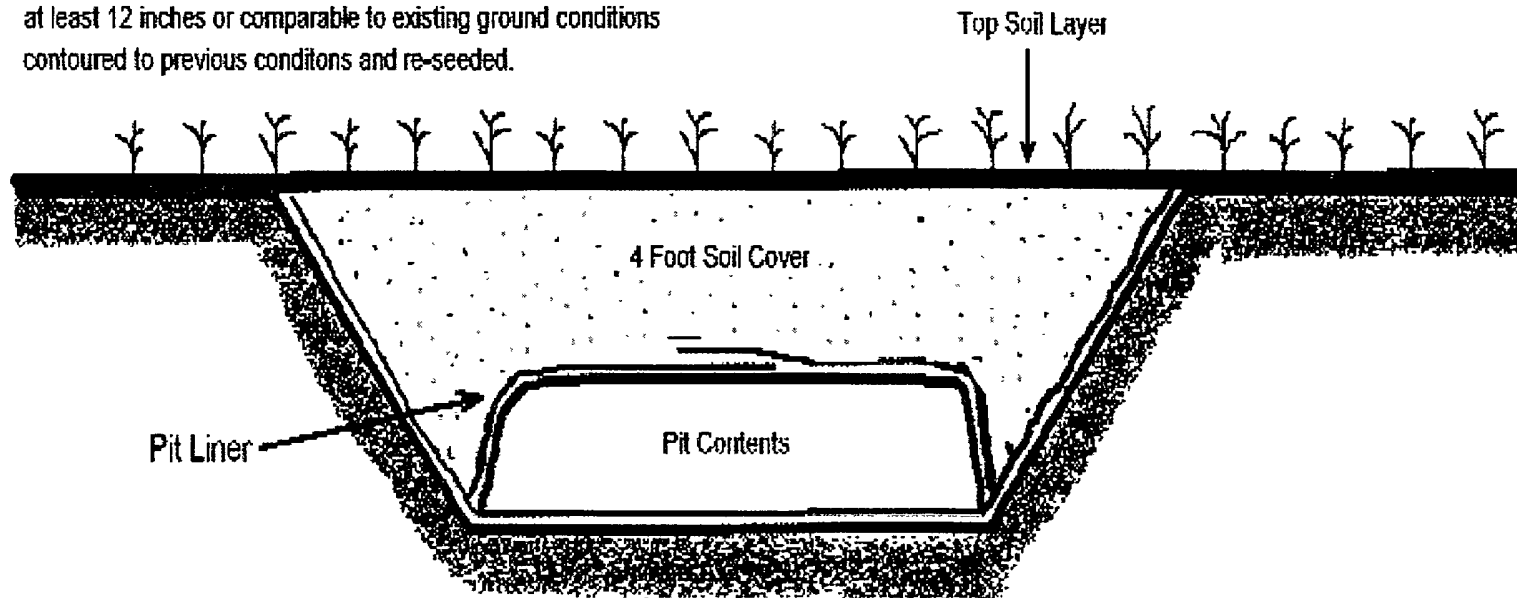
**RL - Reporting Limit**

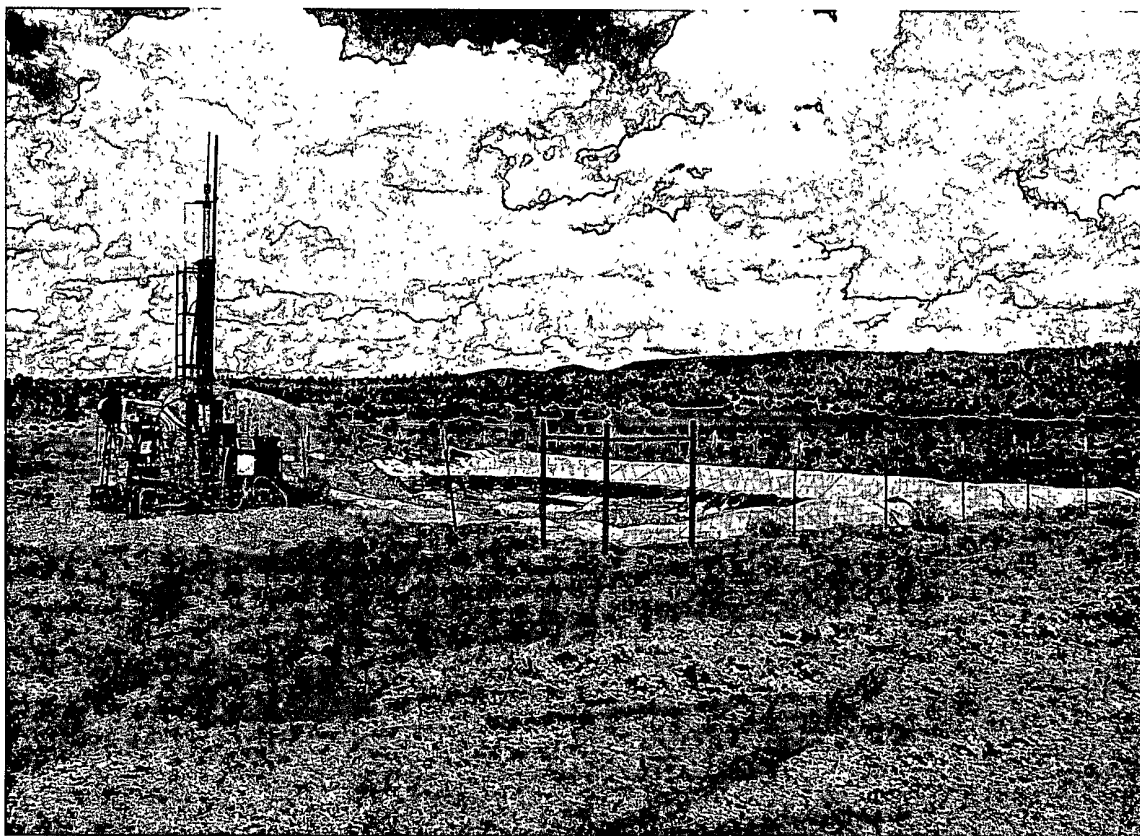
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by a contract laboratory
- ND Not Detected at the Reporting Limit

Reviewed by: Karen A Secor  
Karen Secor, Soil Lab Supervisor

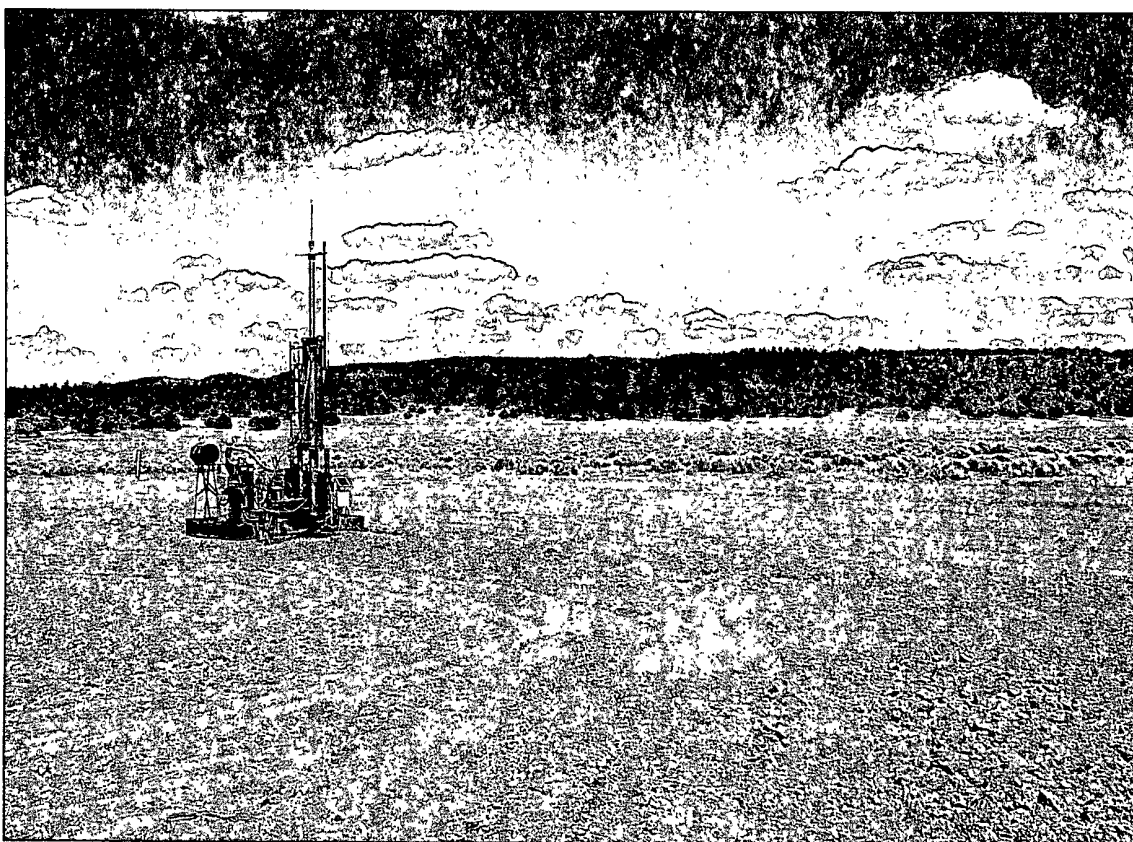
## Black Hills Gas Resources Pit Closure Diagram

Minimum 4 foot soil cover compacted with a topsoil layer at least 12 inches or comparable to existing ground conditions contoured to previous conditions and re-seeded.





*Jicarilla 29-02-26 #21 Drilling Pit Before*



*Jicarilla 29-02-26 #21 Drilling Pit After Closure*



## Black Hills Gas Resources

### Jicarilla 29-02-26 #21

Surface Location: 2,200' FNL 1,200' FWL (SW/NW) Unit E

Sec. 26 T29N R2W

Rio Arriba County, New Mexico

Lease: Contract MDA 701-98-0013, Tract 4

### Inspection report for Jicarilla 29-02-26#21

- o Information taken from daily drilling logs

Date	Level
12/15/2008	2.5' BELOW TOP; 0.5' BELOW MAX
12/16/2008	3' BELOW TOP; 1' BELOW MAX
12/17/2008	3' BELOW TOP; 1' BELOW MAX
12/18/2008	3' BELOW TOP; 1' BELOW MAX
12/19/2008	2.5' BELOW TOP; 0.5' BELOW MAX
12/20/2008	3' BELOW TOP; 1' BELOW MAX
12/21/2008	3.5' BELOW TOP; 1.5' BELOW MAX
12/22/2008	4' BELOW TOP; 2' BELOW MAX
12/23/2008	4' BELOW TOP; 2' BELOW MAX

Glen Davis  
Drilling Rig

Date	Level
4/14/2009	2' BELOW TOP; 0' BELOW MAX
4/15/2009	2.5' BELOW TOP; 0.5' BELOW MAX
4/16/2009	2.5' BELOW TOP; 0.5' BELOW MAX
4/17/2009	2.5' BELOW TOP; 0.5' BELOW MAX
4/18/2009	2.5' BELOW TOP; 0.5' BELOW MAX
4/19/2009	3' BELOW TOP; 1' BELOW MAX
4/20/2009	3' BELOW TOP; 1' BELOW MAX
4/21/2009	3' BELOW TOP; 1' BELOW MAX
4/22/2009	4' BELOW TOP; 2' BELOW MAX
4/23/2009	4' BELOW TOP; 2' BELOW MAX

Mike Romo  
Completion Rig

District I  
1625 N French Dr, Hobbs, NM 88240  
District II  
1301 W Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S St Francis Dr, Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
July 21, 2008

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

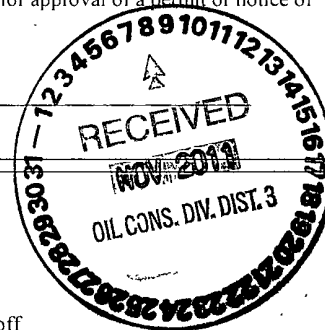
Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

- 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: <b>Black Hills Gas Resources</b> OGRID #: <b>013925</b>	
Address: <b>3200 N 1st St Bloomfield, NM 87413</b>	
Facility or well name: <b>Jicarilla 29-02-26 #21</b>	
API Number: <b>30-039-30576</b> OCD Permit Number: <b>4067</b>	
U/L or Qtr/Qtr <b>Unit E</b> Section <b>26</b> Township <b>29N</b> Range <b>2W</b> County: <b>Rio Arriba</b>	
Center of Proposed Design: Latitude <b>36.69737° N</b> Longitude <b>107.01743° W</b> NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983	
Surface Owner: <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input checked="" 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 <b>20</b> mil <input checked="" type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____ <input type="checkbox"/> String-Reinforced Liner Seams: <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: <b>≈ 20,000</b> bbl Dimensions: L <b>120'</b> x W <b>90'</b> x D <b>10'</b>	
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"/> PVC <input type="checkbox"/> Other _____ Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____	
4. <input type="checkbox"/> <b>Below-grade tank:</b> Subsection I of 19.15.17.11 NMAC Volume: _____ bbl Type of fluid: _____ Tank Construction material: _____ <input type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off <input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____ Liner type Thickness _____ mil <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
5. <input type="checkbox"/> <b>Alternative Method:</b> Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	



Submit To Appropriate District Office Two Copies District I 1625 N French Dr, Hobbs, NM 88240 District II 811 S First St, Artesia, NM 88210 District III 1000 Rio Brazos Rd, Aztec, NM 87410 District IV 1220 S St Francis Dr, Santa Fe, NM 87505	<b>State of New Mexico</b> <b>Energy, Minerals and Natural Resources</b>  <b>Oil Conservation Division</b> <b>1220 South St. Francis Dr.</b> <b>Santa Fe, NM 87505</b>	<b>Form C-105</b> Revised August 1, 2011
--	---	---

1. WELL API NO. <b>30-039-30079</b>	2. Type of Lease <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/> FED/INDIAN
3. State Oil & Gas Lease No.	

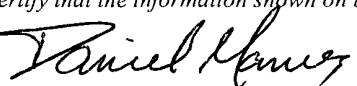
<b>WELL COMPLETION OR RECOMPLETION REPORT AND LOG</b>										
4. Reason for filing  <input type="checkbox"/> <b>COMPLETION REPORT</b> (Fill in boxes #1 through #31 for State and Fee wells only)  <input checked="" type="checkbox"/> <b>C-144 CLOSURE ATTACHMENT</b> (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33, attach this and the plat to the C-144 closure report in accordance with 19 15 17 13 K NMAC)	5. Lease Name or Unit Agreement Name <b>MDA 701-98-0013, Tract 4</b>									
6. Well Number: <b>Jicarilla 29-02-26 #21</b>										
7. Type of Completion <input checked="" type="checkbox"/> NEW WELL <input type="checkbox"/> WORKOVER <input type="checkbox"/> DEEPENING <input type="checkbox"/> PLUGBACK <input type="checkbox"/> DIFFERENT RESERVOIR <input type="checkbox"/> OTHER										
8. Name of Operator <b>Black Hills Gas Resources</b>										
9. OGRID <b>013925</b>										
10. Address of Operator <b>3200 N 1st Street</b> <b>Bloomfield, NM 87413</b>										
11. Pool name or Wildcat										
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
<b>Surface:</b>	<b>E</b>	<b>26</b>	<b>29N</b>	<b>2W</b>		<b>2200'</b>	<b>North</b>	<b>1200</b>	<b>West</b>	<b>Rio Arriba</b>
<b>BH:</b>										
13. Date Spudded	14. Date T.D. Reached	15. Date Rig Released <b>April 14, 2009</b>		16. Date Completed (Ready to Produce)		17. Elevations (DF and RKB, RT, GR, etc)				
18. Total Measured Depth of Well		19. Plug Back Measured Depth		20. Was Directional Survey Made?		21. Type Electric and Other Logs Run				
22. Producing Interval(s), of this completion - Top, Bottom, Name										

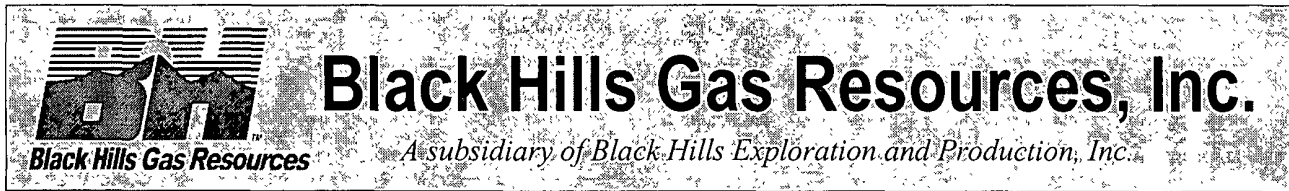
<b>23 CASING RECORD (Report all strings set in well)</b>					
CASING SIZE	WEIGHT LB/FT	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED

<b>24. LINER RECORD</b>				<b>25. TUBING RECORD</b>			
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)	27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">DEPTH INTERVAL</td> <td style="width:50%;">AMOUNT AND KIND MATERIAL USED</td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED						
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED								

<b>28 PRODUCTION</b>							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod or Shut-in)	
Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl	Gas - MCF	Water - Bbl	Oil Gravity - API - (Corr)	
29. Disposition of Gas (Sold, used for fuel, vented, etc)						30. Test Witnessed By	
31. List Attachments							
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit. <b>Plat on closure attachment</b>							
33. If an on-site burial was used at the well, report the exact location of the on-site burial							
Latitude <b>36.69737° N</b>		Longitude <b>107.01743° W</b>		NAD 1927 1983			

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief			
Signature	 Printed Name	<b>Daniel Manus</b> Title	<b>Regulatory Technician</b> Date <b>11/07/2011</b>
E-mail Address <b>Daniel.Manus@blackhillscorp.com</b>			



**Daniel Manus**  
*Regulatory Technician II*

3200 N 1<sup>st</sup> Street – PO Box 249 Bloomfield, NM 87413

Bus: (505) 634-5104  
Fax: (505) 634-1116  
[daniel.manus@blackhillscorp.com](mailto:daniel.manus@blackhillscorp.com)

November 7, 2011

New Mexico Oil Conservation Division  
Aztec Office  
1000 Rio Brazos Road  
Aztec, NM 87410

Subject: Jicarilla 29-02-26 #21 temporary drilling pit closure

Dear Sir or Madam

Black Hills Gas Resources' (BHGR) Jicarilla 29-02-26 #21 temporary drilling pit was closed on August 15, 2009 and the rig was release on December 9, 2008.

As for the notification to the NMOCD of closure of the pit, it is unknown if the notification was made by phone or email. BHGR understands going forward that all contact regarding notification, extensions, and exceptions will be made or followed up by email for documentation.

If you have any questions, please contact me.

Respectfully,

A handwritten signature in black ink that reads "Daniel Manus". The signature is fluid and cursive, with the first name "Daniel" being more prominent than the last name "Manus".

Daniel Manus

OR ANON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

FD. MRK'D. STONE  
W/ P&C No. 8894

N 89°50'25" E  
2646.98' (M)

FD. MRK'D. STONE

N 89°46'02" E  
2624.40' (M)

NM290226NE  
P&C No. 8894

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 unleased 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 working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Daniel Harcus* Date: 11/2/11

Printed Name: DANIEL HARCUS

26

SURFACE:  
LAT: 36.69753° N (NAD 83)  
LONG: 107.01743° W (NAD 83)  
LAT: 36°41'51.23" N (NAD 27)  
LONG: 107°01'01.00" W (NAD 27)

S.H.L. 1200'

C.O.P.

B.H.L. 660'

1200'

2200'

2275'

1980'

S 00°45'54" E  
2606.67' (M)

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.

SEPTEMBER 01, 2005

Date of Survey

Signature and Seal of Professional Surveyor:

ROY A. RUSH  
NEW MEXICO  
REGISTERED PROFESSIONAL LAND SURVEYOR  
8894

11-58

8894

FD. MRK'D. STONE  
W/ P&C No. 8894

N 00°11'19" E  
5319.49' (M)

CENTER OF PIT:  
LAT: 36.69737° N (NAD 83)  
LONG: 107.01730° W (NAD 83)  
LAT: 36°41'50.49" N (NAD 27)  
LONG: 107°01'00.15" W (NAD 27)

B.H.L.

B.H.L. & C.O.P. FOOTAGES ARE PROVIDED BY B.H.G.R.

CLIENT

S 88°06'13" W  
5320.14' (M)

NM290226SE  
MRK'D. STONE

S 00°51'53" E  
2575.17' (M)

Certificate Number

RCVD JAN 12 '12  
OIL CONS. DIV.

DIST. 3