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: **Black Hills Gas Resources** OGRID #: 013925
Address: **P.O. Box 249 / 3200 North First Street Bloomfield, New Mexico 87413**
Facility or well name: **Jicarilla 29-02-09 #143**
API Number: **30-039-30080** OCD Permit Number: _____
U/L or Qtr/Qtr **Unit O/SW/SE** Section **09** Township **29 North** Range **02West** County: **Rio Arriba**
Center of Proposed Design: Latitude **36.73358** Longitude **-107.04521** NAD: ☐1927 ☒ 1983
Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

RCVD JUL 30 '08
OIL CONS. DIV.
DIST. 3

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: **15,000** bbl Dimensions: L **90'** x W **40'** 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	☐ Yes ☐ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to temporary, emergency, or cavitation pits and below-grade tanks)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to permanent pits)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

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_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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

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

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

15.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

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

16.

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

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

Disposal Facility Name: _____ 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): **Lynn H. Benally** Title: **Regulatory Specialist**

Signature: _____ Date: July 29, 2008

e-mail address: **lbenally@bhep.com** Telephone: **(505) 634-1111 Ext 27**

20.
OCD Approval: ☒ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ **Approval Date:** 8-4-08

Title: Environ Spec **OCD Permit Number:** _____

21.
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

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

☐ **Closure Completion Date:** _____

22.
Closure Method:

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

23.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

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

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

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

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

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

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

24.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

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

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

25.
Operator Closure Certification:

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

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Black Hills Gas Resources

Jicarilla 29-02-09 #143
Surface Location: 500' FSL 1,650' FEL (SW/SE) Unit O
Sec.9 T29N R2W
Bottom Hole Location: ± 2300' FSL ± 2600' FEL (NW/SE) Unit J
Sec.8 T29N R2W
Rio Arriba County, New Mexico Lease: Tract 4 MDA 701-98-0013

Pit closure plan for Jicarilla 29-02-09 #143

In accordance with Rule 19.15.17.13 NMAC the pit was constructed prior to June 15, 2008 and will follow Rule 19.15.17.12 NMAC for closure. The drilling pit was constructed and completed on May 2, 2008. The following describes Black Hills Gas Resources (BHGR) standard procedures for temporary pit closures

BHGR closure activities will close temporary pits in place using the following methods;

- 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.
- BHGR will submit to NMOCD within 60 days of pit closure using C-144 a pit closure report to include;
    - Details on the soil cover and capping, where applicable
    - A plot plan
    - Inspection Reports
    - Sampling Results
    - C-105
    - A copy of Deed Notice, where applicable. Location is on Jicarilla Apache Tribal Lands.
- Any hydrocarbon products floating on top of the pit will be recovered and any free water or other liquids will be removed at the start of the pit closure process 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, the pit must be completely dewatered before stirring or otherwise disturbing the bottom of the pit.
    - Excess water removed from the pit will be filtered and pumped out and taken either to BHGR Water Station 5 located approximately 4 miles southwest of the location, section 19 T29N R2W on the Jicarilla Apache Reservation, or used for the next drilling location.
    - Excess sludge's or other solid materials will not included in the in place burial will be transported to the TNT Evaporation Pond/Land-farm located in sections 5, 7 and 8 T25N R3W, HRC 74 Box 113, Lindrith, NM 87029, NM1-8.
- Where applicable the surface owner shall be notified of BHGR proposed closure plan using a means that provides proof of notice (i.e. certified mail, return receipt requested, approved APD).
- Within 6 months of the Rig Off status occurring BHGR will ensure that temporary pits are closed, re-contoured, and reseeded.
- 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:
    - Operator's name, Location by Unit Letter, Section, Township, and Range. Well name and API number.

- Pit contents will be sampled and analyzed for BTEX, DRO, GRO and Chloride to determine existing concentrations. Closure standards will be dependent upon vertical distance to groundwater from the bottom of the pit. A five point composite sample will be taken of the pit contents, samples will be tested per Subsection B of 19.15.17.13(B)(1)(b).

  - Benzene analyzed using EPA SW-846 method 8021B/8260B, ***with a detection limit of 0.2 mg/kg***
  - BTEX analyzed using EPA SW-846 method 8021B/8260B, ***with a detection limit of 50 mg/kg***
  - TPH analyzed using EPA SW-846 method 418.1, ***with a detection limit of 2500 mg/kg***
  - GRO/DRO analyzed using EPA SW-846 method 8015M, ***with a detection limit of 500 mg/kg***
  - Chlorides analyzed using EPA 300.1, ***with a detection limit of 500 mg/kg or 1000 mg/kg***

  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

- The remaining cuttings will be covered in place using native soils and the temporary berm material, the surface is graded to prevent water accumulation, for pit material with constituent concentrations slightly higher than those allowed for pit burial, the pit material may be blended with clean, local soil to dilute and reduce the high concentrations to acceptable levels before the waste/soil mix is buried. If pit material is above closure standard a secondary test will be taken to determine concentrations after soil blending. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents

- The liner will be cut free from its anchor points and rolled into itself on all four sides. Removal of liner will consist of manually or mechanically cutting liner and removing all remaining liner. Care will be taken to remove "All" of the liner ie., edges of liner entrenched or buried. All excessive liner will be disposed of at a licensed disposal facility

- A minimum of four feet of soil cover will be applied over the remaining pit contents and compacted. Stockpiled topsoil shall be applied last. The soil should be mounded and shaped to ensure runoff without erosion and diversion terraces constructed, if necessary. The cover shall include one foot of suitable material to establish vegetation at the site, or to the background thickness of topsoil, whichever is greater. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area.

- The area is re-vegetated with native species to reduce the potential for erosion and promote full recovery of the area's ecosystem. BHGR shall seed the disturbed areas the first growing season after pit closure. Seeding will be accomplished using drilling on the contour whenever practical or by other division-approved methods, BIA stipulated seed mixes will be used. 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 and maintain that cover through two successive growing seasons. Re-seeding or planting will be continued until successful vegetative growth occurs.

- 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. The marker will include welded or stamped, the Operator's Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an Indicator that the marker is an onsite burial location.

  - During the production life of the well, a steel plate measuring no less than 12 inches by 12 inches will be used as a surface completion to indicate the pit location. The plate will include welded or stamped the date of closure and indicate an "in place burial" for the former pit.

- Attached is the Siting Criteria information
- Attached is the Black Hills Gas Resources Typical Drilling Pit Design
- Attached is a location map
- Attached is the BHGR pit closure diagram
- Attached is the Surface Owner Notification

Black Hills Gas Resources

Jicarilla 29-02-09 #143

Surface Location: 500' FSL 1,650' FEL (SW/SE) Unit O
Sec.9 T29N R2W
Bottom Hole Location: ± 2300' FSL ± 2600' FEL (NW/SE) Unit J
Sec.8 T29N R2W
Rio Arriba County, New Mexico Lease: Tract 4 MDA 701-98-0013

Siting Criteria Compliance Demonstrations

- **Depth to groundwater**
  Jicarilla 29-02-09 #143
  Section 09; Township 29 North; Range 02 West
  Depth to nearest ground water over 223 feet below pit bottom.

  Depth to nearest groundwater in the following Townships and Ranges ***(Information provided by Jicarilla Apache Natural Resources Division, Department of Water Resources water well information)***:

  - Township 30 Range 3 West ranges from 402-600 feet below ground surface (bgs);
  - Township 29 Range 2 West ranges from 235-475 feet bgs;
  - North half of Township 29 Range 3 West ranges from 315-350 feet bgs;
  - North half of Township 28 Range 2 West is 252 feet bgs.

- **Distance to water course**
  - The pit is not located within 300 feet of a continuous watercourse, see attached topo map.
  - The pit is located 0ver 2000 feet west of an un-named wash and over 1 mile northwest of La Jara Canyon, see attached topographic map

- **Distance to permanent residence**
  - The pit is not located within 300 feet of a permanent residence, school, hospital, or institution, see attached aerial image generated from the Natural Resources Conservation Service website, http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx .

- **Distance to water well/Within incorporated municipal boundary**
  - The pit is not located within 500 feet of a private domestic water source or 1000 feet from any other fresh water well or spring. There are no identified water wells or stock water wells within a radius of 500 feet.

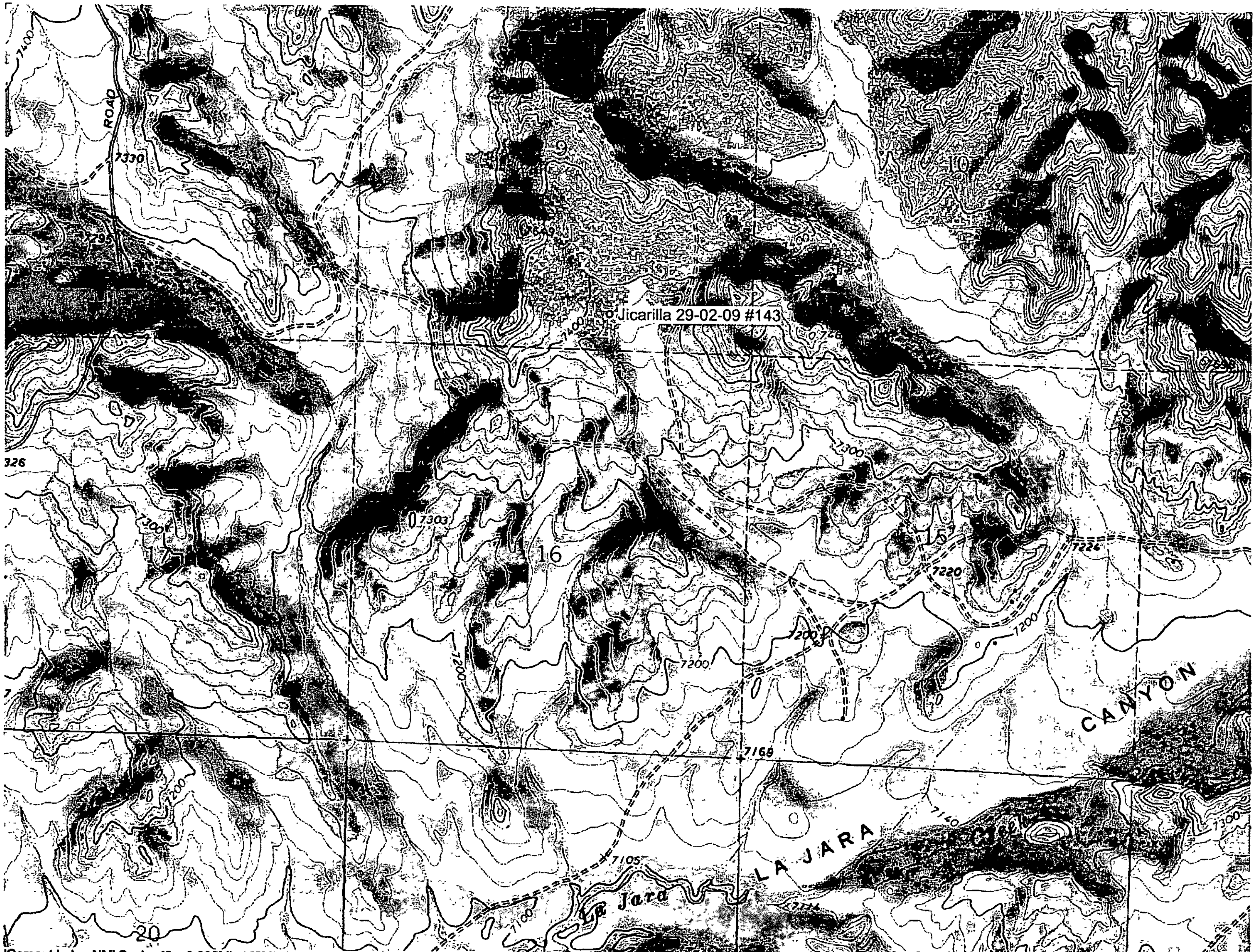
  - The pit is not located within any incorporated municipal water boundary; location is on the Jicarilla Apache Reservation with Dulce, NM being the closest city, which is over 18 miles northeast.

- **Distance to wetland**
  - The pit is not within 500 feet of a wetland. The Environmental Assessment for the area did not identified wetlands within a 500-foot radius of the location. In addition, there is no digital information for this area from the US Fish and Wildlife resources, see attached map generated from the US Fish and Wildlife website. http://wetlandsfws.er.usgs.gov/wtlnds/launch.html

- **Distance to subsurface mine**
  - The pit does not overlie any subsurface mine, see attached map generated by the Mines, Mills, and Quarries in New Mexico 2001.

- **Within an unstable area**
  - The pit is not located in an unstable area, see attached map generated by Decision-makers Field Guide 2002.

- **FEMA Map (100 Year Floodplain)**
  - The FEMA Map for the Jicarilla 29-02-09 #143 is unavailable due to its location on the Jicarilla Apache Reservation. FEMA does not provide information for Indian Reservations, Forest Service Lands, and Military Installations.



Cement Lake; NM' Scale: 1" = 0.295Mi 475Mt 1,558Ft, 1 Mi = 3.388" , 1 cm = 187Mt

USDA United States Department of Agriculture
Natural Resources Conservation Service

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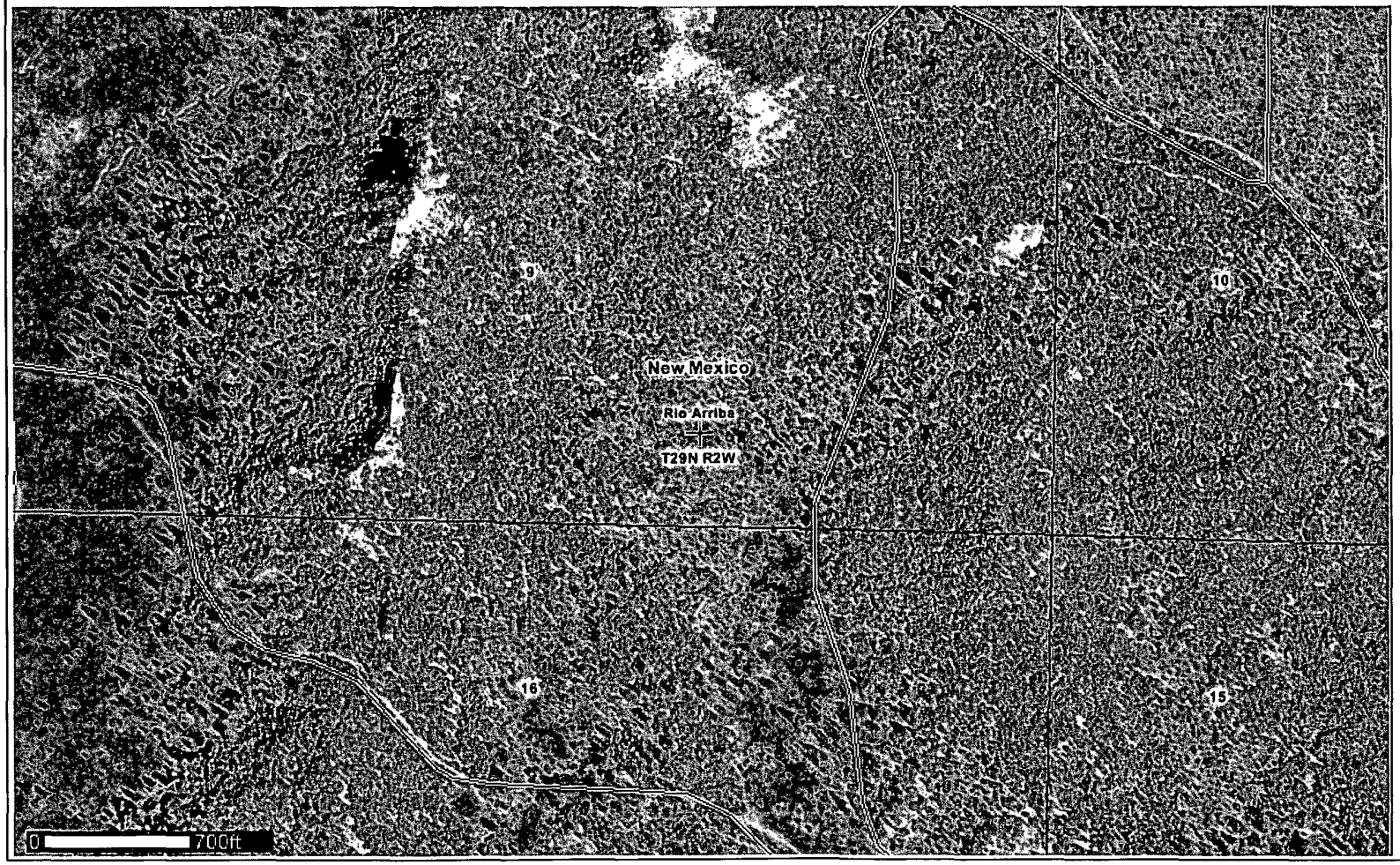
A | A | A

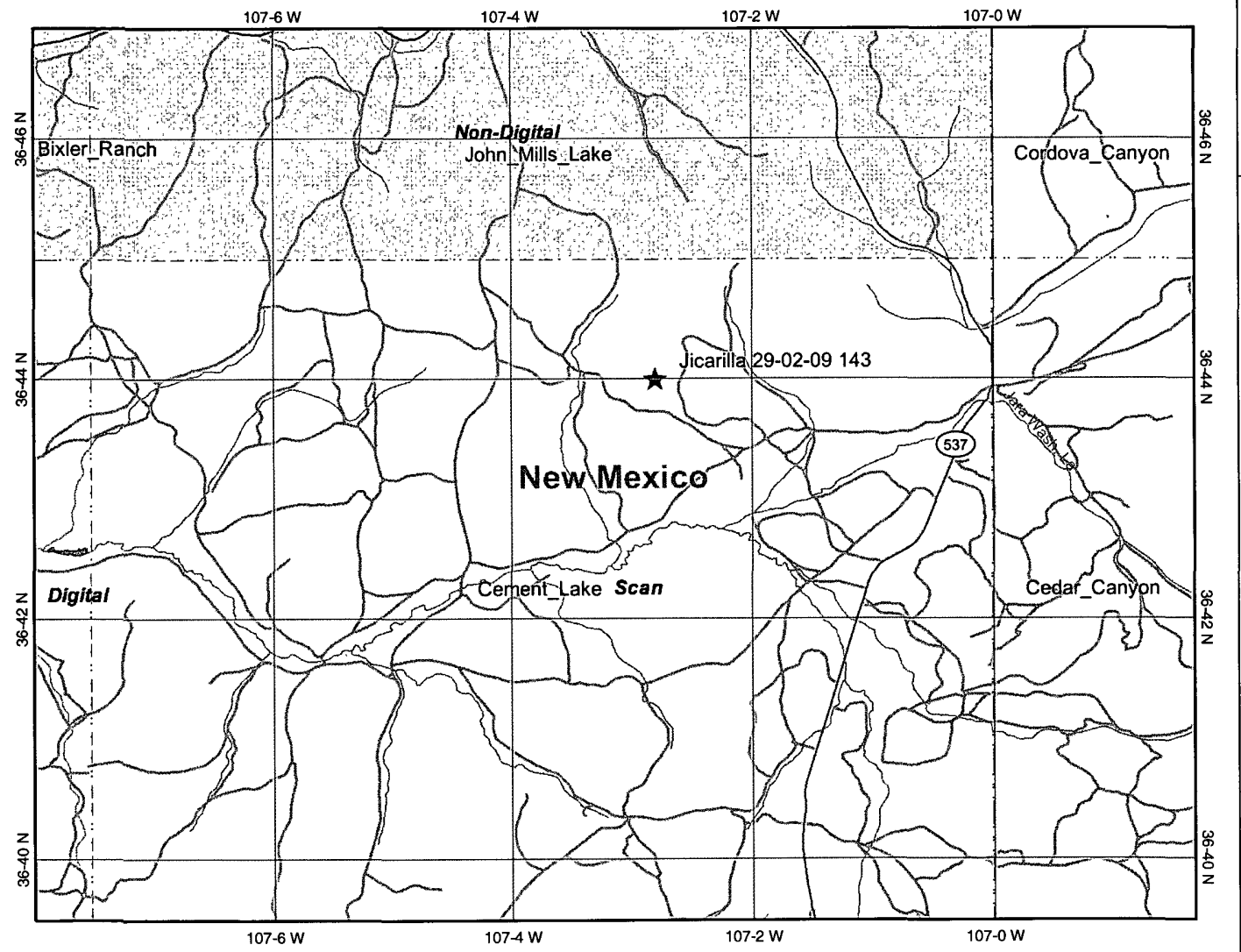
Area of Interest (AOI) | Soil Map | Soil Data Explorer | Shopping Cart

Area of Interest Interactive Map

View Extent: Continental U.S. Scale: (not to scale)



Jicarilla 29-02-09 #143



Map center: 36°43' N, 107°3' W

Legend

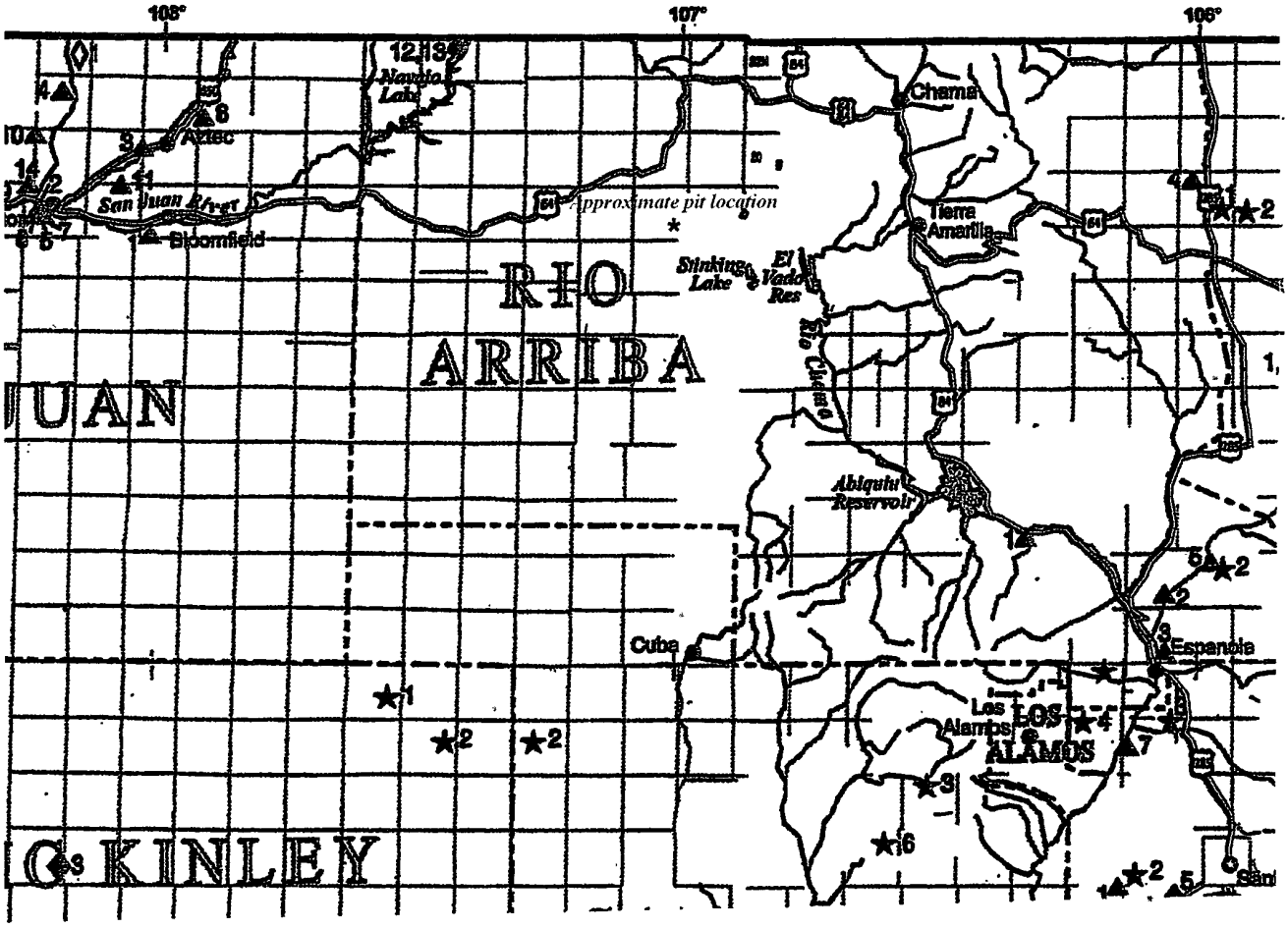
- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- Urban Areas 300K
- States 100K
- South America
- North America

Scale: 1:96,412

Mines, Mills, and Quarries in New Mexico
Spring 2001

Mining and Minerals Division New Mexico Energy

Jicarilla 29-02-09 #143



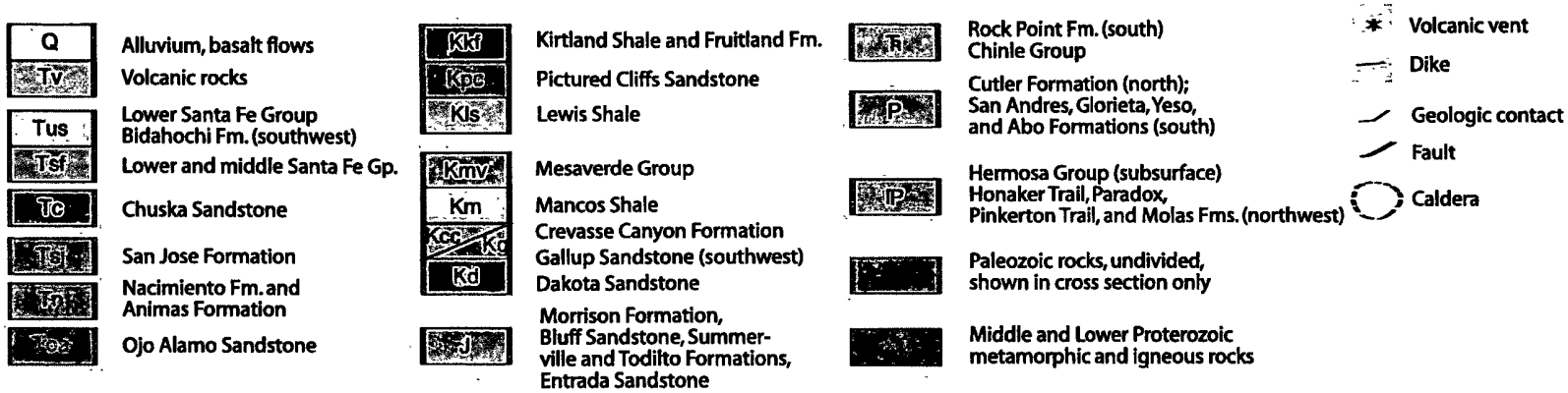


FIGURE 5—Generalized geologic map of the San Juan Basin (Beaumont, 1982; Green et al., 1991).

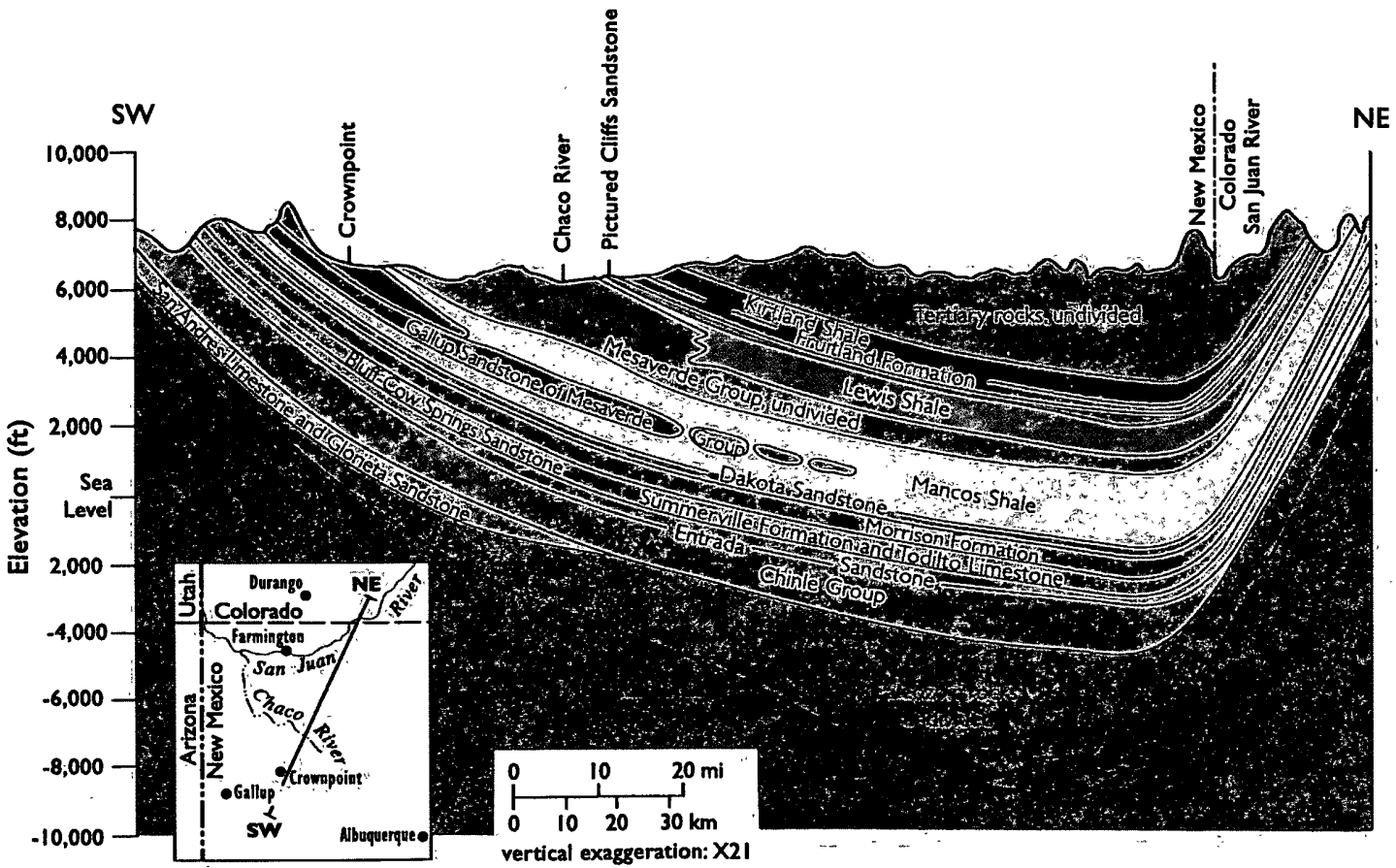
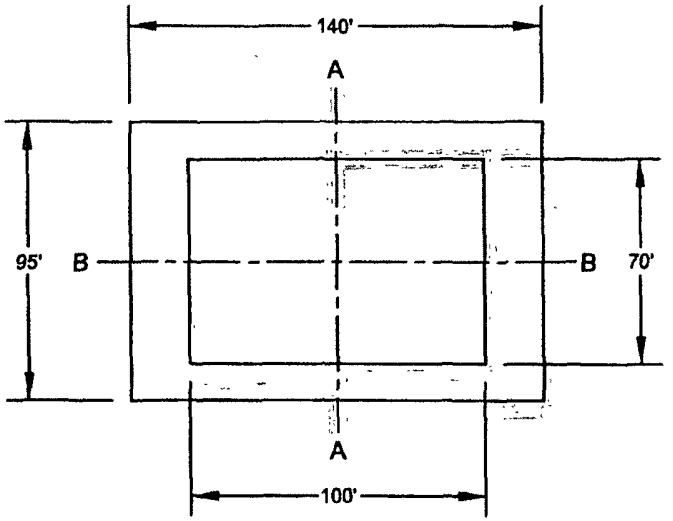
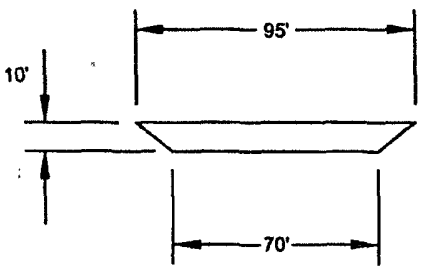


FIGURE 6—Generalized geologic cross section of the San Juan Basin (modified from Stone et al., 1983).

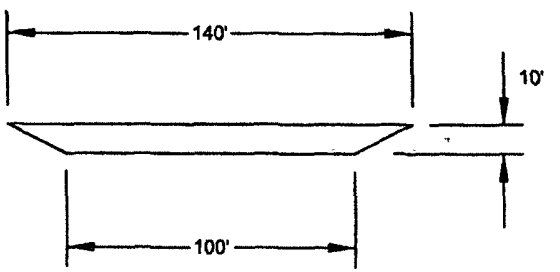
BLACK HILLS GAS RESOURCES
TYPICAL DRILLING PIT



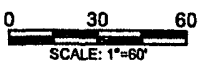
PLAN VIEW



VIEW A-A

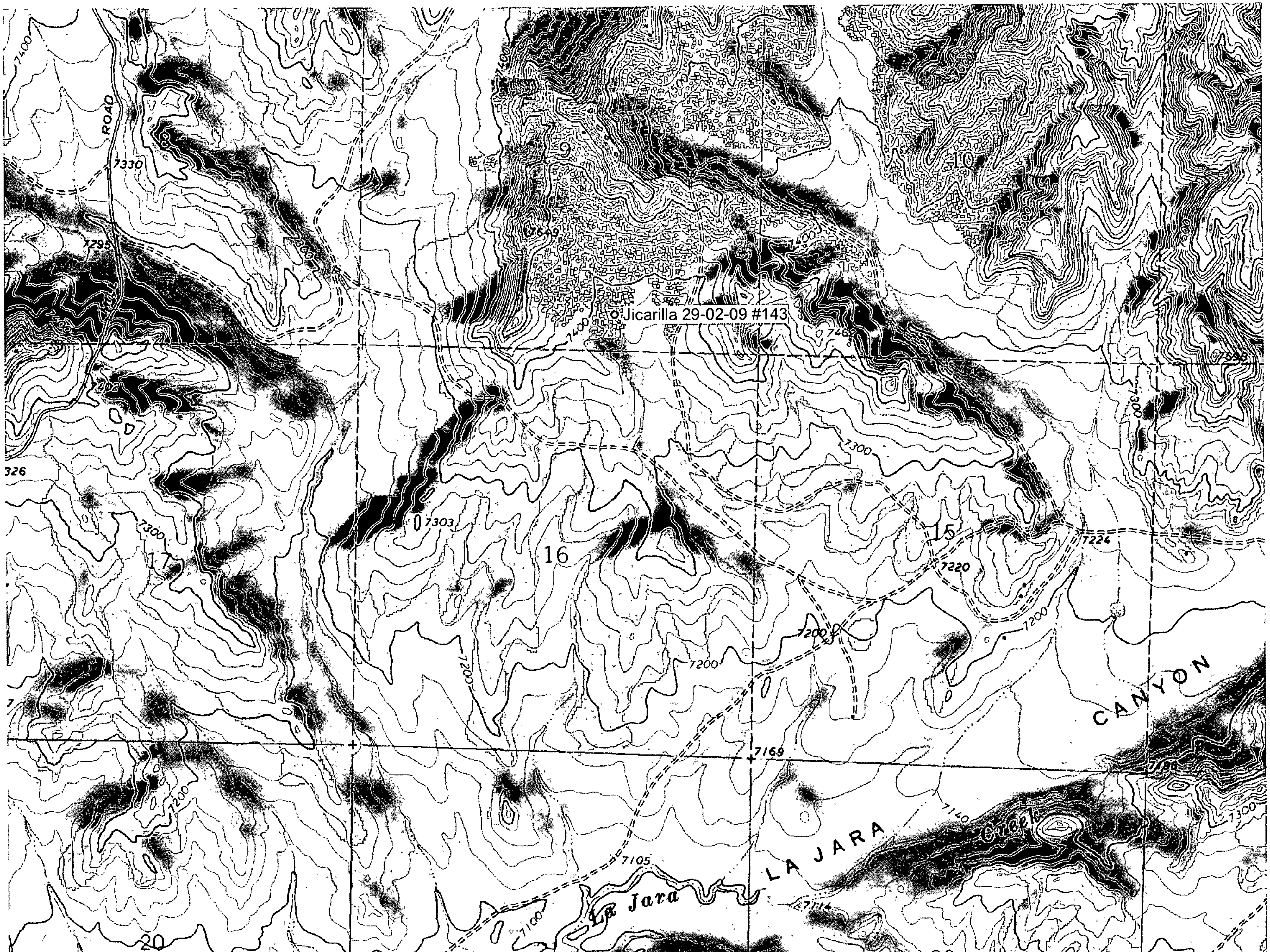


VIEW B-B



NOTE:

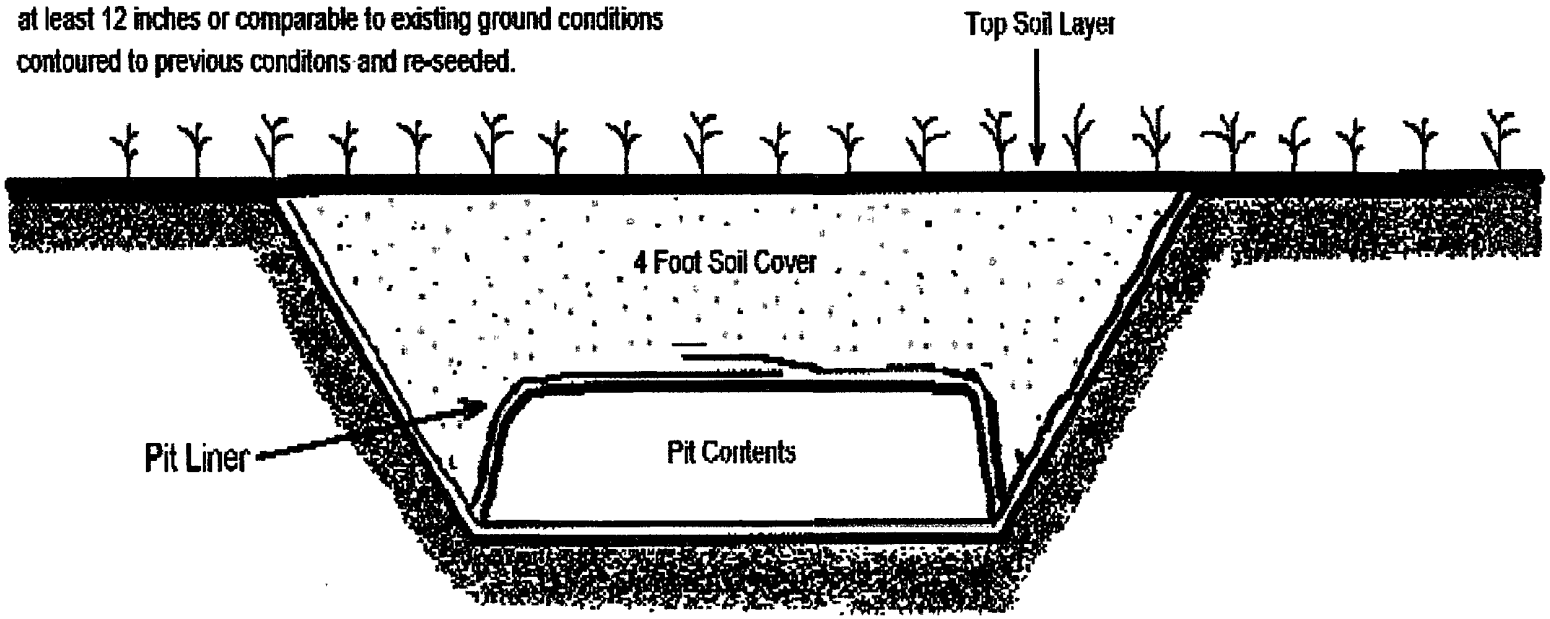
PIT VOLUME APPROXIMATELY 22,000 BARRELS ≈3.3. ACRE FEET OF WATER



'Cement Lake; NM' Scale: 1" = 0.295Mi 475Mt 1,558Ft, 1 Mi = 3.388", 1 cm = 187Mt

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 conditons and re-seeded.



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF INDIAN AFFAIRS
JICARILLA AGENCY

TAKE PRIDE IN AMERICA

FACSIMILE TRANSMITTAL SHEET

DATE: July 29, 2008

TOTAL NUMBER OF PAGES (INCLUDING COVER SHEET): 04

PHONE: (505) 634-1111 FAX: (505) 634-1116

ATTENTION: Lynn Benally

COMPANY: BHGR

REGARD(S): SIGNED PIT CLOSURES

REMARK(S):

FROM:

M. Moore

BRANCH OF REAL PROPERTY MANAGEMENT

TRANSMITTED BY:

W. Vicenti

BRANCH OF REAL PROPERTY MANAGEMENT
PHONE: (505) 759-3978 FAX: (505) 759-3986

OFFICE OF THE SUPERINTENDENT
PHONE: (505) 759-3951 FAX: (505) 759-3948

P.O. BOX 167
120 SENECA DRIVE
DULCE, NEW MEXICO 87528

Pit Closure Notification

In ordinance with 19.17.15.13 New Mexico Administrative Code (NMAC)

Operator/Pit Information:

Operator: Black Hills Gas Resources Telephone: (505) 634-1111 ext 27 e-mail address: dmanus@bhep.com

Address: 3200 N 1st Street PO Box 249 Bloomfield, NM 87413

Facility or well name: Jicarilla 29-02-09 #143 API #: 30-039-30080 Lease Name: Tract 4 MDA 701-98-0013

Footage:

U/L or Qtr/Qtr Unit O/ SW/SE Sec 9 T 29 N R 02 W County: Rio Arriba

Pit Coordinates:

Latitude 36.73358 N Longitude -107.04521 W NAD: 1927 ☐ 1983 ☒

Pit

Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness 15 mil Clay ☐

Pit Volume 15,000 bbl

Date: July 28, 2008

Printed Name/Title Lynn Benally / Regulatory Specialist

Signature

Received by:

Printed Name/Title Manuel Myore Realty Officer

Signature Manuel Myore Date: 7/29/08

RECEIVED
BUREAU OF INDIAN AFFAIRS

JUL 29 2008

JICARILLA AGENCY
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