

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

COPY

RCVD APR 23 '08
OIL CONS. DIV.

DIST. 3
FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. Type of Work ☒ DRILL ☐ REENTER

1b. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator **Black Hills Gas Resources, Inc.** E-mail: lbenally@bhep.com
Contact: Lynn Benally

3a. Address P.O. Box 249
Bloomfield NM 87413 3b. Phone No. (include area code)
505-634-1111

4. Location of Well (Report location clearly and in accordance with any State Requirements.)
At surface 900' FSL 2,145' FEL SW 1/4 SE 1/4
Lat: 36.74912 Long: 107.04689

At proposed production zone

14. Distance in miles and direction from nearest town or post office. *

Well is located approximately 60 miles east of Bloomfield, New Mexico.

15. Distance from proposed location to nearest property of lease line, ft. (Also nearest Drig, unit line, if any) Unit= n/a
Lease= ±2,145'

16. No. of acres in lease
9600.00

17. Spacing Unit dedicated to this well
160 SE 1/4

18. Distance from proposed location to nearest well, drilling, completed or applied for, on this lease, ft. Jicarilla 29-02-04
± 1,600' 42

19. Proposed depth
4,000' TVD

20. BLM/BIA Bond No. on file
NMB000230

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
7,494' GR

22. Approximate date work will start *
November 2, 2006

23. Estimated duration
45-60 days drig + completion

24. Attachments

SEE ATTACHED FOR

CONDITIONS OF APPROVAL

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form.

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature *Kathy L. Schneebeck* Name (Printed/Typed) Kathy L. Schneebeck, 303-820-4480 Date October 3, 2006
Title Permit Agent for Black Hills Gas Resources, Inc.

Approved by (Signature) *[Signature]* Name (Printed/Typed) Date 4/21/08
Title AFM Office FFO

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

MAY 05 2008

NMOCD

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

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

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr. AM 10 03
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

RECEIVED

☐ AMENDED REPORT

070 FARMINGTON NM

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30079	² Pool Code 72400	³ Pool Name Blanco	Pictured Cliffs, East
⁴ Property Code 27470	⁵ Property Name JICARILLA 29-02-04		⁶ Well Number 43
⁷ OGRID No. 013925	⁸ Operator Name BLACK HILLS GAS RESOURCES		⁹ Elevation 7494'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	04	29-N	2-W		900	SOUTH	2145	EAST	RIO ARRIBA

¹¹ 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
¹² Dedicated Acres 160 acres - SE/4				¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ 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

16				SEC. CORNER CALC'D BY SNGL. PROP.	17	OPERATOR CERTIFICATION
LOT 4 41.09 AC.	LOT 3 41.01 AC.	LOT 2 40.92 AC.	LOT 1 40.84 AC.		<p>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.</p>	
					<p><i>Kathy L. Schneebeck</i> October 3, 2006</p>	
					Signature	Date
					Kathy L. Schneebeck	
					Printed Name	
					Permit Agent for Black Hills	
					18	SURVEYOR CERTIFICATION
					<p>I hereby certify that the well location shown on this plot 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.</p>	
					Date	October 3, 2005
					Signature	
					REGISTERED PROFESSIONAL SURVEYOR	
					Certificate Number	
SEC. CORNER FD. PIN & CAP LS 8894	S 89-31-06 W	5288.54' (M)	2145'	SEC. CORNER FD. MKD. STONE		

Submit 3 Copies To Appropriate District Office
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

Form C-103
May 27, 2004

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

WELL API NO. <u>30-039-30079</u>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Jicarilla 29-02-04
8. Well Number 43
9. OGRID Number 013925
10. Pool name or Wildcat Pictured Cliffs

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other:

2. Name of Operator
Black Hills Gas Resources, Inc.

3. Address of Operator
P.O. Box 249 Bloomfield, NM 87413

4. Well Location

Unit Letter: O : 900 feet from the South line and 2,145 feet from the East line

Section: 4 Township 29N Range 2W NMPM County: Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
7,494'

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type: Drilling Pit Depth to Groundwater > 100 Distance from nearest fresh water well > 1000 Distance from nearest surface water > 200

Pit Liner Thickness: 15 mil Below-Grade Tank: Volume _____ bbls; Construction Material Synthetic

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: **Pit Registration**



SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER:



13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Drilling Pit Registration

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Kathy L. Schneebeck TITLE: Permit Agent for Black Hills Gas Resources, Inc. DATE October 3, 2006

Type or print name: **Kathy L. Schneebeck** E-mail address: **kathys@banko1.com** Telephone No. **303-820-4480**

For State Use Only

APPROVED BY: [Signature] TITLE _____

Deputy Oil & Gas Inspector
District #3 DATE MAY 05 2008

Conditions of Approval (if any):

Black Hills Gas Resources, Inc.
Jicarilla 29-02-04 43
900' FSL 2,145' FEL (SW/4 SE/4)
Sec. 4 T29N R2W
Rio Arriba County, New Mexico
Lease: MDA 701-98-0013, Tract 4

DRILLING PROGRAM

This Application for Permit to Drill (APD) was initiated under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. This NOS process included an onsite meeting, which was held on September 19, 2006, as determined by Bureau of Indian Affairs (BIA) and Jicarilla Oil and Gas Administration (JOGA), and at which time the specific concerns of Black Hills Gas Resources, Inc. (Black Hills), BIA and JOGA were discussed.

SURFACE FORMATION – San Jose

GROUND ELEVATION – 7,494'

ESTIMATED FORMATION TOPS - (Water, oil, gas and/or other mineral-bearing formations)

San Jose	Surface	Sandstone, shales & siltstones
Nacimiento	2,178'	Sandstone, shales & siltstones
Ojo Alamo	3,344'	Sandstone, shales & siltstones
Kirkland	3,551'	Sandstone, shales & siltstones
Fruitland Coal	3,656'	Sandstone, shales & siltstones
Pictured Cliffs	3,704'	Sandstone, shales & siltstones
Lewis	3,816'	Sandstone, shales & siltstones

TOTAL DEPTH 4,000'

Estimated depths of anticipated fresh water, oil, or gas:

Tertiary

San Jose	surface	Gas
Nacimiento	2,178'	Gas
Ojo Alamo	3,344'	Gas
Fruitland Coal	3,656'	Gas
Pictured Cliffs	3,704'	Gas

CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' – 250' TVD	12-1/4"	8-5/8"	J-55 24# ST&C New	To surface (± 175 sxs Standard Cement containing 2% CaCl ₂ and 0.25 lb/sx LCM) **
0' – 4,000' TVD	7-7/8"	5-1/2"	J-55 15.5# LT&C New	TD to surface (Lead: ± 300 sxs Lite Standard Cement. Tail: ± 400 sxs 50:50 POZ containing 0.25 lb/sx LCM)* **

* Actual cement volume to be determined by caliper log.

** Cement will be circulated to surface.

Yields:

Surface: Standard Cement yield: = 1.2 ft³/sx (mixed at 15.6 lb/gal)

Production: Lite Standard Cement yield: = 1.59 ft³/sx (mixed at 13.4 lb/gal)
50:50 POZ yield = 1.27 ft³/sx (mixed at 14.15 lb/gal)

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and protected.

PRESSURE CONTROL

BOPs and choke manifold will be installed and pressure tested before drilling out under surface casing (subsequent pressure test will be performed whenever pressure seals are broken), and then will be checked daily as to mechanical operating condition. BOP's will be pressure tested at least once every 30 days. Ram type preventors and related pressure control equipment will be pressure tested to 1,000 psi. Annular type preventor will be pressure tested to 50% of the rated working pressure, not to exceed 1,000 psi. All casing strings will be pressure tested to 0.22 psi/ft. or 1,000 psi, whichever is greater, not to exceed 70% of internal yield.

BOP to be either double gate rams or an annular preventor as per Onshore Order No. 2.

Statement on Accumulator System and Location of Hydraulic Controls

The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with Onshore Order No. 2 for 2M systems.

A remote accumulator will be used. Pressures, capacities, location of remote hydraulic and manual controls will be identified at the time of the BLM supervised BOP test.

MUD PROGRAM

0' - 250' Fresh water – M.W. 8.5 ppg, Vis 30-33
250' - TD' Clean Faze - Low solids non-dispersed
M.W.: 8.5 – 9.2 ppg
Vis.: 28 – 50 sec
W.L.: 15cc or less

Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kick" will be available at wellsite.

AUXILIARY EQUIPMENT

- A) A Kelly cock will be kept in the drill string at all times
- B) Inside BOP or stab-in valve (available on rig floor)
- C) Mud monitoring will be visually observed

LOGGING, CORING, TESTING PROGRAM

- A) Logging: DIL- CNL-FDC-GR - TD - BSC (GR to surface)
Sonic (BSC to TD)
- B) Coring: None
- C) Testing: Possible DST – None anticipated. Drill stem tests may be run on shows of interest

ABNORMAL CONDITIONS

- A) Pressures: No abnormal conditions are anticipated
Bottom hole pressure gradient – 0.31 psi/ft
- B) Temperatures: No abnormal conditions are anticipated
- C) H₂S: See attached H₂S plan in the event H₂S is encountered.
- D) Estimated bottomhole pressure: 1,240 psi

ANTICIPATED START DATE

November 2, 2006

COMPLETION

The location pad will be of sufficient size to accommodate all completion activities and equipment. A string of 2-7/8" PH-6 tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.

Hydrogen Sulfide Drilling Operations Plan

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H₂S Safety Equipment and Systems

Note: All H₂S safety equipment and systems, if necessary, will be installed, tested, and operational when drilling reaches a depth of 500 feet above or three days prior to penetrating the first zone containing or reasonably expected to contain H₂S.

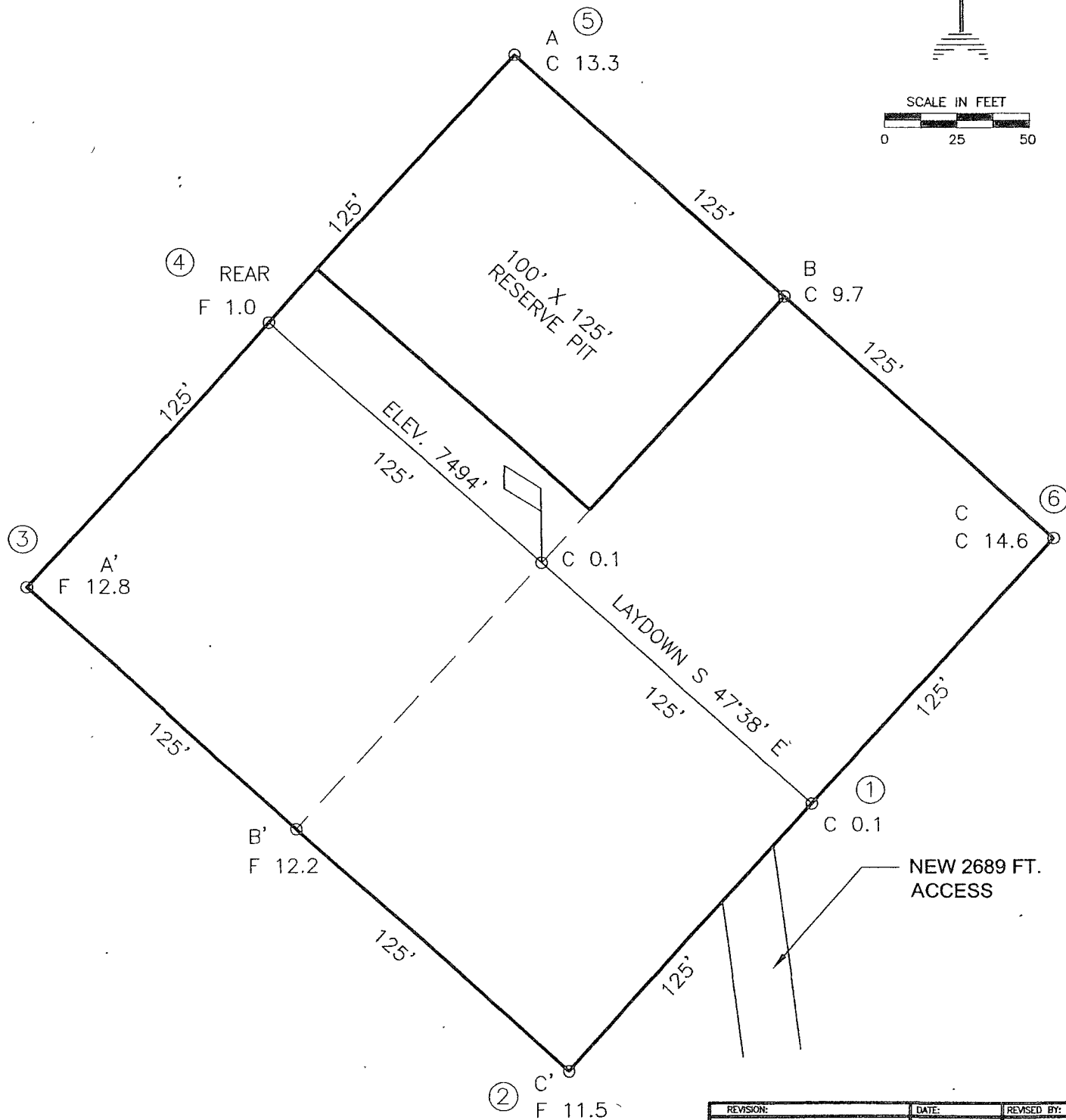
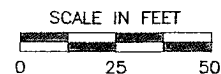
A. Well control equipment:

1. Choke manifold with a minimum of one remote choke.
2. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

- B. Protective equipment for essential personnel:
 - 1. Mark II Surviveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.
- C. H₂S detection and monitoring equipment:
 - 1. Two portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 10 ppm are reached.
- D. Visual warning systems:
 - 1. Wind direction indicators as shown on well site diagram.
 - 2. *Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate. See example attached.*
- E. Mud program:
 - 1. The mud program has been designed to minimize the volume of H₂S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.
- F. Metallurgy:
 - 1. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
 - 2. All elastomers used for packing and seals shall be H₂S trim.
- G. Communication:
 - 1. Cellular telephone communications in company vehicles.
- H. Well testing:
 - 1. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H₂S environment will use the closed chamber method of testing.


WELL PAD DIAGRAM

COMPANY: BLACK HILLS GAS RESOURCES
 LEASE: JICARILLA 29-02-04 No. 43
 FOOTAGE: 900 FSL 2145 FEL
 SEC.: 04, TWN: 29-N, RNG: 2-W, NMPM
 ELEVATION: 7494'



NOTE:

DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

REVISION:	DATE:	REVISED BY:
 Daggett Enterprises, Inc. Surveying and Oil Field Services P. O. Box 15068 • Farmington, NM 87401 Phone (505) 326-1772 • Fax (505) 326-6019 NEW MEXICO L.S. 14831		
DRAWN BY: B.L.	CADFILE: MN456PLB	
ROW#: MN456	DATE: 04/11/06	

WELL PAD CROSS-SECTIONAL DIAGRAM

COMPANY: BLACK HILLS GAS RESOURCES

LEASE: JICARILLA 29-02-04 No. 43

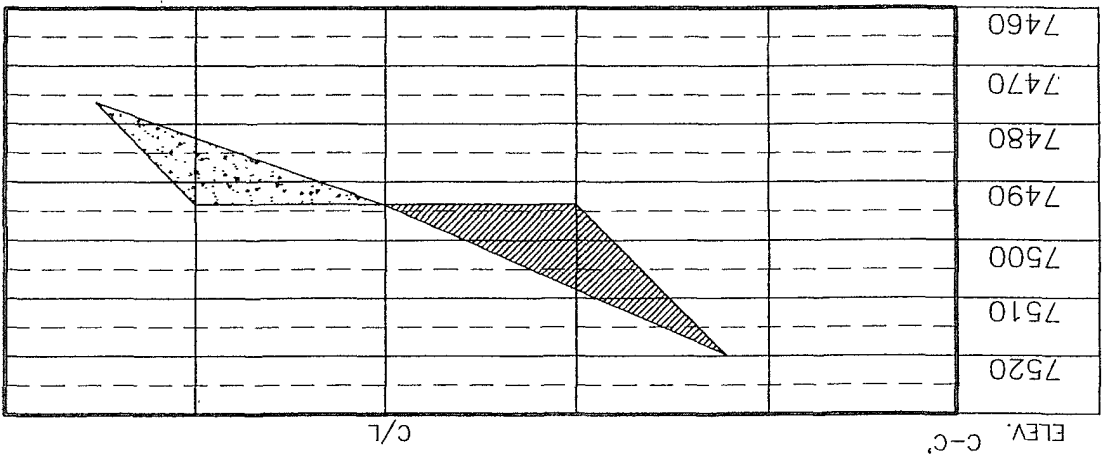
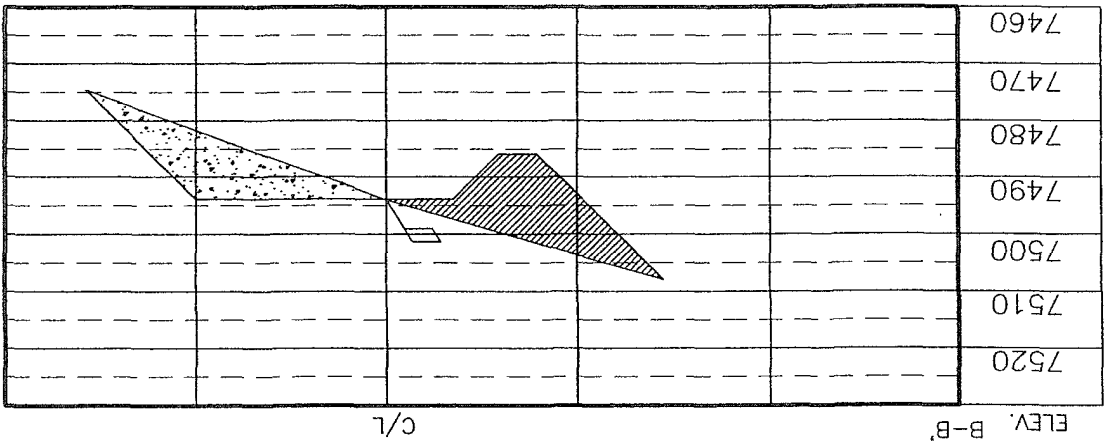
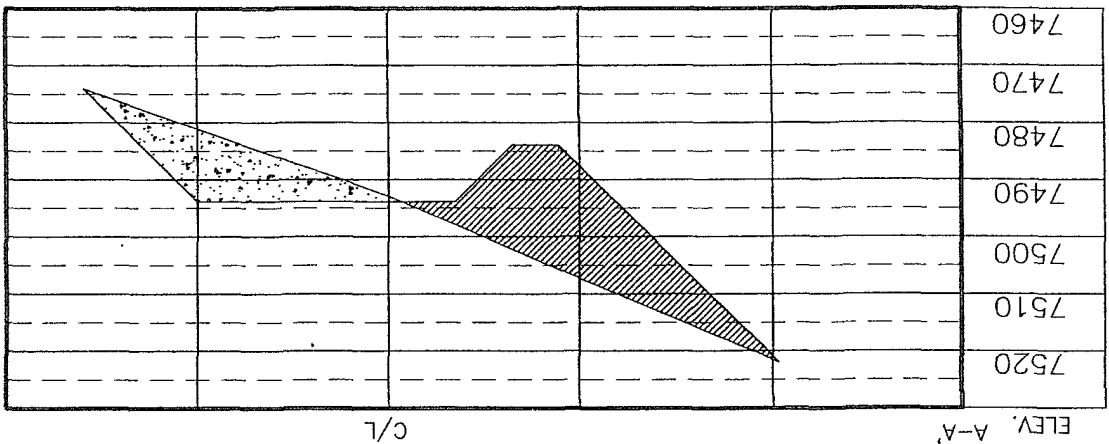
FOOTAGE: 900 FSL, 2145 FEL

SEC.: 04, TWN: 29-N, RNG: 2-W, NMPM

ELEVATION: 7494'

NOTE:

DAGETT ENTERPRISES, INC. IS NOT LIABLE FOR
UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO
ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO
EXCAVATION OR CONSTRUCTION.



REF. DWG. MN456PL8 WELL PAD DIAGRAM

REVISION: DATE: REVISED BY:



Daggett Enterprises, Inc.

Surveying and Oil Field Services
P. O. Box 15068 • Farmington, NM 87401
Phone (505) 326-1772 • Fax (505) 326-6019

NEW MEXICO L.S. 14831

CDRFILE MN456CF8

ROW# MN456

DATE: 04/11/06

2-M SYSTEM

Black Hills Gas Resources, Inc.

ANNULAR PREVENTOR MAY BE SUBSTITUTED FOR DOUBLE GATE PREVENTORS
BOP PRESSURE TEST TO 1,000 PSI

