Form 3160-3
(September 2001)

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

2007 JUN 14 PM 3:36

RECEIVED

5. Lease Serial No.
Jicarilla 464

6. If Indian, Allottee or Tribe Name
Jicarilla Apache Nation

1a. Type of Work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
NA

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

8. Lease Name and Well No.
Jicarilla 464-32 #734

2. Name of Operator
Black Hills Gas Resources

9. API Well No.
30-039-30279

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
PO Box 249/3200 1st Street Bloomfield, NM 87413	505-634-1111 ext 27	Basin ~~Dakota~~ Mancos

4. Location of Well *(Report location clearly and in accordance with any State requirements. *)*
At surface 1,840' FSL 980' FEL (NE/SE)
At proposed prod. zone

11. Sec., T., R., M., or Blk. and Survey or Area
I
Sec.32 T30N R3W

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
20 miles Southwest of Dulce, New Mexico	Rio Arriba	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
Approx. 980 ft. W	Approx. 2409.64	160 ~~320-acre~~ S/E/4
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
50 feet (Twin loc)	7971' ~~8700~~ feet bgs	NMB000230/SLCMMSP0266
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
7041' GR	8/1/2007	45-60 days drlg & compl

24. Attachments

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	Name *(Printed/Typed)*	Date
	Lynn H. Benally	6/14/2007
Title: Regulatory Specialist/Black Hills Gas Resources		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
		5/28/08
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.

**(Instructions on reverse)*

RCVD MAY 28 '08
OIL CONS. DIV.
DIST. 3

H_2S POTENTIAL EXIST

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

NMOCD

JUN 03 2008

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
Santa Fe, NM 87505

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Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-30079	~~71599~~ 97232	WC Basin ~~Dakota~~ Mancos

[4] Property Code	[5] Property Name	[6] Well Number
22185	JICARILLA 464-32	734

[7] OGRID No.	[8] Operator Name	[9] Elevation
013925	BLACK HILLS GAS RESOURCES	7041

[10] Surface Location

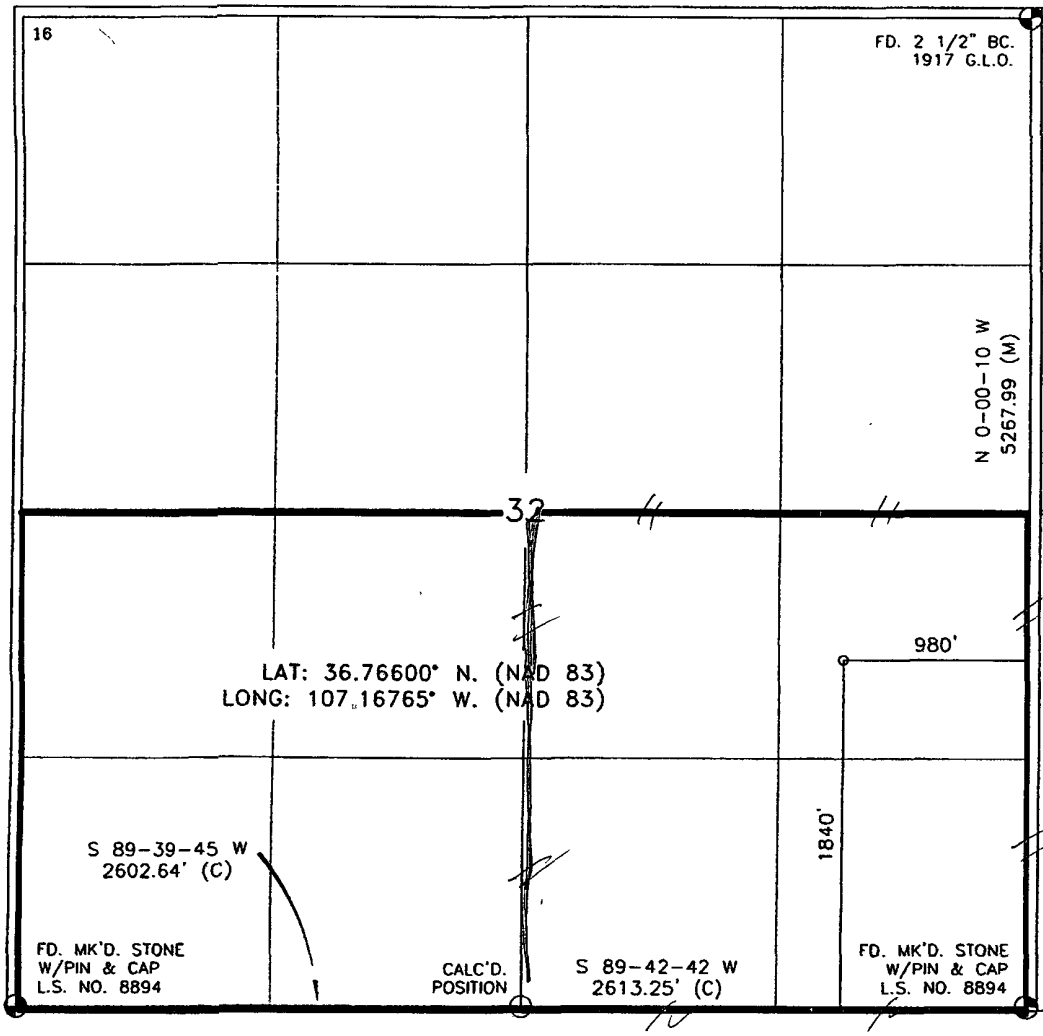
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	32	30-N	3-W		1840	SOUTH	980	EAST	RIO ARRIBA

[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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
~~320 - S/2~~ 160 SE/4			

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



17

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or 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 6/14/07 Date

Lynn H. Benally
Printed Name

18 SURVEYOR CERTIFICATION

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

SEPTEMBER 20, 2006
Date of Survey

Signature and Seal of Professional Surveyor:

NEW MEXICO 8894 REGISTERED PROFESSIONAL LAND SURVEYOR
12-5-06

Certificate Number

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

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

Form C-103
May 27, 2004

WELL API NO. 30-039- 30279
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.

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.)

7. Lease Name or Unit Agreement Name: **Tract 464**

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

8. Well Number: **Jicarilla 464-32 #734**

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

9. OGRID Number: **013925**

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

10. Pool name or Wildcat: **Basin Dakota**

4. Well Location
Unit Letter: **I** : **1,840** feet from the **South** line and **980** feet from the **East** line
Section: **32** Township **30N** Range **3W** NMPM County: **Rio Arriba**

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* **7,041'**

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type: Drilling 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 _____

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER: **Pit Registration** ☒		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 _____ TITLE: Regulatory Technician DATE 6/14/2007

Type or print name: **Daniel R. Manus** E-mail address: **dmanus@bhep.com** Telephone No. **(505) 634-1111 ext. 28**

For State Use Only

APPROVED BY: _____ TITLE Deputy Oil & Gas Inspector, District #3 DATE JUN 03 2008

Conditions of Approval (if any):

WELL PAD DIAGRAM

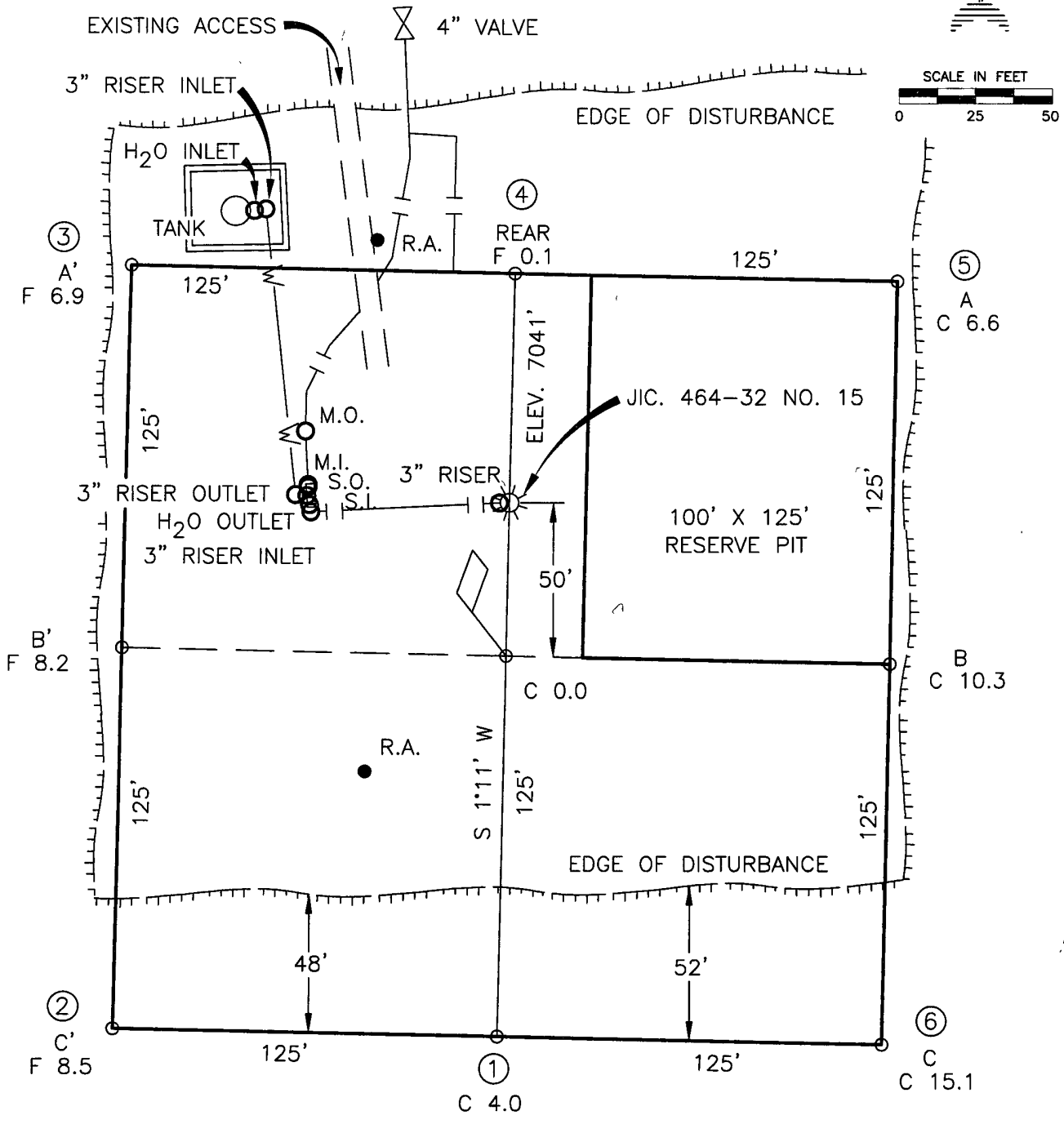
COMPANY: BLACK HILLS GAS RESOURCES

LEASE: JICARILLA 464-32 NO. 734

FOOTAGE: 1840 FSL, 980 FEL

SEC.: 32 TWN: 30-N RNG: 3-W NMPM

ELEVATION: 7041'



AREA OF NEW DISTURBANCE
12462 SQ. FT. (APPROXIMATE)

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. 8894

DRAWN BY: G.V.	CADFILE: MN514_PL8
ROW#: MN514	DATE: 10/18/06

Black Hills Gas Resources

Jicarilla 464-32 #734
1,840' FSL 980' FEL (NE/SE)
Sec.32 T30N R3W
Rio Arriba County, New Mexico
Lease: Contract 464

DRILLING PROGRAM
(Per Rule 320)

This Application for Permit to Drill (APD) was initiated under the NOS process as stated in Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. This NOS process includes an onsite meeting which was held on December 5, 2006 as determined by Bureau of Indian Affairs (BIA) and Jicarilla Oil & Gas Administration (JOGA) and at which time the specific concerns of Black Hills Gas Resources (BHGR), BIA, and JOGA were discussed.

The initial APD for this location was approved May 5, 2005 for the Jicarilla 464-32 #15. BHGR is proposing to drill the Jicarilla 464-32 #734 as a twin well co-located Dakota well on the existing Jicarilla 464-32 #15 location.

SURFACE FORMATION – San Jose

GROUND ELEVATION – 7,041'

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

San Jose	Surface	Sandstone, shales & siltstones
Nacimiento	1,859'	Sandstone, shales & siltstones
Ojo Alamo	3,087'	Sandstone, shales & siltstones
Fruitland Coal	3,513'	Sandstone, shales & siltstones
Pictured Cliffs	3,632'	Sandstone, shales & siltstones
Lewis	3,715'	Sandstone, shales & siltstones
Mesa Verde	5,566'	Sandstone, shales & siltstones
Mancos	6,440'	Sandstone, shales & siltstones
Gallup	7,294'	Sandstone, shales & siltstones
Greenhorn	8,021'	Sandstone
TOTAL DEPTH	**7,971'**	

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

Nacimiento	1,859'	Gas, water, sand
Ojo Alamo	3,087'	Gas, water, sand
Fruitland Coal	3,513'	Gas, water, sand
Pictured Cliffs	3,632'	Gas, water, sand
Lewis	3,715'	Gas, water, sand, shale
Mesa Verde	5,566'	Gas, water, sand, shale
Mancos	6,440'	Gas, water, sand, shale
Gallup	7,294'	Gas, water, sand, shale
Greenhorn	8,021'	Gas, oil, water, sand, shale

CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
~~0'-275'~~ 0-320	12-1/4"	9 5/8"	J-55 36# ST&C	+/-140 sxs Standard Type II cement (yield 1.18 cu ft/sx:weight 15.6 lb/gal) *
0'-6731"	8-3/4"	7"	N-80 23# LT&C	+/- 410 sxs lite or 65:35 poz (yield 1.49 cu ft/sx:weight 13.1 lb/gal)* and +/- 300 sxs 50:50 poz (yield 2.89 cu ft/sx:weight 11.5 lb/gal)*
6731'-TD	6-1/4"	4-1/2"	J-55 ~~11.5~~ 11.6# LT&C	Uncemented Retrievable Liner

* Actual cement volume to be determined by caliper log.

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

Black Hills Gas Resources (BHGR) proposes that the subject well be drilled such that the Greenhorn Limestone Member of the Mancos Formation will not be penetrated. This will allow evaluation of the Mancos / Gallup and shallower formations.

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 2,000 psi. Annular type preventor will be pressure tested to 50% of the rated working pressure, not to exceed 2,000 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'	-	275'	Fresh water – M.W. 8.5 ppg, Vis 30-33
275'	-	6731'	Klean Faze- Low solids non-dispersed M.W. 8.5 – 9.2 ppg Vis – 28 – 50 sec W.L. 15cc or less
6731'	-	TD	Air & N2 unit – Deliver ± 1800 SCFM (Air) @ 1700 psi & 35 gpm fluid.. Drill with compressed nitrogen.

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

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) H_2S: See attached H_2S plan in event H_2S is encountered.
D) Estimated bottomhole pressure: 2471 psi

ANTICIPATED START DATE

August 1, 2007

COMPLETION

The location pad will be of sufficient size to accommodate all completion activities and equipment. A string of 2-3/8" J-55 4.7#/ft tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.

Black Hills Gas Resources

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 (H_2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S 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 H_2S on metal components. If high tensile tubular 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 will control procedures.
3. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and will control drills for all personnel in each crew. The initial training sessions shell include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will required to carry documentation that they have received the proper training.

II. H2S safety equipment and Systems

Note: All H_2S safety equipment and systems (if necessary) will be in stalled, tested, and operational when drilling reaches a depth of 500 feet above the three days prior to penetrating the first zone containing or reason ably expected to contain H_2S.

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

3200 N. 1st Street, P.O. Box 249 • Bloomfield, NM 87413 • (505) 634-1111 • Fax (505) 634-1116
Email: lbenally@bhep.com

1. Mark II Surniveair 30-minute units located in the doghouse and at briefing areas, as indicated on will site diagram.

C. H_2S detection and monitoring equipment:
   1. Two portable H_2S monitors positioned on location for best coverage and response. These units have warning lights and aqudilbesirens when H_2S levels of 10ppm.

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 programs has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

F. Metallurgy:

   1. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

   2. All elastomers used for packing and seals shall be H_2S 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 lesting will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H_2S environment will use the closed chamber method of testing.

2-M SYSTEM

Black Hills Gas Resources, Inc.

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