

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

COPY

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

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. Contract 464	
1b Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name Jicarilla Apache Nation	
2. Name of Operator Black Hills Gas Resources, Inc.		7. If Unit or CA Agreement, Name and No	
E-mail: lbenally@bhgp.com		8. Lease Name and Well No Jicarilla 464-31 41	
Contact: Lynn Benally		9. API Well No. 30-039-29877	
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 1,200' FSL 660' FWL SE 1/4 SW 1/4 Lat: 36° 45' 50.8" Long: 107° 11' 41.6"		10. Field and Pool, or Exploratory East Blanco / Pictured Cliffs	
At proposed production zone		11. Sec., T., R, M., or Blk and Survey or Area Sec. 31 T 30N R 3W	
14. Distance in miles and direction from nearest town or post office. * Well is located approximately 52 miles east of Bloomfield, New Mexico.		12. County or parish Rio Arriba	
15. Distance from proposed location to nearest property of lease line, ft. (Also nearest Drng, unit line, if any) Unit= n/a Lease= ±660'		13. State New Mexico	
16. No. of acres in lease 2,560.0		17. Spacing Unit dedicated to this well 167.39 SW/4, 52NW/4	
18. Distance from proposed location to nearest well, drilling, completed or applied for, on this lease, ft. ± 2,000' Jicarilla 464 4		20. BLM/BIA Bond No on file NMB000230	
19. Proposed depth 4,000' TVD		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7,034' GR	
22. Approximate date work will start * May 9, 2006		23. Estimated duration 45-60 days drlg + completion	

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 <i>Kathy L. Schneebeck</i>	Name (Printed/Typed) Kathy L. Schneebeck, 303.820.4480	Date April 13, 2006
Title Permit Agent for Black Hills Gas Resources, Inc.		

Approved by (Signature) <i>Jim Lalo</i>	Name (Printed/Typed)	Date 8/21/08
Title <i>Acting AFM Minerals</i>	Office	

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.



H₂S POTENTIAL EXIST

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

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

SEP 09 2008

A COMPLETE C-144 MUST BE SUBMITTED TO AND
APPROVED BY THE NMOCD FOR: A PIT, CLOSED
LOOP SYSTEM, BELOW GRADE TANK, OR
PROPOSED ALTERNATIVE METHOD, PURSUANT TO
NMOCD PART 19.15.17, PRIOR TO THE USE OR
CONSTRUCTION OF THE ABOVE APPLICATIONS.

(resubmitting amended plat)

Black Hills Gas Resources, Inc.
Jicarilla 464-31 41
1,200' FSL 660' FWL (SE/4 SW/4)
Sec. 31 T30N R3W
Rio Arriba County, New Mexico
Lease: Contract 464

DRILLING PROGRAM

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 included an onsite meeting, which was held on March 29, 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 – 7,034'

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

San Jose	Surface	Sandstone, shales & siltstones
Nacimiento	1,933'	Sandstone, shales & siltstones
Ojo Alamo	3,191'	Sandstone, shales & siltstones
Kirkland	3,416'	Sandstone, shales & siltstones
Fruitland Coal	3,616'	Sandstone, shales & siltstones
Pictured Cliffs	3,709'	Sandstone, shales & siltstones
Lewis	3,795'	Sandstone, shales & siltstones

TOTAL DEPTH 4,000'

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

Tertiary

San Jose	surface	Gas
Nacimiento	1,933'	Gas
Ojo Alamo	3,191'	Gas
Fruitland Coal	3,616'	Gas
Pictured Cliffs	3,709'	Gas

CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' – 300'	12-1/4"	9-5/8"	J-55 36# ST&C New	To surface (±305 sxs Class B)
0' – T.D.	8-3/4"	7"	N-80 23# LT&C New	TD to surface (±792 sxs lite or 65:35 poz and ±166 sxs 50:50 poz)*

* Actual cement volume to be determined by caliper log.

Yields: Class B yield = 1.18 ft³/sx
 65:35 Poz yield = 1.62 ft³/sx
 50:50 Poz yield = 1.26 ft³/sx

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' -	300'	Fresh water – M.W. 8.5 ppg, Vis 30-33
300' -	TD	Fresh water - 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

May 9, 2006

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.

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.

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- 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.

2-M SYSTEM

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

