

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SEP 30 2008

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

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side.**

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

2. Name of Operator  
**Black Hills Gas Resources**

3a. Address 3b. Phone No. (include area code)  
**3200 N 1st Street PO Box 249 Bloomfield, NM 87413 505-634-1111 ext 27**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**Surface: 775' FSL 545' FEL SE/SE Unit P Sec 04 T30N R3W**  
**Bottom Hole: ±1150' FSL ±1200' FEL SE/SE Unit P Sec 05 T30N R3W**

5. Lease Serial No.

**Contract 457**

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

7. If Unit or CA. Agreement Name and/or No.

8. Well Name and No.

**Jicarilla 457-04 #144**

9. API Well No.

**30-039-30100**

10. Field and Pool, or Exploratory Area

**E. Blanco/Pictured Cliffs**

11. County or Parish, State

**Rio Arriba, New Mexico**

CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-off	
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Change Drilling Plan</u>	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation (clearly state all pertinent details including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths or pertinent markers and sands. Attach the Bond under which the work will performed or provide the Bond No. on file with the BLM/ BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

The initial APD to drill a Pictured Cliff (PC) well was approved on August 17, 2007. The well was given API number 30-039-30100. Black Hills Gas Resources (BHGR) is submitting this revised drilling plan to not use the parasite string drilling technique. The drilling angle will not change therfore a new directional Nevis report will not be updated. ✓

The surface and bottom hole location will remain the same, therfore the C-102 will not be updated.

Surface disturbance will not change from the initial APD, therefore the Surface Use Plan will not be updated or modified.

CONDITIONS OF APPROVAL  
Adhere to previously issued stipulations.

14. I hereby certify that the foregoing is true and correct.

Name (Printed/ Typed)

**Lynn H. Benally**

Title

**Regulatory Specialist**

Signature

Date

**Sept 30, 2008**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **Troy L. Salvors**

Title **Petroleum Eng.**

Date **10/3/2008**

Conditions of approval, if any are attached. Approval of this notice 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.

Office

**FFC**

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 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 page 2)

NMOCD

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this

form and the number of copies to be submitted, particularly with regard to local area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or

present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well and date well site conditioned for final inspection looking to approval of the abandonment.

## NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c); and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3 - 2, 3162.3 - 3, 3162.3 - 4.

The Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) requires us to inform you that:

This information is being collected to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

BLM would like you to know that you do not have to respond to this or any other Federal agency -sponsored information collection unless it displays a currently valid OMB control number.

## BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 25 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau information Collection Clearance Officer, (WO-630), Mail Stop 401 LS, 1849 C St., N.W., Washington D.C. 20240



## **Black Hills Gas Resources**

### **Jicarilla 457-04 #144**

Surface Location: 775' FSL 545' FEL (SE/SE) Unit P

Sec.4 T30N R3W

Bottom Hole Location:  $\pm 1150'$  FSL  $\pm 1200'$  FEL (SE/SE) Unit P

Sec.5 T30N R3W

Rio Arriba County, New Mexico

Lease: Contract 457

### **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 APD process includes an onsite meeting which was held on February 15, 2006 as determined by Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA) and Jicarilla Oil & Gas Administration (JOGA), and at which time the specific concerns of Black Hills Gas Resources (BHGR) were discussed.

This new drilling plan will modify the drilling program to include the parasite string technique for this un-drilled horizontal well. It will still be drilled into the pictured cliffs formation. Attached is the horizontal drilling plan.

### **SURFACE FORMATION – San Jose**

### **GROUND ELEVATION – 7,122'**

### **ESTIMATED FORMATION TOPS - (mineral-bearing formations)**

San Jose	Surface	Surface	Sandstone, shales & siltstones
Nacimiento	1,988'M	1,988'V	Sandstone, shales & siltstones
Ojo Alamo	3,100'M	3,095'V	Sandstone, shales & siltstones
Kirtland	3,363'M	3,325'V	Sandstone, shales & siltstones
Fruitland Coal	3,697'M	3,547'V	Sandstone, shales & siltstones
Pictured Cliffs	4,184'M	3662'V	Sandstone, shales & siltstones

**TOTAL DEPTH      8024' TMD      3,691' TVD**

### **ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS:**

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

Nacimiento	1,988'	Gas, water, sand
Ojo Alamo	3,100'	Gas, water, sand
Kirtland	3,363'	Gas, water, sand, shale
Fruitland Coal	3,697'	Gas, water, sand
Pictured Cliffs	4,184'	Gas, water, sand

HORIZONTAL DRILLING PROGRAMKick Off Point is estimated to be  $\pm 2835'$  TVDCASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' to 250'	12 1/4"	9 5/8"	J-55 36# ST&C	To surface ( $\pm 175$ sxs classB)
0' to 4249'	8 3/4"	7"	J-55 23# ST & C	TD to surface ( $\pm 630$ sxs lite or 65:35 poz and $\pm 270$ sxs 50:50 poz)*
4249' to 8024'	6 1/4 "	Open hole***	none	none

\* Actual cement volume to be determined by caliper log.

\*\* Cement will be circulated to surface

\*\*\* If hole instability is encountered, a 4 1/2", 10.5#, J-55 uncemented liner may be run in the 6 1/4" open hole section

## Yields:

Surface: Standard cement yield = 1.2 ft<sup>3</sup>/sx (mixed at 15.6 lb/gal)Production: Lite Standard Cement yield: = 1.59 ft<sup>3</sup>/sx (mixed at 13.4 lb/gal)50:50 poz yield = 1.27 ft<sup>3</sup>/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'	Potassium Formate- Inhibitive low solids non-dispersed
			M.W. 6.0 – 9.2 ppg
			Vis – 45 – 60 sec
			W.L. 8cc 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: GR/SP/CAL – Resistivity/Conductivity – Neutron/Density – Bulk Density/RWA  
From TD to SC
- 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<sub>2</sub>S: See attached H<sub>2</sub>S plan in event H<sub>2</sub>S is encountered.
- D) Estimated bottomhole pressure: 1,145 psi

ANTICIPATED START DATE: September 15, 2008

#### COMPLETION

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