

RECEIVED

Form 3160-5  
(August 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FEB 28 2013

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**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.*

Farmington Field  
Bureau of Land Management  
Lease Serial No.  
Jic 460

**SUBMIT IN TRIPLICATE - Other Instructions on page 2.**

1. Type of Well  
 Oil Well     Gas Well     Other

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

3a. Address  
**3200 N 1st St, Bloomfield, NM 87413**

3b. Phone No. (include area code)  
**(505) 634-5104**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**1190' FNL & 1748' FEL, Sec. 16 T30N R3W UL: B**

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

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

8. Well Name and No.  
**Jicarilla 460-16 #6**

9. API Well No.  
**30-039-25865**

10. Field and Pool, or Exploratory Area  
**East Blanco Pictured Cliffs**

11. County or Parish, State  
**Rio Arriba County**

12. 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 type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" 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 recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be 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 recomple 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 reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Per the Notice of Intent dated February 6, 2013, to plug and abandon Jicarilla 460-16 #6, Black Hills Gas Resources is submitting the attached plug and abandon procedure.

OIL CONS. DIV DIST. 3

MAR 05 2013

14. I hereby certify that the foregoing is true and correct. Name (Printed/ Typed)

Daniel Manus

Regulatory Technician

Title

Signature

Date

February 28, 2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

MAR 06 2013

Original Signed: Stephen Mason  
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

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)

NMOCDA

## PLUG AND ABANDONMENT PROCEDURE

February 20, 2013

### Jicarilla 460-16 #6

Cabresto Canyon; Ojo Alamo Ext.

1190' FNL, 1748' FEL, Section 16, T30N, R3W, Rio Arriba County, NM

API 30-039-25865 / Long: \_\_\_\_\_ / Lat: \_\_\_\_\_

Note: All cement volumes use 100% excess outside pipe and 50' excess inside. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class B, mixed at 15.6 ppg with a 1.18 cf/sx yield.

1. This project requires a NMOCD C-144 CLEZ Closed-Loop System Permit for the use of an A-Plus steel tank to handle waste fluids circulated from the well and cement wash up.
2. Install and test location rig anchors. Comply with all NMOCD, BLM, and Operator safety regulations. MOL and RU daylight pulling unit. Conduct safety meeting for all personnel on location. Record casing, tubing and bradenhead pressures. NU relief line and blow down well. Kill well with water as necessary and at least pump tubing capacity of water down the tubing. ND wellhead and NU BOP. Function test BOP.
3. Rods: Yes , No , Unknown .  
Tubing: Yes , No , Unknown , Size 2-3/8", Length 3368'.  
Packer: Yes , No , Unknown , Type .  
If this well has rods or a packer, then modify the work sequence in step #2 as appropriate.  
Note: Prior to spotting Plug #1; RIH and tag existing cement. If tag is lower than 3686' then contact company engineer.
4. **Plug #1 (Kirtland top and Ojo Alamo interval, 3549' – 3224')**: RIH with open ended tubing. Mix and pump 54 sxs Class B cement (100% excess over OA perforations) and spot balanced plug inside casing to isolate the Kirtland top and Ojo Alamo interval. PUH and WOC. TIH and tag TOC at 3224' or higher. If necessary top off Plug #1 with cement. PUH.
5. **Plug #2 (Nacimiento top and San Jose perforations, 2308' – 1596')**: Mix and pump 102 sxs Class B cement (100% excess over SJ perforations) and spot balanced plug inside casing to isolate the Nacimiento top and 50' above top SJ perforation. PUH and WOC. TIH and tag TOC at 1596' or higher. If necessary top off Plug #2 with cement. PUH.
6. **Plug #3 (8-5/8" casing shoe, 589'- 489')**: Mix and pump 17 sxs Class B and spot a balanced plug inside the casing to isolate the 8-5/8" casing shoe. TOH and LD tubing.
7. **Plug #4 (8-5/8" Surface casing shoe, 100' - Surface)**: Perforate 3 squeeze holes at 100'. Establish circulation out bradenhead with water and circulate the BH annulus clean. Mix approximately 40 sxs Class B cement and pump down the 5.5" casing to circulate good cement to surface. Shut in well and WOC.
8. ND BOP and cut off wellhead below surface casing flange. Install P&A marker with cement to comply with regulations. RD, MOL and cut off anchors. Restore location per BLM stipulations.

# Jicarilla 460-16 #6

## Current

Cabresto Canyon; Ojo Alamo ext.

1190' FNL & 1748' FEL, Section 16, T-30-N, R-3-W, Rio Arriba County, NM

Long: \_\_\_\_\_ / Lat: \_\_\_\_\_ / API 30-039-25865

Today's Date: 2/20/13

Spud: 6/3/98

Comp: 7/25/98

Elevation: 7291' GI  
7303' KB

Nacimiento @ 2258' \*est

Ojo Alamo @ 3274'

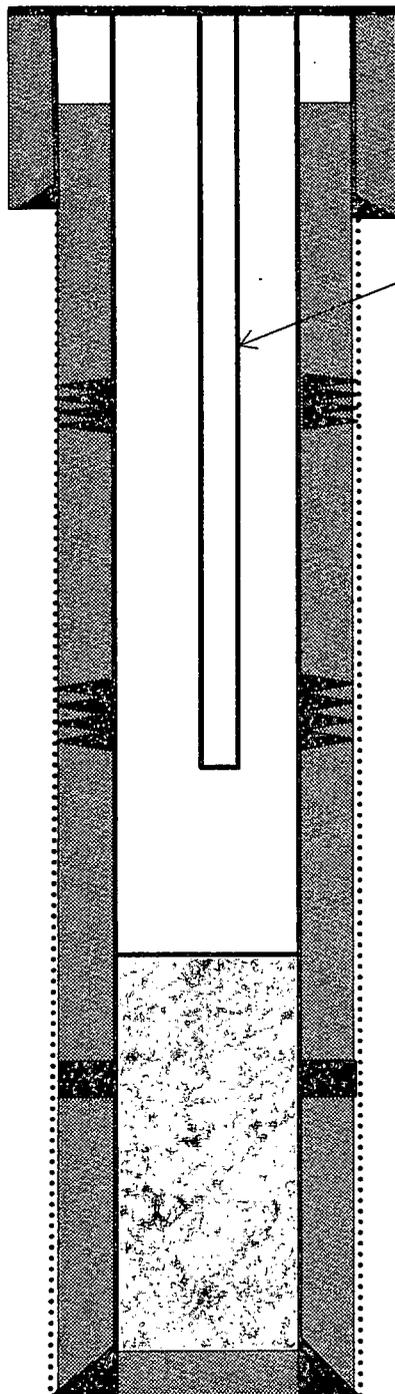
Kirtland @ 3499'

Fruitland @ 3731'

Pictured Cliffs @ 3818'

12-1/4" Hole

7-7/8" Hole



TOC @ 300' (T.S.)

8-5/8" 24#, Casing set @ 539'  
Cement with 300 sxs, circ 56 sx to surface

2-3/8" tubing at 3368'  
(104 jts, SN, perf nipple  
with rods and pump)

San Jose Perforations:  
1646' - 1709'

Ojo Alamo Perforations:  
3276' - 3322'

DV Tool @ 3720'

Stage 2: Cement with 450 sxs.  
No cmt returns. Ran Temp  
Survey, TOC 300'.

Note: DV was never drilled out so  
original PBTD is above tool.

5.5" 15.5#, Casing @ 4045'

Stage 1: Cement with 100 sxs. Open  
DV tool, circ 10 sx to surface.

4060' TD  
3686' PBTD



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
FARMINGTON DISTRICT OFFICE  
6251 COLLEGE BLVD.  
FARMINGTON, NEW MEXICO 87402

Attachment to notice of  
Intention to Abandon:

Re: Permanent Abandonment  
Well: 6 Jicarilla 460-16

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
2. Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 564-7750.
3. The following modifications to your plugging program are to be made:
  - a) You are required to have H2S monitoring equipment and personnel on location during plugging operations.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.