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Form 3160-5  
(August 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Farmington Field Office  
Bureau of Land Management

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.*

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

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. <b>Jicarilla Contract 451</b>
2. Name of Operator <b>Black Hills Gas Resources, Inc.</b>		6. If Indian, Allottee, or Tribe Name <b>Jicarilla Apache Tribe</b>
3a. Address <b>PO Box 249 / 3200 N 1st St Bloomfield NM 87413</b>	3b. Phone No. (include area code) <b>(505) 634-5104</b>	7. If Unit or CA. Agreement Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>1645' FSL &amp; 1210' FWL NW?SW Section 9 T29N R3W (UL: L)</b>		8. Well Name and No. <b>Jicarilla 451-09 #131</b>
		9. API Well No. <b>30-039-29444</b>
		10. Field and Pool, or Exploratory Area <b>East Blanco Pictured Cliffs</b>
		11. County or Parish, State <b>Rio Arriba County, New Mexico</b>

**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 recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. 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 recompleation 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.)

**Black Hills Gas Resources intends to plug and abandon Jicarilla 451-09 #131 per attached procedure.**

**Black Hills Gas Resources will be using a close loop system.**

Notify NMOCD 24 hrs  
prior to beginning  
operations

**Attachments:**

Procedure  
Current wellbore diagram  
Proposed wellbore diagram  
Reclamation plan

**BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS**

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**OIL CONS. DIV DIST. 3**

**JUL 21 2016**

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

**Daniel Manus**

**Regulatory Technician II**

Title

Signature

Date

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

**PE**

Date

**7/18/16**

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

**FTO**

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**

5  
XC

## PLUG AND ABANDONMENT PROCEDURE

June 28, 2016

### Jicarilla 451-09 #131

East Blanco Pictured Cliffs

1645' FSL, 1210' FWL, Section 9, T29N, R3W, Rio Arriba County, NM

API 30-039-29444 / 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 will use 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 X , No \_\_\_\_\_, Unknown\_\_\_\_\_.  
Tubing: Yes X , No \_\_\_\_\_, Unknown\_\_\_\_\_, Size 2-3/8" , Length 2981'.  
Packer: Yes \_\_\_\_\_, No X , Unknown\_\_\_\_\_, Type \_\_\_\_\_.  
If this well has rods or a packer, then modify the work sequence in step #2 as appropriate.
4. **Plug #1 (Pictured Cliffs interval and Fruitland, Kirtland, Ojo Alamo tops, 4008' – 3133'):**  
Round trip 5.5" mill to 4008' or as deep as possible. PU 5.5" Hydroset CIBP and RIH; set at 4008'. **Attempt to pressure test casing. If casing does not test then spot or tag subsequent plugs as appropriate.** Mix 106 sxs Class B cement and spot a plug inside the casing above the CIBP to isolate the PC interval and cover through the Ojo Alamo top. PUH.
5. **Plug #2 (Nacimiento top, 2078' – 1978'):** Mix 17 sxs Class B cement and spot a balanced plug inside the casing to cover the Nacimiento top. TOH.
6. **Plug #3 (8-5/8" Surface casing shoe, 367' - Surface):** Perforate 3 squeeze holes at 367'. Establish circulation out bradenhead with water and circulate the BH annulus clean. Mix approximately 117 sxs Class B cement and pump down the 5.5" casing to circulate good cement to surface. Shut in well and WOC.
7. ND BOP and cut off wellhead below surface casing flange. Fill annuli with cement as necessary. Install P&A marker to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. RD, MOL and cut off anchors. Restore location per BLM stipulations.



6/28/2016

**Jicarilla 451-09 #131**  
**CURRENT Wellbore Diagram**  
API # 30-039-29444  
NWSW Sec 9, T29N, R3W Rio Arriba, NM

Spud: 4/17/2007  
Compl: 5/18/2007

Elev = 7063' GL  
Elev = 7075' KB

12 1/4" hole

**SURFACE CASING**

8 5/8", 24#, J-55 casing @  
317'. Cmt w/ 200 sx. Circ 16  
bbls cmt to surface.

7 7/8" hole

Nacimiento 2028' MD = 2028' TVD

Ojo Alamo 3183' MD = 3174' TVD

Kirtland 3452' MD = 3402' TVD

Fruitland 3702' MD = 3565' TVD

Pictured Cliffs 3979' MD = 3672' TVD

**PROD CASING**

5 1/2", 17#, J-55 casing @  
4111' MD. Cmt w/ 650 sx.  
Ran CBL 5/9/07, TOC at  
1424'.

Top of Cmt 1424' (CBL-2007)

Prod Tbg (7/12/07):

91 jts 2-7/8" 6.5# L-80 tbg, 2-1/4" tbg pump, 3-1/2" x 8' perf  
sub, 2 jts 3-1/2" tbg w/ BP. EOT 2981'.

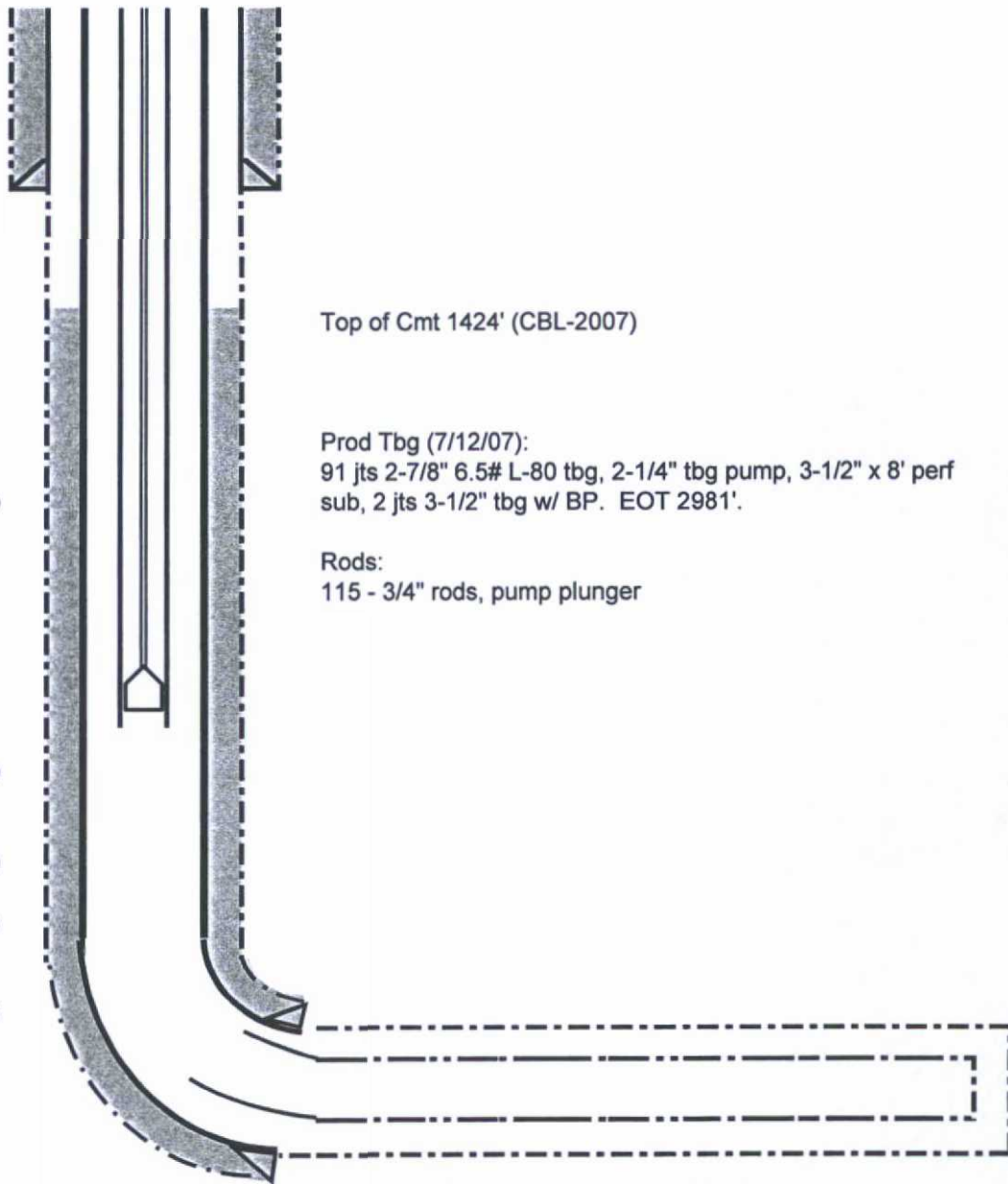
Rods:

115 - 3/4" rods, pump plunger

4 3/4" lateral hole from 4111' to 6231' MD  
inclination at 4111' = 83 degrees

**Tubing Liner Detail:**

2 7/8", 7.9#, N-80 tbg liner (uncemented) from 4058' (on-off  
tool) to 6212'. 6 pre-perfed jts with tops at 4060', 4558', 4964',  
5369', 5770', 6180'. Each jt has 28 - 0.75" holes.



**Jicarilla 451-09 #131**  
**PROPOSED P&A Diagram**  
 API # 30-039-29444  
 NWSW Sec 9, T29N, R3W Rio Arriba, NM

Spud: 4/17/2007  
 Compl: 5/18/2007

Elev = 7063' GL  
 Elev = 7075' KB

12 1/4" hole

**SURFACE CASING**

8 5/8", 24#, J-55 casing @  
 317'. Cmt w/ 200 sx. Circ 16  
 bbls cmt to surface.

**Plug #3: 367' - 0'**  
 Class B cement, 117 sxs

**Perforate @ 367'**

7 7/8" hole

Top of Cmt 1424' (CBL-2007)

Nacimiento 2028' MD = 2028' TVD

**Plug #2: 2078' - 1978'**  
 Class B cement, 17 sxs

Ojo Alamo 3183' MD = 3174' TVD

**Plug #1: 4008' - 3133'**  
 Class B cement, 106 sxs

Kirtland 3452' MD = 3402' TVD

Fruitland 3702' MD = 3565' TVD

Pictured Cliffs 3979' MD = 3672' TVD

**Set Hydroset CIBP @ 4008'**

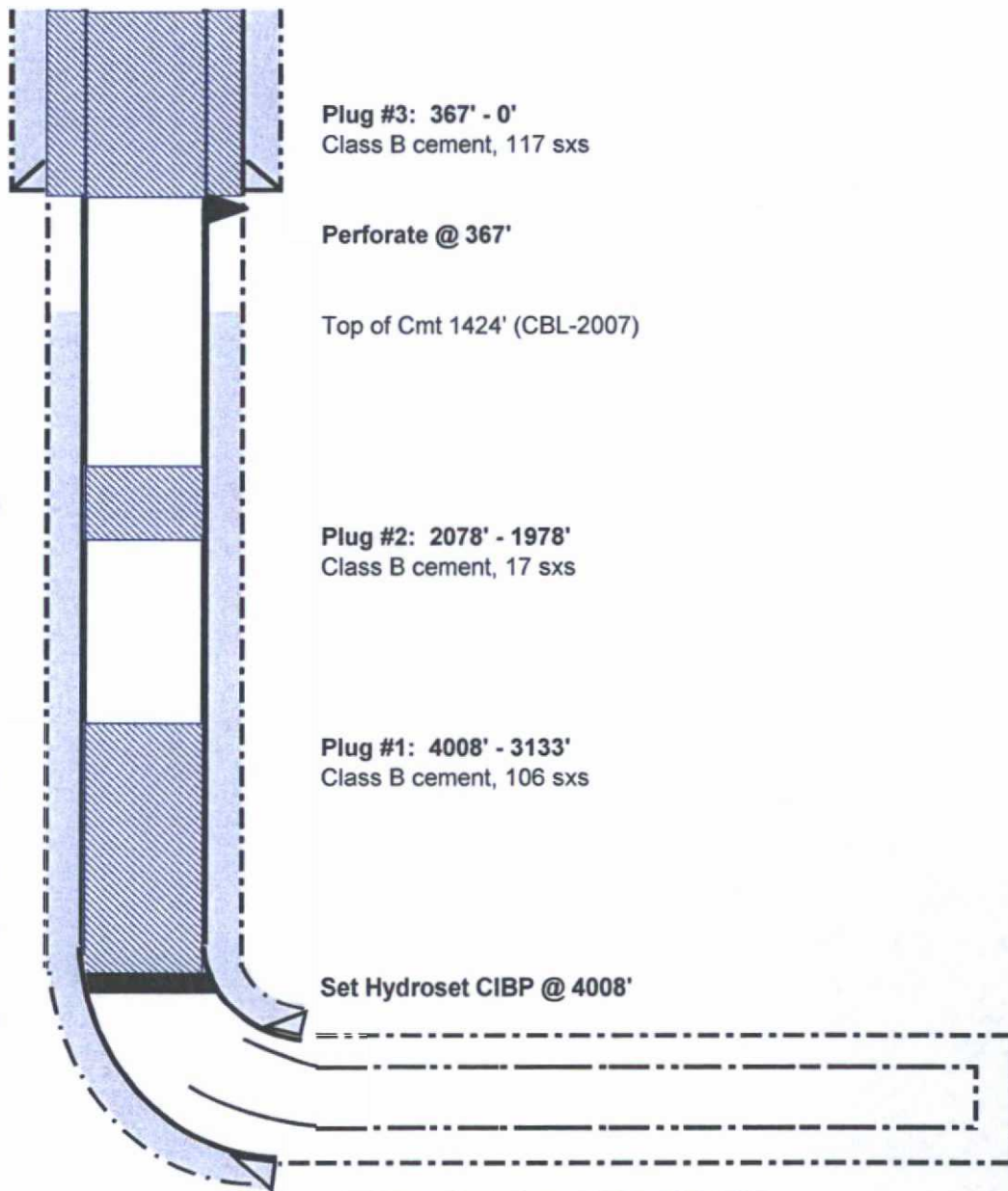
**PROD CASING**

5 1/2", 17#, J-55 casing @  
 4111' MD. Cmt w/ 650 sx.  
 Ran CBL 5/9/07, TOC at  
 1424'.

4 3/4" lateral hole from 4111' to 6231' MD  
 inclination at 4111' = 83 degrees

**Tubing Liner Detail:**

2 7/8", 7.9#, N-80 tbg liner (uncemented) from 4058' (on-off tool) to 6212'. 6 pre-perfed jts with tops at 4060', 4558', 4964', 5369', 5770', 6180'. Each jt has 28 - 0.75" holes.



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: Jicarilla 451-09 #131

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) Bring the top of plug #2 to **1870 ft.** to cover the Nacmiento top. **BLM picks top of Nacimiento at 1920 ft.** Adjust cement volume accordingly.

**CBL (2007) will suffice for verification of TOC.**

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.