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Form 3160-5  
(August 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCT 15 2015

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 Office  
Bureau of Land Management

5. Lease Serial No.	Jicarilla Contract 464
6. Indian, Allottee, or Tribe Name	Jicarilla Apache Tribe
7. If Unit or CA. Agreement Name and/or No.	
8. Well Name and No.	Jicarilla 464 #1
9. API Well No.	30-039-24088
10. Field and Pool, or Exploratory Area	East Blanco Pictured Cliffs
11. County or Parish, State	Rio Arriba County, New Mexico

**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	
2. Name of Operator <b>Black Hills Gas Resources, Inc.</b>	
3a. Address <b>P.O. Box 249 Bloomfield, NM 87413</b>	3b. Phone No. (include area code) <b>(505) 634-5104</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>1800' FSL &amp; 965' FEL NE/SE Section 30 T30N R3W (UL: I)</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 464 #1 per attached procedure. BHGR will be using a close-loop system.**

**Attached: Proposed procedures  
Reclamation Plan**

OIL CONS. DIV DIST. 3

OCT 21 2015

**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**

Notify NMOCD 24 hrs prior to beginning operations

**SEE ATTACHED FOR CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct. Name (Printed/ Typed)	
<b>Daniel Manus</b>	<b>Regulatory Technician II</b>
Signature <i>Daniel Manus</i>	Title
	Date <i>October 15, 2015</i>
<b>THIS SPACE FOR FEDERAL OR STATE OFFICE USE</b>	

Approved by <i>John Savage</i>	Title <b>PE</b>	Date <b>10/19/15</b>
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 <b>FFO</b>	

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

XC  
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## PLUG AND ABANDONMENT PROCEDURE

Rev 10/6/15

### Jicarilla 464 #1

East Blanco Pictured Cliffs

1800' FSL, 965' FEL, Section 30, T30N, R3W, Rio Arriba County, New Mexico

API 30-039-24088/ Lat: \_\_\_\_\_ / Long: \_\_\_\_\_

Note: All cement volumes use 100% excess outside pipe and 50' excess inside pipe. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class B, mixed at 14.8 ppg with a 1.18 cf/sx yield.

1. This project requires the Operator to obtain an approved 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 X, No\_\_\_\_, Unknown\_\_\_\_, Size 2.375", Length 3811'.  
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 perforations and Fruitland, Kirtland, Ojo Alamo tops, 3691' – 3161')**: Round trip 4.5" gauge ring to 3691'. TIH and set 4.5" CR or CIBP at 3691'. Pressure test tubing to 1000#. Load casing with water and circulate well clean. **Pressure test casing to 800#. If the casing does not test, then spot or tag subsequent plugs as appropriate.** Mix 44 sxs Class B cement and spot a balanced plug inside the casing above the CR or CIBP to isolate the Pictured Cliffs interval and cover through the Ojo Alamo top. TOH with tubing.
5. **Plug #2 (Nacimiento top, 2051' – 1951')**: Perforate 3 squeeze holes at 2051'. Attempt to establish rate into squeeze holes if the casing pressure tested. Set 4.5" cement retainer at 2001'. Establish rate into squeeze holes. Mix and pump 36 sxs Class B cement, squeeze 24 sxs outside the casing and leave 12 sxs inside casing to cover the Nacimiento top. TOH and LD tubing.
6. **Plug #3 (7.625" Surface casing shoe, 177' - Surface)**: Perforate 3 squeeze holes at 177'. Establish circulation out bradenhead with water and circulate the BH annulus clean. Mix approximately 45 sxs cement and pump down the 4.5" casing to circulate good cement out bradenhead. Shut in well and WOC.
7. ND BOP and cut off wellhead below surface casing flange. Install P&A marker with cement to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. Cut off anchors and clean up location. Restore location per BLM stipulations.

# Jicarilla 464 #1

## Current

East Blanco Pictured Cliffs

1800' FSL & 965' FEL, Section 30, T-30-N, R-3-W, Rio Arriba County, NM

Lat: \_\_\_\_\_ / Long: \_\_\_\_\_ / API 30-039-24088

Today's Date: rev 10/6/15  
Spud: 10/28/86  
Comp: 12/01/86  
Elevation: 7136' GI  
7148' KB

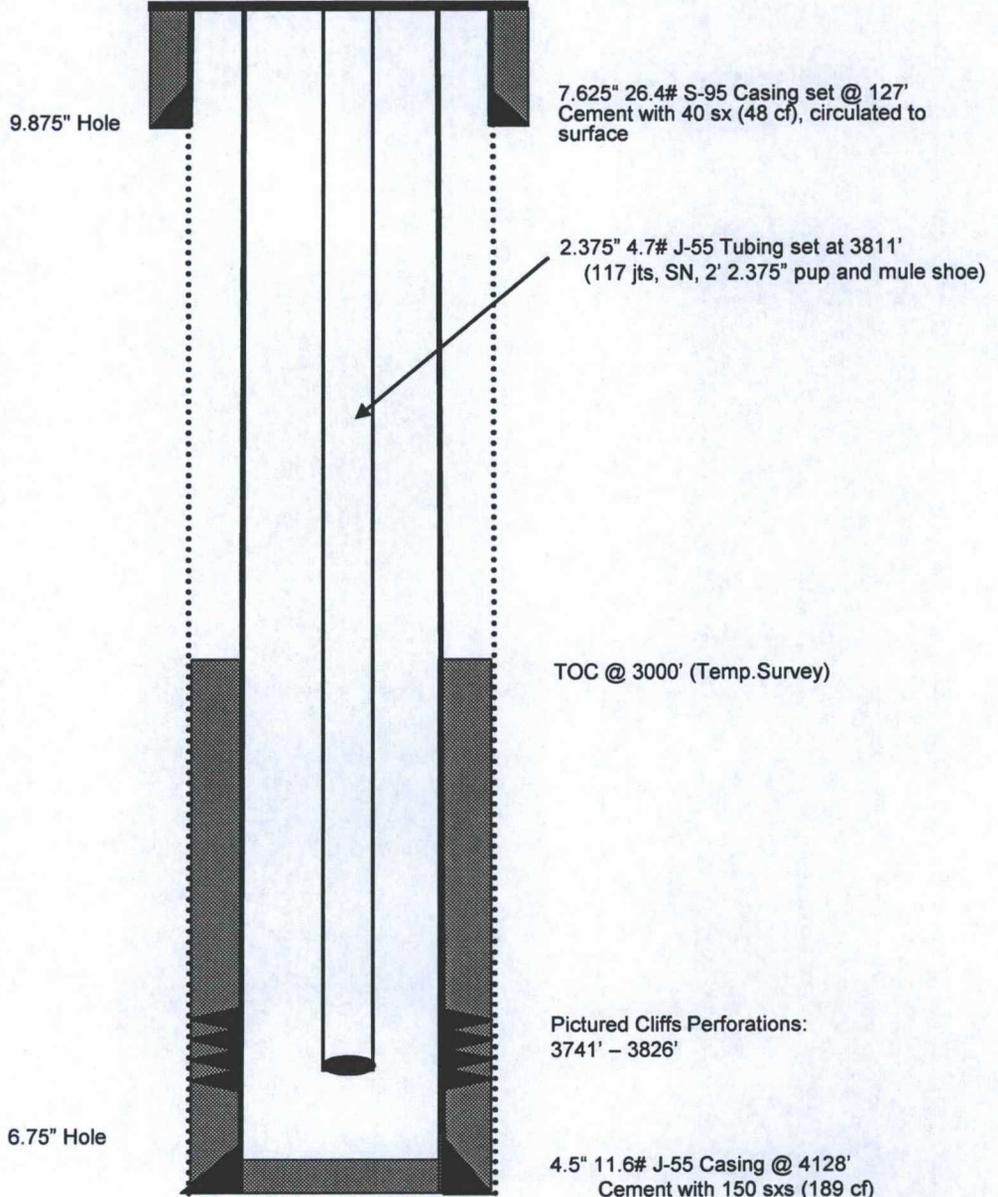
Nacimiento @ 2001'

Ojo Alamo @ 3211'

Kirtland @ 3448'

Fruitland @ 3508'

Pictured Cliffs @ 3740'



4136' TD  
4017' PBD

# Jicarilla 464 #1

## Proposed P&A

East Blanco Pictured Cliffs

1800' FSL & 965' FEL, Section 30, T-30-N, R-3-W, Rio Arriba County, NM

Lat: \_\_\_\_\_ / Long: \_\_\_\_\_ / API 30-039-24088

Today's Date: Rev 10/6/15  
Spud: 10/28/86  
Comp: 12/01/86  
Elevation: 7136' GI  
7148' KB

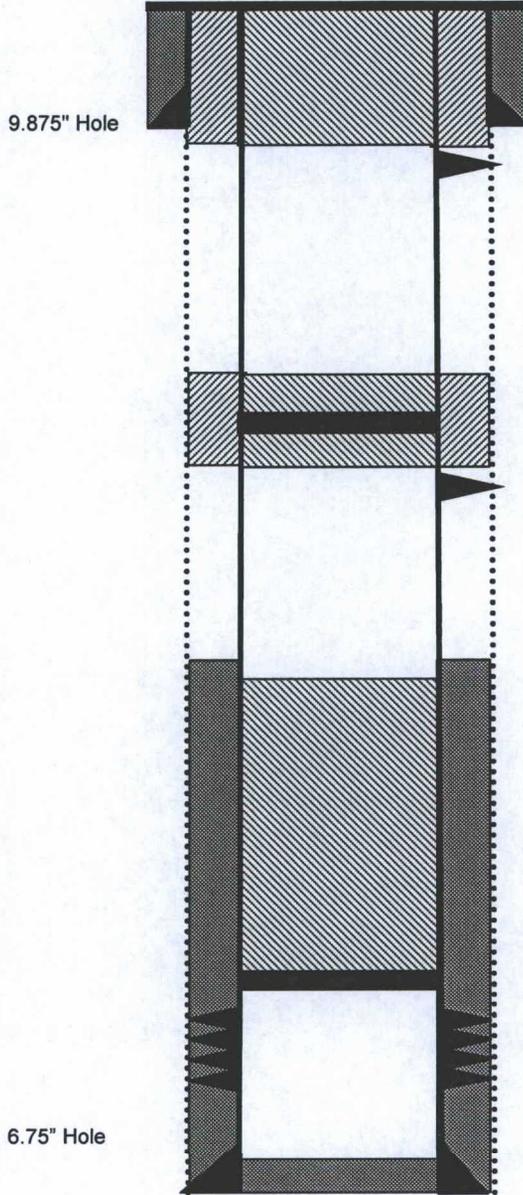
Nacimiento @ 2001'

Ojo Alamo @ 3211'

Kirtland @ 3448'

Fruitland @ 3508'

Pictured Cliffs @ 3740'



7.625" 26.4# S-95 Casing set @ 127'  
Cement with 40 sx (48 cf), circulated to surface

Perforate @ 177'

Plug #3: 177' - 0'  
Class B cement, 45 sxs

Cmt Retainer @ 2001'

Plug #2: 2051' - 1951'  
Class B cement, 36 sxs:  
24 outside and 12 inside

Perforate @ 2051'

TOC @ 3000' (Temp Survey)

Plug #1: 3691' - 3161'  
Class B cement, 44 sxs

Set CR @ 3691'

Pictured Cliffs Perforations:  
3741' - 3826'

4.5" 11.6 J-55 Casing @ 4128'  
Cement with 150 sxs (189 cf)

4136' TD  
4017' PBD

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 464 #1

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.

H2S has not been reported at this location, however, **high to very high concentrations of H2S (135 ppm – 820 ppm GSV)** have been reported in wells which produce gas from the San Jose, Nacimiento, Ojo Alamo, and P.C. formations within a 1 mile radius of this location. **It is imperative that H2S monitoring and safety equipment be on location during P&A operations at this well site.**

Operator must run a CBL to verify cement top. Submit the electronic copy of the log for verification to the following addresses: [tsalyers@blm.gov](mailto:tsalyers@blm.gov) [jwsavage@blm.gov](mailto:jwsavage@blm.gov) [Brandon.Powell@state.nm.us](mailto:Brandon.Powell@state.nm.us)

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.