

RECEIVED

AUG 22 2016

Form 3160-5  
(August 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
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.*

Farmington Field Office  
Bureau of Land Management

5. Lease Serial No.	Jicarilla Contract 458
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 458-6 No. 3
9. API Well No.	30-039-25782
10. Field and Pool, or Exploratory Area	Cabresto Cnyn Tert / E Blanco PC
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>1790 FNL &amp; 1700 FEL SW/NE Section 6 T30N R3W (UL: G)</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 recomplete 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 recompletion 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.)

**Black Hills Gas Resources intends to plug and abandon Jicarilla 458-06 #3 per attached procedure. A closed loop system will be used.**

**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

OIL CONS. DIV DIST. 3  
AUG 29 2016

**SEE ATTACHED FOR CONDITIONS OF APPROVAL**



**H2S POTENTIAL EXIST**

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

**Daniel Manus**

**Regulatory Technician II**

Title

Signature

*Daniel Manus*

Date

*August 22, 2016*

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

Approved by

*Jack Savage*

Title

PE

Date

*8/27/16*

Office

FFO

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.

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**

6

## PLUG AND ABANDONMENT PROCEDURE

August 18, 2016

### Jicarilla 458-06 #3

East Blanco Pictured Cliffs/ Cabresto Canyon; San Jose Ext.  
1790' FNL, 1700' FEL, Section 6, T30N, R3W, Rio Arriba County, NM  
API 30-039-25782 / Long: \_\_\_\_\_ / Lat: \_\_\_\_\_

1. 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.
2. This project will use an A-Plus steel tank to handle waste fluids circulated from the well and cement wash up.
3. 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.
4. Rods: Yes U, No \_\_\_\_\_, Unknown \_\_\_\_\_.  
Tubing: Yes X (dual), No \_\_\_\_\_, Unknown \_\_\_\_\_, Size 1.9", Length 1630' and 3575'.  
Packer: Yes X, No \_\_\_\_\_, Unknown \_\_\_\_\_, Type UNI VI pkr at 3575'; XL on/off tool at 3566'.

**NOTE:** This well has 2 packers; one is a fish at 3605' and the other is a UNI VI packer at 3575'.

Short string - TOH and LD rods and pump. TOH and LD tbg.

Long string - release from on/off tool above packer. TOH and LD long string.

PU 2-3/8" tubing workstring. TIH and latch onto on/off tool at 3566'. Establish injection rate into open perforations. If able to establish rate then go to Plug #1. If unable to latch onto on/off tool and establish rate then contact company engineer.

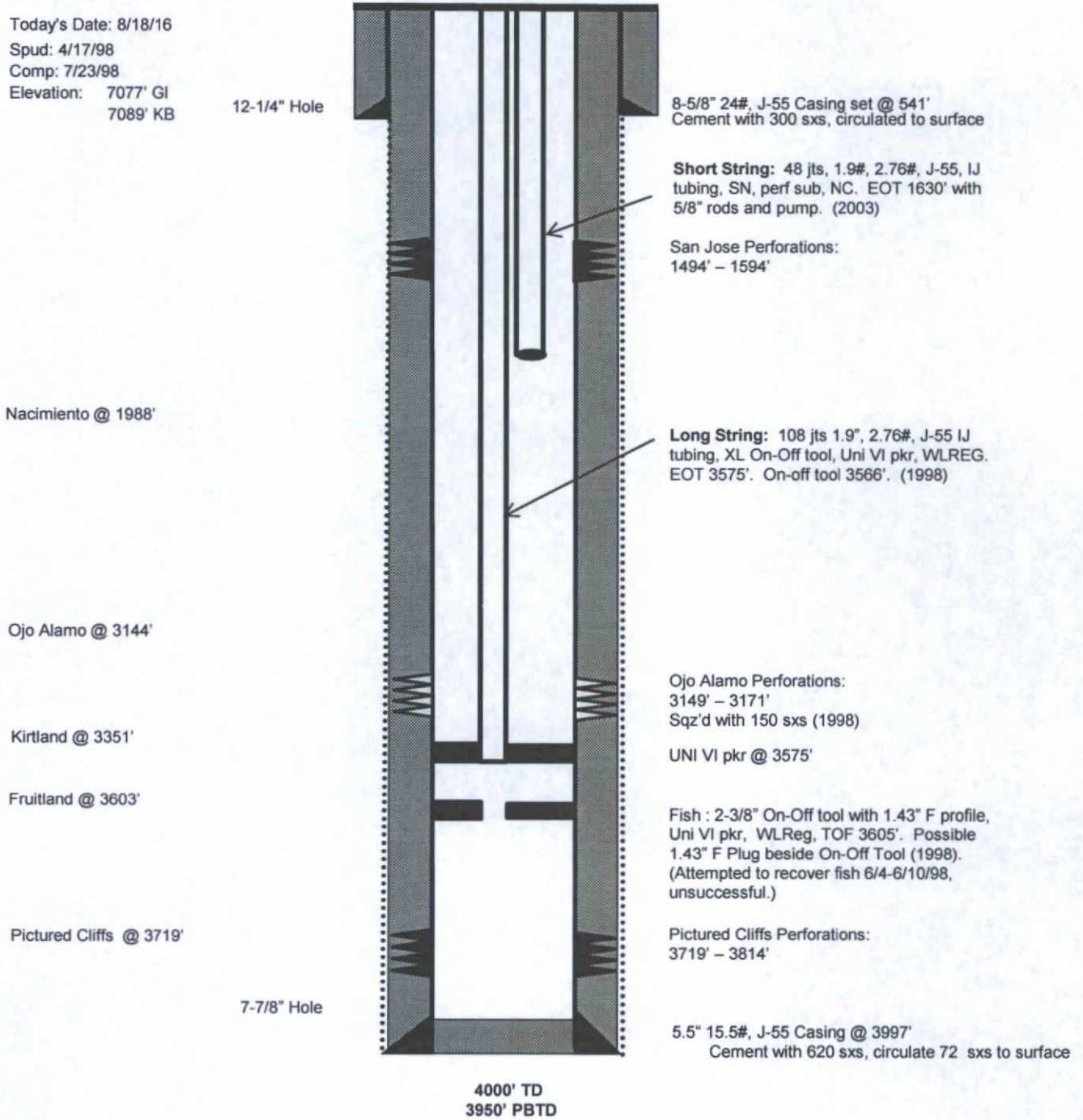
5. **Plug #1 (Pictured Cliffs interval, Fruitland, Kirtland and Ojo Alamo tops, 3814' – 3094'):** With tubing latched onto on/off tool, mix 100 sxs Class B cement (excess over PC perfs), squeeze 40 sxs below packer to fill Pictured Cliffs perforations and cover the Fruitland top. Release off the packer, PU and spot 60 sxs above packer to isolate the Kirtland and Ojo Alamo tops. PUH and WOC (open perfs above plug). TIH and tag cement 50' above top of Ojo Alamo. If necessary top off cement.
6. **Plug #2 (Nacimiento top, 2038' – 1938'):** Mix 23 sxs Class B cement (excess due to open perfs above plug) and spot cement inside the casing to cover the Nacimiento top. TOH with tubing and WOC. TIH and tag cement. If necessary top off. TOH with tubing.
7. **Plug #3 (San Jose perforations, 1444' – 1344'):** Round trip 5.5" scraper to 1444' or as deep as possible. TIH and set 5.5" CR or CIBP at 1444'. Attempt to pressure test casing to 800 psi. If casing does not test then spot or tag subsequent plugs as appropriate. Mix 17 sxs Class B cement and spot a balanced plug inside casing above CR or CIBP to isolate the San Jose interval. PUH.

8. **Plug #4 (8-5/8" Surface casing shoe, 591' - Surface):** Attempt to pressure test the bradenhead annulus to 300 PSI; note the volume to load. If the BH annulus holds pressure, then establish circulation out casing valve with water. Mix approximately 70 sxs cement and spot a balanced plug from 591' to surface, circulate good cement out casing valve. TOH and LD tubing. Shut well in and WOC. If the BH annulus does not test, then perforate at the appropriate depth and attempt to circulate cement to surface filling the casing from 591' and the annulus from the squeeze holes to surface. Shut in well and WOC.
9. ND cementing valves and cut off wellhead. 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

# Jicarilla 458-06 #3 Current

East Blanco Pictured Cliffs / Cabresto Canyon; San Jose Ext.  
1790' FNL & 1700' FEL, Section 6, T-30-N, R-3-W, Rio Arriba County, NM  
Long: \_\_\_\_\_ / Lat: \_\_\_\_\_ / API 30-039-25782

Today's Date: 8/18/16  
Spud: 4/17/98  
Comp: 7/23/98  
Elevation: 7077' GI  
7089' KB



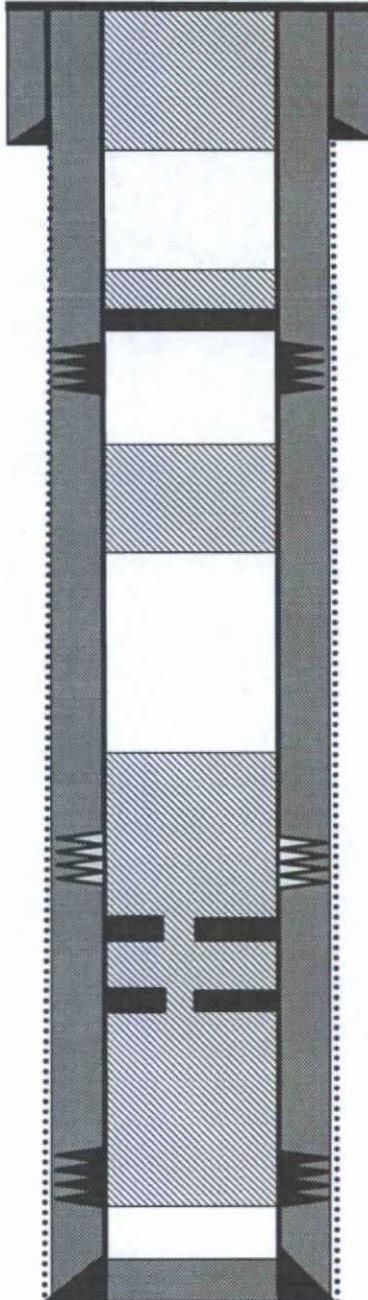
4000' TD  
3950' PBTD

# Jicarilla 458-06 #3 Proposed P&A

East Blanco Pictured Cliffs / Cabresto Canyon; San Jose Ext.  
1790' FNL & 1700' FEL, Section 6, T-30-N, R-3-W, Rio Arriba County, NM  
Long: \_\_\_\_\_ / Lat: \_\_\_\_\_ / API 30-039-25782

Today's Date: 8/18/16  
Spud: 4/17/98  
Comp: 7/23/98  
Elevation: 7077' GI  
7089' KB

12-1/4" Hole



**Plug #4: 591' - 0'**  
Class B cement, 70 sxs

8-5/8" 24#, J-55 Casing set @ 541'  
Cement with 300 sxs, circulated to surface

Set CR @ 1444'

**Plug #3: 1444' - 1344'**  
Class B cement, 17 sxs

San Jose Perforations:  
1494' - 1594'

Nacimiento @ 1988'

**Plug #2: 2038' - 1938'**  
Class B cement, 23 sxs  
(excess due to open San Jose perforations)

Ojo Alamo @ 3144'

**Plug #1: 3814' - 3094'**  
Class B cement, 100 sxs  
(excess due to open PC perfs)

Ojo Alamo Perforations:  
3149' - 3171'  
Sqz'd with 150 sxs (1998)

Kirtland @ 3351'

UNI VI pkr @ 3575'

Fruitland @ 3603'

Fish : 2-3/8" On-Off tool with 1.43" F profile,  
Uni VI pkr, WLReg, TOF 3605' Possible  
1.43" F Plug beside On-Off Tool (1998).  
(Attempted to recover fish 6/4-6/10/98,  
unsuccessful.)

Pictured Cliffs @ 3719'

Pictured Cliffs Perforations:  
3719' - 3814'

7-7/8" Hole

5.5" 15.5#, J-55 Casing @ 3997'  
Cement with 620 sxs, circulate 72 sxs to surface

4000' TD  
3950' 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 458-6 No. 3

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.

Operator reports low concentrations of H<sub>2</sub>S (2 ppm GSV) at this location, however, **High to Very High concentrations of H<sub>2</sub>S (170 ppm – 2,000 ppm GSV)** have been reported in several wells which produce gas from the San Jose, Nacimiento and Ojo Alamo fms. within a 1 mile radius of this location. **It is imperative that H<sub>2</sub>S monitoring and safety equipment be on location during P&A operations at this wellsite.**

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.