

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires: January 31, 2004

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, Inc. Contact: Lynn H. Benally/Daniel Manus

3a. Address

3200 N 1st Street/PO Box 249 Bloomfield, NM 87413

3b. Phone No. (include area code)

505-634-1111 ext 27, ext 28

4. Location of Well (Footage, Sec., T, R., M., or Survey Description)

Surface: 760' FNL 1,415' FWL NE/NW Sec 3 T28N R2W Unit C

5. Lease Serial No.

MDA 701-98-0013, Tract 2

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 28-02-03 #12

9. API Well No.

30-039-29440

10. Field and Pool, or Exploratory Area

11. County or Parish, State

Rio Arriba, NM

12. CHECK APPROPRIATE BOX(ES) 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"/> Alter 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>Convert undrilled</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>PC to SJ well</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

3. 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 of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with 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 Notices 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.)

The initial APD to drill a Picture Cliffs (PC) well was approved on October 24, 2005. The well was given API number 30-039-29440. After evaluation of drilling data in the immediate area, BHGR has determined that this well is best drilled to the San Jose formation. BHGR is submitting an updated drilling plan, and a revised C-102, to change the well from a PC to a San Jose.

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



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

Lynn H. Benally

Title Regulatory Specialist

Signature

Date

3/26/2007

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by (Signature)

Original Signed: Stephen Mason

Name

(Printed/Typed)

Title

Office

Date

MAR 28 2007

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 to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on next page)

NMOCD

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

DISTRICT II
811 South First, Artesia, N.M. 88210

OIL CONSERVATION DIVISION

Submit to Appropriate District Office

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

2040 South Pacheco
Santa Fe, NM 87505

207 MAR 26 PM 1

State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29440		*Pool Code 97035	*Pool Name BURRO CANYON TERTIARY
*Property Code 35228	*Property Name JICARILLA 28-02-03		*Well Number 12
*GRID No. 013925	*Operator Name BLACK HILLS GAS RESOURCES, INC		*Elevation 7321'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	3	28-N	2-W		760	NORTH	1415	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 140 - NW/4					Joint or Infill		Consolidation Code		Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16 CALC'D CLOSING COR. LOT 4 1415' 2321.49' N 00-01-34 E	N 89-47-48 W 2608.33' LOT 3 LAT. 36-40-23 N (MAD 83) LONG. 107-02-03 W (MAD 83)	FD MARKED STONE (NO P+C) LOT 2	LOT 1
QTR. COR. FD 2 1/2" BC 1917 GLO			

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Daniel Manus
Signature
Daniel Manus
Printed Name
Regulatory Technician
Title
3-26-2007
Date

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

JOHN A. VUKOBRA
NEW MEXICO
14831
RECORDED
PROFESSIONAL SURVEYOR
Date of Survey
Signature and Seal of Professional Surveyor
Certificate Number



Black Hills Gas Resources

Jicarilla 28-02-03 #12

Surface: 760' FNL 1,415' FWL NE/NW

Sec 3 T28N R2W Unit C

Rio Arriba County, New Mexico

Lease: MDA 701-98-0013, Tract 2

DRILLING PROGRAM

(Per Rule 320)

The 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 August 26, 2004 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 well was originally permitted and approved as a vertical Dakota well on October 24, 2006. This new drilling plan addresses changing the un-drilled Pictured Cliffs well to a San Jose well.

SURFACE FORMATION – San Jose

GROUND ELEVATION – 7,321'

ESTIMATED FORMATION TOPS - (Water, oil, gas and/or other mineral-bearing formations)

San Jose	Surface	Sandstone, shales & siltstones
Nacimiento	2,270'	Sandstone, shales & siltstones

TOTAL DEPTH **3,350'** **TD**

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

Nacimiento	2,270'	Gas
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CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0-250' TVD	12-1/4"	8 5/8"	J-55 24# ST&C New	To surface (± 175 sxs ClassB) **
0' - TD	7-7/8"	5-1/2"	J-55 15.5# LT&C New	TD to surface (± 630 sxs lite or 65:35 poz and ± 270 sxs 50:50 poz) *

* Actual cement volume to be determined by caliper log.

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'	Fresh water - Low solids non-dispersed M.W. 8.5 – 9.2 ppg Vis – 28 – 50 sec W.L. 15cc or less

Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kick" will be available at well site.

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: DIL- CNL-FDC-GR - TD - BSC (GR to surface)
Sonic (BSC to TD)
- 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) H₂S: See attached H₂S plan in event H₂S is encountered.
- D) Estimated bottomhole pressure: 1039 psi

ANTICIPATED START DATE

April 23, 2007

COMPLETION

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

Jicarilla 28-02-03 #12
 Surface: 760' FNL 1,415' FWL NE/NW
 Sec 3 T28N R2W Unit C
 Rio Arriba County, New Mexico
 Lease: MDA 701-98-0013, Tract 2

SURFACE CASING AND CENTRALIZER DESIGN

Proposed Total Depth: 3,350 '
 Proposed Depth of Surface Casing: 250 '
 Estimated Pressure Gradient: 0.31 psi/ft
 Bottom Hole Pressure at
 0.31 psi/ft x 3,350 ' = 1,039 psi
 Hydrostatic Head of gas/oil mud: 0.22 psi/ft
 0.22 psi/ft x 3,350 ' = 737 psi

Maximum Design Surface Pressure

Bottom Hole Pressure – Hydrostatic Head =
 (0.31 psi/ft x 3,350 ') – (0.22 psi/ft x 3,350 ') =
 1,039 psi – 737 psi = 302 psi

Casing Strengths 9 5/8 J-55 24# ST&C

Wt.	Tension (lbs)	Burst (psi)	Collapse (psi)
36 #	394,000	3,520	2,020
40 #	452,000	2,950	2,570

Safety Factors

Tension (Dry): 1.8 Burst: 1.0 Collapse: 1.125

Tension (Dry): 36 # / ft x 250 ' = 9,000 #
 Safety Factor = $\frac{394,000}{9,000}$ = 43.78 ok

Burst: Safety Factor = $\frac{3,520 \text{ psi}}{302 \text{ psi}}$ = 11.67 ok

Collapse: Hydrostatic = 0.052 x 9.0 ppg x 250 ' = 117 psi
 Safety Factor = $\frac{2,020 \text{ psi}}{117 \text{ psi}}$ = 17.26 ok

Use 250 ' 9.625 J-55 24# ST&C

Use 2,000 psi minimum casinghead and BOP's but will test to 1,000 psi

Centralizers

5 Total
 1 near surface at 40'
 2 -1 each at middle of bottom joint, second joint
 2 -1 each at every other joint 40' spacing
 Total centralized ± 200 ' (50 ' – 250 ')

Note that field experience indicates that additional centralizers greatly increase the chance of "sticking" the surface casing prior to reaching surface casing total depth.