

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
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

070 F7

5. LEASE SERIAL NO.

Contract 464

6. IF INDIAN, ALLOTTEE, OR TRIBE NAME

Jicarilla Apache Nation

7. IF UNIT OR CO, AGREEMENT DESIGNATION

RESERVED

1. TYPE OF WELL

Oil Well ☐ Gas Well ☒ Other: _____

8. WELL NAME AND NO.

Jicarilla 464-29 16

2. NAME OF OPERATOR

Black Hills Gas Resources, Inc.

9. API WELL NO.

30-039-27776

3. ADDRESS AND TELEPHONE NO.

350 Indiana Street, Suite 400
Golden CO 80401

CONTACT: Lynn Benally

PHONE: 505-634-1111 Ext. 27

Fax: 505-634-1116

10. FIELD AND POOL, OR EXPLORATORY AREA

Dakota

4. LOCATION OF WELL (Footage, T, R, M, or Survey Description)

650' FNL 2,400' FWL Sec. 29 T 30N R 3W

11. COUNTY OR PARISH, STATE

Rio Arriba New Mexico

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☐ Change Plans

☐ Convert to Injection

☒ Deepen

☐ Reclamation

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (start/resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☐ Other

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 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 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 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 above referenced well was originally submitted on June 4, 2002, and given API# 30-039-27776. This Sundry Notice will change the total depth of the above referenced well.

From: 4,027' Total Depth

To: 8,900' Total Depth

The Drilling Program is revised as attached. All other information in the APD shall remain the same.

- This APD is approved for a TD of 8900', however can TD anytime once the Morrison is penetrated. Extra hole is granted to

NMB#000230

allow for the log suite to be run.

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Kathy L. Schneebeck, 303-820-4480

Title: Permit Agent for Black Hills Gas Resources, Inc.

Signature

Kathy L. Schneebeck

Date: June 7, 2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE.

Approved by

/s/ Adrienne Brumley

Title

Date

6/21/05

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

FPO

NMOCD

Submit 3 Copies to Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-039-27776
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. Contract 464
7. Lease Name or Unit Agreement Name Jicarilla Apache Nation
8. Well Number Jicarilla 464-29 16
9. OGRID Number 013925
10. Pool name or Wildcat Dakota

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	
2. Name of Operator Black Hills Gas Resources, Inc.	
3. Address of Operator 350 Indian St., Suite 400, Golden, CO 80401	
4. Well Location Unit Letter _____ 650' feet from the North line and 2,400' feet from the West line Section 29 Township 30N Range 3W NMPM Rio Arriba County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 7,262' GR	
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____	
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>
CHANGE PLANS <input checked="" type="checkbox"/>	
MULTIPLE COMPL <input type="checkbox"/>	
OTHER: <input type="checkbox"/>	OTHER: <input type="checkbox"/>

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

The above referenced well was originally submitted on June 4, 2002, and give API # 30-039-27776. This Sundry Notice will change the total depth as indicated below:

From: 4,027' Total Depth
To: 8,900' Total Depth

The Drilling Program is revised as attached. All other information in the APD shall remain the same.

NMB #000230

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Kathy L. Schneebeck TITLE Permit Agent for Black Hills DATE 06/07/05

Type or print name: Kathy L. Schneebeck E-mail address: kathys@banko1.com Telephone No. (303) 820-4480
For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any): _____

TRACT II
Drawer DD, Arteria, N.H. 68211-0718

ERICT M
D Rio Brazos Rd., Aztec, N.M. 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

DIRECT IV
Box 2088, Santa Fe, NM 87604-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

* API Number		* Pool Code		* Pool Name	
		72400		E. Blanco / Pictured Cliffs Basin DL	
* Property Code		* Property Name			* Well Number
24245		JICARILLA 464-29			16
* OGRID No.		* Operator Name			* Elevation
013925		Black Hills Gas Resources, Inc.			7262

10 Surface Location

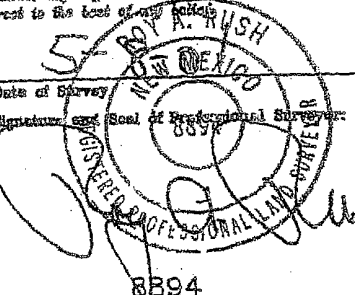
Surface Location									
L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	29	30-N	3-W		650	NORTH	2400	WEST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

Bottom hole location is different from surface									
L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Indicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

TO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

S. CORNER GLO BC 17	N 89-58-21 E 2636.5'	QTR. CORNER FD. GLO BC 1917	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
2400'	1081'		Signature <u>Kathy L. Schneebeck</u> Printed Name Kathy L. Schneebeck Title Permit Agent for Black Hills Date <u>June 7, 2005</u>
	650'		
	670'	257'	
		29	
		LAT. 36°47'21" N LONG. 107°10'30" W	
			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 belief
			Date of Survey <u>5-18-05</u>
			Signature and Seal of Professional Surveyor 
			8894 Certificate Number

S. CORNER
GLO BC
1917

Mallon Oil Company
Jicarilla 464-29 #16
650' FNL 2,400' FWL (NE/4 NW/4)
Sec. 29 T30N R3W
Rio Arriba County, New Mexico
Lease: Jicarilla 464

DRILLING PROGRAM
(Per Rule 320)

SURFACE FORMATION – Upper San Jose

GROUND ELEVATION – 7,262'

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

Lower San Jose	13'	Sandstone, shales and siltstones
Nacimiento	2,115'	Sandstone, shales and siltstones
Ojo Alamo	3,286'	Sandstone, shales and siltstones
Kirtland	3,527'	Sandstone, shales and siltstones
Fruitland	3,771'	Sandstone, shales and siltstones
Pictured Cliffs	3,811'	Sandstone, shales and siltstones
Lewis	3,927'	Sandstone, shales and siltstones
Point Lookout	6,213'	Sandstone, shales and siltstones
Mancos	7,689'	Sandstone, shales and siltstones
Dakota	8,542'	Sandstone, shales and siltstones, sand with gas
Morrison	8,762'	Sandstone, shales and siltstones
Total Depth	8,900'	Sandstone, shales and siltstones

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

Cretaceous		
Mancos	8,762'	Gas

TOTAL DEPTH 8,900'

CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' - 263'	12-1/4"	9-5/8"	J-55 36# ST&C New	To surface (±300 sxs Class B)
0' - 4,020'	8-3/4"	7"	L80 23# LT&C S95 23# LT&C	To surface (±326 sxs Lite and ±300 sxs 50:50 poz)
0' - 8,900'	6-1/4"	4-1/2"	J-55 11.6# LT&C New	TD to 4,020' (±308 sxs lite or 65:35 poz and ±200 sxs 50:50 poz *)

Production liner will overlap a minimum of 100'.

- Actual cement volume to be determined by caliper log.

Yields: Class B yield = $1.18 \text{ ft}^3/\text{sx}$ *15.6 ppg, 1.20 ft³/sx*
 65:35 Poz yield = $1.62 \text{ ft}^3/\text{sx}$ *13.4 ppg, 1.59 ft³/sx*
 50:50 Poz yield = $1.26 \text{ ft}^3/\text{sx}$ *14.2 ppg, 1.27 ft³/sx*

All fresh water and prospectively valuable minerals encountered during drilling, will be recorded by depth and protected.

PRESSURE CONTROL

BOP's 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 rated working pressure of the stack assembly if a test plug is used. If a plug is not used, the stack assembly will be tested to the rated working pressure of the stack assembly or to 70% of the minimum internal yield of the casing, whichever is less. Annular type preventors will be pressure tested to 50% of their rated working pressure. All casing strings will be pressure tested to 0.22 psi/ft. or 1,500 psi, whichever is greater, not to exceed 70% of internal yield.

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 2,000 psi 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' - 263' Spud mud
 263' - TD 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 wellsite.

AUXILIARY EQUIPMENT

- A) Inside BOP or stab-in valve (available on rig floor)
- B) Mud monitoring will be visually observed.

LOGGING, CORING, TESTING PROGRAM

- A) Logging: DIL- CNL-FDC-GR - TD - BSC (GR to surface) (Triple Combo)
- 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: Hydrogen sulfide gas is potentially present in the San Jose and Ojo Alamo formation
and an H₂S drilling plan is attached.
- D) Estimated bottomhole pressure: 2,759 psi

ANTICIPATED START DATE

July 1, 2005

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#/ft tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.

Jicarilla 464-29 #16
 650' FNL 2,400' FWL NE /4 NW /4
 Sec. 29 T 30N R 3W
 Rio Arriba County, New Mexico
 Lease: Jicarilla 464

SURFACE CASING AND CENTRALIZER DESIGN

Proposed Total Depth: 8,900 '
 Proposed Depth of Surface Casing: 263 '
 Estimated Pressure Gradient: 0.31 psi/ft
 Bottom Hole Pressure at 8,900 '
 $0.31 \text{ psi/ft} \times 8,900' = 2,759 \text{ psi}$
 Hydrostatic Head of gas/oil mud:
 $0.22 \text{ psi/ft} \times 8,900' = 1,958 \text{ psi}$

Maximum Design Surface Pressure

Bottom Hole Pressure	-	Hydrostatic Head	=	
($0.31 \text{ psi/ft} \times 8,900'$)	-	($0.22 \text{ psi/ft} \times 8,900'$)	=	
2,759 psi	-	1,958 psi	=	801 psi

Casing Strengths 9-5/8" J-55 36# ST&C

<u>Wt.</u>	<u>Tension (lbs)</u>	<u>Burst (psi)</u>	<u>Collapse (psi)</u>
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): $28 \text{ #/ft} \times 263' = 7,364 \text{ #}$
 Safety Factor = $\frac{452,000 \text{ #}}{7,364 \text{ #}} = 61.38$ ok

Burst: Safety Factor = $\frac{2,950 \text{ psi}}{801 \text{ psi}} = 3.68$ ok

Collapse: Hydrostatic = $0.052 \times 9.0 \text{ ppg} \times 263' = 123 \text{ psi}$
 Safety Factor = $\frac{2,570 \text{ psi}}{123 \text{ psi}} = 20.88$ ok

Use 263' 9-5/8" J-55 36# ST&C

Use 2,000 psi minimum casinghead and BOP's

Centralizers

5 Total
 1 near surface at 80'
 1 10' up on bottom joint
 2 on the first, second, and third collar from bottom.

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

Jicarilla 464-29 16
650' FNL 2,400' FWL (NE/4 NW/4)
Sec. 29 T 30N R 3W
Rio Arriba County, New Mexico
Contract 464

INTERMEDIATE CASING DESIGN

Proposed Total Depth: 8,900 '
Proposed Depth of Surface Casing: 4,020 '
Estimated Pressure Gradient: 0.31 psi/ft
Bottom Hole Pressure at 8,900 '
 $0.31 \text{ psi/ft} \times 8,900' = 2,759 \text{ psi}$
Hydrostatic Head of gas/oil mud: 0.22 psi/ft
 $0.22 \text{ psi/ft} \times 8,900' = 1,958 \text{ psi}$

Maximum Design Surface Pressure

Bottom Hole Pressure	-	Hydrostatic Head	=
(0.31 psi/ft x 8,900 ')	-	(0.22 psi/ft x 8,900 ')	=
2,759 psi	-	1,958 psi	= 801 psi

Use 4,020 ' 7 " L-80 23# LTC New & S95 23# LTC New

Use 2,000 psi minimum casinghead and BOP's

2-M SYSTEM

Black Hills Gas Resources, Inc.

ANNULAR PREVENTOR MAY BE SUBSTITUTED FOR DOUBLE GATE PREVENTORS
BOP PRESSURE TEST TO 1,000 PSI

