

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

1. TYPE OF WELL

Oil Well ☐ Gas Well ☒ Other: _____

2. NAME OF OPERATOR

Black Hills Gas Resources, Inc.

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

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

330' FNL 1,090' FEL Sec. 18 T 30N R 3W

5. LEASE SERIAL NO.

Contract 459

6. INDIAN ALLOTTEE OR TRIBE NAME

Jicarilla Apache Nation

7. IF UNIT OR JOINT AGREEMENT DESIGNATION

070 FARMINGTON NM

8. WELL NAME AND NO.

Jicarilla 459-18-15

9. API WELL NO.

30-039-27777

10. FIELD AND POOL, OR EXPLORATORY AREA

Morrison

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

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> Acidize | <input checked="" type="checkbox"/> Deepen | <input type="checkbox"/> Production (start/resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | <input type="checkbox"/> Location |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | <input type="checkbox"/> Correction |

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# 30-039-27777. This Sundry Notice will change the total depth of the above referenced well.

From: 3,873' 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 Sundry Notice will also correct the well location submitted in a Sundry Notice dated April 12, 2005 as indicated below:

From: 330' FNL 990' FEL

To: 330' FNL 1,090' FEL

NMB#000230

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

Name (Printed/Typed)

Kathy L. Schneebeck, 303.820.4480

Signature

Kathy L. Schneebeck

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

Date: June 3, 2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE.

Approved by

/s/ Adrienne Brumley

Title

Date

6/17/05

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

FEO

NMOCD

RCT I
Box 1980, Hobbs, N.M. 88241-1980
RCT II
Drawer DD, Artesia, N.M. 88211-0719
RCT III
Elc Erasus Ed., Artesia, N.M. 87410
RCT IV
Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 72400	Pool Name East Blanco; Pictured Cliffs Basin DR
Property Code 24245	Property Name JICARILLA 459-18	Well Number 15
OGSD No. 013925	Operator Name Black Hills Gas Resources, Inc.	Elevation 7025

10 Surface Location

or lot no. A	Section 18	Township 30-N	Range 3-W	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 1090	East/West line EAST	County RIO ARriba
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11 Bottom Hole Location If Different From Surface

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

SEC. CORNER
FD. GLO BC
1917

N 89-52-42 W
4097.7'

230'

SEC. CORNER
FD. GLO BC
1917

1090'

990'

LAT. 36°49'09" N
LONG. 107°11'11" W

18

S 00-05-08 E
5281.7'

17 OPERATOR CERTIFICATION

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

Kathy L. Schneebeck
Signature
Kathy L. Schneebeck

Permit Agent for Black Hills
Title

June 3, 2005
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 belief.

4-17
Date of Survey
Signature and Seal of Professional Surveyor

8894
Certificate Number

SEC. CORNER
FD. GLO BC
1917

Replacement page

Black Hills Gas Resources, Inc.
Jicarilla 459-18 #15
 330' FNL 1,090' FEL (NE/4 NE/4)
 Sec. 18 T30N R3W
 Rio Arriba County, New Mexico
 Lease: Jicarilla 459

2005 JUN 7 AM 10 10

RECEIVED
 070 FARMINGTON NM

DRILLING PROGRAM
 (Per Rule 320)

SURFACE FORMATION - Upper San Jose

GROUND ELEVATION -7,025'

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

Lower San Jose	1,900'	Sandstone, shales & siltstones
Nacimiento	3,065'	Sandstone, shales & siltstones
Ojo Alamo	3,312'	Sandstone, shales & siltstones
Kirtland	3,592'	Sandstone, shales & siltstones
Fruitland	3,638'	Sandstone, shales & siltstones
Pictured Cliffs	3,750'	Sandstone, shales & siltstones
Lewis	4,213'	Sandstone, shales & siltstones
Point Lookout	7,516'	Sandstone, shales & siltstones
Mancos	8,279'	Sandstone, shales & siltstones
Dakota	8,589'	Sandstone, shales & siltstones
Morrison	8,900'	Sandstone, shales & siltstones
Total Depth	8,900'	Sandstone, shales & siltstones

see revised Geo tops
 on next page.

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

Cretaceous

Dakota 8,279' Gas

TOTAL DEPTH 8,900'

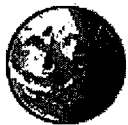
CASING PROGRAM

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' - 3,873'	8-3/4"	7"	L-80 23# LT&C New S95 23# LT&C New	To surface (±306 sxs Lite and ±300 sxs 50:50 poz)
0-3773 8,900'	6-1/4"	4-1/2"	J-55 11.6# LT&C New	TD to 3,873 3,773' (±332 sxs lite or 65:35 poz and ±200 sxs 50:50 poz)*

* Actual cement volume to be determined by caliper log.

Yields: Class B yield = 1.18 ft³/sx
 65:35 Poz yield = 1.62 ft³/sx
 Lite Poz yield = 1.26 ft³/sx

Must be 100' minimum overlap of cement
 w/Int. CSG for
 see cement properties on next page.



CMaybe@bhep.com

06/16/2005 03:47 PM

To Adrienne_Brumley@blm.gov

cc chip_harraden@nm.blm.gov, RWhite@bhep.com

bcc

Subject Jicarilla 459-18 #15

Adrienne - I've had a chance to get the specifications of the cement as well as revised tops from the geologist. He has said that the tops looked like they had been shifted on the application.

Revised/Corrected Picks:

Formation	Top
Nacimiento	1900
Ojo Alamo	3065
Kirtland	3312
Fruitland	3592
Pictured Cliffs	3638
Lewis	3750
Point Lookout	6039
Mancos	6160
Dakota	8279
Morrison	8482

- TD is still 8900', but can TD at anytime once the Morrison has been penetrated.

Cement Properties:

Surface	Class B, 15.6 ppg, 1.20 ft3/sx
Intermediate	Lead - Halliburton Lite, 13.4 ppg, 1.59 ft3/sx
	Tail - 50/50 Poz, 14.2 ppg, 1.27 ft3/sx
Liner	Lead - Halliburton Lite, 13.4 ppg, 1.59 ft3/sx
	Tail - 50/50 Poz, 14.2 ppg, 1.27 ft3/sx

- Extra hole is needed for the logs that will be run.

Also to just clarify our earlier conversation, the planned TD of the 7" intermediate string will be 3873' (+/- 120 ft into the Lewis). The 4-1/2" liner will be overlapped into the intermediate by at least 100' (+/- 3773') our liner cement would then be circulated to the top of the liner at 3773'.

I will call you tomorrow morning at 8:30 to discuss this information, however our geologist will be out of the office tomorrow.

Respectfully,

Chuck Maybee
Senior Petroleum Engineer

Black Hills E&P, Inc.
350 Indiana St, Suite 400
Golden, CO 80401

Office: 720.210.1300
Direct: 720.210.1310

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 459-18 15
 330' FNL 1,090' FEL (NE /4 NE /4)
 Sec. 18 T 30N R 3W
 Rio Arriba County, New Mexico
 Contract 459

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 psi/ft x 8,900 ' = 2,759 psi
 Hydrostatic Head of gas/oil mud: 0.22 psi/ft
 0.22 psi/ft x 8,900 ' = 1,958 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

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

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

Safety Factors

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

Tension (Dry): 36 # / ft x 263 ' = 9,468 #
 Safety Factor = $\frac{394,000}{9,468}$ = 41.61 ok

Burst: Safety Factor = $\frac{3,520 \text{ psi}}{801 \text{ psi}}$ = 4.39 ok

Collapse: Hydrostatic = 0.052 x 9.0 ppg x 263 ' = 123 psi
 Safety Factor = $\frac{2,020 \text{ psi}}{123 \text{ psi}}$ = 16.41 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 40'
 2 -1 each at middle of bottom joint, second joint
 2 -1 each at every other joint ±40' spacing

Total centralized ± 200 ' (63 ' - 263 ')

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 459-18 15
 330' FNL 1,090' FEL (NE /4 NE /4)
 Sec. 18 T 30N R 3W
 Rio Arriba County, New Mexico
 Contract 459

INTERMEDIATE CASING DESIGN

Proposed Total Depth: 8,900 '
 Proposed Depth of Surface Casing: 3,873 '
 Estimated Pressure Gradient: 0.31 psi/ft
 Bottom Hole Pressure at 8,900 '
 0.31 psi/ft x 8,900 ' = 2,759 psi
 Hydrostatic Head of gas/oil mud: 0.22 psi/ft
 0.22 psi/ft x 8,900 ' = 1,958 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 3,873 ' 7 " L-80 23# LTC New

Use 2,000 psi minimum casinghead and BOP's

2-M SYSTEM

MALLON OIL COMPANY

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

