A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

RCVD JUN 24 'VE OIL CONS. DIV.

2006: OCT

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

DIST. 3 FORM APPROVED OMB No. 1004-0137 Expires March 31, 2007

	Lease	Corrol	No
,	Lease	Seliai	FYU

6 If Indian, Allottee or Tribe Name

APPLICAT	ION FOR PERMIT	TO DRIL	L OR DEEPEN	- r. r.	Jicarilla Apache Natio	n
1a Type of Work X DRIL	L REEN	TER	VIV		7´'lf Unit of CA'Agreement, Name	and No
1b Type of Well Oil Well X Gas	s Well Other	XSing	gle Zone Multiple Zo		8 Lease Name and Well No Jicarilla 29-02-17	; 41
2 Name of Operator	E-mail:	lbenally@bh	nep.com		9 API Well No.	
Black Hills Gas Resources,	Inc.	Contact:	Lynn Benally		30-039-360	395
3a Address P.O. Box 249			3b. Phone No. (include area d	code)	10. Field and Pool, or Exploratory	
Bloomfield	NM 87413		505-634-1111		East Blanco / Pictured	d Cliffs
4 Location of Well (Report location clearly and	in accordance with any State Ri	equirements *)			11 Sec,T,R,M,orBlk and Su	rvey or Area
At surface 725' FS	SL 995' FWL : 36.71975	Long: 107	SW /4 SW /4 7 07219		MSec. 17 T 29N	R 2W
At proposed production zone					NMPM	
14 Distance in miles and direction from nearest	town or post office *				12. County or parish	13 State
Well is located approximately 60	omiles east of Bloomfi	ield, New M	exico.		Rio Arriba '	New Mexico
15 Distance from proposed location to nearest	OTTE THE	16 No of acres	in lease	17. Spa	cing Unit dedicated to this well	
property of lease line, ft. (Also nearest Drig, unit line, if any)	Lease= ±4,360'	9,	920.00	16	0 SW/4	
18. Distance from proposed location to nearest	Jicarilla	19 Proposed de	epth	20. BLM	M/BIA Bond No on file	•
well, drilling, completed or applied for, on this lease, ft \$\pmu 1,500 \pmu 44\$			4,000' TVD	N	MB000230	

24. Attachments

22. Approximate date work will start

November 24, 2006

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- 1. Well plat certified by a registered surveyor.
- 2. A Drilling Plan.

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

7,191 'GR

- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

23 Estimated duration

45-60 days drlg + completion

- 5. Operator certification
- 6. Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature	Name (Printed/Typed)	Date
Looky & Schneebeck	Kathy L. Schneebeck, 303-	-820-4480 October 24, 2006
Title Permit Agent for Black Hills	Gas Resources, Inc.	•
Approved by (Signature) Approved by (Manke)	Name (Printed/Typed)	Date 6/25/08
Title AFN	Office FEO.	ا ا

thereon

Conditiona of approval, if any, are attached

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

NOTIFY AZTEC OCD 24 HRS. **PRIOR TO CASING & CEMENT**

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

State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised October 12, 2005

DISTRICT II 1301 W. Grand Ave., Artesia, N.M. 88210

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

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

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

DISTRICT IV

☐ AMENDED REPORT

1220 South St. Francis Dr., Santa Fe, NM 87505 WELL LOCATION AND ACREAGE

30.039.3	50095	² Pool Code 72400	E. Planco Pictured C1	iffs	
⁴ Property Code		Property Name			
21472		JICARILLA 29-02-17			41
OGRID No.	⁸ Operator Name				g Elevation
013925		BLAÇK HILLS GAS RESOURCES			7191

¹⁰ Surface Location Feet from the North/South line East/West line UL or lot no. Section Lot Idn Feet from the Township Range County M 17 29-N 2-W725 SOUTH 995 WEST RIO ARRIBA ¹¹ Bottom Hole Location If Different From Surface UL or lot no. Section Range Lot Idn Feet from the North/South line Feet from the East/West line Township County ¹⁸ Dedicated Acres ¹³ Joint or Infill 14 Consolidation Code 15 Order No. 160 acres - SW/4

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

			T 7.27
16	,		ODEDATOD CEDTIFICATION
			OPERATOR CERTIFICATION
			I hereby certify that the information contained herein is true and complete to the best of my knowledge and
			belief, and that this organization either owns a working
			interest or unleased mineral interest in the land including the proposed bottom hole location or has a
			right to drill this well at this location pursuant to a contract with an owner of such a mineral or working
			interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the
			division.
			Lady Debreebeck
			24 Detober 2006
			Signature Date
FD. MK'D. STONE	·		Kathy L. Schneebeck
W/ P&C STAMPED L.S. NO. 8894			Printed Name Permit Agent for Black Hills
Platath	111111		18 SURVEYOR CERTIFICATION
			I hereby certify that the well location shown on this plat
N 0-50-04 W 2728.81' (M)			was plotted from field notes of actual surveys made by
0,-	<i>N</i> 1		me or under my supervision, and that the same is true
8.83			and correct to the best of my belief.
272			MARCH 22 2005
	\		Date of Supera O
	1		Date of Supressional Surveyor:
	(/)		Service 1
005'	LAT. 36.71975' N. (NAD 83) LONG. 107.072 9' W. (NAD 83)		(Se Cagne) 9 E
995'	LONG. 107.07219 W. (NAD 85)		I HAVE POLICE
	\		Jan Colored Se
.25	//	FD. MK'D. STONE	1,8894 1,10
FD. PIN & CAP	N 89-24-16 W	W/ P&C STAMPED	Certificate Number SSIONAL
L.S. NO. 8894	5354.89' (M)	LS. NO 8894	

Black Hills Gas Resources, Inc. Jicarilla 29-02-17 41 725' FSL 995' FWL (SW/4 SW/4) Sec. 17 T29N R2W

Rio Arriba County, New Mexico Lease: MDA 701-98-0013, Tract 1

DRILLING PROGRAM

This Application for Permit to Drill (APD) was initiated under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. This NOS process included an onsite meeting, which was held on October 5, 2006, as determined by Bureau of Indian Affairs (BIA) and Jicarilla Oil and Gas Administration (JOGA), and at which time the specific concerns of Black Hills Gas Resources, Inc. (Black Hills), BIA and JOGA were discussed.

SURFACE FORMATION – San Jose

GROUND ELEVATION - 7,191'

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

San Jose	Surface	Sandstone, shales & siltstones
Nacimiento	2,134'	Sandstone, shales & siltstones
Ojo Alamo	3,177'	Sandstone, shales & siltstones
Kirkland	3,410'	Sandstone, shales & siltstones
Fruitland Coal	3,528'	Sandstone, shales & siltstones
Pictured Cliffs	3,581'	Sandstone, shales & siltstones
Lewis	3,689°	Sandstone, shales & siltstones
TOTAL DEPTH	4,000°	

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

Tertiary

San Jose	surface	Gas
Nacimiento	2,134'	Gas
Ojo Alamo	3,177	Gas
Fruitland Coal	3,528'	Gas
Pictured Cliffs	3,581'	Gas

CASIN	G	PR	OGR	ΔM
CADII	\sim	1 1/	α	ΔTAT

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 Standard Cement containing 2% CaCl2 and 0.25 lb/sx LCM) **
0' – 4,000' TVD	7-7/8"	5-1/2"	J-55 15.5# LT&C New	TD to surface (Lead: ±300 sxs Lite Standard Cement. Tail: ±400 sxs 50:50 POZ containing 0.25 lb/sx LCM)* **

^{*} Actual cement volume to be determined by caliper log.

Yields:

Surface: Standard Cement yield: = $1.2 \text{ ft}^3/\text{sx}$ (mixed at 15.6 lb/gal)

Production: Lite Standard Cement yield: = 1.59 ft³/sx (mixed at 13.4 lb/gal)

 $50:50 \text{ POZ yield} = 1.27 \text{ ft}^3/\text{sx} \text{ (mixed at 14.15 lb/gal)}$

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' Clean Faze - 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.

^{**} Cement will be circulated to surface.

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) H_2S : See attached H_2S plan in the event H_2S is encountered.

D) Estimated bottomhole pressure: 1,240 psi

ANTICIPATED START DATE

November 24, 2006

COMPLETION

The location pad will be of sufficient size to accommodate all completion activities and equipment. A string of 2-7/8" PH-6 tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.

Hydrogen Sulfide Drilling Operations Plan

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- :
 1. The hazards and characteristics of hydrogen sulfide (H₂S).
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H₂S Safety Equipment and Systems

Note: All H_2S safety equipment and systems, if necessary, will be installed, tested, and operational when drilling reaches a depth of 500 feet above or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S .

A. . Well control equipment:

- Choke manifold with a minimum of one remote choke.
- Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

- B. Protective equipment for essential personnel:
 - 1. Mark II Surviveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.
- C. H₂S detection and monitoring equipment:
 - Two portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 10 ppm are reached.
- D. Visual warning systems:
 - 1. Wind direction indicators as shown on well site diagram.
 - Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate. See example attached.

E. Mud program:

1. The mud program has been designed to minimize the volume of H₂S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

F. Metallurgy:

- 1. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.
- 2. All elastomers used for packing and seals shall be H₂S trim.

G. Communication:

1. Cellular telephone communications in company vehicles.

H. Well testing:

1. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H₂S environment will use the closed chamber method of testing.

WELL PAD DIAGRAM BLACK HILLS GAS RESOURCES COMPANY._ JICARILLA 29-02-17 No. 41 LEASE: ___ 725 FSL, 995 FWL FOOTAGE: __ SEC.: 17 TWN: 29-N RNG: 2-W _;`NMPM ELEVATION: 7191' SCALE IN FEET 30 60 (5) В C 42 RESERVE PIT (4) 100' X 125' REAR 125, C 20 WELLHEAD BACK 476 FT. 6 NEW ACCESS C 0.0 LAYDOWN S SE'A8' E 3 A' F 2.7 1 F 3.4 В' F 5.0 DATE.

NOTE:

DAGGETT ENTERPRISES, INC IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION

Daggett Enterprises, Inc.
Surveying and Oil Field Services
P O Box 15068 Farmington, NM 87401
Phone (505) 326-1772 • Fox (505) 326-6019
NEW MEXICO L S 8894

 DRAWN BY: G.V
 CADFILE MN471_PL8

 ROW# MN471
 DATE 08/28/06

WELL PAD CROSS-SECTIONAL DIAGRAM

COMPANY: BLACK HILLS GAS RESOURCES

	LEASE:	JICARILLA 29-02-17 No. 41	
	FOOTAGE:	725 FSL, 995 FWL	
	'SEC.:17	, TWN: <u>29-N</u> , RNG: <u>2-W</u>	, NMPM
	ELEVATION:7	191'	
		NOTE: DAGGETT EN UNDERGROUI ONE CALL T	TERPRISES, INC. IS NOT LIABLE FOR ND UTILITIES OR PIPELINES. NEW MEXICO OBE NOTIFIED 48 HOURS PRIOR TO OR CONSTRUCTION.
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7180			Daggett Surveying F. O. Box 159 Phone (505) 33
7170			
7160			REF DWG REVISION REVISION REVISION REF CO REVISION ROW ANATT
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2-N SYSTEM

Black Hills Gas Resources, Inc.

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

