

COPY

FORM APPROVED
OMB No. 1004-0135
Expires: March 31, 2007

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 St., Suite 400
Golden CO 80401

CONTACT: Chuck Maybee

PHONE: 720-210-1300

Fax: 720-210-1301

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

1,945' FSL 780' FWL

Sec. 4 T 28N R 2W

5. LEASE SERIAL NO.

MDA 701-98-0013 Tract 2

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache Nation

7. IF UNIT OR CA, AGREEMENT DESIGNATION

8. WELL NAME AND NO.

Jicarilla 28-02-04 31

9. API WELL NO.

Pending 3003929310

10. FIELD AND POOL, OR EXPLORATORY AREA

Est Blanco Pictured Cliffs

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 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 checked="" type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporary 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 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.)

Black Hills Gas Resources, Inc. proposes to amend the Drilling Plan as approved under the Application for Permit to Drill to drill horizontally to a bottomhole location at 660' FSL 660' FEL (SE/4 SE/4) Sec. 4 T28N R2W. Please see the attached Drilling Plan and horizontal drilling information. Contact Chuck Maybee at 720-210-1300 if there are any questions regarding this proposal.

- This action is approved with the condition that if this well is a successful PC completion, the Approved APD for the JIC 28-02-04 #43 will NOT be an allowed PC completion for this same quarter and must be changed to complete in a different horizon.

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: January 12, 2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE.

Approved by

Ann Lovato

Title

Peter Eng

Date

1/21/05

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

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, makes 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.

HOLD C104 FOR C-102 w/ horizontal Leg Shawn

NMOCD

Black Hills Gas Resources, Inc.
Jicarilla 28-02-04 31
API # Assignment pending
Surface: 1,945' FSL 780' FWL (NW/4 SW/4)
End of Horizontal Hole: 660' FSL 660' FEL (SE/4 SE/4)
Sec. 4 T28N R2W
Rio Arriba County, New Mexico
Lease: MDA 701-98-0013 Tract 2

CONFIDENTIAL
DRILLING PROGRAM
(Per Rule 320)

This Sundry Notice is submitted per CFR 3162.3-2. The well pad and reserve pit will be per the Approval to Drill.

This is an amendment to the original drilling Program for horizontal entry into and a deepening horizontally of the recently approved well Jicarilla 28-02-04 31 into the Pictured Cliffs Formation. See also the attached Horizontal Drilling Plan.

Vertical well will be drilled into the Pictured Cliffs per the approved APD. The well will be logged and a cement plug set to 3,500'. The plug will be dressed down to the KOP and the well will be drilled horizontally to the target depth in the Pictured Cliffs. Casing will be set and cemented and the lateral will be continued using 4 3/4" bit and completed open hole.

Please contact Chuck Maybee at BHGR, 720.210.1300 if there are any questions regarding this program.

BHGR RESPECTFULLY REQUESTS THAT ALL INFORMATION REGARDING THIS WELL BE KEPT CONFIDENTIAL.

SURFACE FORMATION – San Jose

Surface water protection plan: Surface casing to be cemented to surface.

GROUND ELEVATION – 7,279' GL

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

All Depths are True Vertical Depth (TVD)

San Jose	Surface	Sandstone, shales and siltstones
Nacimiento	1,977'	Sandstone, shales and siltstones
Ojo Alamo	3,185'	Sandstone, shales and siltstones
Fruitland	3,611'	Sandstone, shales and siltstones
Pictured Cliffs	3,700'	Sandstone, shales and siltstones
Lewis	3,808	Sandstone, shales and siltstones

TOTAL DEPTH	3,800' TVD (end of horizontal hole)	4,050' (anticipated horizontal section)
	7,850.00' MD	

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

Tertiary		
Pictured Cliffs	3,700'	Gas

HORIZONTAL DRILLING PROGRAM

- A) A 2,000-psi WP double-gated BOP will be in place with blind rams on bottom and pipe rams on top controlled by an accumulator placed within easy access to drill and other crew members.
- B) No annular preventor with a 2,000-psi WP will be placed above BOP stack.
- C) Retrievable whipstock to be set at $\pm 3,570'$.

Vertical well will be drilled into the Pictured Cliffs per the approved APD. The well will be logged and a cement plug set to 3,500'. The plug will be dressed down to the KOP and the well will be drilled horizontally to the target depth in the Pictured Cliffs. Casing will be set and cemented and the lateral will be continued using 4 3/4" bit and completed open hole.

CASING PROGRAM

True Vertical Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' - 250'	12-1/4"	8-5/8"	K-55 24# ST&C Approved *	To surface (175 sxs Class B)
0' - 4,500'	7-7/8"	5-1/2"	J-55 17# LT&C See attached **	To surface (630 sxs lite or "65:35 Poz and 270 sxs 50:50 poz)
4,500' - 7,850' (MD)	4-3/4"	Open hole	None	None

* Recently approved APD

** See attached horizontal drilling data page.

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

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

3,570' - 7,850' MD 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) 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: None
- B) Coring: None
- C) Testing: None anticipated.

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: None anticipated.
- D) Estimated bottomhole pressure: 1,240 psi

ANTICIPATED START DATE

January 24, 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.

Black Hills Exploration & Production

Jicarilla 28-02-04 #31

API No. Unassigned
1945 FSL & 780 FWL
Section 4 T28N - R02W

East Blanco Field, Rio Arriba County, New Mexico

Top of Coal:	NA
Bottom of Coal:	NA
KOP: (Estimated)	3570'
At Well -	
Top of PC Target:	
Bottom of PC Target:	
Bottom of PC:	
Top of Lewis:	
At BHL -	
Proposed BHL:	660 FSL & 660 FEL
Azimuth	108.5
Top of PC Target:	
Bottom of PC Target:	

Ground Elevation:	7279'
KB Elevation:	7292' (13' KB)
Production Casing:	5-1/2" 17# J-55 LT&C @ 3500' @ 0 deg
(Proposed)	5-1/2" 17# J-55 BUTT @ 4500' @ 90 deg
Plugback ID:	
Perfs:	San Jose:
Perfs:	Nacimiento:
Perfs:	Ojo Alamo:
Perfs:	Pictured Cliffs:
Completion:	New well

Note: Vertical pilot well will be drilled into the Pictured Cliffs. The well will be logged and a cement plug set to 3300'. The plug will be dressed down to KOP and the well will be drilled horizontal to the target depth in the Pictured Cliffs. Casing will be set and cemented and the lateral will be continued using 4-3/4" bit and completed open hole.

Black Hills Exploration & Production

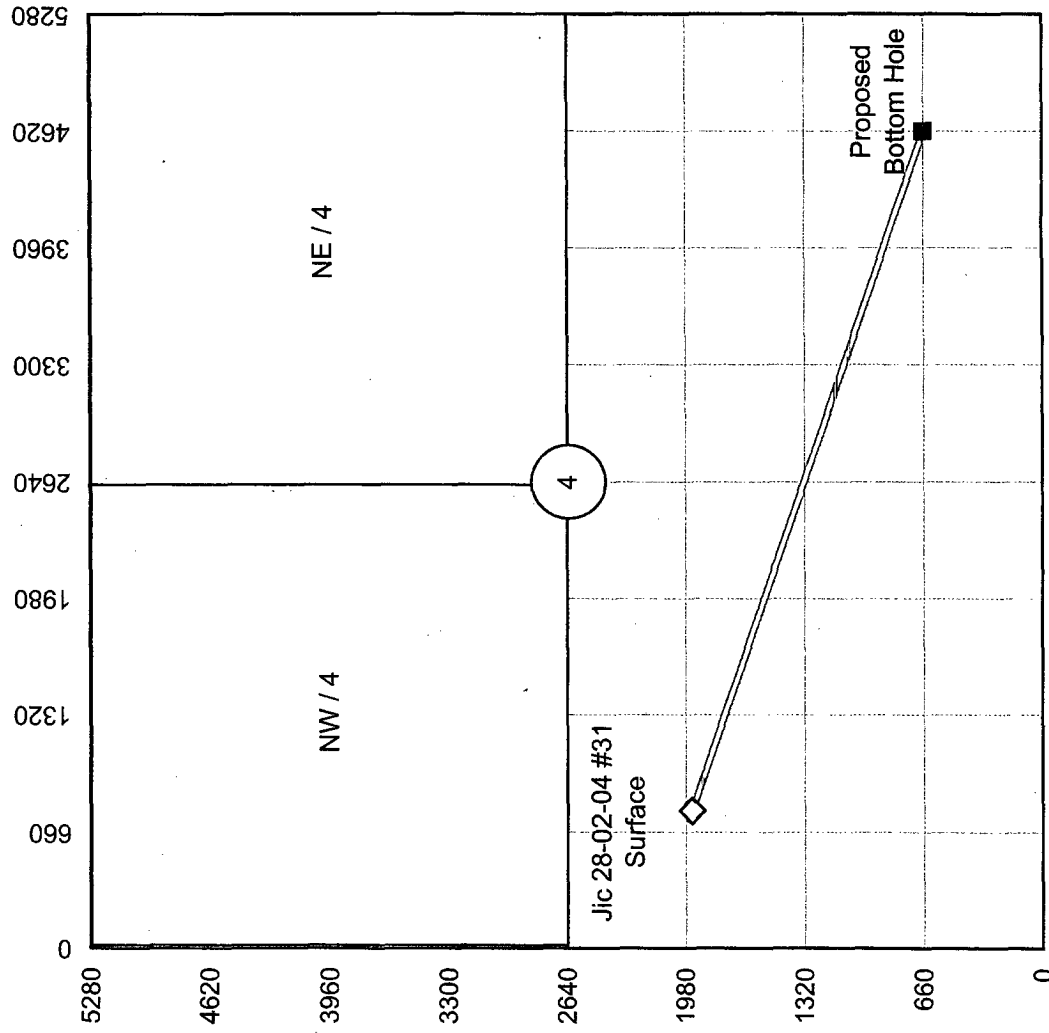
Horizontal Well Plan
 Jicarilla 28-02-04 #31H
 API: Unassigned

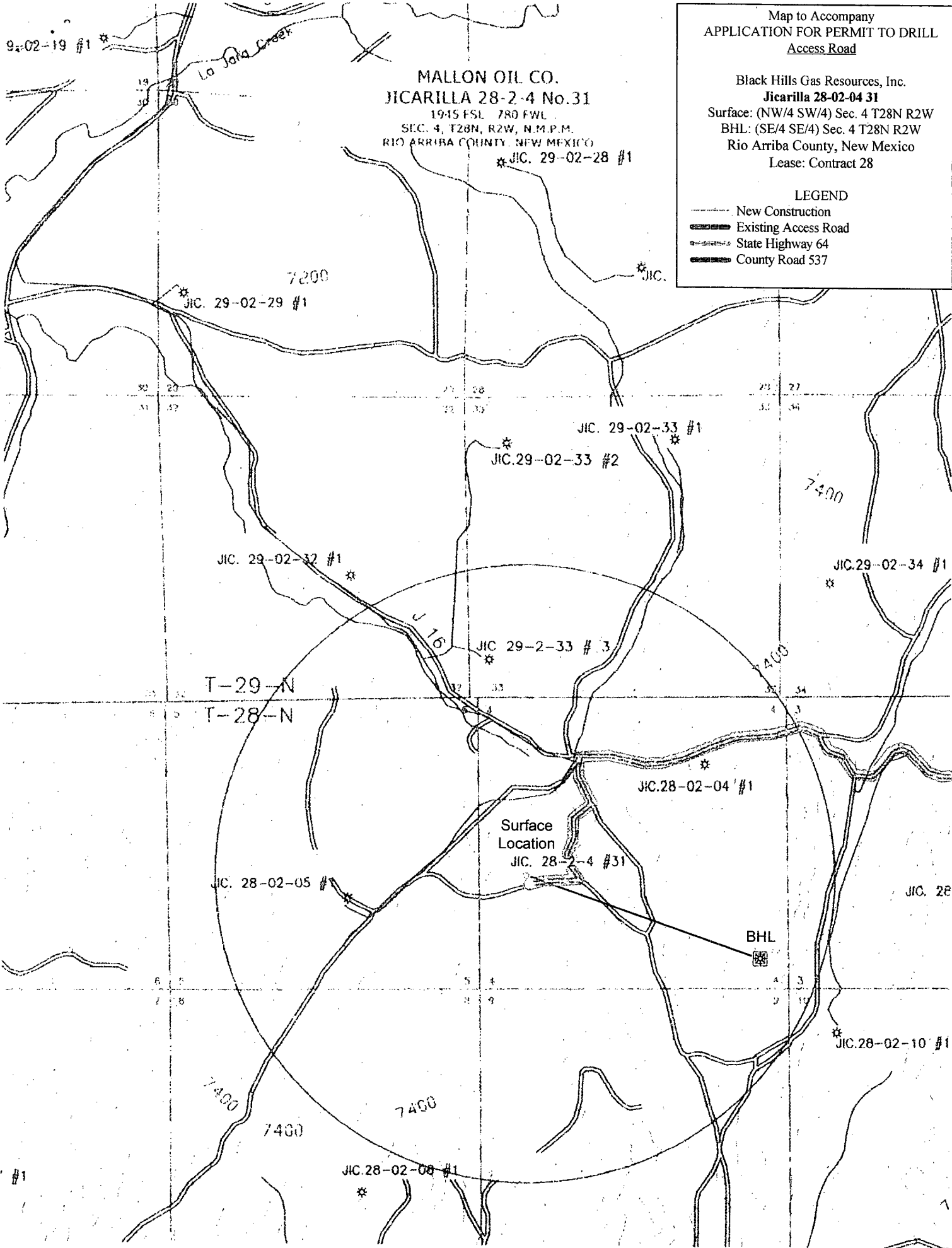
Surface Location
 1945 FSL & 780 FWL Sec. 4 T28N - R02W
 East Blanco Field, Pictured Cliffs Pool
 Rio Arriba County, New Mexico

Proposed Bottom Hole Location
 660 FSL & 660 FEL Sec. 4 T28N - R02W
 Azimuth = 108.5 deg
 Inclination = 90.5 deg
 Vertical Section = 4050'

Lease
 MDA 701-98-0013 TR 4
 Jicarilla Apache Nation

Prognosis
 Vertical Pilot to be Drilled to Pictured Cliffs
 Cement Plug to be Placed
 Plug will be Dressed to KOP
 Build Radius to 90 deg in Pictured Cliffs
 Set & Cement 5-1/2" Casing
 Drill 4-3/4" Open Hole Lateral





Map to Accompany
APPLICATION FOR PERMIT TO DRILL
Access Road

Black Hills Gas Resources, Inc.

Jicarilla 28-02-04 31

Surface: (NW/4 SW/4) Sec. 4 T28N R2W

BHL: (SE/4 SE/4) Sec. 4 T28N R2W

Rio Arriba County, New Mexico

Lease: Contract 28

LEGEND

- New Construction
- Existing Access Road
- State Highway 64
- County Road 537