

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM13376 *See Page 2	
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Black Hills Gas Resources, Inc.		7. If Unit or CA Agreement, Name and No.	
E-mail: lbenally@bhgp.com Contact: Lynn Benally		8. Lease Name and Well No. Many Canyons 30-04-24 13H (FC)	
3a. Address P.O. Box 249 Bloomfield NM 87413		9. API Well No. 30-039-29711	
3b. Phone No. (include area code) 505.634.1111		10. Field and Pool, or Exploratory Basin Fruitland Coal	
4. Location of Well (Report location clearly and in accordance with any State Requirements.) At surface 905' FNL 1,515' FEL NW 1/4 NE 1/4 Lat: 36° 48' 06.9" Long: 107° 12' 08.4" At proposed production zone 905' FNL 660' FWL Sec. 24 T30N R4W		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 24 T 30N R 4W	
14. Distance in miles and direction from nearest town or post office. Well is approximately 50 miles east of Bloomfield, New Mexico.		12. County or parish Rio Arriba	
13. State New Mexico			
15. Distance from proposed location to nearest property or lease line, ft. (Also nearest Drig, unit line, if any) Unit= n/a Lease= ±425'		16. No. of acres in lease 468.3	
17. Spacing Unit dedicated to this well 320.59/2			
18. Distance from proposed location to nearest well, drilling, completed or applied for, on this lease, ft. ±116'		19. Proposed depth 3,740' TVD	
20. BLM/BIA Bond No. on file NMB000230			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7,072' GR		22. Approximate date work will start December 28, 2005	
23. Estimated duration 45-60 days drig + completion			

24. Attachments

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

25. Signature <i>Kathy L. Schneebeck</i>	Name (Printed/Typed) Kathy L. Schneebeck, 303.820.4480	Date November 28, 2005
Title Permit Agent for Black Hills Gas Resources, Inc.		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFA	Date 7/27/06
Title AFA	Office FFO	

Application approval 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. Conditions 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.

(continued on page 2)

HOLD CTR run directional survey

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".NMOCD
8

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

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

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

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised June 10, 2003

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

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-29711	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 35884	⁵ Property Name MANY CANYONS 30-04-24	⁶ Well Number 13H FC
⁷ OGRID No. 013925	⁸ Operator Name BLACK HILLS GAS RESOURCES	⁹ Elevation 7072

¹⁰ Surface Location

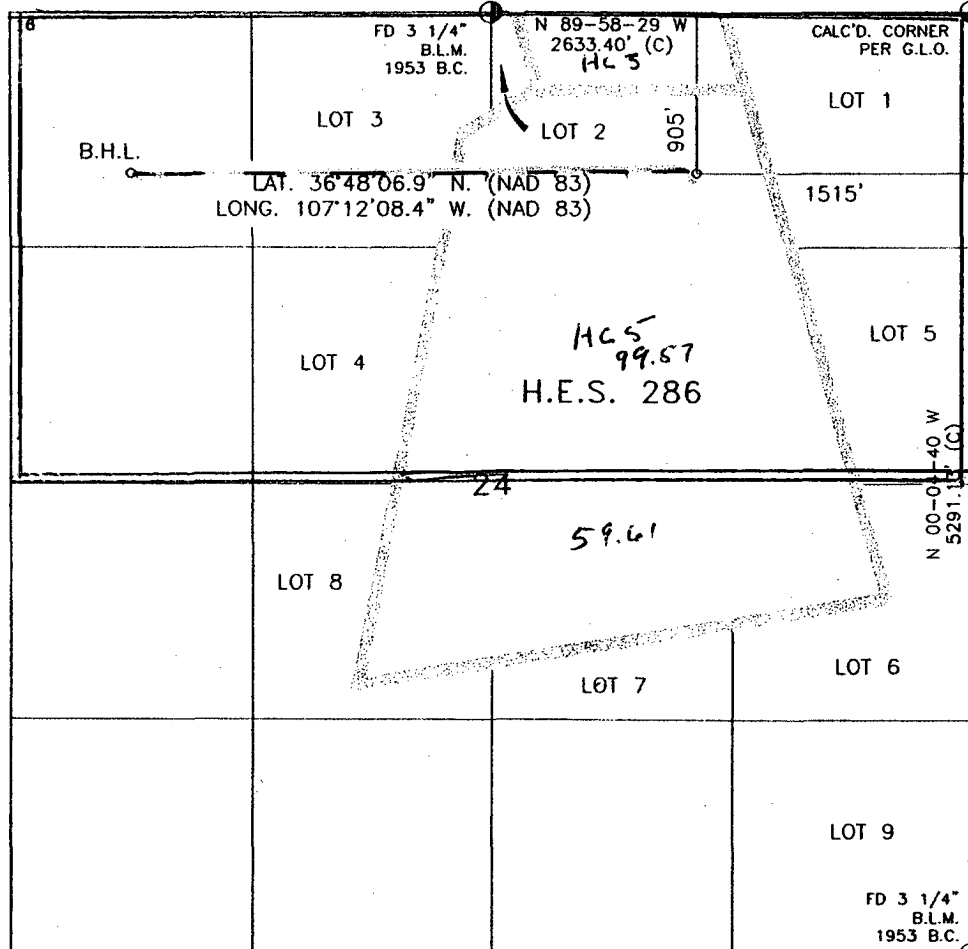
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	24	30-N	4-W	2	905	NORTH	1515	EAST	RIO ARRIBA

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
D	24	30-N	4-W		905	NORTH	660	WEST	RIO ARRIBA

¹² Dedicated Acres N/2 320.86 Frt	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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



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

Printed Name Permit Agent for Black
Hills Gas Resources

Title
November 28, 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.

JOHN A. VUKONICH
Date of Survey
Signature and Seal of Professional Surveyor:

14831
Certificate Number

1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy Minerals and Natural Resources

Form C-144
June 1, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Black Hills Gas Resources, Inc. Telephone: 505-634-1111 Ext 27 e-mail address: lbenally@bhgp.com
Address: P.O. Box 249; Bloomfield, NM 87413
Facility or well name: Many Canyons 30-04-24 13H (FC) API #: Pending U/L or Qtr/Qtr NWNE Sec 24 T 30-N R 4W
County: Rio Arriba Latitude 36° 48' 06.9" Longitude 107° 12' 08.4" NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☐ State ☐ Private ☒ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐
Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness 15 mil Clay ☐

Pit Volume 17,811 bbl

Below-grade tank

Volume: _____ bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ If not, explain why not. _____

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)

Less than 50 feet	(20 points)
50 feet or more, but less than 100 feet	(10 points)
100 feet or more	(0 points)

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes	(20 points)
No	(0 points)

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet	(20 points)
200 feet or more, but less than 1000 feet	(10 points)
1000 feet or more	(0 points)

Ranking Score (Total Points) 10 points

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

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

Date: November 28, 2005

Printed Name/Title Kathy L. Schneebeck / Permit Agent for Black Hills Gas Resources, Inc. Signature Kathy L. Schneebeck

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: DEPUTY OIL & GAS INSPECTOR, DIST. IV

Printed Name/Title _____

Signature _____

Date: JUL 3 1 2006

WELL PAD CROSS-SECTIONAL DIAGRAM

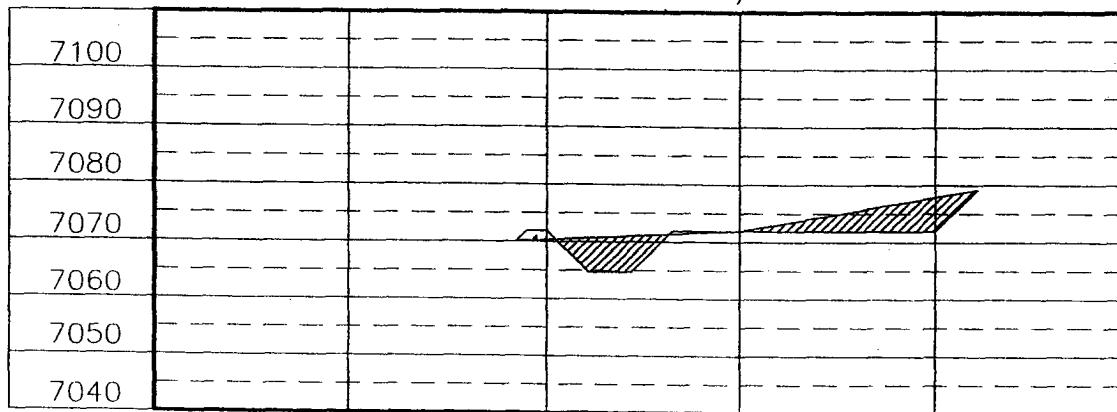
COMPANY: BLACK HILLS GAS RESOURCES
LEASE: MANY CANYONS 30-04-24 NO. 13H FC
FOOTAGE: 905 FNL, 1515 FEL
SEC.: 24, TWN: 30-N, RNG: 4-W, NMPM
ELEVATION: 7072'

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.

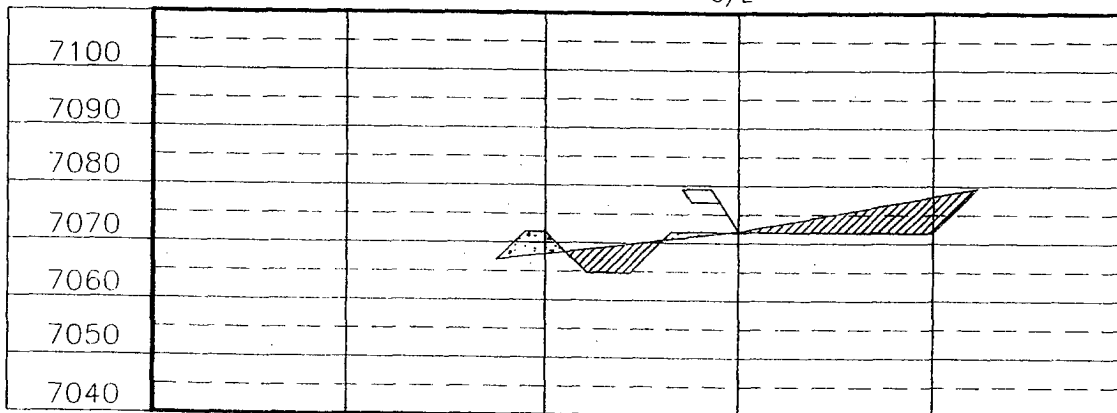
ELEV. A-A'

C/L



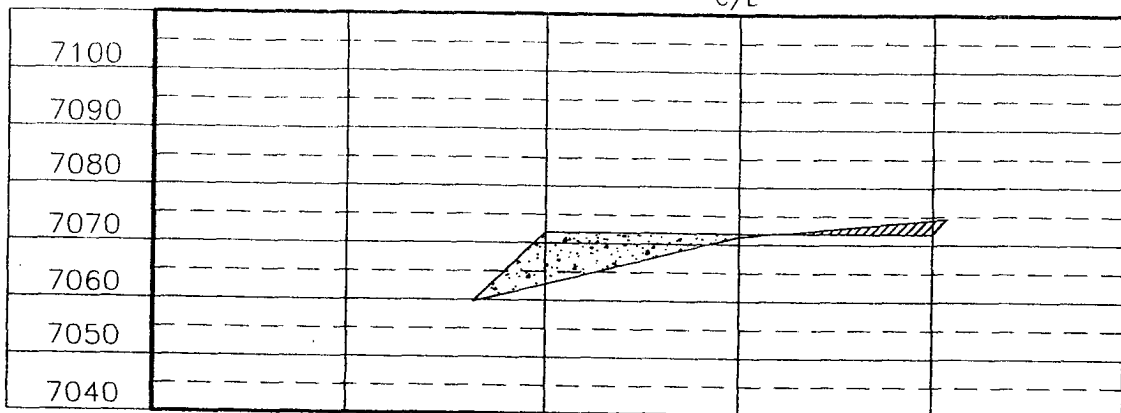
ELEV. B-B'

C/L



ELEV. C-C'

C/L



REF. DWG. MN490_PL8 WELL PAD DIAGRAM

REVISION: DATE: REVISED BY:

Daggett Enterprises, Inc.

Surveying and Oil Field Services

P. O. Box 15068 • Farmington, NM 87401

Phone (505) 326-1772 • Fax (505) 326-6019

NEW MEXICO L.S. 14831

DWG# MN490_CFB

DATE: 07/22/05



DRAWN BY: G.V.

ROW# MN490

Black Hills Gas Resources, Inc.
Many Canyons 30-04-24 13H (FC)
905' FNL 1,515' FEL (NW/4 NE/4) H.E.S. 286
Sec. 24 T30N R4W
BHL: 905' FNL 660' FWL (NW/4 NW/4)
Sec. 24 T30N R4W
Rio Arriba County, New Mexico
Lease (Surface): Fee
Lease (Mineral): NM13376

DRILLING PROGRAM

This Application for Permit to Drill (APD) was initially filed under the Notice of Staking (NOS) process as stated per Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. The process was changed to the "APD" process per Onshore Order No. 1. This APD process will include an on-site meeting as determined by BLM, at which time the specific concerns of Black Hills Gas Resources, Inc. (Black Hills) and BLM will be discussed. Best efforts have been made to address specific concerns of the BLM representatives.

Please contact Lynn Benally at 505-634-1111 to schedule an on-site meeting, if necessary.

This is a new horizontal well to be drilled into the Fruitland Coal formation. See also the attached Horizontal Drilling Program.

SURFACE FORMATION – San Jose

GROUND ELEVATION – 7,072'

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

San Jose	Surface	Sandstone, shales & siltstones
Nacimiento	1,954'	Sandstone, shales & siltstones
Ojo Alamo	3,187'	Sandstone, shales & siltstones
Kirkland	3,421'	Sandstone, shales & siltstones
Fruitland Coal	3,691'	Sandstone, shales & siltstones
Pictured Cliffs	3,751'	Sandstone, shales & siltstones
TOTAL DEPTH	3,740.10'	TVD (end of horizontal hole)
	3,115.25'	(anticipated horizontal section)
	6,606.89'	MD

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

Tertiary

San Jose	surface	Gas
Nacimiento	1,954'	Gas
Ojo Alamo	3,187'	Gas
Fruitland Coal	3,691'	Gas
Pictured Cliffs	3,751'	Gas

HORIZONTAL DRILLING PROGRAM

A) Kick Off Point is estimated to be at $\pm 3,206'$ TVD

CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' – 250'	12-1/4"	8-5/8"	K-55 24# ST&C New	To surface (± 175 sxs Class B)
0' – 3,350'	7-7/8"	5-1/2"	K-55 15.5# LT&C New	TD to surface (± 630 sxs lite or 65:35 poz and ± 270 sxs 50:50 poz)*
3,350' – 3,800'	7-7/8"	5-1/2"	J-55 17# BTC	To 3,350' (± 75 sxs lite or 65:35 poz)*
3,800' – 6,606.89' (MD)	4-3/4"	Open Hole	None	None

* Actual cement volume to be determined by caliper log.

Yields: Class B yield = $1.18 \text{ ft}^3/\text{sx}$
 65:35 Poz yield = $1.62 \text{ ft}^3/\text{sx}$
 50:50 Poz yield = $1.26 \text{ ft}^3/\text{sx}$

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 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: GR/SP/CAL – Resistivity/Conductivity – Neutron/Density – Bulk Density/Rwa
From TD to SC
- 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 H₂S Plan if H₂S is encountered.
- D) Estimated bottomhole pressure: 1,159 psi

ANTICIPATED START DATE

December 28, 2005

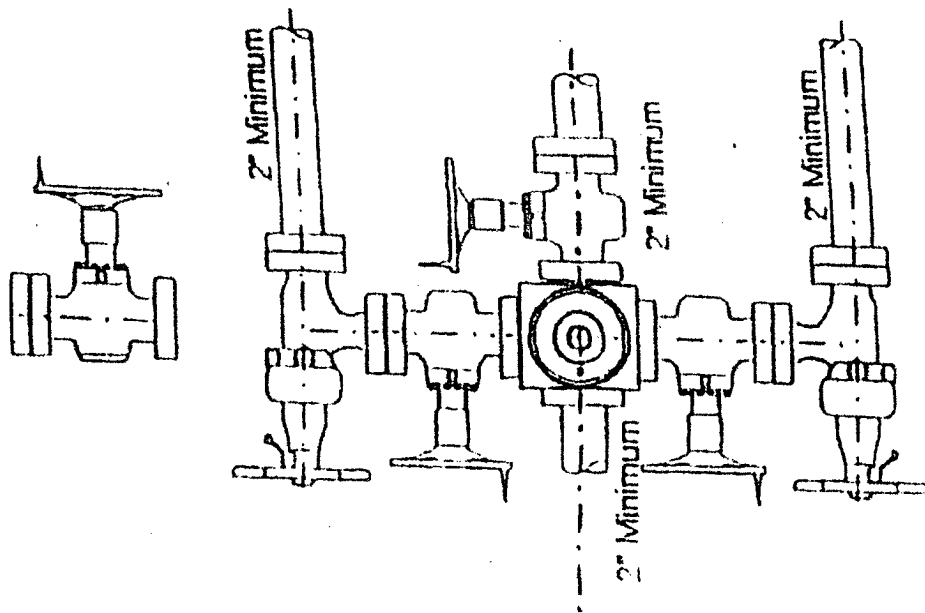
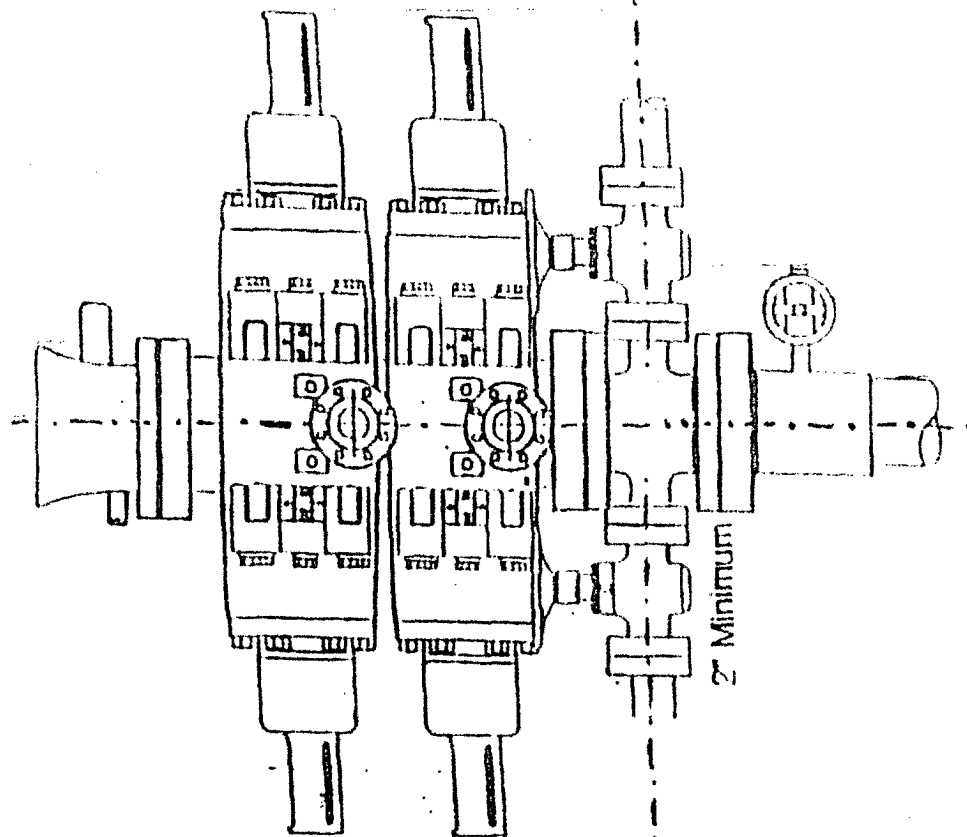
COMPLETION

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.

2-M SYSTEM

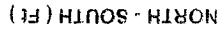
Black Hills Gas Resources, Inc.

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



Lease/Well: Many Canyons 30-04-24 #13H FC
Location: Rio Arriba CO., NM

www.scribd.com/160311632



VERTICAL SECTION (Ft) @ 270.00°

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 (H_2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S 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 H_2S 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 H_2S 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 H_2S Safety Equipment and Systems

Note: All H_2S safety equipment and systems 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:

1. Choke manifold with a minimum of one remote choke.
2. Blind rams and pipe rams to accomodate 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.

Black Hills Gas Resources

C. H₂S detection and monitoring equipment:

1. 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.
2. 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 preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S 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.