

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 reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED  
OMB No. 1004-0135  
Expires July 31, 1996

5. Lease Serial No.

NM 13376

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

MANY CANYONS 30-04-24 #213

9. API Well No.

30-039-29711

10. Field and Pool, or Exploratory Area

Basin Fruitland Coal

AND

Rio Arriba County, New Mexico

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Black Hills Gas Resources, Inc. c/o Mike Pippin LLC (Agent)

3a. Address

3104 N. Sullivan, Farmington, NM 87401

3b. Phone No. (include area code)

505-327-4573

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: 905' FNL & 1515' FEL (B) Sec 24 T30N R4W

Bottom Hole: 905 FNL & 660' FWL (D) Sec. 24 T30N R4W

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize <input type="checkbox"/> Deepen <input type="checkbox"/> Production (Start/Resume) <input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Reclamation <input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<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"/> Well Number Change
	<input type="checkbox"/> Convert to Injection <input type="checkbox"/> Plug Back <input type="checkbox"/> Water Disposal

13. Describe Proposed or Completed Operations (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 recompletes 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 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 would like to change the hole & casing size on this horizontal FRTC gas well to a 12-1/4" hole & 9-5/8" 36# J-55 casing to 263'; an 8-3/4" hole & 7" 23# P-110 csg to 3985'; and a 6-1/4" hole & 4" 9.5# J-55 casing to TD6600'. These changes along with their respective cementing design changes and other details are reflected in the attached Drilling Prognosis.

Black Hills would like to change the number of this well from #13H to #213.

eff 8-28-06 per M.P. 9/29

Permit	
Name (Printed/Typed)	Title
Mike Pippin	Petroleum Engineer (Agent)
Signature	Date
<i>Mike Pippin</i>	August 28, 2006

THIS SPACE FOR FEDERAL OR STATE USE

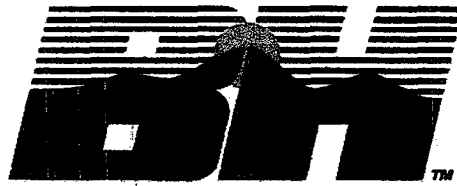
Approved by	Title	Date
<i>Jim Lavelle</i>	<i>Petr. Eng.</i>	9/12/06
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		

Title 18 U.S.C. Section 1001, 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 within its jurisdiction.

(Instructions on reverse)

NMOCDB

9/29



## **Black Hills Exploration & Production**

*A Black Hills Corporation Enterprise*

### **DRILLING PROGNOSIS**

## **Many Canyons 30-04-24 #213**

Many Canyons Field, Rio Arriba County, New Mexico

### **Location**

Surface Well Spot	905' FNL & 1515' FEL (NWNE) Sec 24 T30N – R04W
Bottom Well Spot (Proposed)	905' FNL & 660' FWL (NWNE) Sec 24 T30N – R04W
Elevation Ground Level	7,072'
Kelly Bushing	7,085' (13')

### **Geologic Markers**

	<u>MD</u>	<u>SS</u>
San Jose	13	-7059
Nacimiento	1954	-5118
Ojo Alamo	3187	-3885
Kirtland	3421	-3651
Fruitland	3691	-3381
Pictured Cliffs	3751	-3321
Lewis Shale	3831	-3241

### **Proposed Total Depth**

**Total Measured Depth 6,600'**

**PLEASE NOTE: SMOKING WILL NOT BE TOLERATED WITHIN 30 FEET OF THE RIG PERIMETER. HARD-HATS, SAFETY TOE SHOES & SAFETY GLASSES WILL BE WORN AT ALL TIMES. THERE WILL BE NO FIREARMS OR ALCOHOL ALLOWED ON LOCATION.**

## **COMPLETED WELL CASING CONFIGURATION**

<b>Surface:</b>	Surface to 263'	9 5/8" J-55 ST&C 36.00#/ft.
<b>Intermediate:</b>	Surface to 3985' ± MD.	7.0" P-110 LT&C 23.00#/ft.
<b>Production Liner:</b>	3885' ± MD to TD @ 6600'	4" J-55 9.50#/ft.

## **PHYSICAL DATA**

### **9 5/8" 36#/ft J-55 ST&C**

Collapse	2020 psi
Burst	3520 psi
Tube ID	8.921 in.
Drift	8.765 in.
Capacity	0.07731 bbls./ft.
Displacement	0.43405 cuft/linft.
Makeup Torque	4530/3398/5663 ft lbs.

### **7.0" 23.00 LB/FT P-110 LT&C**

Collapse	4440 psi
Burst	8720 psi
Tube I.D.	6.366 in.
Drift Diameter	6.241 in.
Joint O.D.	7.656 in.
Capacity	0.03937 bbls/ft.
Displacement	0.22103 bbls/ft.
Makeup Torque	4420/3315/5525 ft lbs.

### **4" 9.50 LB/FT J-55**

Collapse	5110 psi
Burst	55440 psi
Tube I.D.	4.000 in.
Drift Diameter	3.423 in.
Joint O.D.	4.000 in.
Capacity	0.011176 bbls/ft.
Displacement	0.08726 bbls/ft.
Makeup Torque	1660/1215/2025 ft lbs

## **ANNULAR VOLUMES AND CAPACITIES**

Surface to 263': 9 5/8" by 7" csg.	0.0297 bbls/ft. 0.1668 cu.ft/lin.ft
263' to 3985' MD: 8 3/4" OH. by 7" csg.	0.02677 bbls/ft. 0.15033 cu ft/lin ft.
3985' to 6600' MD: 6-1/4" OH. by 4" liner	0.0224 bbls/ft. 0.1258 cu ft/lin ft.

## **DRILL PIPE & DRILL COLLAR CAPACITIES & Spec's**

4 1/2" 16.60#/ft Grade "E" w/3.826" ID.

0.01422 bbls./ft. (Cap)

0.00545 bbls./ft (Displ)

6 1/4" 85#/ft, H-90 w/2 1/4" ID

0.0061 bbls./ft. (Cap)

0.0318 bbls./ft. (Displ)

## **PROCEDURE FOR 12-1/4" HOLE & 9-5/8" CSG.**

Set Anchors, MIRU, Notify Jicarilla & BLM 24 hrs. in advance of intent to spud.

Strap all DC's & DP. Record OD & ID of DC's as run.

On-site Supervisor to complete IADC Rig Safety Inspection Report w/Rig Toolpusher prior to spud-in.

Drill Rathole, Mousehole and 11" Pilot hole. **(It is important to make sure this first 30' of hole is drilled straight.)** Drill 12 1/4" hole to  $\pm$  275' or based upon strap of 9 5/8" casing string. Run single shot Totco survey at 12 1/4" TD. Change out handling tools, changeout handling equipment to run 9 5/8" casing.

### **Run 9 5/8" casing as follows:**

A. Joint #1 or shoe jt. install Texas shoe on btm. while joint is on rack, baffle plate in collar of top of joint & centralizer in middle of this joint. Thread lock shoe & collar of first & second joints.

B. Joints #2 & #3 equipped with centralizers on each csg. collar, run remainder of casing.

C. Using a 16' landing joint, land permanent casing string at ground level, pull slips & tie down Rig Brake handle. (Make sure casing centered in Rotary table).

D. Tie down casing string w/approved strength chains or cables to Rig sub base.

## **CEMENTING 9 5/8" CASING**

A. Telephone Jicarilla Agency 6 hrs. in advance to witness cementing operation.

B. Circulate at least 30 minutes @ 4 bpm w/spud mud used to drill surface hole.

C. Rig Cementers, conduct Safety Meeting (includes all personnel on location) regarding cementing operation, pressure test Cementers lines to cement head to 1,000 psi.

D. Do not exceed 100 psi while cementing or bumping plug. Have a Cement company person assigned to continuously test the returns & record volume of excess cement discharged into the reserve pit during cementing operations.

E. Mix & pump 10 bbl. 9.0 ppg. mud flush, followed w/165 sks. Class "G" cement, 2% CACL<sub>2</sub> plus 0.125#/sk. of POL-E-FLAKE, mixed to a 15.6 lbs/gal and 1.18 ft<sup>3</sup>/sk. yield. Water 5.2 gal/sk.

F. Total volume of fresh water required is 32 bbls. for mixing, 22 bbls. displacement & 10 bbls. wash-up.

Fluid	Fluid Type	Fluid Name	Weight (lbm/gal)	Avg Rate (bbl/min)	Volume (bbls)
1	Spacer	Water	8.3	4.0	10
2	Cement	Class G	15.6	4.0	35
3	Displacement	Water	8.3	4.0	22

- G. Pump only the calculated volume. Stop pumping **do not** pressure up, close valve on cement head. Record all cement properties including , but not limited to all types of cmt, yield, percentages of additives, etc and all volumes circulated to surface on daily report & on Csg. & Cmt. report.
- H. Wait on cement 8 hrs. Notify BLM of pending BOPE testing. Rig/Pump repair could be scheduled during this time period. If verbal approval is received: The following will be documented in the morning report ,the time, date, topic of discussion and any information relevant shall be recorded.

### **Install 2,000 psi BOE & Choke Manifolds.**

- A. A Kelly cock will be kept in the drill string at all times.
- B. Inside BOP or full opening stab-in valve available on rig floor.
- C. After 4 hr. WOC, remove Cmt. Head & 9 5/8" Landing jt.
- D. Install 9 5/8" by 7" FMC 5,000# "A" section w/male 8rd thread into 9 5/8" casing collar. Bolt on BOPE.
- E. Test all hydraulic lines from remote Accumulator for leaks. Tie the choke manifold to the 2" outlet on 9 5/8" by 7" FMC, 5,000# "A" section casing head equipped with 1-2" ball valves on opposite side of tie in for choke manifold.
- F. Pickup 8 3/4" PDC bit (HTC type: See attachment for proper GPM, RPM & WOB) with 3-12's, bit sub w/float, 6-6 1/4" DC's & Kelly. Pressure test all equipment to the specified requirements on the APD w/rig pump. Hold pressure for 15 minutes, Record all items tested on tour sheet. If verbal approval is received: The following will be documented in the morning report ,the time, date, topic of discussion and any information relevant shall be recorded.

### **Procedure to Drill 8 3/4" hole to Intermediate Depth.**

- A. Drill out baffle & cement in shoe joint.
- B. BHA will be 8-3/4" bit, bit sub w/float, 20-6 1/4" DC's, 4 1/2" 16.60#/ft. DP and 210 micron DP screen. Pressure test all to 1000-psi w/rig pump. Hold pressure for 15 minutes, Record all items tested on tour sheet.
- C. Lowering any pipe string into the hole should not exceed 1 joint/minute.
- D. 8-3/4" PDC bit operating procedures:
  - a. RPM: 80 – 90
  - b. WOB: 8K – 30K
  - c. Circulation Volume: 300 GPM
  - d. Don't exceed 3 degrees per 100'
- E. Cleaning the formation from beneath the bit requires maximum jet impact force and maximum hydraulic horsepower.
- F. All parameters depicting the recommended mud weight, viscosity, water loss, annular velocity, ECD's, circulating pressures/rate, etc. are depicted on the Daily Mud Summary Reports.
- G. Begin use of MA-1 after drilling out surface casing shoe.
- H. Derrick shaker to have 175 mesh screens installed.
- I. At KOP ( 3210' ± ) RU Directional Company and station hole every 200 ft for directional data.

- J. At TD of well:
  - a. Condition mud (bottoms up twice at minimum)
  - b. Strap out, laying down DP & DC's.
  - c. Rig Loggers.
  - d. Conduct Safety Meeting on logging operation.
- K. Well Logging requirements and Black Hills Personnel contacts under *Well Data Distribution* section.
- L. Install 7" rams in BOP during well logging operations
- M. Intermediate Casing to be on location 36 hours prior TD, allow time to do required thread cleaning, drifting & strapping.
- N. Run 7" intermediate casing.
- O. Wait on Cement.

### **RUNNING & CEMENTING 7" CASING**

Notify Jicarilla oil & gas Inspector 6 hrs. in advance of cementing. If verbal approval is received: The following will be documented in the morning report, the time, date, topic of discussion and any information relevant shall be recorded. Record all cement properties including, but not limited to all types of cmt, yield, percentages of additives, etc and all volumes circulated to surface on daily report & on Csg. & Cmt. report.

- A. Install 7" rams in BOP during Well Logging, rig Casers. Conduct Safety Meeting on casing operations relaying specific job assignments and responsibilities. Indicate thread torque requirements, number of joints to be run, marker jts. location, TD of well and lowering pipe speed.
- B. Install, while joint is on the pipe rack, 7" Guide shoe using thread lock. Pickup joint, centralize at mid point, pickup jt. #2, thread lock, install automatic fill up on top of this jt. run in remainder of casing w/centralizer on csg. collar at every second joint. Total of 13 centralizers. API Bul 5A2 thread compound to be applied over entire surface of each collar.
- C. Install Plug container head w/30'-2" 1000 psi WP hose, break circulation at very low pump rate (2 bbls./min.), once established, increase pump rate slowly to 3-4 bpm while reciprocating (15' minimum) casing string.
- D. At TD, **drop ball**, using a Landing joint, measure distance (+- 132") required to land string in slips, immediately above 7" casing collar.
- E. Pump at least 2 complete circulations while **continuously** reciprocating csg. string. It is very important to make sure the mud weight is consistent throughout the system before cementing w/15 yield point, 45-50 viscosity. **FINAL CEMENT VOLUMES TO BE DETERMINED FROM CALIPER LOG.**
- F. Rig Cementers, conduct Safety Meeting, pressure test all lines to 2,500 psi to the Plug Container. Cementers to install bypass line to the Pit to allow lines from the cement truck to the Plug container to be flushed clean before second plug is dropped.
- G. Have a Cement company person assigned to continuously test the returns & record volume of excess cement discharged into the reserve pit during cementing operations.
- H. Release Plug #1, mix & pump 30 bbls. 9.5#/gal. Mud flush w/dye included, followed by lead slurry consisting of 410 sks. Haliburton light w/ 5.0#/sk. Gilsonite, 0.25#/sk Flocele & 2% Calcium Chloride. Mixed at 12.40#/gal, 1.94ft<sup>3</sup>/sk with a tail slurry consisting of 300sks. 50/50 Poz w/ 8.0#/sk. Silicalite Compacted, 0.3% Halad 344, 2% Calcium Chloride, 0.25#/sk Flocele and 5.0#/sk. Gilsonite. Mixed at 13.5#/gal, 1.33 ft<sup>3</sup>/sk 100% excess of calculated volume.

- I. Flush surface lines w/water until clean, release Plug #2 15 # sugar, displace w/calculated volume of water (+- 95 bbls) at 5-6 bpm rate, slowing to 2 bpm prior to bumping the plug. Bump plug w/1,500 psi. Do not exceed calculated displacement volume by more than 3 bbls. Close in Plug container, release Cementers.
- J. Strip BOE, secure to sub base, land 7" casing in slips, remove Landing jt. Remove BOE, wash clean & make necessary changes to accommodate slimhole tools.

**NOTE:** If hole conditions dictate a two-stage cement job is required, reciprocate casing while circulating at least bottoms up twice. Land casing 8" above 9 5/8" btm. flange. Pump required cement volumes, drop top plug, **displace cement w/mud**. Drop dart, (wait 20 minutes) begin circulating w/rig pump. Continue to circulate 4-6 hrs. depending upon cement pumping time & surface samples. Pump 2<sup>nd</sup> stage using same procedures as stated in step "E".

### **Install 2,000 psi BOE & Choke Manifolds.**

Pressure test all equipment to the specified requirements on the APD w/rig pump. Hold pressure for 15 minutes, Record all items tested on tour sheet. If verbal approval is received: The following will be documented in the morning report, the time, date, person representing agency, topic of discussion and any information deemed relevant shall be recorded.

- A. A Kelly cock will be kept in the drill string at all times.
- B. Inside BOP or full opening stab-in valve available on rig floor.
- C. After 4 hr. WOC, remove Cmt. Head & 7" Landing jt.
- D. Install 7" by 7" FMC 5,000# "A" section w/male 8rd thread into 7" casing collar. Bolt on BOE.
- E. Test all hydraulic lines from remote Accumulator for leaks. Tie the choke manifold to the 2" outlet on 9" by 7" FMC, 5,000# "A" section casing head equipped with 1-2" ball valves on opposite side of tie in for choke manifold.
- F. RU all compression equipment, blooie line and all related equipment.
- G. Pickup all necessary handling tools for the 4-3/4" drill collars & 3-1/2 drill pipe.
- G. Pickup 6-1/4" bit (HTC type: refer to standard operating procedures for proper (GPM, RPM & WOB), bit sub w/float, 4-3/4" DC's & Kelly. Pressure test all to 1000-psi w/rig pump. Hold pressure for 15 minutes, Record all items tested on tour sheet.

### **PROCEDURE TO DRILL 6 1/4" HOLE TO CASING POINT**

- A. BHA will be 6 1/4" bit, bit sub w/float, 10-4 3/4" DC's, 3 1/2" 13.30#/ft. DP and 210 micron DP screen. Pressure test all to 1000-psi w/air package. Hold pressure for 15 minutes, Record all items tested on tour sheet.
- B. Lowering any pipe string into the hole should not exceed 1 joint/minute.
- C. Drillout bit will be 6-1/4" insert tri-cone with shroud or as recommended by bit company.
- D. Cleaning the formation from beneath the bit requires maximum jet impact force and maximum hydraulic horsepower.
- E. All parameters depicting the recommended mud weight, viscosity, water loss, annular velocity, ECD's, circulating pressures/rate, etc. are depicted on the Daily Mud Summary Reports.
- F. Continue the use of MA-1 after drilling out casing shoe.

- G. Derrick shaker to have 175 mesh screens installed.
- H. Note amount of fill/washing required when tripping back in to hole to determine stability.
- I. At TD of well:
  - a. Condition mud (bottoms up twice at minimum)
  - b. Strap out, laying down DP & DC's.
  - c. Trip in with 4" production liner w/liner hanger and perforated subs as directed run with drillstring. Hang off liner @ 3885' ±.
  - d. Come off liner hanger and TOH with drillstring.
  - e. Nipple down BOPE & nipple up Wellhead. Move out drilling rig

### **RUNNING 4" Liner**

#### ***A. Procedure to be provided at TD***

#### **MUD PROGRAM**

0'	-	250'	Fresh water – M.W. 8.5 ppg, Vis 30-33
250'	-	3985'	Klean Faze- Low solids non-dispersed M.W. 8.5 – 9.2 ppg Vis – 28 – 50 sec W.L. 15cc or less
3985'	-	TD	Klean Faze- Low solids non-dispersed M.W. 8.8 – 9.0 ppg Vis – 45 – 55 sec W.L. 6 cc or less

Sufficient mud materials & chemicals shall be on hand in case earlier mud up is required sufficient quantities shall be inventoried to control mud properties, lost circulation and to contain "the event of a kick" will be available at wellsite.

### **CASING PROGRAM**

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0'-275'	12-1/4"	9 5/8"	J-55 36# ST&C	+/- 165 sxs Standard Type II cement
0'-3985"	8-3/4"	7"	P-110 23# LT&C	+/- 410 sxs lite or 65:35 poz and +/- 300 sxs 50:50 poz
3885'-TD	6-1/4"	4"	J-55 9.5#	

\* Actual cement volume to be determined by caliper log.

Yields: Class B yield = 1.18 ft<sup>3</sup>/sx  
65:35 Poz yield



## EVALUATION PROGRAM

### **Mud Log:**

Type of unit: 2 Man Mudlog Unit  
Logging Company: Choquette Well Logging  
Depth interval: 300' - TD  
Log scale: 5 inches / 100 feet  
Special format: Note on strip log - drilling parameters, operations and dates, lag  
times, deviation surveys, logging equipment downtime, lost  
circulation zones and data, and sample quality and shows.  
Morning Reports & Logs (e-mail): Richard White – Geology  
Allen Parrent – Drilling Superintendent

### **Cuttings Samples:**

Number of sets (washed and sacked): 1  
Sample interval: Every 30 feet from 300 to Kirtland  
Every 10 feet from Kirtland to TD of Production Casing Depth

### **Final destination of dry samples:**

Black Hills E&P  
350 Indiana St, Suite 400  
Golden, CO 80401  
Attn: Richard White

## **OPEN-HOLE LOGGING SPECIFICATIONS**

**Operator:** Black Hills Gas Resources

**Well name/number:** Many Canyons 30-04-24 #213

**Location:** 905 FNL & 1505 FEL Sec 24 T30N – R04W

**API Number:** \_\_\_\_\_

**Logging company:** Halliburton Energy Services

**Logging system:** Triple Combo

**Responsibility for service company**

**notification and coordination:** Drilling Consultant

Run #1 –Radius to Surface Casing

<b>Log type</b>		<b>Depth interval</b>	<b>Depth scale</b>
GR/SP/CAL	1	TD – Surface Casing	2 inches / 100 feet
	1	TD - Surface Casing	5 inches / 100 feet
Resistivity/	1	TD - Surface Casing	2 inches / 100 feet
Conductivity	1	TD - Surface Casing	5 inches / 100 feet
Neutron/	1	TD - Surface Casing	2 inches / 100 feet
Density/			
Bulk Density/	1	TD - Surface Casing	5 inches / 100 feet
Rwa			

<b>Curve</b>	<b>Scale</b>	<b>Track(s)</b>	<b>Line</b>	<b>Parameters</b>
GR	0 – 200 API units	1	solid	
SP	20 mV per division	1	dashed	
CAL	6 – 16 inches	1	dotted	
Rwa	0 – 10 ohm-m	1	dashed (TLD□, a =1.0, m =1.7)	
Resistivity	0.2 – 2,000 ohm-m (Logarithmic)	2	dashed (90-inch investigation) dotted (60-inch investigation) solid (20-inch investigation)	
Conductivity	400 – 0 mmho	2–3	solid	(60-inch investigation)
Neutron	+0.3 – -0.1	2–3	dashed	(Sandstone)
Density	+0.3 – -0.1	2–3	solid	(2.65 gm/cc w/cross-over)
Bulk Den.	2.0 – 3.0 gm/cc	2–3	solid	

**Special log format (final prints only):**

Attach Bulk Density / GR / CAL to base of 5-inch/100'

CNL Porosity / TLD Porosity / GR / Rwa / CAL log.

**Additional logging parameters:**

Be sure that correct mud, mud filtrate, and mud cake resistivities, salinities, and fluid densities are used — verify with mud sample taken from flowline just prior to logging. Pay particular attention that correct fluid properties are used in density porosity calculation.

**Logging priority:**

If logging tools are run separately in the hole, run porosity tools first, unless otherwise directed by Operator. If restrictions are encountered during logging try running uncanceled tools separately.

**First pass (repeat) section length:** 300 feet, unless otherwise directed by Operator.

**LAS file:** Make available to Operator for downloading immediately upon job completion as per Log Requirements section of Well Data Distribution List.

**Log folded-paper final prints:** Deliver black & white folded-paper final prints to Operator within 24 hours of job completion. Number of copies and delivery locations as per Well Data Distribution List (no colored prints).

**Well Data Distribution**

Company	Address	Contact	Mud logs	Morning Reports	Openhole Logs			
			Daily	Daily	Fax	LAS	Field	Final
Black Hills Exploration & Production								
BHGR	350 Indiana St, Suite 400 Golden, CO 80401	Main: 720.210.1300 Fax: 720.210.1363						
Allen Parrent		aparrent@bhep.com	1	1		1	3	2
Richard White		rwhite@bhep.com	1	1		1		1
Black Hills Exploration & Production								
BHGR	PO Box 249 Bloomfield, NM 87413	Main: 505.634.1111 Fax: 505.634.1116						
Agatha Snell		asnell@bhep.com		1			1	1
Barrons Resources								
BRC	PO Box 249 Bloomfield, NM 87413	Main: 505.634.1111 Fax: 505.634.1116						
			1	1		1		
			1	1		1	1	2

**Contacts**

Contact	Name	Office	Cell	Home	Fax
Wellsite	D. Baxter/D. Brady	505.559.4175	505.486.0328		
Primary	Allen Parrent	720.210.1310	505.486.0323		720.210.1363
Geology	Dick White	720.210.1341	303.204.8102		720.210.1363