

**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: _____		8. WELL NAME AND NO. Jicarilla 457-09 1	
2. NAME OF OPERATOR Black Hills Gas Resources, Inc.		9. API WELL NO. 30-039-25902	
3. ADDRESS AND TELEPHONE NO. 350 Indiana St., Suite 400 Golden CO 80401		10. FIELD AND POOL, OR EXPLORATORY AREA East Blanco / Pictured Cliffs	
4. LOCATION OF WELL (Footage, T, R, M, or Survey Description) 1,150' FSL 1,191' FEL Sec. 9 T 30N R 3W		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		TYPE OF ACTION							
☒	Notice of Intent	☐	Acidize	☐	Deepen	☐	Production (start/resume)	☐	Water Shut-Off
		☐	Alter Casing	☐	Reclamation	☐	Reclamation	☐	Well Integrity
☐	Subsequent Report	☐	Casing Repair	☐	New Construction	☒	Recomplete	☐	Other
		☐	Change Plans	☐	Plug and Abandon	☐	Temporarily Abandon		
☐	Final Abandonment Notice	☐	Convert to Injection	☐	Plug Back	☐	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

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. F

Please find: Revised Drilling Program, BOP Diagram, Horizontal Drilling Plan. The location was permitted for Black Hills Gas Resources, Inc. (Black Hills) with an APD submitted to the Bureau of Land Management (BLM) in Farmington, New Mexico and the New Mexico Oil Conservation Division (NMOCD) on July 1, 1998. Black Hills proposed to re-enter and horizontally drill this location with a southeast lateral bore. End of lateral bore is anticipated to be 660' FSL and 2,590' FWL (SE/4 SW/4) of Section 10 T30N R3W.

Please send a copy of all correspondence to Banko Petroleum Management Inc. at 385 Inverness Parkway, Suite 420, Englewood, CO 80112-5849. Please contact David Banko or Kathy Schneebeck at 303-820-4480, or at david@banko1.com or kathys@banko1.com, respect

Thank you. SE 1/4 Sec 9 + SW 1/4 Sec 10 will be sold.

14. I hereby certify that the foregoing is true and correct	
Name (Printed/Typed) David F. Banko	Title: Permit Agent for Black Hills Gas Resources, Inc.
Signature 	Date: May 5, 2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by <i>[Signature]</i>	Title <i>Petr. Eng</i>	Date <i>5/20/05</i>
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	

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

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

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102

Revised February 21, 1994

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-039-25902-00-00		2 Pool Code 97057 72400		3 Pool Name EAST BLANCO PC GABRISTO CANYON TERTIARY	
4 Property Code		5 Property Name JICARILLA 457-9			6 Well Number 1
7 GRID No. 13925		8 Operator Name BLACK HILLS GAS RESOURCES, INC.			9 Elevation 7238'

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
P	9	30-N	3-W		1150'	SOUTH	1191'	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
	10	30N	3W		660'	SOUTH	2,590'	WEST	RIO ARRIBA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.

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

16	FD. U.S.G.L.O. BC. 1917	SET STONE	17	OPERATOR CERTIFICATION	
				I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief	
				Signature <u>Kathy L. Schneebeck</u>	
				Printed Name Kathy L. Schneebeck	
			Permit Agent for Black Hills		
			Title		
			Date June 7, 2005		
			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.		
			Date of Survey 3-23-05		
			Signature and Seal of Professional Surveyor <u>Ray A. Rush</u>		
			Certificate Number 8894		
			FD. U.S.G.L.O. BC. 1917		
			S 89-56-34 E 5284.4'		
			1150'		
			1191'		
			BHL		
			FD. U.S.G.L.O. BC. 1917		

Black Hills Gas Resources, Inc.

Jicarilla 457-09 1

API #30-039-25902

Surface: 1,150' FSL 1,191' FEL (SE/4 SE/4)

T30N R3W Sec. 9

End of Horizontal Hole: 660' FSL 2,590' FWL (SE/4 SW/4)

T30N R3W Sec. 10

Rio Arriba County, New Mexico

Lease: Contract 457

DRILLING PROGRAM

This Sundry Notice is submitted per CFR 3162.3-2. The existing well pad and reserve pit will be utilized "as is."

This is a horizontal entry into and a deepening of the existing well Jicarilla 457-09 1 to the Pictured Cliffs Formation. See also the attached Horizontal Re-completion Plan.

SURFACE FORMATION – San Jose

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

GROUND ELEVATION – 7,238' 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	2,022'	Sandstone, shales and siltstones
Ojo Alamo	3,202'	Sandstone, shales and siltstones
Kirtland	3,500'	Sandstone, shales and siltstones
Pictured Cliffs	3,744'	Sandstone, shales and siltstones
Lewis	3,840'	Sandstone, shales and siltstones

TOTAL DEPTH 3,740.84' TVD (end of horizontal hole) 3,781.02' TVD (anticipated horizontal section)
7,619.62' MD

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

Tertiary

Pictured Cliffs 3,744' Gas

RE-ENTRY – HORIZONTAL DRILLING PROGRAM

- A) A 2,000-psi WP double-gated BOP will be installed on the tubing head 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 will be placed above BOP stack.
- C) Perforations at 959' - 1,710' (San Jose Formation) and 3,206' – 3,266' (Ojo Alamo) will be squeeze cemented prior to drilling.
- D) The cast iron bridge plug (CIBP), set at 3,650' will be drilled out during re-entry operation.
- E) Retrievable whipstock to be set at $\pm 3,768'$.

- F) Window to be milled out of 5-1/2" csg at $\pm 3,750' - 3,768'$.

CASING PROGRAM

True Vertical Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' – 547'	12-1/4"	8-5/8"	K-55 24# ST&C	To surface (previously set)
0' – 3,994'	7-7/8"	5-1/2"	K-55 15.5# LT&C	To surface (previously set)
3,752' – 7,620' (MD)	4-3/4"	Open hole	None	None

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

3,752' - 7,620' 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
- C) Testing: None anticipated.

LOGGING, CORING, TESTING PROGRAM

- A) Logging: CBL-CCL log will be run prior to beginning squeeze work.
- B) Coring: None
- C) Testing: None

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: 1,240 psi

ANTICIPATED START DATE

June 7, 2005

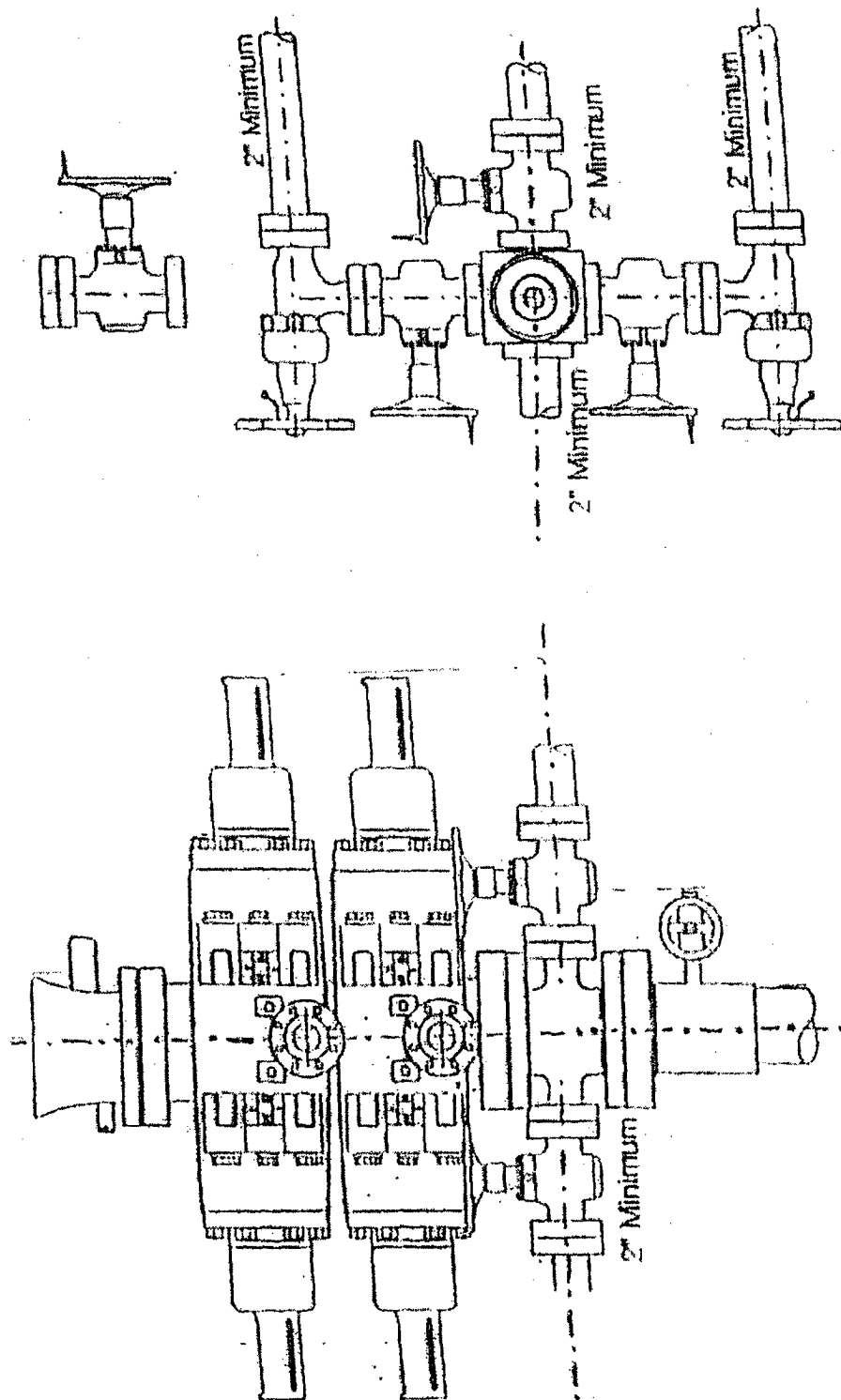
COMPLETION

The location pad is 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



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 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:

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:

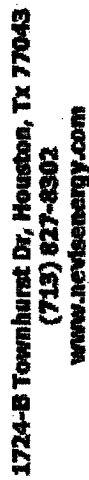
1. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
2. All elastomers used for packing and seals shall be H₂S trim.

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.



G.L. or M.S.L.:

Curve Name: Plan 1

Rectangular Coordinates Referenced to Wellhead

Page 1

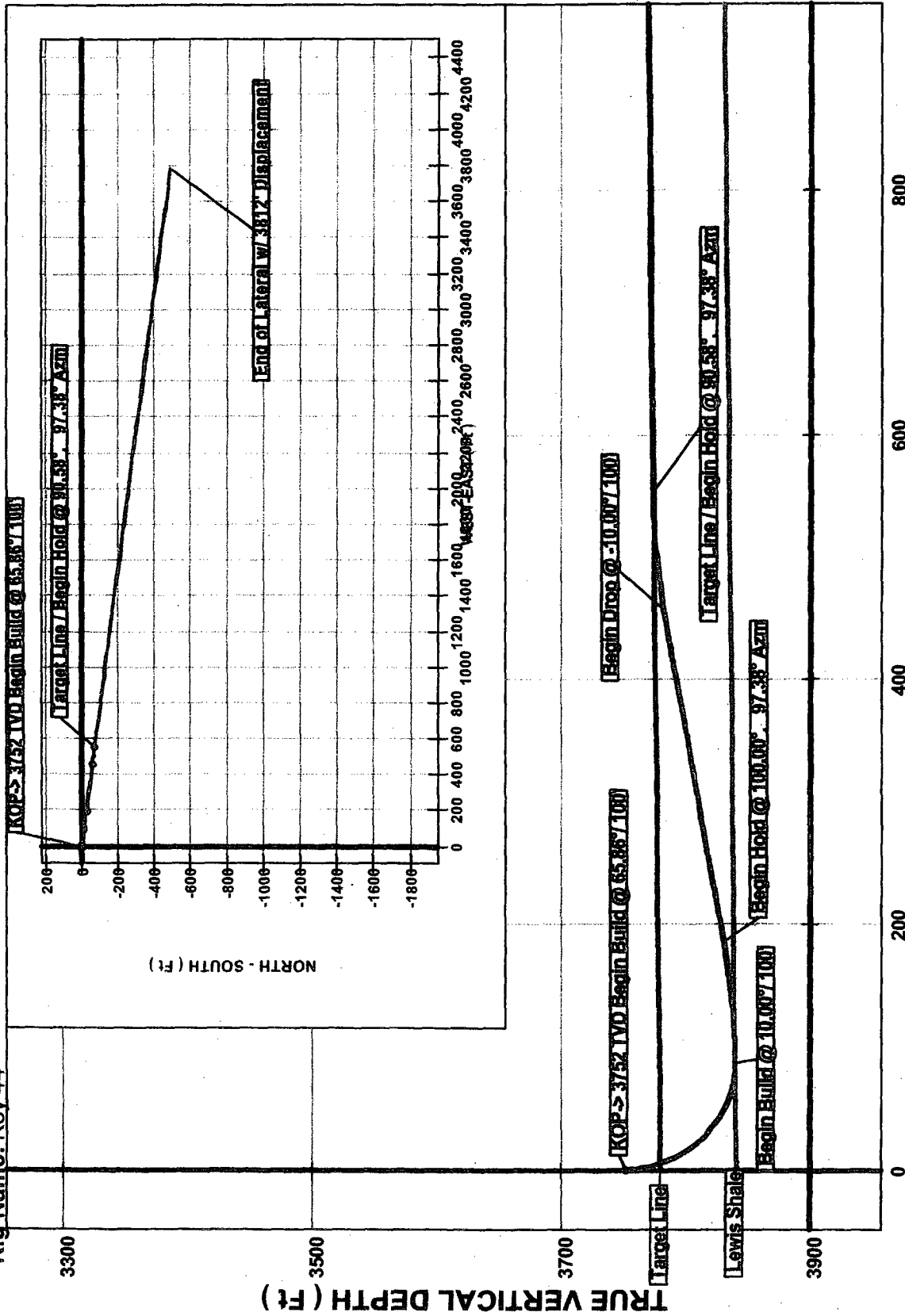
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3832.00	52.69	97.38	3821.19	34.26	-4.40	33.98	34.26	97.38	65.86
3842.00	59.27	97.38	3826.78	42.55	-5.46	42.19	42.55	97.38	65.86
3852.00	65.86	97.38	3831.39	51.42	-6.60	50.99	51.42	97.38	65.86
3862.00	72.44	97.38	3834.95	60.76	-7.80	60.25	60.76	97.38	65.86
3872.00	79.03	97.38	3837.41	70.44	-9.05	69.86	70.44	97.38	65.86
3882.00	85.62	97.38	3838.74	80.35	-10.32	79.68	80.35	97.38	65.86
Begin Build @ 10.00°/ 100'									
3888.66	90.00	97.38	3839.00	87.00	-11.17	86.28	87.00	97.38	65.86
3898.66	91.00	97.38	3838.91	97.00	-12.46	96.20	97.00	97.38	10.00
3908.66	92.00	97.38	3838.65	106.99	-13.74	106.11	106.99	97.38	10.00
3918.66	93.00	97.38	3838.21	116.99	-15.03	116.02	116.99	97.38	10.00
3928.66	94.00	97.38	3837.60	126.97	-16.31	125.91	126.97	97.38	10.00
3938.66	95.00	97.38	3836.82	136.94	-17.59	135.80	136.94	97.38	10.00
3948.66	96.00	97.38	3835.86	146.89	-18.87	145.67	146.89	97.38	10.00
3958.66	97.00	97.38	3834.73	156.83	-20.14	155.53	156.83	97.38	10.00
3968.66	98.00	97.38	3833.42	166.74	-21.42	165.36	166.74	97.38	10.00
3978.66	99.00	97.38	3831.94	176.63	-22.69	175.17	176.63	97.38	10.00
Begin Hold @ 100.00°, 97.38° Azm									
3988.66	100.00	97.38	3830.29	186.49	-23.95	184.95	186.49	97.38	10.00
4088.66	100.00	97.38	3812.93	284.97	-36.60	282.61	284.97	97.38	.00
4188.66	100.00	97.38	3795.56	383.45	-49.25	380.28	383.45	97.38	.00
4213.66	100.00	97.38	3791.22	408.07	-52.42	404.69	408.07	97.38	.00
Begin Drop @ -10.00°/ 100'									
4263.66	100.00	97.38	3782.54	457.31	-58.74	453.53	457.31	97.38	.00
4273.66	99.00	97.38	3780.89	467.18	-60.01	463.31	467.18	97.38	10.00
4283.66	98.00	97.38	3779.41	477.07	-61.28	473.12	477.07	97.38	10.00
4293.66	97.00	97.38	3778.11	486.98	-62.55	482.95	486.98	97.38	10.00
4303.66	96.00	97.38	3776.98	496.92	-63.83	492.80	496.92	97.38	10.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4313.66	95.00	97.38	3776.02	506.87	-65.11	502.67	506.87	97.38	10.00
4323.66	94.00	97.38	3775.23	516.84	-66.39	512.56	516.84	97.38	10.00
4333.66	93.00	97.38	3774.62	526.82	-67.67	522.46	526.82	97.38	10.00
4343.66	92.00	97.38	3774.19	536.81	-68.95	532.36	536.81	97.38	10.00
4353.66	91.00	97.38	3773.92	546.81	-70.24	542.28	546.81	97.38	10.00
Target Line / Begin Hold @ 90.58°, 97.38° Azm									
4359.66	90.58	97.38	3773.84	552.81	-71.01	548.23	552.81	97.38	7.00
4459.66	90.58	97.38	3772.83	652.80	-83.85	647.39	652.80	97.38	.00
4559.66	90.58	97.38	3771.82	752.80	-96.70	746.56	752.80	97.38	.00
4659.66	90.58	97.38	3770.80	852.79	-109.54	845.73	852.79	97.38	.00
4759.66	90.58	97.38	3769.79	952.79	-122.38	944.89	952.79	97.38	.00
4859.66	90.58	97.38	3768.78	1052.78	-135.23	1044.06	1052.78	97.38	.00
4959.66	90.58	97.38	3767.77	1152.78	-148.07	1143.23	1152.78	97.38	.00
5059.66	90.58	97.38	3766.76	1252.77	-160.92	1242.39	1252.77	97.38	.00
5159.66	90.58	97.38	3765.74	1352.77	-173.76	1341.56	1352.77	97.38	.00
5259.66	90.58	97.38	3764.73	1452.76	-186.61	1440.73	1452.76	97.38	.00
5359.66	90.58	97.38	3763.72	1552.76	-199.45	1539.89	1552.76	97.38	.00
5459.66	90.58	97.38	3762.71	1652.75	-212.29	1639.06	1652.75	97.38	.00
5559.66	90.58	97.38	3761.69	1752.75	-225.14	1738.23	1752.75	97.38	.00
5659.66	90.58	97.38	3760.68	1852.74	-237.98	1837.39	1852.74	97.38	.00
5759.66	90.58	97.38	3759.67	1952.74	-250.83	1936.56	1952.74	97.38	.00
5859.66	90.58	97.38	3758.66	2052.73	-263.67	2035.73	2052.73	97.38	.00
5959.66	90.58	97.38	3757.64	2152.73	-276.52	2134.89	2152.73	97.38	.00
6059.66	90.58	97.38	3756.63	2252.72	-289.36	2234.06	2252.72	97.38	.00
6159.66	90.58	97.38	3755.62	2352.72	-302.20	2333.23	2352.72	97.38	.00
6259.66	90.58	97.38	3754.61	2452.71	-315.05	2432.39	2452.71	97.38	.00
6359.66	90.58	97.38	3753.60	2552.70	-327.89	2531.56	2552.70	97.38	.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6459.66	90.58	97.38	3752.58	2652.70	-340.74	2630.72	2652.70	97.38	.00
6559.66	90.58	97.38	3751.57	2752.69	-353.58	2729.89	2752.69	97.38	.00
6659.66	90.58	97.38	3750.56	2852.69	-366.43	2829.06	2852.69	97.38	.00
6759.66	90.58	97.38	3749.55	2952.68	-379.27	2928.22	2952.68	97.38	.00
6859.66	90.58	97.38	3748.53	3052.68	-392.11	3027.39	3052.68	97.38	.00
6959.66	90.58	97.38	3747.52	3152.67	-404.96	3126.56	3152.67	97.38	.00
7059.66	90.58	97.38	3746.51	3252.67	-417.80	3225.72	3252.67	97.38	.00
7159.66	90.58	97.38	3745.50	3352.66	-430.65	3324.89	3352.66	97.38	.00
7259.66	90.58	97.38	3744.49	3452.66	-443.49	3424.06	3452.66	97.38	.00
7359.66	90.58	97.38	3743.47	3552.65	-456.34	3523.22	3552.65	97.38	.00
7459.66	90.58	97.38	3742.46	3652.65	-469.18	3622.39	3652.65	97.38	.00
7559.66	90.58	97.38	3741.45	3752.64	-482.02	3721.56	3752.64	97.38	.00
End of Lateral w/ 3812' Displacement									
7619.62	90.58	97.38	3740.84	3812.60	-489.73	3781.02	3812.60	97.38	.00

Job Number: 5-3-05
 Company: BHEP / Mallon Oil Corp.
 Lease/Well: Jicarilla 457-09 # 1
 Location: Rio Arriba Co., NM
 Rig Name: Key 44

17511-4-17-05
 11:23:45 AM
 11/11/2005



VERTICAL SECTION (Ft) @ 97.38°

Black Hills Gas Resources

Jicarilla 457-09 #1

API No. 3003925902

1150' FSL & 1191' FEL (SE/SE) Unit P

Section 9 T30N - R03W

East Blanco Field, Rio Arriba County, New Mexico

Top of Coal:	3642
Bottom of Coal:	3738
KOP:	3752
At Well - (SESE) SEC 9 T30N - R03W	
Top of PC:	3744
PC Target Line:	3780
Bottom of PC:	3840
Top of Lewis:	3840
At BHL - (SESW) SEC 10 T30N - R03W	
Proposed BHL:	660 FSL & 2590 FWL
Azimuth	97.38
Top of PC:	3726
PC Target Line:	3741

Ground Elevation:	7238'
KB Elevation:	7251' (13' KB)
Surface Casing:	8-5/8" 24# K-55 ST&C @ 547'
Production Casing:	5-1/2" 15.5# K-55 LT&C @ 3994'
Plugback TD:	3650' (CIBP)
Perfs:	San Jose:
Perfs:	Nacimiento:
Perfs:	Ojo Alamo:
Perfs:	3206-66 (Open)
Perfs:	3749-82' (Open under CIBP)
Completion:	Single Completion - San Jose / Ojo Alamo
	52 lbs 1.9" tbg @ 1719'

Note: CBL-CCL log will be run prior to beginning squeeze work. Window for kick-off will be cut from 3750' - 3768'. KOP is estimated to be at 3752', but can be adjusted based on collar locations. San Jose & Ojo Alamo perfs will be squeezed prior to drilling.