

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 24 2008

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

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 - Other Instructions on reverse side.

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		5. Lease Serial No. Tract 4 MDA 701-98-0013
2. Name of Operator Black Hills Gas Resources		6. If Indian, Allottee, or Tribe Name Jicarilla Apache
3a. Address 3200 N 1st Street PO Box 249 Bloomfield, NM 87413	3b. Phone No. (include area code) 505-634-1111 ext 27	7. If Unit or CA. Agreement Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Surface: 900' FSL 2,145' FEL SW/SE Unit O Sec 4 T29N R2W Bottom Hole: ± 1881' FSL ± 2422' FEL NW/SE Unit O Sec 5 T29N R2W		8. Well Name and No. Jicarilla 29-02-04 #143
		9. API Well No. 30-039-30079
		10. Field and Pool, or Exploratory Area East Blanco Pictured Cliffs
		11. County or Parish, State Rio Arriba, New Mexico

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
☐ Subsequent Report	☐ Altering Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other <u>Changing</u>
	☐ Change Plans	☐ Plug and abandon	☐ Temporarily Abandon	<u>the Bottom Hole</u>
	☐ 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 recompleate horizontally, give subsurface locations and measured and true vertical depths or pertinent markers and sands. 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 recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice 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.)

The initial APD was approved for this well on April 21, 2008, as a vertical well. Black Hills Gas Resource (BHGR) is submitting this sundry and the following documents for the Jicarilla 29-02-04 #143 to change the bottom hole location for the undrilled PC and tertiary dual completion well. Included with this sundry will be an updated C-102 adding the new bottom hole location, a directional well plan and plot, and an updated drilling plan. ✓

Surface disturbance will not change from the initial APD, therefore the Surface Use Plan will not be updated or modified.

BHGR will follow up with a sundry to plugging back the Jicarilla 29-02-04 #143 To address spacing issue. ✓



H₂S POTENTIAL EXIST

Hold C104
for Directional Survey
and "As Drilled" plat

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

14. I hereby certify that the foregoing is true and correct.
Name (Printed/ Typed)

Daniel Manus

Title

Regulatory Technician

Signature

[Handwritten Signature: Daniel Manus]

Date

Oct 23, 2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **Troy L. Salvors**

Title **Petroleum Eng.**

Date **10/27/2008**

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

FFO

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 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 page 2)

NMOCD

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

16

SEC. CORNER
FD PIN & CAP
W/ LS. #8894

SEC. CORNER
FD MK'D STONE
W/ PIN & CAP
LS. #8894

SEC. CORNER
CALC'D BY
SINGL. PROP.

LOT 4 41.43 AC.
LOT 3 41.36 AC.
LOT 2 41.26 AC.
LOT 1 41.10 AC.

LOT 4 41.09 AC.
LOT 3 41.01 AC.
LOT 2 40.92 AC.
LOT 1 40.84 AC.

BOTTOM HOLE LOCATION:
LAT: 36°51'18" N (NAD 83)
LONG: 107°06'58" W (NAD 83)
LAT: 36°45'06.77" N (NAD 27)
LONG: 107°03'57.09" W (NAD 27)

SURFACE:
LAT: 36°49'12" N (NAD 83)
LONG: 107°04'68" W (NAD 83)
LAT: 36°44'56.77" N (NAD 27)
LONG: 107°02'46.62" W (NAD 27)

N 02-00-38 E 5265.65' (M)
N 02-11-14 E 5311.03' (M)
N 02-08-50 E 5264.83' (C)
N 89-07-36 W 5238.28' (M)
S 89-31-06 W 5288.54' (M)

40.00 AC. 40.00 AC. 40.00 AC. 40.00 AC. 40.00 AC. 40.00 AC. 40.00 AC. 40.00 AC.

B.H.L. 2422'
1881'
970'
900'

C.O.P. 2145'
S.H.L. 2145'

NOTE: CASED 10' PAST THE HALF SECTION LINE

PRELIMINARY B.H.L.
B.H.L. FOOTAGES ARE APPROXIMATE AND PROVIDED BY _____
CLIENT _____

CENTER OF PIT.
LAT: 36°44'57.60350" N (NAD 83)
LONG: 107°02'48.991199" W (NAD 83)

17 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.

Daniel Manus 10/29/08
Signature Date
Daniel Manus
Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plot 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 knowledge and belief

OCTOBER 7, 2005
Date of Survey

Signature and Seal of Professional Surveyor

8894
Certificate Number



Black Hills Gas Resources

Jicarilla 29-02-04 #143

Surface Location: 900' FSL 2145' FEL (SW/SE) Unit O
Sec.4 T29N R2W

Bottom Hole Location: $\pm 1881'$ FSL $\pm 2422'$ FEL (NW/SE) Unit ϕJ
Sec.5 T29N R2W

Rio Arriba County, New Mexico
Lease: IMDA 701-98-0013, Tract 4

DRILLING PROGRAM (Per Rule 320)

This Application for Permit to Drill (APD) was initiated under the NOS process as stated in Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. This APD process includes an onsite meeting which was held on February 15, 2006 as determined by Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA) and Jicarilla Oil & Gas Administration (JOGA), and at which time the specific concerns of Black Hills Gas Resources (BHGR) were discussed.

This new drilling plan will modify the drilling program to exclude the parasite string technique for this un-drilled horizontal well. It will still be drilled into the pictured cliffs formation. Attached is the horizontal drilling plan.

SURFACE FORMATION – San Jose

GROUND ELEVATION – 7,494'

ESTIMATED FORMATION TOPS - (mineral-bearing formations)

	Surface	Surface	Sandstone, shales & siltstones
San Jose			
Nacimiento	2,178' MV	2,178' XM	Sandstone, shales & siltstones
Ojo Alamo	3,344' MV	3,380' XM	Sandstone, shales & siltstones
Kirtland	3,551' MV	3,677' XM	Sandstone, shales & siltstones
Fruitland Coal	3,656' MV	3,888' XM	Sandstone, shales & siltstones
Pictured Cliffs	3,728' MV	4,193' XM	Sandstone, shales & siltstones

TOTAL DEPTH **8975' TMD** **3,825' TVD** ✓

ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS:

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

Nacimiento	2,178'	Gas, water, sand
Ojo Alamo	3,344'	Gas, water, sand
Kirtland	3,551'	Gas, water, sand, shale
Fruitland Coal	3,656'	Gas, water, sand
Pictured Cliffs	3,728'	Gas, water, sand

HORIZONTAL DRILLING PROGRAMKick Off Point is estimated to be $\pm 2777'$ TVDCASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' to 250'	12 1/4"	9 5/8"	H-40 32.3# ST&C	To surface (± 175 sxs classB)
0' to 4293'	8 3/4"	7"	J-55 23# ST & C	TD to surface (± 630 sxs lite or 65:35 poz and ± 270 sxs 50:50 poz)*
4293' to 8975'	6 1/4 "	Open hole***	none	none

* Actual cement volume to be determined by caliper log.

** Cement will be circulated to surface

*** If hole instability is encountered, a 4 1/2", 10.5#, J-55 uncemented liner may be run in the 6 1/4" open hole section

Yields:

Surface: Standard cement yield = 1.2 ft³/sx (mixed at 15.6 lb/gal)Production: Lite Standard Cement yield = 1.59 ft³/sx (mixed at 13.4 lb/gal)
50:50 poz yield = 1.27 ft³/sx (mixed at 14.15 lb/gal)

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and protected.

PRESSURE CONTROLBOPs 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~~ ¹⁵⁰⁰ 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' Potassium Formate- Inhibitive low solids non-dispersed
 M.W. 6.0 – 9.2 ppg
 Vis – 45 – 60 sec
 W.L. 8cc 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 attached H₂S plan in event H₂S is encountered.
- D) Estimated bottomhole pressure: 1,145 psi

ANTICIPATED START DATE: October 29, 2008

COMPLETION

The location pad will be of sufficient size to accommodate all completion activities and equipment. A string of 2-3/8”, 4.7#, J-55 tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.



Job Number: 81xxx
Company: Black Hills Gas Resources
Lease/Well: Jicarilla 29-02-04 #143
Location: Rio Arriba County, NM
Rig Name:
RKB: 13'
G.L. or M.S.L.: 7494'

State/Country: NM/USA
Declination:
Grid:
File name: Z:\BLACKH~1\NEWWEL~1\29-02--1\29024143.SVY
Date/Time: 22-Oct-08 / 11:30
Curve Name: Jlc 29-02-04 #143 plan 10-22-08

Jlc 29-02-04 #143 plan 10-22-08

WINSERVE PROPOSAL REPORT
 Minimum Curvature Method
 Vertical Section Plane 280.00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
KOP-> 2777 TVD Begin Build @ 6.00% 100'									
2777.00	.00	280.00	2777.00	.00	.00	.00	.00	.00	.00
2807.00	1.80	280.00	2807.00	.47	.08	-.46	.47	280.00	6.00
2837.00	3.60	280.00	2836.96	1.88	.33	-1.86	1.88	280.00	6.00
2867.00	5.40	280.00	2866.87	4.24	.74	-4.17	4.24	280.00	6.00
2897.00	7.20	280.00	2896.68	7.53	1.31	-7.42	7.53	280.00	6.00
2927.00	9.00	280.00	2926.38	11.76	2.04	-11.58	11.76	280.00	6.00
2957.00	10.80	280.00	2955.94	16.92	2.94	-16.66	16.92	280.00	6.00
2987.00	12.60	280.00	2985.31	23.00	3.99	-22.66	23.00	280.00	6.00
3017.00	14.40	280.00	3014.48	30.01	5.21	-29.55	30.01	280.00	6.00
3047.00	16.21	280.00	3043.41	37.93	6.59	-37.35	37.93	280.00	6.00
3077.00	18.01	280.00	3072.09	46.75	8.12	-46.04	46.75	280.00	6.00
3107.00	19.81	280.00	3100.47	56.47	9.81	-55.61	56.47	280.00	6.00
3137.00	21.61	280.00	3128.53	67.08	11.65	-66.06	67.08	280.00	6.00
3167.00	23.41	280.00	3156.24	78.56	13.64	-77.37	78.56	280.00	6.00
3197.00	25.21	280.00	3183.58	90.91	15.79	-89.53	90.91	280.00	6.00
3227.00	27.01	280.00	3210.52	104.11	18.08	-102.53	104.11	280.00	6.00
3257.00	28.81	280.00	3237.03	118.15	20.52	-116.36	118.15	280.00	6.00
3287.00	30.61	280.00	3263.08	133.02	23.10	-131.00	133.02	280.00	6.00
3317.00	32.41	280.00	3288.66	148.70	25.82	-146.44	148.70	280.00	6.00
3347.00	34.21	280.00	3313.73	165.17	28.68	-162.66	165.17	280.00	6.00
3377.00	36.01	280.00	3338.27	182.43	31.68	-179.66	182.43	280.00	6.00
3407.00	37.81	280.00	3362.26	200.45	34.81	-197.40	200.45	280.00	6.00
3437.00	39.61	280.00	3385.66	219.21	38.06	-215.88	219.21	280.00	6.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3467.00	41.41	280.00	3408.47	238.69	41.45	-235.07	238.69	280.00	6.00
3497.00	43.21	280.00	3430.65	258.89	44.96	-254.96	258.89	280.00	6.00
3527.00	45.01	280.00	3452.19	279.77	48.58	-275.52	279.77	280.00	6.00
3557.00	46.81	280.00	3473.06	301.32	52.32	-296.74	301.32	280.00	6.00
3587.00	48.62	280.00	3493.25	323.51	56.18	-318.60	323.51	280.00	6.00
3617.00	50.42	280.00	3512.72	346.33	60.14	-341.07	346.33	280.00	6.00
3647.00	52.22	280.00	3531.47	369.75	64.21	-364.13	369.75	280.00	6.00
3677.00	54.02	280.00	3549.48	393.74	68.37	-387.76	393.74	280.00	6.00
3707.00	55.82	280.00	3566.72	418.29	72.64	-411.93	418.29	280.00	6.00
3737.00	57.62	280.00	3583.18	443.37	76.99	-436.63	443.37	280.00	6.00
3767.00	59.42	280.00	3598.85	468.95	81.43	-461.83	468.95	280.00	6.00
3797.00	61.22	280.00	3613.70	495.01	85.96	-487.49	495.01	280.00	6.00
3827.00	63.02	280.00	3627.73	521.53	90.56	-513.61	521.53	280.00	6.00
3857.00	64.82	280.00	3640.92	548.47	95.24	-540.14	548.47	280.00	6.00
3887.00	66.62	280.00	3653.26	575.82	99.99	-567.07	575.82	280.00	6.00
3917.00	68.42	280.00	3664.73	603.54	104.80	-594.37	603.54	280.00	6.00
3947.00	70.22	280.00	3675.32	631.60	109.68	-622.01	631.60	280.00	6.00
3977.00	72.02	280.00	3685.02	659.99	114.61	-649.96	659.99	280.00	6.00
4007.00	73.82	280.00	3693.83	688.67	119.59	-678.20	688.67	280.00	6.00
4037.00	75.62	280.00	3701.74	717.60	124.61	-706.70	717.60	280.00	6.00
4067.00	77.42	280.00	3708.73	746.78	129.68	-735.43	746.78	280.00	6.00
4097.00	79.22	280.00	3714.80	776.16	134.78	-764.36	776.16	280.00	6.00
4127.00	81.03	280.00	3719.95	805.71	139.91	-793.47	805.71	280.00	6.00
4157.00	82.83	280.00	3724.16	835.41	145.07	-822.72	835.41	280.00	6.00
4187.00	84.63	280.00	3727.44	865.23	150.25	-852.09	865.23	280.00	6.00

Begin Hold @ 85.00° for 100'

4193.23	85.00	280.00	3728.00	871.43	151.32	-858.19	871.43	280.00	6.00
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5' Into PC - casing

4293.23	85.00	280.00	3736.72	971.05	168.62	-956.30	971.05	280.00	.00
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4393.23	85.00	280.00	3745.43	1070.67	185.92	-1054.40	1070.67	280.00	.00
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4493.23	85.00	280.00	3754.15	1170.29	203.22	-1152.51	1170.29	280.00	.00
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Begin Build @ 2.95° 100'

4543.23	85.00	280.00	3758.50	1220.10	211.87	-1201.56	1220.10	280.00	.00
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4573.23	85.89	280.00	3760.89	1250.00	217.06	-1231.01	1250.00	280.00	2.95
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4603.23	86.77	280.00	3762.81	1279.94	222.26	-1260.50	1279.94	280.00	2.95
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4633.23	87.66	280.00	3764.27	1309.91	227.46	-1290.01	1309.91	280.00	2.95
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4663.23	88.54	280.00	3765.26	1339.89	232.67	-1319.53	1339.89	280.00	2.95
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Target / Hold @ 89.21°, 273.04° Azm

4685.80	89.21	280.00	3765.70	1362.46	236.59	-1341.76	1362.46	280.00	2.95
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4785.80	89.21	280.00	3767.08	1462.45	253.95	-1440.24	1462.45	280.00	.00
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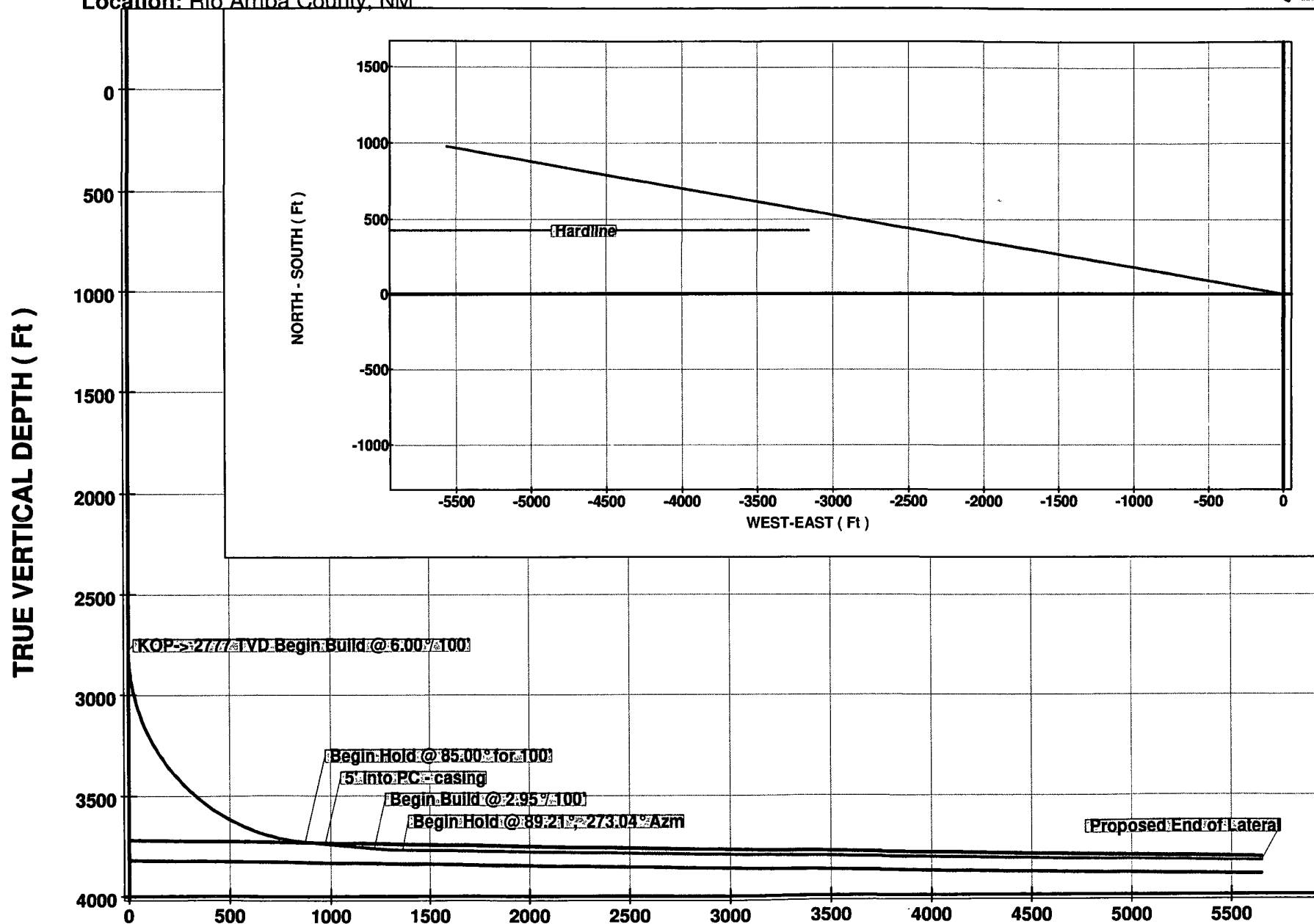
4885.80	89.21	280.00	3768.46	1562.44	271.32	-1538.71	1562.44	280.00	.00
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4985.80	89.21	280.00	3769.84	1662.43	288.68	-1637.18	1662.43	280.00	.00
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5085.80	89.21	280.00	3771.22	1762.43	306.04	-1735.65	1762.43	280.00	.00
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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5185.80	89.21	280.00	3772.60	1862.42	323.41	-1834.12	1862.42	280.00	.00
5285.80	89.21	280.00	3773.98	1962.41	340.77	-1932.59	1962.41	280.00	.00
5385.80	89.21	280.00	3775.36	2062.40	358.13	-2031.06	2062.40	280.00	.00
5485.80	89.21	280.00	3776.74	2162.39	375.49	-2129.54	2162.39	280.00	.00
5585.80	89.21	280.00	3778.12	2262.38	392.86	-2228.01	2262.38	280.00	.00
5685.80	89.21	280.00	3779.50	2362.37	410.22	-2326.48	2362.37	280.00	.00
5785.80	89.21	280.00	3780.88	2462.36	427.58	-2424.95	2462.36	280.00	.00
5885.80	89.21	280.00	3782.26	2562.35	444.95	-2523.42	2562.35	280.00	.00
5985.80	89.21	280.00	3783.64	2662.34	462.31	-2621.89	2662.34	280.00	.00
6085.80	89.21	280.00	3785.02	2762.33	479.67	-2720.36	2762.33	280.00	.00
6185.80	89.21	280.00	3786.40	2862.32	497.04	-2818.84	2862.32	280.00	.00
6285.80	89.21	280.00	3787.78	2962.31	514.40	-2917.31	2962.31	280.00	.00
6385.80	89.21	280.00	3789.16	3062.30	531.76	-3015.78	3062.30	280.00	.00
6485.80	89.21	280.00	3790.54	3162.29	549.13	-3114.25	3162.29	280.00	.00
6585.80	89.21	280.00	3791.92	3262.28	566.49	-3212.72	3262.28	280.00	.00
6685.80	89.21	280.00	3793.30	3362.27	583.85	-3311.19	3362.27	280.00	.00
6785.80	89.21	280.00	3794.68	3462.26	601.22	-3409.66	3462.26	280.00	.00
6885.80	89.21	280.00	3796.06	3562.25	618.58	-3508.14	3562.25	280.00	.00
6985.80	89.21	280.00	3797.44	3662.24	635.94	-3606.61	3662.24	280.00	.00
7085.80	89.21	280.00	3798.82	3762.23	653.31	-3705.08	3762.23	280.00	.00
7185.80	89.21	280.00	3800.20	3862.23	670.67	-3803.55	3862.23	280.00	.00
7285.80	89.21	280.00	3801.58	3962.22	688.03	-3902.02	3962.22	280.00	.00
7385.80	89.21	280.00	3802.96	4062.21	705.39	-4000.49	4062.21	280.00	.00
7485.80	89.21	280.00	3804.34	4162.20	722.76	-4098.96	4162.20	280.00	.00
7585.80	89.21	280.00	3805.72	4262.19	740.12	-4197.44	4262.19	280.00	.00
7685.80	89.21	280.00	3807.10	4362.18	757.48	-4295.91	4362.18	280.00	.00
7785.80	89.21	280.00	3808.48	4462.17	774.85	-4394.38	4462.17	280.00	.00
7885.80	89.21	280.00	3809.86	4562.16	792.21	-4492.85	4562.16	280.00	.00
7985.80	89.21	280.00	3811.24	4662.15	809.57	-4591.32	4662.15	280.00	.00
8085.80	89.21	280.00	3812.62	4762.14	826.94	-4689.79	4762.14	280.00	.00
8185.80	89.21	280.00	3814.00	4862.13	844.30	-4788.26	4862.13	280.00	.00
8285.80	89.21	280.00	3815.38	4962.12	861.66	-4886.73	4962.12	280.00	.00
8385.80	89.21	280.00	3816.76	5062.11	879.03	-4985.21	5062.11	280.00	.00
8485.80	89.21	280.00	3818.14	5162.10	896.39	-5083.68	5162.10	280.00	.00
8585.80	89.21	280.00	3819.52	5262.09	913.75	-5182.15	5262.09	280.00	.00
8685.80	89.21	280.00	3820.90	5362.08	931.12	-5280.62	5362.08	280.00	.00
8785.80	89.21	280.00	3822.28	5462.07	948.48	-5379.09	5462.07	280.00	.00
8885.80	89.21	280.00	3823.66	5562.06	965.84	-5477.56	5562.06	280.00	.00
Proposed End of Lateral									
8975.25	89.21	280.00	3824.90	5651.50	981.37	-5565.65	5651.50	280.00	.00

Job Number: 81xxx
 Company: Black Hills Gas Resources
 Lease/Well: Jicarilla 29-02-04 #143
 Location: Rio Arriba County, NM



VERTICAL SECTION (Ft) @ 280.00°