Form 3160- 5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

RECEIVED
MAR 19 2008
Bureau of Land Management
Farmington Field Office

1. Type of Well
☐ Oil Well ☑ Gas Well ☐ Other

2. Name of Operator
Black Hills Gas Resources

3a. Address
3200 N 1st Street PO Box 249 Bloomfield, NM 87413

3b. Phone No. *(include area code)*
505-634-1111 ext 27

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Surface: 165' FSL 1,155' FWL SW/SW Unit M Sec 17 T30N R3W
Bottom Hole: ±200' FSL ± 700 FWL SE/SW Unit N Sec 18 T30N R3W

5. Lease Serial No.
Contract 459

6. If Indian, Allottee, or Tribe Name
Jicarilla Apache

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

8. Well Name and No.
Jicarilla 459-17 #741

9. API Well No.
30-039-30172

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
	☐ Altering Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Converting
	☐ Change Plans	☐ Plug and abandon	☐ Temporarily Abandon	undrilled vertical well
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug back	☐ Water Disposal	to a Directional well

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 and pertinent markers and sands. Attach the Bond under which the work will 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 Notice shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

Black Hills Gas Resource (BHGR) is submitting the following documents for the Jicarilla 459-17 #741 to convert the undrilled vertical well to a directional well. Included with the 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.

RCVD APR 17 '08
OIL CONS. DIV.
DIST. 3

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

H_2S 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)*
Lynn H. Benally

Title
Regulatory Specialist

Signature

Date 3/19/2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Wayne Townsend

Title Pet. Eng.

Date 4/17/08

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, fictitiousor fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD

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 October 12, 2005
Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-30172	72400	EAST BLANCO/PICTURED CLIFFS

[4] Property Code	[5] Property Name	[6] Well Number
22211	JICARILLA 459-17	741

[7] OGRID No.	[8] Operator Name	[9] Elevation
013925	BLACK HILLS GAS RESOURCES	7180'

[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
M	17	30-N	3-W		165	SOUTH	1155	WEST	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
N	18	30-N	3-W	4	200	SOUTH	700	WEST	RIO ARRIBA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
246.24 AC.			

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

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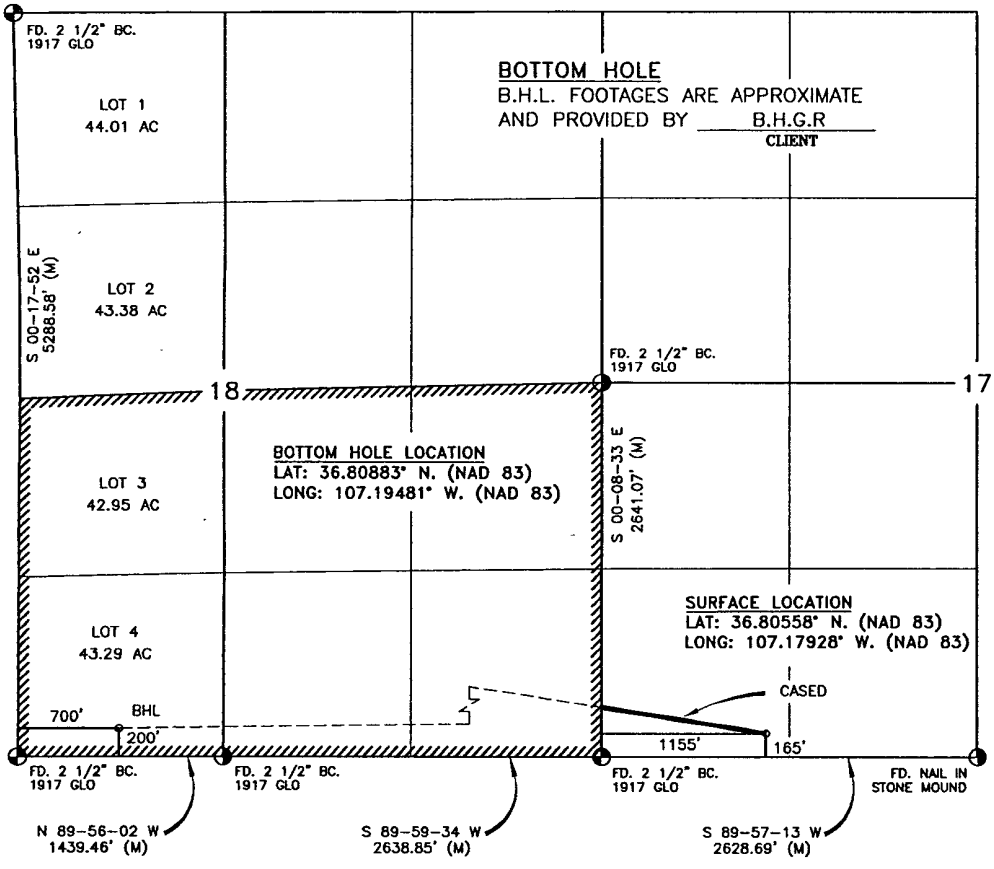

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OPERATOR CERTIFICATION

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.

Signature 3/19/2008
Date

Lynn H. Benally
Printed Name

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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.

MARCH 29, 2007
Date of Survey

Signature and Seal of Professional Surveyor:

03-19-08

8894
Certificate Number

Black Hills Gas Resources

Jicarilla 459-17 #741
Surface Location: 165' FSL 1,155' FWL Unit M (SW/SW)
Sec.17 T30N R03W
Bottom Hole Location: ± 200' FSL ± 7000' FWL (SE/SW) Unit N
Sec. 18 T30N R3W
Rio Arriba County, New Mexico
Lease: Contract 459

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 October 26, 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 convert the un-drilled vertical well to a new horizontal well drilled into the pictured cliffs formation. Attached is the horizontal drilling plan.

SURFACE FORMATION – San Jose

GROUND ELEVATION –7,180'

ESTIMATED FORMATION TOPS - (mineral-bearing formations)

San Jose	Surface	Sandstone, shales & siltstones	
Nacimiento	2046'M	2046'V	Sandstone, shales & siltstones
Ojo Alamo	3225'M	3210'V	Sandstone, shales & siltstones
Kirtland	3518'M	3450'V	Sandstone, shales & siltstones
Fruitland Coal	4037'M	3712'V	Sandstone, shales & siltstones
Pictured Cliffs	4417'M	3760'V	Sandstone, shales & siltstones
TOTAL DEPTH	**7872' TMD**	**3853'TVD**	

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

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

Nacimiento	2046'	Gas, water, sand
Ojo Alamo	3225'	Gas, water, sand
Kirtland	3518'	Gas, water, sand, shale
Fruitland Coal	4037'	Gas, water, sand
Pictured Cliffs	4417'	Gas, water, sand

HORIZONTAL DRILLING PROGRAM
Kick Off Point is estimated to be ± 2790' TVD

CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
250'	17-1/2"	13-3/8"	J-55 61#	To Surface (±340 sxs premium cement containing 2% $CaCl^2$ and ¼#/sx Poly-E-Flake)
250' – 2800'	12-1/4"	7" csg + 1.9" tbg	J-55 23# J-55 2.76#	TD to surface (Lead ± 730 sxs lite standard cement. Tail ± 800 sxs 50/50 poz containing ¼#/sx LCM
2800' – 4538'	8-3/4"	7" csg	J-55 23#	
4538' - 7872'	6-1/8"	Open hole**	Open hole	

* Actual cement volume to be determined by caliper log.

** If hole instability is encountered, a 4 ½", 10.5#, J-55 uncemented liner may be run in the 6 1/8" open hole section.

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

PARASITE STRING

Due to severe lost circulation below 3,770' TVD, a 1.9" parasite string will be utilized on the 7" intermediate casing. This string will allow the injection of compressed air into the wellbore at a depth of ±2800'MD. During drilling of the production hole (6-1/8" hole size), this will effectively reduce the equivalent circulating density from 9.1 ppg to ± 6.0 ppg while drilling the production portion of the well. Out from underneath surface casing a 12-1/4" hole will be drilled to KOP (±2800') at that point we will TOH for tools and TIH to begin drilling a 8-3/4" hole directionally at a build rate of 7°/100 to TD @ 4247' MD, setting 7" 23# J-55 csg @ 85°. A 1.5" parasite string will run to KOP, it will be banded to the 7" csg.

Interval	Weight	Grade	Cplng O.D.	Nom. O.D.	I.D.	Drift	Connection
0' to 2,790'	2.76 #/ft	J-55	2.115"	1.900"	1.610"	1.516"	10 Rd Integral Joint

API RATING / SAFETY FACTOR

Interval	Description	Collapse (psi)a	Burst (psi)b	Tension Body (M Lbs)c	Tension Cplng (M Lbs)c
0' to 2,790'	1-1/2", 2.76 #/ft, J-55, IJ	7,750. / 6.13	7,350. / 2.66	55 / 1.70	55 / 1.70

a) Based on full parasite string evacuation with 9.0 ppg formation gradient on backside
b) Based on 9.0 ppg gradient to surface, with no fluid on backside (backside evacuated) and 1,500 psi applied surface pressure
c) Based on tubing string weight in air (7,452 lbs) with 25,000 lbs of over-pull applied. Buoyed weight of parasite string in 9.0 ppg mud = 6;412. lbs

Yields:

Surface: Standard cement yield = 1.2 ft^3/sx (mixed at 15.6 lb/gal)

Production: Lite Standard Cement yield: = 1.59 ft^3/sx (mixed at 13.4 lb/gal)
50:50 poz yield = 1.27 ft^3/sx (mixed at 14.15 lb/gal)

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'	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)	H_2S:	See attached H_2S plan in event H_2S is encountered.
D)	Estimated bottomhole pressure:	psi

ANTICIPATED START DATE: April 28, 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#/ft, J-55 tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.

NEVIS
ENERGY SERVICES INC.
1724-B Townhurst Drive
Houston Texas 77043
1-800-909-9819
www.nevisenergy.com

Job Number: 81xxx
Company: Black Hills Gas Resources
Lease/Well: Jicarilla 459-17 #741
Location: Rio Arriba County, NM
Rig Name:
RKB: 13'
G.L. or M.S.L.: 7180'

State/Country: NM/USA
Declination:
Grid:
File name: Z:\BLACKH~1\NEWWEL~1\459-17~2\45917741.SVY
Date/Time: 13-Mar-08 / 08:10
Curve Name: Jicarilla 459-17 #741 plan 3-13-08

WINSERVE PROPOSAL REPORT
Minimum Curvature Method
Vertical Section Plane 270.44
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	CLOSURE Direction Deg	Dogleg Severity Deg/100
KOP-> 2790 TVD Begin Build @ 6.00°/ 100 Ft									
2790.00	.00	270.44	2790.00	.00	.00	.00	.00	.00	.00
2820.00	1.80	270.44	2820.00	.47	.00	-.47	.47	270.44	6.00
2850.00	3.60	270.44	2849.96	1.88	.01	-1.88	1.88	270.44	6.00
2880.00	5.40	270.44	2879.87	4.23	.03	-4.23	4.23	270.44	6.00
2910.00	7.19	270.44	2909.68	7.52	.06	-7.52	7.52	270.44	6.00
2940.00	8.99	270.44	2939.38	11.75	.09	-11.75	11.75	270.44	6.00
2970.00	10.79	270.44	2968.94	16.90	.13	-16.90	16.90	270.44	6.00
3000.00	12.59	270.44	2998.31	22.98	.18	-22.98	22.98	270.44	6.00
3030.00	14.39	270.44	3027.49	29.98	.23	-29.98	29.98	270.44	6.00
3060.00	16.19	270.44	3056.42	37.89	.29	-37.89	37.89	270.44	6.00
3090.00	17.99	270.44	3085.10	46.70	.36	-46.70	46.70	270.44	6.00
3120.00	19.79	270.44	3113.48	56.41	.44	-56.41	56.41	270.44	6.00
3150.00	21.58	270.44	3141.55	67.01	.52	-67.01	67.01	270.44	6.00
3180.00	23.38	270.44	3169.26	78.48	.61	-78.48	78.48	270.44	6.00
3210.00	25.18	270.44	3196.61	90.82	.70	-90.82	90.82	270.44	6.00
3240.00	26.98	270.44	3223.55	104.01	.80	-104.00	104.01	270.44	6.00
3270.00	28.78	270.44	3250.07	118.03	.91	-118.03	118.03	270.44	6.00
3300.00	30.58	270.44	3276.13	132.89	1.03	-132.88	132.89	270.44	6.00
3330.00	32.38	270.44	3301.72	148.55	1.15	-148.55	148.55	270.44	6.00
3360.00	34.17	270.44	3326.80	165.01	1.27	-165.01	165.01	270.44	6.00
3390.00	35.97	270.44	3351.35	182.25	1.41	-182.24	182.25	270.44	6.00
3420.00	37.77	270.44	3375.35	200.25	1.55	-200.24	200.25	270.44	6.00
3450.00	39.57	270.44	3398.77	218.99	1.69	-218.99	218.99	270.44	6.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
3480.00	41.37	270.44	3421.59	238.47	1.84	-238.46	238.47	270.44	6.00
3510.00	43.17	270.44	3443.79	258.64	2.00	-258.64	258.64	270.44	6.00
3540.00	44.97	270.44	3465.34	279.51	2.16	-279.50	279.51	270.44	6.00
3570.00	46.77	270.44	3486.23	301.04	2.32	-301.03	301.04	270.44	6.00
3600.00	48.56	270.44	3506.44	323.21	2.50	-323.20	323.21	270.44	6.00
3630.00	50.36	270.44	3525.93	346.01	2.67	-346.00	346.01	270.44	6.00
3660.00	52.16	270.44	3544.71	369.41	2.85	-369.40	369.41	270.44	6.00
3690.00	53.96	270.44	3562.73	393.39	3.04	-393.38	393.39	270.44	6.00
3720.00	55.76	270.44	3580.00	417.92	3.23	-417.91	417.92	270.44	6.00
3750.00	57.56	270.44	3596.49	442.98	3.42	-442.97	442.98	270.44	6.00
3780.00	59.36	270.44	3612.18	468.55	3.62	-468.53	468.55	270.44	6.00
3810.00	61.15	270.44	3627.07	494.59	3.82	-494.58	494.59	270.44	6.00
3840.00	62.95	270.44	3641.13	521.09	4.02	-521.08	521.09	270.44	6.00
3870.00	64.75	270.44	3654.35	548.02	4.23	-548.01	548.02	270.44	6.00
3900.00	66.55	270.44	3666.71	575.35	4.44	-575.34	575.35	270.44	6.00
3930.00	68.35	270.44	3678.22	603.06	4.66	-603.04	603.06	270.44	6.00
3960.00	70.15	270.44	3688.85	631.11	4.87	-631.09	631.11	270.44	6.00
3990.00	71.95	270.44	3698.59	659.48	5.09	-659.46	659.48	270.44	6.00
4020.00	73.75	270.44	3707.44	688.15	5.31	-688.13	688.15	270.44	6.00
4050.00	75.54	270.44	3715.38	717.08	5.54	-717.05	717.08	270.44	6.00
4080.00	77.34	270.44	3722.41	746.24	5.76	-746.22	746.24	270.44	6.00
4110.00	79.14	270.44	3728.53	775.61	5.99	-775.59	775.61	270.44	6.00
4140.00	80.94	270.44	3733.71	805.16	6.22	-805.13	805.16	270.44	6.00
4170.00	82.74	270.44	3737.97	834.85	6.44	-834.83	834.85	270.44	6.00
4200.00	84.54	270.44	3741.30	864.66	6.67	-864.64	864.66	270.44	6.00
Hold @ 85.00° for 330'									
4207.72	85.00	270.44	3742.00	872.35	6.73	-872.32	872.35	270.44	6.00
4307.72	85.00	270.44	3750.72	971.97	7.50	-971.94	971.97	270.44	.00
4407.72	85.00	270.44	3759.43	1071.59	8.27	-1071.55	1071.59	270.44	.00
4507.72	85.00	270.44	3768.15	1171.21	9.04	-1171.17	1171.21	270.44	.00
5' into PC - Casing									
4537.72	85.00	270.44	3770.76	1201.09	9.27	-1201.06	1201.09	270.44	.00
4637.72	85.00	270.44	3779.48	1300.71	10.04	-1300.67	1300.71	270.44	.00
4737.72	85.00	270.44	3788.19	1400.33	10.81	-1400.29	1400.33	270.44	.00
4837.72	85.00	270.44	3796.91	1499.95	11.58	-1499.91	1499.95	270.44	.00
Begin Build @ 2.65°/ 100'									
4937.72	85.00	270.44	3805.62	1599.57	12.35	-1599.52	1599.57	270.44	.00
4967.72	85.80	270.44	3808.03	1629.47	12.58	-1629.42	1629.47	270.44	2.65
4997.72	86.59	270.44	3810.02	1659.41	12.81	-1659.36	1659.41	270.44	2.65
5027.72	87.39	270.44	3811.60	1689.36	13.04	-1689.31	1689.36	270.44	2.65
5057.72	88.19	270.44	3812.76	1719.34	13.27	-1719.29	1719.34	270.44	2.65
5087.72	88.98	270.44	3813.50	1749.33	13.50	-1749.28	1749.33	270.44	2.65
Begin Hold @ 89.19°, 270.44° Azm									
5095.59	89.19	270.44	3813.62	1757.21	13.56	-1757.16	1757.21	270.44	2.65

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
5095.63	89.19	270.44	3813.62	1757.24	13.56	-1757.19	1757.24	270.44	.77
5195.63	89.19	270.44	3815.04	1857.23	14.34	-1857.18	1857.23	270.44	.00
5295.63	89.19	270.44	3816.45	1957.22	15.11	-1957.16	1957.22	270.44	.00
5395.63	89.19	270.44	3817.86	2057.21	15.88	-2057.15	2057.21	270.44	.00
5495.63	89.19	270.44	3819.28	2157.20	16.65	-2157.14	2157.20	270.44	.00
5595.63	89.19	270.44	3820.69	2257.19	17.43	-2257.12	2257.19	270.44	.00
5695.63	89.19	270.44	3822.10	2357.18	18.20	-2357.11	2357.18	270.44	.00
5795.63	89.19	270.44	3823.52	2457.17	18.97	-2457.10	2457.17	270.44	.00
5895.63	89.19	270.44	3824.93	2557.16	19.74	-2557.09	2557.16	270.44	.00
5995.63	89.19	270.44	3826.34	2657.15	20.51	-2657.07	2657.15	270.44	.00
6095.63	89.19	270.44	3827.75	2757.14	21.29	-2757.06	2757.14	270.44	.00
6195.63	89.19	270.44	3829.17	2857.13	22.06	-2857.05	2857.13	270.44	.00
6295.63	89.19	270.44	3830.58	2957.12	22.83	-2957.03	2957.12	270.44	.00
6395.63	89.19	270.44	3831.99	3057.11	23.60	-3057.02	3057.11	270.44	.00
6495.63	89.19	270.44	3833.41	3157.10	24.37	-3157.01	3157.10	270.44	.00
6595.63	89.19	270.44	3834.82	3257.09	25.15	-3256.99	3257.09	270.44	.00
6695.63	89.19	270.44	3836.23	3357.08	25.92	-3356.98	3357.08	270.44	.00
6795.63	89.19	270.44	3837.65	3457.07	26.69	-3456.97	3457.07	270.44	.00
6895.63	89.19	270.44	3839.06	3557.06	27.46	-3556.96	3557.06	270.44	.00
6995.63	89.19	270.44	3840.47	3657.05	28.23	-3656.94	3657.05	270.44	.00
7095.63	89.19	270.44	3841.89	3757.04	29.01	-3756.93	3757.04	270.44	.00
7195.63	89.19	270.44	3843.30	3857.03	29.78	-3856.92	3857.03	270.44	.00
7295.63	89.19	270.44	3844.71	3957.02	30.55	-3956.90	3957.02	270.44	.00
7395.63	89.19	270.44	3846.12	4057.01	31.32	-4056.89	4057.01	270.44	.00
7495.63	89.19	270.44	3847.54	4157.00	32.09	-4156.88	4157.00	270.44	.00
7595.63	89.19	270.44	3848.95	4256.99	32.87	-4256.87	4256.99	270.44	.00
7695.63	89.19	270.44	3850.36	4356.98	33.64	-4356.85	4356.98	270.44	.00
7795.63	89.19	270.44	3851.78	4456.97	34.41	-4456.84	4456.97	270.44	.00
Proposed End of Lateral									
7872.11	89.19	270.44	3852.86	4533.44	35.00	-4533.31	4533.44	270.44	.00

Job Number: 81xxx
Company: Black Hills Gas Resources
Lease/Well: Jicarilla 459-17 #741
Location: Rio Arriba County, NM

NEVIS ENERGY SERVICES INC
1724 B Townhurst Drive
Houston Texas 77043
1-800 909 9815
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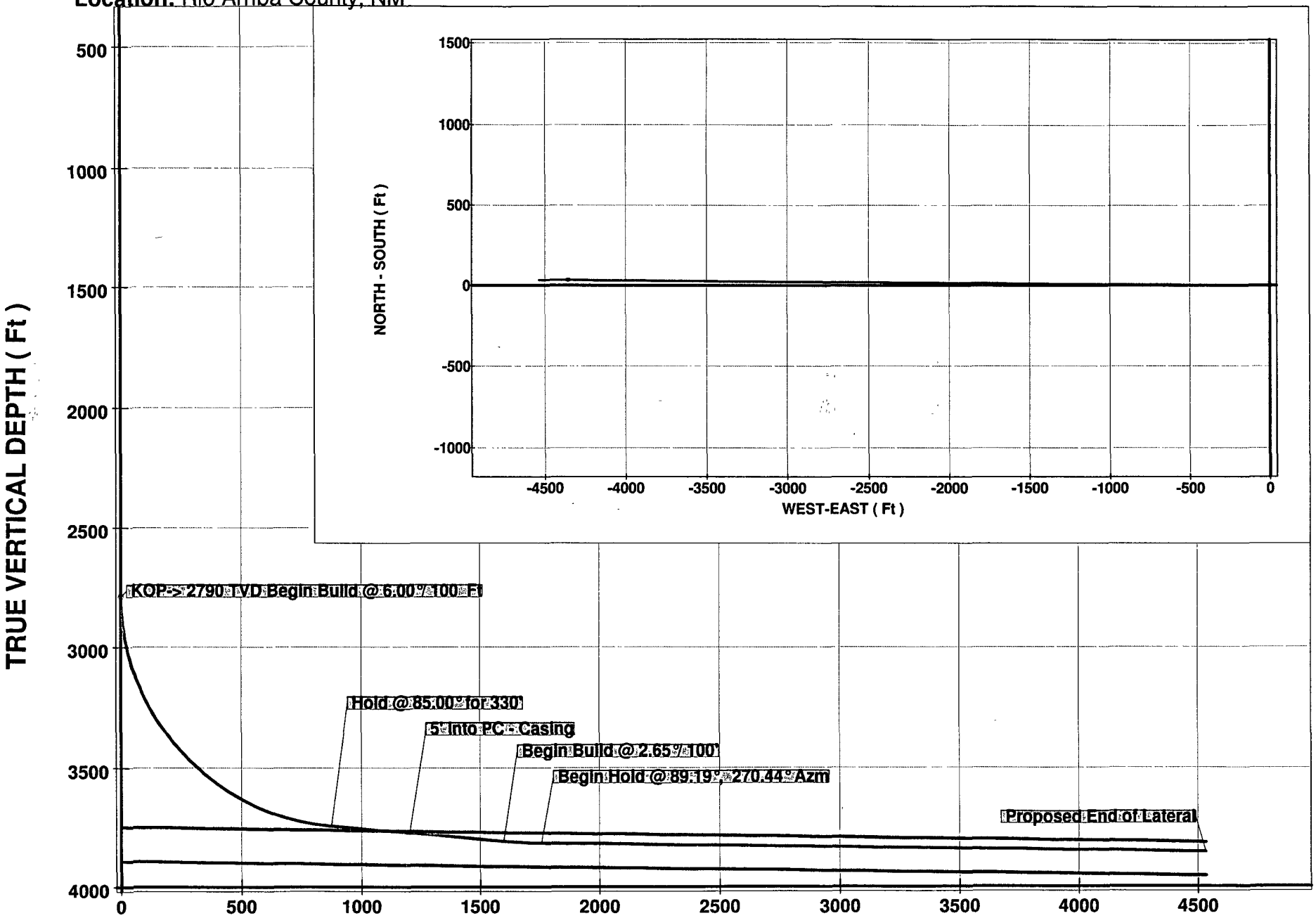

ADDENDUM TO APD SUBMITTAL

JICARILLA 459-17 #741

API #: 30-039-30172

Per the request of Mr. Jim Lovato of the BLM, outlined below is the general procedure to be utilized by Black Hills Gas Resources (BHGR) to run a 1-1/2" parasite string on the 7" casing production string.

The main objective of the parasite string on this well is to reduce the equivalent circulating density (ECD) of the drilling fluid system while drilling horizontally in the Pictured Cliffs Formation. It has been BHGR's experience, that severe lost circulation in the Pictured Cliffs is both costly and damaging to the productivity of these horizontal wells.

It may be argued that conventional air equipment could be utilized, but it has been BHGR experience that conventional air pumped down the drill pipe results in oxygen contamination via fracture within the Pictured Cliffs on offset wells. This result requires either the shutting in or chemical treating of offset wells.

Procedure

1. A 17-1/2" hole will be drilled to 250 ft. 13-3/8" casing will be ran and cemented to surface.

2. A 12-1/4" hole will be drilled to kick off point (KOP) at 2,790' MD/TVD.

3. At this point directional tools and MWD-GR will be used to drill an 8-3/4" curve section to ± 85° inclination at 4,537' MD.

4. The directional tools will be laid down, and 7", 23# ft J-55 LT&C casing will be ran in the hole.

5. At approximately 2,800', an Xtech Industries Air Injection collar (AIC) will be placed in the 7" casing string {See attached Xtech schematic.} This collar will be tack welded on both top and bottom.

6. Once the AIC is made up, a 1.5" parasite string will be screwed into the AIC, and the parasite string will be banded to the 7" casing with metal strips which are welded onto the 7" casing. There will be two (2) bands per joint used to hold the parasite string in place. {See attached photos of the metal bands and placement on the casing.}

Procedure (cont'd):

7. Once the 7" casing is landed, the 7" casing will be cemented as in "normal" cementing operations. Upon bumping the plug, a 20 bbl sugar water plug (1 lb/bbl of sugar) will be pumped down the parasite string to insure that any cement in the AIC is cleaned out. The sugar water will act as a retarder, and not allow the cement to set up.

8. Once the sugar water is pumped. The parasite string is cut at surface, and a tee is welded onto the stub. This is then piped to conventional air compression equipment.

9. BOP's are then nippled up, and a 6-1/8" PDC bit and 4-3/4" directional assembly are tripped in the hole. Float equipment is drilled out and once drilling in the Pictured Cliffs begins air injection down the parasite string is began.

10. Initial air rates are 700 to 1,200 scf/min, and as drilling continues will be increased to 2,000 to 2,500 scf/min. Based on air drilling models we are expecting a reduction of 3.0 ppg in our ECD. This will hopefully allow us to minimize our lost circulation during the lateral section (losses have been as high as 10,000 bbls per well).

11. Additional advantages of the parasite string are hoped to be increased penetration rate and better indications of gas productive intervals to aid in geo-steering the lateral section of this well.

12. Also, a rotating head and gas buster will be utilized at surface while drilling the lateral section of this wellbore.

13. Upon reaching TD, an RBP will be place in the 7" casing below the AIC. This will eliminate any concerns of Pictured Cliffs gas being at the surface during rig down of the drilling rig.