RECEIVED
MAY 19 2008
Bureau of Land Management
Farmington Field Office

RCVD MAY 30 '08
OIL CONS. DIV.
DIST. 3

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.

5. Lease Serial No.
Tract 4 MDA 701-98-0013

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

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

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

8. Well Name and No.
Jicarilla 29-02-04 #143

2. Name of Operator
Black Hills Gas Resources

9. API Well No.
30-039-30079

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

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

10. Field and Pool, or Exploratory Area
East Blanco Pictured Cliffs

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: ± 1200' FSL ± 2500' FEL SE/SW Unit N Sec 5 T29N R2W

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 of 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.)

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 convert the undrilled vertical well to a directional PC and tertiary dual completion. 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.

Hold C104 for Directional Survey and "As Drilled" plat

H_2S POTENTIAL EXI

PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, PROPOSED ALTERNATIVE METHOD OR CLOSURE PLAN TO BE DESIGNED, CONSTRUCTED & OPERATED PURSUANT TO NMOCD RULE 19.15.17 EFFECTIVE 06/16/08

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

NSL-4355

14. I hereby certify that the foregoing is true and correct.

Name *(Printed/ Typed)*	Title
Lynn H. Benally	Regulatory Specialist
Signature	Date May 16, 2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Troy L. Salyers	Title Petroleum Engineer	Date 5-29-2008
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, fictitiousor fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13 - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well and date well site conditioned for final inspection looking to approval of the abandonment.

NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as requited by 43 CFR 3162.4-1(c); and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3 - 2, 3162.3 - 3, 3162.3 - 4.

The Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) requires us to inform you that:

This information is being collected to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

BLM would like you to know that you do not have to respond to this or any other Federal agency -sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 25 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau information Collection Clearance Officer, (WO-630), Mail Stop 401 LS, 1849 C St., N.W., Washington D.C. 20240

Black Hills Gas Resources

Jicarilla 29-02-04 #143
Surface Location: 900' FSL 2,145' FEL (SW/SE) Unit O
Sec.4 T29N R2W
Bottom Hole Location: ±1200' FSL ±2500' FEL (SE/SW) Unit N
Sec.5 T29N R2W
Rio Arriba County, New Mexico
Lease: Tract 4 MDA 701-98-0013

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 September 19, 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 –7,494'

ESTIMATED FORMATION TOPS - (mineral-bearing formations)

San Jose	Surface	Sandstone, shales & siltstones	
Nacimiento	2110'M	2110'V	Sandstone, shales & siltstones
Ojo Alamo	3400'M	3357'V	Sandstone, shales & siltstones
Kirtland	3702'M	3564'V	Sandstone, shales & siltstones
Fruitland Coal	3930'M	3670'V	Sandstone, shales & siltstones
Pictured Cliffs	4314'M	3739'V	Sandstone, shales & siltstones
TOTAL DEPTH	**8975' TMD**	**3825'TVD**	

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

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

Nacimiento	2110'	Gas, water, sand
Ojo Alamo	3400'	Gas, water, sand
Kirtland	3702'	Gas, water, sand, shale
Fruitland Coal	3930'	Gas, water, sand
Pictured Cliffs	4314'	Gas, water, sand

HORIZONTAL DRILLING PROGRAM
Kick Off Point is estimated to be ± 2777' 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' – 2777' 250' - 2777' 2777' –4293'	12-1/4" 8-3/4"	7" csg + 1.9" tbg 7" csg	J-55 23# J-55 2.76# J-55 23#	TD to surface (Lead ± 665 sxs lite standard cement, 3% Econolite, 10 #/sk Gilsonite, ¼#/sk Poly-E-Flake. Tail ± 210 sxs 50/50 poz containing, 5#/sk Gilsonite, 1/8#/sk Poly-E-Flake & .4% Halad (R)-344
4293' - 8975'	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

The general procedure to be utilized by Black Hills Gas Resources (BHGR) is; 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 experience, that severe lost circulation in the Pictured Cliffs has been 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. Then a 13-3/8" casing will be run and cemented to surface.
2. Out from underneath surface casing a 12-1/4" hole will be drilled to KOP (±2777 ') at that point we will TOH for tools, TIH, and an MWD-GR will be used to begin drilling a 8-3/4" hole directionally at a build rate of 6°/100 to TD @ 4293' MD, The directional tools will be laid down, and 7", 23# ft J-55 LT&C casing will be run in the hole setting @ 85°.
3. At approximately 2,777', an Xtech Industries Air Injection collar (AIC) will be placed in the 7" casing string. This collar will be tack welded on both top and bottom.

4. Due to severe lost circulation below 3737' TVD, a 1.5" ID, 1.9" OD 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 ± 2777'MD. Once the AIC is made up, the 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.
5. 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.
6. 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.
7. 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. BOPs will 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.
8. 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).
9. 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.
10. Also, a rotating head and gas buster will be utilized at surface while drilling the lateral section of this wellbore.

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.

Interval	Weight	Grade	Cplng O.D.	Nom. O.D.	I.D.	Drift	Connection
0' to 2,777'	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 2,777'	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: = 2.90 ft^3/sx (mixed at 11.4 lb/gal)
50:50 poz yield = 1.41 ft^3/sx (mixed at 13.1 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 1200 psi

ANTICIPATED START DATE: May 26, 2008

COMPLETION

The location pad will be of sufficient size to accommodate all completion activities and equipment. Based on log results, the tertiary may be perforated, acidized and frac stimulated. Then a lower tubing string of 2-3/8", 4.7# J-55 tubing and retrievable packer will be run and set above the PC completion, isolating PC from tertiary. An upper tubing string of 2-3/8", 4.7# J-55 tubing will be run and hung off near the tertiary perforation. 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 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\29EF29~1\29024143.SV\
Date/Time: 01-May-08 / 15:29
Curve Name: Jic 29-02-04 #143 plan 5-01-08

Jic 29-02-04 #143 plan 5-01-08

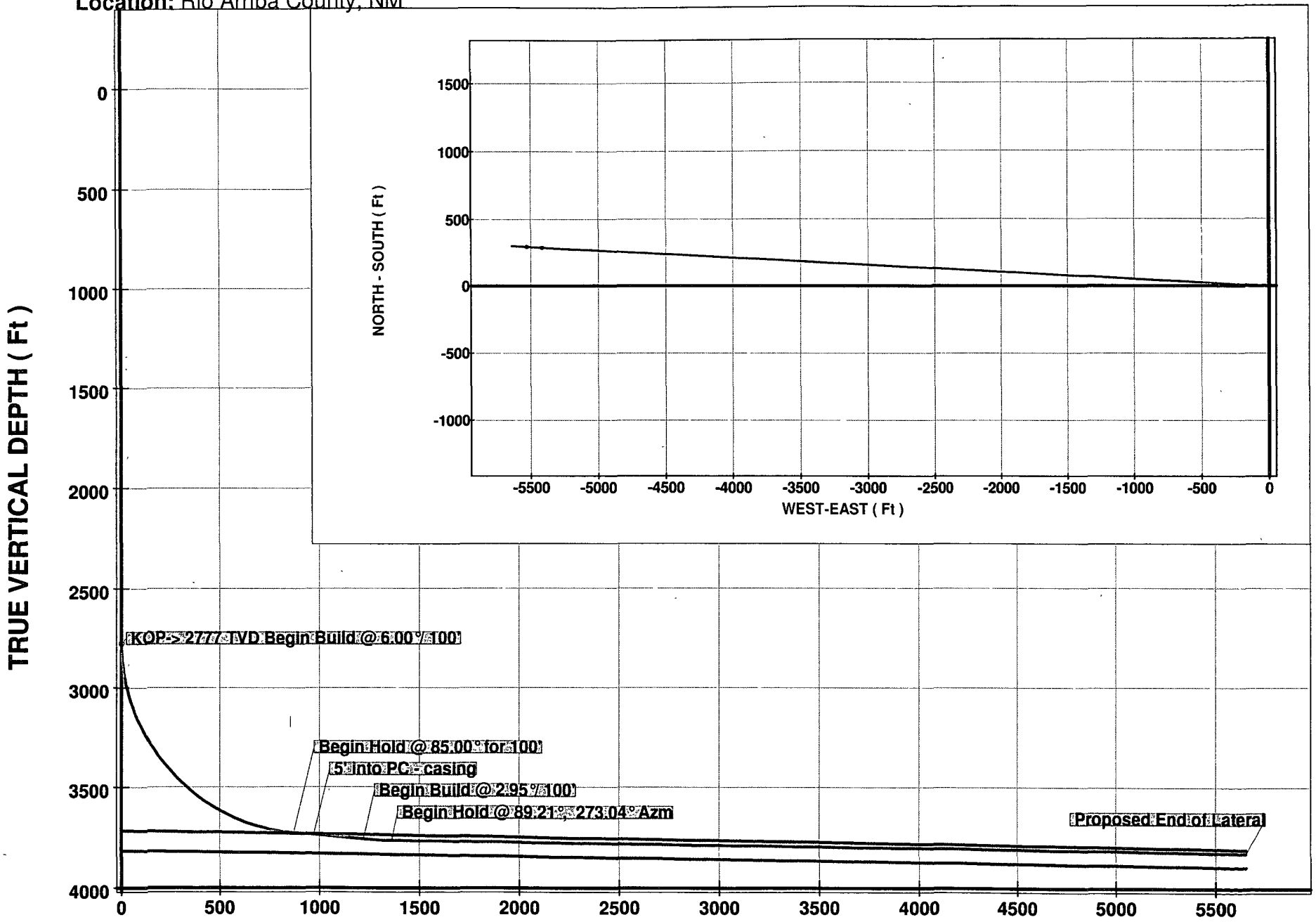
WINSERVE PROPOSAL REPORT
Minimum Curvature Method
Vertical Section Plane 273.04
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

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-> 2777 TVD Begin Build @ 6.00°/ 100'									
2777.00	.00	273.04	2777.00	.00	.00	.00	.00	.00	.00
2807.00	1.80	273.04	2807.00	.47	.03	-.47	.47	273.04	6.00
2837.00	3.60	273.04	2836.96	1.88	.10	-1.88	1.88	273.04	6.00
2867.00	5.40	273.04	2866.87	4.24	.23	-4.23	4.24	273.04	6.00
2897.00	7.20	273.04	2896.68	7.53	.40	-7.52	7.53	273.04	6.00
2927.00	9.00	273.04	2926.38	11.76	.62	-11.74	11.76	273.04	6.00
2957.00	10.80	273.04	2955.94	16.92	.90	-16.90	16.92	273.04	6.00
2987.00	12.60	273.04	2985.31	23.00	1.22	-22.97	23.00	273.04	6.00
3017.00	14.40	273.04	3014.48	30.01	1.59	-29.97	30.01	273.04	6.00
3047.00	16.21	273.04	3043.41	37.93	2.01	-37.87	37.93	273.04	6.00
3077.00	18.01	273.04	3072.09	46.75	2.48	-46.69	46.75	273.04	6.00
3107.00	19.81	273.04	3100.47	56.47	3.00	-56.39	56.47	273.04	6.00
3137.00	21.61	273.04	3128.53	67.08	3.56	-66.98	67.08	273.04	6.00
3167.00	23.41	273.04	3156.24	78.56	4.17	-78.45	78.56	273.04	6.00
3197.00	25.21	273.04	3183.58	90.91	4.83	-90.78	90.91	273.04	6.00
3227.00	27.01	273.04	3210.52	104.11	5.53	-103.97	104.11	273.04	6.00
3257.00	28.81	273.04	3237.03	118.15	6.27	-117.99	118.15	273.04	6.00
3287.00	30.61	273.04	3263.08	133.02	7.06	-132.83	133.02	273.04	6.00
3317.00	32.41	273.04	3288.66	148.70	7.89	-148.49	148.70	273.04	6.00
3347.00	34.21	273.04	3313.73	165.17	8.77	-164.94	165.17	273.04	6.00
3377.00	36.01	273.04	3338.27	182.43	9.68	-182.17	182.43	273.04	6.00
3407.00	37.81	273.04	3362.26	200.45	10.64	-200.16	200.45	273.04	6.00
3437.00	39.61	273.04	3385.66	219.21	11.64	-218.90	219.21	273.04	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
3467.00	41.41	273.04	3408.47	238.69	12.67	-238.36	238.69	273.04	6.00
3497.00	43.21	273.04	3430.65	258.89	13.74	-258.52	258.89	273.04	6.00
3527.00	45.01	273.04	3452.19	279.77	14.85	-279.38	279.77	273.04	6.00
3557.00	46.81	273.04	3473.06	301.32	16.00	-300.89	301.32	273.04	6.00
3587.00	48.62	273.04	3493.25	323.51	17.17	-323.06	323.51	273.04	6.00
3617.00	50.42	273.04	3512.72	346.33	18.38	-345.84	346.33	273.04	6.00
3647.00	52.22	273.04	3531.47	369.75	19.63	-369.22	369.75	273.04	6.00
3677.00	54.02	273.04	3549.48	393.74	20.90	-393.19	393.74	273.04	6.00
3707.00	55.82	273.04	3566.72	418.29	22.20	-417.70	418.29	273.04	6.00
3737.00	57.62	273.04	3583.18	443.37	23.54	-442.74	443.37	273.04	6.00
3767.00	59.42	273.04	3598.85	468.95	24.89	-468.29	468.95	273.04	6.00
3797.00	61.22	273.04	3613.70	495.01	26.28	-494.31	495.01	273.04	6.00
3827.00	63.02	273.04	3627.73	521.53	27.68	-520.79	521.53	273.04	6.00
3857.00	64.82	273.04	3640.92	548.47	29.12	-547.70	548.47	273.04	6.00
3887.00	66.62	273.04	3653.26	575.82	30.57	-575.01	575.82	273.04	6.00
3917.00	68.42	273.04	3664.73	603.54	32.04	-602.69	603.54	273.04	6.00
3947.00	70.22	273.04	3675.32	631.60	33.53	-630.71	631.60	273.04	6.00
3977.00	72.02	273.04	3685.02	659.99	35.03	-659.06	659.99	273.04	6.00
4007.00	73.82	273.04	3693.83	688.67	36.56	-687.70	688.67	273.04	6.00
4037.00	75.62	273.04	3701.74	717.60	38.09	-716.59	717.60	273.04	6.00
4067.00	77.42	273.04	3708.73	746.78	39.64	-745.72	746.78	273.04	6.00
4097.00	79.22	273.04	3714.80	776.16	41.20	-775.06	776.16	273.04	6.00
4127.00	81.03	273.04	3719.95	805.71	42.77	-804.57	805.71	273.04	6.00
4157.00	82.83	273.04	3724.16	835.41	44.35	-834.23	835.41	273.04	6.00
4187.00	84.63	273.04	3727.44	865.23	45.93	-864.01	865.23	273.04	6.00
Begin Hold @ 85.00° for 100'									
4193.23	85.00	273.04	3728.00	871.43	46.26	-870.20	871.43	273.04	6.00
5' into PC - casing									
4293.23	85.00	273.04	3736.72	971.05	51.55	-969.68	971.05	273.04	.00
4393.23	85.00	273.04	3745.43	1070.67	56.84	-1069.16	1070.67	273.04	.00
4493.23	85.00	273.04	3754.15	1170.29	62.12	-1168.64	1170.29	273.04	.00
Begin Build @ 2.95°/ 100'									
4543.23	85.00	273.04	3758.50	1220.10	64.77	-1218.38	1220.10	273.04	.00
4573.23	85.89	273.04	3760.89	1250.00	66.35	-1248.24	1250.00	273.04	2.95
4603.23	86.77	273.04	3762.81	1279.94	67.94	-1278.14	1279.94	273.04	2.95
4633.23	87.66	273.04	3764.27	1309.91	69.53	-1308.06	1309.91	273.04	2.95
4663.23	88.54	273.04	3765.26	1339.89	71.13	-1338.00	1339.89	273.04	2.95
Begin Hold @ 89.21°, 273.04° Azm									
4685.80	89.21	273.04	3765.70	1362.46	72.32	-1360.54	1362.46	273.04	2.95
4785.80	89.21	273.04	3767.08	1462.45	77.63	-1460.39	1462.45	273.04	.00
4885.80	89.21	273.04	3768.46	1562.44	82.94	-1560.24	1562.44	273.04	.00
4985.80	89.21	273.04	3769.84	1662.43	88.25	-1660.09	1662.43	273.04	.00
5085.80	89.21	273.04	3771.22	1762.43	93.56	-1759.94	1762.43	273.04	.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
5185.80	89.21	273.04	3772.60	1862.42	98.86	-1859.79	1862.42	273.04	.00
5285.80	89.21	273.04	3773.98	1962.41	104.17	-1959.64	1962.41	273.04	.00
5385.80	89.21	273.04	3775.36	2062.40	109.48	-2059.49	2062.40	273.04	.00
5485.80	89.21	273.04	3776.74	2162.39	114.79	-2159.34	2162.39	273.04	.00
5585.80	89.21	273.04	3778.12	2262.38	120.10	-2259.19	2262.38	273.04	.00
5685.80	89.21	273.04	3779.50	2362.37	125.40	-2359.04	2362.37	273.04	.00
5785.80	89.21	273.04	3780.88	2462.36	130.71	-2458.89	2462.36	273.04	.00
5885.80	89.21	273.04	3782.26	2562.35	136.02	-2558.74	2562.35	273.04	.00
5985.80	89.21	273.04	3783.64	2662.34	141.33	-2658.59	2662.34	273.04	.00
6085.80	89.21	273.04	3785.02	2762.33	146.63	-2758.44	2762.33	273.04	.00
6185.80	89.21	273.04	3786.40	2862.32	151.94	-2858.28	2862.32	273.04	.00
6285.80	89.21	273.04	3787.78	2962.31	157.25	-2958.13	2962.31	273.04	.00
6385.80	89.21	273.04	3789.16	3062.30	162.56	-3057.98	3062.30	273.04	.00
6485.80	89.21	273.04	3790.54	3162.29	167.87	-3157.83	3162.29	273.04	.00
6585.80	89.21	273.04	3791.92	3262.28	173.17	-3257.68	3262.28	273.04	.00
6685.80	89.21	273.04	3793.30	3362.27	178.48	-3357.53	3362.27	273.04	.00
6785.80	89.21	273.04	3794.68	3462.26	183.79	-3457.38	3462.26	273.04	.00
6885.80	89.21	273.04	3796.06	3562.25	189.10	-3557.23	3562.25	273.04	.00
6985.80	89.21	273.04	3797.44	3662.24	194.41	-3657.08	3662.24	273.04	.00
7085.80	89.21	273.04	3798.82	3762.23	199.71	-3756.93	3762.23	273.04	.00
7185.80	89.21	273.04	3800.20	3862.23	205.02	-3856.78	3862.23	273.04	.00
7285.80	89.21	273.04	3801.58	3962.22	210.33	-3956.63	3962.22	273.04	.00
7385.80	89.21	273.04	3802.96	4062.21	215.64	-4056.48	4062.21	273.04	.00
7485.80	89.21	273.04	3804.34	4162.20	220.95	-4156.33	4162.20	273.04	.00
7585.80	89.21	273.04	3805.72	4262.19	226.25	-4256.18	4262.19	273.04	.00
7685.80	89.21	273.04	3807.10	4362.18	231.56	-4356.03	4362.18	273.04	.00
7785.80	89.21	273.04	3808.48	4462.17	236.87	-4455.88	4462.17	273.04	.00
7885.80	89.21	273.04	3809.86	4562.16	242.18	-4555.73	4562.16	273.04	.00
7985.80	89.21	273.04	3811.24	4662.15	247.48	-4655.58	4662.15	273.04	.00
8085.80	89.21	273.04	3812.62	4762.14	252.79	-4755.43	4762.14	273.04	.00
8185.80	89.21	273.04	3814.00	4862.13	258.10	-4855.27	4862.13	273.04	.00
8285.80	89.21	273.04	3815.38	4962.12	263.41	-4955.12	4962.12	273.04	.00
8385.80	89.21	273.04	3816.76	5062.11	268.72	-5054.97	5062.11	273.04	.00
8485.80	89.21	273.04	3818.14	5162.10	274.02	-5154.82	5162.10	273.04	.00
8585.80	89.21	273.04	3819.52	5262.09	279.33	-5254.67	5262.09	273.04	.00
8685.80	89.21	273.04	3820.90	5362.08	284.64	-5354.52	5362.08	273.04	.00
8785.80	89.21	273.04	3822.28	5462.07	289.95	-5454.37	5462.07	273.04	.00
8885.80	89.21	273.04	3823.66	5562.06	295.26	-5554.22	5562.06	273.04	.00
Proposed End of Lateral									
8975.25	89.21	273.04	3824.90	5651.50	300.00	-5643.54	5651.50	273.04	.00

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



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
30-039-30079	72400	EAST BLANCO PICTURED CLIFFS

[4] Property Code	[5] Property Name	[6] Well Number
27470	JICARILLA 29-02-04	143

[7] OGRID No.	[8] Operator Name	[9] Elevation
013925	BLACK HILLS GAS RESOURCES	7494'

[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
O	4	29-N	2-W		900	SOUTH	2145	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
O	5	29-N	2-W		1200	SOUTH	2500	EAST	RIO ARRIBA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160 - SW/4 SECTION 4 160 - SE/4 SECTION 5			NSL-4355

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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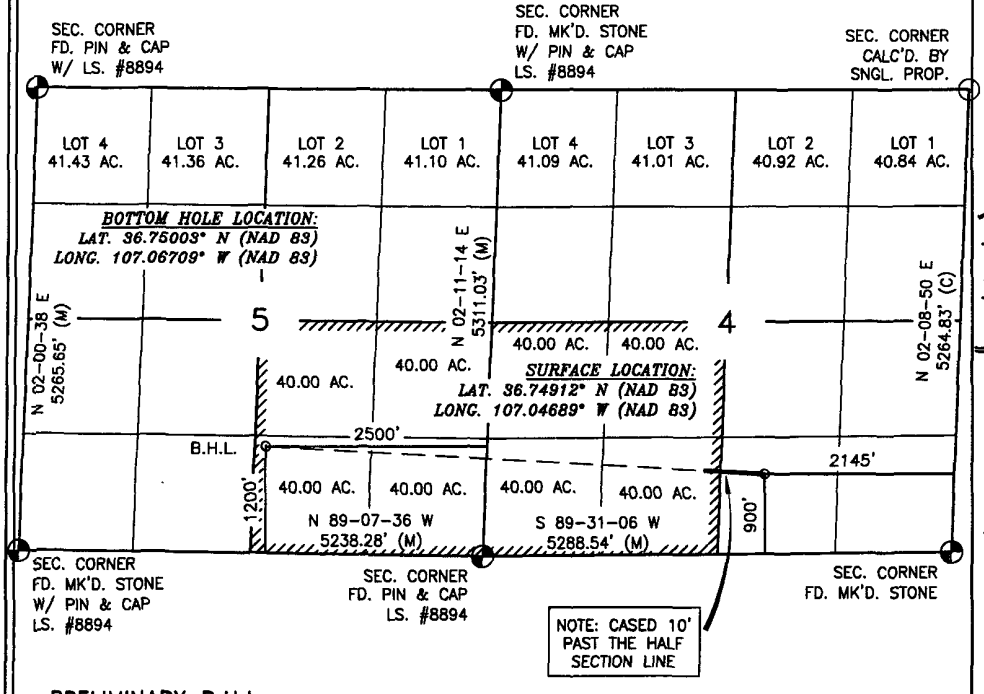

PRELIMINARY B.H.L.
B.H.L. FOOTAGES ARE APPROXIMATE
AND PROVIDED BY B.H.G.R.
CLIENT

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.

Signature — Date: 5/16/08

Printed Name: Daniel Manus

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 knowledge and belief.

OCTOBER 7, 2005
Date of Survey

Signature and Seal of Professional Surveyor:

8894
Certificate Number