

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.**

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: 1,770' FNL 944' FEL Unit H (SE/NE) Sec 11 T29N R04W**  
**Bottom: ± 1770' FNL ± 700' FWL Unit E (SW/NW) Sec 11 T29N R04W**

5. Lease Serial No.  
**NM18316**  
6. If Indian, Allottee, or Tribe Name  
7. If Unit or CA, Agreement Name and/or No.  
8. Well Name and No.  
**Carson 29-04-11 #2**  
9. API Well No.  
**30-039-20649**  
10. Field and Pool, or Exploratory Area  
**Choza Mesa 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			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Add</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and abandon	<input type="checkbox"/> Temporarily Abandon	<u>Horizontal Lateral</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug back	<input type="checkbox"/> 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 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 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 reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The initial APD was submitted by Continental Oil Company on June 6, 1973, approved and given API# 30-039-20649. Black Hills Gas Resources (BHGR) is submitting the following sundry to horizontally re-enter the existing well bore and add a second horizontal lateral into the bottom of the PC formation. The initial upper PC horizontal lateral was submitted via sundry February 13, 2007 and approved. BHGR plans to plug and abandon the upper lateral, a separate sundry will be submitted for this activity. There will be no changes to disturbance and the target bottom hole will be ±1770 FNL and ±700 FWL. Attached is the updated C-102 and the horizontal drilling plan.

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOC D FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOC D PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

RCVD AUG 19 '08  
OIL CONS. DIV.  
DIST. 3  
NOTIFY AZTEC OGD 24 HRS.  
PRIOR TO CASING & CEMENT

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

Name (Printed/ Typed)

**Lynn H. Benally**

Title

**Regulatory Specialist**

Signature

Date

**Aug 15, 2008**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

**Original Signed: Stephen Mason**

Title

Date

**AUG 18 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.

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)

**NMOC D**

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**

<sup>1</sup> API Number 30-039-20649		<sup>2</sup> Pool Code 74960		<sup>3</sup> Pool Name CHOZA MESA/PICTURED CLIFFS	
<sup>4</sup> Property Code 301947		<sup>5</sup> Property Name CARSON 29-4-11			<sup>6</sup> Well Number 2H
<sup>7</sup> GRID No. 013925		<sup>8</sup> Operator Name BLACK HILLS GAS RESOURCES			<sup>9</sup> Elevation 7066'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	11	29-N	4-W		1770	NORTH	944	EAST	RIO ARriba

<sup>11</sup> 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
E	11	29-N	4-W		1770	NORTH	700	WEST	RIO ARriba

<sup>12</sup> Dedicated Acres N/2 = PROJECT AREA 320 ACRES		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.	
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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		17	
<p>CALC'D. CORNER BY DBL. PROP.</p> <p>700'</p> <p>B.H.L.</p> <p>1770'</p> <p>BOTTOM HOLE: LAT: 36.74188° N. (NAD 83) LONG: 107.22992° W. (NAD 83) LAT: 36°44'30.78371" N. (NAD 27) LONG: 107°13'47.70407" W. (NAD 27)</p>		<p>CALC'D. CORNER BY DBL. PROP.</p> <p>1770'</p> <p>944'</p> <p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Lynn H. Benally</i> 8/15/08 Signature Date Lynn H. Benally Printed Name</p>	
18		19	
<p>N 00-14-19 W 5255.91' (C)</p> <p>PRELIMINARY B.H.L. B.H.L. FOOTAGES ARE APPROXIMATE AND PROVIDED BY B.H.G.R. CLIENT</p> <p>CALC'D. CORNER BY DBL. PROP.</p>		<p>S 00-04-14 E 5246.5' (C)</p> <p>SURFACE: LAT: 36.74132° N. (NAD 83) LONG: 107.21800° W. (NAD 83) LAT: 36°44'28.76821" N. (NAD 27) LONG: 107°13'04.79128" W. (NAD 27)</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>MAY 24 2005 Date of Survey Signature and Seal of Professional Surveyor: ROY A. RUSH 8894 8894 Certificate Number</p>	



## Black Hills Gas Resources

### Carson 29-04-11 #2

Surface Location: 1,770' FNL 944' FEL (SE/NE) Unit H  
Sec.11 T29N R04W

Bottom Hole:  $\pm 1770'$  FNL  $\pm 700'$  FWL (SW/NW) Unit E  
Sec.11 T29N R04W

Rio Arriba County, New Mexico

Lease: NM18316

### 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 NOS process includes an onsite meeting which was held on as determined by Carson National Forest Service (FS) at which time the specific concerns of Black Hills Gas Resources (BHGR) and FS.

SURFACE FORMATION – San Jose

GROUND ELEVATION – 7,066' GL

ESTIMATED FORMATION TOPS - (Water, oil, gas and/or other mineral-bearing formations)

Lower Pictured Cliffs      4050'      Sandstone, shales & siltstones

**TOTAL DEPTH      3923'      TVD      7323' TMD**

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

Lower Pictured Cliffs      4050'      Gas, water, sand

### HORIZONTAL RE-ENTRY DRILLING PROGRAM

- A. It is planned to abandon the upper lateral before drilling the lower lateral.
- B. A plug will be set approximately 170 feet into the existing upper lateral.
- C. Kick Off Point for the lower lateral will use the previously milled drilling window estimated to be  $\pm 3705$  to 3718' TVD. The lateral will utilize approximately 100 feet of the existing upper lateral before turning the radius.

### **CASING PROGRAM**

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0-250'	12-1/4"	8-5/8"	K-55 24#ST&C	To Surface (previously set)
0-3718 TVD'	7-7/8"	5 1/2 "	K-55 15.5#LT&C	To Surface (previously set)
3718 TVD-End of Lateral Bore	4-3/4"	Open hole**	Open hole	

\*\* If hole instability is encountered, a 2-7/8", 6.5#, J-55 uncemented liner may be run in the 4 3/4" open hole section.

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

0'	-	250'	Fresh water – M.W. 8.5 ppg, Vis 30-33
250'	-	TD'	Fresh water- Low solids non-dispersed
			M.W. 8.5 – 9.2 ppg
			Vis – 28 – 50 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<sub>2</sub>S: See attached H<sub>2</sub>S plan in event H<sub>2</sub>S is encountered.
- D) Estimated bottomhole pressure: 1143 psi

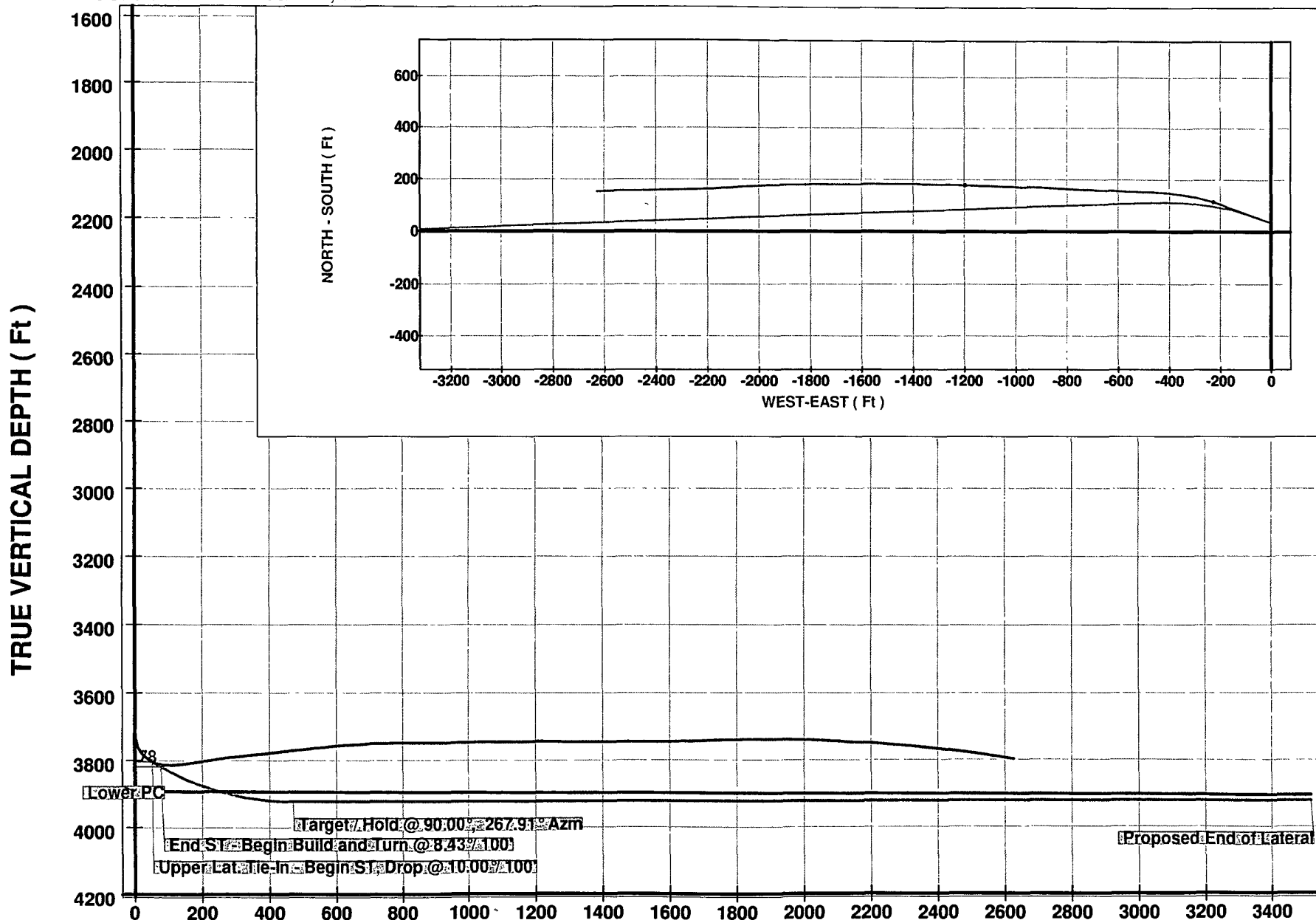
ANTICIPATED START DATE

September 1, 2008

COMPLETION

The location pad will be 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.

Job Number: 81xxxx  
 Company: Black Hills Gas Resources  
 Lease/Well: Carson 29-04 11 # 2  
 Location: Rio Arriba Co., NM



VERTICAL SECTION ( Ft ) @ 270.00°



Job Number: 81xxxx  
 Company: Black Hills Gas Resources  
 Lease/Well: Carson 29-04 11 # 2  
 Location: Rio Arriba Co., NM  
 Rig Name:  
 RKB:  
 G.L. or M.S.L.:

State/Country: NM/USA  
 Declination:  
 Grid:  
 File name: Z:\BLACKH~1\NEWWEL~1\CARSON~1\2904112.SV  
 Date/Time: 09-Jul-08 / 14:41  
 Curve Name: Carson 29-04-11 #2 Lower Lat. Plan 7-09-08

**Carson 29-04-11 #2 Lower Lat. Plan 7-09-08**

WINSERVE PROPOSAL REPORT  
 Minimum Curvature Method  
 Vertical Section Plane 270.00  
 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
Upper Lat. Tie-In - Begin ST, Drop @ 10.00% 100'									
3826.00	63.70	287.90	3804.29	53.03	53.71	-53.03	75.47	315.36	.00
End ST - Begin Build and Turn @ 8.43% 100'									
3856.00	60.70	287.90	3818.28	78.28	61.86	-78.28	99.77	308.32	10.00
3886.00	62.74	286.20	3832.49	103.54	69.60	-103.54	124.76	303.91	8.43
3916.00	64.80	284.57	3845.75	129.48	76.74	-129.48	150.51	300.65	8.43
3946.00	66.88	282.98	3858.03	156.06	83.25	-156.06	176.88	298.08	8.43
3976.00	68.97	281.45	3869.30	183.23	89.13	-183.23	203.76	295.94	8.43
4006.00	71.08	279.96	3879.55	210.94	94.37	-210.94	231.08	294.10	8.43
4036.00	73.20	278.51	3888.75	239.12	98.95	-239.12	258.78	292.48	8.43
4066.00	75.33	277.09	3896.89	267.72	102.86	-267.72	286.81	291.02	8.43
4096.00	77.46	275.69	3903.95	296.70	106.11	-296.70	315.10	289.68	8.43
4126.00	79.61	274.32	3909.91	325.99	108.67	-325.99	343.62	288.44	8.43
4156.00	81.76	272.97	3914.77	355.53	110.56	-355.53	372.32	287.27	8.43
4186.00	83.91	271.63	3918.51	385.27	111.75	-385.27	401.15	286.18	8.43
4216.00	86.07	270.31	3921.13	415.15	112.26	-415.15	430.06	285.13	8.43
4246.00	88.23	268.99	3922.62	445.11	112.07	-445.11	459.00	284.13	8.43
Target / Hold @ 90.00°, 267.91° Azm									
4270.61	90.00	267.91	3923.00	469.70	111.41	-469.70	482.73	283.34	8.43
4370.61	90.00	267.91	3923.00	569.63	107.75	-569.63	579.73	280.71	.00
4470.61	90.00	267.91	3923.00	669.56	104.10	-669.56	677.61	278.84	.00
4570.61	90.00	267.91	3923.00	769.50	100.45	-769.50	776.03	277.44	.00
4670.61	90.00	267.91	3923.00	869.43	96.80	-869.43	874.80	276.35	.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	
4770.61	90.00	267.91	3923.00	969.36	93.15	-969.36	973.83	275.49	.00
4870.61	90.00	267.91	3923.00	1069.30	89.50	-1069.30	1073.04	274.78	.00
4970.61	90.00	267.91	3923.00	1169.23	85.85	-1169.23	1172.38	274.20	.00
5070.61	90.00	267.91	3923.00	1269.16	82.20	-1269.16	1271.82	273.71	.00
5170.61	90.00	267.91	3923.00	1369.10	78.55	-1369.10	1371.35	273.28	.00
5270.61	90.00	267.91	3923.00	1469.03	74.90	-1469.03	1470.94	272.92	.00
5370.61	90.00	267.91	3923.00	1568.96	71.25	-1568.96	1570.58	272.60	.00
5470.61	90.00	267.91	3923.00	1668.90	67.60	-1668.90	1670.27	272.32	.00
5570.61	90.00	267.91	3923.00	1768.83	63.95	-1768.83	1769.99	272.07	.00
5670.61	90.00	267.91	3923.00	1868.76	60.30	-1868.76	1869.74	271.85	.00
5770.61	90.00	267.91	3923.00	1968.70	56.65	-1968.70	1969.51	271.65	.00
5870.61	90.00	267.91	3923.00	2068.63	53.00	-2068.63	2069.31	271.47	.00
5970.61	90.00	267.91	3923.00	2168.56	49.34	-2168.56	2169.13	271.30	.00
6070.61	90.00	267.91	3923.00	2268.50	45.69	-2268.50	2268.96	271.15	.00
6170.61	90.00	267.91	3923.00	2368.43	42.04	-2368.43	2368.80	271.02	.00
6270.61	90.00	267.91	3923.00	2468.36	38.39	-2468.36	2468.66	270.89	.00
6370.61	90.00	267.91	3923.00	2568.30	34.74	-2568.30	2568.53	270.78	.00
6470.61	90.00	267.91	3923.00	2668.23	31.09	-2668.23	2668.41	270.67	.00
6570.61	90.00	267.91	3923.00	2768.16	27.44	-2768.16	2768.30	270.57	.00
6670.61	90.00	267.91	3923.00	2868.10	23.79	-2868.10	2868.20	270.48	.00
6770.61	90.00	267.91	3923.00	2968.03	20.14	-2968.03	2968.10	270.39	.00
6870.61	90.00	267.91	3923.00	3067.96	16.49	-3067.96	3068.01	270.31	.00
6970.61	90.00	267.91	3923.00	3167.90	12.84	-3167.90	3167.92	270.23	.00
7070.61	90.00	267.91	3923.00	3267.83	9.19	-3267.83	3267.84	270.16	.00
7170.61	90.00	267.91	3923.00	3367.76	5.54	-3367.76	3367.77	270.09	.00
7270.61	90.00	267.91	3923.00	3467.70	1.89	-3467.70	3467.70	270.03	.00
Proposed End of Lateral									
7322.35	90.00	267.91	3923.00	3519.40	.00	-3519.40	3519.40	270.00	.00