

Commonwealth of Virginia Department of Mines, Minerals, and Energy Division of Gas and Oil

P.O. Box 1416; Abingdon, VA 24212

CNX Gas Company LLC

CBM BF104A W/PL

Telephone: (276) 676-5423

719

BU-3518

	Operati	on Type:	Coalbed/Pipeline Original			
	Drilling	Report Type:				
DRILLING REPORT (DGO-GO-14)						
1. Drilling Data						
Date drilling commenced:	7/9/2007	Drilling Contra	actor:	Noah Horn		
Date drilling completed:	7/13/2007	J		✓ Rotary ☐ Cable Tool		
Driller's Total Depth (feet):	2,800	3	, ,,,			
Log Total Depth (feet):	2,807	Coal Seam At	Total I	Depth PARDEE		
2. Final Location Plat (as red	uired by 4 VAC25-1	50-360.C.)				
Permitted State Plane X 974	Final Plat State Plane X: 974,007					
Permitted State Plane Y: 290	0,976	Final Plat State Plane Y: 290,980				
☐ Plat Previously Submitted	Or					
List of Attached Items:						
Descrip	tion			FileName		
Pla	t	BF104A Plat.pdf				
3. Geological Data						
Fresh Water At:						
Depth (in feet) Rate Unit of Measure						
Salt Water At:	Salt Water At:					
Donth	(in feet)		Rate	Unit of Measure		
Deptil	(III leet)		Nate	Offic Of Micasure		

Tracking Number:

Operations Name:

Company:

File Number:

Form DGO-GO-14-E Rev. 1/2007

Coal Seams

List of Attached Items:

Description	FileName
Exhibit A	BF104A Exhibit A.pdf

Gas and Oil Shows

List of Attached Items:

Description	FileName		
Gas Show	BF104A Gas Show.xls		

4. Electric Logs (As required by 4VAC25-150-280.A.)

List all logs run: Caliper, Gamma, Density, Temp, Deviation

Did logs disclose vertical locations of a coal seam? ✓ Yes □ No

5. Survey Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

Description	FileName		
Deviation	BF104A Deviation.pdf		

6. Casing and Tubing Program

List of Attached Items:

Description	FileName
Casting	BF104a Casing.xls

7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

Description	FileName		
Drill Data	BF104A Drill Data.pdf		

9. Comments

10. Signature

Permitee: CNX Gas Company LLC Date: 10/10/2007 (Company)

Signed By: Leslie K. Arrington Title: Manager (Signature)

INTERNAL USE ONLY

Submit Date: 10/10/2007

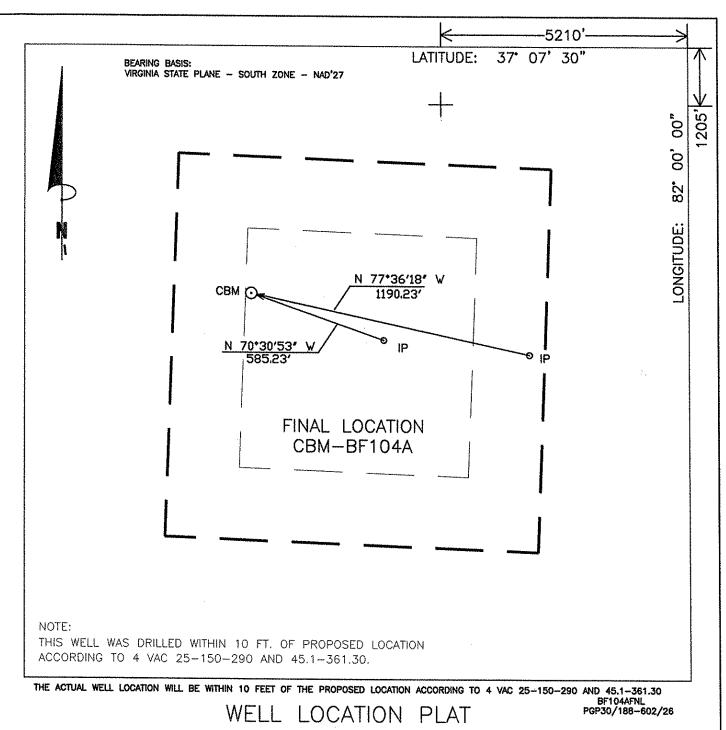
Status: Inspr Approved Date: 10/10/2007

Final PDF Date: 10/10/2007

Form DGO-GO-14-E

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Rev. 1/2007



TRACT NUM	CNX GAS COMPANY, LLC, WELL NAME OR NUMBERCBM—BF104A MBERTAZEWELL COAL & IRON QUADRANGLEBIG_A MOUNTAIN HURRICANE
ELEVATION:	CONTROL STATE PLANE: N 290,980.23 E 974,006.86 2652.21' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S BUCHANAN Scale: 1" = 400' Date 07-13-07
THIC DLAT	IS A NEW PLAT; AN UPDATED PLAT; OR A FINAL LOCATION RDATX Denotes the location of a well on United States Topographic Maps, scale to 24,000, latitude and longitude lines being represented by border lines as shown (optional). DANNY R. PRICE
DGO-GO-7 10/96	Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal) Lic. No. 008540 7/13/07

Exhibit A

Well Name: 07 CBM BF104A

SURFACE ELEV: 2652.21 EASTING: 974006.86 NORTHING: 290980.23

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
COAL			2576.31 2574.71		
COAL		140.80 146.90		1.80 6.10	
COAL	146.90 147.80	147.80 221.50	2505.31 2504.41	0.90 73.70	
LB1	221.50 224.90	224.90 379.90	2430.71 2427.31	3.40	
KN1	379.90 381.00	381.00 403.90	2272.31 2271.21	1.10 22.90	
KN2		407.50 544.10		136.60	
AL1	544.10 544.20	544.20 607.90	2108.11 2108.01	0.10 63.70	
AL2	607.90 609.00	609.00 625.30	2044.31 2043.21	1.10 16.30	
COAL	625.30 625.50	625.50 660.30	2026.91 2026.71		
RA1	660.50	660.50 712.80	1991.91 1991.71	52.30	
RA2		714.90 748.50	1939.41 1937.31	33.60	
RA3	748.50 748.90	748.90 773.10	1903.71 1903.31	0.40 24.20	
COAL	773.10 773.70	773.70 870.00	1879.11 1878.51		
JB1	870.00 872.20	872.20 872.90	1782.21 1780.01	0.70	
JB2	873.00	873.00 897.10	1779.21	0.10	
JB3	898.50	898.50 954.10	1755.11 1753.71	1.40 55.60	
T2	954.10 954.70	954.70 1031.90	1698.11 1697.51	0.60 77.20	
*T1	1031.90 1032.90	1037.30	1620.31 1619.31	4.40	
*TI	1037.30 1038.60	1038.60 1183.10	1614.91 1613.61	1.30 144.50 0.80	
*US1	1183.10 1183.90	1183.90 1185.10	1469.11 1468.31	1.20 0.90	
*LC2	1185.10 1186.00	1186.00 1187.80	1467.11 1466.21	1.80 0.20	
*LC3	1187.80 1188.00	1188.00 1188.20	1464.41 1464.21	0.20	
*LC4	1188.20 1190.40	1190.40 1336.10	1464.01 1461.81 1316.11	2.20 145.70 0.60	
*GC1	1336.10 1336.70	1336.70 1336.90	1315.51	0.20	

*GC1	1336.90	1337.90	1315.31	1.00
	1337.90	1469.90	1314.31	132.00
*SE2	1469.90	1470.80	1182.31	0.90
0112	1470.80	1524.70	1181.41	53.90
4 T 03		1525.50	1127.51	0.80
*LS1	1524.70			
	1525.50	1525.70	1126.71	0.20
*LS2	1525.70	1525.90	1126.51	0.20
	1525.90	1588.00	1126.31	62.10
*LS3	1588.00	1590.50	1064.21	2.50
	1590.50	1645.10	1061.71	54.60
*UH2	1645.10	1647.00	1007.11	1.90
	1647.00	1668.30	1005.21	21.30
*UH3	1668.30	1669.30	983.91	1.00
0115	1669.30	1706.10	982.91	36.80
4 NATT 7	1706.10	1707.10	946.11	1.00
*MH1				
	1707.10	1786.90	945.11	79.80
*MH2	1786.90	1787.40	865.31	0.50
	1787.40	1833.00	864.81	45.60
*P11	1833.00	1835.80	819.21	2.80
	1835.80	1842.80	816.41	7.00
*P10	1842.80	1843.10	809.41	0.30
	1843.10	1847.30	809.11	4.20
*LH1	1847.30	1849.00	804.91	1.70
11111	1849.00	1902.70	803.21	53.70
*LH3	1902.70	1904.30	749.51	1.60
"LING			747.91	27.70
1 = 0.4	1904.30	1932.00		
*P91	1932.00	1933.90	720.21	1.90
	1933.90	1986.00	718.31	52.10
*P81	1986.00	1986.90	666.21	0.90
	1986.90	1987.20	665.31	0.30
*P81	1987.20	1987.60	665.01	0.40
	1987.60	1988.20	664.61	0.60
*P82	1988.20	1988.80	664.01	0.60
	1988.80	1994.30	663.41	5.50
*P71	1994.30	1995.00	657.91	0.70
x - 4x	1995.00	2045.50	657.21	50.50
*COAL	2045.50	2045.90	606.71	0.40
"COMI		2046.80	606.31	0.90
40077	2045.90			0.90
*COAL	2046.80	2047.70	605.41	
	2047.70	2120.50	604.51	72.80
*COAL	2120.50	2121.00	531.71	0.50
	2121.00	2156.30	531.21	35.30
*COAL	2156.30	2156.50	495.91	0.20
	2156.50	2156.90	495.71	0.40
*COAL	2156.90	2157.20	495.31	0.30
	2157.20	2171.00	495.01	13.80
*COAL	2171.00	2171.50	481.21	0.50
001123	2171.50	2347.80	480.71	176.30
*P41	2347.80	2348.50	304.41	0.70
LAT	2348.50	2375.10	303.71	26.60
4500				
*P43	2375.10	2375.30	277.11	0.20
	2375.30	2446.30	276.91	71.00
*P31	2446.30	2447.10	205.91	0.80
	2447.10	2464.70	205.11	17.60
*P32	2464.70	2465.80	187.51	1.10
	2465.80	2466.10	186.41	0.30
*P33	2466.10	2466.40	186.11	0.30
	2466.40	2515.00	185.81	48.60
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*P34	2515.00	2515.80	137.21	0.80
	2515.80	2587.20	136.41	71.40
*P01	2587.20	2587.90	65.01	0.70
	2587.90	2596.70	64.31	8.80
*COAL	2596.70	2597.00	55.51	0.30
	2597.00	2658.90	55.21	61.90
*SJ3	2658.90	2659.10	-6.69	0.20
	2659.10	2806.88	-6.89	147.78

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BARON FORK.

GAMMA-CALIPER LOG FROM 0 TO 501.00 GAMMA-DENSITY LOG FROM 501.00 TO TD.

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION FILE: D:\PROJECTS\VP_JJK\GAS\BF104A.CMP

DATE: 08/27/07

Well: BF104A

Oil & Gas Show

Formation	Тор	Bottom	Thickness	IPF	Pressure	Hours
				(MCFD/BOPD)		Tested
Lee/Norton	1032	1933	901			
Pocahontas	2464	2466	2			
Total IPF				Not Taken		

COMPU-LOG DEVIATION

CLIENT: CONSOL ENERGY

LOCATION:

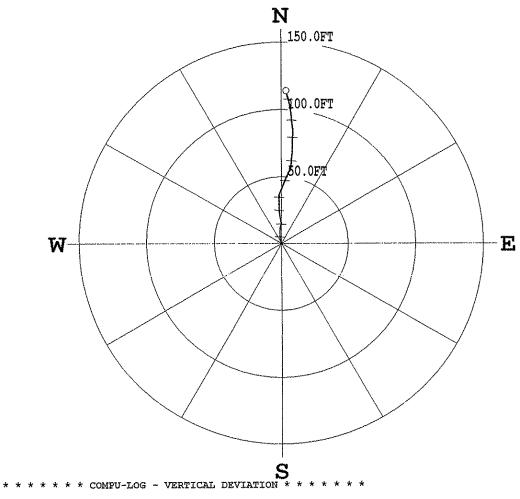
HOLE ID: 07-CNX-BF-104A DATE OF LOG: 07/12/07 PROBE: 9136CH 1279



SCALE: 50 FT/IN
TRUE DEPTH: 2803.79 E

AZIMUTH: 1.9

DISTANCE: 113.9 FT + = 300 FT INCR O = BOTTOM OF HOLE



CLIENT : CONSOL ENERGY HOLE ID. : 07-CNX-BF-104
FIELD OFFICE : 0'DRISCOLL DATE OF LOG : 07/12/07
DATA FROM : FROBE : 9136CH , 1279
MAG. DECL. : -7.100 DEPTH UNITS : FEET
LOG: 07-CNX-BF-104A_07-12-07_22-27_9136CH_.10_0.00_2806.70_DEVI.log

	-	_			_		
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	MGB
0.50	0.50	0.00	0.00	0.0	0.0	0.0	0.0
10,00	10.00	0.00	0.00	0.0	18.4	0.2	50.9
20.00	20.00	-0.00	0.00	0.0	139.8	0.2	231.5
30.00	30.00	0.03	0.01	0.0	20.4	0.3	23.7
40.00	40.00	0.09	0.03	0.1	15.9	0.5	6.2
50.00	50.00	0.19	0.03	0.2	10.0	0.7	1.1
60.00	60.00	0.32	0.02	0.3	3.9	0.9	345.0
70.00	70.00	0.47	-0.02	0.5	357.3	0.9	341.9
80.00	80.00	0.61	-0.09	0.6	351.3	1.0	325.6
90.00	89.99	0.72	-0.19	0.7	345.5	0.7	323.2
100.00	99,99	0.81	-0.26	0.9	342.0	0.7	314.3
110.00	109.99	0.86	-0.32	0.9	339.8	0.5	318.3
120.00	119.99	0.93	-0.34	1.0	339.9	0.5	0.3
130.00	129.99	1.05	-0.35	1.1	341.8	13	4.8
140.00	139.99	1.29	-0.39	1.3	343.4	1.1	342.2
150.00	149.99	1.51	-0.46	1.6	343,1	1, 4	330.0
160.00	159.98	1.66	-0.55	1.8	341.7	0.8	337.4
170.00	169.98	1.78	-0.62	1.9	340.9	0.9	338.1
180.00	179.98	1.90	-0.66	2.0	340.9	0.9	350.5
190.00	189.98	2.08	~0.68	2.2	341.8	1.2	0.9
200.00	199.98	2.35	-0.72	2.5	342.9	1.5	356.4
210.00	209.97	2,62	-0.77	2.7	343.7	1.4	350.9
220.00	219.97	2.88	-0.82	3.0	344.2	1.4	0.3
230.00	229.97	3.13	-0.88	3.3	344.2	1.2	333.8
240.00	239.96	3.35	-0.96	3.5	344.0	1.3	342.1
250.00	249.96	3.53	-1.00	3.7	344.2	1.1	336.1
260 00	250 06	2 72	_፣ በቁ	3 0	A VV	1 4	3EB 1

13V.VV	123.33	1.00	~v.55	ىك. بىل.	34T.0	1.3	₩.0
140.00	1.39.99	1.29	-0.39	1.3	343.4		342.2
150.09	149.99	1.51	-0.46	1.6	343.1		330.0
160.00	159.98	1.66	-0.55	1.8	341.7		337.4
170.00	169.98	1.78	-0.62	1.9	340.9	0.9	338.1
180.00	179.98	1.90	-0.66	2.0	340.9	0.9	350.5
190.00	189.98	2.08	-0.68	2.2	341.8	1.2	0.9
200.00	199.98	2.35	-0.72	2.5	342.9	1.5	356.4
210.00	209.97	2.62	-0.77	2.7	343.7	1.4	350.9
220.00	219.97	2.88	-0.82	3.0	344.2	1.4	0.3
	229.97	3.13	-0.88	3.3	344.2	1.2	333.8
230.00		3.35	-0.96	3.5	344.0	1.3	342.1
240.00	239.96					1.1	336.1
250.00	249.96	3.53	-1.00	3.7	344.2		
260.00	259.96	3.73	-1.03	3.9	344.5	1.4	358.1
270.00	269.96	4.03	-1.05	4.2	345.4	1.7	355.4
280.00	279.95	4.34	-1.07	4.5	346.2	1.8	352.8
290.00	289.95	4.64	-1.10	4.8	346.7	1.9	352.6
300.00	299.94	4.86	-1.14	5.0	346.8	0.8	2,6
310.00	309.94	5.06	-1.15	5.2	347.2	1.2	359.0
320.00	319.94	5.33	-1.14	5.4	347.9	1.9	355 4
	329.93	5.73	-1.14	5.8	348.7	2.2	358.6
330.00		6.12	-1.14	6.2	349.5	2.2	351.5
340.00	339.92		-1.14	6.5	349.9	1.9	358.7
350.00	349.92	6.43				1.4	357.7
360.00	359.91	6.73	-1.15	6.8	350.3		
370.00	369.91	6.97	-1.14	7.1	350.7	1.8	3.7
380.00	379.90	7.30	-1.13	7.4	351.2	2.0	1.0
390.00	389.90	7.67	-1.11	7.7	351.8	2.0	357.7
400.00	399.89	7.96	-1.11	8.0	352.1	1.2	1.8
410.00	409.89	8.30	-1.10	8.4	352.5	2.0	2.1
420.00	419.88	8.66	~1.09	8.7	352.8	2.1	16.3
430.00	429.87	8.97	-1.10	9.0	353.0	1.5	1.3
440.00	439.87	9.21	-1.10	9.3	353.2	1.3	359.6
450.00	449.87	9.44	-1.09	9.5	353.4	1.3	0.5
	459.87	9.68	-1.08	9.7	353.7	1.3	4.1
460.00			-1.05	10.1	354.0	2.0	2.6
470.00	469.86	10.00		10.4	354.3	2.1	3.2
480.00	479.85	10.36	-1.04				
490.00	489.85	10.69	-1.05	10.7	354.4	1.9	359.7
500.00	499.85	10.96	-1.06	11.0	354.5	1.4	354.5
510.00	509.84	11.32	-0.98	11.4	355.0	2.2	2.7
520.00	519.83	11.70	-0.91	11.7	355.5	2.3	9.5
530.00	529.82	12.14	-0.85	12.2	356.0	2.6	9.4
540.00	539.81	12.56	-0.74	12.6	356.6	2.5	54.8
550.00	549.80	12.83	-0.59	12.8	357.4	2.2	336.7
560.00	559.79	13.18	-0.51	13.2	357.8	2.2	330.4
570.00	569.79	13.58	-0.46	13.6	358.1	2.3	355.5
580.00	579.78	13.97	-0.41	14.0	358.3	2.4	40.1
590.00	589.77	14.31	-0.26	14 3	359.0	2.3	9.5
		14.29	-0.02	14.3	359.9	2.2	81.3
600.00	599.76	14.61	-0.02	14.6	359.7	2.0	338.9
610.00	609.75		-0.03	15.0	359.7	2.3	8.1
620.00	619.75	14.97			359.4		
630.00	629.74	15.34	-0.17	15.3		2.1	348.9
640.00	639.73	15.71	-0.22	15.7	359.2	2.1	348.6
650.00	649.73	16.06	-0.33	16.1	358.8	2.0	331.2
660.00	659.72	16.42	-0.35	16.4	358.8	2.4	358,8
670.00	669.71	16.82	-0.42	16.8	358.6	2.4	346.6
680.00	679.70	17.20	-0.56	17.2	358.1	2.3	
690.00	689.69	17.60	-0.58	17.6	358.1	2.4	349.4
700.00	699.68	18.00	-0.62	18.0	358.0	2.3	11.1
710.00	709.68	18.39	-0.63	18.4	359.0	2.2	310.5
720.00	719.67	18.65	-0.75	18.7	357.7	2.1	26.9
730.00	729.66	19.01	-0.80	19.0	357.6	2.1	325.3
740.00	739.66	19.30	-0.89	19.3	357.4	2.3	61.3
750.00	749.65	19 66	-0.85	19.7	357.5	2.1	347.9
	759.64	19.99	-0.99	20.0	357.2	2.1	338.6
760.00		20.36	-1.01	20.4	357.1	2.3	17.6
770.00	769.63	20.35	-1.07	20.8	357.0	2.2	355.6
780.00	779.63			21.1	356.9	2.2	345.7
790.00	789.62	21.12	-1.15	21.5	356.8	2.2	352.7
800.00	799.61	21.49	-1.19			2.2	
810.00	809.61	21.85	-1.33	21.9	356.5		340.0
820.00	819.60	22.22	-1.35	22.3	356.5	2.2	8.9
830.00	829.59	22.60	-1.42	22.6	356.4	2.1	352.2
840.00	839.58	22.96	-1.48	23.0	356.3	2.1	339.1
850.00	849.58	23.33	-1.48	23.4	356.4	2.2	344.6
860.00	859.57	23.68	-1.54	23.7	356.3	2.1	19.4
870.00	869.56	23.96	-1.69	24.0	356.0	1.9	294.4
880.00	879.56	24.21	-1.60	24.3	356.2	2.6	17.8
890.00	889.55	24.51	-1.74	24.6	355.9	1.8	347.3
900.00	899.55	24.84	-1.75	24.9	356.0	1.9	347.7
910.00	909.54	25.18	-1.75	25.2	356.0	2.1	341.3
920.00	919.53	25.51	-1.80	25.6	356.0	1.9	11.7
930.00	929.53	25.85	-1.81	25.9	356.0	2.0	347.9
940.00	939.52	26.18	-1.84	26.2	356.0	1.9	7.1
950.00	949.52	26.51	-1.87	26.6	356.0	1.9	11.6
960.00	959.51	26.86	-1.86	26.9	356.0	1.9	6.5
	969.51	27.19	-1.87	27.3	356.1	1.9	0.2
970.00		27.51	-1.87	27.6	356.1	1.8	359.0
980.00	979.50			27.9	356.1	1.7	354.1
990.00	989.50	27.82	-1.88		356.1 356.2	1.7	2.8
1000.00	999.49	28.12	-1,88	28.2		1.7	352.6
1010.00	1009.49	28.43	-1.89	28.5	356.2		
1020.00	1019.48	28.72	-1.90	28.8	356.2	1.7	358,3
1030.00	1029.48	29.03	-1.91	29,1	356.2	1.7	345.4
1040.00	1039.47	29.34	-1.85	29.4	356.4	2.2	18.7
1050.00	1049.46	29.70	-1.88	29.8	356.4	1.9	353.3
1060.00	1059.46	30.03	-1.86	30.1	356.5	2.0	15.9
1070.00	1069.45	30.38	-1.84	30.4	356.5	1.9	2.5
1080.00	1079.45	30.72	-1.79	30.8	356.7	2.0	5.9
1090.00	1089.44	31.06	-1.78	31.1	356.7	1.9	5.4

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1020.00	1019.48	28.72	-1.90	28.8 29.1	356.2	1.7 358.3
1030.00 1040.00	1029.48 1039.47	29.03 29.34	-1.91 -1.85	29.4	356.2 356.4	1.7 345.4 2.2 18.7
1050.00	1049.46	29.70	-1.88	29.8	356.4	1.9 353.3
1060.00	1059.46	30.03	-1.86	30.1	356.5	2.0 15.9
1070.00	1069.45	30.38	-1.84	30.4	356.5	1.9 2.5
1080.00	1079.45	30.72	-1.79	30.8	356.7	2.0 5.9
1090.00	1089.44	31.06	-1.78	31.1	356.7	1.9 5.4
1100.00 1110.00	1099.43 1109.43	31.40 31.72	-1.78 -1.87	31.5 31.8	356.7 356.6	1.9 358.8 1.9 305.4
1120.00	1119.42	31.92	-1.79	32.0	356.8	2.5 63.4
1130.00	1129.41	32.24	-1.81	32.3	356.8	2.1 21.1
1140.00	1139.41	32.56	-1.89	32.6	356.7	2.2 351.6
1150.00	1149.40	32.87	-1.76	32.9	356.9	2.2 297.1
1160.00	1159.39	33.22	-1.79 -2.03	33.3	356.9	2.2 340.8
1170.00 1180.00	1169.38 1179.38	33.52 33.79	-2.03 -1.77	33.6 33.8	356.5 357.0	2.2 342.9 2.4 8.4
1190.00	1189.37	34.16	-1.88	34.2	356.9	2.1 320.6
1200.00	1199.36	34.45	-1.73	34.5	357.1	2.2 47.3
1210.00	1209.35	34.77	-1.76	34.8	357.1	2.2 358.8
1220.00	1219.35	35.13	-1.68	35.2	357.3	2.3 20.0
1230.00 1240.00	1229.34 1239.33	35.47 35.58	-1.58 -1.73	35.5 35.6	357.4 357.2	1.9 48.2 2.0 246.2
1250.00	1249.32	35.66	-1.98	35.7	356.8	2.8 11.9
1260.00	1259.31	36.12	-1.79	36.2	357.2	3.1 22.9
1270.00	1269.30	36.58	-1.60	36.6	357.5	2.8 23.3
1280.00	1279.29	37.04	-1.40	37.1	357.8	2.8 22.5
1290.00 1300.00	1289.27	37.49 37.95	-1.22 -1.04	37.5	358.1 358.4	2.8 23.7 2.9 21.8
1310.00	1299.26 1309.25	38.40	-0.85	38.0 38.4	358.7	2.8 22.0
1320.00	1319.24	38.86	-0.67	38.9	359.0	2.8 19.3
1330.00	1329.23	39.31	-0.50	39.3	359.3	2.7 24.0
1340.00	1339.21	39.76	-0.33	39.8	359.5	2.8 25.2
1350.00	1349.20	40.21	-0.15	40.2	359.8	2.9 19.1
1360.00 1370.00	1359.19 1369.18	40.66 41.12	0.03 0.23	40.7 41.1	0.0 0.3	2.9 22.0 2.7 24.3
1380.00	1379.17	41.57	0.40	41.6	0.6	2.8 25.8
1390.00	1389.15	42.01	0.58	42.0	0.8	2.7 22.1
1400.00	1399.14	42.46	0.77	42.5	1.0	2.8 18.8
1410.00	1409.13	42.90	0.93	42.9	1.2	2.7 26.2
1420.00	1419.12	43.34	1.12	43.4	1.5	2.9 20.0
1430.00 1440.00	1429.11 1439.10	43.80 44.24	1.28 1.47	43.8 44.3	1.7 1.9	2.7 20.0 2.9 20.1
1450.00	1449.08	44.71	1.66	44.7	2.1	2.8 22.3
1460.00	1459.07	45.17	1.82	45.2	2.3	2.7 17.2
1470.00	1469.06	45.63	1.97	45.7	2.5	2.7 36.7
1480.00	1479.05	46.07	2.17	46.1	2.7	3.0 17.7
1490.00	1489.04	46.54 47.02	2.37 2.57	46.6 47.1	2.9 3.1	2.9 19.8 2.9 21.8
1500.00 1510.00	1499.02 1509.01	47.48	2.79	47.6	3.4	3.0 27.8
1520.00	1519.00	47.96	2.97	48.1	3.5	2.8 23.0
1530.00	1528.98	48.42	3.16	48.5	3.7	3.0 22.9
1540.00	1538.97	48.87	3.37	49.0	3.9	2.9 22.5
1550.00	1548.96	49.34	3.57	49.5	4.1	2.8 24.8
1560.00 1570.00	1558.95 1568.93	49.78 50.23	3.77 3.96	49.9 50.4	4.3 4.5	2.8 22.8 2.8 23.2
1580.00	1578.92	50.68	4.17	50.9	4.7	2.9 28.1
1590.00	1588,91	51.12	4.39	51.3	4.9	2.8 24.6
1600.00	1598.90	51.56	4.61	51.8	5.1	2.8 29.1
1610.00	1608.89	52.01	4.82	52.2	5.3	2.8 25.0
1620.00 1630.00	1618.87 1628.86	52.44 52.87	5.03 5.24	52.7 53.1	5.5 5.7	2.8 29.1 2.7 32.7
1640.00	1638.85	53.29	5.45	53.6	5.8	2.7 23.6
1650.00	1648.84	53.74	5.64	54.0	6.0	2.9 20.2
1660.00	1658.83	54.17	5.89	54.5	6.2	2.9 26.3
1670.00	1668.81	54.63	6.10	55.0	6.4	2.8 28.2
1680.00 1690.00	1678.80 1688.79	55.06 55.53	6.32 6.50	55.4 55.9	6,5 6.7	2.8 22.3 2.9 25.1
1700.00	1698.78	55.99	6.66	56.4	6.8	2.8 14.7
1710.00	1708.76	56.48	6.79	56.9	6.9	2.9 12.7
1720.00	1718.75	56.97	6.94	57.4	6.9	3.1 14.9
1730.00	1728.74	57.50	7.04	57.9	7.0	3.1 11.0
1740.00 1750.00	1738.72 1748.71	58.01 58.56	7.16 7.20	58.5 59.0	7.0 7.0	3.1 3.2 3.3 2.7
1760.00	1758.69	59.14	7.30	59.6	7.0	3.7 0.5
1770.00	1768.67	59.74	7.38	60.2	7.0	3.5 9.2
1780.00	1778.65	60.37	7.44	60.8	7.0	3.7 4.2
1790.00	1788.63	61.00	7.49	61.5	7.0	3.6 8.4
1800.00 1810.00	1798.61 1808.59	61.64 62.29	7.55 7.61	62.1 62.8	7.0 7.0	3.7 0.1 3.6 8.9
1820.00	1818.57	62.23	7.66	63.4	6.9	3.7 3.5
1830.00	1828.55	63.56	7.67	64.0	6.9	3.5 3.1
1840.00	1838.53	64.17	7.75	64.6	6.9	3.6 0.5
1850.00	1848.51	64.81	7.78	65.3	6.8	3.6 6.9
1860.00	1858.49	65.45 66.10	7.83 7.91	65.9 66.6	6.8 6.8	3.7 7.0 3.8 6.1
1870.00 1880.00	1868.47 1878.45	66.10 66.75	7.91 7.95	67.2	6.8	3.7 2.5
1890.00	1888.42	67.39	8.01	67.9	6.8	3.6 7.1
1900.00	1898.40	68.03	8.03	68.5	6.7	3.6 6.3
1910.00	1908.38	68.65	8.08	69.1	€.7	3.7 3.9
1920.00	1918.37	69.27	8.14	69.7 70.4	6.7 6.7	3.6 6.1 3.5 1.6
1930.00 1940.00	1928.35 1938.33	69.88 70.48	8.16 8.22	70.4	6.6	3.5 1.6
1950.00	1948.31	71.09	8.24	71.6	6.6	3.4 0.4
1960.00	1958.29	71.67	8.27	72.1	6.6	3.4 358.7
1970.00	1968.28	72.25	8.29	72.7	6.5	3.3 2.2

1890.00	1888.42	67.39	6.01	91.9	۵.0	~ . w	
1900.00	1898.40	68.03	8.03	68.5	6.7	3.6	6.3
1910.00	1908,38	68,65	8,08	69.1	6.7	3.7	3.9
1920.00	1918.37	69.27	8.14	69.7	6.7	3.6	6.1
1930.00	1928.35	69.88	8.16	70.4	6.7	3.5	1.6
1940.00	1938.33	70.48	8.22	71.0	6.6	3.5	8.5
1950.00	1948.31	71.09	8.24	71.6	6.6	3.4	0.4
1960.00	1958.29	71.67	8.27	72.1	6.6	3.4	358.7
1970.00	1968.28	72.25	8.29	72.7	6.5	3.3	2.2
1980.00	1978.26	72.82	8.30	73.3	6.5 6.5	3.2 3.1	0.8 353.1
1990.00	1988.24	73.37	8.30 8.33	73.8 74.4	6.4	3.1	2.7
2000.00	1998.23	73.91 74.46	8.34	74.9	6.4	3.1	1.5
2010.00	2008.21 2018.20	75.00	8.35	75.5	6.4	3.1	0.8
2020.00 2030.00	2028.19	75.54	8.37	76.0	6.3	3.1	0.7
2040.00	2038.17	76.07	8.38	76.5	6.3	3.0	1.5
2050.00	2048.16	76.59	8.39	77.1	6.3	2.9	6.7
2060.00	2058.14	77.12	8.42	77.6	6.2	3.0	356.2
2070.00	2068.13	77.63	8.43	78.1	6.2	2.9	0.1
2080.00	2078.12	78.13	8.47	78.6	6.2	2.9	3,8
2090.00	2088.10	78.65	8.49	79.1	6.2	2.9	3.7
2100.00	2098.09	79.15	8.52	79.6	6.1	2.9	3.8
2110.00	2108.08	79.65	8.52	80.1	6.1	2.8	350.3
2120.00	2118.07	80.12	8.54	80.6	6.1	2.7	13.0
2130.00	2128.05	80.61	8.59	81.1	6.1	2.8	$3.1 \\ 0.4$
2140.00	2138.04	81.08	8.63 8.59	81.5 82.0	6.1 6.0	2.6 2.5	352.8
2150.00	2148.03	81.52	8.62	82.4	6.0	2.4	356.0
2160.00	2158.03	81.93 82.28	8.62	82.7	6.0	2.4	4.1
2170.00 2180.00	2168.01 2178.01	82.62	B.66	83.1	6.0	2.7	359.4
2190.00	2188.00	83.06	8.65	83.5	5.9	2.4	359.6
2200.00	2197.99	83.49	8.65	83.9	5.9	2.5	359.2
2210.00	2207.98	83.93	8.64	84.4	5.9	2.5	358.1
2220.00	2217.97	84.37	8.63	84.8	5.8	2.5	354.4
2230.00	2227.96	84.80	8.61	85.2	5,8	2.5	357.3
2240.00	2237.95	85.22	8.59	85.6	5.8	2.4	354.1
2250.00	2247.94	85.63	8.55	86.1	5.7	2,4	353.7
2260.00	2257.93	86.05	8.50	86.5	5.6	2.4	341.1
2270.00	2267.92	86.47	8.44	86.9	5.6	2.3	346.9
2280.00	2277.91	86.88	8.37	87.3	5.5	2.5	359.2
2290.00	2287.90	87.30	8.35	87.7	5.5	2.4	347.6
2300.00	2297.90	87.71	8.30	88.1	5.4 5.4	2.4 2.5	0.2 356.1
2310.00	2307.89	88.12	8.26 8.20	88.5 88.9	5.3	2.3	358.4
2320.00	2317.88 2327.87	88.53 88.93	8.13	89.3	5.2	2.4	339.3
2330.00 2340.00	2337.86	89.32	8.09	89.7	5.2	2.2	356.4
2350.00	2347.85	99.74	8.05	90.1	5,1	2.5	352.8
2360.00	2357.84	90.15	8.00	90.5	5.1	2.2	358.3
2370,00	2367.84	90.57	7.94	90.9	5.0	2.4	349.5
2380.00	2377.83	90.99	7.89	91.3	5.0	2.4	349.2
2390,00	2387.82	91.43	7.82	91.8	4.9	2.5	351.2
2400.00	2397.81	91.87	7.78	92.2	4.8	2.6	355,1
2410.00	2407.80	92.32	7.73	92.6	4.8	2.6	353.5
2420.00	2417.79	92.76	7.67	93.1	4.7	2.6	354.3
2430.00	2427.78	93.21	7.60	93.5	4.7	2.7	351.9
2440.00	2437.77	93.51	7.57	93.8	4.6	2.5	345.5 342.6
2450.00	2447.76	93.76	7.56 7.56	94.1 94.5	4.6 4.6	2.8 2.7	0.9
2460.00 2470.00	2457.75 2467.73	94.15 94.61	7.49	94.9	4.5	2.8	348.4
2470.00	2477.72	95.10	7.46	95.4	4.5	2.9	356.3
2490.00	2487.71	95.58	7.40	95.9	4.4	2.7	358.8
2500.00	2497.70	96.06	7.34	96.3	4.4	2.8	339.5
2510.00	2507.69	96.52	7.29	96.8	4.3	2.6	346.7
2520.00	2517.68	96.98	7.21	97.2	4.3	2.8	353.2
2530.00	2527.67	97.46	7.19	97.7	4.2	2.8	352.3
2540.00	2537.65	97.97	7.14	98.2	4.2	3.0	349.6
2550.00	2547.64	98.47	7.05	98.7	4.1	3.0	352.8
2560.00	2557.63	98.99	7.00	99.2	4.0 4.0	3.1 3.1	356.2 353.2
2570.00	2567.61 2577.60	99.53 100.06	6.93 6.86	99.8 100.3	3.9	3.1	1.3
2580.00 2580.00	2577.60 2587.58	100.41	6.81	100.5	3.9	3.3	358.0
2590.00 2600.00	2597.57	100.41	6.82	101.0	3.9	3.3	359.5
2610.00	2607.55	101.38	6.74	101.6	3.8	3.6	354.1
2620.00	2617.53	101.97	6.66	102.2	3.7	3.4	345.2
2630.00	2627.51	102.55	6.55	102.8	3.7	3.4	342.8
2640.00	2637.49	103.15	6.40	103.3	3.6	3.6	342.4
2650.00	2647.47	103.78	6.29	104.0	3.5	3.7	345.2
2660.00	2657.45	104,43	6.11	104.6	3.4	4.0	346.1
2670.00	2667.43	105.12	5.98	105.3	3.3	4.2 4.3	351.5
2680.00	2677.40	105.82	5.81 5.58	106.0 106.7	3.1 3.0	4.3	348.7 346.7
2690.00	2687.37 2697.34	106.55 107.24	5.38	107.4	2.9	4.3	336.0
2700.00 2710.00	2707.34	107.93	5.16	108.1	2.7	4.0	354.8
2710.00	2717.29	108.63	4.97	108.7	2.6	4.3	336.2
2720.00	2727.26	109.32	4.78	109.4	2.5	3.9	347.8
2740.00	2737.24	109.98	4.57	110.1	2.4	4.1	337.9
2750,00	2747.22	110.65	4.37	110.7	2.3	4.0	339.5
2760.00	2757.19	111.32	4.19	111.4	2.2	3.9	343.2
2770.00	2767.17	111.96	3.99	112.0	2.0	3.8	340.5
2780.00	2777.15	112.61	3.75	112.7	1.9	3.9	355.7
2790.00	2787.12	113.24	3.61	113.3	1.8	4.0	351.8
2800.00	2797.10	113.69	3.51	113.7 113.9	1.8 1.9	3.5 3.4	59.0 71.5
2806.70	2803.79	113.83	3.76	TT0.3	1.3		است و شوع

Well: BF104A

Casing & Tubing Program

	Casing	Casing	Hole	Cement	Ceme	nted	Date	Packers or
		Interval	Size	used in cu/ft	to Sur	face	Cemented	Bridge Plugs
					Yes	No		Kind/Size/Set
Conductor	13 3/8"	26'	15"			Χ	7/9/2007	
Surface	7"	489.5'	8 7/8"	118	Х		7/10/2007	bskt @ 178'
Water Protection	4 1/2"	2554.4'	6 1/2"	397.15	Х		7/13/2007	
Coal Protection	4 1/2"	2554.4'	6 1/2"	397.15	Х		7/13/2007	
Other Casing & Tubing								
Other Casing & Tubing								
Liners								

DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC

COMPANY:

CNX

HOLE #: BF-104A

LOCATION: LEWIS LOW GAP

DRILL RIG #: 40

DATE STARTED: 07-09-07

DATED COMPLETED: 07-13-07

ELECTRIC LOGGED:YES

GROUTED:YES

DEPTH	THICKNESS	ST	RATA REMARKS
FROM	то	FT	DESCRIPTION, VOIDS ETC
0	22	22	OVERBURDEN
22	60	38	SANDY SHALE
60	150	90	SANDY SHALE/COAL/SANDY SHALE
150	210	60	SANDY SHALE
210	240	30	SANDY SHALE/COAL/SANDY SHALE
240	270	30	SAND
270	300	30	SAND/COAL/SANDY SHALE
300	330	30	SANDY SHALE/COAL
330	390	60	SANDY SHALE
390	420	30	SANDY SHALE/COAL/SANDY SHALE
420	450	30	SANDY SHALE
450	480	30	SANDY SHALE/COAL
480	510	30	SANDY SHALE/COAL
510	515	5	SANDY SHALE
515	575	60	SANDY SHALE/COAL/SANDY SHALE
575	605	30	SANDY SHALE
605	665	60	SANDY SHALE/COAL/SANDY SHALE
665	725	60	SANDY SHALE
725	815	90	SANDY SHALE/COAL/SANDY SHALE
815	875	60	SANDY SHALE/COAL
875	935	60	SANDY SHALE
935	965	30	SANDY SHALE/COAL/COAL
965	995	30	SANDY SHALE
995	1025	30	SAND/SANDY SHALE
1025	1055	30	SANDY SHALE/COAL/SANDY SHALE
1055	1145	90	SAND
1145	1205	60	SAND/COAL/SANDY SHALE
1205	1235	30	SAND
1235	1265	30	SANDY SHALE/COAL/SAND
1265	1325	60	SAND/COAL/SAND
1325	1355	30	SAND
1355	1000	•	~ ^ nn ·
1355	1415	60	SAND/SHALE
1415	1475	60	SAND/SHALE/COAL
1475	1505	30	SAND/SHALE
1505	1595	90	SAND/SHALE/COAL
1595	1625	30	SAND
1625	1715	90	SAND/SHALE/COAL
1715	1775	60	SAND
1775	1805	30	SAND/SHALE/COAL
1805	1835	30	SAND
1000	1865	30	SAND/SHALE/COAL

1865	1895	20	CANTEN
		30	SAND
1895	1930	35	SAND/SHALE/COAL
1930	1960	30	SAND
1960	2020	60	SAND/COAL
2020	2260	240	SAND
2260	2290	30	SAND/SANDY SHALE
2290	2320	30	SAND
2320	2350	30	SAND/COAL/SANDY SHALE
2350	2380	30	SAND/COAL/SAND
2380			
2380	2410	30	SAND
2410	2440	30	SAND/SHALE/COAL
2440	2467	27	SAND/SHALE
2467	2469	2	P-3 SEAM (MAYBE P-3)
2469	2470	1	SAND
2470	2500	30	SAND/SHALE/COAL-SOME COAL
2500	2560	60	SAND/SHALE/COAL
2560	2590	30	SAND/SHALE
2590	2620	30	SAND/SHALE/COAL
2620	2650	30	SAND
2650	2680	30	SAND/SHALE/COAL
2680	2800	120	SAND

2800' – TOTAL DEPTH 22' – 13 3/8" CASING 489.50' – 7" CASING 2616.46' – 4 ½" CASING