

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

Telephone: (276) 676-5423

CBM C18 W/PL

Coalbed/Pipeline

289

BU-2981

	DRILLING R	EPORT (DGO-GO	O-14)				
1. Drilling Data							
Date drilling commenced:	2/8/2006	Drilling Contractor	: Noah Horn Well Drilling				
Date drilling completed:	2/15/2006	_ Rig Type: ☑ Rotary ☐ Cable Tool					
Driller's Total Depth (feet):	2,490	3 71	_ , _				
Log Total Depth (feet):	2,491	Coal Seam At Total	Depth Pocahontas				
2. Final Location Plat (as required by 4 VAC25-150-360.C.)							
Permitted State Plane X 978	3,659	Final Plat State Plane X: 978,659					
Permitted State Plane Y: 36	1,994	Final Plat State Pla	Final Plat State Plane Y: 361,995				
✓ Plat Previously Submitted	Or						
List of Attached Items:							
Descrip	tion		FileName				
3. Geological Data							
Fresh Water At:							
Depth	(in feet)	Rate	Unit of Measure				
Salt Water At:							
Depth	(in feet)	Rate	Unit of Measure				

**Tracking Number:** 

Operations Name: Operation Type:

**Drilling Report Type:** Original

Company:

File Number:

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

#### Coal Seams

List of Attached Items:

Description	FileName
bu2981-exh a-page 2	bu-2981-exh a-page 2.tif
bu2981-exh a-page 1	bu2981-exh a-page 1.tif

#### Gas and Oil Shows

List of Attached Items:

Description	FileName
bu2981-gas shows	bu2981-gas shows.tif

#### **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			
Deviaiton	C18 Deviation.pdf			

#### 6. Casing and Tubing Program

List of Attached Items:

Description	FileName			
bu2981-casing	bu2981-casing.tif			

#### 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: CNX

List of Attached Items:

Description	FileName
bu2981-drill data-page 1	bu2981-drill data-page 1.tif
bu2981-drill data-page 2	bu2981-drill data-page 2.tif

#### 9. Comments

Hard copy approved by inspector on 4-13-06. Deviation survey not attached, please do so and resubmit

1	O.	Si	gr	nat	tu	re
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Permitee: CNX Gas Company LLC Date: 6/27/2007 (Company)

Signed By: Les Arrington Title: Manager (Signature)

## INTERNAL USE ONLY

Submit Date: 6/27/2007

Status: Inspr Approved Date: 7/20/2007

Final PDF Date: 7/20/2007

Form DGO-GO-14-E

Rev. 1/2007

*COAL 1775.10 1775.40 525.36 0.3 1775.40 1794.00 525.06 18.6   *P92 1794.00 1795.00 506.46 1.0 1795.00 1883.10 505.46 88.1   *P81 1883.10 1884.80 417.36 1.7 1884.80 1997.00 416.86 113.4   *P61 1997.00 1997.10 303.46 0.1 1997.10 2023.00 303.36 25.9	0
*P92 1794.00 1795.00 506.46 1.0 1795.00 1883.10 505.46 88.1 *P81 1883.10 1884.80 417.36 1.7 1884.80 1997.00 416.86 113.4 *P61 1997.00 1997.10 303.46 0.1	0
*P81 1883.10 1884.80 417.36 1.7 1884.80 1997.00 416.86 113.4 *P61 1997.00 1997.10 303.46 0.1	0
*P81 1883.10 1884.80 417.36 1.7 1884.80 1997.00 416.86 113.4 *P61 1997.00 1997.10 303.46 0.1	0
1884.80 1997.00 416.86 113.4 *P61 1997.00 1997.10 303.46 0.1	0
*P61 1997.00 1997.10 303.46 0.1	0
The property of the property o	0
1997.10 2023.00 303.36 25.9	0
	0
*P62 2023.00 2023.40 277.46 0.4	0
2023.40 2047.50 277.06 24.1	0
*P51 2047.50 2048.20 252.96 0.7	0
*P52 2048.20 2052.60 252.26 4.4	0
2052.60 2160.83 247.86 108.2	3
*P3 2160.83 2162.01 139.63 1.1	8
2162.01 2202.40 138.45 40.3	9
*P21 2202.40 2202.60 98.06 0.2	0
2202.60 2207.10 97.86 4.5	0
*P22 2207.10 2207.20 93.36 0.1	0
2207.20 2209.10 93.26 1.9	0
*COAL 2209.10 2209.30 91.36 0.2	0
2209.30 2264.60 91.16 55.3	0
*P01 2264.60 2264.70 35.86 0.1	0
2264.70 2491.38 35.76 226.6	8

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS

WELL'S PROXIMITY TO GRAPEVINE FORK. GAMMA-CALIPER LOG FROM 0 TO 865.00 GAMMA-DENSITY LOG FROM 865.00 TO TD.

FILE: C:\VP\GAS\C18.CMP

DATE: 02/28/06

Well Name: 06-CNX-C-18

SURFACE ELEV: 2300.46 EASTING: 978658.57 NORTHING: 361994.86

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
COAL	145.30	145.90	2155.16 2154.56	0.60	
HG1	145.90 175.50	175.50 176.10	2124.96	0.60	
COAL	176.10 299.40	299.40	2124.36 2001.06	123.30	
SD1	299.60 317.30 319.00	317.30 319.00 336.60	2000.86 1983.16 1981.46	17.70 1.70 17.60	
SD2	336.60 337.70	337.70 352.10	1963.86 1962.76	1.10	
SD3	352.10 353.00	353.00 353.10	1948.36 1947.46	0.90	
UB1	393.10	394.40	1907.36	1.30	
LB1	394.40 458.90 460.60	458.90 460.60 497.90	1906.06 1841.56 1839.86	1.70 37.30	
COAL	497.90 498.50	498.50 520.50	1802.56 1801.96	0.60 22.00	
LB2	520.50	520.80 656.60	1779.96 1779.66	0.30	
KN2	656.60 659.10	659.10 776.00	1643.86 1641.36	2.50 116.90	
AL1	776.00	776.20 776.20	1524.46 1524.26	0.20	
AL2	777.10 777.30	777.30 860.50	1523.36 1523.16	0.20 83.20	
RA2	860.50	862.70 975.50	1439.96 1437.76	2.20	
JB1		976.80 1001.00	1324.96 1323.66	1.30 24.20	
JB3	1001.00	1002.40	1299.46 1298.06	1.40 73.70	
T2	1076.10 1076.30	1076.30	1224.36 1224.16	0.20 10.70	
T1	1087.00	1087.10	1213.46 1213.36	0.10 92.80	
*US1	1179.90	1180.00	1120.56 1120.46	0.10 135.00	
*GC2	1315.00 1315.30	1315.30 1398.10	985.46 985.16	0.30	
*SE2	1398.10 1399.00	1399.00 1429.30	902.36 901.46	0.90	
*LS1	1429.30 1429.50	1429.50 1430.50	871.16 870.96	0.20	
*LS2	1430.50 1430.90	1430.90 1502.60	869.96 869.56	0.40 71.70	
*UH1	1502.60 1503.20	1503.20 1545.70	797.86 797.26	0.60 42.50	
*UH2	1545.70 1546.00	1546.00 1584.00	754.76 754.46	0.30	
*MH1	1584.00 1585.40	1585.40 1692.40	716.46 715.06	1.40	
*P11	1692.40	1694.00	608.06	1.60	
*P10	1694.00 1695.50	1695.50 1749.80	606.46 604.96	1.50 54.30	
*LH3	1749.80 1751.50	1751.50 1774.10	550.66 548.96	1.70 22.60	
*P91	1774.10	1774.60	526.36	0.50	

# Gas and Oil Shows

				IPF		HOURS
FORMATION	TOP	BOTTOM	THICKNESS	(MCFD/BOPD)	PRESSURE	TESTED
Lee/Norton	1584	1885	301	(See Below)		
Pocahontas	2048	2162	114	(See Below)		
Total IPF				76.9 thru 1" Orifice		

# COMPU-LOG DEVIATION

ENT: CONSOL ENERGY

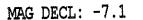
ATION: -

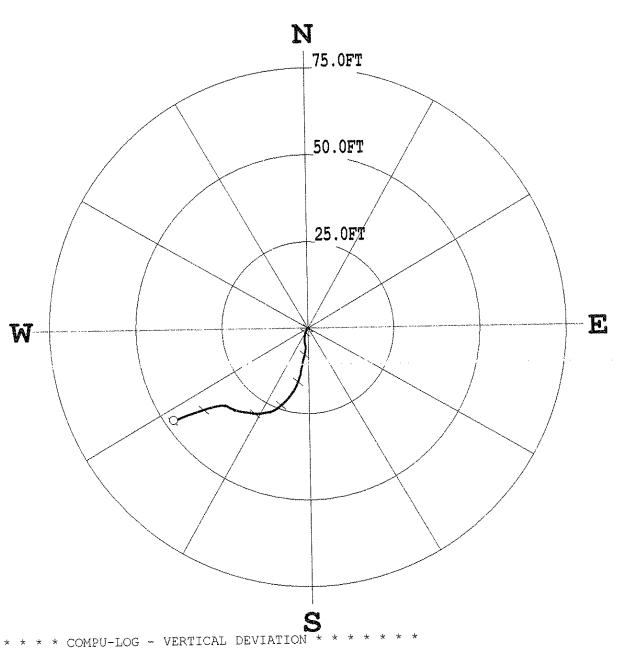
E ID: 06-CNX-C-18 TE OF LOG: 02/14/06 DBE: 9136CH 1244

SCALE: 25 FT/IN

TRUE DEPTH: 2490.22 FT

AZIMUTH: 236.3 DISTANCE: 47.4 FT + = 300 FT INCR○ = BOTTOM OF HOLE





CLIENT : CONSOL ENERGY HOLE ID. : 06-CNX-C-FIELD OFFICE : O'DRISCOLL DATE OF LOG : 02/14/06 DATA FROM : - PROBE : 9136CH , : 06-CNX-C-18

: 9136CH , 1244 DATA FROM : -MAG. DECL. : -7.100

DEPTH UNITS : FEET

LOG: 06-CNX-C-18\_02-14-06\_18-55\_9136CH\_.10\_0.00\_2491.30\_DEVI.log

עוויים באים ביות	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB	
ABLE DEPTH	0.20	0.00	0.00	0.0	0.0	0.0	0.0	
0.0	"	0.00	-0.01	0.0	338.1	0.4	308.0	
10.0	10.00	0.05	-0.04	0.1	316.2	0.3	12.3	
20.0	20.00	0.06	-0.04	0.1	330.2	0.1	66.8	
30.0	30.00	* '	-0.01	0.1	350.6	0:1	33.9	
40.0	40.00	0.08	* '	0.1	8.8	0.4	78.8	
50.0	50.00	0.09	0.01		17.8	0.2	79.2	
40 O	ሬስ ስስ	<u>0 10</u>	0.03	0.1	17.0	0 + 2	1212	

#### CASING AND TUBING PROGRAM

		Casing	Hole	Cement Used In		ented irface	Date	Packers Or Bridge Plugs
	Casing	Interval	Size	Cu/Ft	Yes	No	Cemented	Kind/Size/Set
Conductor	13 3/8"	19.5'	15"			X	2-8-06	
Surface	7"	840.3'	8 7/8"	232.2 Cu/ft	X		2-9-06	Basket@575' and 620'
Water Protection	4 1/2"	2239.77	6 1/2"	341.6 Cu/ft	X		2-15-06	
Coal Protection	4 1/2"	2239.77	6 1/2"	341.6 Cu/ft	X		2-15-06	
Other Casing And Tubing Left In Well								
Liners								1 × //

## DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC

COMPANY: CNX

HOLE #: C-18

LOCATION: LOWER BIG BRANCH

DRILL RIG #: 88

DATE STARTED: 02-08-06

**DATED COMPLETED: 02-15-06** 

ELECTRIC LOGGED:YES GROUTED:YES

DEPTH	THICKNES	SS	STRATA REMARKS		
FROM	ТО	FT	DESCRIPTION, VOIDS ETC		
0	4	4	OVERBURDEN		
4	19.50	15.50	SHALE/SOFT SAND/SAND STONE		
19.50	30	10.50	SAND STONE		
30	60	30	SAND/SHALE		
60	90	30	SAND/SHALE/COAL		
90	120	30	SAND/SHALE		
120	180	60	SAND/SHALE/COAL		
180	210	30	SAND/SHALE		
210	240	30	SAND		
240	420	180	SAND/SHALE/COAL		
420	630	210	SAND/SHALE		
630	660	30	SAND/SHALE/COAL		
660	720	60	SAND		
720	750	30	SAND/SHALE		
750	780	30	SAND/SHALE/COAL		
780	810	30	SANDY SHALE/SAND STONE /SANDY		
	SHALE/SAND STONE				
810	840	30	SAND STONE		
840	870	30	SAND STONE/SANDY SHALE/COAL		
	STRK/SAND STONE				
870	960	90	SAND/SHALE		
960	990	30	SAND/SHALE/COAL		
990	1020	30	SAND STONE/SANDY SHALE /COAL /SAND		
	STONE				
1020	1050	30	SANDY SHALE/SAND STONE		
1050	1080	30	SAND STONE/SANDY SHALE/SAND STONE		
STR/COAL/S	SANDY SHALE				
1080	1110	30	SANDY SHALE/COAL/SAND STONE/SANDY		
	SHALE				
1110	1140	30	SANDY SHALE/COAL/SAND STONE		
1140	1170	30	SAND STONE/COAL/SANDY SHALE/SAND		
	STONE				
1170	1200	30	SANDY SHALE/COAL/SAND STONE		
1200	1230	30	SAND STONE/SANDY SHALE		
1230	1260	30	SANDY SHALE/SAND STONE STR		
1260	1290	30	SANDY SHALE/SAND STONE/SANDY SHALE		
1290	1320	30	SAND STONE/SANDY SHALE /COAL /SAND		
	STONE/SANDY SHALE				
1320	1350	30	SAND STONE/SANDY SHALE/SAND STONE		
1350	1380	30	COAL/SANDY SHALE/SAND STONE /SANDY		
	SHALE				
1380	1410	30	COAL/SANDY SHALE/COAL/SAND STONE		

			6.13 TO 12 TO 12 CONT. (CONT.)			
1410	1440	30	SANDY SHALE/COAL STRK/SAND STONE			
1440	1470	30	SANDY SHALE/SAND STONE			
1470	1500	30	SANDY SHALE/COAL/SAND STONE			
1500	1530	30	SAND STONE/SANDY SHALE/SAND STONE			
1530	1560	30	SAND STONE/COAL/SANDY SHALE			
1560	1590	30	SANDY SHALE/COAL/SANDY SHALE/SAND			
	STONE STR					
1590	1620	30	SAND STONE/SANDY SHALE			
1620	1650	30	SANDY SHALE STR/SAND STONE /			
	COAL/SANDY SHALE					
1650	1680	30	SAND/SHALE			
1680	1710	30	SAND/SHALE/COAL			
1710	1740	30	SAND/SHALE			
1740	1770	30	SAND/SHALE/COAL			
1770	1800	30	SANDY SHALE/COAL/SAND STONE			
1800	1835	35	SANDY SHALE/SAND STONE			
1835	1865	30	SAND STONE/SANDY SHALE/SAND STONE			
1865	1895	30	SANDY SHALE/COAL/SANDY SHALE/SAND			
	STONE					
1895	1925	30	SAND STONE/COAL/SANDY SHALE			
1925	1955	30	SANDY SHALE/SAND STONE			
1955	1985	30	SAND STONE/SANDY SHALE/SAND STONE			
1985	2015	30	SANDY SHALE/SAND STONE			
2015	2045	30	SANDY SHALE/SAND STONE/COAL			
2045	2075	30	COAL/SAND STONE			
2075	2105	30	SAND STONE			
2105	2135	30	SANDY SHALE/SAND STONE			
2135	2165	30	SANDY SHALE/SAND STONE/COAL P-			
4/SANDY SHALE/SAND STONE						
2165	2187	22	SAND			
2187	2189	2	COAL P-3			
2189	2195	6	SAND			
2195	2315	120	SAND/SHALE			
2315	2345	30	SAND			
2345	2370	25	SAND STONE/SHALE STRKS			
2370	2400	30	SAND STONE/SANDY SHALE/SAND STONE			
testeroji il	STR	2000,0000				
2400	2430	30	SAND STONE/SHALE/SANDY SHALE			
2430	2460	30	SANDY SHALE/SAND STONE			
2460	2490	30	SAND STONE			

2490.00 FT. TOTAL DEPTH 19.50 FT. OF 13 3/8" CASING 840.30 FT. OF 7" CASING 2239.77 FT. OF 4 ½" CASING