

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 F13 W/PL

755

BU-3463

•	Operation Ty		Coalbed	bed/Pipeline					
	Drilling	Report Type:	Original	ginal					
DRILLING REPORT (DGO-GO-14)									
1. Drilling Data									
Date drilling commenced:	5/24/2007	Drilling Contra	actor:	Noah Horn					
Date drilling completed:	5/30/2007	J		 ☑ Rotary ☐ Cable Tool					
Driller's Total Depth (feet):	2,410	3	, ,,	,					
Log Total Depth (feet):	2,411	Coal Seam At	Total De	pth Pocahontas					
2. Final Location Plat (as red	2. Final Location Plat (as required by 4 VAC25-150-360.C.)								
Permitted State Plane X 969	9,168	Final Plat State	e Plane >	X: <u>969,170</u>					
Permitted State Plane Y: 350	6,464	Final Plat State	e Plane \	Y: <u>356,461</u>					
☐ Plat Previously Submitted	Or								
List of Attached Items:									
Descrip	tion			FileName					
Pla	t	F13 Plat.pdf							
3. Geological Data									
Fresh Water At:									
Depth (in feet) Rate Unit of Measure									
Salt Water At:									
Denth	ı (in feet)		Rate	Unit of Measure					
Берш	(111 1661)		i tate	Offit Of Measure					

**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	F13 Exhibit A.pdf

#### Gas and Oil Shows

List of Attached Items:

Description	FileName		
Gas Show	F13 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	F13 Deviation.pdf

#### 6. Casing and Tubing Program

List of Attached Items:

Description	FileName
Casing	F13 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.

7" Casing cemented on the backside to surface; Void @ 626' - 630'

#### 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

Description	FileName		
Drill Data	F13 Drill Data.pdf		

## 9. Comments

10. Signature

Permitee: CNX Gas Company LLC Date: 10/12/2007 (Company)

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

INTERNAL USE ONLY

Submit Date: 10/12/2007

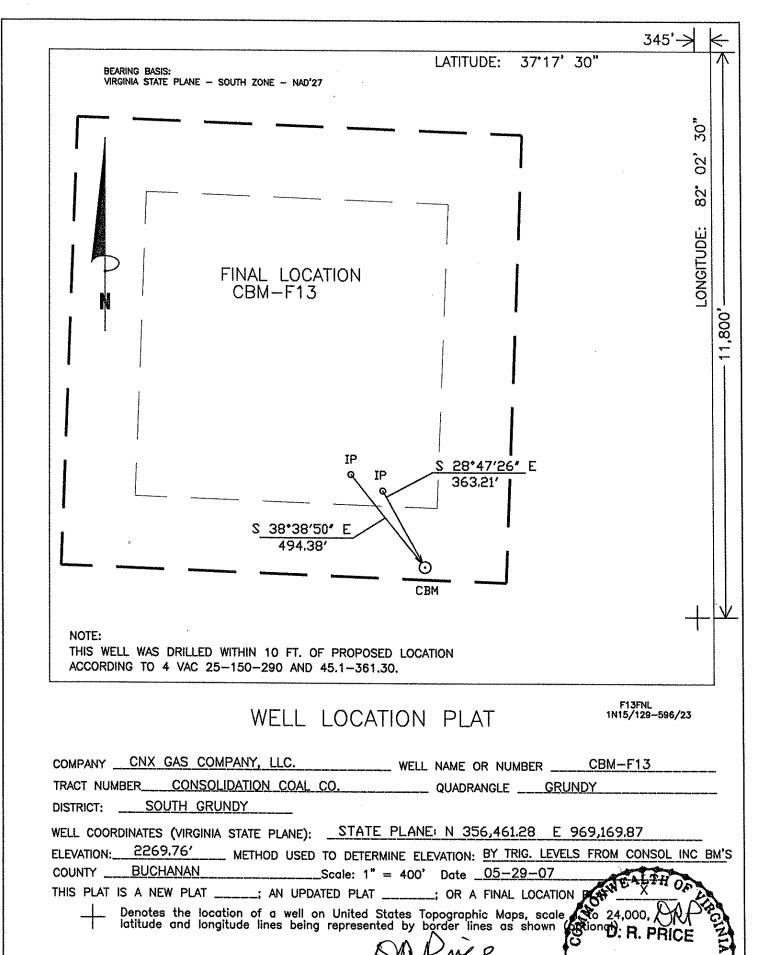
Status: Inspr Approved Date: 10/15/2007

Final PDF Date: 10/16/2007

Form DGO-GO-14-E

Page 3 of 3

Rev. 1/2007



Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)
Form DG0—G0—7
Rev. 10/96

Exhibit A

Well Name: 07 CBM F13

SURFACE ELEV: 2269.76 EASTING: 969169.87 NORTHING: 356461.28

SEAM	FROM TO (FT)		ELEVATION (TOSE)	THK. (FT)	REMARKS	
HG1	150.90	152.70	2118.86	1.80	100 100 100 100 100 100 100 100 100 100	
COAL	152.70 239.10	239.10 239.80	2117.06 2030.66	0.70		
COAL	239.80	265.90	2029.96	26.10		
SD1	265.90	267.80	2003.86	1.90		
	267.80	294.00	2001.96	26.20		
SD2	294.00	294.90	1975.76	0.90		
a = 0	294.90	301.20	1974.86	6.30		
SD3	301.20 302.00	302.00 309.00	1968.56	0.80 7.00		
COAL	302.00	309.00	1967.76 1960.76	0.90		
COLL	309.90	348.80	1959.86	38.90		
UB1	348.80	349.80	1920.96	1.00		
	349.80	425.00	1919.96	75.20		
LB1	425.00	426.70	1844.76	1.70		
	426.70	491.00		64.30		
LB2	491.00	492.20	1778.76	1.20		
72377	492.20	627.60	1777.56		MINER OUR	
KN2	627.60 630.00	630.00 723.80	1642.16 1639.76	2.40 93.80	MINED OUT	
AL1	723.80	724.20	1545.96	0.40		
	724.20	748.00	1545.56	23.80		
AL2	748.00	749.70	1521.76	1.70		
	749.70	819.10	1520.06	69.40		
RA2	819.10	820.40	1450.66	1.30		
	820.40	932.00	1449.36	111.60		
JB1	932.00	932.70	1337.76	0.70		
JB3	932.70 955.00	955.00 956.00	1337.06 1314.76	22.30 1.00		
000	956.00	993.30	1313.76	37.30		
Т2	993.30	994.20	1276.46	0.90		
	994.20	1042.10	1275.56	47.90		
T1	1042.10	1042.50	1227.66	0.40		
	1042.50	1046.20	1227.26	3.70		
TI	1046.20	1046.70	1223.56	0.50		
*CC0	1046.70	1264.40	1223.06	217.70		
*GC2	1264.40 1264.60	1264.60 1265.10	1005.36 1005.16	0.20 0.50		
*GC2	1265.10	1265.20	1003.10	0.10		
002	1265.20	1336.90	1004.56	71.70		
*SE2	1336.90	1337.50	932.86	0.60		
	1337.50	1371.30	932.26	33.80		
*LS1	1371.30	1372.60	898.46	1.30		
	1372.60	1447.60	897.16	75.00		
*UH1	1447.60	1447.90	822.16	0.30		
*UH2	1447.90	1513.50	821.86 756.26	65.60 1.30		
OUZ	1513.50	1514.80	730.20	1.30		

	1514.80	1603.80	754.96	89.00
*P11	1603.80	1604.10	665.96	0.30
	1604.10	1607.00	665.66	2.90
*P11	1607.00	1607.70	662.76	0.70
	1607.70	1607.80	662.06	0.10
*P11	1607.80	1608.90	661.96	1.10
	1608.90	1632.50	660.86	23.60
*P10	1632.50	1633.20	637.26	0.70
	1633.20	1685.10	636.56	51.90
*LH3	1685.10	1686.90	584.66	1.80
	1686.90	1702.20	582.86	15.30
*COAL	1702.20	1702.40	567.56	0.20
	1702.40	1744.00	567.36	41.60
*P92	1744.00	1745.00	525.76	1.00
	1745.00	1807.10	524.76	62.10
*P81	1807.10	1808.30	462.66	1.20
	1808.30	1808.60	461.46	0.30
*P82	1808.60	1809.00	461.16	0.40
	1809.00	2109.00	460.76	300.00
*P3	2109.00	2110.60	160.76	1.60
	2110.60	2110.80	159.16	0.20
*P3	2110.80	2113.40	158.96	2.60
	2113.40	2144.60	156.36	31.20
*P21	2144.60	2144.80	125.16	0.20
	2144.80	2150.90	124.96	6.10
*P22	2150.90	2151.20	118.86	0.30
	2151.20	2411.42	118.56	260.22

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO HARPER BRANCH.

GAMMA-CALIPER LOG FROM 0 TO 695.00 GAMMA-DENSITY LOG FROM 695.00 TO TD.

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

FILE: H:\JIMHAZ~1\PROJECTS\GAS\F13.CMP

DATE: 06/28/07

Well: F13

## Oil & Gas Show

Formation	Top	Bottom	Thickness	IPF	Pressure	Hours
				(MCFD/BOPD)		Tested
Lee/Norton	1371	1808	437			
Pocahontas	2109	2111	2			
Total IPF				42.3		

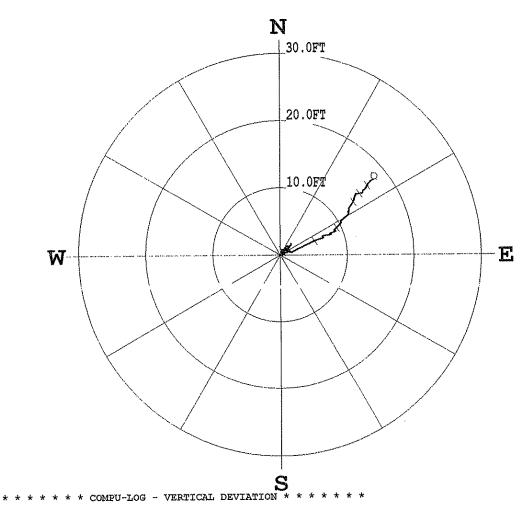
# COMPU-LOG DEVIATION

CLIENT: CNX-GAS

LOCATION: -

HOLE ID: 07-CNX-F-13 DATE OF LOG: 05/30/07 PROBE: 9136CH 1244 MAG DECL: -7.1

SCALE: 10 FT/II
TRUE DEPTH: 24:
AZIMUTH: 50.3
DISTANCE: 18.2
+ = 300 FT INCI
O = BOTTOM OF I



CLIENT : CNX-GAS HOLE ID. : 07-CNX-F-13

FIELD OFFICE : 0'DRISCOLL DATE OF LOG : 05/30/07

DATA FROM : - FROBE : 9136CH , 1244

MAG. DECL. : -7.100 DEPTH UNITS : FEET

LOG: 07-CNX-F-13\_05-30-07\_05-19\_9136CH\_.10\_0.00\_2411.70\_DEVI.log

C	ABLE DEPTH	TRUE DEPTH	NORTH	DEV.	EAST		DISTANCE	Azimuth		ANGB
	0.50	0.50		0.00		0.00	0.0	0.0	0.0	0.0
	10,00	10.00		0.01		0.00	0.0	19.3	1.7	197.7
	20.00	19.99		0.06		0.15	0.2	68.4	1.9	355.5
	30.00	29.99		0.06		0.22	0.2	74.7	2.0	87.0
	40.00	39.98		0.15		0.41	0.4	69.6	2.0	107.3
	50.00	49.98		0.45		0.33	0.6	36.3	1.9	0.2
	60.00	59.97		0.60		0,23	0.6	20.9	1.5	206.3
	70.00	69.97		0.36		0.33	0.5	42.8	1.8	114.5
	80.00	79.96	€5	0.35		0.65	0.7	61.7	1.9	52.5
	90.00	89.96		0.63		0.72	1.0	49.1	1.5	346.3
	100.00	99.96		0.83		0.57	1.0	34.7	1.6	295.6
!	110.00	109.95		0.68		0.43	0.8	32.3	1.8	152.7
•	120.00	119.95		0.51		0.71	0.9	54.4	2.1	104.9
	130.00	129.94		0.46		1.03	1.1	65.9	1.9	62.9
	140.00	139.94		0.71		1.00	1.2	54.7	1.5	327.3
	150.00	149.93		0.92		0.85	1.3	42.7	1.6	311.9
	160.00	159.93		0.89		0.69	1.1	37.8	1.5	171.3
	170.00	169.92		0.65		0.87	1.1	53.3	1.8	119.4
	180.00	179.92		0.49		1.18	1.3	67.2	2.3	94.3
	190.00	189.91		0.70		1.36	1.5	62.7	1.7	352.8
	200.00	199.91		0.94		1.25	1.6	53.1	1.3	305.5
	210.00	209.91		0.91		1.05	1.4	49.2	1.2	224.1
	220.00	219.90		0.71		0.97	1.2	53.7	1.5	177.9
	230.00	229.90		0.48		0.92	1.0	62.2	1.0	217.8
	240.00	239.90		0.66		0.77	1.0	49.8	1.6	332.4
	250.00	249.89		0.79		0.62	1.0	38.4	1.1	218.0
	260.00	259.89		0.75		0.43	0.9	29.9	1.4	275.4
	200100	777				^ ^^	Λ 77	20 0	1 2	105 9

1180.00 1290.00 1200.00 1210.00 1220.00 1230.00 1240.00 1250.00 1260.00 1270.00 1390.00 1310.00 1310.00 1350.00 1340.00 1350.00 1370.00 1380.00 1400.00 1410.00 1410.00 1440.00 1440.00 1440.00 1450.00 1550.00 1550.00 1550.00 1550.00 1550.00 1560.00 1570.00 1560.00 1570.00 1660.00 1670.00 1680.00 1670.00 1680.00 1770.00	1509.53 1519.53 1529.53 1539.53 1549.53 1559.53 1559.53 1569.53 1609.53 1619.53 1629.53 1639.53 1639.53 1649.53 1659.53 1669.53 1679.53 1679.53 1709.52 1719.52 1719.52 1729.52 1739.52 1749.52 1749.52 1759.52 1769.52 1769.52 1779.52 1769.52 1779.52 1769.52	9.16 9.18 9.27 9.39 9.45 9.52 9.55 9.60 9.63 9.63 9.73 9.73 9.78 9.90 9.90 10.12	8.501 8.1501	12356891233680247990233567891223456677689990011122333334445567890123455566778899900112233456666666666666666666666666666666666	\$540741737875107512768186320964219866431956321111100996633357924580206444433444444433197684444333322210000009998776655555555555555555555555555555555	1.186.07.01.62.3388.07.01.62.338.07.01.62.338.07.01.62.338.07.01.62.338.07.01.62.338.07.01.00.00.00.00.00.00.00.00.00.00.00.00.
1990.0 2000.0 2010.0 2020.0 2030.0 2040.0	0 1989.51 0 1999.51 0 2099.51 0 2019.51 0 2039.51 0 2049.51 0 2059.51 0 2059.51 0 2059.51 20 2059.51	9.78 9.81 9.85 9.90 9.96 10.04	12.69 12.72 12.74 12.79 12.80 12.83	16.1 16.1 16.2 16.2 16.3	52.4 52.3 52.3 52.1 51.9	0.2 28.5 0.4 321.4 0.8 106.4 0.8 295.4 0.7 2.7

2110.00	STOR' PT	10.51	15.31	16.6	51.6	0.5	231.5
2120.00	2119.51	10.30	13.01		51.7	0.4	191.4
2130.00	2129.51	10.29	13.03	16.6		1.0	329.6
2140.00	2139.51	10.33	12.96	16.6	51.4		2.1
2150.00	2149.51	10.41	13.01	16.7	51.3	0,6	
2160.00	2159.51	10.48	12.99	16.7	51.1	0.3	63.6
2170.00	2169.51	10.51	13.03	16.7	51.1	0.3	62.7
2180.00	2179.51	10.54	13.07	16.8	51.1	0.4	32.8
2190.00	2189.51	10.57	13.12	16.8	51.2	0.6	355.8
2200.00	2199.51	10.62	13.16	16.9	51.1	0.4	41.4
2210.00	2209.51	10,66	13.21	17.0	51.1	0.5	18.8
2220.00	2219.51	10.71	13.25	17.0	51.1	0.3	57.3
2230.00	2229.51	10.76	13.29	17.1	51.0	0.5	65.3
2240.00	2239.51	10.80	13.33	17.2	51.0	0.4	29.9
2250.00	2249.51	10.84	13.37	17.2	51.0	0.4	10.7
	2259.51	10.88	13.41	17.3	50.9	0.3	38.8
2260.00	2269.51	10.92	13.44	17.3	50.9	0.3	26.4
2270.00		10.94	13.42	17.3	50.8	0.9	56.3
2280.00	2279.50	10.99	13.53	17.4	50.9	0.6	61.9
2290.00	2289.50		13.63	17.5	51.0	0.4	97.3
2300.00	2299.50	11.05		17.7	51.1	0.9	93.6
2310.00	2309.50	11.10	13.74		51.1	0.7	64.0
2320.00	2319.50	11.15	13.85	17.8		0.7	57.1
2330.00	2329.50	11.21	13.94	17.9	51.2		4.1
2340.00	2339.50	11.31	13.99	18.0	51.0	0.6	
2350.00	2349.50	11.34	14.12	18.1	51.2	0.8	76 5
2360.00	2359.50	11.43	14.19	18.2	51.2	0.8	6.0
2370.00	2369.50	11.53	14.11	18.2	50.8	1.0	237.2
2380.00	2379.50	11.56	14.02	18.2	50.5	0.3	46.4
2390.00	2389.50	11.62	14.04	18.2	50.4	0.4	15.9
2400.00	2399.50	11.65	14.03	18.2	50.3	0.5	64.1
2410.00	2409.49	11.66	14.01	18.2	50.2	1.1	11.8
2411.70	2411.19	11.66	14.02	18.2	50.3	0.5	183.8
Z=11./U	C-1 - 1 - 1 - 2						

:

•

# **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		
Conductor	13 3/8"	35'	15"			Χ	5/24/2007	
Surface	7"	700'	8 7/8"	190.35	Х		5/25/2007	bskt @ 581'
Water Protection	4 1/2"	2170'	6 1/2"	329.55	Х		5/30/2007	
Coal Protection	4 1/2"	2170'	6 1/2"	329.55	Х		5/30/2007	
Other Casing & Tubing								
Other Casing & Tubing								
Liners								

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

COMPANY: CNX

HOLE #: F-13

LOCATION: CHILDRESS BRANCH

DRILL RIG #: 17

DATE STARTED: 05-24-07

DATED COMPLETED: 05-30-07

ELECTRIC LOGGED:YES

**GROUTED:YES** 

DEPTH	THICKNESS	S'.	TRATA REMARKS		
FROM	TO	FT	DESCRIPTION, VOIDS ETC		
0	34	34	OVERBURDEN		
34	35	1	BROWN SAND		
35	60	25	BROWN SAND/SHALE		
60	90	30	SHALE		
90	120	30	SANDY SHALE/COAL/SHALE		
120	150	30	SHALE/SAND		
150	180	30	COAL/SANDY SHALE		
180	210	30	SANDY SHALE/SAND		
210	240	30	SANDY SHALE		
240	360	120	SANDY SHALE/COAL/SANDY SHALE		
360	390	30	SAND/SANDY SHALE		
390	420	30	SANDY SHALE/SAND		
420	450	30	SAND/SANDY SHALE/COAL		
450	480	30	SANDY SHALE/SAND		
480	510	30	SANDY SHALE/COAL/SANDY SHALI		
510	570	60	SANDY SHALE/SAND		
570	626	56	SAND/SANDY SHALE		
626	630	4	VOID		
630	660	30	SAND/SANDY SHALE		
660	690	30	SANDY SHALE		
690	720	30	SANDY SHALE/SAND		
720	750	30	SAND STONE/COAL/SANDY SHALE		
750	780	30	SANDY SHALE		
780	810	30	SANDY SHALE/COAL		
810	840	30	SAND STONE		
840	870	30	SAND STONE/SANDY SHALE		
870	900	30	SANDY SHALE		
900	930	30	SANDY SHALE/COAL/SANDY SHALE		
930	990	60	SAND STONE/COAL/SANDY SHALE		
990	1020	30	SAND STONE/SANDY SHALE		
1020	1050	30	SANDY SHALE		
1050	1080	30	SANDY SHALE/SAND STONE		
1080	1230	150	SANDY SHALE		
1230	1290	60	SANDY SHALE/SHALE		
1290	1320	30	SHALE/SANDY SHALE		
1320	1350	30 30	SANDY SHALE/SAND STONE		
1350	1380	30	SANDY SHALE/COAL/SAND STONE		
1380	1410	30	SANDY SHALE/COAL/SAND STONE SANDY SHALE/SAND STONE		
1410	1440	30 30	SANDY SHALE		
1410	1440	30	SAND I SHALE SAND STONE		
1440	1500	30	SAND STONE SAND STONE/SANDY SHALE		
1500	1530	30	SANDY SHALE		

1530	1560	30	SAND STONE/SANDY SHALE
1560	1590	30	SANDY SHALE
1590	1620	30	SANDY SHALE/COAL/SANDY SHALE
1620	1650	30	SANDY SHALE/SHALE
1650	1680	30	SANDY SHALE/COAL
1680	1710	30	SAND/COAL/SANDY SHALE
1710	1740	30	SANDY SHALE
1740	1800	60	SANDY SHALE/COAL/SANDY SHALE
1800	1830	30	SANDY SHALE/COAL/SAND
1830	1860	30	SAND/SANDY SHALE
1860	1920	60	SAND STONE
1920	1950	30	SAND/SANDY SHALE
1950	1980	30	SANDY SHALE/SAND
1980	2040	60	SAND STONE
2040	2070	30	SAND/SANDY SHALE
2070	2100	30	SANDY SHALE/SAND/SANDY SHALE
2100	2103	3	SANDY SHALE
2103	2107	4	P-3 COAL
2107	2130	23	SANDY SHALE
2130	2160	30	SANDY SHALE/COAL/SANDY SHALE
2160	2190	30	SANDY SHALE/SAND
2190	2250	60	SANDY SHALE
2250	2280	30	SANDY SHALE/SHALE
2280	2310	30	SHALE/SANDY SHALE
2310	2410	100	SANDY SHALE/SHALE

2410' - TOTAL DEPTH 35' - 13 3/8" CASING 707.1' - 7" CASING 2170.53' - 4 1/2" CASING