

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: HAZLETT, FREDERICK S. Operator Well No.: SHL-1B-HS

LOCATION: Elevation 1163.45' Quadrangle: MAJORSVILLE

District: SANDHILL County MARSHALL  
Latitude:        Feet South of 39 Deg. 58 Min. 23.96 Sec.  
Longitude        Feet West of 80 Deg. 34 Min. 29.22 Sec.

Company:

CNX Gas Company LLC	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 200 Evergreene Drive Waynesburg, PA 15370				
Agent: Tim Rinehart				
Inspector: Bill Hendershot				
Date Permit Issued: 01/24/2011				
Date Well Work Commenced: 01/26/2011	30"	39'	39'	Grouted In
Date Well Work Completed: 09/02/2011	20"	80'	80'	105 sks
Verbal Plugging N/A	13 3/8"	959'	959'	670 sks
Date Permission granted on: 01/26/2011				
Rotary Cable Rig X	9 5/8"	2896'	2896'	950 sks
Total Depth (feet): 12,964'	5 1/2"	12,885'	12,885'	2,176 sks
Fresh Water Depth (ft.): 200'				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? Yes				
Coal Depths (ft.) <u>652'-658'</u>				

OPEN FLOW DATA

Producing formation Marceullus Pay zone depth (ft) 12,964'  
Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow        MCF/d Final open flow        Bbl/d  
Time of open flow between initial and final tests        Hours  
Static rock Pressure 5 psi/ft at a TVD of 7,057' 3,528.5 psi\_psig (surface pressure) after        Hours

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Second producing formation        Pay zone depth (ft)         
Gas: Initial open flow        \* MCF/d Oil: Initial open flow        \* Bbl/d  
Final open flow        \* MCF/d Final open flow        \* Bbl/d  
Time of open flow between initial and final tests        \* Hours  
Static rock Pressure        \* psig (surface pressure) after        \* Hours

\*Commingled with previous formations

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: Tim Rinehart  
By: Tim Rinehart  
Date: 09-02-11

WR-35

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WELL: 47-5101387

Were core samples taken? Yes / No      Were cuttings caught during drilling? Yes / No

Were Electrical Yes / No, Mechanical Yes / No, or Geophysical logs Yes / No recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING:

- 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR PHYSICAL CHANGE, ETC.
- 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**PERFORATED INTERVALS, FRACTURING, OR STIMULATING:**

**FORMATIONS ENCOUNTERED:**

GAMMA RAY /FORMATION TOPS

FORMATION

TOP

BASE

**\*Depths Determined By Drillers Log\***

Driller's Log	
Depth	Formation
0'-15'	Fill
15'-150'	Shale
150'-652'	Shale/Sand
652'-658'	Coal
658'-762'	Shale/Sand
762'-1013'	Red Rock
1013'-1249'	Shale
1249'-1377'	Shale/Sand
1377'-1408'	Shale/Lime
1408'-1502'	Shale/Sand
1502'-1659'	Sand
1659'-1721'	Sand/Lime
1721'-1782'	Sand/Shale/Lime
1782'-1847'	Sand
1847'-2003'	Shale/Sand
2003'-2097'	Shale/Lime
2097'-2253'	Sand/Shale/Lime
2253'-2284'	Sand/Shale/Lime
2284'-2378'	Sand/Lime/Silt
2378'-2473'	Red Rock/Shale
2473'-2505'	Red Rock/Shale
2505'-2599'	Shale/Lime
2599'-2694'	Sand/Shale/Lime
2694'-2820'	Sand/Shale/Silt
2820'-2946'	Shale/Lime
2946'-3027'	Sand/Shale/Silt

**\*Depth Determined From AIR-Quad/Gamma Logs\***



**Geological Top Estimations**

Well (Pad) Name Datum (GR)	SHL01 pad 1163		
	TVD	S.L.	
Gas Sand Top	1262	-99	
Gas Sand Base	1326	-163	
1st Salt Sand Top	1358	-195	
1st Salt Sand Base	1366	-203	
2nd Salt Sand Top	1463	-300	The salt sands could possibly be a fluid thief zone
2nd Salt Sand Base	1518	-355	
3rd Salt Sand Top	1551	-388	
3rd Salt Sand Base	1592	-429	
Maxton Top	1613	-450	
Maxton Base	1693	-530	
Big Lime Top	1697	-534	
Big Injun Top	1730	-567	
Big Injun Base	1916	-753	
Berea Top	2212	-1049	
Berea Base	2229	-1066	
Gantz Top	2265	-1102	
Gantz Base	2313	-1150	
Gordon Top	2631	-1468	
Gordon Base	2649	-1486	
Fifth Top	2741	-1578	
Fifth Base	2772	-1609	
Burkett Shale	6302	-5139	
Tully Top	6310	-5147	
Hamilton Top	6343	-5180	
Marcellus	6419	-5256	
Onondaga	6500	-5337	

**TVD: ~6530**