

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

Farm name: Mark Hickman 5H Operator Well No.: 833343

LOCATION: Elevation: 1285' Quadrangle: Valley Grove WV

District: Triadelphia County: Ohio  
Latitude: 1640' Feet South of 40 Deg. 02 Min. 30 Sec.  
Longitude 710' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496 Oklahoma City, OK 73154-0496	13 3/8"	759	759'	112 Cu. Ft.
Agent: Eric Gillespie	9 5/8"	2265'	2265'	920 Cu. Ft.
Inspector: <b>Bill Hendershot</b>	5 1/2"	13078'	13078'	3312 Cu. Ft.
Date Permit Issued: 5-17-2011				
Date Well Work Commenced: 8-14-2011				
Date Well Work Completed: 9-9-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6698'				
Total Measured Depth (ft): 13078'				
Fresh Water Depth (ft.): 30'				
Salt Water Depth (ft.): 1015'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): ~700'				
Void(s) encountered (N/Y) Depth(s) Y ~700'				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7,150'-12,946'  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 2,405\* MCF/d Final open flow 104 Bbl/d  
Time of open flow between initial and final tests 186 Hours  
Static rock Pressure 4,297\* psig (surface pressure) after \_\_\_\_\_ Hours

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

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Matthew Williams  
Signature

12-11-2012  
Date

Were core samples taken? Yes \_\_\_\_\_ No

Were cuttings caught during drilling? Yes \_\_\_\_\_ No

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list LWD GR from 5,442' - 13,016 MD

**NOTE: IN THE AREA BELOW 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 THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

See attached

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
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Surface:

See attached



**LATERAL SIDETRACK WELLBORE (no vertical pilot hole associated with this well)**

**Maximum TVD of wellbore: 6,698 ft TVD @ 7,307 ft MD**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SH/LS/SS	0	0	520	520
SH	520	520	700	700
NO RETURNS	700	700	880	880
SH	880	880	1180	1180
SH/SILT	1180	1180	1270	1270
SH	1270	1270	1420	1420
SS/SH	1420	1420	1733	1733
BIG INJUN (SS)	1733	1733	2060	2060
SHALE	2060	2060	6679	6491
GENESEO (SH)	6679	6491	6719	6520
TULLY (LS)	6719	6520	6761	6546
HAMILTON (SH)	6761	6546	7021	6661
MARCELLUS (SH)	7021	6661		
TD OF LATERAL			13075	6617