WR-35 Rev (9-11)

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

DATE:	12-4-2012
API#:	47-069-00082

Farm name: Mark Hickman 5H	Operator Well No.: 833343				
LOCATION: Elevation: 1285'	Quadrangle: Valley Grove WV				
District: Triadelphia  Latitude: 1640' Feet South of 40 Deg.  Longitude 710' Feet West of 80 Deg.		n. <sup>30</sup> Se			
Company: Chesapeake Appalachia, L.L.C.					
Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.	
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: Bill Hendershot	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 🗸 Cable 🔲 Rig					
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'					
Gas: Initial open flow MCF/d Oil: Initial open flow Final open flow 2,405* MCF/d Final open flow Time of open flow between initial and final tests 186  Static rock Pressure 4,297* psig (surface pressure) af	zone depth (ft) lowB vHours terHours ne depth (ft) lowB vBIHours	7,150'-12,946' 8bl/d bl/d 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	ata on separate s	heet)	

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.

Mulero Williams
Signature

7-//-2012 Date

Were core samples taken? YesNoX	Were	cuttings caught during	drilling? Yes	No_X
Were Electrical, Mechanical or Geophysical logs re	corded on this well? I	f yes, please list_LWD	GR from 5,442' -	13,016 MD
NOTE: IN THE AREA BELOW PUT THE FRACTURING OR STIMULATING, PHYSIC DETAILED GEOLOGICAL RECORD OF TO COAL ENCOUNTERED BY THE WELLBOR	CAL CHANGE, ETC. THE TOPS AND BO	2). THE WELL LOCOTTOMS OF ALL	G WHICH IS A SY FORMATIONS, 1	STEMATIC
Perforated Intervals, Fracturing, or Stimulating:				
See attached				
Plug Back Details Including Plug Type and Depth(s	s):			
			William Commence and Commence a	
Formations Encountered: Surface:	Top Depth	/	Bottom D	<u>Depth</u>
See attached				
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## PERFORATION RECORD ATTACHMENT

## Well Number and Name: 833343 Mark Hickman 5H

PERFORATION RECORD		STIMULATION RECORD							
Interval F	Perforated		Fluid Propping Agent		Fluid		ing Agent	Average	
From	To	Date	Interval	Treated	Type	Amount	Туре	Amount	Injection
12,536	12,946	8/24/2012	12,536	12,946	Slk wtr	13,059	Sand	684,020	79.8
12,047	12,456	8/28/2012	12,047	12,456	Slk wtr	12,832	Sand	685,560	79.4
11,557	11,967	8/29/2012	11,557	11,967	Slk wtr	12,805	Sand	680,620	79.7
11,072	11,477	8/29/2012	11,072	11,477	Slk wtr	12,896	Sand	684,360	79.9
10,573	10,987	8/30/2012	10,573	10,987	Slk wtr	12,929	Sand	683,020	80
10,085	10,503	8/30/2012	10,085	10,503	Slk wtr	12,810	Sand	685,040	80
9,598	10,008	9/4/2012	9,598	10,008	Slk wtr	13,048	Sand	683,780	79.8
9,109	9,518	9/5/2012	9,109	9,518	Slk wtr	13,030	Sand	683,860	79.9
8,619	9,029	9/6/2012	8,619	9,029	Slk wtr	12,994	Sand	685,840	79.8
8,121	8,539	9/7/2012	8,121	8,539	Slk wtr	12,929	Sand	683,900	80
7,640	8,043	9/8/2012	7,640	8,043	Slk wtr	13,015	Sand	685,680	79.9
7,150	7,560	9/9/2012	7,150	7,560	Slk wtr	12,409	Sand	683,655	80
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	Interval F From 12,536 12,047 11,557 11,072 10,573 10,085 9,598 9,109 8,619 8,121 7,640	Interval Perforated From To 12,536 12,946 12,047 12,456 11,557 11,967 11,072 11,477 10,573 10,987 10,085 10,503 9,598 10,008 9,109 9,518 8,619 9,029 8,121 8,539 7,640 8,043	Interval Perforated   From   To   Date     12,536   12,946   8/24/2012   12,047   12,456   8/28/2012   11,557   11,967   8/29/2012   11,072   11,477   8/29/2012   10,573   10,987   8/30/2012   10,085   10,503   8/30/2012   9,598   10,008   9/4/2012   9,109   9,518   9/5/2012   8,619   9,029   9/6/2012   8,121   8,539   9/7/2012   7,640   8,043   9/8/2012	Interval Perforated					

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## 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