

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: 11/20/2012  
API #: 47-033-05588

Farm name: Williams, Betty Ann Operator Well No.: Charles Unit 1H

LOCATION: Elevation: 1215' Quadrangle: Wolf Summit

District: Tenmile County: Harrison  
Latitude: 3,404 Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude 8,862 Feet West of 80 Deg. 27 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft Class A
Agent: CT Corporation System	13-3/8" 54.5#	511'	511'	710 Cu. Ft. Class A
Inspector: Tristan Jenkins	9-5/8" 36#	2578'	2578'	1050 Cu. Ft. Class A
Date Permit Issued: <u>1/23/2012</u>	5-1/2" 20#	14,940'	14,940'	3686 Cu. Ft. Class H
Date Well Work Commenced: <u>3/4/2012</u>				
Date Well Work Completed: <u>8/30/2012</u>	2-3/8" 4.7#	7448'		
Verbal Plugging: <u>N/A</u>				
Date Permission granted on: <u>N/A</u>				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>7,091' TVD</u>				
Total Measured Depth (ft): <u>14,940' MD, 6,997' TVD (BHL)</u>				
Fresh Water Depth (ft.): <u>20', 23', 40', 45', 50'</u>				
Salt Water Depth (ft.): <u>1,510'</u>				
Is coal being mined in area (N/Y)? <u>No</u>				
Coal Depths (ft.): <u>116', 196', 221'</u>				
Void(s) encountered (N/Y) Depth(s) <u>No, N/A</u>				

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

Producing formation Marcellus Pay zone depth (ft) 7,016' TVD (Top)

Gas: Initial open flow --- MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 12,754 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 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

RECEIVED  
OFFICE OF OIL & GAS  
2012 NOV 26 P 11:11  
WV DEPARTMENT OF ENVIRONMENTAL PROTECTION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in 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.

Lisa Botinelli  
Signature

11/20/12  
Date

01/11/2013

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 Yes – CBL.

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-pad (Post East Unit 5H API# 47-033-05580). Please reference wireline logs submitted with Form WR-35 for Post East Unit 5H.

**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:

Perforations: 8127'-14,874' MD (1416 holes)

Frac'd w/ 10,584 gals 15% HCL Acid, 142,023 bbls Slick Water carrying 779,481# 100 mesh,  
2,699,465# 40/70 and 1,672,304# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime (est.)	1,586'	2,120'
Fifty Foot Sand (est.)	2,121'	2,247'
Gordon (est.)	2,248'	2,532'
Fifth Sandstone (est.)	2,533'	2,583'
Bayard (est.)	2,584'	3,239'
Speechley (est.)	3,240'	3,467'
Balltown (est.)	3,468'	4,001'
Bradford (est.)	4,002'	4,578'
Benson (est.)	4,579'	4,871'
Alexander (est.)	4,872'	5,100'
Elk (est.)	5,101'	5,628'
Rhinestreet (est.)	5,629'	6,297'
Sycamore (est.)	6,298'	6,536'
Middlesex	6,537'	6,606'
West River Shale	6,607'	6,666'
Genundewa	6,667'	6,696'
Burket	6,697'	6,735'
Tully	6,736'	7,015'
Marcellus	7,016'	7,091' TVD

01/11/2013