

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: 11/19/2012
API #: 47-033-05549

*UPDATED

Farm name: Williams, Edgar - Estate Operator Well No.: Williams Unit 1H

LOCATION: Elevation: 1191' Quadrangle: Wolf Summit

District: Coal County: Harrison
Latitude: 8728' Feet South of 39 Deg. 20 Min. 00 Sec.
Longitude 9173' Feet West of 80 Deg. 22 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" 55#	476'	476'	661 Cu. Ft. Class A
Inspector: Tristan Jenkins	9-5/8" 36#	2620'	2620'	1067 Cu. Ft. Class A
Date Permit Issued: 5/24/2011	5-1/2" 20#	17,129'	17,129'	4275 Cu. Ft. Class H
Date Well Work Commenced: 6/4/2011		Depth-Top	Bottom	
Date Well Work Completed: 8/5/2012	Cement Plug	5873'	6073'	150 Cu. Ft. Class A
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>	2-3/8" 4.6#	7117'		
Total Vertical Depth (ft): 7049' TVD (deepest point drilled)				
Total Measured Depth (ft): 17,129' MD, 7049' TVD (BHL)				
Fresh Water Depth (ft.): 153'				
Salt Water Depth (ft.): 1030'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): Deepest known coal seam mined at surface				
Void(s) encountered (N/Y) Depth(s) N, N/A				

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

Producing formation Marcellus Pay zone depth (ft) 6972' TVD (Top)

Gas: Initial open flow ----- MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow 8,881 MCF/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests N/A Hours
Static rock Pressure 3300 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.

Lisa B. Dineley
Signature

11/19/12
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 Yes, CBL.

This is a subsequent well. Aniero only runs wireline logs on the first well on a multi-pad (Southern Unit 2H AP# 47-033-05363). Please reference wireline logs submitted with Form WR-35 for Southern Unit 2H.

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: 7127' – 16,798' MD (1884 holes)

Frac'd w/ 14,008 gals 15% HCL Acid, 206,991 bbls Slick Water carrying 1,114,000# 100 mesh, 4,132,200# 40/70 and 2,565,500# 20/40 sand.

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

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime	1,402'	1,494'
Big Injun	1,495'	1,907'
Gantz Sand	1,908'	1,964'
Fifty Foot Sand	1,965'	2,162'
Gordon	2,163'	2,402'
Fifth Sandstone	2,403'	2,471'
Bayard	2,472'	3,134'
Speechley	3,135'	3,309'
Balltown	3,310'	3,832'
Bradford	3,833'	4,419'
Benson	4,420'	4,809'
Alexander	4,810'	5,004'
Elk	5,005'	5,589'
Rhonestreet	5,590'	6,278'
Sycamore SS	6,279'	6,731'
Burkett	6,732'	6,756'
Tully	6,757'	6,884'
Hamilton	6,885'	6,971'
Marcellus	6,972'	7,049' TVD

REC-370
DEC 1 2017
W. COLLEGE ST. SUITE 100
COLUMBIA, MO 65201

WELL NAME: Williams Unit 1H
API #: 47-033-05549

Antero Resources Appalachian Corporation
Addendum to Form WR-35 - List of Additives Actually Used for
Fracturing Or Stimulating Well

ADDITIVES	CHEMICAL ABSTRACT SERVICE NUMBER (CAS #)
AI-2	Mixture
Ethylene Glycol Monobutyl Ether (2-Butoxyethanol)	111-76-2
Propargyl Alcohol	107-19-7
Isopropanol (Isopropyl Alcohol)	67-63-0
Proprietary Blend	Proprietary
EB-4L (Ethylene Glycol)	107-21-1
Hydrochloric Acid	7647-01-0
KR-153-SL	Unknown/Unavailable
LSG-100	Unknown/Unavailable
OB-2	Unknown/Unavailable
PH-15L	Unknown/Unavailable
Super TSC LT	Unknown/Unavailable
WFR-3B	Mixture
Petroleum distillate hydrotreated	64742-47-8
Mineral Spirits	8052-41-3
Propylene Glycol	57-55-6
Ethoxylated Alcohols	68551-12-2