

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: 4-23-2014  
API #: 47-069-00066

FINAL

JR

Farm name: Larry Ball 6H Operator Well No.: 832769

LOCATION: Elevation: 1324' Quadrangle: Bethany WV

District: Liberty County: Ohio  
Latitude: 10110' Feet South of 40 Deg. 12 Min. 30 Sec.  
Longitude 15140 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	20"	100'	100'	Driven
Agent: Eric Gillespie	13 3/8"	590'	590'	718 Cu. Ft.
Inspector: Bill Hendershot	9 5/8"	2051'	2051'	858 Cu. Ft.
Date Permit Issued: 1-14-2011	5 1/2"	13523'	13523'	2711 Cu. Ft.
Date Well Work Commenced: 4-16-2011				
Date Well Work Completed: 8-20-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6341'				
Total Measured Depth (ft): 13523'				
Fresh Water Depth (ft.): 100'				
Salt Water Depth (ft.): 1545'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 540'				
Void(s) encountered (N/Y) Depth(s) N				

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

Producing formation Marcellus Pay zone depth (ft) 7,070-13,371

Gas: Initial open flow 1,263\* MCF/d Oil: Initial open flow 155 Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 120 Hours

Static rock Pressure 4,122\* psig (surface pressure) after 120 Hours \*Calculated

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

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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.

Maximo Williams  
Signature

4-23-2014  
Date

05/23/2014

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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 4661' - 13472' 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>
<u>Surface:</u>			

(See attached)

05/23/2014

## PERFORATION RECORD ATTACHMENT

Well Number and Name: 8327 69 Larry Ball 6H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval Treated		Fluid		Propping Agent		Average Injection
	From	To		Type	Amount	Type	Amount			
7/9/2012	12,873	13,371	8/7/2012	12,873	13,371	Slk wtr	27,164	Sand	946,740	79
8/7/2012	12,228	12,784	8/8/2012	12,228	12,784	Slk wtr	19,096	Sand	953,160	79.9
8/8/2012	11,583	12,140	8/10/2012	11,583	12,140	Slk wtr	17,221	Sand	954,900	76.5
8/10/2012	10,939	11,495	8/10/2012	10,939	11,495	Slk wtr	17,099	Sand	945,400	79.9
8/11/2012	10,288	10,857	8/13/2012	10,288	10,857	Slk wtr	17,143	Sand	949,440	78.9
8/13/2012	9,649	10,197	8/14/2012	9,649	10,197	Slk wtr	17,443	Sand	953,440	79.8
8/14/2012	9,010	9,561	8/16/2012	9,010	9,561	Slk wtr	17,180	Sand	950,260	79.7
8/16/2012	8,360	8,922	8/17/2012	8,360	8,922	Slk wtr	17,126	Sand	955,240	79.6
8/17/2012	7,715	8,271	8/18/2012	7,715	8,271	Slk wtr	16,966	Sand	956,920	80
8/19/2012	7,070	7,626	8/20/2012	7,070	7,626	Slk wtr	16,962	Sand	955,880	79.9

**LATERAL SIDETRACK WELLBORE (no vertical pilot hole associated with this well)****Maximum TVD of wellbore: 6341 ft TVD @ 13523 ft MD**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS	0	0	540	540
PITTSBURG COAL	540	540	553	553
SS/LS	553	553	1210	1210
SS	1210	1210	1380	1380
SS/SH	1380	1380	1600	1600
BIG INJUN (SS)	1600	1600	1869	1869
SHALE	1869	1869	6450	6036
GENESEO (SH)	6450	6036	6476	6051
TULLY (LS)	6476	6051	6574	6102
HAMILTON (SH)	6574	6102	6887	6204
MARCELLUS (SH)	6887	6204		
TD OF LATERAL			13523	6341



# Hydraulic Fracturing Fluid Product Component Information Disclosure

69-00066

Fracture Date:	8/2/2012
State:	WEST VIRGINIA
County:	OHIO
API Number:	4706900066
Operator Name:	CHESAPEAKE APPALACHIA LLC
Well Name and Number:	LARRY BALL 6H
Longitude:	-80.578029
Latitude:	40.166746
Long/Lat Projection:	NAD27
Production Type:	GAS
True Vertical Depth (TVD):	6,328
Total Water Volume (gal)*:	7,164,066

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## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by Mass)**	Maximum Ingredient Concentration in HF Fluid (% by Mass)**	Comments
Fresh Water		Carrier/Base Fluid				79.57354%	
Recycled Produced Water		Carrier/Base Fluid				6.42616%	
Acid, Hydrochloric 15pct	SCHLUMBERGER	Acid	Water	007732-18-5	85.00%	0.38160%	
			Hydrogen Chloride	007647-01-0	15.00%	0.06734%	
A264	SCHLUMBERGER	Corrosion Inhibitor	Methanol (Methyl Alcohol)	000067-56-1	40.00%	0.00039%	
			Aliphatic acid	N/A	30.00%	0.00029%	
			Aliphatic alcohols, ethoxylated # 1	N/A	30.00%	0.00029%	
			Propargyl Alcohol (2-Propynol)	000107-19-7	10.00%	0.00010%	
L058	SCHLUMBERGER	Iron Control Agent	Sodium Erythorbate	006381-77-7	100.00%	0.00033%	
Northern White Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	10.80396%	
100 Mesh Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	2.65322%	
EC6110A	NALCO	Anti-Bacterial Agent	Glutaraldehyde	000111-30-8	60.00%	0.01861%	
			Quaternary Ammonium Compounds	N/A	10.00%	0.00310%	
			Ethanol	000064-17-5	5.00%	0.00155%	
EC6629A	NALCO	Scale Inhibitor	No Hazardous Components	NONE		0.00000%	

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B315	SCHLUMBERGER	Friction Reducer	Petroleum Distillate Hydrotreated Light	064742-47-8	30.00%	0.01499%	
			Aliphatic alcohol polyglycol ether	N/A	1.50%	0.00075%	
J580	SCHLUMBERGER	Gelling Agent	Carbohydrate polymer	N/A	100.00%	0.00542%	
J218	SCHLUMBERGER	Breaker	Ammonium Persulfate	007727-54-0	100.00%	0.00028%	

\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

"Additional Ingredients Not Listed on MSDS" component information were obtained directly from the supplier. As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of this information should be directed to the supplier who provided it.