

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 #: 47-069-00104
FINAL

JR

Farm name: Larry Ball OHI 3H Operator Well No.: 834228

LOCATION: Elevation: 1324' Quadrangle: Bethany

District: Liberty County: Ohio
Latitude: 10090' Feet South of 40 Deg. 12 Min. 30 Sec.
Longitude 16150' 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"	610'	610'	707 Cu. Ft.
Agent: <u>Eric Gillespie</u>	9 5/8"	2025'	2025'	943 Cu. Ft.
Inspector: <u>Bill Hendershot</u>	5 1/2"	14698'	14698'	4861 Cu. Ft.
Date Permit Issued: <u>11-17-2011</u>				
Date Well Work Commenced: <u>1-13-2012</u>				
Date Well Work Completed: <u>8-20-2012</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>6272'</u>				
Total Measured Depth (ft): <u>14699'</u>				
Fresh Water Depth (ft.): <u>100', 376'</u>				
Salt Water Depth (ft.): <u>1545'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>549'</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

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

Producing formation Marcellus Pay zone depth (ft) 6,700-14,559
Gas: Initial open flow 1,150* MCF/d Oil: Initial open flow 208 Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 48 Hours
Static rock Pressure 4,077* psig (surface pressure) after 48 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

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.

Marlene Williams
Signature

4-23-2014
Date

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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 5657' to 14699' 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>Bottom Depth</u>
<u>Surface:</u>		

(See attached)

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PERFORATION RECORD ATTACHMENT

Well Number and Name: 8342 28 Larry Ball OHI 3H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection	
	From	To			Type	Amount	Type	Amount		
7/12/2012	14,045	14,559	8/1/2012	14,045	14,559	Sik wtr	12,690	Sand	713,580	79.8
8/3/2012	13,433	13,956	8/4/2012	13,433	13,956	Sik wtr	12,904	Sand	722,140	79.9
8/4/2012	12,821	13,344	8/4/2012	12,821	13,344	Sik wtr	12,724	Sand	725,800	79.8
8/5/2012	12,209	12,732	8/7/2012	12,209	12,732	Sik wtr	14,179	Sand	727,340	77.8
8/7/2012	11,597	12,130	8/9/2012	11,597	12,130	Sik wtr	12,855	Sand	725,440	78.1
8/9/2012	10,985	11,508	8/10/2012	10,985	11,508	Sik wtr	12,785	Sand	727,380	79.9
8/10/2012	10,366	10,889	8/12/2012	10,366	10,889	Sik wtr	12,824	Sand	725,600	78.3
8/12/2012	9,760	10,284	8/13/2012	9,760	10,284	Sik wtr	12,637	Sand	718,480	79.7
8/13/2012	9,148	9,672	8/15/2012	9,148	9,672	Sik wtr	12,581	Sand	726,020	78.2
8/15/2012	8,536	9,060	8/16/2012	8,536	9,060	Sik wtr	12,667	Sand	726,440	79.4
8/17/2012	7,924	8,442	8/18/2012	7,924	8,442	Sik wtr	12,699	Sand	726,420	80
8/18/2012	7,312	7,836	8/19/2012	7,312	7,836	Sik wtr	12,517	Sand	722,960	79.6
8/19/2012	6,700	7,223	8/20/2012	6,700	7,223	Sik wtr	12,645	Sand	726,200	80

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LATERAL SIDETRACK WELLBORE (no vertical pilot hole associated with this well)**Maximum TVD of wellbore: 6272 ft TVD @ 6558 ft MD**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS	0	0	549	549
PITTSBURG COAL	549	549	557	557
SS/SH	557	557	730	730
SS/LS	730	730	850	850
SS/LS/SH	850	850	880	880
SS/SH	880	880	930	930
SHALE	930	930	970	970
SH/LS	970	970	1030	1030
SS/SH/LS	1030	1030	1060	1060
SS/SH	1060	1060	1090	1090
SS	1090	1090	1300	1300
SS/SH	1300	1300	1420	1420
SS	1420	1420	1480	1480
SS/SH	1480	1480	1540	1540
SS/LS/SH	1540	1540	1610	1610
BIG INJUN (SS)	1610	1610	1880	1880
SHALE	1880	1880	6070	6048
GENESEO (SH)	6070	6048	6095	6068
TULLY (LS)	6095	6068	6164	6122
HAMILTON (SH)	6164	6122	6352	6221
MARCELLUS (SH)	6352	6221		
TD OF LATERAL			14699	6154

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69-0010

State:	WEST VIRGINIA
County:	OHIO
API Number:	4706900104
Operator Name:	CHESAPEAKE APPALACHIA LLC
Well Name and Number:	LARRY BALL OHI 3H
Longitude:	-80.577958
Latitude:	40.166741
Long/Lat Projection:	NAD27
Production Type:	GAS
True Vertical Depth (TVD):	6,272
Total Water Volume (gal)*:	7,647,318

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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				80.18570%	
Recycled Produced Water		Carrier/Base Fluid				6.46805%	
Acid, Hydrochloric 15pct	SCHLUMBERGER	Acid	Water	007732-18-5	85.00%	0.49030%	
			Hydrogen Chloride	007647-01-0	15.00%	0.08652%	
A264	SCHLUMBERGER	Corrosion Inhibitor	Methanol (Methyl Alcohol)	000067-56-1	40.00%	0.00039%	
			Aliphatic acid	N/A	30.00%	0.00030%	
			Aliphatic alcohols, ethoxylated # 1	N/A	30.00%	0.00030%	
			Propargyl Alcohol (2-Propynol)	000107-19-7	10.00%	0.00010%	
L058	SCHLUMBERGER	Iron Control Agent	Sodium Erythorbate	006381-77-7	100.00%	0.00038%	
Northern White Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	10.14956%	
100 Mesh Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	2.54052%	
EC6110A	NALCO	Anti-Bacterial Agent	Glutaraldehyde	000111-30-8	60.00%	0.01576%	
			Quaternary Ammonium Compounds	N/A	10.00%	0.00263%	
			Ethanol	000064-17-5	5.00%	0.00131%	
EC6629A	NALCO	Scale Inhibitor	No Hazardous Components	NONE		0.00000%	

J580	SCHLUMBE RGER	Gelling Agent	Carbohydrate polymer	N/A	100.00%	0.01067%	
B315	SCHLUMBE RGER	Friction Reducer	Petroleum Distillate Hydroreated Light	064742-47-8	30.00%	0.01062%	
J218	SCHLUMBE RGER	Breaker	Aliphatic alcohol polyglycol ether Ammonium Persulfate	N/A	1.50%	0.00053%	
				007727-54-0	100.00%	0.00064%	

* 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.

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