

CORRECTION

Date **October 26, 2010**
API # **4707700508**

**State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work**

Farm Name: **Bray Liston 8H**

Operator Well No.: **831258**

LOCATION Elevation: **1896'**
District: **Pleasant**

Quadrangle: **Valley Point**
County: **Preston**

Top Hole Latitude: **xx** ft South of **39** ° **37'** **30"**
Top Hole Longitude: **xx** ft West of **79** ° **37'** **30"**
Btm Hole Latitude: **xx** ft South of **xx** ° **xx'** **xx"**
Btm Hole Longitude: **xx** ft West of **xx** ° **xx'** **xx"**

Company: Chesapeake Appalachia, LLC
P.O. Box 18496
Oklahoma City, OK 73154-0496

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	40'	40'	Driven
13 3/8"	560'	560'	614 Cu. Ft.
9 5/8"	1603'	1603'	732 Cu. Ft.
5 1/2"	11683'	11683'	2296 Cu. Ft.
2 3/8"	8070'	8070'	

Agent: Eric Gillespie
Inspector: Tristan Jenkins
Date Permit Issued: 08/03/2009
Date Well work commenced: 11/30/2009
Date Well Work completed: 04/18/2010
Verbal Plugging Permission
Granted on / /
Rotary Cable Rig
Total Depth (ft): 12430' TVD: 7999'
Fresh Water Depth (ft): 30'
Salt Water Depth (ft.): None
Is coal being mined in area (Yes No
Coal Depths (ft): None

Open Flow Data

1st Producing Formation **Marcellus** Pay Zone Depth **8,102 ft to 12,430 ft**
Gas: Initial Open Flow **1,285 Mcf/day** Oil: Initial Open Flow **bb/day**
Final Open Flow **xx Mcf/day** Final Open Flow **bb/day**
Time of Open Flow between Initial and Final Tests **xx** hours
Static Rock Pressure **5,199 psig after** **xx** hours

2nd Producing Formation **Marcellus** Pay Zone Depth **xx ft to xx ft**
Gas: Initial Open Flow **Mcf/day** Oil: Initial Open Flow **bb/day**
Final Open Flow **xx Mcf/day** Final Open Flow **bb/day**
Time of Open Flow between Initial and Final Tests **xx** hours
Static Rock Pressure **xx psig after** **xx** hours

3rd Producing Formation **Marcellus** Pay Zone Depth **xx ft to xx ft**
Gas: Initial Open Flow **Mcf/day** Oil: Initial Open Flow **bb/day**
Final Open Flow **xx Mcf/day** Final Open Flow **bb/day**
Time of Open Flow between Initial and Final Tests **xx** hours
Static Rock Pressure **xx psig after** **xx** hours

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Perforated Intervals

1 st Stage	Marcellus	0	holes from	11,683 ft	to	12,430 ft
2 nd Stage	Marcellus	20	holes from	11,530 ft	to	11,612 ft
3 rd Stage	Marcellus	50	holes from	11,128 ft	to	11,450 ft
4 th Stage	Marcellus	50	holes from	10,728 ft	to	11,050 ft
5 th Stage	Marcellus	50	holes from	10,142 ft	to	10,464 ft
6 th Stage	Marcellus	50	holes from	9,702 ft	to	10,024 ft
7 th Stage	Marcellus	50	holes from	9,302 ft	to	9,624 ft
8 th Stage	Marcellus	50	holes from	8,902 ft	to	9,224 ft
9 th Stage	Marcellus	50	holes from	8,502 ft	to	8,824 ft
10 th Stage	Marcellus	50	holes from	8,102 ft	to	8,424 ft

Fracturing / Stimulation

1 st Stage	Type of Treatment Slickwater			
	Total Acid 5,000 Gal of 15% HCl		Breakdown Pressure 7,545 psi	
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,290 psi MTP 9,190 psi	
	Total Fluid 13,229 bbl	Total Nitrogen 0 scf	Total Sand 311,906 lb of 100 mesh	
			Total Sand 300,511 lb of 40/70	
	ISIP 6,308 psi	5 min 4,976 psi		
2 nd Stage	Type of Treatment Slickwater			
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,350 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,824 psi MTP 8,946 psi	
	Total Fluid 12,313 bbl	Total Nitrogen 0 scf	Total Sand 288,400 lb of 100 mesh	
			Total Sand 289,200 lb of 40/70	
	ISIP 6,619 psi	5 min 5,732 psi		
3 rd Stage	Type of Treatment Slickwater			
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 7,392 psi	
	Average Rate 65 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,784 psi MTP 9,727 psi	
	Total Fluid 15,718 bbl	Total Nitrogen 0 scf	Total Sand 312,000 lb of 100 mesh	
			Total Sand 268,000 lb of 40/70	
	ISIP 6,389 psi	5 min 0 psi		
4 th Stage	Type of Treatment Slickwater			
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 8,469 psi	
	Average Rate 72 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,620 psi MTP 9,192 psi	
	Total Fluid 12,472 bbl	Total Nitrogen 0 scf	Total Sand 300,510 lb of 100 mesh	
			Total Sand 285,699 lb of 40/70	
	ISIP 6,834 psi	5 min 6,342 psi		
5 th Stage	Type of Treatment Slickwater			
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 8,467 psi	
	Average Rate 80 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,458 psi MTP 9,119 psi	
	Total Fluid 12,307 bbl	Total Nitrogen 0 scf	Total Sand 297,000 lb of 100 mesh	
			Total Sand 294,000 lb of 40/70	
	ISIP 6,656 psi	5 min 5,989 psi		
6 th Stage	Type of Treatment Slickwater			
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,887 psi	
	Average Rate 80 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,504 psi MTP 9,008 psi	
	Total Fluid 13,287 bbl	Total Nitrogen 0 scf	Total Sand 325,500 lb of 100 mesh	
			Total Sand 307,200 lb of 40/70	
	ISIP 5,983 psi	5 min 4,844 psi		
7 th Stage	Type of Treatment Slickwater			
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,290 psi	
	Average Rate 93 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,934 psi MTP 8,975 psi	
	Total Fluid 12,504 bbl	Total Nitrogen 0 scf	Total Sand 300,000 lb of 100 mesh	
			Total Sand 300,000 lb of 40/70	
	ISIP 6,004 psi	5 min 5,342 psi		

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8 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 3,407 psi	
	Average Rate 89 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,345 psi	MTP 9,072 psi
	Total Fluid 12,164 bbl	Total Nitrogen 0 scf	Total Sand 300,000 lb of 100 mesh
			Total Sand 300,000 lb of 40/70
	ISIP 6,454 psi	5 min 5,267 psi	
9 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,914 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,414 psi	MTP 8,980 psi
	Total Fluid 12,014 bbl	Total Nitrogen 0 scf	Total Sand 311,400 lb of 100 mesh
			Total Sand 310,000 lb of 40/70
	ISIP 7,112 psi	5 min 5,990 psi	
10 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,117 psi	
	Average Rate 91 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,578 psi	MTP 8,985 psi
	Total Fluid 11,512 bbl	Total Nitrogen 0 scf	Total Sand 330,000 lb of 100 mesh
			Total Sand 310,000 lb of 40/70
	ISIP 7,195 psi	5 min 5,986 psi	

Well Log

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Formation Name	Top	Bottom	Comments
			All depths in feet KBTVD
Sand and Shale	0	936	
Big Lime	936	1087	
Big Injun	1087	1225	
Shale and trace Sand	1225	2350	
Shale	2350	2770	
Silt	2770	2800	
Balltown Sand	2800	2923	
Shale and Silt	2923	3070	
Shale	3070	3400	
Shale and Silt	3400	3760	
Shale, trace Sand	3760	4270	
Shale	4270	4360	
Silt and Shale	4360	4510	
Shale	4510	4690	
Silt and Shale	4690	5500	
Shale	5500	5950	
Shale and Silt	5950	6040	
Shale	6040	6220	
Shale and Silt	6220	6280	
Shale	6280	6430	
Shale and Silt	6430	6460	
Shale	6460	7467	
Geneseo	7467	7525	
Tully	7525'	7577'	
Hamilton	7577'	7914'	
Marcellus	7914'	12430'	

NOTE: ON BACK OF THIS FORM 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 ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: Marlene Williams
 CHESAPEAKE APPALACHIA, LLC
 By: Marlene Williams, Regulatory Analyst II
 Date: 2-13-2013

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