WR -35

Date: January 27, 2011
API # 47-103-02459

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

Farm Name: Hohman HBP S 3H **Operator Well No.:** 627377

LOCATION **Elevation:** 1494' **Quadrangle:** Wileyville
District: Proctor **County:** Wetzel
Latitude: 11,300 ft **South of** 39° 42' 30"
Longitude: 10,00 ft **West of** 80° 40' 00"

Company: Chesapeake Appalachia, L.L.C.
P.O. Box 18496
OKC, OK 73154-0496

Agent: Eric Gillespie
Inspector: David Scranage
Date Permit Issued: **6/4/2009**
Date Well work commenced: 3/27/2010
Date Well Work completed: 8/2/2010
Verbal Plugging Permission
Granted on / /
Rotary ☒ Cable☐ Rig
Total Depth (ft): 12,480' TVD (ft): 7120'
Fresh Water Depth (ft): 438'
Salt Water Depth (ft.):NA
Is coal being mined in area (Yes ☐ No ☒)
Coal Depths (ft): 230' & 1280'
Was this well logged and plugged back?
Yes____ No__X__ if yes –
depth cement plug set _____'

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	40	40'	Driven
13 3/8"	1448'	1448'	1522 Cu. Ft.
9 5/8"	2783'	2783'	1198 Cu. Ft.
5 ½"	12,473'	12,473'	1808 Cu. Ft.

Open Flow Data

1st Producing Formation — Pay Zone Depth 7,398 ft to 12,341 ft
Gas: Initial Open Flow 3,371 Mcf/day — Oil: Initial Open Flow ____ bbl/day
Final Open Flow N/A Mcf/day — Final Open Flow ____ bbl/day
Time of Open Flow between Initial and Final Tests In Line hours
Static Rock Pressure 4,628 psig after N/A hours

2nd Producing Formation — Pay Zone Depth ____ ft to ____ ft
Gas: Initial Open Flow N/A Mcf/day — Oil: Initial Open Flow ____ bbl/day
Final Open Flow N/A Mcf/day — Final Open Flow ____ bbl/day
Time of Open Flow between Initial and Final Tests ____ hours
Static Rock Pressure N/A psig after ____ hours

3rd Producing Formation — Pay Zone Depth ____ ft to ____ ft
Gas: Initial Open Flow N/A Mcf/day — Oil: Initial Open Flow ____ bbl/day
Final Open Flow N/A Mcf/day — Final Open Flow ____ bbl/day
Time of Open Flow between Initial and Final Tests ____ hours
Static Rock Pressure N/A psig after ____ hours

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.

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Chesapeake Energy
Well No.: 627377

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Perforated Intervals

1st Stage	Marcellus	50	holes from	12,039 ft	to	12,341 ft
2nd Stage	Marcellus	50	holes from	11,664 ft	to	11,966 ft
3rd Stage	Marcellus	50	holes from	11,289 ft	to	11,591 ft
4th Stage	Marcellus	50	holes from	10,914 ft	to	11,216 ft
5th Stage	Marcellus	50	holes from	10,539 ft	to	10,841 ft
6th Stage	Marcellus	50	holes from	10,160 ft	to	10,466 ft
7th Stage	Marcellus	50	holes from	9,787 ft	to	10,091 ft
8th Stage	Marcellus	50	holes from	8,898 ft	to	9,195 ft
9th Stage	Marcellus	50	holes from	8,523 ft	to	8,823 ft
10th Stage	Marcellus	50	holes from	8,148 ft	to	8,450 ft
11th Stage	Marcellus	50	holes from	7,768 ft	to	8,075 ft
12th Stage	Marcellus	50	holes from	7,398 ft	to	7,700 ft

Fracturing / Stimulation

1st Stage		Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl		Breakdown Pressure 5,303 psi	
	Average Rate 85 scf/min ☐ or bpm ☒		ATP 7,546 psi	MTP 8,653 psi
	Total Fluid 11,448 bbl	Total Nitrogen 0 scf	Total Sand 151,000 lb of 100 mesh	
			Total Sand 383,000 lb of 40/70	
	ISIP 4,313 psi	5 min 3,660 psi		
2nd Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,644 psi	
	Average Rate 88 scf/min ☐ or bpm ☒		ATP 6,868 psi	MTP 8,136 psi
	Total Fluid 10,458 bbl	Total Nitrogen 0 scf	Total Sand 140,880 lb of 100 mesh	
			Total Sand 344,174 lb of 40/70	
	ISIP 4,286 psi	5 min 3,529 psi		
3rd Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,525 psi	
	Average Rate 87 scf/min ☐ or bpm ☒		ATP 6,846 psi	MTP 8,702 psi
	Total Fluid 10,642 bbl	Total Nitrogen 0 scf	Total Sand 138,318 lb of 100 mesh	
			Total Sand 346,971 lb of 40/70	
	ISIP 4,595 psi	5 min 3,675 psi		
4th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,745 psi	
	Average Rate 87 scf/min ☐ or bpm ☒		ATP 6,648 psi	MTP 8,800 psi
	Total Fluid 10,604 bbl	Total Nitrogen 0 scf	Total Sand 143,777 lb of 100 mesh	
			Total Sand 338,382 lb of 40/70	
	ISIP 4,621 psi	5 min 3,658 psi		
5th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,870 psi	
	Average Rate 79 scf/min ☐ or bpm ☒		ATP 6,649 psi	MTP 8,946 psi
	Total Fluid 11,294 bbl	Total Nitrogen 0 scf	Total Sand 144,134 lb of 100 mesh	
			Total Sand 342,237 lb of 40/70	
	ISIP 4,485 psi	5 min 3,540 psi		
6th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,814 psi	
	Average Rate 81 scf/min ☐ or bpm ☒		ATP 6,576 psi	MTP 8,890 psi
	Total Fluid 10,232 bbl	Total Nitrogen 0 scf	Total Sand 145,404 lb of 100 mesh	
			Total Sand 341,961 lb of 40/70	
	ISIP 4,405 psi	5 min 3,622 psi		
7th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,863 psi	
	Average Rate 84 scf/min ☐ or bpm ☒		ATP 6,777 psi	MTP 8,450 psi
	Total Fluid 10,165 bbl	Total Nitrogen 0 scf	Total Sand 142,809 lb of 100 mesh	
			Total Sand 340,487 lb of 40/70	
	ISIP 4,317 psi	5 min 3,577 psi		

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8th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,829 psi	
	Average Rate 89 scf/min ☐ or bpm ☒		ATP 6,910 psi	MTP 8,527 psi
	Total Fluid 10,038 bbl	Total Nitrogen 0 scf	Total Sand 142,242 lb of 100 mesh	
			Total Sand 341,070 lb of 40/70	
	ISIP 4,210 psi	5 min 3,522 psi		
9th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,127 psi	
	Average Rate 90 scf/min ☐ or bpm ☒		ATP 6,787 psi	MTP 8,462 psi
	Total Fluid 9,886 bbl	Total Nitrogen 0 scf	Total Sand 139,660 lb of 100 mesh	
			Total Sand 337,904 lb of 40/70	
	ISIP 4,558 psi	5 min 3,503 psi		
10th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,025 psi	
	Average Rate 79 scf/min ☐ or bpm ☒		ATP 6,610 psi	MTP 8,235 psi
	Total Fluid 11,284 bbl	Total Nitrogen 0 scf	Total Sand 140,683 lb of 100 mesh	
			Total Sand 342,468 lb of 40/70	
	ISIP 4,668 psi	5 min 3,573 psi		
11th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,408 psi	
	Average Rate 80 scf/min ☐ or bpm ☒		ATP 7,119 psi	MTP 8,085 psi
	Total Fluid 12,648 bbl	Total Nitrogen 0 scf	Total Sand 153,728 lb of 100 mesh	
			Total Sand 339,972 lb of 40/70	
	ISIP 4,275 psi	5 min 3,383 psi		
12th Stage		Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,840 psi	
	Average Rate 88 scf/min ☐ or bpm ☒		ATP 6,984 psi	MTP 8,785 psi
	Total Fluid 10,231 bbl	Total Nitrogen 0 scf	Total Sand 156,243 lb of 100 mesh	
			Total Sand 347,361 lb of 40/70	
	ISIP 4,722 psi	5 min 3,428 psi		

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Well Log

Formation Name	Top	Bottom	Comments
SH/SS	0	560	1H/Mud logger
SH/SILT	560	620	1H/Mud logger
SH/SS	620	680	1H/Mud logger
SH	680	730	1H/Mud logger
SH/SS	730	860	1H/Mud logger
SHALE	860	950	1H/Mud logger
SH/SS	950	980	1H/Mud logger
SH/SILT/SS	980	1040	1H/Mud logger
SHALE	1040	1100	1H/Mud logger
SH/SILT	1100	1130	1H/Mud logger
SH/SILT/LS	1130	1160	1H/Mud logger
SH/LS	1160	1220	1H/Mud logger
SH/SILT/LS	1220	1250	1H/Mud logger
SH/SILT	1250	1291	1H/Mud logger
Pittsburgh Coal	1291	1301	1H/Mud logger
SH/SILT	1301	1370	1H/Mud logger
SH/SS	1370	1430	1H/Mud logger
SH/LS	1430	1610	Mud logger
SH	1610	1640	Mud logger
SH/SS/LS	1640	1790	Mud logger
SS	1790	1850	Mud logger
SH	1850	1940	Mud logger
Salt Sands	1940	2000	Mud logger
SH	2000	2060	Mud logger
SS	2060	2090	Mud logger
SH	2090	2190	Mud logger
Maxton	2190	2240	OHL
SH/SS/SILT	2240	2300	Mud logger
SH/LS	2300	2340	Mud logger
SS	2340	2358	Mud logger
Big Lime	2358	2390	Mud logger
SS	2390	2406	Mud logger
Big Injun	2406	2674	Mud logger
SH/SILT	2674	3278	Mud logger
Gordon Sand	3278	3290	Mud logger
SH/SILT	3290	4820	Mud logger
SH	4820	5090	Mud logger
SH/SILT	5090	7055	Mud logger
Geneseo	7055	7076	MWD GR
Tully	7076	7176	MWD GR
Marcellus	7176	12480	MWD GR

Signed: Marlene Williams

CHESAPEAKE APPALACHIA, LLC

By: Marlene Williams, Regulatory Analyst II

Date: 2-13-2013

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