WR-35
Rev (9-11)

Final Completion
State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 08-08-2013
API #: 47-009-00106

Farm name: Samuel Hubbard BRK 3H Operator Well No.: 833613

LOCATION: Elevation: 1225' Quadrangle: Steubenville East

District: Cross Creek County: Brooke
Latitude: 1930' Feet South of 40 Deg. 17 Min. 30 Sec.
Longitude 1550' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496	26"	125'	125'	336 Cu. Ft.
Agent: Eric Gillespie	20"	433'	433'	701 Cu. Ft.
Inspector: Bill Hendershot	13 3/8"	1775'	1775'	1875 Cu. Ft.
Date Permit Issued: 9-20-2011	9 5/8"	7796'	7796'	3207 Cu. Ft.
Date Well Work Commenced: 10-12-2011	5 1/2"	14621'	14621'	1976 Cu. Ft.
Date Well Work Completed: 4-15-2013				
Verbal Plugging:				
Date Permission granted on:				
Rotary ☑ Cable ☐ Rig ☐				
Total Vertical Depth (ft): 11035'(cement plug @9200'-10999')				
Total Measured Depth (ft): 14625'				
Fresh Water Depth (ft.): 60', 95', 200'				
Salt Water Depth (ft.): 1055'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 257"				
Void(s) encountered (N/Y) Depth(s) Y 265'				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)
Producing formation Utica Pay zone depth (ft) 10,923-14,473
Gas: Initial open flow ____ MCF/d Oil: Initial open flow ____ Bbl/d
Final open flow 11,110* MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 96 Hours
Static rock Pressure 6,969* psig (surface pressure) after 96 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

Received

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

8-9-2013
Date

Office of Oil and Gas
Dept. of Environmental Protection

10/18/2013

9-106

Were core samples taken? Yes Y No_____ Were cuttings caught during drilling? Yes Y No_____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list GR, neutron, density, and resistivity
open hole logs run from 0-11,035' MD; LWD GR from 9200-14,625' 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 attachment

Plug Back Details Including Plug Type and Depth(s): cement plug @9200'-10999'

Formations Encountered: Top Depth / Bottom Depth
Surface:

See attachment

Received

12

Office of Oil and Gas
WV Dept. of Environmental Protection
10/18/2013

9-106

PERFORATION RECORD ATTACHMENT

Well Number and Name: 833613 Samuel Hubbard BRK 3H

PERFORATION RECORD			STIMULATION RECORD							
	Interval Perforated					*Fluid*		*Propping Agent*		Average
Date	From	To	Date	Interval Treated		Type	Amount	Type	Amount	Injection
7/29/2012	14,090	14,473	3/14/2013	14,090	14,473	Slk wtr	9,271	Sand	544,920	70
3/14/2013	13,637	14,021	3/14/2013	13,637	14,021	Slk wtr	8,712	Sand	544,920	74
3/15/2013	13,185	13,568	3/15/2013	13,185	13,568	Slk wtr	8,572	Sand	549,800	69
3/15/2013	12,733	13,116	3/15/2013	12,733	13,116	Slk wtr	8,620	Sand	549,800	75
3/15/2013	12,280	12,664	3/15/2013	12,280	12,664	Slk wtr	8,502	Sand	553,467	80
3/16/2013	11,828	12,211	3/16/2013	11,828	12,211	Slk wtr	8,508	Sand	547,660	78
3/16/2013	11,375	11,761	3/16/2013	11,375	11,761	Slk wtr	8,704	Sand	547,500	78
3/16/2013	10,923	11,306	3/16/2013	10,923	11,306	Slk wtr	8,739	Sand	559,221	79

9-106

VERTICAL PILOT HOLE

Formation/Lithology	Top Depth, TVD/MD (ft)	Bottom Depth, TVD/MD (ft)
SS/LS	0	257
PITTSBURG COAL	257	350
SS/SH	350	400
SS	400	1252
BIG LIME (LS)	1252	1395
BIG INJUN (SS)	1395	1555
SHALE	1555	5646
GENESEO (SH)	5646	5663
TULLY (LS)	5663	5724
HAMILTON (SH)	5724	5813
MARCELLUS (SH)	5813	5876
ONONDAGA (LS)	5876	6019
HUNTERSVILLE (CHERT)	6019	6112
ORISKANY (SS)	6112	6195
HELDERBERG (LS)	6195	6603
SALINA (LS/DOLOMITE/SALT)	6603	6880
SHALE	6880	7665
LOCKPORT (DOLOMITE)	7665	8010
ROSE HILL (SH)	8010	8435
CLINTON (SS)	8435	8536
QUEENSTON (SH)	8536	10560
UTICA (SH)	10560	10721
POINT PLEASANT (SH)	10721	10834
TRENTON (LS)	10834	
TD OF PILOT HOLE		11035

LATERAL SIDETRACK WELLBORE

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SS/LS	0	0	257	257
PITTSBURG COAL	257	257	350	350
SS/SH	350	350	400	400
SS	400	400	1252	1252
BIG LIME (LS)	1252	1252	1395	1395
BIG INJUN (SS)	1395	1395	1555	1555
SHALE	1555	1555	5646	5646
GENESEO (SH)	5646	5646	5663	5663
TULLY (LS)	5663	5663	5724	5724
HAMILTON (SH)	5724	5724	5813	5813
MARCELLUS (SH)	5813	5813	5876	5876
ONONDAGA (LS)	5876	5876	6019	6019
HUNTERSVILLE (CHERT)	6019	6019	6112	6112
ORISKANY (SS)	6112	6112	6195	6195
HELDERBERG (SS/SH)	6195	6195	6603	6603
SALINA (LS/DOLOMITE/SALT)	6603	6603	6880	6880
SHALE	6880	6880	7665	7665
LOCKPORT (DOLOMITE)	7665	7665	8010	8010
ROSE HILL (SH)	8010	8010	8435	8435
CLINTON (SS)	8435	8435	8536	8536
QUEENSTON (SH)	8536	8536	10469	10388
UTICA (SH)	10469	10388	10764	10548
POINT PLEASANT (SH)	10764	10548		
TD OF LATERAL			14625	10520