WR-35 Rev (9-11)

State of West Virginia Department of Environmental Protection Office of Oil and Gas

DATE:	9-7-2012
API#:	47-061-01616

Well Operator	r's Report of W	Vell Work				
name: Esther Clark 1H	Operator Wel	l No.: 832638		ECEIVED		
LOCATION: Elevation: 1424'			S	SEP 1 2 2012		
			WV GE	OLOGICAL SURVE		
District: Battelle				MORGANTOWN, WV		
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	20"	110'	110'	106 Cu. Ft.		
Agent: Eric Gillespie	13 3/8"	525'	525'	623 Cu. Ft.		
	9 5/8"	3660'	3660'	1852 Cu. Ft.		
Date Permit Issued: 1-25-2011	5 1/2"	15657'	15657'	3357 Cu. Ft.		
Date Well Work Commenced: 12-10-2011						
Date Well Work Completed: 3-26-2012						
Verbal Plugging:						
Date Permission granted on:				·		
Rotary Cable Rig						
Total Vertical Depth (ft): 7962'						
Total Measured Depth (ft): 15674'	·					
Salt Water Depth (ft.): None						
Is coal being mined in area (N/Y)? Y						
Coal Depths (ft.): 221', 1200'						
Void(s) encountered (N/Y) Depth(s) N						
Producing formation Marcellus Pay 2 Gas: Initial open flow MCF/d Oil: Initial open flow Final open flow 4011* MCF/d Final open flow Time of open flow between initial and final tests 77 Static rock Pressure 5130* psig (surface pressure) and Gas: Initial open flow MCF/d Oil: Initial open flow MCF/d Oil: Initial open flow MCF/d Final open flow MCF/d Final open flow MCF/d Final open flow MCF/d Final open flow	zone depth (ft) 8 low Bb Hours fter Hour ne depth (ft) low Bb Bb	ol/d l/d *Calculated rs	ata on separate s	heet)		
Static rock Pressure psig (surface pressure) af		•				
	District: Battelle Latitude: 5490' Feet South of 39 Deg. Longitude 5960' Feet West of 80 Deg Company: Chesapeake Appalachia, L.L.C. Address: P.O. Box 18496 Oklahoma City, OK 73154-0496 Agent: Eric Gillespie Inspector: Sam Ward Date Permit Issued: 1-25-2011 Date Well Work Commenced: 12-10-2011 Date Well Work Completed: 3-26-2012 Verbal Plugging: Date Permission granted on: Rotary	TION: Elevation: 1424' Quadrangle: District: Battelle County: Monc Latitude: 5490' Feet South of 39 Deg. 40 Min Longitude 5990' Feet West of 80 Deg. 22 Min Company: Chesapeake Appalachia, L.L.C. Address: P.O. Box 18496 Casing & Tubing Tubing Tubing Tubing Poklahoma City, OK 73154-0496 20" Agent: Eric Gillespie 13 3/8" Inspector: Sam Ward 9 5/8" Date Permit Issued: 1-25-2011 5 1/2" Date Well Work Completed: 3-26-2012 Verbal Plugging: Date Permission granted on: Rotary ✓ Cable Rig Total Measured Depth (ft): 7962' Total Measured Depth (ft): 15674' Fresh Water Depth (ft.): None Is coal being mined in area (N/Y)? Y Coal Depths (ft.): 221', 1200' Void(s) encountered (N/Y) Depth(s) N EN FLOW DATA (If more than two producing formations please inclused on the producing formation of the p	District: Battelle County: Monongalia	TION: Elevation: 1424' District: Battelle Latitude: 5980' Feet South of 30 Deg. 40 Min. 50 Sec. Longitude: 5980' Feet West of 80 Deg. 22 Min. 30 Sec. Company: Chesapeake Appalachia, L.L.C. Address: P.O. Box 18496 Casing & Used in Tubing drilling drilling Oklahoma City, OK 73154-0496 20" 110' 110' Agent: Eric Gillespie 13 3/8" 525' 525' Inspector: Sam Ward 9 5/8" 3660' 3660' Date Permit Issued: 1-25-2011 5 1/2" 15657' 15657' Date Well Work Completed: 3-26-2012 Verbal Plugging: Date Permission granted on: Rotary		

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.

Were core samples taken? YesNo_X	Were cuttings caught during drilling? Yes X No
Were Electrical, Mechanical or Geophysical log	gs recorded on this well? If yes, please list
FRACTURING OR STIMULATING, PHYS DETAILED GEOLOGICAL RECORD O	THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, SICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING SORE FROM SURFACE TO TOTAL DEPTH.
Perforated Intervals, Fracturing, or Stimulating:	:
(See Attached)	
Plug Back Details Including Plug Type and Dep	oth(s):
Formations Encountered: Surface:	Top Depth / Bottom Depth
(See Attached)	

PERFORATION RECORD ATTACHMENT

Well Number and Name: 832638 Esther Clark 1H

PERFORATION RECORD		STIMULATION RECORD								
	Interval F	erforated				F	luid	Propp	ing Agent	Average
Date	From	То	Date	Interval	Treated	Type	Amount	Туре	Amount	Injection
2/15/2012	15,144	15,536	3/12/2012	15,144	15,536	Slk wtr	13,281	Sand	568,080	81
3/13/2012	14,658	15,051	3/14/2012	14,658	15,051	Slk wtr	9,916	Sand	569,480	76
3/14/2012	14,175	14,570	3/14/2012	14,175	14,570	Slk wtr	10,729	Sand	568,500	78
3/15/2012	13,688	14,080	3/16/2012	13,688	14,080	Slk wtr	10,270	Sand	571,840	77
3/16/2012	13,203	13,595	3/17/2012	13,203	13,595	Slk wtr	10,410	Sand	571,980	84
3/17/2012	12,717	13,113	3/18/2012	12,717	13,113	Slk wtr	10,526	Sand	571,880	76
3/18/2012	12,232	12,624	3/18/2012	12,232	12,624	Slk wtr	11,981	Sand	571,880	82
3/18/2012	11,747	12,139	3/19/2012	11,747	12,139	Slk wtr	10,706	Sand	570,900	80
3/19/2012	11,262	11,654	3/21/2012	11,262	11,654	Slk wtr	10,859	Sand	570,960	70
3/21/2012	10,776	11,169	3/21/2012	10,776	11,169	Slk wtr	16,450	Sand	571,720	50
3/22/2012	10,295	10,683	3/22/2012	10,295	10,683	Slk wtr	10,891	Sand	572,280	81
3/22/2012	9,806	10,198	3/23/2012	9,806	10,198	Slk wtr	10,638	Sand	570,180	84
3/23/2012	9,321	9,713	3/23/2012	9,321	9,713	Slk wtr	10,410	Sand	565,980	83
3/24/2012	8,835	9,228	3/25/2012	8,835	9,228	Slk wtr	9,979	Sand	565,250	85.8
3/26/2012	8,349	8,747	3/26/2012	8,349	8,747	Slk wtr	9,866	Sand	568,160	84.6

LATERAL WELLBORE

Maximum TVD of wellbore:

7962 ft TVD @ 8370 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SHALE	0	0	250	250
SANDSTONE/SHALE	250	250	500	500
SHALE	500	500	930	930
SANDSTONE	930	930	990	990
LIMESTONE/SHALE	990	990	1140	1140
COAL	1140	1140	1156	1156
COAL/LIMESTONE/SHALE	1156	1156	1240	1240
COAL	1240	1240	1260	1260
COAL/LIMESTONE/SHALE	1260	1260	1320	1320
SHALE	1320	1320	1600	1600
SANDSTONE/SHALE	1600	1600	2460	2460
BIG LIME	2640	2640	2550	2550
BIG INJUN SANDSTONE	2550	2550	2750	2750
SANDSTONE/SHALE	2750	2750	3210	3210
BEREA SANDSTONE	3210	3210	3550	3550
SHALE	3550	3550	4100	4100
SHALE/SANDSTONE	4100	4100	4580	4580
SHALE	4580	4580	7849	7749
GENESEO	7849	7749	7881	7775
TULLY	7881	7775	7911	7797
HAMILTON	7911	7797	8121	7914
MARCELLUS	8121	7914	15674	15674
TD	15674	7894		0