

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

Farm name: Robert Bone BRK 3H Operator Well No.: 833484

LOCATION: Elevation: 1150' Quadrangle: Bethany

District: Buffalo County: Brooke  
Latitude: 5310' Feet South of 40 Deg. 15 Min. 00 Sec.  
Longitude 11290' Feet West of 80 Deg. 35 Min. 00 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	20"	102'	102'	477 Cu. Ft.
Agent: Eric Gillespie	13 3/8"	331'	331'	421 Cu. Ft.
Inspector: <b>Bill Hendershot</b>	9 5/8"	1665'	1665'	763 Cu. Ft.
Date Permit Issued: 7-12-2011	5 1/2"	11003'	11003'	2846 Cu. Ft.
Date Well Work Commenced: 10-2-2011				
Date Well Work Completed: 10-26-2011				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 5882' (cement plug @ 5074'-5866')				
Total Measured Depth (ft): 11003'				
Fresh Water Depth (ft.): 61', 200'				
Salt Water Depth (ft.): 1146'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 230'				
Void(s) encountered (N/Y) Depth(s) Y 230'				

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

Producing formation Marcellus Pay zone depth (ft) 6,150'-10,867'

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow Not Tested 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

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

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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.

Madeline Williams  
Signature

9-14-2012  
Date

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 GR, neutron, density, and resistivity  
open hole logs run from 0' - 5,888' MD; sonic log from 4,691' - 5,888' MD; LWD GR from 4,928' - 10,998' 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): Cement plug @ 5074' - 5866'

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

(See Attached)

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PERFORATION RECORD ATTACHMENT

Well Number and Name: 833484 Robert Bone BRK 3H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval Treated		Fluid		Propping Agent		Average Injection
	From	To		Type	Amount	Type	Amount			
6/3/2012	10,328	10,867	6/14/2012	10,328	10,867	Slk wtr	10,921	Sand	601,560	79.3
6/14/2012	9,747	10,268	6/15/2012	9,747	10,268	Slk wtr	10,643	Sand	597,940	79.3
6/15/2012	9,147	9,668	6/15/2012	9,147	9,668	Slk wtr	10,829	Sand	599,740	80
6/15/2012	8,546	9,068	6/16/2012	8,546	9,068	Slk wtr	10,801	Sand	600,420	79.6
6/16/2012	7,948	8,469	6/16/2012	7,948	8,469	Slk wtr	10,801	Sand	602,380	79.7
6/16/2012	7,349	7,869	6/16/2012	7,349	7,869	Slk wtr	10,795	Sand	598,460	80
6/16/2012	6,749	7,270	6/17/2012	6,749	7,270	Slk wtr	10,730	Sand	599,440	79.5
6/17/2012	6,150	6,670	6/17/2012	6,150	6,670	Slk wtr	10,815	Sand	604,080	78.8

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**VERTICAL PILOT HOLE**

Formation/Lithology	Top Depth, TVD/MD (ft)	Bottom Depth, TVD/MD (ft)
LS/SHALE	0	230
PITTSBURG COAL	230	235
LS/SILTSTONE	235	400
SS	400	490
SHALE	490	610
SS/SHALE	610	1270
BIG LIME (LS)	1270	1300
BIG INJUN (SS)	1300	1574
SHALE/SS	1574	3700
SHALE	3700	5640
GENESE0 (SH)	5640	5654
TULLY (LS)	5654	5710
HAMILTON (SH)	5710	5802
MARCELLUS (SH)	5802	5860
ONONDAGA (LS)	5862	
TD OF PILOT HOLE		5882

**LATERAL SIDETRACK  
WELLBORE**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SHALE	0	0	230	230
PITTSBURG COAL	230	230	235	235
LS/SILTSTONE	235	235	400	400
SS	400	400	490	490
SHALE	490	490	610	610
SS/SHALE	610	610	1270	1270
BIG LIME (LS)	1270	1270	1383	1383
BIG INJUN (SS)	1383	1383	1574	1574
SHALE/SS	1574	1574	3700	3700
SHALE	3700	3700	5670	5637
GENESE0 (SH)	5670	5637	5684	5648
TULLY (LS)	5684	5648	5768	5706
HAMILTON (SH)	5768	5706	5956	5794
MARCELLUS (SH)	5956	5794		
TD OF LATERAL			11003	5759

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