

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

Farm name: Michael Ratcliffe OHI 3H Operator Well No.: 835699

LOCATION: Elevation: 1,285' Quadrangle: Bethany WV.

District: Liberty County: Ohio
Latitude: 7,060' Feet South of 40 Deg. 10 Min. 00 Sec.
Longitude 6,740' Feet West of 80 Deg. 32 Min. 30 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"	115'	115'	Driven
Agent: Eric Gillespie	13 3/8"	663'	663'	421 Cu. Ft.
Inspector: Bill Hendershot	9 5/8"	2,100'	2,100'	934 Cu. Ft.
Date Permit Issued: 7-3-2012	5 1/2"	13,262'	13,262'	1162 Cu. Ft.
Date Well Work Commenced: 9-28-2012				
Date Well Work Completed: 2-2-2013				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6,329'				
Total Measured Depth (ft): 13,262'				
Fresh Water Depth (ft.): 350'				
Salt Water Depth (ft.): 1504'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 615'				
Void(s) encountered (N/Y) Depth(s) Y 615'				

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

Producing formation Marcellus Pay zone depth (ft) 6,600-13,121

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow Not Tested MCF/d Final open flow _____ Bbl/d Flow test 4/8/13 tentatively

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.

Signature

Date

PERFORATION RECORD ATTACHMENT

Well Number and Name: 835699 Michael Ratcliffe OHI 3H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval Treated	Type	Fluid		Propping Agent		Average Injection
	From	To				Amount	Type	Amount		
1/28/2013	12,729	13,139	1/28/2013	12,729	13,121	Slk wtr	9,747	Sand	600,340	80
1/29/2013	12,257	12,650	1/29/2013	12,257	12,650	Slk wtr	9,923	Sand	599,580	79.8
1/29/2013	11,786	12,179	1/29/2013	11,786	12,179	Slk wtr	12,416	Sand	601,660	80
1/29/2013	11,314	11,707	1/29/2013	11,314	11,707	Slk wtr	9,837	Sand	601,480	79
1/30/2013	10,843	11,236	1/30/2013	10,843	11,236	Slk wtr	9,691	Sand	597,460	79.6
1/30/2013	10,369	10,765	1/30/2013	10,369	10,765	Slk wtr	9,771	Sand	603,360	79
1/30/2013	9,900	10,289	1/30/2013	9,900	10,289	Slk wtr	10,757	Sand	602,060	80
1/30/2013	9,429	9,821	1/31/2013	9,429	9,821	Slk wtr	9,228	Sand	599,900	79
1/31/2013	8,957	9,356	1/31/2013	8,957	9,356	Slk wtr	9,935	Sand	601,460	79
2/1/2013	8,486	8,879	2/1/2013	8,486	8,879	Slk wtr	9,360	Sand	599,480	79.9
2/1/2013	8,014	8,407	2/1/2013	8,014	8,407	Slk wtr	9,733	Sand	600,840	80
2/1/2013	7,543	7,936	2/2/2013	7,543	7,936	Slk wtr	9,473	Sand	601,880	80
2/2/2013	7,071	7,464	2/2/2013	7,071	7,464	Slk wtr	9,450	Sand	602,860	80.2
2/2/2013	6,600	6,993	2/3/2013	6,600	6,993	Slk wtr	-	Sand	-	-

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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 MWD GR in lateral

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):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
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LATERAL WELLBORE

Maximum TVD of wellbore: 6329 ft TVD @ 7772 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SHALE	0	0	190	190
SHALE	190	190	210	210
SS/SHALE	210	210	262	262
SHALE/LS	262	262	320	320
SS/SHALE	320	320	360	360
SHALE	360	360	420	420
LS	420	420	480	480
LS/SHALE	480	480	590	590
PITTSBURGH COAL	590	590	598	598
SHALE	598	598	682	682
SS/SHALE	682	682	706	706
SS	706	706	815	815
SLTSTN	815	815	960	960
SS	960	960	1050	1050
SLTSTN	1050	1050	1200	1200
SS	1200	1200	1320	1320
SHALE	1320	1320	1647	1647
BIG INJUN	1647	1647	1932	1932
SHALE	1932	1932	2180	2180
SHALE/SLTSTN	2180	2180	2204	2204
SLTSTN	2204	2204	2396	2396
SHALE	2396	2396	3194	3194
SS/SHALE	3194	3194	3276	3276
SHALE	3276	3276	3610	3610
SLTSTN/SHALE	3610	3610	3718	3718
SHALE	3718	3718	4000	4000
SHALE/SLTSTN	4000	4000	5012	5012
SHALE	5012	5012	5024	5024
SHALE/SLTSTN	5024	5024	5488	5488
SHALE	5488	5488	6189	6132
GENESEO	6189	6132	6214	6150
TULLY	6214	6150	6279	6195
HAMILTON	6279	6195	6490	6295
MARCELLUS	6490	6295	13262	6205
TD	13262	6205		0