

WR-35
Rev (9-11)

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

DATE: 4-23-2014
API #: 47-069-00136

FINAL

Farm name: Chad Glauser OHI 5H Operator Well No.: 835090

LOCATION: Elevation: 1240' Quadrangle: Valley Grove

District: Triadelphia County: Ohio
Latitude: 3950' Feet South of 40 Deg. 02 Min. 30 Sec.
Longitude 4310' 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"	100'	100'	409 Cu. Ft.
Agent: <u>Eric Gillespie</u>	13 3/8"	745'	745'	1080 Cu. Ft.
Inspector: <u>Bill Hendershot</u>	9 5/8"	2200'	2200'	1030 Cu. Ft.
Date Permit Issued: <u>7-17-2012</u>	5 1/2"	11757'	11757'	2784 Cu. Ft.
Date Well Work Commenced: <u>7-21-2012</u>				
Date Well Work Completed: <u>8-23-2012</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>6429'</u>				
Total Measured Depth (ft): <u>11757'</u>				
Fresh Water Depth (ft.): <u>576'</u>				
Salt Water Depth (ft.): <u>1135'</u>				
Is coal being mined in area (N/Y)? <u>Y</u>				
Coal Depths (ft.): <u>678'</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

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

Producing formation Marcellus Pay zone depth (ft) 6,800'-11,612'
Gas: Initial open flow 1,177* MCF/d Oil: Initial open flow 104 Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 48 Hours
Static rock Pressure 4,179* psig (surface pressure) after 48 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

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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.

Marlow Williams
Signature

4-23-2014
Date

05/23/2014

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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 the curve and lateral sections

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):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

(See attached)

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PERFORATION RECORD ATTACHMENT

Well Number and Name: 835090 Chad Glauser OHI 5H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval	Treated	Fluid		Propping Agent		Average Injection
	From	To				Type	Amount	Type	Amount	
8/11/2012	11,283	11,612	8/18/2012	11,283	11,612	Slk wtr	7,770	Sand	401,220	78
8/18/2012	10,875	11,205	8/18/2012	10,875	11,205	Slk wtr	7,524	Sand	401,280	79.7
8/18/2012	10,468	10,797	8/19/2012	10,468	10,797	Slk wtr	7,389	Sand	400,620	79
8/19/2012	10,060	10,390	8/19/2012	10,060	10,390	Slk wtr	7,626	Sand	399,220	79.1
8/19/2012	9,653	9,982	8/19/2012	9,653	9,982	Slk wtr	7,607	Sand	399,260	79.7
8/19/2012	9,245	9,575	8/19/2012	9,245	9,575	Slk wtr	7,226	Sand	402,220	79.8
8/20/2012	8,838	9,167	8/20/2012	8,838	9,167	Slk wtr	7,495	Sand	395,820	80.1
8/20/2012	8,430	8,760	8/20/2012	8,430	8,760	Slk wtr	7,193	Sand	397,080	79.9
8/20/2012	8,025	8,355	8/20/2012	8,025	8,355	Slk wtr	7,318	Sand	397,840	79.7
8/21/2012	7,615	7,945	8/22/2012	7,615	7,945	Slk wtr	7,232	Sand	399,100	79.9
8/22/2012	7,208	7,537	8/22/2012	7,208	7,537	Slk wtr	7,283	Sand	397,400	80
8/22/2012	6,800	7,130	8/23/2012	6,800	7,130	Slk wtr	7,187	Sand	398,460	79

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LATERAL WELLBORE

Maximum TVD of wellbore: 6429 ft TVD @ 6766 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SS	0	0	678	678
PITTSBURGH COAL	678	678	686	686
SS/SLTSTN	686	686	830	830
SHALE	830	830	1130	1130
SS/SHALE	1130	1130	1314	1314
SHALE	1314	1314	1340	1340
SS/SHALE	1340	1340	1648	1648
SHALE	1648	1648	1696	1696
SS	1696	1696	1890	1890
BIG INJUN	1890	1890	2030	2030
SHALE	2030	2030	2300	2300
SLTSTN	2300	2300	2480	2480
SHALE	2480	2480	4010	4010
SLTSTN	4010	4010	4040	4040
SHALE	4040	4040	4220	4220
SLTSTN	4220	4220	4400	4400
SHALE	4400	4400	4490	4490
SLTSTN	4490	4490	5360	5360
SHALE	5360	5360	6322	6247
GENESEO	6322	6247	6345	6263
TULLY	6345	6263	6380	6288
HAMILTON	6380	6288	6595	6396
MARCELLUS	6595	6396	11757	6363
TD	11757	6363		0

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NY Department of
Environmental Conservation 05/23/2014

Hydraulic Fracturing Fluid Product Component Information Disclosure

69-00136

Fracture Date:	8/18/2012
State:	WEST VIRGINIA
County:	OHIO
API Number:	4706900136
Operator Name:	CHESAPEAKE APPALACHIA LLC
Well Name and Number:	CHAD GLAUSER OHI 5H
Longitude:	-80.597472
Latitude:	40.02983
Long/Lat Projection:	NAD27
Production Type:	GAS
True Vertical Depth (TVD):	6,429
Total Water Volume (gal)*:	3,799,026

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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by Mass)**	Maximum Ingredient Concentration in HF Fluid (% by Mass)**	Comments
Fresh Water		Carrier/Base Fluid				80.49320%	
Recycled Produced Water		Carrier/Base Fluid				5.45050%	
Acid, Hydrochloric 15pct	SCHLUMBERGER	Acid	Water	007732-18-5	85.00%	0.90104%	
			Hydrogen Chloride	007647-01-0	15.00%	0.15901%	
L058	SCHLUMBERGER	Iron Control Agent	Sodium Erythorbate	006381-77-7	100.00%	0.00079%	
A264	SCHLUMBERGER	Corrosion Inhibitor	Methanol (Methyl Alcohol)	000067-56-1	40.00%	0.00071%	
			Aliphatic acid	N/A	30.00%	0.00053%	
			Aliphatic alcohols, ethoxylated # 1	N/A	30.00%	0.00053%	
			Propargyl Alcohol (2-Propynol)	000107-19-7	10.00%	0.00018%	
Northern White Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	8.98560%	
100 Mesh Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	3.91741%	
EC6110A	NALCO	Anti-Bacterial Agent	Glutaraldehyde	000111-30-8	60.00%	0.01693%	
			Quaternary Ammonium Compounds	N/A	10.00%	0.00282%	
			Ethanol	000064-17-5	5.00%	0.00141%	

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EC6629A	NALCO	Scale Inhibitor	No Hazardous Components	NONE		0.00000%	
B315	SCHLUMBERGER	Friction Reducer	Petroleum Distillate Hydrotreated Light	064742-47-8	30.00%	0.01439%	
			Aliphatic alcohol polyglycol ether	N/A	1.50%	0.00072%	
J580	SCHLUMBERGER	Gelling Agent	Carbohydrate polymer	N/A	100.00%	0.00817%	
J218	SCHLUMBERGER	Breaker	Ammonium Persulfate	007727-54-0	100.00%	0.00098%	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

"Additional Ingredients Not Listed on MSDS" component information were obtained directly from the supplier. As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of this information should be directed to the supplier who provided it.