

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

DATE: 2-25-2015
API #: 47-103-02841

Farm name: Robert Baxter Wtz 6H Operator Well No.: 831168

LOCATION: Elevation: 1,320' Quadrangle: Wileyville

District: Proctor County: Wetzel
Latitude: 5,420' Feet South of 39 Deg. 45 Min. 00 Sec.
Longitude 13,310' Feet West of 80 Deg. 42 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>P.O. Box 18496</u>				
<u>Oklahoma City, OK 73154-0496</u>	<u>20"</u>	<u>118'</u>	<u>118'</u>	<u>222 Cu. Ft.</u>
Agent: <u>Eric Gillespie</u>	<u>13 3/8"</u>	<u>1,030'</u>	<u>1,030'</u>	<u>1,167 Cu. Ft.</u>
Inspector: <u>Derek Haught</u>	<u>9 5/8"</u>	<u>2,592'</u>	<u>2,592'</u>	<u>1,077 Cu. Ft.</u>
Date Permit Issued: <u>1-16-2013</u>	<u>5 1/2"</u>	<u>13,416'</u>	<u>13,416'</u>	<u>3,096 Cu. Ft.</u>
Date Well Work Commenced: <u>6-7-2013</u>				
Date Well Work Completed: <u>12-6-2013</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>6,985'</u>				
Total Measured Depth (ft): <u>13,419'</u>				
Fresh Water Depth (ft.): <u>511'</u>				
Salt Water Depth (ft.): <u>1,159'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>962'</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 sheets)

Producing formation Marcellus Pay zone depth (ft) 7,784-13,065

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

Final open flow 3,032* MCF/d Final open flow 91 Bbl/d

Time of open flow between initial and final tests 72 Hours *Calculated

Static rock Pressure 4,540* psig (surface pressure) after 72 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

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

2/26/15
Date

Rechecked
AL 5/19/15

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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 _____
No logs were run.

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 Name and Number: Robert Baxter Wtz 6H

API No. 47-103-02841

103-02841

Stage	PERFORATION RECORD				STIMULATION RECORD							
	Date	Interval Perforated		Total Number Of Shots	Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate	
		From	To				Type	Amount	Type	Amount		
1	10/29/2013	12909	13065	40	10/29/2013	12909	13065	SLK Wtr	5931	Sand	406900	73
2	10/29/2013	12702	12860	40	10/29/2013	12702	12860	SLK Wtr	4781	Sand	404660	79
3	10/30/2013	12506	12664	40	10/30/2013	12506	12664	SLK Wtr	4789	Sand	402040	78
4	10/30/2013	12309	12467	40	10/30/2013	12309	12467	SLK Wtr	5572	Sand	404720	79
5	10/30/2013	12112	12270	40	10/30/2013	12112	12270	SLK Wtr	5553	Sand	403520	79
6	10/30/2013	11915	12073	40	10/30/2013	11915	12073	SLK Wtr	5624	Sand	403840	79
7	10/30/2013	11719	11877	40	10/30/2013	11719	11877	SLK Wtr	5416	Sand	406900	76
8	10/31/2013	11522	11680	40	10/31/2013	11522	11680	SLK Wtr	5630	Sand	405360	79
9	10/31/2013	11325	11483	40	10/31/2013	11325	11483	SLK Wtr	3573	Sand	405940	79
10	10/31/2013	11128	11283	40	10/31/2013	11128	11283	SLK Wtr	5718	Sand	405380	77
11	10/31/2013	10932	11090	40	10/31/2013	10932	11090	SLK Wtr	5309	Sand	404380	76
12	10/31/2013	10735	10893	40	10/31/2013	10735	10893	SLK Wtr	5589	Sand	405820	79
13	11/1/2013	10538	10696	40	11/1/2013	10538	10696	SLK Wtr	5500	Sand	404540	80
14	11/1/2013	10342	10500	40	11/1/2013	10342	10500	SLK Wtr	4687	Sand	404840	79
15	11/1/2013	10145	10303	40	11/1/2013	10145	10303	SLK Wtr	5598	Sand	404680	77
16	11/1/2013	9948	10106	40	11/1/2013	9948	10106	SLK Wtr	5439	Sand	406840	78
17	11/2/2013	9751	9909	40	11/2/2013	9751	9909	SLK Wtr	5388	Sand	404600	79
18	11/2/2013	9555	9713	40	11/2/2013	9555	9713	SLK Wtr	5444	Sand	405580	79
19	11/2/2013	9358	9516	40	11/2/2013	9358	9516	SLK Wtr	5554	Sand	404820	80
20	11/2/2013	9161	9319	40	11/2/2013	9161	9319	SLK Wtr	5420	Sand	405800	78
21	11/2/2013	8964	9122	40	11/2/2013	8964	9122	SLK Wtr	5542	Sand	406360	78
22	11/3/2013	8768	8926	40	11/3/2013	8768	8926	SLK Wtr	5523	Sand	404520	79
23	11/3/2013	8571	8729	40	11/3/2013	8571	8729	SLK Wtr	5447	Sand	404240	79
24	11/3/2013	8374	8532	40	11/3/2013	8374	8532	SLK Wtr	5508	Sand	406120	80
25	11/3/2013	8177	8336	40	11/3/2013	8177	8336	SLK Wtr	5557	Sand	406000	78
26	11/3/2013	7981	8139	40	11/3/2013	7981	8139	SLK Wtr	4692	Sand	405840	79
27	11/4/2013	7784	7942	40	11/4/2013	7784	7942	SLK Wtr	5413	Sand	405980	79

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HORIZONTAL WELL (No pilot hole associated with this pad)				
Maximum TVD of wellbore:	6985 ft TVD @ 13418 ft MD			
Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SS and SILTSTN	0	0	910	910
LS and SS	910	910	1161	1161
Pittsburgh Coal	1161	1161	1169	1169
SH and SS	1169	1169	1716	1716
SILTSTN and SS	1716	1716	2145	2145
Big Lime	2145	2145	2232	2232
SILTSTN and SS	2232	2232	2292	2287
Big Injun	2292	2287	2454	2450
SH and SILTSTN	2454	2450	7324	6766
Geneseo	7324	6766	7353	6780
Tully	7353	6780	7422	6809
Hamilton	7422	6809	7636	6881
Marcellus	7636	6881	7650	6885
Purcell	7650	6885		
End of Well			13419	6985

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Hydraulic Fracturing Fluid Product Component Information Disclosure

103.02841

Fracture Date:	10/29/2013
State:	WEST VIRGINIA
County:	WETZEL
API Number:	4710302841
Operator Name:	CHESAPEAKE APPALACHIA LLC
Well Name and Number:	ROBERT BAXTER WTZ 6H
Longitude:	-80.727742
Latitude:	39.713468
Long/Lat Projection:	NAD27
Production Type:	GAS
True Vertical Depth (TVD):	7,032
Total Water Volume (gal)*:	8,661,576

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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	CHESAPEAKE ENERGY	Carrier/Base Fluid	Water	007732-18-5	100.00%	79.22479%	
Recycled Produced Water	CHESAPEAKE ENERGY	Carrier/Base Fluid	Water	007732-18-5	100.00%	6.66040%	
EC6110A	NALCO	Anti-Bacterial Agent	Ethanol	000064-17-5	5.00%	0.00114%	
			Glutaraldehyde (Pentanediol)	000111-30-8	60.00%	0.01367%	
			Quaternary Ammonium Compounds	NA	10.00%	0.00228%	
EC6629A	NALCO	Scale Inhibitor	No Hazardous Components	NONE		0.00000%	
A264, J218, J580, J609, L058, U028, Acid, Hydrochloric 15pct, Northern White Sand, 100 Mesh Sand	SCHLUMBERGER	Breaker, Corrosion Inhibitor, Friction Reducer, Gelling Agent, Iron Control Agent, Acid, Proppant - Natural	Crystalline silica	14808-60-7	98.20505%	13.76091%	
			Hydrogen chloride	7647-01-0	1.14581%	0.16056%	
			Guar gum	9000-30-0	0.33722%	0.04725%	
			Acrylamide, 2-acrylamido-2-	38193-60-1	0.08346%	0.01169%	
			Ammonium sulfate	7783-20-2	0.07888%	0.01105%	
			Sodium hydroxide	1310-73-2	0.06561%	0.00919%	

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Sodium sulfate	7757-82-6	0.03409%	0.00478%
Diammonium peroxidisulphate	7727-54-0	0.01780%	0.00249%
Polymer of 2-acrylamido-2-	136793-29-8	0.00894%	0.00125%
Urea	57-13-6	0.00550%	0.00077%
Sodium erythorbate	6381-77-7	0.00429%	0.00060%
Methanol	67-56-1	0.00359%	0.00050%
Fatty acids, tall-oil	61790-12-3	0.00263%	0.00037%
Thiourea, polymer with	68527-49-1	0.00217%	0.00030%
Non-crystalline silica	7631-86-9	0.00172%	0.00024%
Alcohols, C14-15, ethoxylated	68951-67-7	0.00101%	0.00014%
Prop-2-yn-1-ol	107-19-7	0.00067%	0.00009%
Alkenes, C>10 a-	64743-02-8	0.00045%	0.00006%
Tetrasodium	64-02-8	0.00017%	0.00002%
Dimethyl siloxanes and silicones	63148-62-9	0.00008%	0.00001%
Siloxanes and Silicones, di-Me,	67762-90-7	0.00001%	< 0.00001%
Octamethylcyclotetrasiloxane	556-67-2	0.00001%	< 0.00001%
Decamethyl cyclopentasiloxane	541-02-6	0.00001%	< 0.00001%
Dodecamethylcyclohexasiloxane	540-97-6	< 0.00001%	< 0.00001%

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Additional Ingredients Not Listed on MSDS

EC6110A, EC6629A	NALCO	Anti-Bacterial Agent, Scale Inhibitor	Methanol (Methyl Alcohol)	000067-56-1	0.00603%
			Proprietary Acrylate Polymer	TRADE SECRET	0.00603%
			Proprietary Quaternary Ammonium Salt	TRADE SECRET	0.00603%
			Water	007732-18-5	0.02277%

* 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.