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APR 01 2013  
WV GEOLOGICAL SURVEY  
605 NEWTOWN, WV

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: 3/27/2013  
API #: 47-4902209

Farm name: Bower, Richard and Jocelyn Operator Well No.: Brennan Unit A 7H

LOCATION: Elevation: 1256 Quadrangle: Mannington 7.5'

District: Lincoln County: Marion  
Latitude: 15030 Feet South of 39 Deg. 32 Min. 30 Sec.  
Longitude 1120 Feet West of 80 Deg. 17 Min. 30 Sec.

Company: XTO Energy Inc

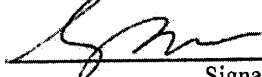
Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>PO Box 1008, Jane Lew, WV 26378</u>	<u>20"</u>	<u>40'</u>	<u>40'</u>	<u>CTS</u>
Agent: <u>Gary Beall</u>	<u>13-3/8"</u>	<u>635'</u>	<u>635'</u>	<u>532 sx</u>
Inspector: <u>Bill Hendershot</u>	<u>9-5/8"</u>	<u>3014'</u>	<u>3014'</u>	<u>1040 sx</u>
Date Permit Issued: <u>5/18/2012</u>	<u>5-1/2"</u>	<u>12999'</u>	<u>12999'</u>	<u>1910 sx</u>
Date Well Work Commenced: <u>6/18/2012</u>				
Date Well Work Completed: <u>1/4/13</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>7588'</u>				
Total Measured Depth (ft): <u>12646'</u>				
Fresh Water Depth (ft.): <u>65'</u>				
Salt Water Depth (ft.): <u>None Noted</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>140'</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) 7535-7655  
Gas: Initial open flow N/A MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 3095 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests N/A 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

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

3-28-13  
Date



Brennan Unit A 7H		47-049-02209	
Formation Name or Type	Top	Bottom	
SS,SLT,SH	0	80	
SS	80	128	
SH	128	140	
COAL	140	150	
SS,SH	150	170	
SH	170	178	
SS	178	202	
SS,SH	202	460	
SH	460	506	
SS	506	525	
SS,SH	525	700	
SH,SS	700	1025	
SH	1025	1165	
SH,SS	1165	1265	
SH	1265	1830	
SS	1830	2070	
SH	2070	2100	
SH,SS	2100	2540	
SS	2540	2700	
SH	2700	3170	
SLTST,SS	3170	3240	
SH, SLST	3240	3270	
SH, SS, SLTST	3270	3450	
SH, SLTST	3450	3690	
SH,SS,SLTST	3690	3720	
SH, SS, SLTST, LS	3720	3750	
SH, SLTST	3750	3810	
SH	3810	3870	
SH, SLTST	3870	3930	
SH, SLTST, LS	3930	3960	
SH	3960	4410	
SH, SLTST	4410	4520	
SH	4520	5070	
SH, SLTST, SS	5070	5120	
SH, SLTST	5120	5190	
SH	5190	7550	
SH, LS	7550	7620	
LS, SH	7620	7700	
SH,LS	7700	7750	
SH	7750	7770	
SH, . LS	7770	7800	
SH	7800	7980	
SH, LS	7980	8030	
SH,	8030	8080	
SH, LS	8080	8100	
SH	8100	10670	
SH, LS	10670	10750	
SH	10750	12646	

**BRENNAN A 7H**

FORMATION	TVD
BIG INJUN*	1955
BIG INJUN BASE*	2021
GREENBRIER*	2051
GREENBRIER BASE*	2085
SQUAW*	2094
SQUAW BASE*	2105
GANTZ*	2493
GANTZ BASE*	2510
50FT*	2541
50FT BASE*	2639
30FT*	2653
30FT BASE*	2702
GORDON*	2721
GORDON BASE*	2747
LWR GORDON*	2853
LWR GORDON BASE*	2896
4TH SAND*	2928
4TH SAND BASE*	2935
5TH SAND*	2987
5TH SAND BASE*	3022
LWR SPEECHLEY*	3607
LWR SPEECH. BASE*	3627
UP BALLTOWN*	3827
UP BALLTOWN BASE*	3840
BALLTOWN*	3891
BALLTOWN BASE*	3922
GENESEO SHALE	7388
GENESEO BASE	7421
TULLY LIMESTONE	7421
TULLY BASE	7472
HAMILTON SHALE	7472
HAMILTON BASE	7532
UPPER MARCELLUS	7532
UP MARCELLUS BASE	7620
PURCELL LIMESTONE	7620
PURCELL BASE	7625
LOWER MARCELLUS	7625
LO MARCELLUS BASE**	7682

\* Tops projected from offset log due to air drilling and therefore not logging this section

\*\* Base projected from offset logs due to not actually drilling through this base

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Well Name: Brennan Unit A 7H

API # 47-049-02209

**Preforated Intervals, Fracturing or Stimulating**

Stg 7 Marcellus; 10523'-10745'; 60 shots; Slick water frac; Avg treating 7352 psi@ 84 bpm; 106,358 #100 mesh; 300,298 #s 30/50 mesh; 9638 bbl water, 0 bbl treated water
Stg 8 Marcellus; 10218'-10440'; 60 shots; Slick water frac; Avg treating 7510 psi@ 83 bpm; 107,843 #100 mesh; 260,370 #s 30/50 mesh; 9339 bbl water, 0 bbl treated water
Stg 9 Marcellus; 9913 '-10135'; 60 shots; Slick water frac; Avg treating 7161 psi@ 85 bpm; 107,827 #100 mesh; 313,530 #s 30/50 mesh; 9950 bbl water, 0 bbl treated water
Stg 10 Marcellus; 9608'-9830'; 60 shots; Slick water frac; Avg treating 7185 psi@ 83 bpm; 107,259 #100 mesh; 312,494 #s 30/50 mesh; 9964 bbl water, 0 bbl treated water
Stg 11 Marcellus; 9303'-9525'; 60 shots; Slick water frac; Avg treating 7703 psi@ 85 bpm; 106,308 #100 mesh; 318,239 #s 30/50 mesh; 9789 bbl water, 0 bbl treated water
Stg 12 Marcellus; 8998'-9220'; 60 shots; Slick water frac; Avg treating 7344 psi@ 76 bpm; 107,032 #100 mesh; 313,211 #s 30/50 mesh; 10105 bbl water, 0 bbl treated water
Stg 13 Marcellus; 8693'-8915'; 60 shots; Slick water frac; Avg treating 7257 psi@ 77 bpm; 107,021 #100 mesh; 312,458 #s 30/50 mesh; 10024 bbl water, 0 bbl treated water
Stg 14 Marcellus; 8388'-8610'; 60 shots; Slick water frac; Avg treating 7324 psi@ 81 bpm; 107,658 #100 mesh; 313,971 #s 30/50 mesh; 9985 bbl water, 0 bbl treated water
Stg 15 Marcellus; 8083'-8305'; 60 shots; Slick water frac; Avg treating 7451 psi@ 70 bpm; 106,486 #100 mesh; 313,103 #s 30/50 mesh; 10093 bbl water, 0 bbl treated water

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	10/22/2012
State:	West Virginia
County:	Marion
API Number:	47-049-02209
Operator Name:	XTO Energy
Well Name and Number:	Brennan 7H
Longitude:	-80.29565
Latitude:	39.50037
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7,640
Total Water Volume (gal)*:	6,380,682

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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
Water			water	7732-18-5	100.00000%	0.8894	
Sand		Proppant	sand	14808-60-7	100.00000%	0.1044	
Biocide - MC 8520	Multi-Chem	Biocide	Whole Product				
			4,4 -Dimethyloxazolidine	51200-87-4	95.00000%	0.0001	
			3,4,4-Trimethyloxazolidine	75673-43-7	4.50000%	0.0000	
			2-Amino-2-Methyl-1-Propanol	124-68-5	0.50000%	0.0000	
Biocide - MC 8650	Multi-Chem	Biocide	Whole Product				
			Glutaraldehyde	111-30-8	60.00000%	0.0000	
			Other -(non hazardous)		40.00000%	0.0000	
Friction Reducer - MC MX-14-5	Multi-Chem	Friction Reducer	Whole Product				
			Hydrotreated light distillates (10-30%)	64742-47-8	30.00000%	0.0002	
			Other -(non hazardous)		70.00000%	0.0004	
Scale Inhibitor - MC-MX-588-2	Multi-Chem	Scale Inhibitor	Whole Product				
			Other -(non hazardous)		100.00000%	0.0001	
Acid - 7.5% HCl Acid	Universal	Acid	Whole Product				
			Hydrochloric Acid (15-40%) blended down to 7.5%	7647-01-0	7.50000%	0.0004	
			Other -(non hazardous)		92.50000%	0.0050	

\* 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%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.