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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 #:	47-4902210

Farm name: Bower, Richard and Jocelyn	Operator Well No.: Brennan Unit A 5H				
LOCATION: Elevation: 1256	Quadrangle: Mannington 7.5'				
District: Lincoln	County: Marie	County: Marion			
Latitude: 15020 Feet South of 39 Deg.	32 Min				
Longitude 1110 Feet West of 80 Deg.	Min.	Sec.	•		
Company: XTO Energy Inc					
Address: PO Box 1008, Jane Lew, WV 26378	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.	
	20"	40'	40'	CTS	
Agent: Gary Beall	13-3/8"	632'	632'	531 sx	
Inspector: Bill Hendershot	9-5/8"	3103'	3103'	1041 sx	
Date Permit Issued: 5/18/2012	5-1/2"	12006'	12006'	1705 sx	
Date Well Work Commenced: 6/18/2012					
Date Well Work Completed: 1/5/2013					
Verbal Plugging:					
Date Permission granted on:					
Rotary Cable Rig					
Total Vertical Depth (ft): 7626'					
Total Measured Depth (ft): 11,511'					
Fresh Water Depth (ft.): 65'					
Salt Water Depth (ft.): None Noted					
Is coal being mined in area (N/Y)?				0 605	
Coal Depths (ft.): 140'			CEIV	nd	
Void(s) encountered (N/Y) Depth(s) N			SECON		
Is coal being mined in area (N/Y)? N  Coal Depths (ft.): 140'  Void(s) encountered (N/Y) Depth(s) N  OPEN FLOW DATA (If more than two producing formation Producing formation Marcellus Pay Gas: Initial open flow N/A MCF/d Oil: Initial open flow Time of open flow between initial and final tests N/Static rock Pressure psig (surface pressure) at Second producing formation Pay zo Gas: Initial open flow MCF/d Oil: Initial open flow MCF/d Oil: Initial open flow MCF/d Final open flow MCF	ne depth (ft) lowB	bl/d	ta on separate s	veural brosev. Spartweiz Og	
Time of open flow between initial and final tests					
Static rock Pressure psig (surface pressure) at	fter Hou	rs			

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.

3-35-17 ature Date(3)

06/14/2013

Were core samples taken? Yes No_X	Were cuttings caught during drilling? Yes_X No
Were Electrical, Mechanical or Geophysical logs recorded on	this well? If yes, please list GR, ROP, Directional Survey, Total Gas, Mudlogs
FRACTURING OR STIMULATING, PHYSICAL CHA	LOWING: 1). DETAILS OF PERFORATED INTERVALS, NGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC PS AND BOTTOMS OF ALL FORMATIONS, INCLUDING SURFACE TO TOTAL DEPTH.
Perforated Intervals, Fracturing, or Stimulating:	
Stg 1 Marcellus; 11206'-11436'; 60 shots; Slick water frac; Avg treating 7125 psi@	79 bpm; 111,300 #100 mesh; 326,769 #s 30/50 mesh; 10141 bbl water, 0 bbl treated water
Stg 2 Marcellus; 10886'-111116'; 60 shots; Slick water frac; Avg treating 7623 psi@	9 82 bpm; 106,234 #100 mesh; 300,279 #s 30/50 mesh; 9772 bbl water, 0 bbl treated water
Stg 3 Marcellus; 10566'-10796'; 60 shots; Slick water frac; Avg treating 7623 psi@	82 bpm; 110,195 #100 mesh; 328,735 #s 30/50 mesh; 10315 bbl water, 0 bbl treated water
Stg 4 Marcellus; 10246'-10476'; 60 shots; Slick water frac; Avg treating 7285 psi@	84 bpm; 109,586 #100 mesh; 328,641 #s 30/50 mesh; 10421 bbl water, 0 bbl treated water
Stg 5 Marcellus; 9926'-10156'; 60 shots; Slick water frac; Avg treating 7433 psi@ 8	85 bpm; 109,473 #100 mesh; 327,469 #s 30/50 mesh; 10156 bbl water, 0 bbl treated water
Stg 6 Marcellus; 9606'-9836'; 60 shots; Slick water frac; Avg treating 7386 psi@ 8	4 bpm; 109,656 #100 mesh; 316,069 #s 30/50 mesh; 10075 bbl water, 0 bbl treated water
Plug Back Details Including Plug Type and Depth(s):	
Formations Encountered: Top Surface:	Depth / Bottom Depth
See attached sheet.	
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Brennan Unit A 5H 47-049-02		210	
Formation Name or Type	Тор	Bottom	
SS,SLT,SH	0	80	
SS	80	128	
	128	140	
SH	140	150	
COAL			
SS,SH	150	170 178	
SH	170		
SS	178	202	
SS,SH	202	460	
SH	460	506	
SS	506	525	
SS,SH	525	630	
SS, LS SLST, SH	630	650	
SH, SLST, LS, SS	650	680	
SH, SLST, SS	680	710	
SH, SLST, SS	710	740	
SS, SLST	740	770	
SH, SLST	770	860	
SH, LS, SLST	860	890	
SH, SLST	890	980	
LS, SH	980	1010	
SH, SLST, SS	1010	1040	
SLST, SS	1040	1070	
SS	1070	1190	
SH, SLST	1190	1220	
LS, SH, SLST	1220	1250	
SH, LS, SS	1250	1360	
SH, SS	1360	1420	
SS, SH	1420	1510	
SS, SH, SLST	1510	1550	
SS, SH	1550	1670	
SH, SS	1670	1700	
SS, SH	1700	1910	
SS, SH, LS	1910	2060	
SS, SH, SLTST	2060	2090	
SH, SS, SLTST	2090	2150	
SLTST, SH	2150	2180	
SH, SLTST, SS	2180	2270	
SH, SLTST	2270	2480	
SH, SS	2480	2600	
SH, SS, SLTST	2600	2720	
SS, SH, SLTST	2720	2780	
SH, SLTST, SS	2780	2850	
SLTST, SH, SS	2850	2970	
SH, SLTST, SS	2970	3050	
SH, SS	3050	3130	
SH	3130	3220	
SH, SLTST	3220	3340	
SH, SS, SLTST	3340	3400	
SH, SLTST	3400	3640	
SH	3640	3790	

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	7378
GENESEO BASE	7411
TULLY LIMESTONE	7411
TULLY BASE	7461
HAMILTON SHALE	7461
HAMILTON BASE	7521
UPPER MARCELLUS	7521
UP MARCELLUS BASE	7611
PURCELL LIMESTONE	7611
PURCELL BASE	7614
LOWER MARCELLUS	7614
LO MARCELLUS BASE**	7671

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

<sup>\*\*</sup> Base projected from offset logs due to not actually drilling through this base

SH, SLTST	3790	4060
SH '	4060	4420
SH, SLTST	4420	4570
SH	4570	5140
SH, SLTST	5140	5290
SH	5290	5770
SH, SLTST	5770	5860
SH	5860	7500
LS, SH	7500	7600
SH, LS	7600	7730
SH	7730	7900
SH, LS	7900	7920
SH	7920	9920
SH, LS	9920	9940
SH	9940	11528

Well Name: Brennan Unit A 5H

API# 47-049-02210

## **Preforated Intervals, Fracturing or Stimulating**

Stg 7 Marcellus; 9286'-9516'; 60 shots; Slick water frac; Avg treating 7175 psi@ 83 bpm; 108,674 #100 mesh; 301,576 #s 30/50 mesh; 9985 bbl water, 0 bbl treated water

Stg 8 Marcellus; 8966'-9196'; 60 shots; Slick water frac; Avg treating 7346 psi@ 77 bpm; 107,920 #100 mesh; 316,698 #s 30/50 mesh; 10172 bbl water, 0 bbl treated water

Stg 9 Marcellus; 8646'-8876'; 60 shots; Slick water frac; Avg treating 7318 psi@ 84 bpm; 108,224 #100 mesh; 328,471 #s 30/50 mesh; 10184 bbl water, 0 bbl treated water

Stg 10 Marcellus; 8326'-8556'; 60 shots; Slick water frac; Avg treating 6983 psi@ 77 bpm; 107,871 #100 mesh; 326,649 #s 30/50 mesh; 10139 bbl water, 0 bbl treated water

Stg 11 Marcellus; 8006'-8236'; 60 shots; Slick water frac; Avg treating 7256 psi@ 80 bpm; 108,329 #100 mesh; 328,640 #s 30/50 mesh; 10004 bbl water, 0 bbl treated water