

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

API 47-99-02270-F County Wayne District Butler  
Quad Prichard Pad Name N.A Field/Pool Name N/A  
Farm name Billy G. Stewart Well Number Musick #4  
Operator (as registered with the OOG) Teddy Adkins  
Address 14485 S Calhoun Hwy City Arnoldsburg State WV Zip 25234

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing N/A Easting \_\_\_\_\_  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing \_\_\_\_\_ Easting \_\_\_\_\_

Elevation (ft) 982 GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
N/A


Date permit issued 6/12/2015 Date drilling commenced N/A Date drilling ceased N/A  
Date completion activities began 8/11/15 Date completion activities ceased 8/11/15  
Verbal plugging (Y/N) \_\_\_\_\_ Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

Please note: Operator is required to submit a plugging application within 5 days of verbal permission.

Freshwater depth(s) ft none Open mine(s) (Y/N) depths none  
Salt water depth(s) ft 1270' Void(s) encountered (Y/N) depths none  
Coal depth(s) ft none Cavern(s) encountered (Y/N) depths none  
Is coal being mined in area (Y/N) no

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Reviewed by:

  
12/25/2015  
12-23-2015

API 47-99 - 02270-F Farm name Billy G. Stewart Well number Musick #4

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor							
Surface	12-3/4"	10-3/4	362'	used	H	120	yes
Coal							
Intermediate 1	8-3/4"	7"	1460'	used	J	88	YES
Intermediate 2							
Intermediate 3							
Production	6-1/2"	4-1/2"	2383'	used	N-80	118	yes
Tubing							
Packer type and depth set							

Comment Details See original WR-35 for this well for pipe and cement data

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Type 1	234					
Coal							
Intermediate 1	Standard, 3%CC	225					
Intermediate 2							
Intermediate 3							
Production	Standard, 3% CC	105					
Tubing							

Drillers TD (ft) 2425'      Loggers TD (ft) 2410'

Deepest formation penetrated Berea Sand      Plug back to (ft) 2238'

Plug back procedure Nabors Well Services set solid plug at 2238'

Kick off depth (ft) none

Check all wireline logs run     caliper     density     deviated/directional     induction  
 neutron     resistivity     gamma ray     temperature     sonic

Well cored     Yes     No      Conventional      Sidewall      Were cuttings collected     Yes     No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_

10-3/4" - 119.0'

7" - 81'

4-1/2" - 2150' and 2022'

WAS WELL COMPLETED AS SHOT HOLE     Yes     No      DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?     Yes     No      DETAILS \_\_\_\_\_

WERE TRACERS USED     Yes     No      TYPE OF TRACER(S) USED \_\_\_\_\_

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Berea Sand</u>	<u>2202</u> TVD	<u>2206</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole 260 psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas show \_\_\_\_\_ mcfpd Oil 4 bpd NGL 0 bpd Water 0 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
					See original WR-35 submitted 8/6/13 attached

Please insert additional pages as applicable.

Drilling Contractor \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

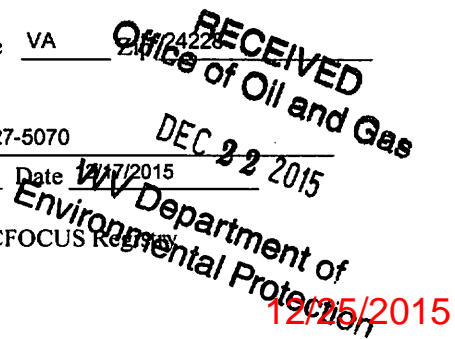
Cementing Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Stimulating Company C & J Energy Services  
Address 188 Ida Lane City Clintwood State VA

Please insert additional pages as applicable.

Completed by Teddy Adkins Telephone 304-927-5070  
Signature \_\_\_\_\_ Title Owner Date 12/17/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Report



12/25/2015

WR-35  
Rev (9-11)

COPY

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

DATE: 7/2/2013  
API #: 47-099-02270

Farm name: Billy Stewart Operator Well No.: Musick #4

LOCATION: Elevation: 982' Quadrangle: Prichard 7.5

District: Butler County: Wayne  
Latitude: 5400 Feet South of 38 Deg. 10 Min. 00 Sec.  
Longitude 3150 Feet West of 82 Deg. 30 Min. 00 Sec.

Company: Teddy Adkins

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>14485 S Calhoun Hwy Arnoldsburg, WV 25234</u>	<u>10-3/4"</u>	<u>362'</u>	<u>362'</u>	<u>234 sks</u>
Agent: <u>Teddy Adkins</u>	<u>7"</u>	<u>1460'</u>	<u>1460'</u>	<u>225 sks</u>
Inspector: <u>Ralph Triplett</u>	<u>4-1/2"</u>	<u>2383'</u>	<u>2383'</u>	<u>105 sks</u>
Date Permit Issued: <u>9/27/12</u>				
Date Well Work Commenced: <u>10/14/2012</u>				
Date Well Work Completed: <u>10/19/12</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>2425'</u>				
Total Measured Depth (ft): <u>2425'</u>				
Fresh Water Depth (ft.): <u>260'</u>				
Salt Water Depth (ft.): <u>1260'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>N/A</u>				
Void(s) encountered (N/Y) Depth(s) <u>NONE</u>				

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

Producing formation Berea Pay-zone depth (ft) 2207-2295

Gas: Initial open flow show MCF/d Oil: Initial open flow 2 Bbl/d

Final open flow show MCF/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 18 Hours

Static rock Pressure 0 psig (surface pressure) after 48 Hours

NO RESULT FROM FRAC - WILL REFRAC

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.

Teddy Adkins  
Signature

8/6/13  
Date

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Musick #4

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Gamma Ray/Neutron/Density/Induction/Temperature/PE

**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:

Perforations: 2207 - 2211 8 holes; 2218 1 hole; 2222 1 hole; 2291 1 hole; 2295 1 hole

FOAM FRAC USING 500 GAL ACID; 25,000 LBS. 20/40 SAND; 29,900 SCF NITROGEN; 233 BBL. WATER

Formations Encountered:	Top Depth	Bottom Depth	
Surface	0	12	
Sand	12	47	
Slate	47	74	
Sand	74	114	
Slate	114	147	
Sand	147	190	
Slate	190	240	
Sand	240	345	
Slate	345	422	
Sand	422	544	
Slate	544	560	
Sand	560	612	
Slate	612	682	
Sand	682	707	
Slate	707	824	Run 362' 10-3/4" Cement back to surface
Sand	824	945	
Slate	945	955	
Salt Sand	955	1260	
Slate	1260	1277	Water 1270' Hole Full
Sand	1277	1440	Run 1460' 7" - Cement back to surface
Little Lime	1440	1470	
Pencil Cave	1470	1473	
Big Lime	1473	1504	
Big Injun Sand	1504	1537	
Stray Sand	1537	1695	
Shell	1695	1711	
Shell (Hard)	1711	1743	
Slate	1743	1822	
Slate & Shells	1822	2106	
Coffee Shale	2106	2127	
Berea Sand	2127	2133	Show Oil Run 4-1/2" 2383' cement back to 1250'
Slate and Shells	2133	2148	
Shell	2148	2162	
Sand & Shale	2162	2425	
TD		2425	

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