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WR - 35  
Rev (5-01)

Date: 05/14/13  
API # 47-1304739

**MAY 20 2013**

**State of West Virginia**  
**Department of Environmental Protection**  
WV Department of Office of Oil & Gas  
Environmental Protection Operators Report of Well Work

Farm Name: Cain Family Operators well No: Joker # 8

Location: Elevation 1091 Quadrangle: 7.5 Annamoriah  
District 1 Center County: 13 Calhoun  
Latitude: 9100 Feet W of 38 Deg. 55 Min. 00 Sec.  
Longitude: 1800 Feet S of 81 Deg. 7 Min. 30 Sec.

Company: Central West Virginia Oil & Gas LLC  
Address: 957 Bug Ridge  
Sutton WV 26601

*WJ*

Agent:	William Hunt	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill up Cu Ft			
Inspector	Ed Gainer				Sanded	Sks		CU FT
Date Permit Issued	<u>07/18/11</u>	<u>9 5/8</u>	<u>42</u>	<u>42</u> FT				
Date Well Work Commenced	<u>12/27/12</u>	<u>7</u>	<u>348</u>	<u>348</u> FT	<u>65</u>	<u>Sks</u>	<u>78</u>	<u>CU FT</u>
Date Well Work Completed	<u>01/15/13</u>	<u>4 1/2</u>	<u>2556</u>	<u>2556</u> FT	<u>145</u>	<u>Sks</u>	<u>174</u>	<u>CU FT</u>
Verbal Plugging:				FT		<u>Sks</u>		<u>CU FT</u>
Date Permission Granted On				FT		<u>Sks</u>		<u>CU FT</u>
Rotary X Cable	<u>RIG</u>							
Total Depth (feet):	<u>2596</u>	<u>Loggers</u>						
Fresh Water Depth:	<u>None</u>							
Salt Water Depth	<u>1720</u>							
Is coal being mined in area ?	<u>None</u>							
Coal Depths								

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OPEN FLOW DATA:

**WV Department of Environmental Protection**

Producing Formation: Berea Pay zone depth (ft) 2490 to 2496  
GAS: Initial Open Flow: 50 MCF/d OIL: Initial Open Flow:      Bbl/d  
Final Open Flow: 45 MCF/d Final Open Flow:      Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock pressure: 55 PSI (surface pressure) after 6 Hours

Second producing formation: Injun Pay zone depth (ft) 2124 to 2132  
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:      PSI (surface pressure) after      Hours

NOTE: ON BACK OF THESE FORM PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGIC RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

**Received**

JUN 25 2013

Signed: *[Signature]*  
By: WILLIAM HUNT  
Date: 5/14/2013

Office of Oil and Gas  
WV Dept. of Environmental Protection **07/26/2013**

State of West Virginia  
Department of Environmental Protection  
Office of Oil & Gas

Operators well name: Joker # 8  
Farm Name: Cain Family

Company:  
Address:

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Environmental Protection

GEOLOGICAL RECORD

Description:	Top	Bottom
Sand/clay/shale	0	1150
Sand/silts/shale	1150	1255
Shale	1255	1290
Salt sands	1290	1370
Shale	1370	1730
Sands Maxton	1730	1848
Shale	1848	1860
Sands	1860	1950
Sands/silts/shale	1848	2008
Lime	2008	2092
Injun Sand	2092	2134
Shale	2134	2490
Berea sand	2490	2498
Shale	2498	2596 (TD)
	2596 (TD)	
	0	
	0	
	0	
	0	

**Additional Comments:**

**Stage One:** MIRU Universal Well Service and Weatherford Wire Line. PU tools RIN and run CBL from 2553 ' KB to 790' KB. POOH LD/CBL tools. TOC = 1017'. PU HSC and RIN. Perforate with 6 shots (SF) from 2490 ' KB to 2496' KB. POOH LD tools. MIRU Universal Well Service. Establish brake down and feed rate, continue with 30 bbl/min pad. Complete stage one Berea formation stimulation and flush casing. Breakdown Pressure 4094 psi, Avg Pressure 1175 psi, Max Pressure 1250 psi. Slurry Volume 379 bbls, Max Sand Concentration 3 ppg, Total Sand 300 cwt, Flush 42 bbls Water, Final ISIP 868 psi, 5 - Min 575 psi, 10 - Min 523 psi.

**Stage Two:** RU Weatherford Wire line. PU tools RIH and set LMFP @ 2170' KB. POOH LD tools. PU HSC RIN and perforate with 6 SPF from 2124' KB to 2132' KB. POOH LD tools. RU Universal Well Service. Pump 5 bbls 15% HCL acid drop ball for LMFP, continue with 12 bbls 15% HCL acid land, establish formation breakdown and feed rate to 30 bbls/min. Complete stage two Injun formation stimulation and flush casing. Breakdown Pressure 1730psi, Avg Pressure 1182 psi, Max Pressure 1459 psi. Slurry Volume 676 bbls, Max Sand Concentration 3 ppg, Total Sand 400 cwt, Flush 34 bbls Water, Final ISIP 885 psi, 5 - Min 680 psi, 10 - Min 548 psi.

Received

JUN 25 2013