

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: May 21, 2013  
API #: 47-077-00574

Farm name: Hickory Ridge Operator Well No.: 2H

LOCATION: Elevation: 1313' Quadrangle: Aurora 7.5'

District: Union County: Preston  
Latitude: 4220 Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude 1370 Feet West of 79 Deg. 32 Min. 30 Sec.

Company: Gastar Exploration USA, Inc

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
229 West Main St, Suite 301 Clarksburg, WV 26301	20"		59'	Sanded
Agent: <u>Michael McCown</u>	13 3/8"		529'	430 sks
Inspector: <u>Sam Ward</u>	9 5/8"		2137'	680 sks
Date Permit Issued: <u>4/15/11</u>	5 1/2"		7752'	1315 sks
Date Well Work Commenced: <u>6/14/11</u>	2 3/8"		4512'	
Date Well Work Completed: <u>8/19/11</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): <u>4708'</u>				
Total Measured Depth (ft): <u>7779'</u>				
Fresh Water Depth (ft.): <u>60'</u>				
Salt Water Depth (ft.): <u>1600'</u>				
Is coal being mined in area (N/Y)? <u>No</u>				
Coal Depths (ft.): <u>none reported</u>				
Void(s) encountered (N/Y) Depth(s) <u>No</u>				

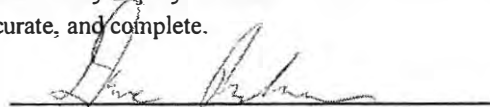
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**Office of Oil & Gas**  
**MAY 22 2013**  
**WV Department of**  
**Environmental Protection**

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

Producing formation Marcellus Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow 351 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 367 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 48 Hours  
Static rock Pressure 480 psig (surface pressure) after 24 Hours

Second producing formation none 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

5-21-13  
Date

05/24/2013

77-00574

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 Gamma Ray, Caliber Log,  
Compensated Z-Densilog, Compensated Neutron Log

**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 page

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered: \_\_\_\_\_ Top Depth \_\_\_\_\_ / \_\_\_\_\_ Bottom Depth  
Surface: \_\_\_\_\_

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
Benson	45	55
Sherr	934	2150
Rhinestreet	2150	2932
Elk	2932	3100
Geneseo	4518	4566
Tully	4566	4578
Hamilton	4578	4861
Marcellus	4861	4976
Onondaga	4976	none reported

05/24/2013

77.00574

**Fluid & Sand Volume Summary - Hickory Ridge #2H**

<u>Date</u>	<u>Stage</u>	<u>Perforated interval</u>		<u>Fluid Type</u>	<u>Frac Fluid</u>	<u>Pump</u>	<u>100 mesh</u>	<u>40/70 M</u>	<u>Total Sand</u>	<u>Avg Inj</u>
		<u>From</u>	<u>To</u>							
		<u>ft</u>	<u>ft</u>		<u>bbls</u>	<u>bbls</u>	<u>lbs</u>	<u>lbs</u>	<u>lbs</u>	<u>BPM</u>
8/10/2011	1	7475	7685	slk wtr	9116	0	88904	293916	382820	86
8/10/2011	2	7200	7410	slk wtr	7953	396	87435	288527	375962	86
8/11/2011	3	6945	7135	slk wtr	5144	152	90284	285713	375997	86
8/11/2011	4	6650	6820	slk wtr	5292	135	88110	299028	387138	87
8/12/2011	5	6375	6585	slk wtr	5482	136	91005	291776	382781	87
8/12/2011	6	6100	6310	slk wtr	4182	90	89347	245152	334499	85
8/13/2011	7	5825	6035	slk wtr	8512	70	88420	286581	375001	87
8/13/2011	8	5550	5760	slk wtr	8933	52	88460	268181	356641	86
8/14/2011	9	5275	5485	slk wtr	8657	46	88180	286362	374542	87
8/14/2011	10	4948	5210	slk wtr	8733	83	89537	290885	380422	87
<b>Totals</b>					<b>72004</b>	<b>1160</b>	<b>889682</b>	<b>2836121</b>	<b>3725803</b>	
					<b><u>Water to Recover</u></b>	<b><u>73164 bbls</u></b>				