

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: April 11, 2013  
API #: 47-051-01491 *Revised*

Farm name: Hendrickson - South Operator Well No.: 3H

LOCATION: Elevation: 1228' Quadrangle: Wileyville 7.5'

District: Franklin County: Marshall  
Latitude: 1810 Feet South of 39 Deg. 45 Min. 00 Sec.  
Longitude 11185 Feet West of 80 Deg. 42 Min. 30 Sec.

Company: Gastar Exploration USA, Inc.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>229 West Main Street, Suite 301</u> <u>Clarksburg, WV 26301</u>	<u>20"</u>		<u>40'</u>	<u>CTS</u>
Agent: <u>Michael McCown</u>	<u>13-3/8"</u>		<u>1058'</u>	<u>957</u>
Inspector: <u>Bill Hendershot</u>	<u>9-5/8"</u>		<u>2517'</u>	<u>950</u>
Date Permit Issued: <u>7/31/2011</u>	<u>5-1/2"</u>		<u>11518'</u>	<u>3073</u>
Date Well Work Commenced: <u>8/3/2011</u>	<u>2-3/8"</u>		<u>6168'</u>	
Date Well Work Completed: <u>3/31/2012</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>6,675'</u>				
Total Measured Depth (ft): <u>11,518'</u>				
Fresh Water Depth (ft.): <u>60'</u>				
Salt Water Depth (ft.): <u>1600'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>832-852; 987-997</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) 6675'  
Gas: Initial open flow 2724 MCF/d Oil: Initial open flow 39 Bbl/d  
Final open flow 2853 MCF/d Final open flow 64 Bbl/d  
Time of open flow between initial and final tests 240 Hours  
Static rock Pressure 1565 psig (surface pressure) after 240 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]  
Signature

4-11-13  
Date

**Received**  
AUG - 2 2013  
Office of Oil and Gas  
WV Dept. of Environmental Protection  
11/22/2013

51-01491

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 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 sheet:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Plug Back Details Including Plug Type and Depth(s): n/a

\_\_\_\_\_  
\_\_\_\_\_

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

Sewickley Coal	832 - 852	Geneseo	6443 - 6573
Pittsburgh Coal	987 - 997	Tully	6573 - 6510
Maxton	2029 - 2069	Hamilton	6510 - 6641
Big Lime	2060 - 2090	Marcellus	6641 - 6675
Big Injun	2100		
Base of Big Injun	2290		
Weir	2420 - 2590		
Berea	2599 - 2823		
Gordon	2826 - 2857		
Benson	3535 - 3545		
Java	5126 - 5445		
Rhinestreet	5900 - 6240		
Cashaqua	6240 - 6363		
Middlesex	6363 - 6386		
West River	6386 - 6443		

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Fluid & Sand Volume Summary - Hendrickson #3H

Date	Stage	Perforated interval		Fluid Type	Frac Fluid	Pump Down	100 mesh	40/70 M	Total Sand	Avg Inj
		From ft	To ft							
1/9/2012	1	11250	11460	slk wtr	6958	0	97374	295950	393324	82
1/10/2012	2	10957	11167	slk wtr	6963	275	94571	297855	392426	82
1/10/2012	3	10657	10867	slk wtr	6383	263	94368	142783	237151	79
1/11/2012	4	10357	10567	slk wtr	8466	243	94005	250839	344844	82
1/11/2012	5	10057	10267	slk wtr	8658	198	93707	292579	386286	83
1/12/2012	6	9757	9967	slk wtr	8244	173	95103	291365	386468	82
1/12/2012	7	9457	9667	slk wtr	7688	177	94179	291858	386037	82
1/13/2012	8	9157	9367	slk wtr	8119	148	89067	206833	295900	80
1/13/2012	9	8857	9067	slk wtr	8394	152	89022	301167	390189	81
1/14/2012	10	8557	8767	slk wtr	8221	133	89256	301008	390264	81
1/14/2012	11	8257	8467	slk wtr	8730	125	89309	240853	330162	81
1/14/2012	12	7957	8167	slk wtr	7960	106	89188	301388	390576	82
1/15/2012	13	7657	7867	slk wtr	12345	87	89084	258808	347892	81
1/16/2012	14	7357	7567	slk wtr	8534	130	89195	299970	389165	81
1/16/2012	15	7057	7267	slk wtr	8485	55	89127	297646	386773	82

Totals

124148

2265

1376555

4070902

5447457

Water to Recover

126413 bbls