

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

Farm name: Shields Operator Well No.: 4H

LOCATION: Elevation: 1331' Quadrangle: Powhatan Point 7.5'

District: Franklin County: Marshall  
Latitude: 11,560 Feet South of 39 Deg. 47 Min. 30 Sec.  
Longitude 10,540 Feet West of 80 Deg. 45 Min. 00 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"		110'	CTS
Agent: Michael McCown	13 3/8"		1178'	1065 ft^3
Inspector: Bill Hendershot	9 5/8"		2533'	1038 ft^3
Date Permit Issued: 3-26-2012	5 1/2"		10137'	2857 ft^3
Date Well Work Commenced: 4-27-2012	2 3/8"		6407'	
Date Well Work Completed: 4-11-2013				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 6526'				
Total Measured Depth (ft): 10,185'				
Fresh Water Depth (ft.): 60'				
Salt Water Depth (ft.): 1600'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): Refer to page 2				
Void(s) encountered (N/Y) Depth(s) No				

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

Producing formation Marcellus Pay zone depth (ft) 6888' to 10,022'  
Gas: Initial open flow 1896 MCF/d Oil: Initial open flow 97 Bbl/d  
Final open flow 2520 MCF/d Final open flow 172 Bbl/d  
Time of open flow between initial and final tests 96 Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ 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

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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.

*Don Rubin* 6-27-13 01/17/2014

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 No

**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	766 - 786	Geneseo	6355 - 6375
Pittsburgh Coal	907 - 917	Tully	6375 - 6412
Maxton	1885 - 1935	Hamilton	6412 - 6452
Big Lime	1958 - 1988	Marcellus	6452 - 6526
Big Injun	1988		
Base of Big Injun	2132		
Weir	2317 - 2487		
Berea	2505 - 2745		
Gordon	2840 - 2870		
Benson	3544 - 3554		
Java	5167 - 5487		
Rhinestreet	5839 - 5981		
Cashaqua	5981 - 6270		
Middlesex	6270 - 6284		
West River	6284 - 6355		

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