

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

DATE: 6/27/2013
API #: 47-051-01540

Farm name: Shields Operator Well No.: 8H

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

District: Franklin County: Marshall
Latitude: 11,465 Feet South of 39 Deg. 47 Min. 30 Sec.
Longitude 10,765 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: <u>Michael McCown</u>	13 3/8"		1184'	1103 ft^3
Inspector: <u>Bill Hendershot</u>	9 5/8"		2416'	1084 ft^3
Date Permit Issued: <u>3-29-2012</u>	5 1/2"		12071'	3394 ft^3
Date Well Work Commenced: <u>6-23-2012</u>	2 3/8"		6571'	
Date Well Work Completed: <u>5-31-2013</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>6490'</u>				
Total Measured Depth (ft): <u>12,101'</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>Refer to page 2</u>				
Void(s) encountered (N/Y) Depth(s) <u>No</u>				

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

Producing formation Marcellus Pay zone depth (ft) 7060' to 11,929'

Gas: Initial open flow 504 MCF/d Oil: Initial open flow 32 Bbl/d

Final open flow 1512 MCF/d Final open flow 181 Bbl/d

Time of open flow between initial and final tests 72 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

Were cuttings caught during drilling? Yes _____ No

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

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
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 - 6490
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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Fluid & Sand Volume Summary - Shields #8H

Date	Stage	Perforated interval		Fluid Type	Frac Fluid	Pump Down	100 mesh		40/70 M		Total Sand		Avg Inj BPM
		From ft	To ft				lbs	lbs	lbs	lbs	lbs	lbs	
4/1/2013	1	11895	11919	sik wtr	3972	487	109339	74379	183718	80			
4/3/2013	2	11780	11870	sik wtr	2365	1101	61199	0	61199	80			
4/10/2013	3	11495	11745	sik wtr	5699	0	259731	14087	273818	80			
4/11/2013	4	11195	11445	sik wtr	6330	377	260145	90282	350427	80			
4/12/2013	5	10895	11145	sik wtr	5806	355	259712	94603	354315	80			
4/13/2013	6	10595	10845	sik wtr	6182	317	256018	94917	350935	80			
4/14/2013	7	10295	10545	sik wtr	5188	299	259480	92005	351485	80			
4/15/2013	8	9995	10245	sik wtr	5672	270	255600	90509	346109	80			
4/16/2013	9	9695	9945	sik wtr	5410	240	258869	69556	328425	80			
4/17/2013	10	9395	9645	sik wtr	5771	217	258793	91063	349856	80			
4/18/2013	11	9095	9345	sik wtr	4536	209	259995	0	259995	80			
4/19/2013	12	8795	9045	sik wtr	5698	117	258276	91839	350115	80			
4/19/2013	13	8495	8745	sik wtr	5569	155	258257	92155	350412	80			
4/20/2013	14	8195	8445	sik wtr	5553	151	258939	91634	350573	80			
4/20/2013	15	7895	8145	sik wtr	5604	105	258334	92868	351202	80			
4/21/2013	16	7595	7845	sik wtr	5379	87	258653	78269	336922	80			
4/21/2013	17	7295	7545	sik wtr	5630	62	257759	93309	351068	80			
4/22/2013	18	7060	7250	sik wtr	2730	46	1423	0	1423	59			

Totals	93094	4595	4050522	1251475	5301997
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<u>Water to Recover</u>	97689
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APR 17 2013