

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 #: 47-051-01541

Farm name: Shields Operator Well No.: 9H

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 10.785 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"		1181'	1065 ft^3
Inspector: Bill Hendershot	9 5/8"		2337'	993 ft^3
Date Permit Issued: 3-21-2012	5 1/2"		9577'	2700 ft^3
Date Well Work Commenced: 7-4-2012	2 3/8"		6438'	
Date Well Work Completed: 5-31-2013				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 6485'				
Total Measured Depth (ft): 9612'				
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) 6928' to 9435'

Gas: Initial open flow 1320 MCF/d Oil: Initial open flow 32 Bbl/d

Final open flow 1608 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.

*[Signature]*

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 - 6485
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 #9H

Date	Stage	Perforated interval		Fluid Type	Frac Fluid	Pump	100 mesh			40/70 M		Total Sand	Avg Inj
		From	To				lbs	lbs	lbs	lbs	lbs		
4/1/2013	1	9339	9425	slk wtr	3279	0	96763	64835	161598	80	80		
4/2/2013	2	9188	9344	slk wtr	3938	218	114919	70759	185678	80	80		
4/3/2013	3	8988	9144	slk wtr	4444	183	110863	44722	155585	80	80		
4/4/2013	4	8788	8944	slk wtr	4705	188	129995	69887	199882	80	80		
4/5/2013	5	8588	8744	slk wtr	4403	184	138898	60717	199615	80	80		
4/6/2013	6	8388	8544	slk wtr	2002	153	2683	0	2683	37	37		
4/7/2013	7	8188	8344	slk wtr	4003	148	1086	0	1086	68	68		
4/10/2013	8	7988	8144	slk wtr	4181	135	144858	64608	209466	80	80		
4/11/2013	9	7788	7944	slk wtr	3806	118	132180	68705	200885	80	80		
4/12/2013	10	7588	7744	slk wtr	5050	104	131687	66372	198059	80	80		
4/15/2013	11	7388	7544	slk wtr	3734	88	131901	70418	202319	81	81		
4/17/2013	12	7188	7344	slk wtr	3748	71	133115	65738	198853	80	80		
4/18/2013	13	6928	7124	slk wtr	2240	52	66806	50088	116894	79	79		

**Totals**

49533      1642      1335754      696849      2032603

Water to Recover      51175 bbls

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