

WR-35  
Rev (5-01)

DATE: 3/1/12  
API #: 47-011-00994

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Eustace & Della Blake Operator Well No.: HR 436

LOCATION: Elevation: 753' Quadrangle: Milton WV 7.5'

District: Union County: Cabell  
Latitude: 11032 Feet South of 38 Deg. 30 Min. 00 Sec.  
Longitude 1032 Feet West of 82 Deg. 12 Min. 30 Sec.

Company: Hard Rock Exploration

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: <u>1244 Martins Branch Road</u> <u>Charleston WV, 25312</u>				
Agent: <u>Marc Scholl</u>	<u>13 3/8"</u>	<u>34</u>	<u>34</u>	<u>N/A</u>
Inspector: <u>Ralph Triplett</u>	<u>9 5/8"</u>	<u>545</u>	<u>545</u>	<u>288 f3 CTS</u>
Date Permit Issued: <u>9/29/11</u>	<u>7"</u>	<u>2368</u>	<u>2368</u>	<u>518 f3 CTS</u>
Date Well Work Commenced: <u>11/28/11</u>	<u>4.5"</u>	<u>6700</u>	<u>6700</u>	<u>130 CuFt</u>
Date Well Work Completed: <u>12/14/11</u>				
Verbal Plugging:	<u>Ran Gamma Log from KOP(2628' - 3568'MD)</u>			
Date Permission granted on:				
Rotary x Cable Rig				
Total Depth (feet): <u>6762'TMD, 3363'TVD</u>				
Fresh Water Depth (ft.): <u>200'</u>				
Salt Water Depth (ft.): <u>850', 1515'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>N/A</u>				

OPEN FLOW DATA

Producing formation Lower Huron Shale Pay zone depth (ft) 3360'MD- 6762 'MD  
3206'TVD - 3363' TVD

Gas: Initial open flow odor MCF/d Oil: Initial open flow          Bbl/d  
Final open flow 1000+ MCF/d Final open flow          Bbl/d  
Time of open flow between initial and final tests 72 Hours  
Static rock Pressure          psig (surface pressure) after 72 Hours

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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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NOTE: ON BACK OF THIS FORM 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 ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: [Signature]  
By: President  
Date: 3/30/12

09/14/2012

<u>Formation:</u>	<u>Top:</u>	<u>Bottom:</u>
Soil, Sand, and Shale	0	223
Sand	223	298
Sand/Shale	298	1408
Salt Sand	1408	1518
Lime	1518	1658
Injun Sand/Squaw	1658	1838
Shale	1838	2284
Coffee Shale	2284	2294
Berea	2294	2304
Devonian Shale	2304	3363
<b>Lower Huron Section</b>	<b>3160</b>	<b>3363</b>

**All formation depths shown As TVD**

12/08/11 Run total of 155 jts of R-3 4.5" 11.6ppf casing N-80 casing to depth of 6700' KB. Run total of 16 mechanical set Packers Plus formation packers for a 15 stage completion. RU DSA and 10k flanged valve. MIRU Baker Cmt Crew at 6:45pm. Dropped 5bbl water with 2 balls for toe sub and follow with N2. Pressure up with N2 and set packers, open toe sub at 3718psi. Perform annular squeeze on top packer with 100sx mixed at 15ppg.

	<b>Sleeve Size (FP)</b>	<b>Sleeve Depth</b>	<b>Packers</b>
<b>Stage 1</b>	GS/POFC	6698.27	6519.99
<b>Stage 2</b>	1.250	6427.82	6297.38
<b>Stage 3</b>	1.500	6205.22	6074.73
<b>Stage 4</b>	1.625	5982.58	5852.09
<b>Stage 5</b>	1.750	5759.82	5629.28
<b>Stage 6</b>	1.875	5537.11	5406.77
<b>Stage 7</b>	2.000	5314.68	5184.39
<b>Stage 8</b>	2.125	5092.30	4961.96
<b>Stage 9</b>	2.375	4869.73	4739.14
<b>Stage 10</b>	2.500	4646.83	4516.39
<b>Stage 11</b>	2.750	4424.22	4293.68
<b>Stage 12</b>	2.875	4201.38	4070.84
<b>Stage 13</b>	3.125	3978.70	3848.21
<b>Stage 14</b>	3.250	3755.98	3625.34
<b>Stage 15</b>	3.500	3533.12	3360.88
			2681.39

12/12 /11 - 12/14/11 MIRU Baker Stim crew. Start pumping N2 on Stg1. Work rate to 100kscf/min and pump total of 1MMscf N2. Shut down and drop ball for stage 2. Pump ball to sleeve with low rate N2. Open sleeve and increase rate. Pump total of 1MMscf N2. Drop ball for stage 3. Repeat process for stages 3-15.

	<b>Stg 1</b>	<b>Stg 2</b>	<b>Stg 3</b>	<b>Stg 4</b>	<b>Stg 5</b>	<b>Stg 6</b>	<b>Stg 7</b>	<b>Stg 8</b>
<b>Max P</b>	5460	5089	4688	4672	5217	5261	5028	4908
<b>Avg P</b>	3995	4874	4629	4615	5108	5193	5005	4888
<b>Max R</b>	98.8	105.9	104.0	105.9	110.0	105.3	102.8	101.4
<b>Avg R</b>	96.5	103.1	103.7	104.9	105.0	103.6	101.4	100.7
<b>5 min</b>	1100	1126	1229	1274	1597	2497	2660	2651
	<b>Stg 9</b>	<b>Stg 10</b>	<b>Stg 11</b>	<b>Stg 12</b>	<b>Stg 13</b>	<b>Stg 14</b>	<b>Stg 15</b>	
<b>Max P</b>	4721	4531	4538	4677	4609	4419	3586	
<b>Avg P</b>	4624	4512	4510	4632	4471	4298	3571	
<b>Max R</b>	106.5	103.2	103.5	106.1	109.8	109.0	104.9	
<b>Avg R</b>	104.5	102.3	103.3	105.1	106.8	106.6	103.8	
<b>5 min</b>	1683	1585	1460	1642	1540	1390	1160	

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