

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

Well Operator's Report of Well Work

Farm name: Larry D. And Joyce Epling Operator Well No.: HR 475

LOCATION: Elevation: 1020' Quadrangle: Reedy WV 7.5'

District: Reedy County: Roane  
Latitude: 7281' Feet South of 38 Deg. 55 Min. 00 Sec.  
Longitude 7634' Feet West of 81 Deg. 22 Min. 30 Sec.

Company: Hard Rock Exploration

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<b>Address: 1244 Martins Branch Road</b>				
<b>Charleston WV, 25312</b>				
Agent: Marc Scholl	13 3/8"	32'	32'	N/A
Inspector: Ed Gainer	9 5/8"	914'	914'	456 ft3 CTS
Date Permit Issued: 6/26/12	7"	2621'	2621'	564 ft3 CTS
Date Well Work Commenced: 9/5/12	4.5"	7560'	7560'	130 ft3
Date Well Work Completed: 10/5/12				
Verbal Plugging:	Ran Gamma Log from (3950'MD(kop) - 4984'MD Land)			
Date Permission granted on:	On first build section - later plugged back and started new			
Rotary x Cable Rig	Build section at shallower TVD.			
Total Depth (feet): 7614'TMD, 4401'TVD				
Fresh Water Depth (ft.): None - dry	Ran Gyro Log from 3700' - Surface			
Salt Water Depth (ft.): 1927'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): <u>N/A</u>				

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OPEN FLOW DATA

Producing formation Lower Huron Shale Pay zone depth (ft) 4531'MD- 7614 'MD  
4362'TVD - 4401' TVD

Gas: Initial open flow 375 MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow >1.5 MMCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 72 Hours  
Static rock Pressure 1240 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

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: \_\_\_\_\_  
By: President  
Date: 2/20/2013

03/01/2013



87-04718

10/05/12 Nabors Stim crew Pressure test lines (MIRU on 10/4/12). Open frac valve at 6:50am – 1226 psi casing pressure. Start pumping at half rate On Stg 1 and bring trucks in slowly. Pump total of 1MM scf N2 at 100k scf/min. Shut down and drop 1.25" ball for Stg 2 off of gate. Start pumping at 17k scf/min; Open sleeve and Bring to design rate of 100kscf/min and pump total of 1MM scf N2. Shut down and drop 1.375"ball for Stg 3 and repeat process for Stgs 3 – Stg 14.

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7
Max P	5085	5050	5538	5634	5634	5683	5890
Avg P	4739	4781	5349	5567	5567	5580	5833
Max R	104	102	103	105	105	106	99
Avg R	98	99	101	101	103	101	97
Shut In	1705-10	1682-10	N/A	N/A	N/A	N/A	N/A
	Stage 8	Stage 9	Stage 10	Stage 11	Stage 12	Stage 13	Stage 14
Max P	4762	4550	4593	4616	4793	5120	4718
Avg P	4620	4470	4563	4537	4735	5074	4673
Max R	103	103	102	101	103	102	102
Avg R	100	100	101	100	102	101	101
Shut In	N/A	N/A	N/A	N/A	N/A	N/A	2136-5

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