

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

Well Operator's Report of Well Work

Farm name: GINI Morgan Operator Well No.: HR 444

LOCATION: Elevation: 675' Quadrangle: Peniel WV 7.5'

District: Reedy County: Roane  
Latitude: 9940' Feet South of 38 Deg. 55 Min. 00 Sec.  
Longitude 9860' 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.
Address: <u>1244 Martins Branch Road</u> <u>Charleston WV, 25312</u>	<u>20"</u>	<u>19'</u>	<u>19'</u>	<u>NA</u>
Agent: <u>Marc Scholl</u>	<u>13 3/8"</u>	<u>83</u>	<u>83</u>	<u>70ft3 CTS</u>
Inspector: <u>Ed Gainer</u>	<u>9 5/8"</u>	<u>621</u>	<u>621</u>	<u>300 ft3 CTS</u>
Date Permit Issued: <u>9/9/2011</u>	<u>7"</u>	<u>2329</u>	<u>2329</u>	<u>550 ft3 CTS</u>
Date Well Work Commenced: <u>2/27/12</u>	<u>4.5"</u>	<u>7357</u>	<u>7357</u>	<u>130 ft3</u>
Date Well Work Completed: <u>3/22/12</u>				
Verbal Plugging:	<u>Ran Gamma Log from (3500' - 4500'MD)</u>			
Date Permission granted on:	<u>Ran Gyro Log from (3400' - Surface)</u>			
Rotary x Cable Rig	<u>Ran Open hole Log from (2366' - Surface)</u>			
Total Depth (feet): <u>7425'TMD, 4192'TVD</u>				
Fresh Water Depth (ft.): <u>55-60'</u>				
Salt Water Depth (ft.): <u>1116', 1575'</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) 4164'MD- 7425 'MD  
4080'TVD - 4192' TVD

Gas: Initial open flow oder MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 2000+ 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 \_\_\_\_\_ 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: James J. [Signature]

Date: 6/6/12

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<u>Formation:</u>	<u>Top:</u>	<u>Bottom:</u>
Soil/Sand/Shale	0	1585
Salt Sand	1585	1764
Lime	1764	1815
Injun	1815	1833
Shale	1833	2228
Coffee Shale	2228	2242
Devonian Shale	2242	4192
Lower Huron Section	4050	4192

**All depths shown As TVD**

03/07/12 Run total of 171 jts of R-3 4.5" casing with 14 stg Peak Completions Mechanical set packer system. Total pipe set at 7357' KB. MIRU Baker Packer set crew. Drop balls for P/O shoe. Start pumping N2 at low rate to land balls and set packers. Continue to pressure up and open shoe at 3826psi. RU to perform annular squeeze. Pump 100sx of neat cement mixed at 15ppg.

	<b>Sleeve</b>	<b>Sleeve Size</b>	<b>Packers</b>
<b>Stage 1</b>	7357'	P/O Shoe	7230'
<b>Stage 2</b>	7095.6'	1.156	6966'
<b>Stage 3</b>	6872'	1.281	6743'
<b>Stage 4</b>	6607'	1.406	6520'
<b>Stage 5</b>	6384'	1.531	6296'
<b>Stage 6</b>	6161'	1.656	6073'
<b>Stage 7</b>	5938'	1.781	5809'
<b>Stage 8</b>	5716'	2.031	5587'
<b>Stage 9</b>	5451'	2.281	5321'
<b>Stage 10</b>	5186'	2.531	5098'
<b>Stage 11</b>	5005'	2.781	4875'
<b>Stage 12</b>	4740'	3.031	4610'
<b>Stage 13</b>	4516'	3.281	4387'
<b>Stage 14</b>	4251'	3.531	4164'
<b>Anchor</b>			2649'

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03/22/12. Casing pressure 1330psi. Start pumping on Stg 1 at 8:50am. Start pumping at 50k scf/min and work rate up as pressure allows. Pump total of 1MM scf N2. Shut down and load 1.25" ball for Stg 2. Pressure test and wait for ball to drop. Start pumping ball down at 17k scf/min. Ball appeared to land and pressure started to level off. Up rate to 100k scf/min and pump total of 1MM scf N2. Shut down and drop 1.375" ball for Stg 3. Repeat frac process for stages 3 - 14.

	<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>Max P</b>	5899	5934	5997	6007	5952	5939	5919
<b>Avg P</b>	4305	5404	5726	5940	5920	5660	5848
<b>Max R</b>	102.0	102.3	97.5	94.7	91.2	97.8	100.5
<b>Avg R</b>	77.8	93.5	92.1	90.3	90.5	88.8	99.4
<b>2 min</b>	2075	2270	2634	3056	3280	2926	2924
<b>5 min</b>	N/A	1966	2103	2457	2390	N/A	2480
	<b>Stg 8</b>	<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>Max P</b>	5596	5364.0	5051	4853	4665	4723	3944
<b>Avg P</b>	5462	5308.0	4810	4788	4647	4650	3932
<b>Max R</b>	102.6	103.0	103.0	103.6	103.7	102.5	103.4
<b>Avg R</b>	98.7	102.0	99.5	102.0	103.0	100.0	102.0
<b>2 min</b>	2570	2780	2455	2416	2396	2320	2041
<b>5 min</b>	2194	2400	N/A	2160	2162	2090	1983

10/26/2012