WR-35
Rev (5-01)

DATE: 2/29/12
API # : 47-087-04699

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

Well Operator's Report of Well Work

Farm name:_____Roderic And Ronda Moore__ Operator Well No.:_____HR 447_____

LOCATION: Elevation: _____855'_____ Quadrangle: _____Reedy WV 7.5'_____

District: _____Reedy_____ County: _____Roane_____
Latitude: 12479__Feet South of_38___Deg.__55____Min.____Sec.
Longitude_6886____Feet West of__81___Deg.___27___Min.__30____Sec.

**Company: __Hard Rock Exploration_____**

| | Casing & Tubing | Used in drilling | Left in well | Cement fill up Cu. Ft. |
|---|---|---|---|---|
| **Address: 1244 Martins Branch Road** | | | | |
| **Charleston WV, 25312** | | | | |
| **Agent: Marc Scholl** | 13 3/8" | 33 | 33 | N/A |
| **Inspector: Ed Gainer** | 9 5/8" | 797 | 797 | 378 ft3 CTS |
| **Date Permit Issued: 7/20/11** | 7" | 2538 | 2538 | 573 ft3 CTS |
| **Date Well Work Commenced: 10/25/11** | 4.5" | 7587 | 7587 | 130 CuFt |
| **Date Well Work Completed: 11/13/11** | | | | |
| **Verbal Plugging:** | Ran Gamma Log from KOP(3770' – 4360'TVD) | | | |
| **Date Permission granted on:** | Ran Gyro Log from Surface to 3770' | | | |
| **Rotary x Cable Rig** | | | | |
| **Total Depth (feet): 7660'TMD, 4373'TVD** | | | | |
| **Fresh Water Depth (ft.): 570'** | | | | |
| | | | | |
| **Salt Water Depth (ft.): 1230', 1850'** | | | | |
| | | | | |
| **Is coal being mined in area (N/Y)? N** | | | | |
| **Coal Depths (ft.):_____N/A_____** | | | | |

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OPEN FLOW DATA

Producing formation___Lower Huron_Shale__Pay zone depth (ft) 4302'MD- 7660 'MD
4239'TVD – 4373' TVD

Gas: Initial open flow__50____MCF/d Oil: Initial open flow_____Bbl/d
Final open flow___1500+___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

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: 2/29/2012

05/25/2012

| Formation: | Top: | Bottom: |
|---|---|---|
| Soil/Sand/Shale | 0 | 560 |
| Sand | 560 | 635 |
| Sand/Shale | 635 | 1800 |
| Salt Sand | 1800 | 2120 |
| Shale | 2120 | 2465 |
| Coffee Shale | 2465 | 2480 |
| Berea | 2480 | 2482 |
| Devonian Shale | 2482 | 4230 |
| **Lower Huron Section** | **4230** | **4373** |

**All depths shown As TVD**

11/4/11
Run 178 jts of R-3 4.5" 11.6ppf N-80 casing to depth of 7587'. Run 15 stg team downhole packer and sleeve completion system. Finish running casing at 2:30am. NU DSA and 10k psi frac valve. MIRU BJ Services. Start pumping balls for toe sub and pump total of 165k scf N2. Open HP sleeve at approx. 3850psi. Shut down. Bleed casing to 1500psi. RD N2 equip. RU to perform annular squeeze with 100sx type 1 3% mixed at 15ppg.

| | Sleeves | Packers |
|---|---|---|
| **Stage 1** | 7497.6 | 7405.7 |
| **Stage 2** | 7278.9 | 7187.0 |
| **Stage 3** | 7060.2 | 6968.3 |
| **Stage 4** | 6841.5 | 6749.6 |
| **Stage 5** | 6622.8 | 6530.9 |
| **Stage 6** | 6404.1 | 6312.2 |
| **Stage 7** | 6185.4 | 6093.5 |
| **Stage 8** | 5966.7 | 5874.8 |
| **Stage 9** | 5748.0 | 5656.1 |
| **Stage 10** | 5529.3 | 5437.4 |
| **Stage 11** | 5310.6 | 5218.7 |
| **Stage 12** | 5091.9 | 5000.0 |
| **Stage 13** | 4873.2 | 4739.6 |
| **Stage 14** | 4612.8 | 4520.9 |
| **Stage 15** | 4394.1 | 4302.2 |
| | | 2834.2 |



11/13/11 MIRU N2 Equipment. Start pumping N2 on Stg 1. Work trucks to design rate of 100kscf/min. Pump total of 1MMscf N2. Shut down and drop ball for stg2. Wait 10min for ball to drop. Start pumping N2 at low rate to seat and open sleeve. Increase rate and pump total of 1MMscf N2. Shut down and drop ball for Stg 3. Repeat process for stgs 3-15.

| | Stg 1 | Stg 2 | Stg 3 | Stg 4 | Stg 5 | Stg 6 | Stg 7 | Stg 8 |
|---|---|---|---|---|---|---|---|---|
| **Max P** | 5984 | 6038 | 5558 | 6023 | 5981 | 5657 | 5368 | 5958 |
| **Avg P** | 5894 | 5924 | 5472 | 5799 | 5909 | 5606 | 5288 | 5799 |
| **Max R** | 96.7 | 101.8 | 83.8 | 104.9 | 101.1 | 101.1 | 102.7 | 102.4 |
| **Avg R** | 86.6 | 88.6 | 83.5 | 96.4 | 98.6 | 99.0 | 101.8 | 100.0 |
| **5 min** | 1995 | N/A | 2068 | N/A | N/A | N/A | N/A | 2286 |

| | Stg 9 | Stg 10 | Stg 11 | Stg 12 | Stg 13 | Stg 14 | Stg 15 |
|---|---|---|---|---|---|---|---|
| **Max P** | 5628 | 5783 | 5706 | 5763 | 5698 | 5004 | 4603 |
| **Avg P** | 5468 | 5624 | 5603 | 5610 | 5621 | 4927 | 4548 |
| **Max R** | 108.0 | 111.0 | 112.0 | 112.0 | 111.0 | 114.0 | 111.0 |
| **Avg R** | 103.0 | 109.0 | 106.0 | 109.0 | 108.0 | 110.0 | 110.0 |
| **5 min** | 2236 | 2300 | 2240 | 2190 | 2203 | 1999 | 1930 |