

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

Well Operator's Report of Well Work

Farm name: Joyce Howard Conrad Operator Well No.: HR 452

LOCATION: Elevation: 712' Quadrangle: Reedy WV 7.5'

District: Reedy County: Roane
Latitude: 13380 Feet South of 38 Deg. 55 Min. 00 Sec.
Longitude 2703 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 | 20" | 29 | 29 | N/A |
| Agent: Marc Scholl | 13 3/8" | 84 | 84 | 56ft3 CTS |
| Inspector: Ed Gainer | 9 5/8" | 673 | 673 | 324 ft3 CTS |
| Date Permit Issued: 7/26/11 | 7" | 2332 | 2332 | 504 ft3 CTS |
| Date Well Work Commenced: 1/10/12 | 4.5" | 7419 | 7419 | N/A |
| Date Well Work Completed: 1/19/12 | | | | |
| Verbal Plugging: | Ran Gamma Log from KOP(3539' - 4161'TVD) | | | |
| Date Permission granted on: | Ran Gamm Log from 2600' - Surface | | | |
| Rotary x Cable Rrig | | | | |
| Total Depth (feet): 7419'TMD, 4178'TVD | | | | |
| Fresh Water Depth (ft.): 60' | | | | |
| Salt Water Depth (ft.): 1208', 1755' | | | | |
| Is coal being mined in area (N/Y)? N | | | | |
| Coal Depths (ft.): <u>N/A</u> | | | | |

OPEN FLOW DATA

Producing formation Lower Huron Shale Pay zone depth (ft) 4203'MD- 7419 'MD
4080'TVD - 4178' TVD

Gas: Initial open flow 1200 MCF/d Oil: Initial open flow Bbl/d
Final open flow 1200 MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests 24 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: James Fitzgerald
By: President
Date: 3/20/12

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| Formation: | Top: | Bottom: |
|---------------------|-------------|----------------|
| Soil, Sand, Shale | 0 | 1530 |
| Salt Sand | 1530 | 1790 |
| Lime | 1790 | 1830 |
| Injun | 1830 | 1850 |
| Shale | 1850 | 2235 |
| Coffee Shale | 2285 | 2300 |
| Devonian Shale | 2300 | 4178 |
| Lower Huron Section | 4090 | 4178 |

All depths shown As TVD

01/19/12 Run total of 171 jts of R-3 4.5" 11.6 ppf casing to depth of 7362' with 14 stg Packers Plus mechanical packer system. Finish running casing and RU wellhead at 4:00pm. Shut well in. Will test well as natural producer.

| | Sleeve | Sleeve Size | Packers |
|-----------------|---------------|--------------------|----------------|
| Stage 1 | 7360 | Shoe | 7187 |
| Stage 2 | 7047 | 1.250 | 6959 |
| Stage 3 | 6825 | 1.500 | 6736 |
| Stage 4 | 6644 | 1.750 | 6513 |
| Stage 5 | 6421 | 2.000 | 6290 |
| Stage 6 | 6198 | 2.125 | 6068 |
| Stage 7 | 5934 | 2.250 | 5845 |
| Stage 8 | 5711 | 2.500 | 5581 |
| Stage 9 | 5489 | 2.625 | 5358 |
| Stage 10 | 5224 | 2.875 | 5135 |
| Stage 11 | 5001 | 3.000 | 4912 |
| Stage 12 | 4778 | 3.250 | 4690 |
| Stage 13 | 4556 | 3.375 | 4426 |
| Stage 14 | 4292 | 3.625 | 4203 |
| Anchor | | | 4647 |

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09/14/2012