

WR-35
Rev (5-01)

DATE: 6-18-14
API #: 47-087-04737

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

Well Operator's Report of Well Work

Farm name: James E. Derrick Operator Well No.: HR 483

LOCATION: Elevation: 834 Quadrangle: Peniel WV 7.5'

District: Reedy County: Roane
Latitude: 7365' Feet South of 38 Deg. 52 Min. 30 Sec.
Longitude 10281' 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: <u>1244 Martins Branch Road</u> <u>Charleston WV, 25312</u> | | | | |
| Agent: <u>Marc Scholl</u> | <u>13 3/8"</u> | <u>30'</u> | <u>30'</u> | <u>na</u> |
| Inspector: <u>Ed Galner</u> | <u>9 5/8"</u> | <u>796'</u> | <u>796'</u> | <u>390 ft3 CTS</u> |
| Date Permit Issued: <u>2-4-14</u> | <u>7"</u> | <u>2532'</u> | <u>2532'</u> | <u>565ft3 CTS</u> |
| Date Well Work Commenced: <u>3-30-14</u> | <u>4.5"</u> | <u>7500'</u> | <u>7500'</u> | <u>130ft3</u> |
| Date Well Work Completed: <u>6-20-14</u> | | | | |
| Verbal Plugging: | | | | |
| Date Permission granted on: | <u>Gamma Log from (3774' - 7498' MD)</u> | | | |
| Rotary x Cable Rig | <u>Ran Gyro Log from (3810'(kop) - Surface)</u> | | | |
| Total Depth (feet): <u>7587'TMD, 4435'TVD</u> | <u>Ran Open hole Logs from 2593' - 796'</u> | | | |
| Fresh Water Depth (ft.): <u>110'</u> | | | | |
| Salt Water Depth (ft.): <u>1190', 1840'</u> | | | | |
| Is coal being mined in area (N/Y)? <u>N</u> | | | | |
| Coal Depths (ft.): <u>N/A</u> | | | | |

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Office of Oil and Gas
JUN 30 2014
WV Department of Environmental Protection

OPEN FLOW DATA

Producing formation Lower Huron Shale Pay zone depth (ft) 4309'MD- 7587'MD
4258'TVD - 4435' TVD

Gas: Initial open flow 150 MCF/d Oil: Initial open flow Bbl/d
Final open flow >1MMCF/d Final open flow Bbl/d
Time of open flow between initial and final tests 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 E. Derrick
By: President
Date: 6/30/2014

08/15/2014

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| Formation: | Top: | Bottom: |
|---------------------|-------------|----------------|
| Soil/Sand/Shale | 0 | 530 |
| White Sand | 530 | 625 |
| Sand and Shale | 625 | 1700 |
| Salt Sand | 1700 | 1930 |
| Big Lime | 1930 | 1978 |
| Keener? | 1978 | 2000 |
| Shale | 2000 | 2024 |
| Big Injun | 2024 | 2060 |
| Shale | 2060 | 2452 |
| Coffee shale | 2452 | 2460 |
| Shale | 2460 | 4435 |
| Lower Huron Section | 4260 | 4435 |

All depths shown As TVD

04/30/14 Run total of 168 jts of 4.5" 11.6ppf N-80 casing with 12 stg Peake Completions openhole packer system to depth of 7493' set at 7500' KB. RU frac valve

05/01/14 MIRU Universal Well Services. Start pumping 5 bbls water drop ball for toe sub and then 3 bbls water followed with N2 at 5-7k scf/min. Land ball and pressure up to 2200 psi – packers set and shut off gas rate. Continue to pressure up to 3000 psi with approx. 125k scf N2. Hold 3000 psi for 30 min. Bleed pressure off to 1000 psi. RU to 4x7 annular and dump squeeze with 100sx cmt mixed at 15ppg

NOTE: THERE ARE NO PERFORATED INTERVALS IN THIS STYLE OF COMPLETION. THE PACKERS WILL SERVE AS STAGE ISOLATION AND THE BALL ACTIVATED MECHANICAL SLEEVES SERVE AS THE MEANS OF COMMUNICATION FROM WELLBORE TO FORMATION. ALL DEPTHS ARE INDICATED BELOW.

| Stage | Sleeve | Sleeve Size | Ball Size | Packer |
|--------|---------|-------------|-----------|---------|
| 1 | 7499.00 | Shoe | N/A | 7316.00 |
| 2 | 7181.35 | 1.28 | 1.375 | 7043.00 |
| 3 | 6908.35 | 1.40 | 1.500 | 6770.00 |
| 4 | 6635.35 | 1.53 | 1.625 | 6497.00 |
| 5 | 6362.30 | 1.78 | 2.000 | 6223.95 |
| 6 | 6089.15 | 2.03 | 2.250 | 5950.75 |
| 7 | 5816.10 | 2.28 | 2.500 | 5677.95 |
| 8 | 5543.30 | 2.53 | 2.750 | 5404.95 |
| 9 | 5270.35 | 2.78 | 3.000 | 5132.00 |
| 10 | 4997.60 | 3.03 | 3.250 | 4858.55 |
| 11 | 4679.20 | 2.28 | 3.500 | 4584.05 |
| 12 | 4447.90 | 3.53 | 3.750 | 4309.25 |
| Anchor | | | | 2814.90 |

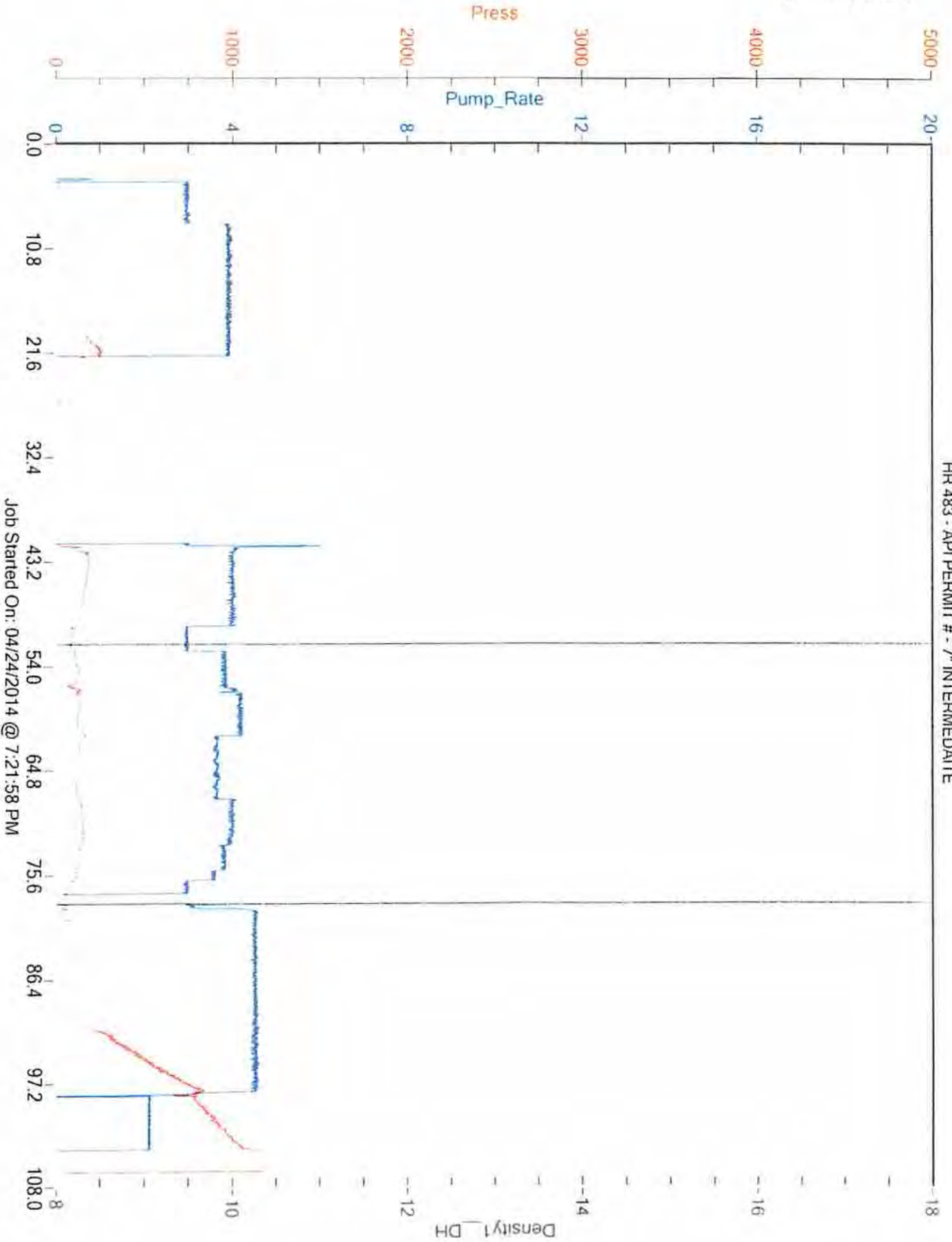
6/19/14 - 6-20-14 . Start pumping N2 at 30-40kscf/min and open shoe at approx 4100psi. Continue to increase rate and pump total of 1mmscf. Load 1.375" ball for Stg 2. Drop ball and start pumping ball to sleeve at 20kscf/min. Land ball at 160kscf. Open sleeve at 4500psi. Continue to increase rate and pump total of 1MMscf N2. Shut down and Load 1.5" ball for Stg 3. Pump ball to sleeve at 20kscf/min. Land ball and open sleeve at approx 4000psi. Increase rate and pump total of 1MMscf N2. Shut down and drop 1.75" ball for Stg 4. Repeat stimulation process for Stages 4-12.

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| | Stg1 | Stg2 | Stg3 | Stg4 | Stg5 | Stg6 | Stg7 | Stg8 | Stg9 | Stg10 | Stg11 | Stg12 |
|----------|----------------|-------|-------|------|-----------------|------|------|------|------|-------|-------|-------|
| Max p | 5850 | 5750 | 5800 | | 4600 | 4600 | 4450 | 4400 | 4700 | 4600 | 4300 | 3830 |
| Avg p | 5700 | 5680 | 5700 | | 4520 | 4500 | 4400 | 4300 | 4450 | 4550 | 4180 | 3815 |
| Max R | 90 | 101.2 | 103 | | 102 | 106 | 103 | 103 | 100 | 102 | 105 | 103 |
| Avg R | 84 | 100 | 101.5 | | 100 | 104 | 100 | 100 | 99 | 100 | 102 | 102 |
| SIP | 2012- 10min | | | Na | 1770 - 10min | na | na | | na | na | | |

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HARD ROCK
HR 483 - API PERMIT # - 7" INTERMEDANTE

Job Started On: 04/24/2014 @ 7:21:58 PM

08/15/2014