

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 10/1/2013
API #: 47-9101102 **F**

Farm name: KNOTTS, RICHARD D Operator Well No.: WV 510993R

LOCATION: Elevation: 1327 Quadrangle: ROSEMONT

District: BOOTH'S CREEK County: TAYLOR
Latitude: 4230 Feet South of 39 Deg. 20 Min. 00 Sec.
Longitude 4630 Feet West of 80 Deg. 07 Min. 30 Sec.

Company: EQT Production Company

| Address: | Casing & Tubing | Used in drilling | Left in well | Cement fill up Cu. Ft. |
|---|-------------------------------------|-----------------------|----------------|------------------------|
| EQT Plaza, Suite 1700 625 Liberty Avenue, Pittsburgh, PA 15222 | 16" | 44 | 44 | 0 |
| Agent: Rex. C. Ray | 11 3/4" | 750 | 750 | 423 |
| Inspector: Bill Hatfield | 8 5/8" | 2725 | 2725 | 805 |
| Date Permit Issued: 6/30/2009 | 5 1/2" | 10,139 | 10,139 | 983 |
| Date Well Work Commenced: 7/7/2009 | The 18", 11 3/4", and 8-5/8" casing | were set on the orig. | 510993 permit. | |
| Date Well Work Completed: 9/10/2009 | The 5-1/2" casing | was set on the | 510993 re-work | permit referenced |
| Verbal Plugging: N/A | above (47-9101102) | | | |
| Date Permission granted on: N/A | | | | |
| Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/> | | | | |
| Total Vertical Depth (ft): 7439' | | | | |
| Total Measured Depth (ft): 10,184' | | | | |
| Fresh Water Depth (ft.): See 510993 orig. WR-35 | | | | |
| Salt Water Depth (ft.): N/A | | | | |
| Is coal being mined in area (N/Y)? N | | | | |
| Coal Depths (ft.): See 510993 orig. WR-35 | | | | |
| Void(s) encountered (N/Y) Depth(s) N | | | | |

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7382
Gas: Initial open flow 1181 MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow 2086 MCF/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 260 psig (surface pressure) after 25 Hours

Second producing formation No second 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

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I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

10/21/13
Date

10/25/2013

Were core samples taken? Yes _____ No **X**

Were cuttings caught during drilling? Yes **X** No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Gamma ray

NOTE: IN THE AREA BELOW 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 THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

See attached

Plug Back Details Including Plug Type and Depth(s): Set cast iron bridge plug @ 6582'. Pulled 5225' of 5-1/2" csg out of hole. Set solid 29 bbl cmt. plug from 5225'-4803'. Kicked off plug and re-drilled curve and lateral.

Formations Encountered: _____ Top Depth _____ Bottom Depth
Surface: _____

Int. Csg was set down to 2725'. On the re-work, the following formations were encountered:
B-5 2725/3001/276 SPEECHLEY 3001/3304/303' BRADFORD 3304/3670/366
RILEY 3670/4276/606 BENSON 4276/6651/2375' SONYEA 6651/6906/255
MIDDLESEX 6906/6971/65 GENESSEE 6971/7140/169 GENESEO 7140/7190/50
TULLY 7190/7219/29 LUDLOWVILLE 7219/7247/28 HAMILTON 7247/7382/135
MARCELLUS 7382/7439/57

91-01102

510933 - Perforations

| Zone/Stage | Date | Top Plug Depth (ftKB) | Bottom Plug Depth (ftKB) | Top Perf. Depth (ftKB) | Bottom Perf. Depth (ftKB) | Shots/ft |
|------------|------------|-----------------------|--------------------------|------------------------|---------------------------|----------|
| 1 | 9/28/2009 | NA | 9,833.00 | 10,104.00 | 9,862.00 | 4 |
| 2 | 10/22/2009 | 9,833.00 | 9,533.00 | 9,804.00 | 9,562.00 | 4 |
| 3 | 10/23/2009 | 9,533.00 | 9,233.00 | 9,504.00 | 9,262.00 | 4 |
| 4 | 10/23/2009 | 9,233.00 | 8,933.00 | 9,204.00 | 8,962.00 | 4 |
| 5 | 10/23/2009 | 8,933.00 | 8,633.00 | 8,604.00 | 8,362.00 | 4 |
| 6 | 10/24/2009 | 8,633.00 | 8,333.00 | 8,304.00 | 8,062.00 | 4 |
| 7 | 10/24/2009 | 8,333.00 | 8,033.00 | 8,004.00 | 7,762.00 | 4 |
| 8 | 10/24/2009 | 8,033.00 | NA | 8,004.00 | | 4 |

510933 - Stimulated Stages

| Zone/Stage | P Break (psi) | Avg Treat Pressure (psi) | Avg rate (bbl/min) | ISIP (psi) | Avg Prop Conc (lb/gal) | IS Min. SIP (psi) | Vol. Water Pump (bbl) | Start Date | End Date | Preppant (lb) |
|------------|---------------|--------------------------|--------------------|------------|------------------------|-------------------|-----------------------|------------------|------------------|---------------|
| 1 | 7,639.00 | 8,796.00 | 88 | 5,980.00 | 1.5 | 4,551.00 | 10130 | 9/28/2009 15:00 | 9/29/2009 9:30 | 407,074 |
| 2 | 6,837.00 | 8,280.00 | 97.26 | 5,563.00 | 1.26 | 5,345.00 | 10201 | 10/23/2009 6:33 | 10/23/2009 10:56 | 414,243 |
| 3 | 6,444.00 | 8,365.00 | 98.33 | 6,069.00 | 0.89 | 4,770.00 | 11121 | 10/23/2009 12:36 | 10/23/2009 17:54 | 410,605 |
| 4 | 6,185.00 | 8,229.00 | 98.53 | 5,504.00 | 1.29 | 4,562.00 | 10195 | 10/23/2009 19:22 | 10/23/2009 23:46 | 399,012 |
| 5 | 6,239.00 | 8,034.00 | 99.63 | 5,726.00 | 1.25 | 4,571.00 | 10727 | 10/24/2009 1:18 | 10/24/2009 5:51 | 398,857 |
| 6 | 6,852.00 | 7,919.00 | 98.1 | 5,539.00 | 1.34 | 4,362.00 | 9957 | 10/24/2009 6:43 | 10/24/2009 11:34 | 415,394 |
| 7 | 6,520.00 | 8,841.00 | 98.36 | 5,926.00 | 1.26 | 4,653.00 | 9867 | 10/24/2009 12:56 | 10/24/2009 17:20 | 409,964 |
| 8 | 7,181.00 | 7,983.00 | 100.7 | 4,794.00 | 1.25 | 4,233.00 | 9880 | 10/24/2009 18:33 | 10/25/2009 3:32 | 369,516 |