

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: JULY 22, 2013
API #: 047-035-03010

Farm name: T. I. HARTLEY Operator Well No.: 5

LOCATION: Elevation: 749' Quadrangle: LIVERPOOL 7.5'

District: RAVENSWOOD County: JACKSON
Latitude: 10440 Feet South of 38 Deg. 55 Min. 0 Sec.
Longitude 9760 Feet West of 81 Deg. 30 Min. 0 Sec.

Company: PETRO HOLDINGS, INC.

| Address: | Casing & Tubing | Used in drilling | Left in well | Cement fill up Cu. Ft. |
|---|-----------------|------------------|--------------|------------------------|
| P.O. BOX 987 SPENCER, WV 25276 | 9 5/8" | 680' | 680' | CTS |
| Agent: KEITH CRIHFELD | | | | |
| Inspector: JAMIE STEVENS | 7" | 2068' | 2068' | 222 |
| Date Permit Issued: 08/31/2012 | | | | |
| Date Well Work Commenced: 09/20/2012 | 4 1/2" | 2476' | 2476' | 83 |
| Date Well Work Completed: 12/12/2012 | | | | |
| Verbal Plugging: N/A | | | | |
| Date Permission granted on: | | | | |
| Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/> | | | | |
| Total Vertical Depth (ft): 2502' | | | | |
| Total Measured Depth (ft): 2502' | | | | |
| Fresh Water Depth (ft.): DAMP 520' | | | | |
| Salt Water Depth (ft.): 1730' | | | | |
| Is coal being mined in area (N/Y)? NO | | | | |
| Coal Depths (ft.): N/A | | | | |
| Void(s) encountered (N/Y) Depth(s) N/A | | | | |

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

Producing formation BEREA Pay zone depth (ft) 2364' - 2372'

Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d

Final open flow 0 MCF/d Final open flow 1 Bbl/d

Time of open flow between initial and final tests 168 Hours

Static rock Pressure 85 psig (surface pressure) after 216 Hours

Second producing formation N/A 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.

Keith Crihfeld
Signature

07/22/2013
Date

09/13/2013

35-0301D

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes _____ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list OPEN HOLE GAMMA - RAY, NEUTRON, COMPENSATED DENSITY, TEMPERATURE, INDUCTION, CALIPER; CASED HOLE - GAMMA-RAY AND BOND LOG

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:

PERFORATE 2371' - 2375' (PER CASED HOLE LOG) (24 HOLES) AND STIMULATE WITH 500 GALLONS OF 15% HCl ACID 317 MSCF OF N2, 175 BBLs OF WATER AND 37,200 LBS OF 20/40 SAND

Plug Back Details Including Plug Type and Depth(s): N/A

| <u>Formations Encountered:</u> | <u>Top Depth</u> | <u>Bottom Depth</u> |
|--------------------------------|------------------|---------------------|
| <u>Surface:</u> | | |
| REDROCK | 0 | 20 |
| SHALE | 20 | 30 |
| REDROCK | 30 | 40 |
| SHALE | 40 | 160 |
| REDROCK | 160 | 170 |
| SHALE | 170 | 340 |
| SAND | 340 | 360 |
| SHALE | 360 | 520 |
| SAND | 520 | 540 |
| SHALE | 540 | 630 |
| SAND | 630 | 670 |
| REDROCK/SHALE | 670 | 950 |
| SAND | 950 | 995 |
| SHALE | 995 | 1020 |
| SAND | 1020 | |

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09/13/2013

CONTINUED

35-03010

| Formations Encountered: Surface: | Top Depth | Bottom Depth |
|-------------------------------------|-----------|--------------|
| SHALE | 1040 | 1130 |
| SAND | 1130 | 1140 |
| SHALE | 1140 | 1430 |
| SAND | 1430 | 1537 |
| SHALE | 1537 | 1600 |
| SAND | 1600 | 1646 |
| SHALE | 1646 | 1693 |
| LIME | 1693 | 1802 |
| SHALE | 1802 | 1810 |
| LIME | 1810 | 1920 |
| SHALE | 1920 | 1934 |
| SAND | 1934 | 1980 |
| SHALE | 1980 | 2364 |
| SAND | 2364 | 2372 |
| SHALE | 2372 | 2502 |

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