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: | 12/07/2012   |
|-------|--------------|
| API#: | 47-033-05534 |

| IION: Elevation: 1174' GL  | Onadrangle:   | Mount Clare 7.5                | 5'                 |                        |  |
|--|---|--------------------------------|--------------------|------------------------|--|
|  |   |                                |                    |                        |  |
| District: Grant  Latitude: 2.854 Feet South of 39 De   | County: <del>riar</del><br>eg. 12 Min   | County: Harrison  Min. 30 Sec. |                    |                        |  |
|  | eg. 20 Min  |                                |                    |                        |  |
| Company: Petroleum Development Corporation   |   |                                |                    |                        |  |
| Address: 120 Genesis Boulevard   | Casing &<br>Tubing  | Used in drilling               | Left in well       | Cement fill up Cu. Ft. |  |
| Bridgeport, WV 26330   | 20"   | 27'                            | 27'                | Grout to Surface       |  |
| Agent: Bob Williamson  | 13 3/8"   | 462'                           | 462'               | 466                    |  |
| Inspector: Tristan Jenkins   | 9 5/8"  | 2709'                          | 2709'              | 1109                   |  |
| Date Permit Issued: 05/12/2011   | 5 1/2"  | 13,830'                        | 13,830'            | 3686                   |  |
| Date Well Work Commenced: 07/07/2011   |   |                                |                    |                        |  |
| Date Well Work Completed: 10/08/2012   |   |                                |                    |                        |  |
| Verbal Plugging: N/A   |   |                                |                    |                        |  |
| Date Permission granted on:  |   |                                |                    |                        |  |
| Rotary Cable Rig   |   |                                |                    | an ansates             |  |
| Total Vertical Depth (ft): 7223'   |   |                                | MECE               | WED Ges                |  |
| Total Measured Depth (ft): 13,853'   |   |                                | Office of          | DII & Gas              |  |
| Fresh Water Depth (fl.): 17', 142'   |   |                                | IAN 2              | 9 2013                 |  |
| Salt Water Depth (ft.): 1410'  |   |                                |                    |                        |  |
| Is coal being mined in area (N/Y)? N   |   |                                | WV Depa            | antment of             |  |
| Coal Depths (ft.): None Reported   |   | F                              | vironmen           | tal Protect            |  |
| Void(s) encountered (N/Y) Depth(s) None  |   | t/*                            |                    |                        |  |
| EN FLOW DATA (If more than two producing forms of producing formation Marcellus Shale Pages: Initial open flow N/A MCF/d Oil: Initial open final open flow 4,828 MCF/d Final open formation psig (surface pressure second producing formation psig (surface pressure) MCF/d Oil: Initial open flow MCF/d Oil: Initial open final open flow MCF/d Final open formation producing formation mCF/d Final open form | ay zone depth (ft)_ n flowBl low720BbHours ) after72Hour zone depth (ft) n flowBl lowBb | 7224'<br>ol/d<br>l/d<br>rs     | nta on separate si | neet)                  |  |
| tatic rock Pressurepsig (surface pressure)   |   | rs                             |                    |                        |  |

Signature

01/28/2013

Date

| Were core samples taken? YesNo_XX  | Were o  | cuttings caught                        | during drilling? Yes XX No   |  |
|--|---|--|--|--|
| Were Electrical, Mechanical or Geophysical logs record afrom 7,190'-13,853',OH Mud Log from 6400'- 13,853', Pathfinder Direction         | ded on this well? If                            | yes, please list                       | SLB open hole LWD Ecoscope linage/GR/Dens/Neutron                                    |  |
| NOTE: IN THE AREA BELOW PUT THE FRACTURING OR STIMULATING, PHYSICAL DETAILED GEOLOGICAL RECORD OF THE COAL ENCOUNTERED BY THE WELLBORE F | FOLLOWING: 1<br>CHANGE, ETC. 2<br>E TOPS AND BO | ). DETAILS<br>2). THE WEL<br>OTTOMS OF | OF PERFORATED INTERVALS,<br>L LOG WHICH IS A SYSTEMATIC<br>ALL FORMATIONS, INCLUDING |  |
| Perforated Intervals, Fracturing, or Stimulating:  |   |  |  |  |
| Perforated interval 8,241 ft – 13,760 ft (640 s  | shots). Frac'd 16                               | stages usir                            | ng 380 bbls 15% HCL, and   |  |
| 148,000 bbls of Slickwater carrying 1,323,000  | lbs of 100-mesh                                 | sand, 5,151                            | ,800 lbs of 40/70 sand, and  |  |
| 45,300 lbs of 30/50 sand.  |   |  | · · · · · · · · · · · · · · · · · · ·  |  |
| Plug Back Details Including Plug Type and Depth(s):  | N/A   |  |  |  |
| Formations Encountered: Surface:   | Top Depth                                       | 1                                      | Bottom Depth   |  |
| Little Lime  | 1476  | 1503                                   | (All depths TVD except MD-TD)  |  |
| Big Lime   | 1520  | 1698                                   | Show Oil, Gas & Water @ 1573'.   |  |
| Gantz  | 1982  | 2013                                   | RECEIVED   |  |
| Fifty Foot   | 2050  | 2101                                   | Office of Oll & Gas  |  |
| Gordon Stray   | 2149  | 2171                                   |  |  |
| th SS  | 2280  | 2342                                   | JAN 2 9 2013   |  |
| 5th Sand   | 2356  | 2383                                   | W// Donatmont of   |  |
| Bayard   | 2468  | 2489                                   |  |  |
| Benson   | 4459  | 4505                                   | Zirvirommornari Totocii  |  |
| **All Depths shown above are from the pilot  | t hole log well# 4                              | 17-033-0555                            | 6 located on the same 3 well pad.  |  |
| Sycamore   | 6384  | 6432                                   |  |  |
| Tully LS   | 6970  | 7052                                   |  |  |
| Marcellus Shale  | 7161  | 13,853                                 | MD-TD  |  |
|  | · .   |  |  |  |