WR-35
Rev. 8/23/13



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

API 47 - 091 - 01267 County Taylor District Fetterman
Quad Gladesville 7.5' Pad Name OES Field/Pool Name Unknown
Farm name Orthodox Educational Society Well Number 4HM
Operator (as registered with the OOG) PDC Mountaineer, LLC
Address 120 Genesis Blvd. City Bridgeport State WV Zip 26330

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey

| | | | | |
|---|---|---|---|---|
| Top hole | Northing | 4365717.504809 | Easting | 588802.480616 |
| Landing Point of Curve | Northing | 4365479.576141 | Easting | 588883.354903 |
| Bottom Hole | Northing | 4363837.893347 | Easting | 589453.120747 |

Elevation (ft) 1945 GL Type of Well ■New □ Existing Type of Report □Interim ■Final

Permit Type □ Deviated ■ Horizontal □ Horizontal 6A □ Vertical Depth Type □ Deep ■ Shallow

Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework □ Stimulate

Well Type □ Brine Disposal □ CBM ■ Gas □ Oil □ Secondary Recovery □ Solution Mining □ Storage □ Other _____

Type of Completion □ Single ■ Multiple Fluids Produced □ Brine ■Gas □ NGL □ Oil ■ Other Frac Fluid
Drilled with □ Cable ■ Rotary

Drilling Media Surface hole ■ Air □ Mud ■Fresh Water Intermediate hole ■ Air □ Mud ■ Fresh Water □ Brine
Production hole □ Air ■ Mud □ Fresh Water □ Brine
Mud Type(s) and Additive(s)
Surface: Air with soap & treated water as needed.
Bottom Hole: Synthetic based mud averaging 12+ ppg & 47 Vis.

Date permit issued 06/18/2012 Date drilling commenced 08/06/2013 Date drilling ceased 08/29/2013
Date completion activities began 10/08/2013 Date completion activities ceased 11/16/2013
Verbal plugging (Y/N) N Date permission granted --------- Granted by ----------

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft Est: 245' Open mine(s) (Y/N) depths N
Salt water depth(s) ft Est: 910' Void(s) encountered (Y/N) depths N
Coal depth(s) ft Est: 273', 326', 414', & 468' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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API 47- 091 - 01267 Farm name Orthodox Educational Society Well number 4HM

| CASING STRINGS | Hole Size | Casing Size | Depth | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/ N) * Provide details below* |
|---|---|---|---|---|---|---|---|
| Conductor | 30" | 20" | 105' | New | H-40/94# | None | N/A |
| Surface | 17 1/2" | 13 3/8" | 545' | New | J-55 / 54.5# | 182' | Y |
| Coal | N/A | | | | | | |
| Intermediate 1 | 12 1/4" | 9 5/8" | 2511' | New | J-55 / 40# | 353' | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8 1/2" | 5 1/2" | 14,103' | New | P-110 / 20# | None | Y |
| Tubing | | | | | | | |
| Packer type and depth set | | | | | | | |

Comment Details

| CEMENT DATA | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield ( $ft^3$/sks) | Volume ($ft^3$) | Cement Top (MD) | WOC (hrs) |
|---|---|---|---|---|---|---|---|
| Conductor | N/A | | | | | | |
| Surface | Class A | 532 | 15.6 | 1.18 | 628 | Surface | 12 |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 875 | 15.6 | 1.18 | 1032 | Surface | 24 |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | L: Class A / T. Type 1 | 1684/1764 | 14.5/14.5 | 1.17/1.17 | 4068 | Surface | N/A |
| Tubing | | | | | | | |

Drillers TD (ft) 14,115' Loggers TD (ft) 14,115'
Deepest formation penetrated Marcellus Shale Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) Monitor & nudge surface, KO point at 6800'.

Check all wireline logs run ☐ caliper ☐ density ■ deviated/directional ☐ induction
☐ neutron ☐ resistivity ■ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ■ No ☐ Conventional ☐ Sidewall Were cuttings collected ■ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

13 3/8" Surface String: Ran a total of 5 centralizers every other joint starting at Joint #1 Ran 1 basket at Joint #11 ( 182' from surface).
9 5/8" Intermediate String: Ran a total of 10 centralizers every 300 feet starting at Joint #2. Ran at basket at Joint 51 (depth from surface was 353')
5 1/2" Production String: Spiraglide centralizers on the first 155 joints. Bow Spring centralizers every 4 joints after that into surface casing, total of 25.

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ■ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ■ No DETAILS

WERE TRACERS USED ☐ Yes ■ No TYPE OF TRACER(S) USED

API 47- 091 - 01267 Farm name Orthodox Educational Society Well number 4HM

## PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|---|---|---|---|---|---|
| 1 | 10/08/13 | 13872 | 13922 | 40 | Marcellus |
| 2 | 10/09/13 | 13672 | 13832 | 50 | Marcellus |
| 3 | 10/10/13 | 13469 | 13632 | 50 | Marcellus |
| 4 | 10/11/13 | 13272 | 13432 | 50 | Marcellus |
| 5 | 10/11/13 | 13072 | 13232 | 40 | Marcellus |
| 6 | 10/12/13 | 12872 | 13032 | 40 | Marcellus |
| 7 | 10/12/13 | 12672 | 12832 | 40 | Marcellus |
| 8 | 10/13/13 | 12472 | 12632 | 40 | Marcellus |
| 9 | 10/13/13 | 12272 | 12432 | 40 | Marcellus |
| 10 | 10/14/13 | 12074 | 12232 | 40 | Marcellus |
| 11 | 10/14/13 | 11872 | 12032 | 40 | Marcellus |
| 12 | 10/15/14 | 11672 | 11832 | 40 | Marcellus |
| 13 | 10/16/13 | 11472 | 11632 | 40 | Marcellus |
| 14 | 10/16/13 | 11272 | 11429 | 40 | Marcellus |
| 15 | 10/17/13 | 11072 | 11232 | 40 | Marcellus |
| 16 | 10/18/13 | 10870 | 11032 | 40 | Marcellus |

Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|---|---|---|---|---|---|---|---|---|
| 1 | 10/09/13 | 66 | 8243 | 9000 | 4789 | 289612 | 7091 | NA |
| 2 | 10/10/13 | 59 | 8388 | 9151 | 4786 | 292553 | 8403 | NA |
| 3 | 10/10/13 | 54 | 8446 | 9317 | 4737 | 270610 | 7319 | NA |
| 4 | 10/11/13 | 60 | 8407 | 8983 | 6637 | 247510 | 5740 | NA |
| 5 | 10/11/13 | 65 | 8203 | 8561 | 4919 | 288100 | 5301 | NA |
| 6 | 10/12/13 | 63 | 8314 | 9080 | 6190 | 283648 | 6874 | NA |
| 7 | 10/12/13 | 56 | 8661 | 9113 | 6595 | 197908 | 5381 | NA |
| 8 | 10/13/13 | 56 | 8480 | 9235 | 6769 | 290855 | 6581 | NA |
| 9 | 10/13/13 | 69 | 8358 | 9105 | 6975 | 289752 | 6320 | NA |
| 10 | 10/14/13 | 64 | 8463 | 9121 | 6265 | 290255 | 6575 | NA |
| 11 | 10/15/13 | 68 | 8056 | 8471 | 5869 | 289523 | 5234 | NA |
| 12 | 10/16/13 | 67 | 8222 | 9068 | 4973 | 288984 | 5346 | NA |
| 13 | 10/16/13 | 71 | 7924 | 8385 | 6229 | 291675 | 5305 | NA |
| 14 | 10/17/13 | 72 | 7883 | 8620 | 6375 | 286206 | 5205 | NA |
| 15 | 10/18/13 | 69 | 8427 | 8984 | 6039 | 292779 | 6423 | NA |
| 16 | 10/18/13 | 61 | 8233 | 9075 | 5357 | 236012 | 5494 | NA |

Please insert additional pages as applicable.

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API 47- 091 - 01267 Farm name Orthodox Educational Society Well number 4HM

## PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|---|---|---|---|---|---|
| 17 | 10/18/13 | 10672 | 10832 | 40 | Marcellus |
| 18 | 10/20/13 | 10472 | 10632 | 40 | Marcellus |
| 19 | 10/20/13 | 10272 | 10432 | 40 | Marcellus |
| 20 | 10/21/13 | 10072 | 10230 | 40 | Marcellus |
| 21 | 10/21/13 | 9872 | 10032 | 40 | Marcellus |
| 22 | 10/25/13 | 9678 | 9832 | 40 | Marcellus |
| 23 | 10/26/13 | 9472 | 9634 | 40 | Marcellus |
| 24 | 10/27/13 | 9272 | 9432 | 40 | Marcellus |
| 25 | 10/27/13 | 9072 | 9232 | 40 | Marcellus |
| 26 | 10/28/13 | 8873 | 9027 | 40 | Marcellus |
| 27 | 10/28/13 | 8672 | 8832 | 40 | Marcellus |
| 28 | 10/29/13 | 8472 | 8632 | 40 | Marcellus |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|---|---|---|---|---|---|---|---|---|
| 17 | 10/19/13 | 69 | 7712 | 8471 | 6180 | 285268 | 5849 | NA |
| 18 | 10/20/13 | 66 | 7753 | 8488 | 5900 | 304443 | 5615 | NA |
| 19 | 10/21/13 | 70 | 7704 | 8388 | 5712 | 297568 | 5437 | NA |
| 20 | 10/21/13 | 71 | 7616 | 8338 | 5953 | 300281 | 5237 | NA |
| 21 | 10/25/13 | 68 | 7612 | 9116 | 6046 | 249142 | 5044 | NA |
| 22 | 10/26/13 | 76 | 7348 | 8192 | 6256 | 292356 | 5368 | NA |
| 23 | 10/26/13 | 72 | 7435 | 8228 | 6100 | 289765 | 5286 | NA |
| 24 | 10/27/13 | 71 | 7553 | 8547 | 5477 | 291928 | 5696 | NA |
| 25 | 10/27/13 | 72 | 7376 | 8294 | 5477 | 293494 | 5205 | NA |
| 26 | 10/28/13 | 71 | 7610 | 8352 | 6552 | 293454 | 5239 | NA |
| 27 | 10/28/13 | 78 | 7625 | 8989 | 6216 | 261625 | 4979 | NA |
| 28 | 10/29/13 | 77 | 7303 | 8063 | 6043 | 294768 | 5080 | NA |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Please insert additional pages as applicable

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API 47- 091 - 01267 Farm name Orthodox Educational Society Well number 2HM

| PRODUCING FORMATION(S) | DEPTHS | |
|---|---|---|
| Marcellus Shale | 7776' - 8103' TVD | 7975' - 14,115' MD |
| | | |
| | | |
| | | |

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface N/T psi Bottom Hole N/T psi DURATION OF TEST N/T hrs

OPEN FLOW Gas 5,933 mcfpd Oil N/A bpd NGL N/A bpd Water 818 bpd GAS MEASURED BY ☐ Estimated ■ Orifice ☐ Pilot

| LITHOLOGY/ FORMATION NAME | TOP DEPTH IN FT TVD | BOTTOM DEPTH IN FT TVD | TOP DEPTH IN FT MD | BOTTOM DEPTH IN FT MD | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, $H_2S$, ETC) |
|---|---|---|---|---|---|
| | 0 | | 0 | | |
| Little Lime | 1050 | 1063 | 1050 | 1063 | Due to air/fluid rotary drilling, fresh water, salt water, & coal are |
| Big Lime | 1085 | 1308 | 1085 | 1308 | estimated from surrounding wells and reported on page 1. |
| Pocono | 1320 | 1412 | 1320 | 1412 | |
| Berea | 1440 | 1482 | 1440 | 1482 | |
| Gantz | 1608 | 1621 | 1608 | 1621 | |
| 50 Foot | 1645 | 1690 | 1645 | 1690 | |
| 30 Foot | 1695 | 1705 | 1695 | 1705 | |
| 4th Sand | 2127 | 2172 | 2127 | 2172 | |
| 5th Sand | 2265 | 2300 | 2265 | 2300 | |
| Sycamore | 6798 | 6803 | 6800 | 6805 | |
| Tully | 7485 | 7572 | 7512 | 7623 | |
| Hamilton | 7572 | 7776 | 7623 | 7975 | |
| Marcellus | 7776 | 8103 | 7975 | 14,115 | Continuous shows of gas while drilling |

Please insert additional pages as applicable.

Drilling Contractor Pioneer Energy Services
Address 1083 N Eighty-Eight Rd City Rices Landing State PA Zip 15357

Logging Company Phoenix Technology Services USA Inc
Address Foster Plaza 5, Ste. 300, 651 Holiday Drive City Pittsburgh State PA Zip 15220

Cementing Company Baker Hughes
Address Rt. 2, Box 506, 837 Philippi Pike City Clarksburg State WV Zip 26301

Stimulating Company Baker Hughes
Address Rt. 2, Box 506, 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Bob Williamson Telephone 304-808-6296
Signature Title Sr Geologist Date 03/21/2014

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

# Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|---|---|
| Job Start Date: | 10/9/2013 |
| Job End Date: | 10/29/2013 |
| State: | West Virginia |
| County: | Taylor |
| API Number: | 47-091-01267-00-00 |
| Operator Name: | PDC Energy |
| Well Name and Number: | OES 4HM |
| Longitude: | -79.96811100 |
| Latitude: | 39.43634300 |
| Datum: | NAD83 |
| Federal/Tribal Well: | NO |
| True Vertical Depth: | 8,000 |
| Total Base Water Volume (gal): | 7,065,492 |
| Total Base Non Water Volume: | 0 |

Frac Focus
Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Oil & Gas

91.01267

## Hydraulic Fracturing Fluid Composition:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Abstract Service Number (CAS #) | Maximum Ingredient Concentration in Additive (% by mass)** | Maximum Ingredient Concentration in HF Fluid (% by mass)** | Comments |
|---|---|---|---|---|---|---|---|
| Water | PDC | Base Fluid | | | | | |
| | | | Water | NA | 100.00000 | 87.65377 | None |
| Sand (Proppant) | Baker Hughes | Proppant | | | | | |
| | | | Silica Substrate | NA | 100.00000 | 11.72662 | None |
| Hydrochloric Acid (15%) | Baker Hughes | Acidizing | | | | | |
| | | | Hydrochloric Acid | 7647-01-0 | 15.00000 | 0.05986 | None |
| MaxPerm 20A | Baker Hughes | Friction Reducer | | | | | |
| | | | Aliphatic hydrocarbon | Proprietary | 30.00000 | 0.04131 | None |
| | | | Oxyalkylated alcohol | Proprietary | 5.00000 | 0.00688 | None |
| GW-3LDF | Baker Hughes | Water gellant | | | | | |
| | | | Guar gum | 9000-30-0 | 60.00000 | 0.00711 | None |
| | | | Paraffinic petroleum distillate | 64742-55-8 | 30.00000 | 0.00355 | None |
| | | | Petroleum distillates | 64742-47-8 | 30.00000 | 0.00355 | None |
| | | | 1-Butoxy-2-proponal | 5131-66-8 | 5.00000 | 0.00059 | None |
| | | | Crystalline silica: Quartz (SiO2) | 14808-60-7 | 5.00000 | 0.00059 | None |
| | | | Isotridecanol, ethoxylated | 9043-30-5 | 5.00000 | 0.00059 | None |
| GasFlo G | Baker Hughes | Surfactant | | | | | |
| | | | Methanol | 67-56-1 | 30.00000 | 0.01256 | None |
| SCW5279 | Baker Hughes | Scale Inhibitor | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Ethylene glycol | 107-21-1 | 60.00000 | 0.00861 | None |
| Sodium Hypochlorite 12% | Baker Hughes | Biocide | | | | | |
| | | | Sodium hypochlorite | 7681-52-9 | 30.00000 | 0.00119 | None |
| | | | Sodium chloride | 7647-14-5 | 30.00000 | 0.00119 | None |
| GBW 5 | Baker Hughes | Frac gel breaker | | | | | |
| | | | Ammonium persulphate | 7727-54-0 | 100.00000 | 0.00168 | None |
| Ferrotrol 300L | Baker Hughes | Iron Control | | | | | |
| | | | Citric Acid | 77-92-9 | 60.00000 | 0.00155 | None |
| Sodium Chlorite | Dupont | Biocide | | | | | |
| | | | Sodium chlorite | 7758-19-2 | 31.00000 | 0.00117 | None |
| CI-14 | Baker Hughes | Corrosion Inhibitor | | | | | |
| | | | Methanol | 67-56-1 | 100.00000 | 0.00060 | None |
| | | | Polyoxyalkylenes | Proprietary | 30.00000 | 0.00018 | None |
| | | | Fatty acids | Proprietary | 10.00000 | 0.00006 | None |
| | | | Olefin | Proprietary | 5.00000 | 0.00003 | None |
| | | | Propargyl alcohol | 107-19-7 | 5.00000 | 0.00003 | None |

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

91-01267

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

API 47 - 091 - 01269 County Taylor District Fetterman
Quad Gladesville 7.5' Pad Name OES Field/Pool Name Unknown
Farm name Orthodox Educational Society Well Number 6HM
Operator (as registered with the OOG) PDC Mountaineer, LLC
Address 120 Genesis Blvd. City Bridgeport State WV Zip 26330

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey

| | | | | |
|---|---|---|---|---|
| Top hole | Northing | 4365722.477543 | Easting | 588810.256755 |
| Landing Point of Curve | Northing | 4365610.560742 | Easting | 589174.520721 |
| Bottom Hole | Northing | 4363779.754970 | Easting | 589800.761654 |

Elevation (ft) 1945 GL Type of Well ■New □ Existing Type of Report □Interim ■Final

Permit Type □ Deviated ■ Horizontal □ Horizontal 6A □ Vertical Depth Type □ Deep ■ Shallow

Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework □ Stimulate

Well Type □ Brine Disposal □ CBM ■ Gas □ Oil □ Secondary Recovery □ Solution Mining □ Storage □ Other _____

Type of Completion □ Single ■ Multiple Fluids Produced □ Brine ■Gas □ NGL □ Oil ■ Other Frac Fluid
Drilled with □ Cable ■ Rotary

Drilling Media Surface hole ■ Air □ Mud ■Fresh Water Intermediate hole ■ Air □ Mud ■ Fresh Water □ Brine
Production hole □ Air ■ Mud □ Fresh Water □ Brine
Mud Type(s) and Additive(s)
Surface: Air with soap & treated water as needed.
Bottom Hole: Synthetic based mud averaging 12+ ppg & 47 Vis.

Date permit issued 06/18/2012 Date drilling commenced 08/06/2013 Date drilling ceased 08/29/2013
Date completion activities began 10/06/2013 Date completion activities ceased 11/16/2013
Verbal plugging (Y/N) N Date permission granted -------- Granted by ----------

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft Est: 245' Open mine(s) (Y/N) depths N
Salt water depth(s) ft Est: 910' Void(s) encountered (Y/N) depths N
Coal depth(s) ft Est: 273', 326', 414', & 468' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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WV Department of
Environmental Protection

Reviewed by: _____

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API 47- 091 - 01269 Farm name Orthodox Educational Society Well number 6HM

| CASING STRINGS | Hole Size | Casing Size | Depth | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/ N) * Provide details below* |
|---|---|---|---|---|---|---|---|
| Conductor | 30" | 20" | 105' | New | H-40 / 94# | None | N/A |
| Surface | 17 1/2" | 13 3/8" | 545' | New | J-55 / 54.5# | 129', 46' | Y |
| Coal | N/A | | | | | | |
| Intermediate 1 | 12 1/4" | 9 5/8" | 2510' | New | J-55 / 40# | 372' | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8 1/2" | 5 1/2" | 14,863' | New | P-110 / 20# | None | Y |
| Tubing | | | | | | | |
| Packer type and depth set | | | | | | | |

Comment Details

| CEMENT DATA | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield ( $ft^3$/sks) | Volume ($ft^3$) | Cement Top (MD) | WOC (hrs) |
|---|---|---|---|---|---|---|---|
| Conductor | N/A | | | | | | |
| Surface | Class A | 502 | 15.6 | 1.18 | 592 | Surface | 14.5 |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 891 | 15.6 | 1.18 | 1051 | Surface | 45 |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | L: Class A / T: Type 1 | 1845 / 1647 | 14.5 / 14.5 | 1.18 / 1.18 | 4120 | Surface | N/A |
| Tubing | | | | | | | |

Drillers TD (ft) 14,875' Loggers TD (ft) 14,875'
Deepest formation penetrated Marcellus Shale Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) Monitor & nudge surface, KO point at 6000'

Check all wireline logs run ☐ caliper ☐ density ■ deviated/directional ☐ induction
☐ neutron ☐ resistivity ■ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ■ No ☐ Conventional ☐ Sidewall Were cuttings collected ■ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

13 3/8" Surface String: Ran a total of 5 centralizers every other joint starting at Joint #1. Ran 1 basket at Joint #12 (129' from surface) & 1 basket at Joint #14 (46' from surface).
9 5/8" Intermediate String: Ran a total of 6 centralizers every 500 feet starting at Joint #2. Ran at basket at Joint 51 (depth from surface was 372')
5 1/2" Production String: Spiraglide centralizers on the first 210 joints. Bow Spring centralizers every 4 joints after that into surface casing, total of 20

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ■ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ■ No DETAILS

WERE TRACERS USED ☐ Yes ■ No TYPE OF TRACER(S) USED

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API 47- 091 - 01269 Farm name Orthodox Educational Society Well number 6HM

## PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|---|---|---|---|---|---|
| 1 | 10/06/13 | 14550 | 14655 | 40 | Marcellus |
| 2 | 10/07/13 | 14493 | 14253 | 50 | Marcellus |
| 3 | 10/08/13 | 13953 | 14193 | 50 | Marcellus |
| 4 | 10/08/13 | 13653 | 13893 | 50 | Marcellus |
| 5 | 10/09/13 | 13353 | 13591 | 50 | Marcellus |
| 6 | 10/09/13 | 13053 | 13293 | 50 | Marcellus |
| 7 | 10/10/13 | 12753 | 12993 | 50 | Marcellus |
| 8 | 10/11/13 | 12453 | 12691 | 50 | Marcellus |
| 9 | 10/12/13 | 12153 | 12393 | 50 | Marcellus |
| 10 | 10/12/13 | 11853 | 12093 | 50 | Marcellus |
| 11 | 10/13/13 | 11553 | 11793 | 50 | Marcellus |
| 12 | 10/14/13 | 11253 | 11493 | 50 | Marcellus |
| 13 | 10/15/13 | 10953 | 11193 | 50 | Marcellus |
| 14 | 10/16/13 | 10653 | 10893 | 50 | Marcellus |
| 15 | 10/17/13 | 10353 | 10593 | 50 | Marcellus |
| 16 | 10/19/13 | 10053 | 10293 | 50 | Marcellus |

Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|---|---|---|---|---|---|---|---|---|
| 1 | 10/07/13 | 62 | 8018 | 8758 | 4980 | 422166 | 9735 | NA |
| 2 | 10/08/13 | 59 | 8356 | 9803 | 7099 | 314456 | 9094 | NA |
| 3 | 10/08/13 | 69 | 8959 | 8810 | 6246 | 425283 | 8959 | NA |
| 4 | 10/09/13 | 71 | 8330 | 8703 | 4899 | 417294 | 8823 | NA |
| 5 | 10/09/13 | 75 | 8385 | 8826 | 5490 | 422778 | 9915 | NA |
| 6 | 10/10/13 | 69 | 8521 | 9220 | 6150 | 422963 | 8499 | NA |
| 7 | 10/11/13 | 64 | 8378 | 9319 | 5987 | 417389 | 9185 | NA |
| 8 | 10/12/13 | 59 | 8402 | 9340 | 6224 | 170528 | 5526 | NA |
| 9 | 10/12/13 | 60 | 7453 | 8920 | 4901 | 421091 | 8117 | NA |
| 10 | 10/13/13 | 66 | 8159 | 9430 | 5742 | 421019 | 7769 | NA |
| 11 | 10/14/13 | 65 | 8451 | 9309 | 5696 | 371508 | 8045 | NA |
| 12 | 10/15/13 | 65 | 8205 | 8825 | 5540 | 421669 | 7523 | NA |
| 13 | 10/16/13 | 56 | 8432 | 9168 | 6846 | 253250 | 7039 | NA |
| 14 | 10/17/13 | 79 | 8009 | 8839 | 6735 | 419947 | 7556 | NA |
| 15 | 10/18/13 | 65 | 7883 | 8781 | 5711 | 428209 | 7379 | NA |
| 16 | 10/20/13 | 73 | 7616 | 8536 | 5086 | 420883 | 7379 | NA |

Please insert additional pages as applicable.

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API 47- 091 - 01269 Farm name Orthodox Educational Society Well number 6HM

## PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|---|---|---|---|---|---|
| 17 | 10/20/13 | 9753 | 9993 | 50 | Marcellus |
| 18 | 10/21/13 | 9456 | 9697 | 50 | Marcellus |
| 19 | 10/24/13 | 9153 | 9393 | 50 | Marcellus |
| 20 | 10/26/13 | 8853 | 9093 | 50 | Marcellus |
| 21 | 10/27/13 | 8555 | 8793 | 50 | Marcellus |
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Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|---|---|---|---|---|---|---|---|---|
| 17 | 10/21/13 | 75 | 7208 | 8632 | 5817 | 427648 | 7397 | NA |
| 18 | 10/21/13 | 74 | 7550 | 8320 | 5348 | 434755 | 7648 | NA |
| 19 | 10/26/13 | 76 | 7391 | 8416 | 6194 | 423183 | 7424 | NA |
| 20 | 10/27/13 | 78 | 7300 | 7804 | 6451 | 420726 | 7426 | NA |
| 21 | 10/28/13 | 79 | 7316 | 8532 | 6644 | 421094 | 7371 | NA |
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Please insert additional pages as applicable.

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API 47- 091 - 01269 Farm name Orthodox Educational Society Well number 2HM

| PRODUCING FORMATION(S) | DEPTHS | |
|---|---|---|
| Marcellus Shale | 7778' - 8165' TVD | 8135' - 14,875' MD |
| | | |
| | | |
| | | |

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface N/T psi Bottom Hole N/T psi DURATION OF TEST N/T hrs

OPEN FLOW Gas 4,166 mcfpd Oil N/A bpd NGL N/A bpd Water 1080 bpd GAS MEASURED BY ☐ Estimated ■ Orifice ☐ Pilot

| LITHOLOGY/ FORMATION NAME | TOP DEPTH IN FT TVD | BOTTOM DEPTH IN FT TVD | TOP DEPTH IN FT MD | BOTTOM DEPTH IN FT MD | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, $H_2S$, ETC) |
|---|---|---|---|---|---|
| | 0 | | 0 | | |
| Little Lime | 1050 | 1063 | 1050 | 1063 | Due to air/fluid rotary drilling, fresh water, salt water, & coal are |
| Big Lime | 1085 | 1308 | 1085 | 1309 | estimated from surrounding wells and reported on page 1. |
| Pocono | 1320 | 1412 | 1321 | 1413 | |
| Berea | 1440 | 1482 | 1441 | 1483 | |
| Gantz | 1608 | 1621 | 1609 | 1622 | |
| 50 Foot | 1645 | 1690 | 1646 | 1692 | |
| 30 Foot | 1695 | 1705 | 1697 | 1707 | |
| 4th Sand | 2127 | 2172 | 2129 | 2174 | |
| 5th Sand | 2265 | 2300 | 2268 | 2303 | |
| Sycamore | 6804 | 6814 | 6848 | 6858 | |
| Tully | 7477 | 7569 | 7646 | 7765 | |
| Hamilton | 7569 | 7778 | 7765 | 8135 | |
| Marcellus | 7778 | 8165 | 8135 | 14,875 | Continuous shows of gas while drilling |

Please insert additional pages as applicable.

Drilling Contractor Pioneer Energy Services
Address 1083 N Eighty-Eight Rd City Rices Landing State PA Zip 15357

Logging Company Phoenix Technology Services USA Inc
Address Foster Plaza 5, Ste. 300, 651 Holiday Drive City Pittsburgh State PA Zip 15220

Cementing Company Baker Hughes
Address Rt. 2, Box 506, 837 Philippi Pike City Clarksburg State WV Zip 26301

Stimulating Company Baker Hughes
Address Rt. 2, Box 506, 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Bob Williamson Telephone 304-808-6296
Signature Title Sr Geologist Date 03/21/2014

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

# Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|---|---|
| Job Start Date: | 10/7/2013 |
| Job End Date: | 10/28/2013 |
| State: | West Virginia |
| County: | Taylor |
| API Number: | 47-091-01269-00-00 |
| Operator Name: | PDC Energy |
| Well Name and Number: | OES 6HM |
| Longitude: | -79.96802100 |
| Latitude: | 39.43647300 |
| Datum: | NAD83 |
| Federal/Tribal Well: | NO |
| True Vertical Depth: | 8,000 |
| Total Base Water Volume (gal): | 7,224,336 |
| Total Base Non Water Volume: | 0 |

## Hydraulic Fracturing Fluid Composition:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Abstract Service Number (CAS #) | Maximum Ingredient Concentration in Additive (% by mass)** | Maximum Ingredient Concentration in HF Fluid (% by mass)** | Comments |
|---|---|---|---|---|---|---|---|
| Water | PDC | Base Fluid | | | | | |
| | | | Water | NA | 100.00000 | 87.47963 | None |
| Sand (Proppant) | Baker Hughes | Proppant | | | | | |
| | | | Silica Substrate | NA | 100.00000 | 12.04059 | None |
| Hydrochloric Acid (15%) | Baker Hughes | Acidizing | | | | | |
| | | | Hydrochloric Acid | 7647-01-0 | 15.00000 | 0.04393 | None |
| MaxPerm 20A | Baker Hughes | Friction Reducer | | | | | |
| | | | Aliphatic hydrocarbon | Proprietary | 30.00000 | 0.03216 | None |
| | | | Oxyalkylated alcohol | Proprietary | 5.00000 | 0.00536 | None |
| GW-3LDF | Baker Hughes | Water gellant | | | | | |
| | | | Guar gum | 9000-30-0 | 60.00000 | 0.00622 | None |
| | | | Paraffinic petroleum distillate | 64742-55-8 | 30.00000 | 0.00311 | None |
| | | | Petroleum distillates | 64742-47-8 | 30.00000 | 0.00311 | None |
| | | | Isotridecanol, ethoxylated | 9043-30-5 | 5.00000 | 0.00052 | None |
| | | | Crystalline silica: Quartz (SiO2) | 14808-60-7 | 5.00000 | 0.00052 | None |
| | | | 1-Butoxy-2-proponal | 5131-66-8 | 5.00000 | 0.00052 | None |
| GasFlo G | Baker Hughes | Surfactant | | | | | |
| | | | Methanol | 67-56-1 | 30.00000 | 0.01249 | None |
| SCW5279 | Baker Hughes | Scale Inhibitor | | | | | |

91-01269

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Ethylene glycol | 107-21-1 | 60.00000 | 0.00889 | None |
| Sodium Hypochlorite 12% | Baker Hughes | Biocide | | | | | |
| | | | Sodium hypochlorite | 7681-52-9 | 30.00000 | 0.00117 | None |
| | | | Sodium chloride | 7647-14-5 | 30.00000 | 0.00117 | None |
| Sodium Chlorite | Dupont | Biocide | | | | | |
| | | | Sodium chlorite | 7758-19-2 | 31.00000 | 0.00119 | None |
| GBW 5 | Baker Hughes | Frac gel breaker | | | | | |
| | | | Ammonium persulphate | 7727-54-0 | 100.00000 | 0.00116 | None |
| Ferrotrol 300L | Baker Hughes | Iron Control | | | | | |
| | | | Citric Acid | 77-92-9 | 60.00000 | 0.00114 | None |
| CI-14 | Baker Hughes | Corrosion Inhibitor | | | | | |
| | | | Methanol | 67-56-1 | 100.00000 | 0.00044 | None |
| | | | Polyoxyalkylenes | Proprietary | 30.00000 | 0.00013 | None |
| | | | Fatty acids | Proprietary | 10.00000 | 0.00004 | None |
| | | | Propargyl alcohol | 107-19-7 | 5.00000 | 0.00002 | None |
| | | | Olefin | Proprietary | 5.00000 | 0.00002 | None |
| Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS. | | | | | | | |

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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

API 47- 109 - 01093 W County Wyoming District Slab Fork
Quad McGraws 7 1/2 Pad Name _____ Field/Pool Name _____
Farm name Heartwood Forestland Fund IV, LP Well Number Y&O #107
Operator (as registered with the OOG) EnerVest Operating LLC
Address 300 Capitol Street, Suite 200 City Charleston State WV Zip 25301

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1877 GL Type of Well □New ■ Existing Type of Report □Interim ■Final

Permit Type □ Deviated □ Horizontal □ Horizontal 6A ■ Vertical Depth Type □ Deep ■ Shallow

Type of Operation □ Convert □ Deepen □ Drill ■ Plug Back □ Redrilling □ Rework □ Stimulate

Well Type □ Brine Disposal □ CBM ■ Gas □ Oil □ Secondary Recovery □ Solution Mining □ Storage □ Other _____

Type of Completion □ Single ■ Multiple Fluids Produced □ Brine ■Gas □ NGL □ Oil □ Other _____
Drilled with □ Cable ■ Rotary

Drilling Media Surface hole ■ Air □ Mud □Fresh Water Intermediate hole ■ Air □ Mud □ Fresh Water □ Brine
Production hole ■ Air □ Mud □ Fresh Water □ Brine
Mud Type(s) and Additive(s)

_____

_____

Date permit issued 10/16/2013 Date drilling commenced 7/2/1989 Date drilling ceased 10/25/1989
Date completion activities began 11/12/2013 Date completion activities ceased 1/10/2014
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft +- 1130' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft +- 1380' Void(s) encountered (Y/N) depths _____
Coal depth(s) ft No Record Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) _____

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API 47- 109 - 01093 W Farm name Heartwood Forestland Fund IV, LP Well number Y&O #107

| CASING STRINGS | Hole Size | Casing Size | Depth | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/ N) * Provide details below* |
|---|---|---|---|---|---|---|---|
| Conductor | | 20" | 20' | | | | |
| Surface | | | | | | | |
| Coal | | | | | | | |
| Intermediate 1 | | 9 5/8" | 1094' | | 36# | | |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | | 4 1/2" | 6548' | | 11.6# | | |
| Tubing | | 2 3/8" | 3601 | | | | |
| Packer type and depth set | | Parmaco Tension Packer @1471' on tbg | | | | | |

Comment Details

| CEMENT DATA | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield ( $ft^3$/sks) | Volume ($ft^3$) | Cement Top (MD) | WOC (hrs) |
|---|---|---|---|---|---|---|---|
| Conductor | | | | | | | |
| Surface | | | | | | | |
| Coal | A | | | | 509 | | |
| Intermediate 1 | | | | | | | |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | A | | | | 1501 | | |
| Tubing | | | | | | | |

Drillers TD (ft) 6563' Loggers TD (ft)
Deepest formation penetrated Plug back to (ft)
Plug back procedure

Kick off depth (ft)

Check all wireline logs run ☐ caliper ☐ density ☐ deviated/directional ☐ induction
☐ neutron ☐ resistivity ☐ gamma ray ☐ temperature ☐sonic

Well cored ☐ Yes ■ No Conventional Sidewall Were cuttings collected ☐ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ■ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ■ No DETAILS

WERE TRACERS USED ☐ Yes ■ No TYPE OF TRACER(S) USED

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API 47- 109 - 01093 W  Farm name Heartwood Forestland Fund IV, LP  Well number Y&O #107

## PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|---|---|---|---|---|---|
| 1 | 12-10-13 | 3674 | 3684 | 40 | Gordon |
| 2 | 12-10-13 | 3605 | 3615 | 40 | Gordon |
| 3 | 12-10-13 | 1363 | 1373 | 21 | Ravencliff |
| 3 | 12-10-13 | 1400 | 1400 | 21 | Ravencliff |
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Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|---|---|---|---|---|---|---|---|---|
| 1 | 12/10/13 | 23 | 1762 | 1976 | 596 | 40,352 | 286 | 423,909 SCF |
| 2 | 12/10/13 | 19.5 | 1455 | 1221 | 358 | 40,159 | 279 | 271,685 SCF |
| 3 | 12/10/13 | 21 | 1674 | 1831 | 1569 | 40,204 | 299 | 252,579 SCF |
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API 47- 109 - 01093 W  Farm name Heartwood Forestland Fund IV, LP Well number Y&O #107

| PRODUCING FORMATION(S) | DEPTHS | |
|---|---|---|
| Gordon | 3674-3684 TVD | 3674-3684 MD |
| Gordon | 3605-3615 | 3605-3615 |
| Ravencliff | 1363-1440 | 1363-1440 |
| | | |

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow  OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface 50 psi  Bottom Hole ____ psi  DURATION OF TEST 24 hrs

| OPEN FLOW | Gas | Oil | NGL | Water | GAS MEASURED BY |
|---|---|---|---|---|---|
| | 550 mcfpd | 0 bpd | 0 bpd | 0 bpd | ■ Estimated ☐ Orifice ☐ Pilot |

| LITHOLOGY/ FORMATION NAME | TOP DEPTH IN FT TVD | BOTTOM DEPTH IN FT TVD | TOP DEPTH IN FT MD | BOTTOM DEPTH IN FT MD | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, $H_2S$, ETC) |
|---|---|---|---|---|---|
| | 0 | | 0 | | |
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Please insert additional pages as applicable.

Drilling Contractor ____
Address ____ City ____ State ____ Zip ____

Logging Company ____
Address ____ City ____ State ____ Zip ____

Cementing Company ____
Address ____ City ____ State ____ Zip ____

Stimulating Company ____
Address ____ City ____ State ____ Zip ____

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas

Completed by Kevin L. Miller  Telephone ____
Signature Kevin L. Miller  Title Manager - Operations  Date 5/14/2014

Submittal of Hydraulic Fracturing Chemical Disclosure Information  Attach copy of FRACFOCUS Registry

WV Department of
Environmental Protection

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Rev. 5/08

API # 47-109-01093

**STATE OF WEST VIRGINIA**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**
**OFFICE OF OIL AND GAS**

## AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Department, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: HEARTWOOD FORESTLAND FUND IV, L.P. Operator Well No.: Y & O 107

LOCATION: Elevation: 1877' Quadrangle: McGRAWS 7½'
District: SLAB FORK County: WYOMING
Latitude: 12475 Feet South of 37 Deg. 42 Min. 30 Sec.
Longitude: 8425 Feet West of 81 Deg. 27 Min. 30 Sec.

Well Type: OIL _____ GAS ✓

Company: ENERVEST OPERATING CO.
300 CAPITOL ST. STE 200
CHARLESTON, WV 25301

Coal Operator or Owner: WV MLD. VOL., INC.
ROCKHOUSE LAND, LLC

Agent: BARRY LAY

Coal Operator or Owner: _____

Permit Issued Date: 10/16/13

### AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Kanawha ss:

Barry Lay and CHRIS VEAZEY being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by the above named well operator, and participated in the work of plugging and filling the above well say that said work was commenced on the 25TH day of NOVEMBER, 2013 and the well was plugged and filled in the following manner:

| TYPE | FROM | TO | PIPE REMOVED | LEFT |
|---|---|---|---|---|
| CEMENT | 4352' | 5100' | NONE | 4½" @ 6548' |
| RETAINER | 4352' | 4354' | NONE | " " |
| CEMENT | 4056' | 4352' | NONE | " " |
| CIBP | 3740' | 3742' | NONE | " " |
| | | | | |
| | | | | |
| | | | | |

Description of monument: N/A PARTIAL PLUG and that the work of plugging and filling said well was completed on the 25TH day of NOVEMBER, 2013.

And further deponents saith not.

Barry Lay
Chris Veazey

Sworn and subscribe before me this 14TH day of April, 2014

My commission expires: June 5, 2016

Alison E. Winter
Notary Public

OFFICIAL SEAL
Alison E. Winter
Notary Public
State of West Virginia
My Commission Expires
June 05, 2016
1845 Roundhill Rd
Charleston, WV 25314

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Department of Environmental Protection

Affidavit reviewed by the Office of Oil and Gas: _____ Title: _____