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

API 47 - 051 - 00608 W
County Marshall
Quad Littleton
Farm name Mason Dixon Farms, LLC
Operator (as registered with the OOG) Columbia Gas Transmission, LLC
Address 1700 MacCorkle Ave SE
City Charleston
State WV
Zip 25325-1273

Elevation (ft) 1089 GL
Type of Well □ New □ Existing
Type of Report □ Interim □ Final
Permit Type □ Deviated □ Horizontal □ Horizontal 6A □ Vertical
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
Drilled with □ Cable □ Rotary
Mud Type(s) and Additive(s)

Date permit issued 6/07/13 Date drilling commenced 8/9/13 Date drilling ceased
Date completion activities began 8/9/13 Date completion activities ceased 9/30/13
Verbal plugging (Y/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 Open mine(s) (Y/N) depths
Salt water depth(s) ft Void(s) encountered (Y/N) depths
Coal depth(s) ft Cavern(s) encountered (Y/N) depths

Is coal being mined in area (Y/N)

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Reviewed by:
API 47-351 - 00608

**Farm name:** Mason Dixon Farms, LLC  
**Well number:** 2993

### CASING STRINGS

<table>
<thead>
<tr>
<th>Hole Size</th>
<th>Casing Size</th>
<th>Depth</th>
<th>New or Used</th>
<th>Grade</th>
<th>Basket Depth(s)</th>
<th>Did cement circulate (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor</td>
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<td>Surface</td>
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<td>Coal</td>
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<td>Intermediate 1</td>
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<td>Intermediate 3</td>
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<td>Production</td>
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<td>Tubing</td>
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<tr>
<td>Packer type and depth set</td>
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</tbody>
</table>

**Comment Details:** No adding casing was allowed and no additional casing installed during permitted well work.

### CEMENT DATA

<table>
<thead>
<tr>
<th>Class/Type of Cement</th>
<th>Number of Sacks</th>
<th>Slurry wt (ppg)</th>
<th>Yield (R^3/s/ft)</th>
<th>Volume (R^3)</th>
<th>Cement Top (MD)</th>
<th>WOC (hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor</td>
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</tbody>
</table>

**Drillers TD (ft):**  
**Loggers TD (ft):**  
**Deepest formation penetrated:**  
**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:**

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**WV Department of Environmental Protection**  
**UOI 01 2013**

**11/01/2013**
PERFORATION RECORD

<table>
<thead>
<tr>
<th>Stage No.</th>
<th>Perforation date</th>
<th>Perforated from MD ft.</th>
<th>Perforated to MD ft.</th>
<th>Number of Perforations</th>
<th>Formation(s)</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

<table>
<thead>
<tr>
<th>Stage No.</th>
<th>Stimulation Date</th>
<th>Ave Pump Rate (BPM)</th>
<th>Ave Treatment Pressure (PSI)</th>
<th>Max Breakdown Pressure (PSI)</th>
<th>ISIP (PSI)</th>
<th>Amount of Propant (lbs)</th>
<th>Amount of Water (bbls)</th>
<th>Amount of Nitrogen/other (units)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>9/25/13</td>
<td>0.1</td>
<td>1400</td>
<td>N/A</td>
<td>N/A</td>
<td>0</td>
<td>0</td>
<td>600 gal acid</td>
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</table>

Please insert additional pages as applicable.
<table>
<thead>
<tr>
<th>FORMATION</th>
<th>TOP DEPTH</th>
<th>BOTTOM DEPTH</th>
<th>TOP DEPTH</th>
<th>BOTTOM DEPTH</th>
<th>ROCK TYPE</th>
<th>FLUID TYPE</th>
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</thead>
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Office of Oil & Gas

11/1/13

WV Department of Environmental Protection

Drilling Contractor

Address

City

State

Zip

Logging Company

Address

City

State

Zip

Cementing Company

Address

City

State

Zip

Stimulating Company

Universal Well Services

Address

Route 6, Hall Rd

City

Buckhannon

State

WV

Zip

26201

telepho 304-483-0073

Completed by Jim Amos

Signature

Title Senior Engineer

Date 11/01/13

Submital of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry