

Amended Final

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 47-051-01714 County Marshall District Clay  
Quad Glen Easton Pad Name Francis Field/Pool Name \_\_\_\_\_  
Farm name Francis Well Number 7H  
Operator (as registered with the OOG) Chevron Appalachia, LLC  
Address 800 Mountain View Drive City Smithfield State PA Zip 15478

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4413734.3 Easting 526320.0  
Landing Point of Curve Northing 4413684.2 Easting 526981.5  
Bottom Hole Northing 4412804.6 Easting 527685.4

Elevation (ft) 1383 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)  
None Aqueous Fluid containing weighting agent, fluid loss additive, emulsifier, Viscosity and Rheological Control agent, Oil-Wetting Agent, fluid rheology conditioner

Date permit issued 3/20/2014 Date drilling commenced 4/14/2014 Date drilling ceased 11/5/2014  
Date completion activities began 3/3/2015 Date completion activities ceased 7/21/2015  
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 619 - 648 Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1890' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 105-145', 490-520', 700-840', 1080-1190', 1475-1585', 1640-1860' Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No but not sealed

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API 47-051 - 01714 Farm name Francis Well number 7H

| CASING STRINGS            | Hole Size | Casing Size | Depth | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/N)<br>* Provide details below* |
|---------------------------|-----------|-------------|-------|-------------|-------------|-----------------|--|
| Conductor                 | 36        | 30          | 45    | New         | X-56; 118.6 |                 |  |
| Surface                   | 17-1/2    | 13-3/8      | 652   | New         | J-55; 54.50 |                 |  |
| Coal                      |           |             |       |             |             |                 |  |
| Intermediate 1            | 12-1/4    | 9-5/8       | 2653  | New         | L-80; 40    |                 |  |
| Intermediate 2            |           |             |       |             |             |                 |  |
| Intermediate 3            |           |             |       |             |             |                 |  |
| Production                | 8-1/2     | 5-1/2       | 12030 | New         | P-110; 20   |                 |  |
| Tubing                    |           |             |       |             |             |                 |  |
| Packer type and depth set |           |             |       |             |             |                 |  |

Comment Details \_\_\_\_\_

| CEMENT DATA    | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield (ft <sup>3</sup> /sks) | Volume (ft <sup>3</sup> ) | Cement Top (MD) | WOC (hrs) |
|----------------|----------------------|-----------------|-----------------|------------------------------|---------------------------|-----------------|-----------|
| Conductor      | Bulk Cement          | Bulk Cement     | Bulk Cement     | Bulk Cement                  | Bulk Cement               | Surface         | 8.0       |
| Surface        | Class                | 681             | 15.6            | 1.21                         | 837                       | Surface         | 8.0       |
| Coal           |                      |                 |                 |                              |                           |                 |           |
| Intermediate 1 | Class                | 947             | 15.6            | 1.18                         | 1117                      | Surface         | 8.0       |
| Intermediate 2 |                      |                 |                 |                              |                           |                 |           |
| Intermediate 3 |                      |                 |                 |                              |                           |                 |           |
| Production     | Class A              | 2358            | 15.2            | 1.25                         | 2942                      | Surface         | Well TD'd |
| Tubing         |                      |                 |                 |                              |                           |                 |           |

Drillers TD (ft) 12083      Loggers TD (ft) 12083  
 Deepest formation penetrated Marcellus Shale      Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 5308

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 \_\_\_\_\_  
One bow spring centralizer every two jts on the Surface string and intermediate. Two centralizer every jt in the lateral and curve, then one every two jts from KOP to surface

WAS WELL COMPLETED AS SHOT HOLE     Yes     No    DETAILS    See attached perforation / stimulation report

WAS WELL COMPLETED OPEN HOLE?     Yes     No    DETAILS    \_\_\_\_\_

WERE TRACERS USED     Yes     No    TYPE OF TRACER(S) USED    \_\_\_\_\_

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PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|----------------------|------------------------|--------------|
|           |                  | SEE                    |                      |                        |              |
|           |                  | ATTACHED               |                      |                        |              |
|           |                  |                        |                      |                        |              |
|           |                  |                        |                      |                        |              |
|           |                  |                        |                      |                        |              |
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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) |
|-----------|-------------------|---------------------|------------------------------|------------------------------|------------|--------------------------|------------------------|----------------------------------|
|           |                   |                     | SEE                          |                              |            |                          |                        |                                  |
|           |                   |                     | ATTACHED                     |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |
|           |                   |                     |                              |                              |            |                          |                        |                                  |

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| PRODUCING FORMATION(S) | DEPTHS |
|------------------------|--------|
|                        | TVD MD |
| _____                  | _____  |
| _____                  | _____  |
| _____                  | _____  |

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1100 psi Bottom Hole n/a psi DURATION OF TEST 12 hrs

OPEN FLOW Gas 1 mcfpd Oil 50 bpd NGL n/a bpd Water 100 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

| LITHOLOGY/<br>FORMATION | TOP<br>DEPTH IN FT<br>NAME TVD | BOTTOM<br>DEPTH IN FT<br>TVD | TOP<br>DEPTH IN FT<br>MD | BOTTOM<br>DEPTH IN FT<br>MD | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND<br>TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)                |
|-------------------------|--------------------------------|------------------------------|--------------------------|-----------------------------|---|
|                         | 0                              |                              | 0                        |                             |   |
| Monongahela Group Sand  | 596                            | 635                          | 596                      | 635                         | Fresh Water 619'-648'MD 2" stream   |
| Pittsburgh Coal         | 816                            | 820                          | 816                      | 820                         | Coal  |
| Big Lime                | 1860                           | 1940                         | 1860                     | 1940                        | Limestone: crm-wh, hd, crpxln (Brine @ 1890' 25bbbls/hr)  |
| Burgoon (Big Injun)     | 1940                           | 2130                         | 1938                     | 2128                        | SS: offwh, wh, cons, clr, trans, lcemt, fg-mg   |
| Weir Sand               | 2290                           | 2310                         | 2288                     | 2308                        | SLTST: ltgy-mgy, occ mgy, hrd, vf-fg, tcmt, bio, arg, sl calc   |
| Berea Sand              | 2525                           | 2550                         | 2522                     | 2547                        | SS: wh, clr, trans, ltgy-gy, cns, lcmt, mg-fg, sbang-ang, arg, msph, non calc, tr flor, ext fast cut, frt odr, lse pyr          |
| Burket Shale            | 6391                           | 6410                         | 7124                     | 7177                        | SH: drkgy, v, drkgy, frm, slty, grty, sbbiky-sbfiss, modcalc, embd calc, lse calct  |
| Tully Limestone         | 6410                           | 6446                         | 7177                     | 7284                        | LS: ltgy, gy, mgy, frm-hrd, dns, cln, mic-fxln, v, arg  |
| Hamilton Shale          | 6446                           | 6530                         | 7284                     | 7641                        | SH: drkgy, v, drkgy, frm, slty, grty, sbbiky-sbfiss, carb, modv, calc, lse calct, w/LS  |
| Marcellus Shale         | 6530                           |                              | 7641                     |                             | SH: drkgy, v, drkgy, frm, slty, grty, sbbiky-sbfiss, non calc, lse calct, lse pyr, w/LS: gy, ltgy, hrd, mott, mic, fxln, v, arg |
|                         |                                |                              |                          |                             |   |
|                         |                                |                              |                          |                             |   |
|                         |                                |                              |                          |                             |   |

Please insert additional pages as applicable.

Drilling Contractor SEE ATTACHED  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

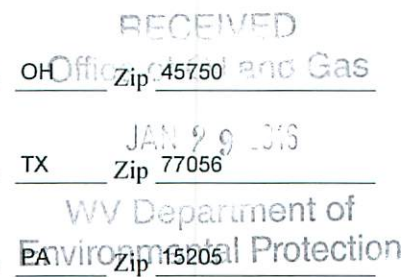
Logging Company Stratagraph NE Inc  
Address 116 Ellsworth Avenue City Marietta State OH Zip 45750

Cementing Company Baker Hughes  
Address 5373 West Alabama, Suite 300 City Houston State TX Zip 77056

Stimulating Company Schlumberger Technology Corp  
Address Two Robinson Plaza, Suite 200 City Pittsburgh State PA Zip 15205

Please insert additional pages as applicable.

Completed by Jackie M. Scholar Telephone 724.564.3721  
Signature [Signature] Title Regulatory Compliance Team Lead Date 1/25/2016





**Jackie M. Scholar**  
Regulatory Reporting Coordinator

January 25, 2016

**CERTIFIED MAIL: 7015 0640 0001 0567 3294**

WV DEP  
Office of Oil and Gas  
601 – 57<sup>th</sup> Street  
Charleston, WV 25304

RE: Amended Well Operator's Report of Well Work WR-35  
**Francis 7H**

Dear Sir/Madam,

Enclosed here within please find one (1) Amended Well Operator's Report of Well Work WR-35 for the **Francis 7H, (API 47-5101714)**. The following items have been amended:

- **Gas Test**
- **Oil Test**
- **Shut-In Pressure**
- **Duration of Test**
- **Open-Flow**
- **Gas Measured By**

If you have any questions, please contact me at (724) 564-3721. Thank you.

Sincerely,  
Chevron Appalachia, LLC

Jackie M. Scholar

Enclosure

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