



**Jackie M. Scholar**  
Regulatory Reporting Coordinator

May 10, 2016

**CERTIFIED MAIL: 7015 0640 0001 0567 4482**

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  
**Berger 10H**

Dear Sir/Madam,

Enclosed here within please find one (1) Amended Well Operator's Report of Well Work WR-35 for the **Berger 10H, (API 47-051-01709)**. The following items have been amended:

- **Production Information**

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

Sincerely,  
Chevron Appalachia, LLC

Jackie M. Scholar

Enclosures

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**Appalachian/Michigan Business Unit**  
Chevron North America Exploration & Production Company (a division of Chevron U.S.A. Inc.)  
800 Mountain View Drive, Smithfield, PA 15478  
Tel 724-564-3721  
[jscholar@chevron.com](mailto:jscholar@chevron.com)

WV Department of  
Environmental Protection  
10/28/2016

Amended

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 47-051-01709 County Marshall District Clay  
Quad Glen Easton Pad Name Berger Field/Pool Name \_\_\_\_\_  
Farm name Berger Well Number 10H  
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 4413857.76 Easting 520982.62  
Landing Point of Curve Northing 441.474.32 Easting 520694.54  
Bottom Hole Northing 4412051.71 Easting 521749.12

Elevation (ft) 1292' 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)  
Surface section was drilled on air. Intermediate and Production sections were drilled on SBM fluid loss control emulsifier, and shale stabilizer additives.

Date permit issued 2/26/2014 Date drilling commenced 6/22/2014 Date drilling ceased 12/31/2014  
Date completion activities began 8/4/2015 Date completion activities ceased 12/31/2015  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug  
Freshwater depth(s) ft 169' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft \_\_\_\_\_ Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 768'-769', 784'-785', 830'-837', 1411'-1413', 1415'-1418' Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No but not sealed

Reviewed by: [Signature]  
10/28/2016

API 47-051 - 01709 Farm name Berger Well number 10H

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	36	30	40	New	X-42; 118.76		Y
Surface	17 1/2	13 3/8	<del>297</del> 305	New	J-55; 54.50		Y
Coal							
Intermediate 1							
Intermediate 2	12 1/4	9 5/8	2678	New	L-80; 40/N-80; 40		Y
Intermediate 3							
Production	8 1/2	5 1/2	13050	New	P-110; 20		Y
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	60				Surface	8
Surface	Bulk	382	15.60	1.21	462	Surface	8
Coal							
Intermediate 1							
Intermediate 2	A	900	15.60	1.24	1116	Surface	8
Intermediate 3							
Production	A	2478	15.20	1.31	3246	Surface	8
Tubing							

Drillers TD (ft) 13067 Loggers TD (ft) 13067  
 Deepest formation penetrated \_\_\_\_\_ Plug back to (ft) N/A  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 4305

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 Bow spring centralizer every two joints on the Water and Intermediate strings. Production string has two centralizers every joint in the lateral and curve, then one every two joints from KOP to surface.

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WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS Please see attached Perforation and Stimulation reports

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

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



API 47- 051 - 01709 Farm name Berger Well number 10H

PRODUCING FORMATION(S)	DEPTHS		
	6439	TVD	7178 MD
Marcellus (S2B)			

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1390 psi Bottom Hole 3900 psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 343 mcfpd Oil 116 bpd NGL n/a bpd Water 30 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT FVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
Dunkard Group Sand	160	169	169	169	Fresh Water 169' MD 1" stream
Pittsburgh Coal	830	837	830	837	Coal
Salt Sand	1538	1568	1540	1570	Gas Show @ 1550' 6101 units
Big Lime	1848	1928	1850	1930	Limestone: crm-wh, hd, crpxln
Burgoon (Big Injun)	1927	2117	1930	2120	SS: offwh, wh, cons, clr, trans, lcemt, fg-mg
Weir Sand	2277	2297	2280	2300	SLTST: ltgy-mgy, occ mgy, hrd, vf-fg, tcmt, bio, arg, sl calc
Berea Sand	2507	2530	2510	2533	SS: wh, clr, trans, ltgy-gy, ons, lcemt, mg-fg, sbang-ang, arg, meph, non calc, tr flor, exl fast out, frt odr, lse pyr
Burket Shale	6284	6302	6840	6871	SH: drkgy, v. drkgy, frm, slty, grty, sbbiky-sbfiss, modcalc, embd calc, lse calct
Tully Limestone	6302	6340	6871	6944	LS: ltgy, gy, mgy, frm-hrd, dns, cln, mic-fxln, v. arg
Hamilton Shale	6340	6384	6944	7057	SH: drkgy, v. drkgy, frm, slty, grty, sbbiky-sbfiss, carb, modv. calc, lse calct, w/LS
Marcellus Shale	6384		7057		SH: drkgy, v. drkgy, frm, slty, grty, sbbiky-sbfiss, non calc, lse calct, lse pyr, w/LS: gy, ltgy, hrd, mott, mic, fxl, v. arg

Please insert additional pages as applicable.

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

Logging Company ALS Group USA Corp  
Address 3352 128th Avenue City Holland State MI Zip 49424

Cementing Company SEE ATTACHED  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Stimulating Company Schlumberger Technology Corp  
Address 4600 J Barry Court, Suite 200 City Canonsburg State PA Zip 15307

Please insert additional pages as applicable.

Completed by Jackie M. Scholar Telephone 724-564-3721  
Signature [Signature] Title Regulatory Compliance Team Lead Date 5/10/2016

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

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