

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

API 47-061-01710 County Monongalia District Clay  
Quad Blacksville, WV Pad Name Campbell Field/Pool Name \_\_\_\_\_  
Farm name Ellen F. Campbell Well Number 1H  
Operator (as registered with the OOG) Northeast Natural Energy, LLC  
Address 707 Virginia Street East, Suite 1200 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 4394766.9 Easting 569970.9  
Landing Point of Curve Northing 4394751.6 Easting 569708.3  
Bottom Hole Northing 4396924.7 Easting 568262.6

Elevation (ft) 1,293.6' 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)  
Synthetic Based Mud - Horizontal Section: BIO-BASE 365, CALCIUM CHLORIDE POWDER, G-SEAL PLUS, HRP, LIME, M-I WATE (BARITE),  
M-I-X II MEDIUM, MEGADRIL P SYSTEM, MEGADRIL P SYSTEM RENTAL, MEGAMUL, SAFE-CARB 250, VERSATHIN HF, VERSAWET, VG-PLUS, VINSEAL MEDIUM, WALNUT NUT PLUG MEDIUM

Date permit issued 6/17/2015 Date drilling commenced 7/20/2015 Date drilling ceased 2/16/2016  
Date completion activities began 12/8/2016 Date completion activities ceased 1/4/2017  
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 1,190' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft 2,000' Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 200' ; 940' Cavern(s) encountered (Y/N) depths \_\_\_\_\_  
Is coal being mined in area (Y/N) N

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N  
APR 03 2017  
Reviewed by:  
WV Department of  
Environmental Protection  
05/26/2017

API 47-061 - 01710 Farm name Ellen F. Campbell Well number 1H

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	24	50	N	N/A	N/A	Y to surface
Surface	17.5	13 3/8	1,262	N	54.5	N/A	Y 38 bbl return
Coal							
Intermediate 1	12.25	9 5/8	2,427'	N	40	N/A	Y 20 bbl return
Intermediate 2							
Intermediate 3							
Production	8.5	5.5	17,340'	N	20	N/A	Y 10 bbl return
Tubing	N/A	2-3/8	8,559	N	4.7	N/A	N/A
Packer type and depth set		N/A					

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	4,500 psi ready mix	36.4		.75	27.27	CTS	48
Surface	Class A	1,054	15.2	1.27	1,271	CTS	8
Coal							
Intermediate 1	Class A	889	15.2	1.26	1,074	CTS	8
Intermediate 2							
Intermediate 3							
Production	50/50 Premium NE - 1.3% R-3.3% MPA 170	2,804	14.5	1.17	2,661	CTS	48
Tubing							

Drillers TD (ft) 17,363' Loggers TD (ft) 17,338'

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure \_\_\_\_\_

Kick off depth (ft) 7,363'

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 \_\_\_\_\_

Surface: bow spring centralizers every 3rd joint or aprox 120'

Intermediate: bow spring centralizers every 3rd joint or aprox 120'

Production: Hard bodied spiral centralizers every other joint or aprox 80' from TD to KOP then bow spring from KOP to 9 5/8" every forth joint or aprox 140'

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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