

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



API 47-15-02891 County CLAY District UNION  
Quad ELKHURST 7.5' Pad Name \_\_\_\_\_ Field/Pool Name \_\_\_\_\_  
Farm name WADE HOLDSWORTH, ET. UX. Well Number KING #8  
Operator (as registered with the OOG) RAVEN RIDGE ENERGY, LLC  
Address 3230 PENNSYLVANIA AVENUE City CHARLESTON State WV Zip 25302

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

Elevation (ft) 1,250 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)  
SOAP

Date permit issued 7/10/2013 Date drilling commenced 10/15/2013 Date drilling ceased 10/19/2013  
Date completion activities began 3/5/2014 Date completion activities ceased 3/19/2014  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A



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

Freshwater depth(s) ft 200' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1150' - 1650' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft NONE OF RECORD Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by: \_\_\_\_\_

06/27/2017

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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	14 1/4"	13 3/8"	30'	NEW	J-55 - 42 LBS	NONE	SAND -IN BY RIG
Surface	12 1/4"	9 5/8"	378'	NEW	J-55 - 29 LBS	120'	YES
Coal							
Intermediate 1	8 3/4"	7"	1899'	NEW	J-55 - 17LBS	335'	YES
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2264'	NEW	J-55 - 10.5 LBS	NONE	YES
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	CLASS I	10 - RIG				GROUND LEVEL	8
Surface	CLASS I	120	15.6	1.18	141.6	GROUND LEVEL	8
Coal							
Intermediate 1	CLASS I	300	15.6	1.18	354	GROUND LEVEL	8
Intermediate 2							
Intermediate 3							
Production	CLASS I	60	14.2	1.26	75.6	1608'	8
Tubing							

Drillers TD (ft) 2293' Loggers TD (ft) 2290'  
 Deepest formation penetrated SQUAW Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft)<sup>N/A</sup> \_\_\_\_\_

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 \_\_\_\_\_

RECEIVED  
Office of Oil and Gas

JUN 10 2014

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WV Department of  
Environmental Protection

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

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





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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>
<u>BIG INJUN</u>	<u>2070' - 2092'</u> TVD _____ MD _____
<u>SQUAW</u>	<u>2106' - 2126'</u> _____
_____	_____
_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 220 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST 12 hrs

OPEN FLOW Gas 20 mcfpd Oil 6 bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME 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 <sub>2</sub> S, ETC)
SAND & SHALE	0	1058'	0		
SALT SANDS	1058'	1656'			
MAUCH CHUNK	1656'	1842'			
LITTLE LIME	1842'	1881'			
BLUE MONDAY	1881'	1901'			
BIG LIME	1901'	2013'			
GREENBRIER GROUP	2013'	2072'			
BIG INJUN	2072'	2092'			
KEENER	2092'	2106'			
SQUAW	2106'	2126'			

Please insert additional pages as applicable.

Drilling Contractor WACO OIL & GAS  
Address P.O. BOX 397 City GLENVILLE State WV Zip 26351

Logging Company NABORS  
Address 82 ELKINS ROAD City BUCKHANNON State WV Zip 26201

Cementing Company ALLIED OIL AND GAS SERVICES, LLC  
Address 100 HOPE ROAD City CLARKSBURG State WV Zip 26301

Stimulating Company PRODUCERS SERVICE CORPORATION  
Address 109 SOUTH GRAHAM STREET City ZANESVILLE State OH Zip 43701

Please insert additional pages as applicable.

Completed by DANIELLE N. BOGGS Telephone 304-344-9291  
Signature Danielle N. Boggs Title OPERATIONS MANAGER Date 5/30/2014

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