

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

RECEIVED
Office of Oil and Gas
JUN 26 2014

API 47-39-06351 ^W County KANAWHA District BIG SANDY
Quad BLUE CREEK Pad Name _____ Field/Pool Name _____
Farm name JOHN & PEGGY BARKER REVOCABLE TRUST Well Number WHITE 2A
Operator (as registered with the OOG) RAVEN RIDGE ENERGY, LLC
Address 3230 PENNSYLVANIA AVENUE City CHARLESTON State WV Zip 25302

WV Department of
Environmental Protection

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) 811' 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 3/28/2013 Date drilling commenced 4/4/2013 Date drilling ceased 4/10/2013
Date completion activities began 1/16/2014 Date completion activities ceased 2/1/2014
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 150' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,100' - 1,600' 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:

07/04/2014

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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	J55 - 42LBS		YES - CEMENTED BY RIG
Surface	12 1/4"	9 5/8"	377'	NEW	LS - 17LBS		YES
Coal							
Intermediate 1	8 3/4"	7"	1,771'	NEW	J55 - 23LBS		YES
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2200'	NEW	J-55 - 10.5 LBS.		
Tubing			<u>2000'</u>				
Packer type and depth set _____							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS I	10 - RIG				GROUND LEVEL	8
Surface	CLASS I	140	15.6	1.18	165.2	GROUND LEVEL	8
Coal							
Intermediate 1	CLASS I	355	15.6	1.18	418.9	GROUND LEVEL	8
Intermediate 2							
Intermediate 3							
Production	CLASS I	150	14.2	1.29	193.5	GROUND LEVEL	8
Tubing							

Drillers TD (ft) ²⁰²¹ _____

Loggers TD (ft) ²⁰¹⁷ _____

Deepest formation penetrated ^{Weir} _____

Plug back to (ft) ^{None} _____

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 _____

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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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	1/17/2014	1971'	1832'	16	WEIR

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)
1	1/17/14	25	2828	3811	1363	15,000	500	0

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)

DEPTHS

WEIR 1836' - 1892' TVD _____ MD _____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 100 psi Bottom Hole _____ psi DURATION OF TEST 12 hrs

OPEN FLOW Gas 10 mcfpd Oil 2 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 ₂ S, ETC)
SAND	0	1100'	0		
SALT SAND	1100'	1330'			
SAND	1330'	1390'			
MAXTON	1390'	1527'			
PENCIL CAVE	1527'	1544'			
LITTLE LIME	1544'	1549'			
BIG LIME	1549'	1712'			
BIG INJUN	1712'	1738'			
SAND	1738'	1836'			
WEIR	1836'	1892'			
SAND	1892'	2021'			

Please insert additional pages as applicable.

Drilling Contractor Petty Oilfield Services

Address 7752 Lynne Avenue City Hamlin State WV Zip 25523

Logging Company Weatherford

Address 286 Weatherford Blvd. City Buckhannon State WV Zip 26201

Cementing Company Universal Well Services

Address 5 Hall Run Road City Buckhannon State WV Zip 26201

Stimulating Company Universal Well Services

Address 5 Hall Run Road City Buckhannon State WV Zip 26201

Please insert additional pages as applicable.

Completed by Danielle N. Boggs Telephone 304-344-9291

Signature *Danielle N. Boggs* Title Operations Manager Date 12/11/2013

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