

JK

OCT 31 2014

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

API 47-15-02888 County CLAY District UNION
Quad ELKHURST 7.5' Pad Name _____ Field/Pool Name _____
Farm name CONNER, CHESSIE, ET AL. Well Number J.S. COCHRAN #3
Operator (as registered with the OOG) RAVEN RIDGE ENERGY, LLC
Address 3230 PENNSYLVANIA AVE. 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 _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1,237' 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

Drilly Permit JK

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 6/26/2013 Date drilling commenced 11/2/2013 Date drilling ceased 11/30/2013
Date completion activities began N/A Date completion activities ceased N/A
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 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 N Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by: _____

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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	YES - CEMENTED BY RIG
Surface	12 1/4"	9 5/8"	377'	NEW	J-55 - 29 LBS	120'	YES
Coal							
Intermediate 1	8 3/4"	7"	1908'	NEW	J-55 - 17 LBS	335'	YES
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2230'	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 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	275	14.7	1.36	374	GROUND LEVEL	8
Intermediate 2							
Intermediate 3							
Production	CLASS I	70	15.6	1.18	82.6	1650'	12
Tubing							

Drillers TD (ft) ^{2350'} _____

Loggers TD (ft) ^{2346'} _____

Deepest formation penetrated ^{SQUAW} _____

Plug back to (ft) _____

Plug back procedure _____

Kick off depth (ft) ^{N/A} _____

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 _____ FRAC/COMPLETION HAS NOT BEEN COMPLETED TO DATE.

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)
	N/A				

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)
	N/A							

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS
NONE	TVD MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

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

OPEN FLOW Gas _____ mcfpd Oil _____ 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 & SHALE	0	1048'	0		
SALT SANDS	1048'	1646'			
MAUCH CHUNK	1646'	1832'			
LITTLE LIME	1832'	1871'			
BLUE MONDAY	1871'	1891'			
BIG LIME	1891'	2003'			
GREENBRIER GROUP	2003'	2062'			
BIG INJUN	2062'	2082'			
KEENER	2082'	2096'			
SQUAW	2096'	2116'			
SAND & SHALE	2116'	2350			

Please insert additional pages as applicable.

Drilling Contractor CUNNINGHAM ENERGY, LLC
Address 3230 PENNSYLVANIA AVENUE City CHARLESTON State WV Zip 25302

Logging Company NABORS COMPLETION & PRODUCTION
Address 1650 HACKERS CREEK ROAD City JANE LEW State WV Zip 26378

Cementing Company FORMATION CEMENTING, INC.
Address P.O. BOX 2667 City ZANESVILLE State OH Zip 43702

Stimulating Company N/A
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by DANIELLE N. BOGGS Telephone 304-344-9291
Signature *Danielle N. Boggs* Title OPERATIONS MANAGER Date 10/2/2014

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