

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

API 47 - 067 - 00948 County Nicholas District Wilderness
Quad Mount Nebo Pad Name WR Pad 7 Field/Pool Name Marcellus
Farm name Plum Creek Timberlands LP Well Number WR Infantry 1-1H
Operator (as registered with the OOG) BRC Operating Company, LLC
Address 200 Crescent Court, Suite 1900 City Dallas State Texas Zip 75201

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 38.19088 Easting 80.78252
Landing Point of Curve Northing Not applicable Easting Not applicable
Bottom Hole Northing 38.19088 Easting 80.78252

Elevation (ft) 2420 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 N/A
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)
Oil Based

Date permit issued 08/07/2017 Date drilling commenced 09/03/2017 Date drilling ceased 10/29/2017
Date completion activities began Not initiated Date completion activities ceased _____
Verbal plugging (Y/N) Y Date permission granted 10/30/2017 Granted by Jeremy James, Insp.

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

Freshwater depth(s) ft 1164 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2578 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 510' - 640' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
[Signature]

API 47-067 - 00948 Farm name Plum Creek Timberlands LP Well number WR Infantry 1-1H

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"	26"	114'	N	102.7		Y
Surface	24"	18-5/8"	1406'	N	94.5		Y
Coal							
Intermediate 1	17-1/2"	13-3/8"	2404'	N	54.5		Y
Intermediate 2	12-1/4"	9-5/8"	6378'	N	47.0		Y
Intermediate 3							
Production							
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					126	114'	
Surface	A	3,350	15.4-15.5	1.22	4087	1406'	
Coal							
Intermediate 1	A	1,531	15.4-16.5	1.22	1867	2404'	
Intermediate 2	A	2,731		1.22	3,331	6378'	
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) _____ Loggers TD (ft) _____

Deepest formation penetrated Lower Marcellus Plug back to (ft) 6307

Plug back procedure Partial plugging completed 10/30/2017 thru 11/02/2017; refer to attachment

Kick off depth (ft) 6402

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 One per casing joint

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)
N/A	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	N/A							

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
Marcellus	7248	TVD	7248 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	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)
FORMATION	0		0		
LITTLE LIME	1945	2010	1945	2010	LIMESTONE/MIN BRINE
BLUE MONDAY	2010	2070	2010	2070	LIMESTONE / MIN BRINE
BIG LIME	2070	2430	2070	2430	LIMESTONE / MIN BRINE/MIN OIL
BEREA	2750	3110	2750	3110	SANDSTONE / MIN BRINE
GORDON	3110	4800	3110	4800	SANDSTONE / MIN BRINE
SYCAMORE	6420	6670	6420	6670	SHALE NO FLUID
HAMILTON	6670	6990	6670	6990	SHALE NO FLUID / GAS
MAHANTANGO	6990	7130	6990	7130	SHALE NO FLUID / GAS
UPPER MARCELLUS	7130	7210	7130	7210	SHALE NO FLUID / GAS
CHERRY VALLEY	7210	7248	7210	7248	LIMESTONE / GAS
LOWER MARCELLUS	7248	7288	7248	7288	SHALE / GAS

Please insert additional pages as applicable.

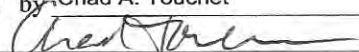
Drilling Contractor PRECISION DRILLING
 Address 10350 RICHMOND AVENUE SUITE 700 City HOUSTON State TX Zip 77042

Logging Company WEATHERFORD
 Address 300 BURNETT ST City FORT WORTH State TX Zip 76102

Cementing Company SCHLUMBERGER
 Address 4600 J. BARRY COURT, SUITE 200 City CANONSBURG State PA Zip 15317

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

Please insert additional pages as applicable.

Completed by Chad A. Touchet Telephone 817-739-4410
 Signature  Title Vice President Date 12-13-2017