

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

API 47-87-04691 County Roane District Curtis  
Quad Penie / 538 Pad Name \_\_\_\_\_ Field/Pool Name \_\_\_\_\_  
Farm name Monk Well Number 2010A4-3  
Operator (as registered with the OOG) Longhorn Hydrocarbons LLC  
Address 3152 Parkway City Pigeon Forge State TN Zip 37863

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

Elevation (ft) 983 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 Awaiting (

Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other Awaiting (

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 03/02/2011 Date drilling commenced 03/07/2011 Date drilling ceased 02/09/2011  
Date completion activities began 03/21/2011 Date completion activities ceased 03/22/2011  
Verbal plugging (Y/N) N Date permission granted N/A Granted by \_\_\_\_\_

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

Freshwater depth(s) ft 600ft Open mine(s) (Y/N) depths N

Salt water depth(s) ft 1100ft Void(s) encountered (Y/N) depths N

Coal depth(s) ft N/A 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	<del>4.25</del>	9 5/8	<del>23 02ft</del>	new	J55-42lbs		Yes Cemented
Surface	8.75	7"	953	New	J55-15.5lb		Yes
Coal							
Intermediate 1	<del>8.75</del>	<del>7"</del>	<del>2000ft</del>	new	J55-23lbs		Yes
Intermediate 2							
Intermediate 3							
Production	6.25	4.5"	2000ft		J55-10.5lbs		Yes
Tubing	2 3/8		As Needed				
Packer type and depth set		4.5 / 800 feet					

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	Class1	10				ground level	8/WDBR
Surface							
Coal							
Intermediate 1	Class1	230	15.6	1.18	271.4	ground level	8
Intermediate 2							
Intermediate 3							
Production	Class1	350	14.2	1.29	451.5	ground level	12
Tubing							

Drillers TD (ft) 2000 Loggers TD (ft) 2000  
 Deepest formation penetrated Salt Sand Plug back to (ft) \_\_\_\_\_  
 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 No Frack 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)
1	03/28/2011	1839	1844	31	Salt Sand

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 (B/M)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/oilier (units)
	N/A							

Please insert additional pages as applicable.

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**PRODUCING FORMATION(S)** **DEPTHS**  
No Frack To Date - No \_\_\_\_\_ TVD \_\_\_\_\_ MD  
Production \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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		BOTTOM		DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
Red Rock	0	610	0		
Pitts Sand	610	695			
Slate	695	770			
Pitts-Sand	770	810			
late Red Roc	810	1105			
L. Dunkard	1105	1244			
SLate Lime	1244	1330			
Gas Sand	1330	1521			
Slate-sand	1521	1770			
Salt Sand	1770	1930			

Please insert additional pages as applicable.

Drilling Contractor Monroe Drilling  
 Address 48886 Moore Ridge Rd. City Woodsfield State OH Zip 43793

Logging Company Appalachian Well Survey  
 Address 4973 Skyline Drive City Cambridge State OH Zip 43725

Cementing Company Formation Cement  
 Address P.O. Box 2667 City Zanesville State OH Zip 43702

Stimulating Company \_\_\_\_\_  
 Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please insert additional pages as applicable.

Completed by Eric Moser Telephone 865.287.6208  
 Signature \_\_\_\_\_ Title Managing Partner Date 09/24/2014

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