

4708510234 P

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

API 47 - 085 - 10234 County Ritchie District Clay  
Quad Pennsboro 7.5' Pad Name Bison Pad Field/Pool Name ----  
Farm name Donald L. Costilow Well Number Mogar Unit 2H  
Operator (as registered with the OOG) Antero Resources Corporation  
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4349550m Easting 508520m  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing \_\_\_\_\_ Easting \_\_\_\_\_

Elevation (ft) 1220' 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)  
Air - Foam & 4% KCL  
Mud - Polymer

Date permit issued 9/14/2015 Date drilling commenced 6/19/2017 Date drilling ceased 6/19/2017  
Date completion activities began N/A Date completion activities ceased N/A  
Verbal plugging (Y/N) N/A 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 None Identified Open mine(s) (Y/N) depths No  
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths No  
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

Reviewed by:  
07/01/2022

4708510234P

API 47-085 - 10234 Farm name Donald L. Costilow Well number Mogar Unit 2H

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	24"	20"	40'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"		New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"		New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"		New	23#, HCP-110	N/A	Y
Tubing		2-3/8"			4.7#, P-110		
Packer type and depth set		N/A					

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 A	sx	15.6	1.18		0'	8 Hrs.
Surface	Class A	sx	15.6	1.20		0'	8 Hrs.
Coal							
Intermediate 1	Class A	sx	15.6	1.19		0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	sx (Lead) sx (Tail)	14.1 (Lead), 15.17 (Tail)	1.4 (Lead), 1.6 (Tail)		-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 40' Loggers TD (ft) \_\_\_\_\_  
 Deepest formation penetrated N/A Plug back (ft) 0'  
 Plug back procedure N/A

RECEIVED  
Office of Oil & Gas  
JUN 29 2022

Kick off depth (ft) \_\_\_\_\_ WV Department of Environmental Protection

\*\* This is a subsequent Well. Antero only runs wireline logs on one well on a multi-well pad (Bill Unit 3H API#47-085-10257). A Cement Bond Log has been included with this submittal.

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 \_\_\_\_\_  
 Conductor - 0

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 N/A

07/01/2022



API 47- 085 - 10234 Farm name Donald L. Costilow Well number Mogar Unit 2H

PRODUCING FORMATION(S)	DEPTHS	
	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	BOTTOM	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	
<b>*PLEASE SEE ATTACHED EXHIBIT 3</b>					

<p>RECEIVED Office of Oil &amp; Gas JUN 29 2022 WV Department of Environmental Protection</p>					

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC  
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company Schlumberger Oilfield Services  
Address 300 Schlumberger Dr City Sugarland State TX Zip 77478

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

Please insert additional pages as applicable.

Completed by Mallory Stanton Telephone 303-357-7310  
Signature Mallory Stanton Title Permitting Manager Date 6/29/2022