

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

API 47 - 033 - 05620 County Harrison District Sardis
Quad Wolf Summit Pad Name Jones Pad Field/Pool Name ---
Farm name Jones, John R. & Catherine W. Well Number Zirk Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop St. City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey *Since this well was P&A'd an as-drilled plat was not prepared.
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1176' 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 6/1/2012 Date drilling commenced 6/3/2012 Date drilling ceased 6/13/2012
Date completion activities began N/A - Well P&A Date completion activities ceased N/A - Well P&A
Verbal plugging (Y/N) Y Date permission granted 6/6/2012 Granted by Inspector Tristan Jenkins

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

Freshwater depth(s) ft est 230' Open mine(s) (Y/N) depths No
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths No
Coal depth(s) ft Pad constructed on reclaimed PGH coal bench Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

API 47-033 - 05620 Farm name Jones, John R. & Catherine W. Well number Zirk Unit 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	24"	20"	40'	New	94# H-40	N/A	Y
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							
Packer type and depth set		N/A					

Comment Details Well was drilled to a total depth of 276 feet and encountered stuck pipe. Well was plugged under continuous operations through verbal approval from WVDEP Office of Oil & Gas on 6/6/2012.
Cement Plug - From 200' and fell back to 26' using 147 sx Class A cement and Cement Plug - From 26' to surface using 26 sx of Class A Cement

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 A	530 sx	15.6	1.18	38	0'	8 Hrs.
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) 276' TVD Loggers TD (ft) N/A
Deepest formation penetrated Plug back to (ft) N/A
Plug back procedure N/A

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

Conductor- 0

Surface- 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface

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

API 47- 033 - 05620 Farm name Jones, John R. & Catherine W. Well number Ahouse Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
N/A	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 Oil NGL Water GAS MEASURED BY
 --- mcfpd --- bpd --- bpd --- bpd 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)
	0		0		
Siltstone	0'	276'	0'	276'	

Please insert additional pages as applicable.

Drilling Contractor Hall Drilling
 Address 981 Washington Avenue City Ellenboro State WV Zip 26346

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

Cementing Company Allied Oil & Gas Services, LLC
 Address 1036 East Main Street City Bridgeport State WV Zip 26330

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

Please insert additional pages as applicable.

Completed by Ashlie Steele Telephone 303-357-7323
 Signature *Ashlie Steele* Title Permitting Supervisor Date 11/30/2015