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

API <u>47</u> - 085 - 10242	_ _{County} Ritchie	Distr	_{ict} <u>Clay</u>		
Quad Pennsboro 7.5'	Pad Name Bison	Pad Field	l/Pool Name		_
Farm name Donald L. Costilow		Wel	l Number Mo	gar Unit 1H	
Operator (as registered with the OOG	Antero Resources	Corporation			
Address 1615 Wynkoop Street	City Den	ver	State CO	_{Zip} <u>80202</u>	
As Drilled location NAD 83/UTM Top hole Landing Point of Curve Bottom Hole	Attach an as-drilled Northing 4349550m Northing Northing		508517m		
Elevation (ft) 1220' GL	Type of Well	New □ Existing	Type of Report	: □Interim ■Final	
Permit Type Deviated F	Horizontal Horizont	tal 6A □ Vertical	Depth Type	□ Deep ■ S	Shallow
Type of Operation □ Convert □	Deepen ■ Drill □	Plug Back □ Redrilling	□ Rework	■ Stimulate	
Well Type □ Brine Disposal □ CB	-	•		torage 🗆 Other	
			•	orage - Other	
Type of Completion ■ Single □ Mu	ultiple Fluids Produc	ced □ Brine ■Gas □	NGL	□ Other	_
Drilled with □ Cable ■ Rotary					
Drilling Media Surface hole A	ir □ Mud □Fresh Wat	er Intermediate hole	≜ Air □ Muo	d □ Fresh Water	□ Brine
Production hole □ Air ■ Mud	□ Fresh Water □ Brine				
Mud Type(s) and Additive(s) Air - Foam & 4% KCL					
Mud - Polymer					
Date permit issued9/14/2015	Date drilling comm	nenced6/19/2017	Date drilling		2017
Date completion activities began	N/A	Date completion activities	s ceased	N/A	_
Verbal plugging (Y/N) N/A	Date permission granted	N/A	Granted by	N/A	
Please note: Operator is required to s	ubmit a plugging applica	tion within 5 days of verba	l permission to p	plug	
resimuter depth(s) it	ne Identified	Open mine(s) (Y/N) depth	s	No	
out water depth(s) it	Identified	Void(s) encountered (Y/N)	depths	No	
Coal depth(s) ft None I	dentified	Cavern(s) encountered (Y/	N) depths	No	
Is coal being mined in area (Y/N)	No				
				Reviewed by:	

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API 47- 085	10242	Farm name_[Donald L. Cos	stilow	We	ell number Mog	jar Unit 1H	
CASING STRINGS	Hole Size	Casing Size		w or Grade sed wt/ft		Basket Depth(s)	Did cement circula * Provide details	
Conductor	24"	20"	40' N	lew 94#	, H-40	N/A	Υ	
Surface	17-1/2"	13-3/8"	١	New 54.5	#, J-55	N/A	Y	
Coal								
Intermediate 1	12-1/4"	9-5/8"		New 36#	ŧ, J-55	N/A	Y	
Intermediate 2			-		,			
Intermediate 3								
Production	8-3/4"/8-1/2"	5-1/2"		New 23#, H	HCP-110	N/A	Y	
Tubing	0-3/4 /0-1/2	2-3/8"	•		, P-110	l l	<u> </u>	
Packer type and d	lenth set			4.7#	, F-110	<u> </u>		
- uokei type una e	iopin soi	N/A						
Comment Details								
CEMENT	Class/Type		Slurry	Yield	Volum (ft ³)			VOC
DATA Conductor	of Cement Class A	of Sacks	wt (ppg) 15.6	(ft ³ /sks) 1.18	<u>(π-)</u>	Top (M 0'		hrs) 8 Hrs.
Surface	Class A	SX	15.6	1.20		0'		B Hrs.
Coal	Class A	5X	15.6	1.20				
Intermediate 1	Class A		15.6	1.10		0'		0.11
Intermediate 2	Class A	SX	15.6	1.19				8 Hrs.
Intermediate 3								
Production	0, 1,	(1 1) (7 1)						2.1.1
Tubing	Class H	sx (Lead) sx (Tail) 14.1 (Lead), 15.17 (Tail)	1.4 (Lead), 1.6 (Tail)		~500' into Interme	liate Casing 6	B Hrs.
T doing				L				
Drillers TD (f Deepest forma Plug back pro	ation penetrated	N/A		ggers TD (ft) g back to (ft)	A			
Kick off depth	, ,		1	-		logs on o API#47-(included	s a subsequent Well. Anter ne well on a multi-well pad 085-10257). A Cement Bon with this submittal.	l (Bill Unit 3
Check all wire	eline logs run	=		deviated/directi gamma ray		induction temperature	□sonic	
Well cored	□ Yes 💄 No	Conventional	Sidewall	W	ere cutting	gs collected	Yes No	
						_		
DESCRIBE T	HE CENTRAL	LIZER PLACEMENT	USED FOR EA	CH CASING S	TRING _			
CONTRACTOR OF THE PROPERTY OF								
			·	-				
WAS WELL	COMPLETED	AS SHOT HOLE	Yes A No	DETAILS				
WAS WELL	COMPLETED	OPEN HOLE? □ Y	es 🖪 No	DETAILS _				
WERE TRAC	ERS USED C	🗆 Yes 🗂 No 💮 TY	PE OF TRACE	ER(S) USED 🛚 N/	A			

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Amount of

Proppant (lbs)

Amount of

Water (bbls)

Rev. 8/23/13 Farm name Donald L. Costilow

_Well number_Mogar Unit 1H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	*PL	EASE S	EE ATT	ACHE	D EXHIBIT 1

Please insert additional pages as applicable.

Stage

No.

Stimulations

Date

STIMULATION INFORMATION PER STAGE

ISIP (PSI)

Max Breakdown

Pressure (PSI)

Complete a separate record for each stimulation stage. Ave Pump

Rate (BPM)

Ave Treatment

Pressure (PSI)

1	ı	*PI F	ASE SEE	ΕΔΤΤΔ	CHEC	FXH	BIT 2		
	*PLEASE SEE ATTACHED EXHIBIT 2								

Please insert additional pages as applicable.

Amount of

Nitrogen/other (units)

API 47- 085	_ 10242	Farm	_{name} Donald I	L. Costilow		Well nu	_{nber_} Moga	r Unit 1H
PRODUCING	FORMATION(S	<u></u>	<u>DEPTHS</u>	_TVD _		MD		
Please insert ad	lditional pages as	applicable.						
GAS TEST	□ Build up □	Drawdown	■ Open Flow	C	DIL TEST 🛢 I	Flow 🗆 P	ump	
SHUT-IN PRE	SSURE Surfa	nce	psi Botto	m Hole	psi	DURATIO	ON OF TES	T hrs
OPEN FLOW	Gas mcfp	Oil	NGL bpd —	_ bpd	Water bpd	GAS ME	ASURED I	BY fice □ Pilot
LITHOLOGY/ FORMATION	DEPTH IN FT		DEPTH IN FT					D QUANTITYAND NE, OIL, GAS, H ₂ S, ETC)
Drilling Contra	Iditional pages as actor Frontier Dril oring Run Road	ling LLC	City	Pennsboro		State _V	VV Zip	26415
	any					State _	Zip	
Cementing Cor Address 300 Sc	mpany Schlumbe	erger Oilfield S	ervices City	Sugarland		State _ 7	X Zip	77478
Address	mpanylditional pages as					State	Zip	
Completed by	Mallery Stanton	Stanton	Title P	ermitting Mana	Telephone ger	303-357-7	310 ate 6/29/202	2
	Mallory Stanton Mallory vdraulic Fracturi						ate 6/29/202	