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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 47 - 039 - 01610 County Kanawh		rict_Elk	
Quad Blue Creek, WV Pad Name	Field	d/Pool Name Coco	A Storage
Farm name Brown, James E. III		l Number 7219	
Operator (as registered with the OOG) Columbia Gas Tra	nsmission, LLC		
Address PO Box 1273 City Cha	rleston	State WV	Zip 25314
As Drilled location NAD 83/UTM Attach an as-drille Top hole Northing 4251337.66 m	d plat, profile view, and dev Easting	viation survey 464662.03 m	
Landing Point of Curve Northing N/A	Easting		
Bottom Hole Northing not measured (ve	ertical wellbore) Easting	not measured (vertical w	ellbore)
Elevation (ft) 1032 GL Type of Well of Permit Type Deviated Horizontal Horizo		Type of Report □In Depth Type ■	nterim Final Deep Shallow
Type of Operation □ Convert □ Deepen □ Drill □	Plug Back Redrilling	■ Rework ■ S	Stimulate
Well Type □ Brine Disposal □ CBM ■ Gas □ Oil □ Sec	ondary Recovery Solution	on Mining Storage	e 🗆 Other
Type of Completion ■ Single □ Multiple Fluids Product Drilled with □ Cable □ Rotary Drilling Media Surface hole □ Air □ Mud □ Fresh Wate Production hole □ Air □ Mud □ Fresh Water □ Brine Mud Type(s) and Additive(s) N/A - no drilling performed			
Date permit issued3/8/16 Date drilling comm	encedN/A	Date drilling cease	
Date rework activities began3/2/17	Date rework activities	s ceased10/	30/17 RECEIVED Office of Oil and Gas
Verbal plugging (Y/N)N/A Date permission granted	(Granted by	
			NOV 2 0 2017
Please note: Operator is required to submit a plugging applica-	tion within 5 days of verbal	permission to plug	WV Department of Environmental Protection
Freshwater depth(s) ft none observed during rework	Open mine(s) (Y/N) depth:	none observe	ed during rework
Salt water depth(s) ft none observed during rework	Void(s) encountered (Y/N)		erved during rework
Coal depth(s) ft none observed during rework	Cavern(s) encountered (Y/	N) depths none obs	served during rework
Is coal being mined in area (Y/N)	(*)		
			Reviewed by:
Dlhh Re	Wewe	e	01/05/2018

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API 47- 039	01610	Farm na	ame_Brown, J	ames E. II	ı	Well	number_721	9	
CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft		Basket Depth(s)		circulate (Y/N) letails below*
Conductor									
Surface									
Coal									
ntermediate 1									
ntermediate 2									
ntermediate 3									
roduction									
ubing									
acker type and de	epth set								
CEMENT DATA	Class/Type of Cement	Numbe of Sack			Yield t ³ /sks)	Volume	Ceme Top (M	(C) (C) (C)	WOC (hrs)
Conductor	of Cement	OI Sack	s with	(1	(363)	TIC-7	Top (N	,	(ma)
Surface									
Coal									
ntermediate 1			-	_					
ntermediate 2									
ntermediate 3		_	_						
Production									
Tubing									
San in the second of the contract of the second of the sec) 5398 tion penetrated cedure			Loggers T Plug back	. / (1) - Col				
Kick off depth	(ft)								
Check all wirel	line logs run	□ caliper □ neutron	□ density □ resistivity		ed/direction		duction mperature	□sonic	
Well cored	Yes • No	Convention	onal Side	wall	We	ere cuttings	collected	Yes	No
DESCRIBE TH	HE CENTRALI	ZER PLACEMI	ENT USED FO	R EACH C	ASING ST	TRING			
WAS WELL C	COMPLETED A	S SHOT HOLE	□ Yes ■	No Di	ETAILS .				RECEIVED Office of Oil and
WAS WELL C	COMPLETED C	PEN HOLE?	■ Yes □ N	o DET	ΔП S				NOV 2 0 20
					uL5				W Department

Show the

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API	47-	039		01610
API	4/-	000	-	

Farm name	Brown,	James	E.	Ш
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_Well number_7219

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
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)
1	10/26/17	4	1525	N/A	N/A	N/A	150	3000 gal HCl
								acid
-								
								PEGEIVED
								Office of Oil and
								NOV 2 0 201

Please insert additional pages as applicable.

WV Department of Environmental Protection

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API 47- 039	_ 01610	N.	Farm	name Brown,	James E.	Ш	Well	number	7219	<u> </u>
PRODUCING	FORMAT	ION(S)	DEPTHS						
Oriskany (natur	al gas stor	age)			TVD	5323 - 5350	MD			
					_					
Please insert ad	lditional pa	ages as	applicable.			,				
GAS TEST	□ Build u	ip 🗆 1	Drawdown	■ Open Flow		OIL TEST 🗆	Flow 1	□ Pump		
SHUT-IN PRE	SSURE	Surfa	ce 1700	psi Botto	om Hole	psi	DURA	TION O	F TES	T 0.75 hrs
OPEN FLOW	Gas 23800	_ mcfp	Oil d	NGL bpd	_ bpd _	Water bpd		MEASU mated		
LITHOLOGY/ FORMATION	TOP DEPTH I NAME T	N FT	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN	FT DESCRIBE				D QUANTITYAND NE, OIL, GAS, H ₂ S, ETC)
	0			0						
		-								
										-
		-								
		-				_				
Please insert ad	l Iditional pa	ages as	applicable.		l					
Drilling Contra Address	ctor <u></u>			City			State		Zip	
Logging Comp				City			Ctata		7in	
				City			_ state	-	_ Zip	
Cementing Cor							12		5 <u>40</u> 2	
Address				City	-		State		_ Zip	
Stimulating Co Address Hall Rd				City	Buckhanno	- n	State	WV	Zip	26201
Please insert ad	ditional pa									
Completed by	James Ar	nos				Telephone	304-483	3-0073		RECEIVED Office of Oil and Gas
Signature		<u></u>	1	Title S	r WET Engine	eer				NOV 2 0 2017
7	un		u							WV Department of Environmental Protection