

1700 MacCorkle Ave SE P.O. Box 1273 Charleston, WV 25325

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WV Department of Environmental Protection

August 17, 2017

WV DEP – Office of Oil & Gas 601 57th Street, SE Charleston, WV 25304-2345

Enclosed are the final WR-35 <u>Well Operator's Report of Well Work</u> and WR-34 <u>Discharge</u> <u>Monitoring Report</u> forms for Glady 7468 (API 075-00037).

If you have questions, feel free to call.

Regards,

Jim Amos

Senior Well Services Engineer Columbia Gas Transmission, LLC james amos@transcanada.com

off: 304-373-2412 cell: 304-483-0073

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

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API 47 - 075 - 00037 County Poo	cahontas	District Green Bank	WV Department of Environmental Protection		
Quad Sinks of Gandy Pad Name					
Farm name U.S. Forest Service	_ Well Number 7468				
Operator (as registered with the OOG) Columbia Gas	Transmission, LLC				
	Charleston	State WV	Zip 25325-1273		
Top hole Northing	drilled plat, profile view, a	asting			
Landing Point of Curve Northing Bottom Hole Northing		sting sting			
Elevation (ft) 3749 GL Type of W	/ell □New • Existing	Type of Report	Interim •Final		
Permit Type Deviated Horizontal Ho	orizontal 6A Vertical	Depth Type	Deep Shallow		
Type of Operation Convert Deepen Drill	□ Plug Back □ Red	rilling 🗆 Rework 🖻	Stimulate		
Well Type □ Brine Disposal □ CBM □ Gas □ Oil	□ Secondary Recovery □	Solution Mining 🖪 Stora	ge 🗆 Other		
Type of Completion □ Single □ Multiple Fluids I Drilled with □ Cable □ Rotary	Produced □ Brine	s nGL ooil o	Other		
Drilling Media Surface hole		hole 🗆 Air 🗆 Mud	□ Fresh Water □ Brine		
Production hole	Dine				
40/00/40	commenced				
Date neworksum activities ocgan	Date <u>[rework/stim]</u> ac	tivities ceased10	<u> </u>		
Jule permission g					
Please note: Operator is required to submit a plugging a	pplication within 5 days of	verbal permission to plug	3		
Freshwater depth(s) ft	Open mine(s) (Y/N)	depths			
Salt water depth(s) ft		(Y/N) depths			
Coal depth(s) ft					
Is coal being mined in area (Y/N)					

Reviewed by:

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API 47- 075	00037	_	_{ame} U.S. For	est Servic	a	*** 11	. 74	168	
API 47- 070		Farm r	ame			Well	number		
CASING	Hole	Casing		New or	Grade		Basket		ment circulate (Y/ N)
STRINGS Conductor	Size	Size	Depth	Used	wt/ft		Depth(s)	* Prov	ride details below*
Surface				<u> </u>	ļ				
Coal									
Intermediate 1			<u>-</u>				· · ·		-
Intermediate 2									
Intermediate 3									RECEIVED
Production					ļ				Office of Oil and Gas
Tubing				 					AUG 1 8 2017
	reh and				Į.				AUU 1 0 2011
Packer type and de	pun set								WV Department of nvironmental Protectio
CEMENT	No existing casing w	vas altered and no ad	ditional casing installe		d well work.	Volume	Cen	nent	woc
DATA	of Cement	of Sac			t ³ /sks)	(ft ³)	Top ((hrs)
Conductor									
Surface									
Coal									
Intermediate 1									
Intermediate 2									
Intermediate 3									
Production									
Tubing									
Drillers TD (ft)				Loggers 7	CD (ft)				
Deepest format									
Plug back proc									
No casing cemented	during permitted well	work.							
Kick off depth	(ft)								
Check all wirel	ine logs run	□ caliper □ neutron	□ density □ resistivity				duction emperature	□soni	ic
Well cored	Yes No	□ Conventi	onal Side	wall	We	ere cuttings	collected	□ Yes □	□ No
	=				.,,				
DESCRIBE TH	IE CENTRALIZ	ZER PLACEM	ENT USED FO	OR EACH C	ASING ST	TRING		· · · · · · · · · · · · · · · · · · ·	····
									
WAS WELL C	OMPLETED A	S SHOT HOL	E □Yes ■	No D	ETAILS .				
WAS WELL C	OMPLETED O	PEN HOLE?	■ Yes □ N	lo DET	AILS	<u> </u>	·		
WERE TRACE	RS USED	Yes • No	TYPE OF T	'RACER(S)	USED				,

WR-35						
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API	47- 075	00037	Farm name_	U.S. Forest Service	_Well number_	7468
AFI	4 /		railli liaille_		_wen number_	

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					DECEMED
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					Environmental Protection

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	10/21/16	10	780	N/A	N/A	0	150	6000 gals acid
					-			
		•						
		-						

Please insert additional pages as applicable.

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API 47- 075	_ 00037	Farm	name U.S. Fores	st Service		Well number	7468	
PRODUCING	FORMATION(<u>(S)</u>	DEPTHS					
Oriskany (stora	ge)			TVD	6043 - 6245	MD		
Please insert ad	lditional pages a	as applicable.						
GAS TEST	□ Build up □	Drawdown	• Open Flow	(OIL TEST 🗆	Flow □ Pump		
SHUT-IN PRE	SSURE Surf	face 2030	_psi Botto	m Hole	psi	DURATION O	F TEST 0.7	5 hrs
OPEN FLOW ulated @ 2050 psi	Gas 58300 mcf	Oil fpd	NGL bpd		Water bpd	GAS MEASU		□ Pilot
LITHOLOGY/	TOP	воттом	ТОР	BOTTOM		choke		
FORMATION	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT			ROCK TYPE AND	RECORD QUA	NTITYAND
	NAME TVD	TVD	MD	MD	TYPE OF FI	LUID (FRESHWAT	ER, BRINE, OII	L, GAS, H ₂ S, ETC)
	0		0					
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					_			AUG 1 8 20
								WV Departmen
Please insert ad	l Iditional pages a	as applicable.						
Drilling Contra	ctor							
Address		1	City			State	Zip	
Address 106 Isla	any Baker Atlas and Ave	Logging	City	Buckhannor	า	State WV	Zip 2620	1
			•				r	
	npany					State	Zip	
	personal Management					State	Zip	
Stimulating Co	mpany C&J E	nergy Services		lone I am		G	7. 0627	
Address 528 Inc	lditional pages a	as annlicable	City	Jane Lew		State WV	Zip _20378	
		ы аррисанс.						
Completed by						304-483-0073		
	Sam	_ / .	Title Se	enior Enginee	r	Date 8	/17/17	\sim

Glady 7468 (API 075-00037)	
Work Performed Performed CTCO and acid stimulation.	
renomied of co and acid sumulation.	

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