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 - 077 - 00005 Count	y Preston	District Portland	
Taura Alta	Vame	T	Alta Storage
Farm name Lewis, C. E.		Well Number 7369	
Operator (as registered with the OOG) Columb	ia Gas Transmission, L		
Address 1700 MacCorkle Ave SE	City Charleston	State WV	Zip <u>25325-1273</u>
Top hole Northing _ Landing Point of Curve Northing _	h an as-drilled plat, profile		
Elevation (ft) 2002 GL Ty	pe of Well New Exis	sting Type of Report □I	nterim Final
Permit Type Deviated Horizontal	□ Horizontal 6A · · · V	Vertical Depth Type	Deep □ Shallow
Type of Operation Convert Deepen	□ Drill □ Plug Back	□ Redrilling □ Rework •	Stimulate
Well Type □ Brine Disposal □ CBM □ Gas	□ Oil □ Secondary Recov	ery Solution Mining Storag	e 🗆 Other
Drilled with □ Cable □ Rotary Drilling Media Surface hole □ Air □ Mud Production hole □ Air □ Mud □ Fresh Wa Mud Type(s) and Additive(s)		mediate hole □ Air □ Mud □	Fresh Water 🗆 Brine
		RE	CEIVED
		Office o	f Oll and Gas
Date permit issued 5/19/15 Date of	Irilling commenced	Date drilling ceas	
Date stim activities began 10/7/		activities ceased 11	/12/15 115
Verbal plugging (Y/N) Date permis	ssion granted	Granted by De	Dartment of
			ntal Protection
Please note: Operator is required to submit a plug	gging application within 5		
Freshwater depth(s) ft	Open mine(s) (Y/N) depths	
Salt water depth(s) ft		ountered (Y/N) depths	
Coal depth(s) ft		countered (Y/N) depths	
Is coal being mined in area (Y/N)			
			Reviewed by:



12/18/2015

API 47- 077 - 00005 Farm name Lewis, C. E. Well number 7369 CASING Hole Casing Depth Used Wt/ft Depth(s) *Provide details below* Size Size Depth Used Wt/ft Depth(s) *Provide details below* Surface Coal Intermediate Intermediate I Intermediate 3 Production Intermediate States Intermediate	WR-35 Rev. 8/23/13									Page of
STERNOS Size Size Depth Used with Depth(s) *Provide details below* Conductor	API 47- 077	_ 00005	Farm na	ıme Lewis, C	. E.	_	Well	number73	69	
STERNOS Size Size Depth Used with Depth(s) *Provide details below* Conductor	CASING	Hole	Casing		New or	Grade		Basket	Did ceme	ent circulate (Y/ N)
Surface Intermediate Intermediat	STRINGS		_	Depth	Used	wt/ft	1	Depth(s)		•
CEMENT Class/Type Number Slurry Yield Volume Cement WOC Condition Cond										
Intermediate 1	Surface									
Intermediate 2 Intermediate 3 Packet type and depth set Comment Details Mo existing casing was altered and no additional casing installed during permitted well work. CEMENT Class/Type Number of Sacks Sturry (ppg) (11 ½ks) Volume Cement WOC (this) Conductor of Cement of Sacks (12) Top (MD) (this) Food (t	Coal									
Intermediate 3 Implicit Impli	Intermediate 1								<u> </u>	
Troduction	Intermediate 2									
Tubing Packer type and depth set	Intermediate 3									
Tecker type and depth set Comment Details	Production									
Cemment Details No existing casting was altered and no additional casing installed during permitted west work. CEMENT Class/Type Number Sturry Vield Volume Cement WOC Top (ft //sks) (ft	Tubing									
CEMENT ClassType Number of Sacks wit (ppg) (ft 7/sks) (ft 2/sks) (Packer type and de	pth set			,, - <u>-</u>			·	, <u></u>	
Conductor	CEMENT				ry (
Intermediate 1 Intermediate 2 Intermediate 3 Intermediate 4 Intermediate 3 Intermediate 3 Intermediate 3 Intermediate 4 Intermediate 4 Intermediate 5 Inte	Conductor	or Cement	UI Sack	s wi (p)	ρ <u>g) (</u> [(383)	711.7		MD)	(ms)
Intermediate 1 Intermediate 2 Intermediate 2 Intermediate 3 Intermediate 4 Intermediate 4 Intermediate 5 Intermediate 5 Intermediate 5 Intermediate 6 Intermediate 6 Intermediate 6 Intermediate 6 Intermediate 6 Intermediate 6 Intermediate 7 Interm	Surface									
Intermediate 2 Intermediate 3 Interm	Coal						_			
Intermediate 3 Production Fubing Describing Describi	Intermediate 1									
Production Tubing	Intermediate 2			+				_		
Drillers TD (ft) Loggers TD (ft)	Intermediate 3		-							
Drillers TD (ft)	Production									
Deepest formation penetrated Plug back to (ft)	Tubing							-	_	
Deepest formation penetrated Plug back to (ft)	!			<u> </u>						
No casing cemented during permitted well work. Cick off depth (ft)	Deepest format	ion penetrated								
Check all wireline logs run			ell work.							
neutron resistivity gamma ray temperature Isonic	Kick off depth	(ft)								
DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Office of Oil and Ga NOV 1 9 2015 WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS WV Department of Environmental Protections WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS	Check all wirel	ine logs run	· · · · · · · · · · · · · · · · · · ·						□sonic	
Office of Oil and Ga NOV 1 9 2015 WAS WELL COMPLETED AS SHOT HOLE □ Yes ■ No DETAILS Environmental Protec WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS	Well cored 🛚	Yes 🖪 No	□ Convention	onal 🗆 Side	wall	We	ere cuttings	collected	□ Yes □	No
Office of Oil and Ga NOV 1 9 2015 WAS WELL COMPLETED AS SHOT HOLE □ Yes ■ No DETAILS Environmental Protec WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS	DEŠCRIBE TE	E CENTRALI	IZER PLACEME	ENT USED FO	R EACH C	ASING ST	TRING		RI	ECEIVED
WAS WELL COMPLETED AS SHOT HOLE									Office	of Oil and Ca
WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS WV Department o Environmental Protec WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS WV Department or NOV 1 9 2015										on and da
Environmental Protec WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS										IV 1 9 2015
WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS	WAS WELL C	COMPLETED A	AS SHOT HOLE	∵ □ Yes ■	No D	ETAILS		Er	WV-D	epartment of
VERE TRACERS USED □ Yes ■ No TYPE OF TRACER(S) USED	WAS WELL C	OMPLETED (OPEN HOLE?	□ Yes ■ N	lo DET	AILS				
	WERE TRACE	ERS USED 🛚	Yes ■ No	TYPE OF T	RACER(S)	USED _				

WR-	35	
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Page	of

API 47- 077	_ 00005	Farm name	wis, C. E.	Well number
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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					
				<u> </u>	
-					
		L			

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	11/11/15		900	N/A	N/A	0	110	1500 gals acid
	_							
		-						
			-	<u> </u>				
							_	
								EIVED
							Office of	Oil and Gas
								0 2015
						-	NUV	1 9 2015
	_						WV Der	artment of
						Er	vironme	ntal Protection
				1			1111111	1.14

Please insert additional pages as applicable.

WR-35 Rev. 8/23/13									Page of
	_ 00005		Farm	name_Lewis, C.	E		Well num	_{ber_} 7369	
PRODUCING	EODM ATIO	ONI(S)	_	<u>DEPTHS</u>					
Chert (storage)		714(2)	-	DEF THS	T1 17	5390 - 5755) (D		
Chert (Storage)					_ TVD	3390 - 3733	MD		
			<u> </u>						
Please insert ad	lditional pag	es as ap	plicable.						
GAS TEST	□ Build up	□ Dra	awdown	■ Open Flow		OIL TEST	□ Flow □ Pu	mp	
SHUT-IN PRE	SSURE S	Surface	1853	_psi Botto	m Hole	psi	DURATIO	N OF TEST 1	hrs
OPEN FLOW	Gas 14600	mcfpd	Oil	NGL bpd	_ bpd _		GAS MEA d □ Estimate		□ Pilot
LITHOLOGY/	ТОР	E	воттом	ТОР	воттом	ſ			
FORMATION	DEPTH IN		PTH IN FT	DEPTH IN FT	DEPTH IN		BE ROCK TYPE A		
	NAME TV 0	<u>u</u>	TVD	MD 0	MD	TYPE OF	FLUID (FRESHW	ATEK, BRINE, OI	L, GAS, H ₂ S, ETC)
					-		•		-
						-			
									•
Please insert ad	 ditional pag	es as an	plicable.	<u></u>					t 1/10-F
Drilling Contra			_						
Address							State	Zip	
Logging Comp	_{anv} Baker A	itlas Log	ging						
Address 106 Isla	and Ave			City	Buckhanno	n	State W	/ Zip <u>2620</u>	1
Cementing Cor				City			State	Zip PE	CEIVED Oil and Gas
Stimulating Co								Office of	Oil and Gas
Address 528 Inc	lustrial Park R	d		City	Jane Lew	_	State W	/Zip_ 263 7	8 1 9 2015
Please insert ad	lditional pag	es as ap	plicable.						
0 1.11	lim Amos					m 1 1	304_483_007	" WV De	partment of

Title Senior Engineer

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Terra Alta 7369 (API 077-00005)

Work Performed

Killed well. Ran CBL and pipe inspection log. Set bridge plug and replaced master valve. Pulled bridge plug. Cleaned/jetted well using coil tubing. Washed across perforated interval with foamed treated fresh water and 250 gals HCl acid. Performed acid treatment with 1500 gals HCl acid. Flowed well to recover fluids.

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Office of Oil and Gas

NOV 1 9 2015

WV Department of For immental Protection WR-34 Page 1 of 3 Rev. 10-10

State of West Virginia Department of Environmental Protection - Office of Oil and Gas Discharge Monitoring Report

Oil and Gas General Permit

Company Name:	Columbia Gas Transmission, LLC	
API No:	47-077-00005	County: Preston
District:	Portland	Well No: 7369
Farm Name:	Lewis, C. E.	
Discharge Date/s F	From:(MMDDYY) N/A	To: (MMDDYY) N/A
Discharge Times.	From: N/A	To: N/A
Total Volume to b	e Disposed from this facility (gall	ons): 16800
	Utilized (write volumes in gallor	•
(1) Land Applicat	tion:	(Include a topographical map of the Area.)
(2) UIC:	16800	Permit No. 34-119-28776
(3) Offsite Dispos	sal:	Site Location:
(4) Reuse:		Alternate Permit Number:
(5) Centralized Fa		Permit No.
(6) Other method		(Include an explanation)
` '	s below to determine your treatme	• •
	ment test: Cl- mg/l	DO mg/l
(Y/N)	If yes, who? ine 2 iid or flowback put into the pit? (Yes) a chloride value pretreatment (see	If yes, then enter a one (1) on line 7. e above) (Y/N) If yes, go to line 6 If yes, enter a two (2) on line 7. If
Name of Princip	pal Exec. Officer: James E Amos	RECEIVED
Title of Officer	· · · · · · · · · · · · · · · · · · ·	Office of Oil and Gas
information sub of those individ information is t	der penalty of law that I have permitted on this document and all the luals immediately responsible for	rsonally examined and am fallillad with the he attachments and that, based on my inquiry obtaining the information believe that there are significant pertalties fit ection illity of fine and imprisonment.

Signature of a Principal Exec. Officer or Authorized agent.

WR-34 Page 2 of 3 Category 1 Sampling Results API No: Predischarge Discharge Reported Reported Units Parameter Limits Limits 6-10 6-10 S.U pН Settling Time 5 N/A N/A Days 6 mg/1Fe 6 D.O. 2.5 2.5 mg/l Settleable Sol. 0.5 0.5 mg/l Cl 5,000 5,000 mg/l Oil Trace Trace Obs. TOC** mg/l Monitor Oil and Grease Monitor mg/l Total Al*** Monitor mg/l TSS Monitor mg/l Total Mn Monitor Monitor mg/l Volume Monitor Gal Flow Gal/min Monitor Disposal Area Monitor Acres *** Al is only reported if the pH is above 9.0 Category 2 Sampling Results API No: **Predischarge** Discharge **Parameter** Limits Reported Limits Reported Units 6-10 pН 6-10 S.U N/A Settling Time 10 N/A Days Fe 6 mg/l 6 2.5 D.O. 2.5 mg/l Settleable Sol. 0.5 mg/l 0.5 C1* 12,500 12,500 mg/l Trace Obs. Oil Trace TOC** Monitor mg/lOil and Grease Monitor mg/l Total Al*** Monitor mg/l **TSS** Monitor mg/l mg/l Total Mn Monitor Monitor Gal Volume Monitor Gal/船床CEIVED Flow Monitor Officesof Oil and Gas Disposal Area Monitor * Can be 25,000 with inspector's approval, NOV 1 9 2015 (Inspector's signature): Date:

** Include a description of your aeration technique.

*** Al is only reported if the pH is above 9.0

on

Aeration Code: WV Department of

Category 3
Sampling Results
API No:

	Predis	scharge	Disc	Discharge		
Parameter	Limits	Reported	Limits	Reported	Units	
pН	6-10		6-10		S.U	
Settling Time	20		N/A	N/A	Days	
Fe	6		6		mg/l	
D.O.	2.5		2.5		mg/l	
Settleable Sol.	0.5		0.5		mg/l	
Cl*	12,500		12,500		mg/l	
Oil	Trace		Trace		Obs.	
TOC**			Monitor		mg/l	
Oil and Grease			Monitor		mg/l	
Total Al***			Monitor		mg/l	
TSS			Monitor		mg/l	
Total Mn	Monitor		Monitor		mg/l	
Volume			Monitor		Gal	
Flow			Monitor		Gal/min	
Disposal Area			Monitor		Acres	
* Can be 25,000 wi	th inspector's	approval,				
(Inspector's signatu	re):		Da	ate:		
** Include a descrip	tion of your a	eration technique	ue.	Aeration Cod	e:	
*** Al is only report						
Category 4 Sampling Results API No:		-				

	Predischarge		Discharge		
Parameter	Limits	Reported	Limits	Reported	Units
pН	6-10		6-10		_ S.U
Settling Time	1		N/A	N/A	Days
Fe	Monitor		Monitor		mg/l
D.O.	Monitor		Monitor		mg/l
Settleable Sol.	Monitor		Monitor		mg/l
Cl*	12,500		12,500		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
TSS			Monitor	-	mg/l
Total Mn	Monitor		Monitor		- ABCEIVED
Volume			Monitor		Officesof Oil and Gas
Flow			Monitor		Gal/min
Activated Carbon (0.175)			N/A	N/A	1840BM 19 2015
Date Site Reclaimed	N/A	N/A			10 days from dis.
Disposal Area			Monitor		W\ADenartment of
* Can be 25,000 with inspector's approval,				F	=- "1n"
(Inspector's signature):		Da	ate:	40/40/004	

Date: 12/18/2015



west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

May 19, 2015

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-7700005, issued to COLUMBIA GAS TRANSMISSION, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

Operator's Well No: 7369

Farm Name: LEWIS, C. E.

API Well Number: 47-7700005

Permit Type: Re-Work Date Issued: 05/19/2015 RECEIVED
Office of Oil and Gas

NOV 1 9 2015

WV Department of Environmental Protection

Promoting a healthy environment.