



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Tuesday, October 10, 2023
WELL WORK PERMIT
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 12076
47-039-02811-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.

James A. Martin
Chief

A blue ink signature of James A. Martin, written in a cursive style.

Operator's Well Number: 12076
Farm Name: HARLESS, F. H.
U.S. WELL NUMBER: 47-039-02811-00-00
Vertical Re-Work
Date Issued: 10/10/2023

Promoting a healthy environment.

10/13/2023

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

10/13/2023

CK# 43072
900
4703902811W
39-2811

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Columbia Gas Transmission, LLC

307032	Kanawha	Elk	Blue Creek, WV
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Operator ID County District Quadrangle

2) Operator's Well Number: Coco A 12076 3) Elevation: 999.8'

4) Well Type: (a) Oil _____ or Gas X
(b) If Gas: Production _____ / Underground Storage X
Deep X / Shallow _____

5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 5322

6) Proposed Total Depth: 5322 Feet Formation at Proposed Total Depth: Oriskany

7) Approximate fresh water strata depths: none reported by driller

8) Approximate salt water depths: Salt Sand reported from 885 - 1410' by driller. Water at 940'

9) Approximate coal seam depths: Coal reported 95' - 98'

10) Approximate void depths,(coal, Karst, other): None reported by driller

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

Snub tubing out of the well, obtain HRVRT / Temperature / Sonar logs, perform coil tubing cleanout and 2000 gal 15% acid stimulation, snub tubing back in the well.

13) **CASING AND TUBING PROGRAM** * existing

Handwritten signature and date: 9-5-23

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	
Conductor						
Fresh Water	13-3/8 *	H-40	48	147	147	200 sx
Coal	9-5/8 *	J-55	32	2038	2038	700 sx
Production	7 *	N-80	26	31	31	
Production	7 *	N-80	23	5245	5214	200 sx
Tubing	2-3/8	J-55	4.6	5244	5244	
Liners						

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Packers: Kind: _____
Sizes: _____
Depths Set _____

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Coco A 12076 (API 47-039-02811) - CTCO and Acid Treatment

API 3K wellhead, 7" FS x 9-5/8" support

7" 26# N-80 LTC csg to 31' / 7" 23# N-80 8rd csg set at 5245'

Burst: 6340 psig new (5072 psig assuming 80% safety factor)

Capacity: [5214 ft x 1.6535 gal/ft] + [31 ft x 1.6070 gal/ft] = 8,670.94 gals; x 0.0394 bbl/ft = 341.64 bbls

Openhole

Capacity 8-3/4" hole: 77 ft x 0.074376 bbl/ft = 5.73 bbls

Total Capacity: 347.4 bbls

Oriskany: 5260 – 5300

TD: 5322

Fluids Needed

2000 gals 15% HCl acid** treated with corrosion inhibitor, iron control/sequestering agent, and surfactant. Biocide, clay stabilizer, and surfactant to treat +/- 700 bbls fresh water. Liquid caustic on location in case need to neutralize flowback fluids.

* Prior to acid treatment verify that the 7" x 9-5/8" annuli is full, top off with fresh water treated with biocide, corrosion inhibitor, and clay stabilizer as needed (capacity above 7" TOC is ~134 bbls).

CTCO Procedure

1. MIRU 1.75" CTU.
2. Load CT with treated fresh water (TFW) and pressure test CT and BOPs to 2000 psig.
** maximum pressure on wellhead components 2500 psig*
3. Open well and RIH under static conditions.
4. At 5050' begin jetting with foamed TFW. Jet to TD and cycle up and down across interval 5200' – TD.
5. Begin 15% HCl acid foamed to 50Q and cycle up and down across interval 5200' – TD until 1000 gals acid gone.
6. Chase acid with 40 bbls TFW foamed to 50Q to neutralize wellbore / flowback fluids.
7. Flow well while POOH to 4900'. Flow until returns are relatively dry.
8. CTU on stand-by until after acid treatment to unload wellbore if needed.

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Acid Treatment

1. RU to perform acid treatment down casing as follows:

▪ 1000 gals 15% HCl acid	4-6 BPM	Max Treating Press = 2500 psig
▪ 80 bbls bbls TFW	4-6 BPM	Max Treating Press = 2000 psig
▪ 80 bbls bbls TFW	4-6 BPM	Max Treating Press = 1500 psig
▪ 80 bbls bbls TFW	4-6 BPM	Max Treating Press = 1000 psig
▪ 60 bbls TFW	2-4 BPM	Max Treating Press = 1000 psig
		▪ SHUT DOWN FOR 30 minutes TO ALLOW ACID TO SOAK
▪ 20 bbls TFW	2-3 BPM	Max Treating Press = 1000 psig
		▪ SHUT DOWN FOR 30 minutes TO ALLOW ACID TO SOAK
▪ 30 bbls TFW	2-3 BPM	Max Treating Press = 1000 psig
2. Flow well. If well quits flowing, RBIH with CT unloading fluid with N2.
3. RDMO and release CTU / acid equipment.

10/13/2023

4703902811W

WELL JOB PLAN			STS Well Engineering & Technology			PAGE 1	DATE JOB PREPARED: 4/6/2023	
Objective: Baseline Integrity Project						LAST PROFILE UPDATE:		
TITLE: Snub tubing, log, CTCO, rerun tubing			WELL ID: 12076			WORK TYPE: Well Integrity		
FIELD: Coco A			SHL (Lat/ Long) 38.397269 -81.447868			LEASE #: 48281		
STATE: WV			BHL (Lat/Long) 38.397269 -81.447868			API: 47-039-02811		
DIST/TWP: Elk			WELLLINE #: X52AW12076			CNTY: Kanawaha		
EXISTING TUBULAR CONFIGURATION	OD (inches)	WEIGHT (PPF)	GRADE	THREAD	DEPTH (ft)		FORMATION: refer to MISC INFORMATION section	
					TOP	BOTTOM		
Conductor							PAY: 5322	
Surface	13 3/8	48.0	H-40	8rd	0	147	TD: 5322	
Intermediate	9 5/8	32.0	J-55	8rd	0	2038	PBTD:	
Production	7	26.0	N-80	LTC	0	31	KB-GL:	
Production	7	23.0	N-80	8rd	31	5245	CSG DEPTH	
Tubing	2.375 *	4.6	J-55	10rd NUE	0	5244	WELLBORE SCHEMATIC	
Perforations	Open Hole	* Model F 1.81" SN ran on bottom.						
Wellhead	API 3k 1978 vintage wellhead - refurbished with new slips and seals in 1987.					9		
	5/8 x 7 x 2 3/8, 2 3/8 tubing hanger							
Refer to "Wellbore Diagram" tab								
D.H. EQUIPMENT			TYPE		DEPTH (ft)			
PACKER INFO:			Upper					
			Lower					
NIPPLE PROFILE INFO:			Upper					
			Lower					
SSSV INFO:								
CEMENT INFO						Calc TOC (ft)		
13 3/8	Cmt'd to surface w/ 200 sx neat					0		
9 5/8	Cmt'd to surface w/ 600 sx Poz and 100 sx Neat. 35th joint has cmt basket					0		
7	Cmt'd w/ 200 sx neat. CBL TOC is deeper, estimated at 4674'					3665		
MISC INFORMATION								
REFER TO WELL SUMMARY RPT, WELLBORE DIAGRAM, ELOG, ETC. (see spreadsheet tabs below)								
Kill Fluid Calculation <small>* Note that kill fluid calculation tabs are hidden</small>								
Maximum calculated bottom-hole pressure (for reference only):			2195	psig	* input			
* Maximum storage field surface pressure (MAOP):			1900	psig	* input			
Well TD:			5322	ft TVD	* input			
Top of storage zone (Oriskany):			5260	ft TVD	* input			
Calculated maximum BH pressure at top of zone:			2179	psig	* output Kill Fluid (TOZ)			
Kill fluid density at top of zone @:			150	psi OB	8.51	ppg	* output Kill Fluid (TOZ)	
Proposed depth of BP (n/a):			5260	ft TVD	* input			
Calculated maximum BH pressure at depth of BP:			2179	psig	* output Kill Fluid (BP)			
Kill fluid density at depth of BP @:			150	psi OB	8.51	ppg	* output Kill Fluid (BP)	
Required minimum kill fluid density:			8.6	ppg	* greater of the two			
Current AOF:			27,823	MCF/D				
Top historical AOF:			65,983	MCF/D				
Last MVRT:			None available.					
SBT:			Ran SLB CBL 09.17.1987, estimated 7" top of cement found 4674', quality poor to partial.					
PROPOSED YEAR:	2024	ERCB PERMIT REQD:	YES	NO	(Internal) PDS Required:	YES	NO	
PREPARED BY:	Maria Medvedeva	DT. APPLIED:	ISSUED:		APPROVED:	Recoverable Signature		
PREP DATE:	4/6/2023	REVIEWED BY:	James Amos		X Brent Criser			

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WELL JOB PLAN		STS Well Engineering & Technology		PAGE 2	DATE JOB PREPARED: 4/6/2023
Objective: Baseline Integrity Project				LAST PROFILE UPDATE:	
TITLE: Snub tubing, log, CTCO, rerun tubing			WORK TYPE: Well Integrity		
FIELD: Coco A	WELL: 12076				
STAT: WV	SHL (Lat/Long): 38.397269 -81.447868		API: 47-039-02811		
TWP: Elk	BHL (Lat/Long): 38.397269 -81.447868		CNTY: Kanawaha		

PROCEDURE

NOTE: Historic annulus pressure cycling 800-860 psi. Gas samples indicate storage sourced gas composition. Wellhead seals pressure tested good and annulus was killed with 8.7 ppg KWF at the end of 2022 successfully.

- 1 Obtain State well work permit, EM&CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC.
- 2 Notify landowner.
- 3 Obtain General Work Permit and Wellsite Review & Turnover Form from Operations.
- 4 Notify Reservoir Engineering & Geosciences (REG) of intent to take well out of service.
- 5 Notify environmental inspector prior to beginning work. If required, notify State/Federal regulatory agencies prior to beginning work.
- 6 Disconnect well line.
- 7 Prepare access road and well site. Install ECD's per EM&CP.
- 8 Service all wellhead valves.
- 9 Document and report to WE&T the initial casing and annular pressures.
- 10 Pump 20 gals methanol and 20 bbls fresh water down tubing to verify it's open.
- 11 Flow well up casing to verify no bridges and dry wellbore.
- 12 MIRU TTS slickline unit. RIH to find bottom of tubing. Install TTS packoff plug #1 in bottom joint of tubing. Perform negative pressure test in stages to 0 psig. Install TTS packoff plug #2. Perform negative pressure test in stages to 0 psig.
- 13 Remove tbg valve and bonnet. Spray / pour lubricant around top of tubing mandrel and around lock-down pins. Clean mandrel lift threads and verify thread profile. NU 7-1/16" 3M gate valve, Cameron double BOP (blind-shear in bottom / 2-3/8" pipes in top), and annular.
- 14 MIRU stand-alone snubbing stack. Perform low (250 psig) and high (2300 psig) pressure test on each BOP component, including FOSV (2), choke line, blow-off line, and equalization line.
- 15 PU pulling joint, screw into tubing hanger, grab bite on tubing with snubbing slips, equalize pressure across hanger, back out mandrel hold-down pins, and unseat hanger.
- 16 Strip / snub tubing out of hole. On last 3 joints RIH 60 ft every joint with weight on masonry twine to verify depth of upper RBP. Last joint, stop connection just below annular, close gate valve and lower snubbing pipe rams, and bleed pressure to verify last joint. Note that there will likely be pressure inside tubing between the two RBPs.
- 17 Evaluate tubing condition, for tubing to be rerun back in the well.
- 18 MIRU Baker Atlas Logging. Run guage ring and HRVRT casing inspection logs, **GR-N-DT and Sonar diagnostic logs.**
Request 1-day turnaround on HRVRT analysis. Condition of 7" casing will determine next steps. Consult with WE&T engineer before proceeding.
- 19 MIRU 1.75" CTU.
- 20 Flow well. If well wont flow, unload with nitrogen.
- 21 Perform CTCO and 2000 gallons of 15% HCL treatment.
- 22 RDMO CTU.
- 23 Flow well to recover treatment fluids.
- 24 Perform final 45-min flowback test thru 3/4" choke.
- 25 Snub tubing back in well with wireline re-entry guide, Otis XN and Otis X seating nipples on bottom. Do not run tubing into openhole.
- 26 Land tubing and lock-down mandrel. RDMO snubbing unit.
- 27 Reconnect well line.
- 28 MIRU TTS slickline unit. Pressure tubing. Run gauge ring and pull SN plugs. RDMO slickline unit.
- 29 Notify WET Project Support that well is back in-service.
- 30 Reclaim R&L.
- 31 Commission well by completing, processing, and retain for records the Wellsite Review and Turnover Form.
- 32 Notify REG that well is ready for storage service.

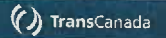
Amos
9-5-23

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PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 4/6/2023		

10/13/2023

Last Updated: 2/7/2023 12:05 PM

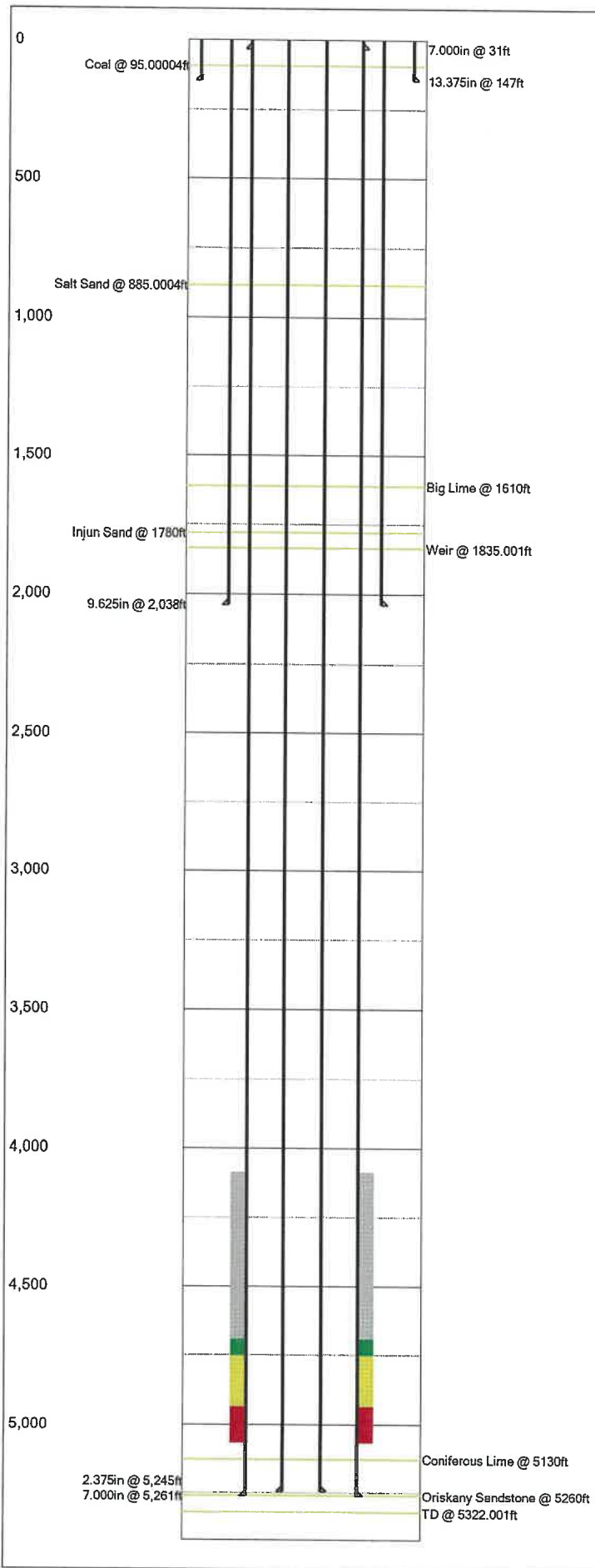


Field Name		Lease Name		Well No.
Coco A		Coco A - 12076		12076
County		State		API No.
Kanawha		WV		47039028110000
Version		Version Tag		
0		Current Completion		
G.L. (ft)	K.B. (ft)	Sec.	Township/Block	Range/Survey
5,322.0		70-61	Elk	030212076
Operator		Well Status	Latitude	Longitude
TransCanada		ACTIVE	38.3973	-81.4479
Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From
PropNum		Spud Date	Comp. Date	
L. W. Harless, Et Al		2/1/1978		
Additional Information				
Other1	Other2	Other3	Other4	
Coco A	0302	030212076		
Prepared By		Updated By	Last Updated	
			2/7/2023 12:05 PM	

Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
2/1/1978	Casing	13.375	48.00	H-40	0	147
2/2/1978	Surface Pipe	9.625	32.00	J-55	0	2,038
9/4/1987	Casing	7.000	23.00	N-80	0	31
2/3/1978	Casing	7.000	23.00	N-80	31	5,261
9/2/1987	Tubing	2.375	4.60	J-55	0	5,245

C	Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	9/17/1987	0	7.000	4,088	4,690	Free Pipe
	9/17/1987	0	7.000	4,690	4,750	Good Quality
	9/17/1987	0	7.000	4,750	4,934	Partial Quality
	9/17/1987	0	7.000	4,934	5,070	Poor Quality

Formation	Top (TVD ft)	Comments
Coal	95	Comments: Coal @95'
Salt Sand	885	Comments: @ 940'
Big Lime	1,610	
Injun Sand	1,780	
Weir	1,835	
Coniferous Lime	5,130	
Oriskany Sandstone	5,260	
TD	5,322	



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cccc A
12076

Form 886-P54
(Rev. 8-76)

COLUMBIA GAS SYSTEM - COLUMBIA GAS TRANSMISSION CORPORATION
WELL LOG SUMMARY

WELL NO. 12076	FIELD Blue Creek	DATE WORK STARTED 2-14-78	DATE WORK COMPLETED 7-14-78				
DATE DRILLING STARTED 2-14-78	DATE DRILLING COMPLETED 2-28-78	SHUT-IN DATE 2-28-78	TOTAL DEPTH 5322'				
HOLE SIZE	Bit Gauge (inches)	1 7/8	1 3/4	8-3/4	6-1/8	FORMATION RECORD	
	From - To (feet)					FORMATION	FROM TO
CASING & TUBING <small>(All Measurements Less Threads)</small>	Size (O.D.)	13-3/8	9-5/8	7	2-3/8	Clay	0 10
	Weight/Foot	48	32	23	4.6	Sand	10 95
	Steel Grade	H-40	J-55	N-80	J-55	Coal	95 98
	Coupling Type	Long	Short	Short	NV	Sand	98 123
	Setting Depth	147	2028	5231	5244	Sand	123 126
	Left in Hole	147	2028	5231	5244	Sand	126 136
CEMENT RECORD	No. of Sacks	200	700	200	-	Shale	885 885
	Type	Neac	Poz-Neac	Neac	-	Shale	1410 1525
	Weight (# Gallon)	15.6	15.6	15.3	-	BigLime	1525 1610
	Return to Surface	Yes	Yes	Yes	-	Injun	1610 1780
	Plug Down Pressure	-	1000	1000	-	Weir	1780 1835
						Shale	1835 2043
DOWN HOLE EQUIPMENT	Manufacturer	-	-	-	-	Lime	2043 5130
	Type	-	GS - FC	GS - FC	-	Oriskany	5130 5260
	Size	-	9-5/8	7	-		
	Setting Depth	-	2038-1974	5268-5224	-		
PERFORATING RECORD	From (feet)	Open hole completion.					
	To (feet)						
	No. Shots Perfor.						
	Kind of Shot						
	Date						
STIMULATION RECORD	Formation	Oriskany		Formation		Formation	
	Date	7-14-78		From		From	
	Type	H ₂ O Frac.		To	5302	To	
	Fluid (Total Bbl.)	884					
	Propping Agent (#)	45,000 20-40 Sand					
OPEN FLOW TESTS	Service Co.	Halliburton		BEFORE	AFTER	BEFORE	AFTER
	Date	7-17-78					
	Open Flow	14.7MMCF					
	Duration (hour)						
	Type Gauge	SideStatic					
WELLHEAD PRESSURE TESTS	Size Opening	4"					
	START DATE	7-17-78					
	1 Minute						
	3 Minutes						
	5 Minutes						
	10 Minutes						
	20 Minutes						
	72 Hours	1480					
LOGGING RECORD	ELEVATION	996.74		DISTANCE TO GROUND	10'		
	DEPTH MEASUREMENT TAKEN FROM	<input checked="" type="checkbox"/> Kelly Bushing <input type="checkbox"/> Ground <input type="checkbox"/> Other (specify) _____					
	Logged By (company)	Schlumberger					
	Type of Log	Gamma Ray	Neutron				
	Date	2-27-78	2-27-78				
REMARKS	From (feet)	5300	2600				
	To (feet)	Surface	5300				
PREPARED BY	A. O. Eplin	DATE	9/11/78	APPROVED BY		DATE	

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10/13/2023

WW-2A
(Rev. 6-14)

1.) Date: 09/07/2023
2.) Operator's Well Number Coco A 12076
State County Permit
3.) API Well No.: 47-039-02811

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name Michael L. Thomas
Address PO Box 747
Pinch WV 25156
(b) Name Leonard Thomas
Address 247 Homeplace Ln
Elkview, WV 25071
(c) Name _____
Address _____

added per Mr. Michael Thomas's request

5) (a) Coal Operator
Name Not operated
Address _____
(b) Coal Owner(s) with Declaration
Name Not operated
Address _____
Name _____
Address _____

6) Inspector Terry Urban
Address PO Box 1207
Clendenin, WV 25045
Telephone 304-549-5915

(c) Coal Lessee with Declaration
Name Not operated
Address _____

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

OR Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Well Operator Columbia Gas Transmission, LLC
By: Maria Medvedeva
Its: Senior Wells Engineer Storage Technical Services
Address: 1700 MacCorkle Ave SE
Charleston WV 25314-1273
Telephone: 304-410-4313
Email: maria_medvedeva@tcenergy.com

Subscribed and sworn before me this 7th day of September, 2023
Daniel J. Eash Notary Public

My Commission Expires June 14, 2028

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

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10/13/2023

4703902811W

Columbia Gas Transmission, LLC
1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



August 31, 2023

Michael L. Thomas
PO Box 747
Pinch, WV 25156

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to work on an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Coco A 12076 (API 47-039-02811).

As part of the well permitting process, Columbia, the well operator, is required to provide a copy of all applicable permit application forms for your review and record retention.

Regards,

Maria Medvedeva
Senior Wells Engineer
Well Engineering & Technology
Columbia Gas Transmission, LLC

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pinch, WV 25156

OFFICIAL USE

Certified Mail Fee	\$4.35
Extra Services & Fees (check box, add fee as appropriate)	\$7.55
<input type="checkbox"/> Return Receipt (hardcopy)	\$3.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$9.45
Total Postage and Fees	\$17.55

Sent To: Michael Thomas
Street and Apt. No., or PO Box No.:
City, State, ZIP+4®: CA 12076

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

<p>SENDER: COMPLETE THIS SECTION</p> <ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. <p>1. Article Addressed to: Michael Thomas PO Box 747 Pinch, WV 25156</p> <p>9590 9402 7630 2122 5682 55</p> <p>2. Article Number (Transfer from service label) 7022 2410 0002 6396 3041</p>	<p>COMPLETE THIS SECTION ON DELIVERY</p> <p>A. Signature x </p> <p><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) Michael L Thomas</p> <p>C. Date of Delivery SEP 05 2023</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Collect on Delivery Restricted Delivery		<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®																
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™																
<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery																
<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Signature Confirmation™																
<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery																
<input type="checkbox"/> Collect on Delivery Restricted Delivery																	
<input type="checkbox"/> Insured Mail																	
<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)																	

PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt

www.tcenergy.com

10/13/2023

4703902811W

Columbia Gas Transmission, LLC
1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



September 7th, 2023

Leonard Thomas
247 Homeplace Ln
Elkview, WV 25071

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to work on an existing underground natural gas storage well located on property line between you and your brother Michael Thomas. Mr. Michael Thomas has been notified separately. As reference, the field and well ID is Coco A 12076 (API 47-039-02811).

As part of the well permitting process, Columbia, the well operator, is required to provide a copy of all applicable permit application forms for your review and record retention.

Regards,

Maria Medvedeva
Senior Wells Engineer
Well Engineering & Technology
Columbia Gas Transmission, LLC

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Elkview, WV 25071

OFFICIAL USE

Certified Mail Fee	\$4.35
Extra Services & Fees (check box, add fee as appropriate)	\$7.55
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$9.65
Total Postage and Fees	\$17.55

Sent To: **Leonard Thomas**
Street and Apt. No., or PO Box No.
City, State, ZIP+4®: **CA 12076**

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

RECEIVED
Office of Oil and Gas
SEP 18 2023
WV Department of
Environmental Protection

0726
02
Postmark
Here
SEP - 7 2023
09/07/2023

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
**Leonard Thomas
247 Homeplace Ln
Elkview, WV 25071**

9590 9402 7630 2122 5682 31

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent
 Addressee

B. Received by (Printed Name) **LEONARD THOMAS**

C. Date of Delivery **9-12-23**

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

Adult Signature Priority Mail Express®
 Adult Signature Restricted Delivery Registered Mail™
 Certified Mail Registered Mail Restricted Delivery
 Certified Mail Restricted Delivery Signature Confirmation™
 Collect on Delivery Signature Confirmation Restricted Delivery
 Collect on Delivery Restricted Delivery
 Insured Mail
 Insured Mail Restricted Delivery (over \$500)

7022 2410 0002 6396 3065

www.tcenergy.com

PS Form 3811 July 2020 PSN 7530-02-000-9053

Domestic Return Receipt

10/13/2023

WW-2A Surface Waiver
(4/16)

SURFACE OWNER WAIVER

County Kanawha Operator Columbia Gas Transmission LLC
Operator well number Coco A 12076

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date _____

Print Name

Company Name _____
By _____
Its _____

RECEIVED
Office of Oil and Gas Date _____

SEP 18 2023

Signature WV Department of Environmental Protection Date _____

10/13/2023

COAL OPERATOR, OWNER, OR LESSEE WAIVER

* coal not operated

County Kanawha
Operator Columbia Gas Transmission LLC

Operator's Well Number Coco A 12076

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date

Company Name
By
Its _____
Date

Signature Date

RECEIVED
Office of Oil and Gas
SEP 18 2023
WV Department of
Environmental Protection

10/13/2023

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
F.H. Harless et al	United Fuel Gas Company	Storage Lease - 1048281-000	124 / 451

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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Office of Oil and Gas

SEP 18 2023

WV Department of
Environmental Protection


The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:
By: Its:

Columbia Gas Transmission, LLC

Maria Medvedeva

Senior Wells Engineer Storage Technical Services



10/13/2023

N/A

WW-2B1
(5-12)

Well No. Coco A 12076

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contractor chosen to collect sample.

Certified Laboratory Name _____
Sampling Contractor _____

Well Operator Not applicable - existing underground natural gas storage well
Address _____
Telephone _____

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

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SEP 18 2023
WV Department of
Environmental Protection

10/13/2023

WW-9
(5/16)

API Number 47 - 039 - 02811
Operator's Well No. Coco A 12076

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Columbia Gas Transmission, LLC OP Code 307032
Watershed (HUC 10) Indian Creek of Elk River Quadrangle Blue Creek, WV

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: N/A

Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number 34-167-23862)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Mud Master 64054; Reserve Environmental Services (WMGR 123SW008)
Appalachian Water Services (WMGR 123SW001))

Will closed loop system be used? If so, describe: yes - steel flow line to tanks

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Fresh water

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? NaCl, biocide, soda ash, polymer, starch, CaCO3, KCl, HCl

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? To be managed by Waste Management and US Ecology for disposal at permitted landfill

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

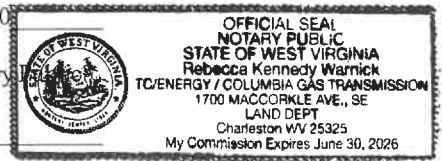
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]
Company Official (Typed Name) Maria Medvedeva
Company Official Title Senior Wells Engineer Storage Technical Services

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Office of Oil and Gas
SEP 18 2023
WV Department of
Environmental Protection

Subscribed and sworn before me this 31st day of August, 2023

[Signature] Notary
My commission expires 6/30/25



10/13/2023

Proposed Revegetation Treatment: Acres Disturbed < 1.0 Prevegetation pH 6-7

Line 2 Tons/acre or to correct to pH 7-8

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch hay or straw @ 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual rye	40	Orchard Grass and/or Tall Fescue	29
		Birdsfoot Trefoil (Empire)	9
		Annual Rye	12

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

[Handwritten Signature]

Comments:

Title: Inspector Charlie Coas

Date: 9-5-23

Field Reviewed? Yes No

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Office of Oil and Gas
SEP 18 2023
WV Department of
Environmental Protection

10/13/2023

N/A

4703902811W

N/A

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material will be used for deicing or fill material on the property.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

During routine tailgate and JSA meetings groundwater protection will be a topic of discussion.

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

No fertilizer will be stored on site. Fuel, oil, and lubricants will be stored on site, but located within secondary containment. Spills from construction equipment, well treatment fluids, and produced well fluids are the only possible source of contamination to groundwater.

All construction and well servicing equipment will be monitored and inspected daily for leaks or spills.

Signature: 

Date: 08/31/2023

RECEIVED
Office of Oil and Gas

SEP 18 2023

WV Department of
Environmental Protection

10/13/2023

N/A

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: Columbia Gas Transmission, LLC
Watershed (HUC 10): Indian Creek of Elk River Quad: Blue Creek, WV
Farm Name: L. W. Harless, Et Al

- 1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

No fluids planned to be discharged. No fertilizer will be stored on site. Fuel, oil, and lubricants will be stored on site, but located within secondary containment. Accidental spills from construction equipment, well treatment fluids, and produced well fluids are the only possible source of contamination to groundwater. Drilling and flowback fluids to be stored in tanks. All accumulated fluids to be hauled off site to UIC disposal facility.

- 2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

All construction and well servicing equipment will be monitored and inspected daily for leaks. Tanks to be monitored daily for leaks. Spill kits will be on site.

- 3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Indian Creek is at a distance of 0.41 miles SW.
The Trail Kitchen WV9908037 is the closest Well Head Protection Area at a distance of 11 miles E from discharge area.

- 4. Summarize all activities at your facility that are already regulated for groundwater protection.

N/A

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Office of Oil and Gas
SEP 18 2023
WV Department of
Environmental Protection

- 5. Discuss any existing groundwater quality data for your facility or an adjacent property.

10/13/2023

WV DEP Reclamation Plan - Site Detail

Coco A well 12076 (API 47-039-02811)

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed



- Legend**
- Coco A - 12076
 - CWA 12076

10/13/2023

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Office of Oil and Gas
SEP 18 2023
WV Department of
Environmental Protection

WV DEP Reclamation Plan - Overview

Coco A well 12076 (API 47-039-02811)

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed



Legend

- Coco A - 12076

10/13/2023

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Office of Oil and Gas

SEP 18 2023

WV Department of
Environmental Protection

4703902811W

(ROMANCE)



BLUE CREEK QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(CLIO)

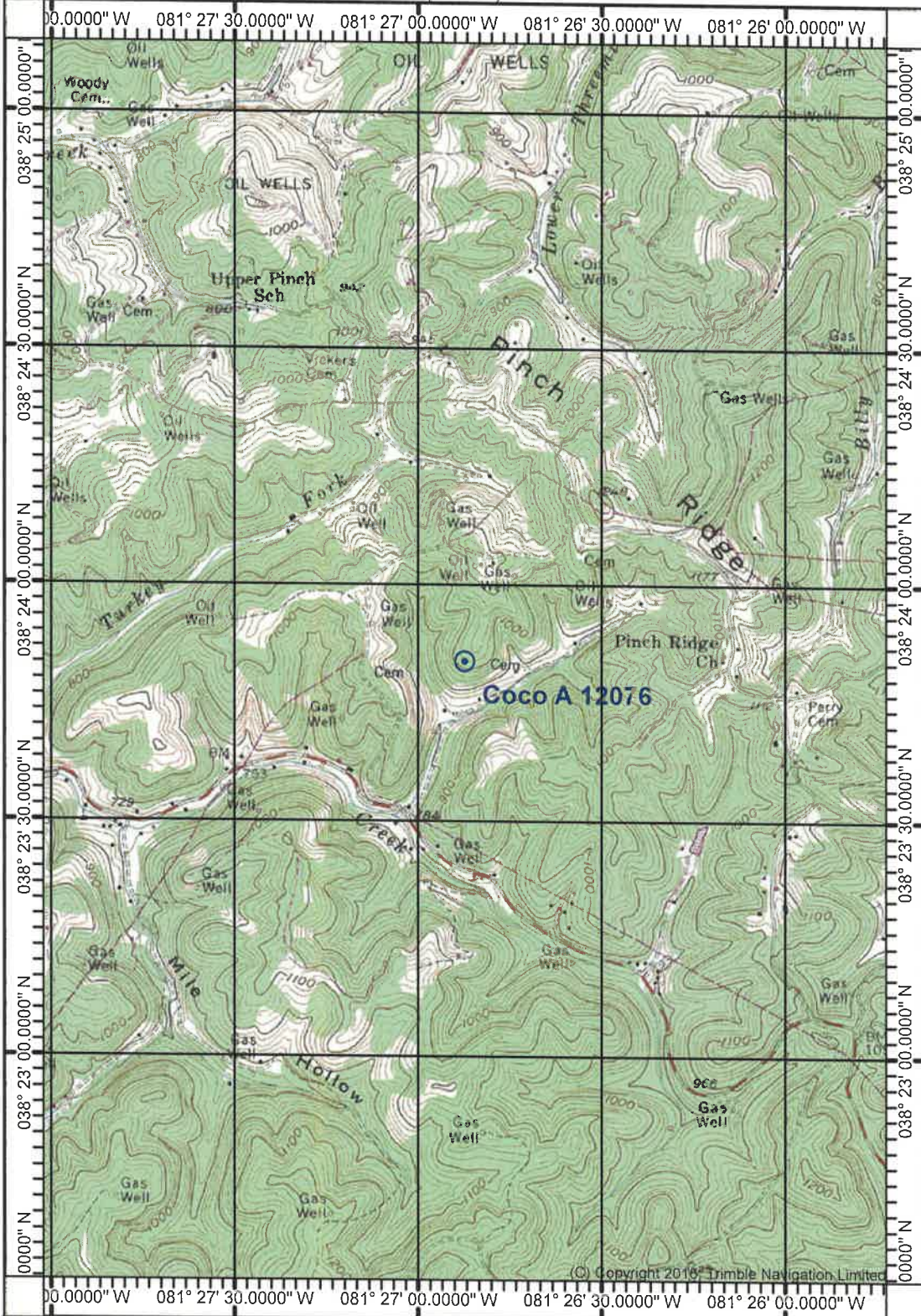
081° 28' 01.2517" W
038° 25' 08.8187" N

(KETTLE)

081° 25' 42.8816" W
038° 25' 08.8187" N

(BIG CHIMNEY)

(CLENDENIN)



038° 22' 31.0896" N
081° 28' 01.2517" W

(QUICK)
SCALE 1:24000

Printed: Tue May 23, 2023
081° 25' 42.8816" W
038° 22' 31.0896" N

(MAMMOTH)

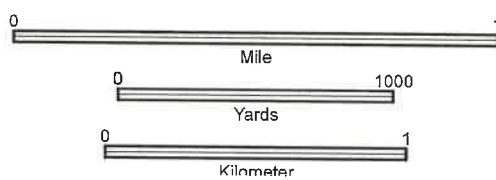
(CHARLESTON
EAST)

Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:24,000
Maps

North American 1983 Datum (NAD83)

To place on the predicted North American
1927 move the projection lines 11M N and
14M E

Declination



CONTOUR INTERVAL 20 FT

38081-D3-TM-024
BLUE CREEK, WV
JAN 1, 1977

10/13/2023
RECEIVED
Office of Oil and Gas
SEP 18 2
WV Department of
Environmental Protection

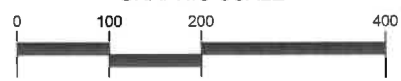
4703902811W

8,946'

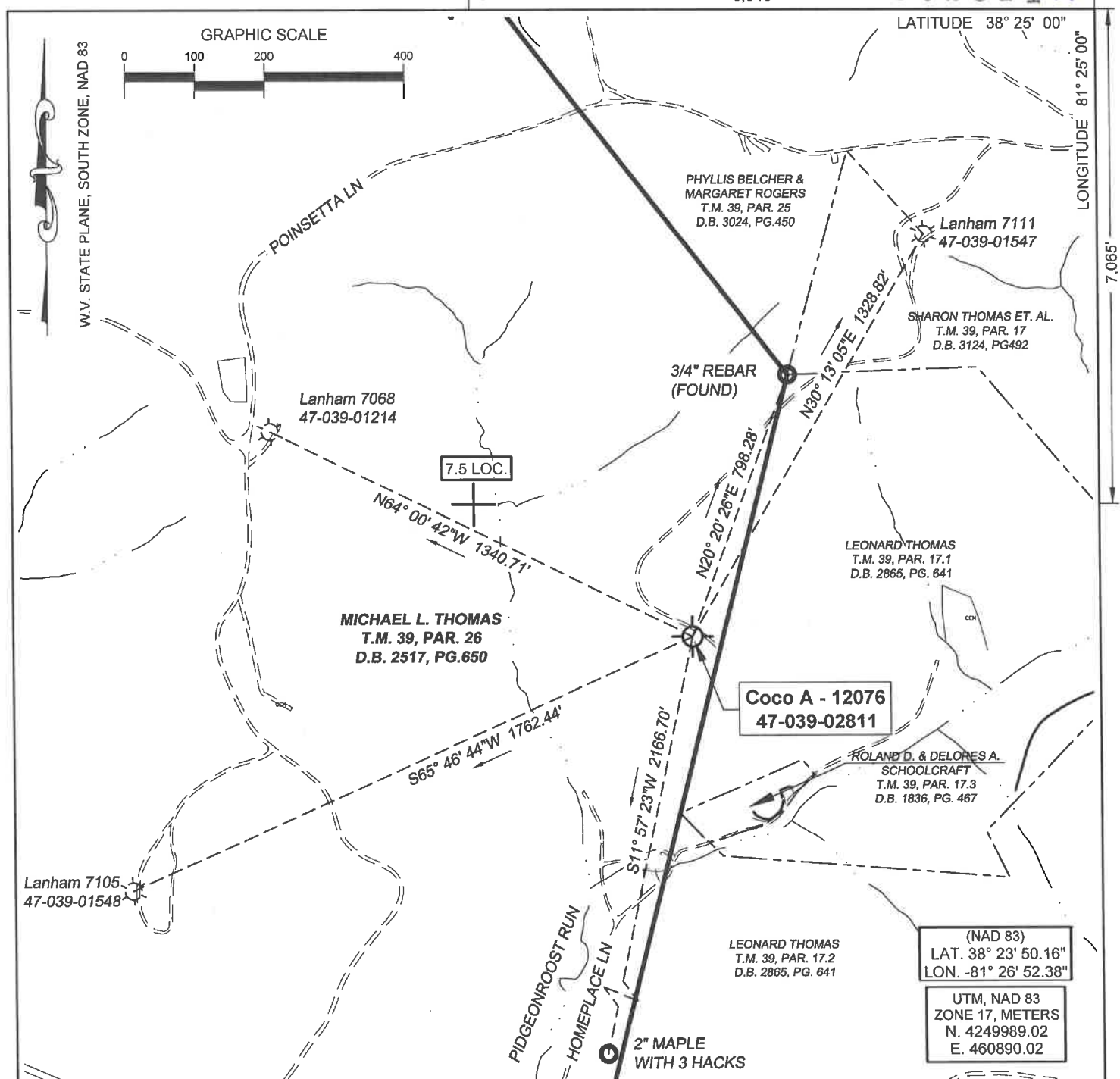
LATITUDE 38° 25' 00"

LONGITUDE 81° 25' 00"

GRAPHIC SCALE



W.V. STATE PLANE, SOUTH ZONE, NAD 83

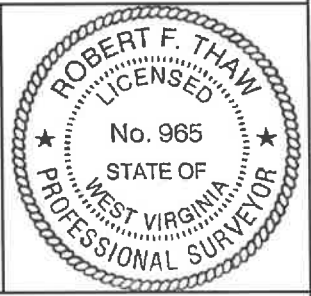


(NAD 83)
LAT. 38° 23' 50.16"
LON. -81° 26' 52.38"
UTM, NAD 83
ZONE 17, METERS
N. 4249989.02
E. 460890.02

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No. 2201-2345-001-014
DRAWING No. 2201-2345-001-014
SCALE 1"=400'
MINIMUM DEGREE OF ACCURACY 1:200
PROVEN SOURCE OF ELEVATION TRIMBLE R10 GPS UNIT

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.
(SIGNED) R. F. Thaw
ROBERT F. THAW PS #965



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
NITRO, WV

DATE AUGUST 8 2023
OPERATOR'S WELL No. 12076
API WELL No. 47 039 - 02811W

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 039 PERMIT 02811W
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 999.8' WATER SHED INDIAN CREEK OF THE ELK RIVER
DISTRICT ELK COUNTY KANAWHA
QUADRANGLE BLUE CREEK, WV

SURFACE OWNER MICHAEL L. THOMAS ACREAGE 208
OIL & GAS ROYALTY OWNER UNITED FUEL GAS COMPANY

LEASE ACREAGE 244 LEASE NO. 1048281-000

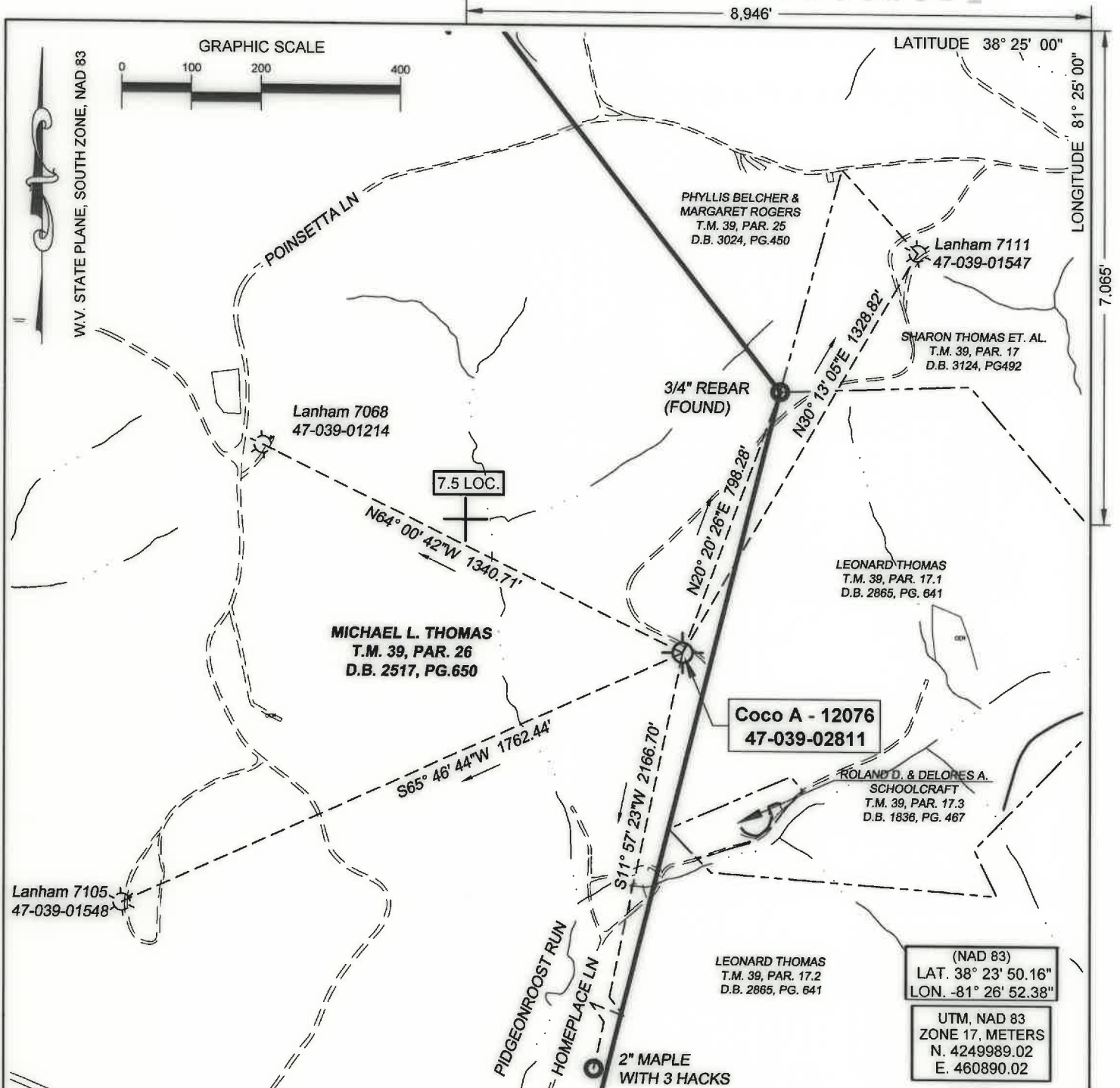
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE
STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION 10/18/2023
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION _____ ESTIMATED DEPTH 5322

WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT MARIA MEDVEDEVA
ADDRESS PO BOX 1273, CHARLESTON, WV 25325-1273 ADDRESS 1700 MACCORKLE AVE., S.E. CHARLESTON, WV 25314

FORM IV-6 (8-78)

4703902811

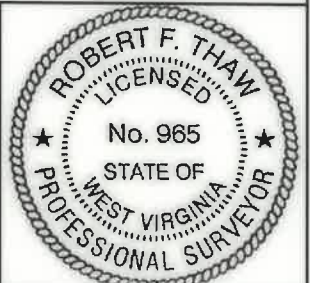


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No. 2201-2345-001-014
 DRAWING No. 2201-2345-001-014
 SCALE 1"=400'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION TRIMBLE R10
GPS UNIT

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

(SIGNED) [Signature]
ROBERT F. THAW PS #965



STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS

NITRO, WV

DATE AUGUST 8 2023
 OPERATOR'S WELL No. 12076
 API WELL No. 47 039 - 02811W

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 999.8' WATER SHED INDIAN CREEK OF THE ELK RIVER
 DISTRICT ELK COUNTY KANAWHA
 QUADRANGLE BLUE CREEK, WV

SURFACE OWNER MICHAEL L. THOMAS ACREAGE 208
 OIL & GAS ROYALTY OWNER UNITED FUEL GAS COMPANY

LEASE ACREAGE 244 LEASE NO. 1048281-000

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE
 STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION 10/13/2023
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION _____ ESTIMATED DEPTH 5322

WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT MARIA MEDVEDEVA
 ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS 1700 MACCORKLE AVE., S.E.
25325-1273 CHARLESTON, WV 25314

FORM IV-6 (8-78)

4708902811W

Columbia Gas Transmission, LLC
1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



September 15, 2023

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

CK #43072
\$900

Enclosed is a well work permit application for the following Columbia Gas Transmission existing storage well:

Coco A 12076 (API 47-039-02811)

Please email to address below, and return hardcopies of permits to:

Columbia Gas Transmission
1700 MacCorkle Ave SE
Charleston, WV 25314
Attn: Maria Medvedeva

If you have questions, feel free to call.

Regards,

Maria Medvedeva
Senior Wells Engineer
Well Engineering & Technology
Columbia Gas Transmission, LLC
Mob: 304-410-4313
maria_medvedeva@tcenergy.com

RECEIVED
Office of Oil and Gas
SEP 18 2023
WV Department of
Environmental Protection

www.tcenergy.com

10/13/2023