



---

west virginia department of environmental protection

---

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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Tuesday, June 6, 2023  
WELL WORK PERMIT  
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC  
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 12049  
47-039-02797-00-00

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: 12049  
Farm Name: KIDDY, JOSEPH B.  
U.S. WELL NUMBER: 47-039-02797-00-00  
Vertical Re-Work  
Date Issued: 6/6/2023

Promoting a healthy environment.

## 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.

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  
Operator ID County District Quadrangle

2) Operator's Well Number: Coco C 12049 3) Elevation: 734

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: 5230

6) Proposed Total Depth: 1537 Feet Formation at Proposed Total Depth: Big Lime

7) Approximate fresh water strata depths: 70' and 150' as reported by driller

8) Approximate salt water depths: None reported by driller, Salt Sand reported from 850' - 1350' by driller.

9) Approximate coal seam depths: None reported by driller

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)

Obtain logs. Install new Master and Side Valves. Attempt to tighten and pressure test 7" casing. Mechanically cut above TOC and run new 7" 23# J-55 casing tying back to casing stub with an external casing patch. Perform freshwater treat.

\* casing and equipment listed below are existing. 7" casing top 2 joints replaced in 2002 for 7" 23 M-95/P-110

13) **CASING AND TUBING PROGRAM**

**\* existing**

*Handwritten signature and date: 5-3-23*

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13-3/8 *	H-40	48	150	150	
Fresh Water	9-5/8 *	H-40	32	2083	2083	
Coal						
Production	7 *	P-110	23	68	68	
Production	7 *	N-80	23	5062	5062	
Tubing	Pulled	2012				
Liners						

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of Environmental Protection

Packers: Kind: \_\_\_\_\_  
Sizes: \_\_\_\_\_  
Depths Set \_\_\_\_\_

<b>WELL JOB PLAN</b>		<b>STS Well Engineering &amp; Technology</b>		PAGE 1	DATE JOB PREPARED: 4/3/2023
Objective: Integrity Improvement				LAST PROFILE UPDATE:	
TITLE: MVX/SVX, casing leak repair, FWT				WORK TYPE: O&M	
FIELD: Coco C		WELL ID: 12049		LEASE #: 47679	
STATE: WV		SHL (Lat/ Long) 38.443441 -81.456606		API: 47-039-02797-0000	
DIST/TWP: Elk		BHL (Lat/Long) 38.443441 -81.456606		CNTY: Kanawha	
EXISTING TUBULAR CONFIGURATION		OD (inches)	WEIGHT (PPF)	DEPTH (ft)	
				TOP	BOTTOM
Conductor					
Surface		13 3/8	48.0	0	150
Intermediate		9 5/8	32.0	0	2083 *
Intermediate		* as per Baker 2019 HRVRT log, historic record 2069'			
Production		7	23.0	0	68 / 5130
Tubing					
Perforations		Refer to "Wellbore Diagram" tab			
Perforations		Refer to "Wellbore Diagram" tab			
Perforations		Refer to "Wellbore Diagram" tab			
Wellhead		API 5K, 7" flowstring x 9-5/8" support, 7" 8rd connection			
D.H. EQUIPMENT		TYPE		DEPTH (ft)	
PACKER INFO:		Upper			
		Lower			
NIPPLE PROFILE INFO:		Upper			
		Lower			
SSSV INFO:					
CEMENT INFO					TOC (ft)
13 3/8	Cemented to surface w/125 sx Class "A"				0
9 5/8	Cemented to surface w/600 sx Poz + 100 sx Neat				0
7	Cemented w/200 sx Class "A". Baker SBT log ran 6/03/2022 TOC is at 4095'.				4095
MISC INFORMATION					
<b>REFER TO WELL SUMMARY RPT, WELLBORE DIAGRAM, ELOG, ETC. (see spreadsheet tabs below)</b>					
<b>Kill Fluid Calculation</b> <small>* Note that kill fluid calculation tabs are hidden</small>					
Maximum calculated bottom-hole pressure (for reference only):		2080	psig	* input	
Maximum storage field surface pressure (MAOP):		1800	psig	* input	
Well TD:		5230	ft TVD	* input	
Top of storage zone:		5148	ft TVD	* input	
Calculated maximum BH pressure at top of zone:		2057	psig	* output Kill Fluid (TOZ)	
Kill fluid density at top of zone @:		250	psi OB	8.62	ppg * output Kill Fluid (TOZ)
Proposed depth of BP:		5000	ft TVD	* input	
Calculated maximum BH pressure at depth of BP:		2050	psig	* output Kill Fluid (BP)	
Kill fluid density at depth of BP @:		250	psi OB	8.85	ppg * output Kill Fluid (BP)
Required minimum kill fluid density:		8.9	ppg	* greater of the two	
Current AOF:		87,645	MCF/D		
Top historical AOF:		123,445	MCF/D		
Last MVRT:		12/18/2019 HRVRT shows 26% metal loss at 1749.78' and 25% metal loss at 1756.17'.			
SBT:		Baker SBT log ran 6/03/2002 confirms 7" casing TOC at 4095'. Log data gap from 3890' - 2170' --> obtain new log per RMP			
PROPOSED YEAR:	2023	ERCB PERMIT REQD:	YES ___ NO ___ X ___	(Internal) PDS Required: YES ___ NO ___	
PREPARED BY:	Maria Medvedeva	DT. APPLIED:	ISSUED:	APPROVED: <del>Invalid signature</del>	
PREP DATE:	4/3/2023	REVIEWED BY:	James Amas		

RECEIVED  
Office of Oil and Gas  
**MAY 08 2023**  
WV Department of  
Environmental Protection

X 

<b>WELL JOB PLAN</b>		<b>STS Well Engineering &amp; Technology</b>		PAGE 2	DATE JOB PREPARED: 4/3/2023
Objective: Integrity Improvement			LAST PROFILE UPDATE:		
TITLE: MVX/SVX, casing leak repair, FWT				WORK TYPE: O&M	
FIELD: Coco C	WELL: 12049				
STAT: WV	SHL (Lat/Long):	38.443441	-81.456606	API: 47-039-02797-0000	
TWP: Elk	BHL (Lat/Long):	38.443441	-81.456606	CNTY: Kanawha	

PROCEDURE

**NOTE: 20+ yr history of annulus pressure build up issues, storage sourced. The highest pressure reached 1200 psi, after which it is believed formation broke down. Pressure doesn't cycle with I/W seasons, most recently ranging 913 - 1000 psig. Likely thief zone below 9-5/8" csg is the Berea 2103 - 2105'. Master valve was replaced in 2016, most recently repacked to stop leaking thru. Wellhead seals tested to 2200 psig good. Baker GR-N-DT and Sonan logs indicate multiple 7" collar leak depths, from 400' to possibly as deep at 3600'. 10/2022 - Well has a history of salt buildup. good results from FWW. Recommend FW soon to try to get back to 2010 deliverability**

Attempt to tighten the leaking 7" csg connections

- 1 Obtain 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 Plumb 7" x 9-5/8" annulus into flowback tank, blow down and leave venting.
- 11 Load / top 7" x 9-5/8" annulus with kill fluid. Top off remaining annuli with FW. Document volumes.
- 12 MIRU Baker Atlas Logging. Run gauge ring, Intex CBL and install RPB1 at 5000' correlated to Baker GR-N-DT 02/13/23. Perform negative pressure test down to 0 psi in increments. Load wellbore with 9.0 ppg viscosified polymer fluid and perform a positive pressure test to 500 psig. Install RBP2 500ft above RBP1. **4% Potassium Chloride for shale inhibition required in kill fluid.**
- 13 Install new master and side valves.
- 14 MIRU service rig.
- 15 Remove wellhead, unset slips on 7" casing and weld on pulling nipple.
- 16 Strip / NU 9" or 13" annular BOP on top of the casing head - there is no way of testing.
- 17 Perform baseine pre-work 7" casing pressure test to 2200 psi at surface for 30 minutes. Chart test and send to WE&T engineer.
- 18 Pull and attempt to tighten connections starting with 5Klbs over hookload, increasing overpull in 5Klbs increments to 90Klbs.  
**DO NOT exceed 90Klbs.**
- 19 Pressure test casing to 2200 psig surface (~1.2 x MAOP) for 30 minutes. Chart pressure test. Consult with WE&T engineer.  
*If pressure test passes and leak is resolved proceed to Step 20.*  
*If pressure test fails process to Step 35.*
- 20 ND annular BOP and reinstall DSPA and MV.
- 21 Pressure test wellhead seals to 2200 psi.
- 22 Pull RBPs with wireline.
- 23 Swab well to re-establish gas flow.
- 24 Run a repeat Baker GR-N-DT log with annulus shut and flowing. Consult with WE&T engineer.
- 25 RDMO and reconnect to pipeline.
- 26 If work occurs between May 1 and September 1, injection season, pump 20 bbls TFW down casing and place well back in service. If work occurs after September 1, withdrawl season, pump 20 bbls TFW down casing, allow to soak 2 days and then place well back in service.
- 27 Notify WET Project Support that well is back in-service.
- 28 Reclaim R&L.
- 29 Commission well by completing, processing, and retain for records the Wellsite Review and Turnover Form.
- 30 Work is complete. Notify REG / WE&T that well is ready for storage service.  
  
*If pressure test failed.*
- 35 Wireline free point 7" casing. TOC is 4095' per Baker SBT 06/03/02 log (data gap from 3890'), confirm top with new log Step 12. Consult with engineer.
- 36 Mechanically cut (use carbide cutters) and pull 7" casing ~3900' as correlated to the Baker GR-N-DT 02/13/23 log. Need good free pipe at cut to be able to slide lead-seal external patch over stub.
- 37 Circulate clean with viscosified drilling fluid. Pull 7" casing.
- 38 TIH with 8-1/2" mill (designed to dress top of 7" csg stub). Wash down to top of 7" csg stub, dress top of 7" stub, circulate clean, and TOO. H.
- 39 Run new 7" 23# J-55 LTC csg, circulate packer inhibitor fluid behind casing, and reconnect with lead-seal external patch. Installation to be supervised by manufacturer representative. Torque connections tight to optimum torque (3130 ft-lbs for 7" 23# J-55 LTC).  
**NOTE 1: FULLY coat the pin end with Bestoflife 2000 pipe dope**
- 40 Pressure test to 2200 psig for 30 minutes. Consult with the WE&T engineer, compare results against the baseline test in Step 17.
- 41 Slack off on casing. Strip off BOPE.

Maria Medvedeva	REVIEWED BY: <i>James Amas</i>	APPROVED: <i>Brent Criser</i>
4/3/2023		

RECEIVED  
Office of Oil and Gas

MAY 08 2023

WV Department of  
Environmental Protection

4703902797W

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 3	DATE JOB PREPARED: 4/3/2023
Objective: Integrity Improvement			LAST PROFILE UPDATE:		
TITLE: MVX/SVX, casing leak repair, FWT			WORK TYPE: O&M		
FIELD: Coco C	WELL: 12049				
STAT: WV	SHL (Lat/Long): 38.443441 -81.456606		API: 47-039-02797-0000		
DIST/TWP: Elk	BHL (Lat/Long): 38.443441 -81.456606		CNTY: Kanawha		
<b>PROCEDURE (continued)</b>					
<p>42 Pull recommended tension on lead-seal external patch and drop slips in top of csg spool.</p> <p>43 Re-pressure test casing.</p> <p>44 Cut down 7" casing, install primary seals, install DSPA, MV and pressure test seals to 2200 psig.</p> <p>45 Pull RBPs with wireline.</p> <p>46 Swab well to re-establish gas flow.</p> <p>47 RDMO and reconnect to pipeline.</p> <p>48 If work occurs between May 1 and September 1, injection season, pump 20 bbls TFW down casing and place well back in service. If work occurs after September 1, withdrawal season, pump 20 bbls TFW down casing, allow to soak 2 days and then place well back in service.</p> <p>49 Notify WET Project Support that well is back in-service.</p> <p>50 Reclaim R&amp;L.</p> <p>51 Commission well by completing, processing, and retain for records the Wellsite Review and Turnover Form.</p> <p>52 Work is complete. Notify REG / WE&amp;T that well is ready for storage service.</p>					
PREPARED BY: Maria Medvedeva	REVIEWED BY: <i>James Amas</i>		APPROVED: <i>Brent Criser</i>		
PREP DATE: 4/3/2023					

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

~ not to scale ~

### COCO C 12049 Current Condition (as of 04.03.2023)

MAOP 1800 psi  
1.2 psi/ft frac grad  
Safety Factor \*1.2

Sea Level @ 734 ft

Fresh Water Depth @ 70' - 150'

Sand / Shale 0' - 933'

Salt Sand 933' - 1349'

Red Rock 1349' - 1370'  
Shale 1370' - 1445'

Maxon Sand 1420' - 1445'  
Shale 1445' - 1480'

Big Injun Sand 1574' - 1740'

Berea 2103' - 2105'

Sand / Shale

Light grey fill indicates cement in place during well construction.

Onondaga 5029' - 5149'

Oriskany 5149' - 5200'  
(gas storage)

13-3/8" 48# H-40 casing @ 150'  
- Cemented to surface with 125 sx class A

Baker 7" diagnostic GR-N-DT and Sonar logs suggest multiple 7" connection leaks, as shallow as 300' and as deep as 2700'. Significant "noise" measured below the 9-5/8" shoe.

Baker 2019 HRVRT log showed 26% metal loss at depths 1749.78' & 1756.17' only.

9-5/8" 32# H-40 csg @ 2083'  
- Cemented to surface with 600 sx Poz + 100sx Neat

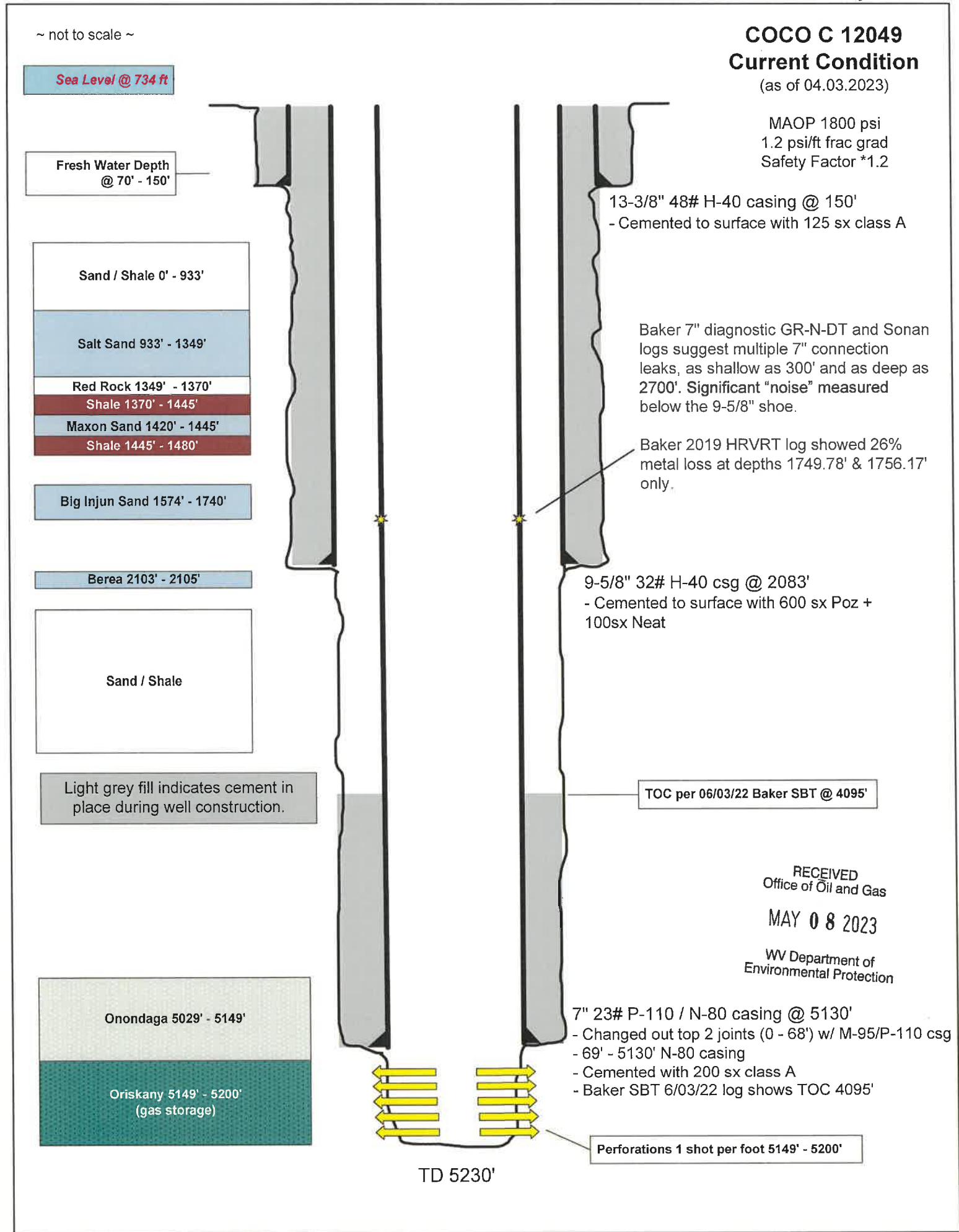
TOC per 06/03/22 Baker SBT @ 4095'

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

7" 23# P-110 / N-80 casing @ 5130'  
- Changed out top 2 joints (0 - 68') w/ M-95/P-110 csg  
- 69' - 5130' N-80 casing  
- Cemented with 200 sx class A  
- Baker SBT 6/03/22 log shows TOC 4095'

Perforations 1 shot per foot 5149' - 5200'

TD 5230'



#12049

Form OG-10



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage

Quadrangle Blue Creek  
Permit No. Kan-2797

WELL RECORD

Oil or Gas Well Gas  
(KIND)

Company <u>Columbia Gas Transmission Corp.</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>P.O. Box 1273, Charlestown WV</u>	Size			
Farm <u>Chloe Copenhaver</u> Acres <u>97</u>	16			Kind of Packer
Location (waters) <u>Blue Creek</u>	<u>13 3/8"</u>	<u>150'</u>	<u>150'</u>	
Well No. <u>12049</u> Elev. <u>742.03 BL</u>	<u>XX 9-5/8"</u>	<u>2069'</u>	<u>2069'</u>	Size of
District <u>Elk</u> County <u>Kanawha</u>	<u>8 1/4"</u>			Depth set
The surface of tract is owned in fee by <u>Dora M. Kiddy</u>	<u>5 3/16"</u>	<u>5130'</u>	<u>5130'</u>	
Address <u>516-101/2 St. Pksbg</u>	<u>4 1/2"</u>			Perf. top
Mineral rights are owned by <u>Same as Above</u>	<u>3"</u>	<u>5156</u>	<u>5156</u>	Perf. bottom
Address	<u>2 3/8"</u>			Perf. top
Drilling commenced <u>10-13-77</u>	Liners Used			Perf. bottom
Drilling completed <u>11-3-77</u>				
Date Shot From To				
With				
Open Flow /10ths Water in Inch	Attach copy of cementing record.			
/10ths Merc. in Inch	CASING CEMENTED SIZE No. Ft. Date			
Volume Cu. Ft.	Amount of cement used (bags)			
Rock Pressure lbs. hrs.	Name of Service Co.			
Oil bbls. 1st 24 hrs.	COAL WAS ENCOUNTERED AT FEET INCHES			
WELL ACIDIZED (DETAILS)	FEET INCHES FEET INCHES			
WELL FRACTURED (DETAILS)	FEET INCHES FEET INCHES			
RESULT AFTER TREATMENT (Initial open Flow or bbls.)				
ROCK PRESSURE AFTER TREATMENT HOURS				
Fresh Water <u>Sand &amp; Sand &amp; Shale</u> 70' to 150'	Salt Water <u>Salt Sand</u> Feet 850' to 1350'			
Producing Sand <u>Oriskany</u>	Depth <u>5148 to 5200</u>			

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Clay		Soft	0	15			
Sand & Shale			15	70			
Sand			70	90	Water		
Shale & Sand			90	850	Water		
Salt Sand	White		850	1350			
Red rock	Red		1350	1370			
Shale	Black		1370	1420			
Maxon Sand	White		1420	1445			
Shale	Black		1445	1480			
Lime	Gray		1480	1680			
White Sand			1680	1725			
Injun Sand	Red		1725	1740			
Shale	Black		1740	1920			
Sand			1920	2020			
Shale			2020	5029			
Coniferous							
Lime			5029	5149			
Oriskany			5149	5200			

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection



WW-2A  
(Rev. 6-14)

1). Date: 05.01.2023  
2.) Operator's Well Number Coco C 12049  
State County Permit  
3.) API Well No.: 47- 039 - 02797

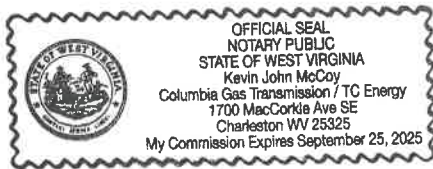
**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

4) Surface Owner(s) to be served:  
(a) Name Stephanie J Blair  
Address 2423 Southern Hwy  
Mineral Wells, WV 26150  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
5) (a) Coal Operator  
Name Not operated  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name Not operated  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name Not operated  
Address \_\_\_\_\_  
6) Inspector Terry Urban  
Address PO Box 1207  
Clendenin, WV 25045  
Telephone 304-549-5915

**TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:**

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas  
X 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)  
X        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 2nd day of May, 2023

[Signature] Notary Public  
My Commission Expires 9-25-2023

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of Environmental Protection

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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov)

4703902797W

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



May 1, 2023

Stephanie J Blair  
2423 Southern Hwy  
Mineral Wells, WV 26150

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to repair an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Coco C 12049 (API 47-039-02797).

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](http://www.usps.com)®.

Mineral Wells, WV 26150

CERTIFIED MAIL USE

Certified Mail Fee \$4.15

Extra Services & Fees (check box, add fee as appropriate):  
 Return Receipt (hardcopy) \$0.00  
 Return Receipt (electronic) \$0.00  
 Certified Mail Restricted Delivery \$0.00  
 Adult Signature Required \$0.00  
 Adult Signature Restricted Delivery \$0.00

Postage \$9.65  
**Total Postage and Fees \$17.15**

Sent To Stephanie Blair  
 Street and Apt. No., or PO Box No.  
 City, State, ZIP+4® CC12049

0726 04  
 MAY 2 2023  
 Postmark Here  
 05/02/2023

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

RECEIVED  
Office of Oil and Gas

MAY 08 2023

WV Department of  
Environmental Protection

[www.tcenergy.com](http://www.tcenergy.com)

**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:  
Stephanie Blair  
2423 Southern Hwy  
Mineral Wells, WV 26150

2. Article Number (Transfer from service label)  
 7022 2410 0002 6396 2983

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

7022 2410 0002 6396 2983  
 Mail Restricted Delivery

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

COMPLETE THIS SECTION ON DELIVERY

A. Signature  
[Signature]  Agent  Addressee

B. Received by (Printed Name)  
Jess Blair JB

C. Date of Delivery  
 \_\_\_\_\_

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

SURFACE OWNER WAIVER

County Kanawha

Operator  
Operator well number

Columbia Gas Transmission LLC  
Coco C 12049

**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 57<sup>th</sup> 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.  
Office of Oil and Gas

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Company  
Name  
By  
Its

MAY 08 2023

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
WV Department of  
Environmental Protection

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

COAL OPERATOR, OWNER, OR LESSEE WAIVER

\* coal not operated

County Kanawha

Operator Columbia Gas Transmission LLC

Operator's Well Number Coco C 12049

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 57<sup>th</sup> 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  
MAY 08 2023  
WV Department of  
Environmental Protection

**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
Velma Price	United Fuel Gas Company	Storage Lease - 1047679-000	120 / 464

**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

RECEIVED  
Office of Oil and Gas  
MAY 08 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



N/A

WW-2B1  
(5-12)

Well No. Coco C 12049

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.

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

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) Blue 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  tu  
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

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]

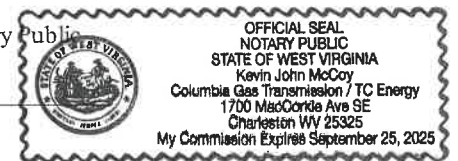
Company Official (Typed Name) Maria Medvedeva

Company Official Title Senior Wells Engineer Storage Technical Services

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

Subscribed and sworn before me this 2nd day of May, 2023

[Signature] Notary Public  
My commission expires 9-25-2023



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

Lime 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: *Angela Miller*

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Title: *Inspector Oil & Gas*

Date: *5-3-23*

Field Reviewed? (  ) Yes (  ) No

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection



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): Blue Creek of Elk River Quad: Blue Creek, WV  
Farm Name: Velma Price

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.

Blue Creek is at a distance of 0.04 miles E.

The Trail Kitchen WV9908037 is the closest Well Head Protection Area at a distance of 11 miles SE from discharge area.

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

N/A

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

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

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: 05.01.2023

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

# WV DEP Reclamation Plan - Site Detail

Coco C well 12049 (API 47-039-02797)

- 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 C - 12049
- CWA/CC 12049

Limit of Proposed Disturbance on existing well site

~0.5 acre

Existing Access Road

400 ft



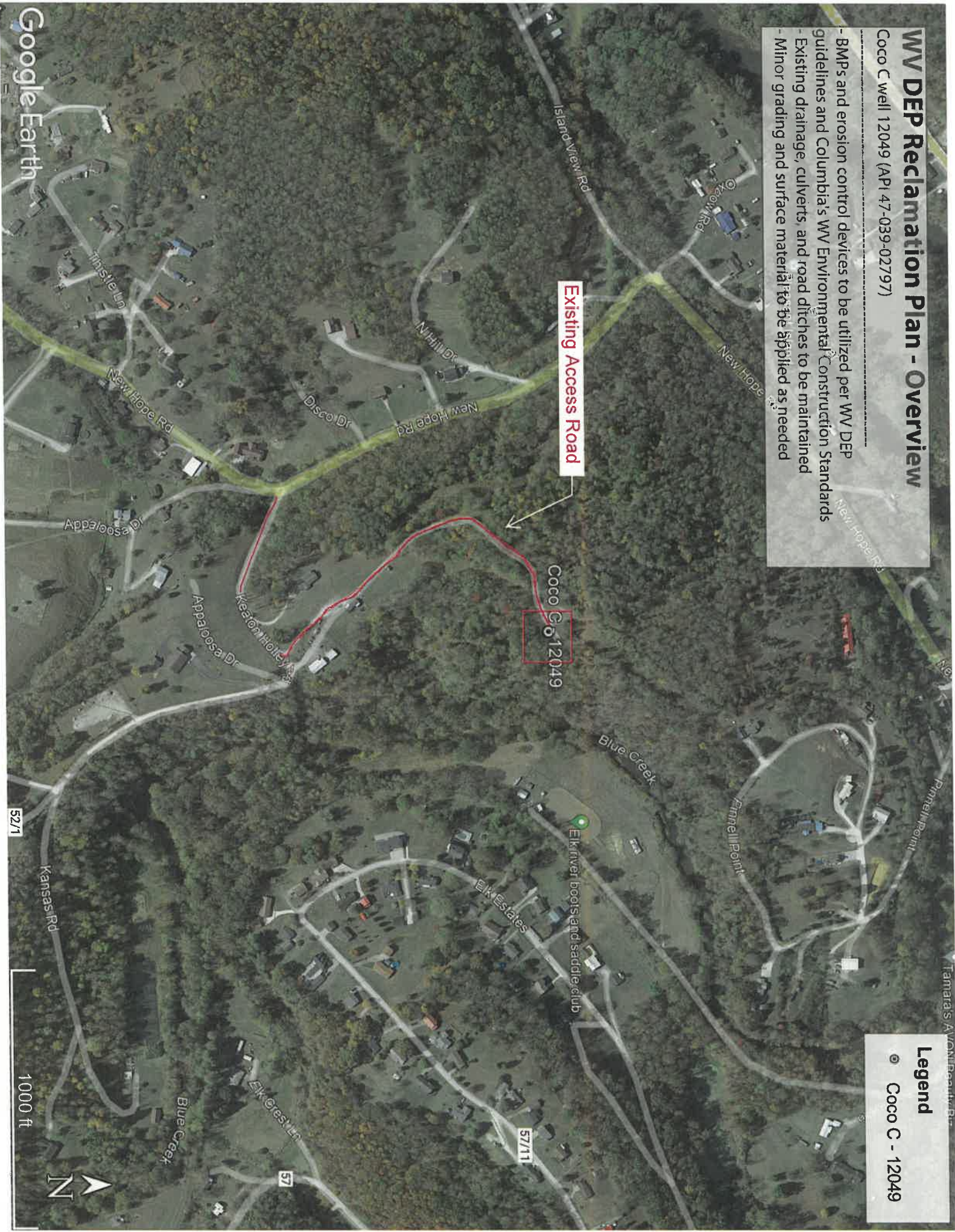
Google Earth

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

### WV DEP Reclamation Plan - Overview

Coco C well 12049 (API 47-039-02797)

- 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



Existing Access Road

Coco C 12049

### Legend

Coco C - 12049

RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

4703902797W

(ROMANCE)



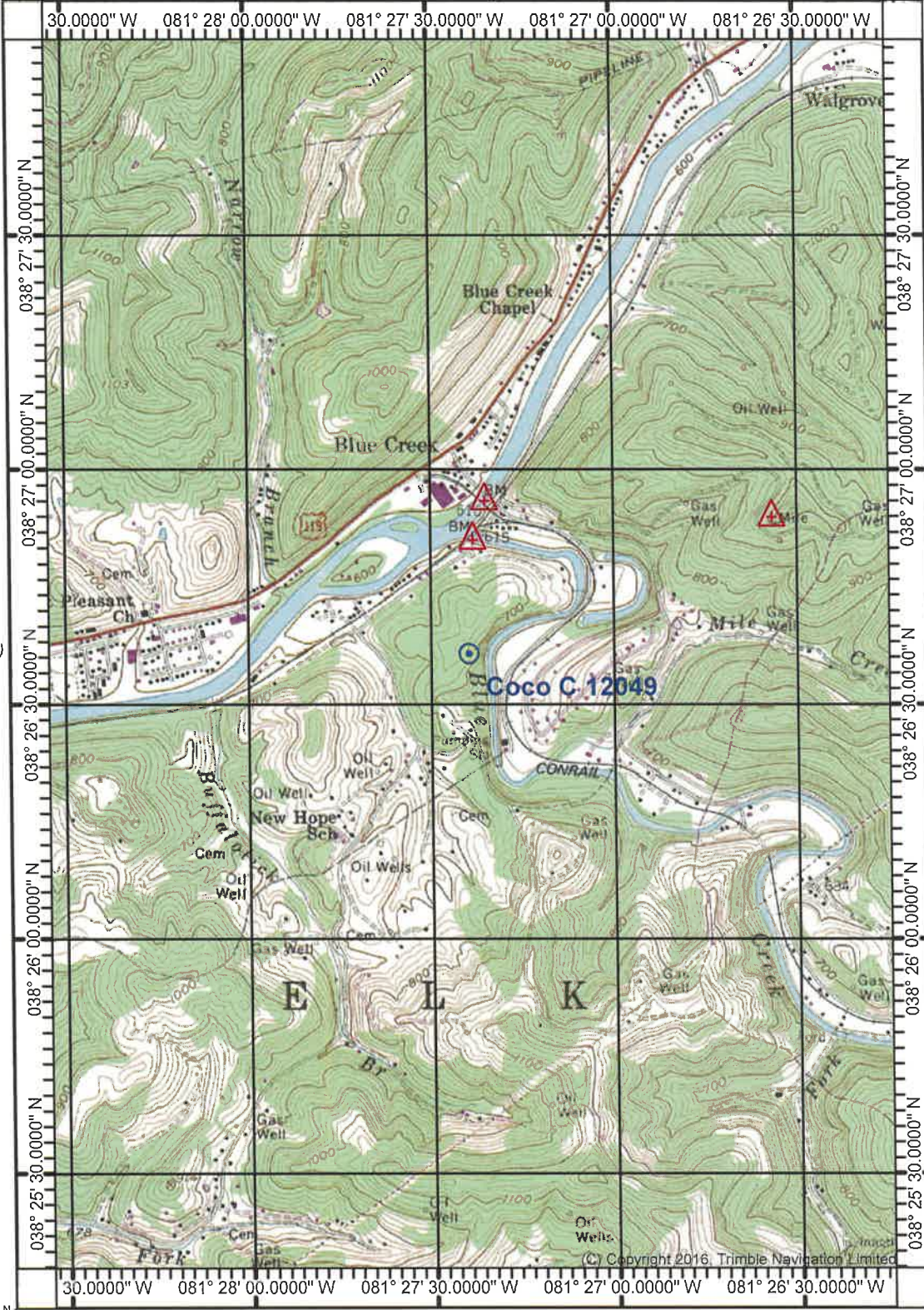
BLUE CREEK QUADRANGLE  
WEST VIRGINIA  
TOPOGRAPHIC SERIES

(CLIO)

081° 28' 32.7525" W  
038° 27' 55.0378" N

(KETTLE)

081° 26' 14.2940" W  
038° 27' 55.0378" N



(BIG CHIMNEY)

(CLENDENIN)

(CHARLESTON EAST)

(MAMMOTH)

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

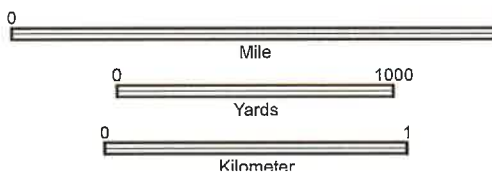
North American 1983 Datum (NAD83)

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

Declination



(QUICK)  
SCALE 1:24000



CONTOUR INTERVAL 20 FT

Printed: Tue Apr 11, 2023

038° 25' 17.3087" N  
081° 26' 14.2940" W

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

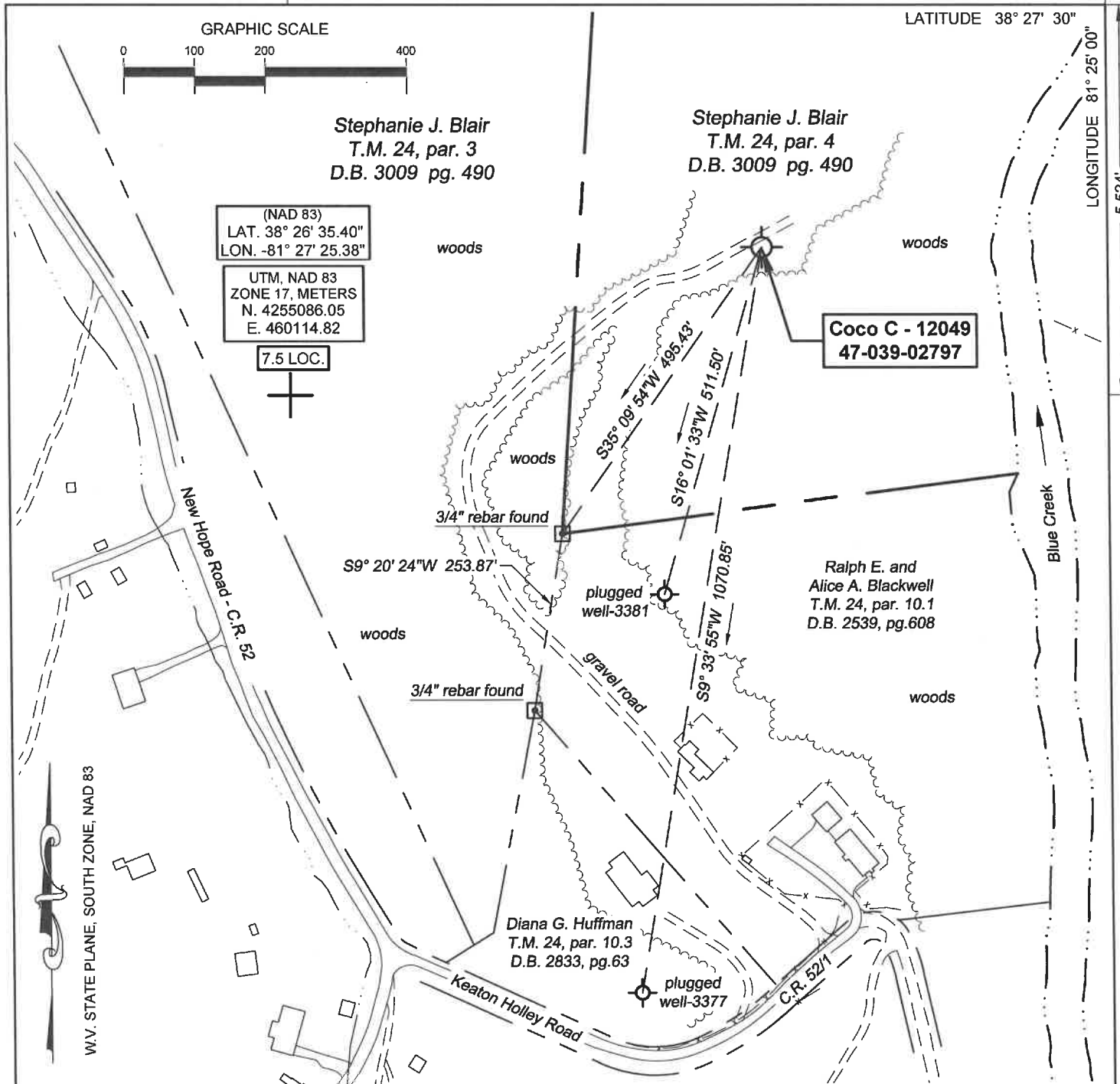
RECEIVED  
Office of Oil and Gas  
MAY 08 2023  
WV Department of  
Environmental Protection

4703902797

11,566'

LATITUDE 38° 27' 30"

LONGITUDE 81° 25' 00"



GRAPHIC SCALE



(NAD 83)  
LAT. 38° 26' 35.40"  
LON. -81° 27' 25.38"

UTM, NAD 83  
ZONE 17, METERS  
N. 4255086.05  
E. 460114.82

7.5 LOC.

Coco C - 12049  
47-039-02797

Ralph E. and  
Alice A. Blackwell  
T.M. 24, par. 10.1  
D.B. 2539, pg.608

Diana G. Huffman  
T.M. 24, par. 10.3  
D.B. 2833, pg.63

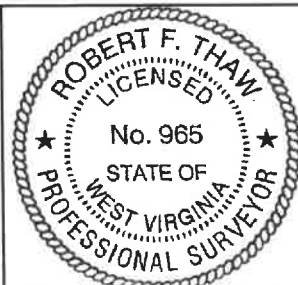
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No. 2301-2345-001-001  
DRAWING No. 2101-2345-001-001  
SCALE 1"=200'  
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)

ROBERT F. THAW PS #965



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

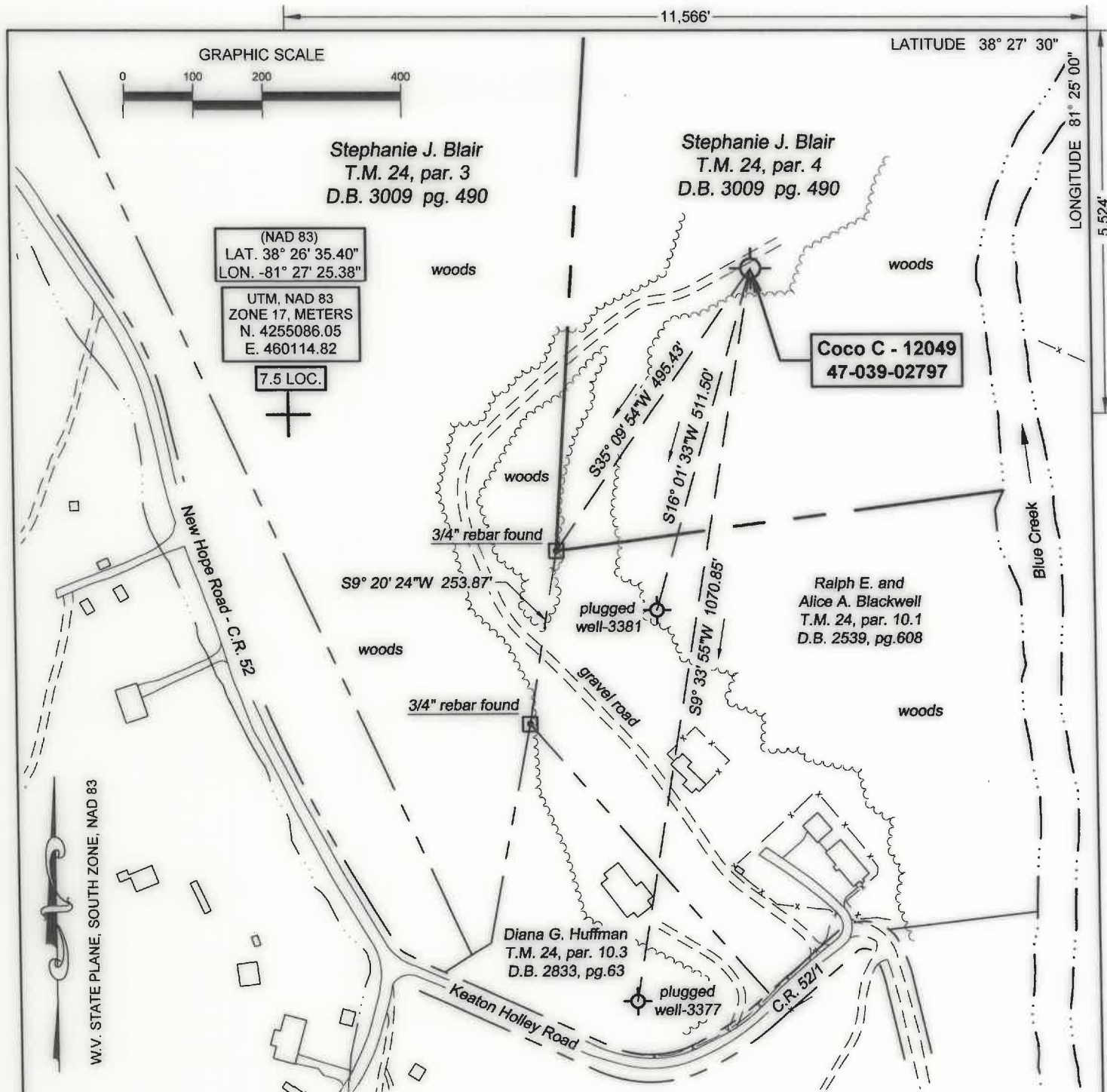


DATE APRIL 20 2023  
OPERATOR'S WELL No. 12049  
API WELL No.

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  STATE 47 COUNTY 039 PERMIT 02797  
(IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 734.5' WATER SHED BLUE CREEK OF THE ELK RIVER  
DISTRICT ELK COUNTY KANAWHA  
QUADRANGLE BLUE CREEK, WV  
SURFACE OWNER STEPHANIE J. BLAIR ACREAGE 7.88  
OIL & GAS ROYALTY OWNER UNITED FUEL GAS COMPANY  
LEASE ACREAGE 31 LEASE NO. 1047679-000

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE   
STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) VALVE CHANGE, CASING LEAK REPAIR  
PLUG AND ABANDON  CLEAN OUT AND REPLUG   
TARGET FORMATION ORISKANY ESTIMATED DEPTH 5230  
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)

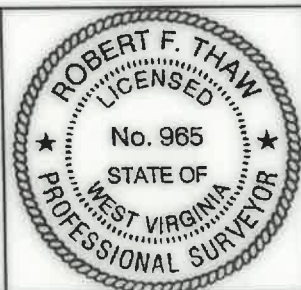


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No. **2301-2345-001-001**  
 DRAWING No. **2101-2345-001-001**  
 SCALE **1"=200'**  
 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. Thaw*  
**ROBERT F. THAW PS #965**



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



DATE **APRIL 20 2023**  
 OPERATOR'S WELL No. **12049**  
 API WELL No. **47 039 - 02797**

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_ STATE COUNTY PERMIT  
 (IF "GAS") PRODUCTION \_\_\_ STORAGE  DEEP  SHALLOW \_\_\_  
 LOCATION: ELEVATION **734.5'** WATER SHED **BLUE CREEK OF THE ELK RIVER**  
 DISTRICT **ELK** COUNTY **KANAWHA**  
 QUADRANGLE **BLUE CREEK, WV**  
 SURFACE OWNER **STEPHANIE J. BLAIR** ACREAGE **7.88**  
 OIL & GAS ROYALTY OWNER **UNITED FUEL GAS COMPANY**  
 LEASE ACREAGE **31** LEASE NO. **1047679-000**

PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE \_\_\_  
 STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_  
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) **VALVE CHANGE, CASING LEAK REPAIR**  
 PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION **ORISKANY** ESTIMATED DEPTH **5230**  
 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)

4703902797W

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



May 8, 2023

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

CK # 43067  
#900<sup>00</sup>

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

Coco C 12049 (API 47-039-02797)

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,

A handwritten signature in blue ink, appearing to read "Maria Medvedeva", with a long horizontal flourish extending to the right.

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  
MAY 08 2023  
WV Department of  
Environmental Protection

[www.tcenergy.com](http://www.tcenergy.com)





Kennedy, James P <james.p.kennedy@wv.gov>

---

**Fwd: Message from KM\_C450i**

1 message

**McLaughlin, Jeffrey W** <jeffrey.w.mclaughlin@wv.gov>

Tue, Jun 6, 2023 at 11:51 AM

To: Maria Medvedeva <maria\_medvedeva@icenergy.com>, Terry W Urban <terry.w.urban@wv.gov>, saillerobinson@kanawha.us, James P Kennedy <james.p.kennedy@wv.gov>

To All:

Please find attached the newly issued Re-Work permit for the Operator's well number 12049 (API No. 47-039-02797).

Regards,

Jeff McLaughlin, Technical Analyst  
WV DEP, Office of Oil and Gas

----- Forwarded message -----

From: <Copy.Center.2064@wv.gov>  
Date: Tue, Jun 6, 2023 at 11:45 AM  
Subject: Message from KM\_C450i  
To: <jeffrey.w.mclaughlin@wv.gov>

---

 **SKM\_C450i23060611460.pdf**  
2364K