



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

Thursday, January 12, 2023
WELL WORK PERMIT
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 7127
47-079-00267-00-00

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

Operator's Well Number: 7127
Farm Name: MELTON, J. E.
U.S. WELL NUMBER: 47-079-00267-00-00
Vertical Re-Work
Date Issued: 1/12/2023

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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. Operator shall provide the Office of Oil and Gas notification of the date that well Re-work commences on this well. Such notice shall be provided by sending an email to DEPOOGNOTIFY@WV.GOV and notifying the inspector 48 hours before well work is anticipated.

*CH # 34892
900 cc*

**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 Putnam Pocatalico Pocatalico, WV
Operator ID County District Quadrangle

2) Operator's Well Number: Lanham 7127 3) Elevation: 597.5

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

5) Proposed Target Formation(s): Big Lime Proposed Target Depth: 1403

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

7) Approximate fresh water strata depths: 45' and 220' as reported by driller 1945

8) Approximate salt water depths: 970' - 1295' as reported by driller 1944

9) Approximate coal seam depths: None reported by driller 1944

10) Approximate void depths, (coal, Karst, other): None reported by driller 1944

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)

Pull tubing. Obtain logs. Install new API wellhead. Cleanout and acid stimulate with 1300 gals 15% HCl.

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* casing and equipment listed below are existing - 2-3/8" tubing will be pulled and not re-run into the well.

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

	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT	
	TYPE	Size	Grade	Weight per ft	For Drilling		Left in Well
Conductor	10.75 *			32.75	49	49	
Fresh Water	8.625 *			28	275	275	
Coal							
Intermediate	7 *			24	1406	1406	
Production	5.5 *			17	1420	1420	200 sx / 240 ft^3
Tubing	2.375*			4.6	1533	1533	
Liners							

Packers: Kind: _____
Sizes: _____
Depths Set _____

Handwritten signature and date: 9-26-22

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 1	DATE JOB PREPARED: 5/9/2022			
Objective: Wellhead Replacement				LAST PROFILE UPDATE:				
TITLE: Pull tubing, log, complete WHX, CTCO / stim				WORK TYPE: MOD				
FIELD: Lanham		WELL ID: 7127		LEASE #: 41162				
STATE: WV		SHL (Lat/ Long) 38.471288 -81.730992		API: 47-079-00267-0000				
DIST/TWP: Poca TANKO		BHL (Lat/Long) 38.471288 -81.730992		CNTY: Putnam				
EXISTING TUBULAR CONFIGURATION		OD (inches)	WEIGHT (PPF)	GRADE	THREAD	DEPTH (ft) TOP BOTTOM	WELLLINE #: X2W7127	FORMATION: refer to MISC INFORMATION section
Conductor								PAY: ELEVATIONS
Surface		10 3/4				0 49		TD: 1537 TMG:
Intermediate		8 5/8	28.0			0 275		PBTD: KB-RF:
Intermediate		7	24.0			0 1406		KB-GL: GL: 596
Production		5 1/2	17.0			0 1420		CSG DEPTH WELLBORE SCHEMATIC
Tubing		2 3/8	4.6			0 1533		
Perforations		Big Lime acid frac stimulated. 7" csg was shot 1387'-1390' per 1950 SLB record						<i>Refer to "Wellbore Diagram" tab</i>
Wellhead		Field Fab, 2" 11-1/2"v connection, 5-1/2" x 7" support						
		7" x 2" Type "Q" tubing head; csg head is 9" x 7" swedge, 9" is 3k						
Refer to "Wellbore Diagram" tab								
D.H. EQUIPMENT		PACKER INFO:		TYPE		DEPTH (ft)		
		Upper						
		Lower						
		NIPPLE PROFILE INFO:						
		Upper						
		Lower						
		SSSV INFO:						
CEMENT INFO						Calc TOC (ft)		
10 3/4		No record				-		
8 5/8		No record				-		
7		1950 Schlumberger Logging record indicates 7" csg perforated 1387 - 1390ft "for squeeze a job". No record of squeeze job however.				-		
5 1/2		Cemented with 200 sx				35		
MISC INFORMATION								
REFER TO WELL SUMMARY RPT, WELLBORE DIAGRAM, ELOG, ETC. (see spreadsheet tabs below)								
Kill Fluid Calculation * Note that kill fluid calculation tabs are hidden								
Maximum calculated bottom-hole pressure (for reference only):		1036		psig		* input		
* Maximum storage field surface pressure (MAOP):		600		psig		* input		
* WHX only once well pressure is below 800psi								
Well TD:		1537		ft TVD		* input		
Top of storage zone (Big Lime):		1403		ft TVD		* input		
Calculated maximum BH pressure at top of zone:		620		psig		* output Kill Fluid (TOZ)		
Kill fluid density at top of zone @: 150 psi OB		10.56		ppg		* output Kill Fluid (TOZ)		
Proposed depth of BP:		1520		ft TVD		* input		
Calculated maximum BH pressure at depth of BP:		622		psig		* output Kill Fluid (BP)		
Kill fluid density at depth of BP @: 150 psi OB		9.77		ppg		* output Kill Fluid (BP)		
Required minimum kill fluid density:		10.6		ppg		* greater of the two		
Current AOF:		677		MCF/D				
Top historical AOF:		740		MCF/D				
Last MVRT:		None run						
SBT:		None run						
PROPOSED YEAR: 2023		ERCB PERMIT REQD: YES ___ NO ___ X ___		(Internal) PDS Required: YES ___ NO ___				
PREPARED BY: Maria Medvedeva		DT. APPLIED: ISSUED:		REVIEWED BY: James Amos		APPROVED: Brent Criser		
PREP DATE: 5/9/2022								

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4707900267

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 2	DATE JOB PREPARED: 5/9/2022
Objective: Wellhead Replacement			LAST PROFILE UPDATE:		
TITLE: Pull tubing, log, complete WHX, CTCO / stim			WORK TYPE: MOD		
FIELD: Lanham	WELL: 7127				
STAT: WW	SHL (Lat/Long): 38.471288	-81.730992	API: 47-079-00267-0000		
TWP: Poca	BHL (Lat/Long): 38.471288	-81.730992	CNTY: Putham		

PROCEDURE

NOTE: Well pressure must be below 600 psi to begin the workover for well control.

- 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 initial tubing, casing, and annular pressures.
- Well pressure must be below 600 psi to continue the workover.**
- 10 Kill well with 10.6 ppg kill weight viscosified polymer fluid. Monitor well to ensure fluid level is static before continuing. If the well is not static, consult with the WE&T engineer. (MIRU wireline unit, run RBP).
- 11 MIRU service rig.
- 12 Remove tbq valve and bonnet.
- 13 Verify that the mandrel has lift threads and if so, stab a pup joint with a 2" valve into the top of mandrel. If mandrel doesn't have lift threads, consult with WE&T engineer.
- 14 Spray / pour lubricant around top of tubing mandrel and around lock-down pins. Clean mandrel lift threads and verify thread profile.
- 15 NU 7-1/16" 3M gate valve, Cameron double BOP (blind-shear in bottom / 2-3/8" pipes in top), and annular. Pressure test low (250psi) and high (1100 psi based on the maximum calculated BHP).
- 16 Pull 2-3/8" tubing.
- 17 MIRU Baker Atlas Logging. Run guage ring, GR-N-CCL, HRVRT and CBL. Send digital copies of logs to WE&T engineer to determine setting depths of the RBP.
Request 1-day turnaround on HRVRT analysis. Condition of 5-1/2" casing will determine next steps. Consult with WE&T engineer before proceeding.
- 18 Install RPB1 per WE&T engineer. Perform pressure test to 200 psi. Install RBP2 ~500 ft above RBP1.
- 19 Remove concrete pad and locate casing top stubs.
- 20 Blow down 5-1/2" x 7", 7" x 8-5/8" annuli and top off with kill fluid. Top off remaining annuli with fresh water.
- 21 Remove BOPs and tubing head.
- 22 Dress top of 7" casing to accommodate new SOW casing head.
- 23 Install new API 5M wellhead.
- 24 Pressure test wellhead seals.
- 25 MIRU Baker Atlas and retrieve RBPs. RDMO wireline truck.
- 26 MIRU 1.75" CTU.
- 27 Flow well. If well won't flow unload with nitrogen.
- 28 Perform CTCO and 1000 gallons of 15% HCL treatment.
- 29 RDMO CTU.
- 30 Flow well to recover treatment fluids.
- 31 Perform final 45-min flowback test thru 3/4" choke.
- 32 Notify WET Project Support that well is back in-service.
- 33 Reclaim R&L.
- 34 Reconnect well line.
- 35 Paint wellhead and well line.
- 36 Commission well by completing, processing, and retain for records the Wellsite Review and Turnover Form.
- 37 Notify REG that well is ready for storage service.

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James Amos
9.26-22

PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 5/9/2022		

01/13/2023

Lanham 7127 (API 47-079-00267) - CTCO and Acid Treatment

API 5K wellhead

5-1/2" 17# csg (grade unknown) ran to 1420'

Burst (assuming J-55 grade): 5320 psig new (4256 psig assuming 80% safety factor)

** Verify with WET engineer that results of HRVRT didn't lower burst*

Capacity: 1420 ft x 0.9764 gal/ft = 1386.5 gals; x 0.0232 bbl/ft = 33 bbls

Big Lime: 1403 – 1537' (driller)

Perfs: None (openhole completion)

TD: 1537' (driller)

Fluids Needed

1300 gals 15% HCl acid treated with corrosion inhibitor, iron control/sequestering agent, and surfactant. Biocide, clay stabilizer, and surfactant to treat +/- 200 bbls fresh water. Liquid caustic on location in case need to neutralize flowback fluids.

** One day before acid treatment load 5-1/2" x 7" annulus with fresh water treated with biocide, corrosion inhibitor, and clay stabilizer*

CTCO Procedure

1. MIRU 1.75" CTU.
2. Load CT with treated fresh water (TFW) and pressure test CT and BOPs to 1100 psig.
** based on the maximum calculated bottomhole pressure*
3. Open well and RIH under static conditions.
4. At 1200' begin jetting with foamed TFW. Jet to TD and cycle up and down across interval 1400' – TD.
5. Begin 15% HCl acid foamed to 50Q and cycle up and down across interval 1400' – TD until 300 gals acid gone.
6. Flow well while POOH to 1000'. Flow until returns are relatively dry.

Acid Treatment

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

▪ 1000 gals 15% HCl acid	2-4 BPM	Max Treating Press = 1100 psig
▪ 60 bbls TFW	2-4 BPM	Max Treating Press = 1100 psig
2. Flow well. If well quits flowing, RBIH with CT unloading fluid with N2.
3. RDMO and release CTU/acid equipment.

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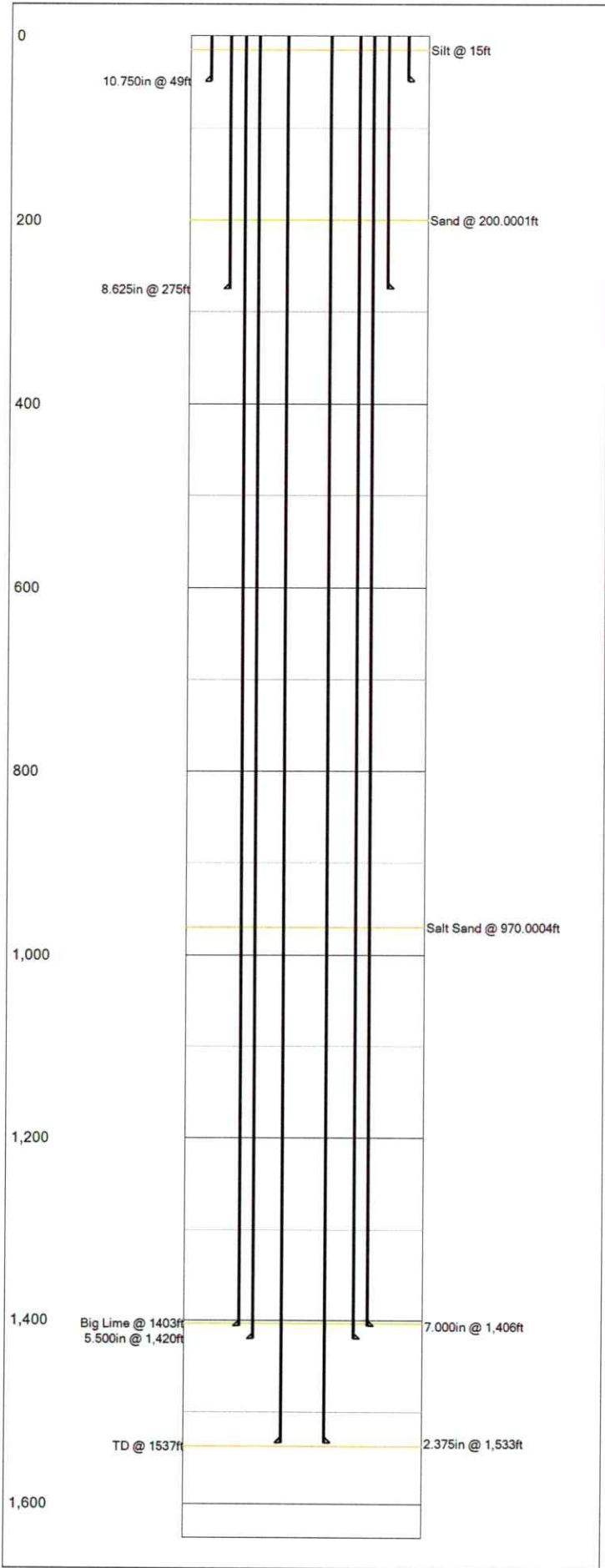
Last Updated: 9/26/2020 12:04 PM



Field Name		Lease Name		Well No.
Lanham		Lanham - 07127		07127
County		State		API No.
Putnam		WV		47079002670000
Version		Version Tag		
0		Current Completion		
G.L. (ft)	K.B. (ft)	Sec.	Township/Block	Range/Survey
1,537.0		56-71	Poca	031007127
Operator		Well Status	Latitude	Longitude
TransCanada		ACTIVE	38.4713	-81.731
Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From
PropNum		Spud Date	Comp. Date	
Pearl W. Melton, Et Al		2/1/1944		
Additional Information				
Other1	Other2	Other3	Other4	
Lanham	0310	031007127		
Prepared By		Updated By	Last Updated	
			9/26/2020 12:04 PM	

Tubular Summary						
Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
2/1/1944	Casing	10.750			0	49
2/2/1944	Casing	8.625	28.00		0	275
2/3/1944	Casing	7.000	24.00		0	1,406
7/3/1950	Casing	5.500	17.00		0	1,420
7/4/1950	Tubing	2.375	4.60		0	1,533

Formation Tops Summary		
Formation	Top (TVD ft)	Comments
Silt	15	Comments: w @ 45
Sand	200	Comments: w @ 220
Salt Sand	970	Comments: g @ 985
Big Lime	1,403	Comments: g @ 1519-1529
TD	1,537	Comments: 358 mcfd



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4707900267W

DATE: _____ ET NO. _____ WORK ORDER NO. _____
 DATE ISSUED: July 12, 1991
 COMPANY: Witco Production DEPT. Operations DIVISION _____ DISTRICT _____
 PROPOSED WORK: Recondition well # X-2-7127(5350), and install 1550' of 2" tubing, and miscellaneous material.
 KNOWN AS: Well X-2-7127(5350)-Additions. NO. _____ ORIGINAL INSTALLATION DATE: _____
 PURPOSE AND NECESSITY: Clean Out Well, and install miscellaneous material, due to well being converted into a Storage Well.
 LOCATION: Well X-2-7127(5350) J.E. Melton # 2.
 IN _____ TOWN Foca TAX DISTRICT _____ TOWNSHIP OR DISTRICT Rural COUNTY Fulton STATE West Virginia
 RELATED PROJECT WORK ORDER NO. 5251 FOR Well # 5350(X-2-7127)-Part Removal.
 APPROVED BY: John G. Martin APPROVED BY: W. Kelley

DETAIL OF EXPENDITURES							
MATERIAL TO BE INSTALLED	Price	SIZE	ESTIMATE		ACTUAL		VARIATION
			QUANTITY	AMOUNT	QUANTITY	AMOUNT	
4# Steel Tubing	.22	2"	1550'	341.00			61
17# Steel Casing	1.05	5 1/2" OD	1435'	1,507.00			93
Baker Cement Shoe	61.71	5 1/2"	1	62.00			29
Type "Q" Tng. Head		7"x2"	1	200.00			00
Ford #2349 Flg. P.V. Comp.		4"	1	376.00			45
Orbit 4000# Sc. Gate		2"	1	110.00			00
Fittings				25.00			97
							54
							00
							60
							76
TOTAL MATERIAL				2,621.00			19
INSTALLATION / DIRECT COST							
Direct Labor				1,000.00			94
Baker Plug & Service				314.00			00
Use of Auto and Hauling				500.00			56
Tools, Supplies and Miscellaneous Expense				75.00			56
Hauling, Erecting, & Dismantling Spudder				300.00			00
Fuel				25.00			00
Cement, & Service				325.00			00
Acidizing, & Service				365.00			37
Administrative Overheads				41.00			27
Stores Expense & Freight				204.00			55
Lebor Benefits Overheads				172.00			45
TOTAL INSTALLATION / DIRECT COST				3,321.00			89
TOTAL ESTIMATE				5,942.00			70

INDICATE NORTH _____ SKETCH _____ INVENTORY MAP NO. _____
 Map Square 25-07

NOTE: Move in Bucyrus Erie Spudder, and string of Cleaning Out Tools, if possible well will be Acidized through present string of 3" Tubing, If well cannot be acidized through present string of 3" Tubing, Pull 3" Tubing, run on Anc. Packer, Run String of 3" 9.2# Tubing on Anchor Packer, in order to acidize well, Pull 3" Tubing, Bail off Well, Set Baker Plug, with 2-aks. Cal-Seal on Plug, Run String of 5 1/2" OD Csg. on Baker Cement Shoe, Cement 5 1/2" OD Casing, Drill out Plug, Bail off Well, Run string of 2" Tubing, Install Misc. equipment, Leave well shut in, and report results.

_____ 06
 _____ 00
 _____ 35

_____ in Direct Labor and _____ and _____

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MAPPED BY _____ MAP NO. _____ QUANTITY MAPPED _____ DATE _____ 19 _____

01/13/2023

4707900267W

FORM U 97-P C 80

7127

United Fuel Gas Company
COMPANY

#7127

SERIAL WELL NO. 5350

LEASE NO. 41162

MAP SQUARE 56-67

RECORD OF WELL NO. 5350 on the		CASING AND TUBING				TEST BEFORE SHOT
		SIZE	WEIGHT	USED IN DRILLING	LEFT IN WELL	
J.E. Melton	farm of 337 Acres					8 /10 of Water in 3" inch
in Pocatalico	District	10 3/4	32.75#	49-3	49-3	/10 of Merc. in. inch
Putnam	County	8 5/8	28#	279-0	279-0	Volume 268 M. Cu. ft.
State of: West Virginia		7"	24#	1416-0	1416-0	TEST AFTER SET Acidizing
Field: Glendenin-Sissonville		3"	7.7#	1550-3	1550-3	7 /10 of Water in 3 inch
Rig Commenced December 7th	1943					/10 of Merc. in. inch
Rig Completed December 13th	1943					Volume 251 M. Cu. ft.
Drilling Commenced January 20th	1944					Hours After Shot
Drilling Completed February 14th	1944					Rock Pressure 605 #
Drilling to cost per foot						Acidized Date 2-17-44
Contractor is: J.F. Flanigan						Size of Packer 1500 Gals.
Address: St. Albans W. Va.						Oil Flowed bbls. 1st 24 hrs.
						Date 2-16-44
Driller's Name P.S. Nice		3 in				Oil Pumped bbls. 1st 24 hrs.
Donald Scyoc						Well abandoned and
						Size of Packer 3xop/8x16"
						Kind of Packer Anchor
						Plugged 104
						1st. Perf. Set 1516 from 1537
Elevation:						Packer set at 1450
						2nd Perf. Set from

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Gray Clay	0	15	15	Wood Conductor 16'
Silt	15	45	30	Water 45' Hole Full
White Slate	45	80	35	
Red Rock	80	110	30	
Blue Rock	110	125	15	
Red Rock	125	141	16	
Lime	141	151	10	
Slate	151	180	29	
Lime	180	194	14	
Slate	194	200	6	
Sand Broken	200	225	25	Water 220' Hole Full
White Slate	225	240	15	
Sand Broken	240	250	10	
White Slate	250	260	10	
Sand	260	277	17	
Slate	277	363	86	
Sandy Shale	363	405	42	

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See Roddard

01/13/2023

WW-2A
(Rev. 6-14)

1.) Date: 05/04/2022
2.) Operator's Well Number Lanham 7127
State County Permit
3.) API Well No.: 47- 079 - 00267

**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 Rosalie & Morris E. Purdy
Address 29 Patriot Way
Poca. WV 25159
(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

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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
 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.

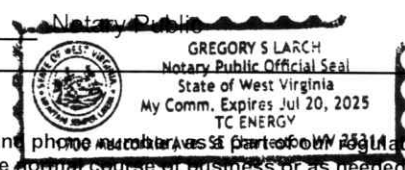
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, 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 21 day of Sept, 2022

My Commission Expires July 20 2025



Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone numbers as 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 01/13/2023

4707900267

Columbia Gas Transmission, LLC

1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



September 20, 2022

Rosalie and Morris E. Purdy
29 Patriot Way
Poca, WV 25159

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WV Department of
Environmental Protection

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 Lanham 7127 (API 47-079-00267).

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

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CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

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

OFFICIAL USE

7022 0410 0002 7183 2243

Certified Mail Fee	\$4.00
Extra Services & Fees (check box, add fee as appropriate)	\$3.25
<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	\$8.95
Total Postage and Fees	\$16.20

Sent To: Rosalie & Morris Purdy
Street and Apt. No., or PO Box No. Lanham #127

SEP 21 2022
Postmark
HARDY

09/21/2022

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<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>A. Signature <input checked="" type="checkbox"/> <u>M Purdy</u> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>	
<p>1. Article Addressed to: <u>Rosalie & Morris Purdy</u> <u>29 Patriot Way</u> <u>Poca, WV 25159</u></p>		<p>B. Received by (Printed Name) <u>M Purdy</u></p> <p>C. Date of Delivery <u>9-28-22</u></p>	
<p>2. Article Number (Transfer from service label) 7022 0410 0002 7183 2243</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 <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input checked="" type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery</p>		<p> <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery </p>	

www.tcenergy.com

01/13/2023

WW-2A Surface Waiver
(4/16)

SURFACE OWNER WAIVER

County Putnam

Operator

Columbia Gas Transmission LLC

Operator well number

Lanham 7127

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:

RECEIVED
Office of Oil and Gas

OCT 05 2022

WV Department of
Environmental Protection

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 _____

Company Name _____
By _____
Its _____ Date _____

Print Name

Signature Date _____

01/13/2023

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

* coal not operated

County Putnam

Operator Columbia Gas Transmission LLC

Operator's Well Number Lanham 7127

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

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Environmental Protection

WW-2A1
(Rev. 1/11)

Operator's Well Number Lanham 7127

**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
Pearl W. Melton, Etal	United Fuel Gas Company	Storage Lease - 1041162-000	53 / 573

**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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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

01/13/2023

4707900267

WW-9
(5/16)

API Number 47 - 079 - 00267
Operator's Well No. Lanham 7127

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) Pocatalico River Quadrangle Pocatalico, 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

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

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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

WV Department of
Environmental Protection

-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.

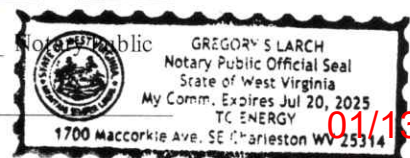
Company Official Signature *Maria Medvedeva*

Company Official (Typed Name) Maria Medvedeva

Company Official Title Senior Wells Engineer Storage Technical Services

Subscribed and sworn before me this 21 day of Sept., 20 22

My commission expires July 20 2025



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: [Signature]
Comments:

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OCT 05 2022
WV Department of Environmental Protection

Title: Inspector Dale Coas Date: 9-26-22

Field Reviewed? (/) Yes () No

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): Pocatalico River Quad: Pocatalico, WV
Farm Name: Pearl W. Melton, 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.

Pocatalico River is at a distance of 0.19 miles W.
The Mason Co PSD-Crab Creek WV3302714c is the closest Well Head Protection Area at a distance of 4.11 miles W from discharge area.

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

N/A

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Environmental Protection

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

01/13/2023

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: 09/20/2022

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01/13/2023

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4707900267

WV DEP Reclamation Plan - Site Detail

Lanham well 7127 (API 47-079-00267)

- 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

Limit of Proposed Disturbance
on existing well site

~0.15 acres

Lanham - 071127

Legend

- CWALM 7127
- Lanham - 071127

01/13/2023



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WV Department of
Environmental Protection

WV DEP Reclamation Plan - Overview

Lanham well 7127 (API 47-079-00267)

- 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

Lanham - 07127

Legend

-  CWALM 7127
-  Lanham - 07127

01/13/2023



Google Earth

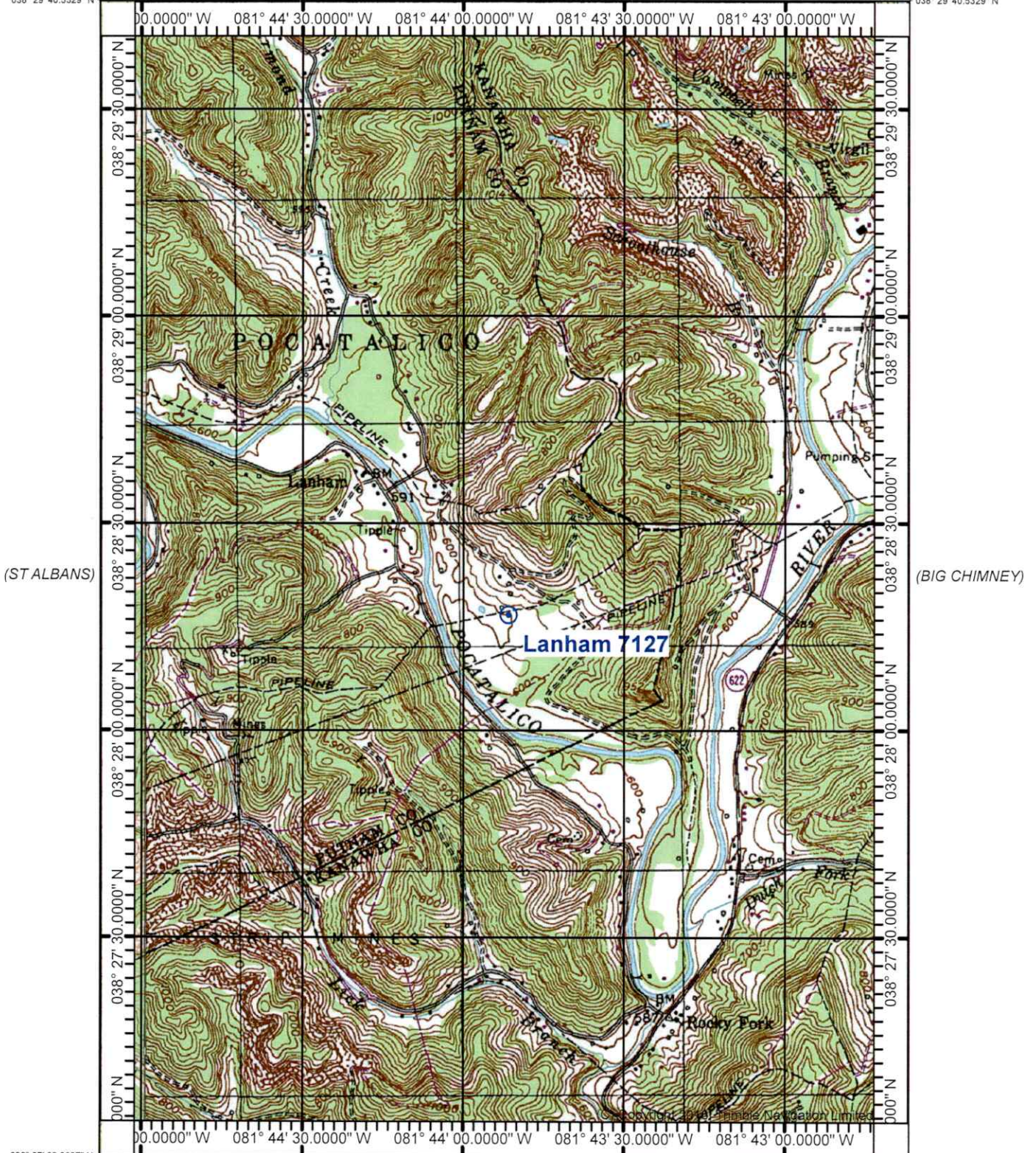
4707900267

(BANCROFT)



POCATALICO QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES (ROMANCE)

081° 45' 01.2460" W (SISSONVILLE) 081° 42' 42.7312" W
038° 29' 40.5329" N 038° 29' 40.5329" N



038° 27' 02.8037" N 081° 45' 01.2460" W (CHARLESTON WEST) SCALE 1:24000 (CHARLESTON EAST) 038° 27' 02.8037" N 081° 42' 42.7312" W

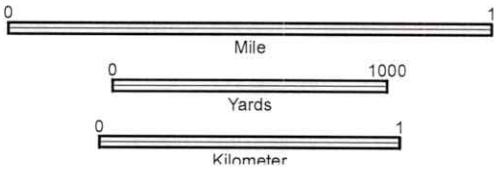
(ALUM CREEK)

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 10M N and
13M E

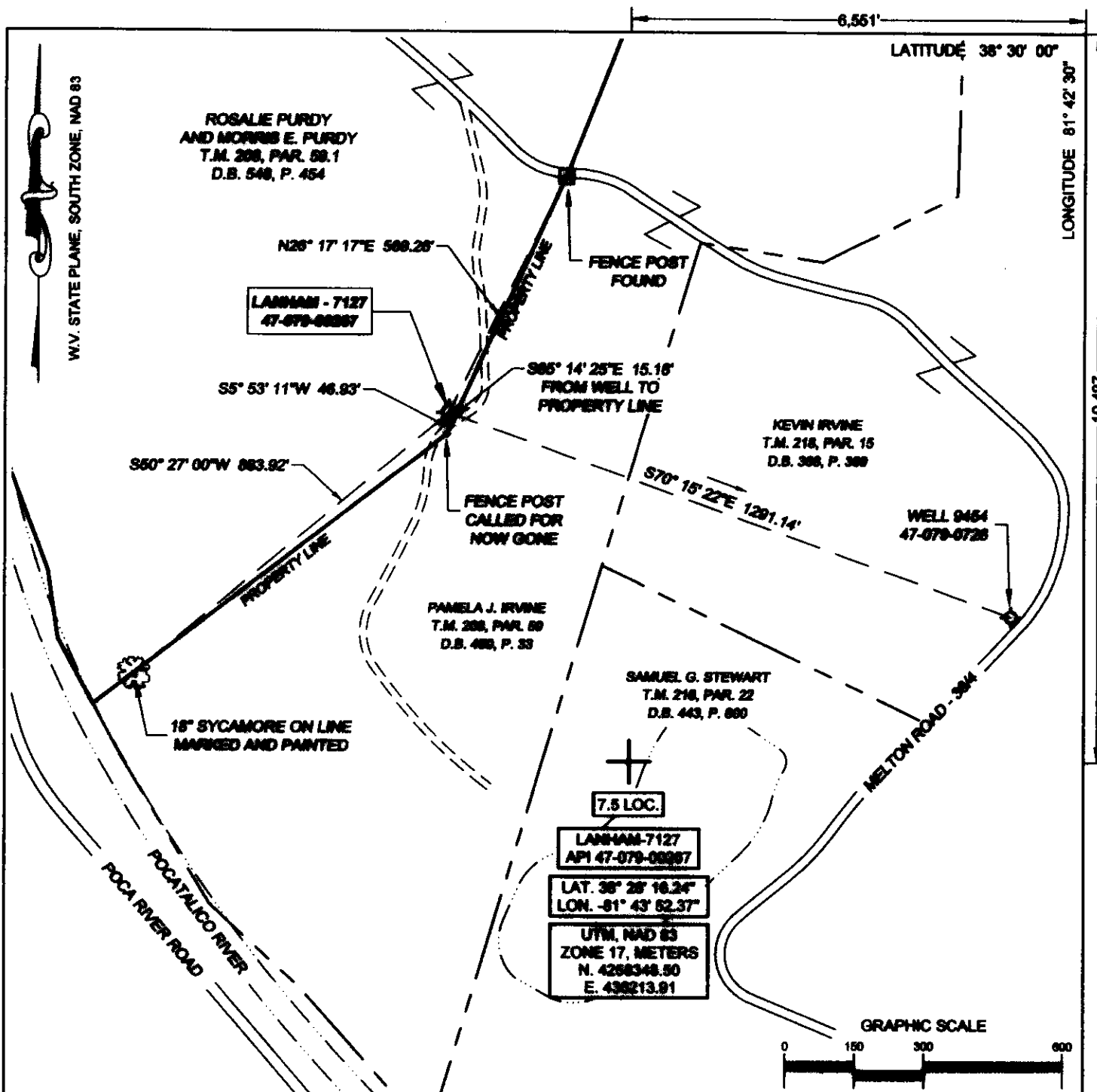
Declination



CONTOUR INTERVAL 20 FT

38081-D5-TM-024
POCATALICO, WV
JAN 1, 1999

01/13/2023



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

FILE No. 2101-2345-001-006
 DRAWING No. LANNAM - 7127
 SCALE 1 INCH = 300 FEET
 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 #985



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



DATE MAY 20 2022
 OPERATOR'S WELL No. 7127
 API WELL No. 47 079 - 00267w

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 079 PERMIT 00267w

LOCATION: ELEVATION 597.5' WATER SHED POCATAHOCO RIVER
 DISTRICT POCATAHOCO COUNTY PURMAN
 QUADRANGLE POCATAHOCO, WV

SURFACE OWNER ROSALIE PURDY AND MORRIS E. PURDY ACREAGE 161.74 ACRES
 OIL & GAS ROYALTY OWNER UNION FUEL GAS COMPANY
 LEASE ACREAGE 294 ACRES LEASE NO. 1041162-000

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WELLHEAD CHANGE / CLEANOUT AND STIMULATE 01/13/2023

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION BIG LIME ESTIMATED DEPTH 1537
 WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT MARIA MEDVEDOVA
 ADDRESS PO BOX 1273, CHARLESTON, WV 25305-1273 ADDRESS 1700 MAGDOFFLE AVE, S.E. CHARLESTON, WV 25314

FORM IV-6 (8-78)

4707900267W

N/A

WW-2B1
(5-12)

Well No. Lanham 7127

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 contactor 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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OCT 05 2022
WV Department of
Environmental Protection

01/13/2023



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

Rework permit issued 4707900267

1 message

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


Thu, Jan 12, 2023 at 8:52 AM

To: maria_medvedeva@tcenergy.com, Joseph D Taylor <joseph.d.taylor@wv.gov>

To whom it may concern, a rework permit has been issued for 4707900267.

James Kennedy

WVDEP OOG

 **4707900267.pdf**
5996K

01/13/2023