



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

Friday, September 25, 2026
WELL WORK PERMIT
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 7286
47-035-00512-00-00

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.

H. Jason Harmon
Chief

Operator's Well Number: 7286
Farm Name: RICHARD & TONYA CARNELL
U.S. WELL NUMBER: 47-035-00512-00-00
Vertical Re-Work
Date Issued: 9/25/2026

Promoting a healthy environment.

09/25/2026

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.
9. 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.

09/25/2026

4703500512

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 Jackson Ravenswood Sandyville WV
Operator ID County District Quadrangle

2) Operator's Well Number: Ripley 7286 3) Elevation: 715.51

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: 4976

6) Proposed Total Depth: 4976 Feet Formation at Proposed Total Depth: Oriskany

7) Approximate fresh water strata depths: 315', 350', 775'

8) Approximate salt water depths: 1690'

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)

Perform a freshwater wash, flowback well. Perform coil tubing cleanout and acid stimulate if needed.

* existing

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13-3/8		48		615	
Fresh Water	10-3/4		32.8	1145	884	
Coal	8-5/8		28		2080	
Intermediate	7		22		4880	
Production	4-1/2	J-55	12.6		4976	
Production						
Production						

[Signature]
8-25-26

Packers: Kind: _____
Sizes: _____
Depths Set _____

09/25/2026

09/25/2026

WW-2A Surface Waiver
(4/16)

SURFACE OWNER WAIVER

County Jackson

Operator
Operator well number

Columbia Gas Transmission LLC
Ripley 7286

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

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

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

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

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

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

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

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

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

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

VOLUNTARY STATEMENT OF NO OBJECTION

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

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

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

_____	Date _____	Company Name _____	_____
Signature		By Its _____	Date _____
_____		_____	_____
Print Name		Signature	Date

09/25/2026

Columbia Gas Transmission, LLC

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

2026, August 18th

Richard and Tonya Carnell
 132 Bonecutter Mountain Dr
 Given, WV 25245

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to workover an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Ripley 7286 (API 47-035-00512).

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

7022 2410 0002 6396 3355

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

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

Given: WV 25245

OFFICIAL USE

Certified Mail Fee \$5.55

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 \$12.90

Total Postage and Fees \$23.10

Sent To Richard & Tonya Carnell

Street and Apt. No., or PO Box No. 132 Bonecutter Mountain Dr

City, State, ZIP+4® Given, WV 25245

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

Postmark Here
 AUG 18 2026
 SOUTH CHARLESTON, WV

RECEIVED
 (08/08/2026)

SEP 08 2026

WV Department of
 Environmental Protection

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

* coal not operated

County JacksonOperator Columbia Gas Transmission LLCOperator's Well Number Ripley 7286

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.

_____	Date _____	Company Name _____	_____
Signature		By _____	_____
		Its _____	Date _____
		Signature _____	Date _____

Office of Oil and Gas

SEP 08 2026

WV Department of
Environmental Protection

09/25/2026

WW-2A1
(Rev. 1/11)

Operator's Well Number Ripley 7286

**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
Homer Nelson	United Fuel Gas Company	Storage Lease - 42899	83 / 41

**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

OFFICE OF OIL AND GAS
SEP 08 2026

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

09/25/2026

WW-2B1
(5-12)Well No. Ripley 7286West 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 _____

SEP 08 2026

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.

09/25/2026

WW-9
(5/16)

API Number 47 - 035 00512
Operator's Well No. Ripley 7286

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) Trace Fork of the Sandy Creek Quadrangle Sandyville WV

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

Will a pit be used? Yes ☐ No ☒

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

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

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

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A SEP 08 2026

-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

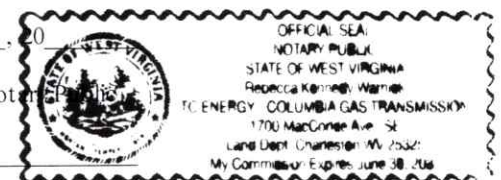
Company Official (Typed Name) Maria Medvedeva

Company Official Title Senior Wells Engineer Storage Technical Services

Subscribed and sworn before me this 18th day of August 2026

Notary

My commission expires 6/30/31



09/25/2026

Form WW-9

Operator's Well No. Ripley 7286Proposed Revegetation Treatment: Acres Disturbed < 1.0 Prevegetation pH 6-7Lime 2 Tons/acre or to correct to pH 7-8Fertilizer type 10-10-10Fertilizer amount 600 lbs/acreMulch hay or straw @ 2 Tons/acreSeed MixturesTemporaryPermanent

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.

SEP 08 2026

Plan Approved by: Joe Taylor

Comments: _____

Title: OGG InspectorDate: 8-25-26

Field Reviewed?

☒ Yes☐ No

09/25/2026

WW-9- GPP
Rev. 5/16

Page _____ of _____
API Number 47 - 035 - 00512
Operator's Well No. Ripley 7286

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): Trace Fork of the Sandy Creek

Quad: Sandyville WV

Farm Name: Homer Nelson

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.

Trace Fork of the Sandy Creek is at a distance of 0.35 miles N.

Ravenswood Municipal Water Works WV3301810 is the closest Well Head Protection Area at a distance of 6.02 miles NW from discharge area.

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

N/A

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

09/25/2026

WW-9- GPP
Rev. 5/16

Page _____ of _____
API Number 47 - 035 - 00512
Operator's Well No. Ripley 7286

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.

SEP 08 2026

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

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

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

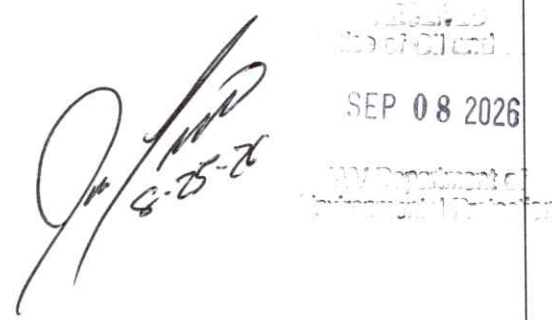
Signature: _____

Date: _____

08/18/26

SPZ

09/25/2026

WELL JOB PLAN				STS Well Engineering & Technology				PAGE 1		DATE JOB PREPARED: 2/13/2025	
Objective: Deliverability restoration								WORK TYPE:			
TITLE: FVWV, CTCO if needed								LEASE #: 42899			
FIELD: Ripley			WELL ID: 7286			API: 47-035-00512					
STATE: WV			SHL (Lat/ Long) 38.879113			-81.678931			CNTY: Kanawha		
DIST/TWP: Ravenswood			BHL (Lat/Long) 38.879113			-81.678931			WELLLINE #: X59W7286		
EXISTING TUBULAR CONFIGURATION		OD (inches)	WEIGHT (PPF)	GRADE	THREAD	DEPTH (ft)		FORMATION	NOTES	TOP (ft)	BOTTOM (ft)
Surface		13 3/8	48.0			0	615	White Shale	W 315'	295	360
Intermediate		10 3/4	32.8			261	1145	Sand	W 350 / 775'	1255	1265
Intermediate		8 5/8	28.0			0	2080	Brown Shale	O 1260'	3875	3975
Intermediate		7	22.0			0	4880	Onondaga		4820	4939
Production		4 1/2	12.6	J-55	Hydrill	0	4925	Oriskany		4939	4976
Wall and anchor packer		estimated depth				4925	4930	TD		4976	4976
Production slotted		4 1/2	12.6			4930	4976				
Perforations											
Wellhead											
CEMENT INFO							Calc TOC (ft)	ELEVATIONS (ft)			
No record of cement, but 1954 work order indicates scope to include "cement between all strings of casing and 4-1/2" to surface".								KB-GL:			
								KB-RF:			
								GL:			
								3790 CBL			
ADDITIONAL INFORMATION							DIRECTIONAL WELL PROFILE (as applicable)				
REFER TO WELL SUMMARY RPT, WBD for Wellbore Schematic, ELOG, etc tabs in this workbook for additional information											
Kill Fluid Calculation * Note that kill fluid calculation tabs are hidden											
Maximum calculated bottom-hole pressure (reference only): 1922 psig * input Maximum storage field surface pressure (MAOP): 1675 psig * input											
Well TD: 4976 ft TVD * input Top of storage zone: 4939 ft TVD * input Calculated maximum BH pressure at top of zone: 1902 psig * output Kill Fluid (TOZ) Kill fluid density at top of zone @: 150 psi OB 7.99 ppg * output Kill Fluid (TOZ)											
Proposed depth of BP: 4939 ft TVD * input Calculated maximum BH pressure at depth of BP: 1902 psig * output Kill Fluid (BP) Kill fluid density at depth of BP @: 150 psi OB 7.99 ppg * output Kill Fluid (BP)											
Required minimum kill fluid density: 8.0 ppg * greater of the two ppg											
Current AOF: 43,335 MCF/D Top historical AOF: 55,364 MCF/D Last MVRT: 10/14/21 Baker HRVRT shows no classable features detected over the surveyed interval. SBT: 11/18/2003 Baker CBL shows 4.5" cement top at 3790'.											
PROPOSED YEAR: 2027		ERCB PERMIT REQD: YES _____ NO_X_		DT. APPLIED: ISSUED:		(Internal) PDS Required: YES _____ NO _____					
PREPARED BY: Maria Medvedeva		REVIEWED BY: James Ames		APPROVED: Brent Criser							
PREP DATE: 2/13/2025											

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 2	DATE JOB PREPARED: 2/13/2025
Objective: Deliverability restoration				WORK TYPE:	
TITLE: FWW, CTCO if needed					
FIELD: Ripley	WELL: 7286				
STAT: WV	SHL (Lat/Long): 38.879113 -81.678931	API: 47-035-00512			
TWP: Ravenswood	BHL (Lat/Long): 38.879113 -81.678931	CNTY: Kanawha			

PROCEDURE

NOTES:

Maintain communication with WVDEP Inspector during well operations to ensure compliance with WV Code.

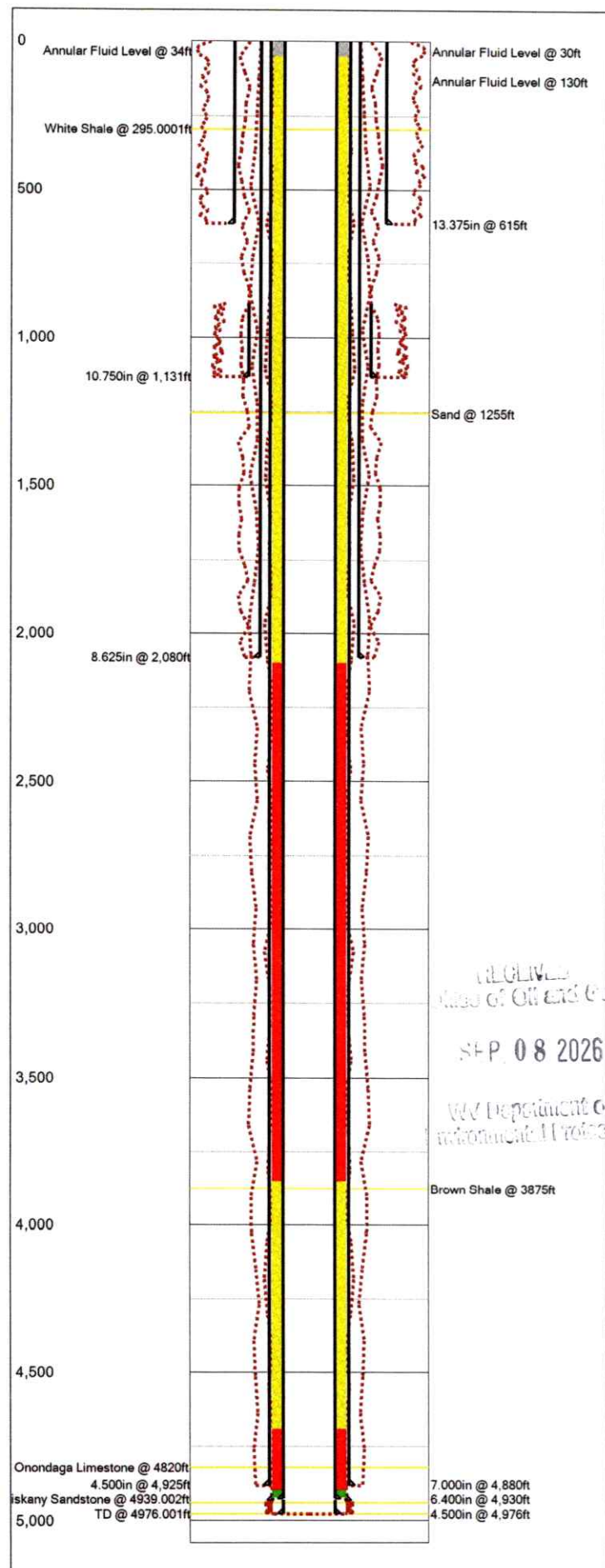
- 1 Obtain State well work permit, EM&CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC.
- 2 Notify landowner.
- 3 Obtain General Work Permit and Wellsite Review & Turnover Form from Operations.
- 4 Notify Reservoir Engineering & Geosciences (REG) of intent to take well out of service.
- 5 Notify environmental inspector prior to beginning work. If required, notify State/Federal regulatory agencies prior to beginning work.
- 6 Disconnect well line.
- 7 Prepare access road and well site. Install ECD's per EM&CP.
- 8 Service all wellhead valves.
- 9 Document and report to WE&T the initial casing and annular pressures.
- 10 Pump 40 bbls TFW down casing. Perform a 45-min flowback test.
- 11 MIRU 1.75" CTU.
- 12 Obtain stabilized pre-cleanout rate through 3/4" choke.
- 13 RI with jetting tool. At 4750' begin flowing well and jet to TD with foamed TFW. At TD begin foamed 15% HCl with mutual solvent (must be compatible with HCl acid to avoid emulsions or damaging by-product) and jet across storage interval (4920-4976', slotted liner) until 1000 gals are gone. Pull up into casing and flow well until relatively dry. RBLH to TD and spot 1000 gals 15% HCl acid with mutual solvent. Pull up to 4500' and load wellbore above acid w/ TFW. Allow to soak for 60min. Displace acid into formation with 1000 gals TFW. Unload wellbore w/ nitrogen to re-establish gas flow.
- 14 Flow well to dry and POOH.
- 15 RDMO CTU.
- 16 Perform final 45-min flowback test thru 3/4" choke. Record flow test in the FLOWTEST and GAS LOSS DATA SHEET. Send report to engineering.
- 17 Continue to Steps 20+ if conditions dictate per engineering.

RECEIVED
SEP 08 2026
WV Department of
Environmental Protection

[Signature]
8-25-26

PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 2/13/2025		

09/25/2026



Last Updated: 4/26/2024 12:02 PM



Field Name		Lease Name		Well No.	
Ripley		Ripley - 07286		07286	
County		State		API No.	
Jackson		WV		47035005120000	
Version	Version Tag				
0 Current Completion					
G.L. (ft)	K.B. (ft)	Sec.	Township/Block	Range/Survey	
4,976.0		58-95	Ravenswood	031207286	
Operator		Well Status	Latitude	Longitude	
TransCanada		ACTIVE	38.8791	-81.6789	
Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From	
PropNum			Spud Date	Comp. Date	
Homer Nelson			7/1/1946		
Additional Information					
Other1	Other2		Other3	Other4	
Ripley	0312		031207286		
Prepared By		Updated By		Last Updated	
				4/26/2024 12:02 PM	

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
7/1/1946	17.500	0	615	
7/3/1946	14.750	884	1,131	
7/5/1946	10.625	0	2,080	
7/7/1946	8.750	0	4,880	
5/3/1954	6.250	0	4,925	
5/3/1954	6.250	4,930	4,976	

Tubular Summary

Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
7/1/1946	Casing	13.375	48.00		0	615
7/3/1946	Casing	10.750	32.75		884	1,131
7/5/1946	Casing	8.625	28.00		0	2,080
7/7/1946	Casing	7.000	22.00		0	4,880
5/3/1954	Casing	6.400			4,925	4,930
5/3/1954	Casing	4.500	12.60	J-55	0	4,925
5/3/1954	Casing	4.500			4,930	4,976

Casing Cement Summary

C	Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	10/14/2021	0	4.500	0	50	Free Pipe
	10/14/2021	0	4.500	50	2,098	Partial Quality
	10/14/2021	0	4.500	2,098	3,848	Poor Quality
	10/14/2021	0	4.500	3,848	4,690	Partial Quality
	10/14/2021	0	4.500	4,690	4,896	Poor Quality
	10/14/2021	0	4.500	4,896	4,921	Good Quality

Formation Tops Summary

Formation	Top (TVD ft)	Comments
White Shale	295	Comments: 3 bph at 315
Sand	1,255	Comments: hole full 350 bph at 775
Brown Shale	3,875	Comments: show oil at 1260
Onondaga Limestone	4,820	
Oriskany Sandstone	4,939	

United Fuel Gas Co.
COMPANY

SERIAL WELL NO. 5744 LEASE NO. Part 44867 - 41769-44764 MAP SQUARE 58-95

RECORD OF WELL NO. <u>5744</u> on the		CASING AND TUBING				TEST BEFORE SHOT	
		SIZE	WEIGHT	USED IN DRILLING	LEFT IN WELL		
Homer Nelson et al.	farm of 113.2 Acres					84 /10 of Water in	7 inch
in Ravenswood	District	13-3/8"	48#	614'9"	614'9"	10 /10 of Merc. in	7 inch
Jackson	County	10-3/4"	32.75#	1145'11"	884'12"	Volume	5,034,000 Cu. ft.
State of: West Virginia		8-5/8"	28#	2079'7"	2079'7"	TEST AFTER SHOT	
Field: Glend-Sissonville # 4		7"	22#	4880'0"	4880'0"	/10 of Water in	inch
Rig Commenced March 10	1946	2"	4#	4989'1"	4989'1"	/10 of Merc. in	inch
Rig Completed March 15	1946					Volume	Cu. ft.
Drilling Commenced March 19	1946					Hours After Shot	
Drilling Completed July 11	1946					Rock Pressure	890
Drilling to cost	per foot					Date Shot	
Contractor is: Mays Drilling Co.						Size of Torpedo	
Address: Kenna, W.Va.		SHUT IN				Oil Flowed	bbls. 1st 24 hrs.
		Date July 13, 1946				Oil Pumped	bbls. 1st 24 hrs.
Driller's Name Don Seyoo		Tubing or Casing 2 in.				Well abandoned and	
Bert Leyton		Size of Packer None				Plugged	104
		Kind of Packer					
		1st. Perf. Set from					
Elevation: 726.5		2nd Perf. Set from					

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Soil	0	10	10	
Red Mud	10	25	15	
Yellow Sand	25	40	15	
Red Rock	40	55	15	
Sand	55	65	10	
Red Rock	65	215	150	
Sand White	215	225	10	
Blue Mud	225	240	15	
Red Rock	240	260	20	
Slate	260	270	10	
Red Rock	270	295	25	Water 3 bailers 315
Sand White	295	360	65	Water hole full 350
Slate	360	370	10	
Red Rock	370	400	30	
Slate	400	430	30	
Red Rock	430	460	30	
Lime	460	490	30	

SEP 08 2026

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SERIAL WELL NO. 5744LEASE NO. 44867-44764-41769MAP SQUARE 58-95

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Slate	490	515	25	
Sand	515	540	25	
Slate	540	545	5	
Pittsburg Sand	545	612	67	
Blue Slate	612	625	13	
Sand	625	640	15	
Slate	640	755	115	
Sand	755	780	25	Water 2 bailers 775
White Slate	780	800	20	
Sand	800	810	10	
Red Rock	810	861	51	
White Slate	861	910	49	
Black Slate	910	918	8	
Lime	918	935	17	
Pink Rock	935	945	10	
Slate & Shells	945	965	20	
White Slate	965	995	30	
Pink Rock	995	1000	5	
White Slate	1000	1030	30	
Black Slate	1030	1043	13	
Slate & Shells	1043	1255	212	
Sand	1255	1265	10	Showing of Oil 1260
Slate & Shells	1265	1300	35	
White Sand	1300	1350	50	
Slate	1350	1370	20	
Sand	1370	1420	50	
Black Slate	1420	1430	10	
Lime Gray	1430	1440	10	
Slate	1440	1450	10	
Sand	1450	1560	110	
Black Slate	1560	1620	60	
Lime	1620	1650	30	
Salt Sand	1650	1750	100	Hole full water 1690
Slate	1750	1755	5	
Big Lime	1755	1957	202	
Slate	1957	1960	3	
Big Injun	1960	2040	80	

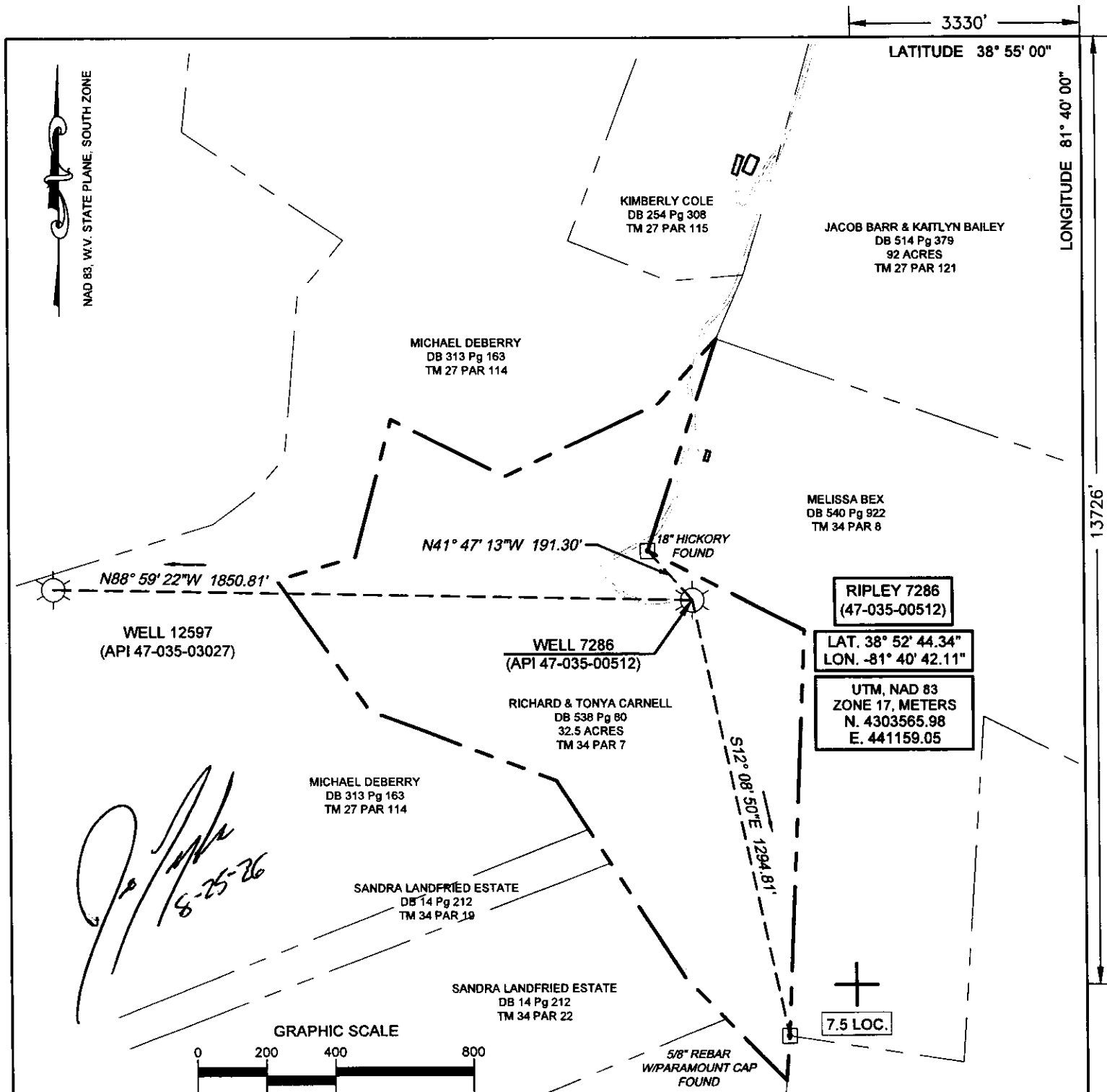
SEP 08 2026

09/25/2026

MAP SQUARE 58-95[illegible]

~~SEP 08 2026~~

~~09/25/2026~~



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

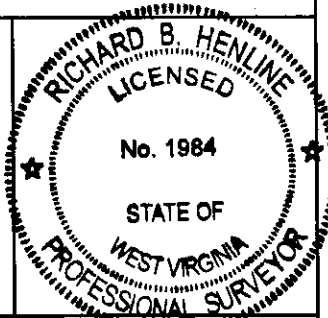
FILE No 2601-3079-001-003
 DRAWING No. RIPLEY WELL-7286
 SCALE 1"=400'
 MINIMUM DEGREE OF
 ACCURACY 1:200
 PROVEN SOURCE OF
 ELEVATION TRIMBLE R10
GPS UNIT

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

(SIGNED)

RICHARD B. HENLINE

PS #1984



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



DATE AUGUST 14, 2026
 OPERATOR'S WELL No. 7286
 API WELL No.

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐ STATE 47 COUNTY 035 PERMIT 00512
 (IF "GAS") PRODUCTION ☐ STORAGE ☒ DEEP ☒ SHALLOW ☐
 LOCATION: ELEVATION 715.51 WATER SHED TRACE FORK OF SANDY CREEK
 DISTRICT RAVENSWOOD COUNTY JACKSON
 QUADRANGLE SANDYVILLE, WV
 SURFACE OWNER RICHARD & TONYA CARNELL ACREAGE 32.5
 OIL & GAS ROYALTY OWNER HOMER NELSON
 LEASE ACREAGE 30 LEASE NO. 42899

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

TARGET FORMATION ORISKANY ESTIMATED DEPTH 4976
 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

(PORTLAND)


A Trimble Company

SANDYVILLE QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(ROCKPORT)



(COTTAGEVILLE)

Declination

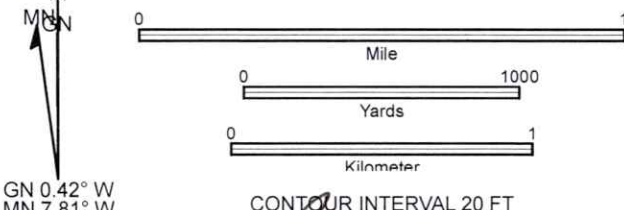
(RIPLEY)

SCALE 1:24000

Printed: Mon Mar 09, 2026

(GAY)

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 9M N and
13M E



38081-H5-TM-024
SANDYVILLE, WV
JAN 1, 1988

09/25/2026

Handwritten signature and date: 8-25-26

WV DEP Reclamation Plan - Overview

Ripley well 7286 (API 47-035-00512)

- 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

 Ripley - 07286



WV Department of
Environmental Protection

SEP 08 2026

WV DEP Reclamation Plan - Site Detail

Ripley well 7286 (API 47-035-00512)

- 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

 CWAY 7286

 Ripley - 07286

Existing access road

Ripley - 07286

~0.25 acre

Limit of Proposed Disturbance
on existing well site

Google Earth

200 ft

N

SEP 08 2026

WV Department of
Environmental Protection

SP

Columbia Gas Transmission, LLC

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



2026, September 8th

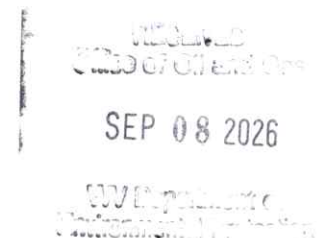
WV DEP – Office of Oil & Gas
601 57th Street, SE
Charleston, WV 25304-2345

Enclosed are well work permit applications for the following Columbia Gas Transmission existing storage wells:

Coco A 7077 (API 47-039-01236)
Coco B 7229 (API 47-039-01616)
Lanham 7126 (API 47-039-00264)
Ripley 7286 (API 47-035-00512)
Ripley 7301 (API 47-035-00526)
Ripley 7304 (API 47-035-00489)
Ripley 7344 (API 47-035-00918)
Ripley 12413 (API 47-035-02462)

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", written over a horizontal line.

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

www.tcenergy.com

09/25/2026



Samples, Casey M <casey.m.samples@wv.gov>

TC Energy 2027 project programs for permitting

3 messages

Maria Medvedeva <maria_medvedeva@tcenergy.com>

Tue, Sep 8, 2026 at 11:58 AM

To: "Samples, Casey M" <casey.m.samples@wv.gov>

Cc: "McLaughlin, Jeffrey W" <jeffrey.w.mclaughlin@wv.gov>, Renae D Whitlock <renae.d.whitlock@wv.gov>

Good afternoon Casey,

The following projects are scheduled for the 2027 well workover program. The permit application fees are listed on the right side of the table and will need to be processed by credit card. Company and card information is listed below. Please give me a call when its convenient for you to process these payments. The permit packets have been dropped off at the front desk of the Charleston WVDEP Office of Oil and Gas just now.

Company – TC Energy (Legacy Columbia Gas Transmission)

Designated Agent – Maria Medvedeva

Billing Address – 1700 MacCorkle Ave SE, Charleston WV 25314

Contact Number – 304 – 410 – 4313

Contact email – maria_medvedeva@tcenergy.com

\$5,600

STORAGE FIELD	WELL NUMBER	CONCISE SCOPE	API Permit #	Amount for payment
Coco A	7077	HRVRT cased hole log, coil cleanout and acid stimulation, if needed frac openhole	47-039-01236-0000	\$800
Coco B	7229	Coil cleanout and acid stimulation	47-039-01616-0000	\$800
Lanham	7126	Plug and abandon OB well	47-079-00264-0000	Not required
Ripley	7286	FWW, coil cleanout and acid stimulation	47-035-00512-0000	\$800
Ripley	7301	Coil cleanout and acid stimulation, HRVRT cased hole log	47-035-00526-0000	\$800
Ripley	7304	Coil cleanout and acid stimulation	47-035-00489-0000	\$800
Ripley	7344	Freshwater wash, coil cleanout and acid stimulation	47-035-00918-0000	\$800
Ripley	12413	HRVRT cased hole log, reperforate, coil cleanout and acid stimulation, if needed refrac	47-035-02462-0000	\$800

Maria (Masha) Medvedeva

Senior Wells Engineer – Well Engineering & Technology

Gas Storage

maria_medvedeva@tcenergy.com

M: +1-304-410-4313



1700 MacCorkle Ave SE
Charleston, WV 25314

TCEnergy.com

TC Energy
maria – medvedeva @tcenergy.com
304-410-4313

09/25/2026

Casey,

Good afternoon, \$150 of each fee will go to the funding below:

3322/9254/6869/0000

The remainder of each fee will go to the funding below:

3323/9280/6869/0000

Thank you,

Renae

[Quoted text hidden]

\$5600
total

\$1050

3322-0000-0313-9254-6869-0000

\$4550

3323-0000-0313-9280-6869-0000

WV Dept of Env. Prot.
601 57th St SE
Charleston, WV 25304
304-926-0499

WV Dept of Env. Prot.
601 57th St SE
Charleston, WV 25304
304-926-0499

SALE

REF#: 00000033
Bank ID: 000000
Batch #: 1549 RRN: 751313650752
09/08/26 14:05:53
AVS: Z CVC: M
Invoice #: WELLS

APPR CODE: 09289S
VISA Manual CP
*****4694 **/**

AMOUNT \$2,800.00

APPROVED

SIGNATURE NOT REQUIRED

I AGREE TO PAY ABOVE TOTAL AMOUNT
IN ACCORDANCE WITH CARD ISSUER'S
AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)
RETAIN THIS COPY FOR STATEMENT
VERIFICATION

Thank You
Please Come Again

MERCHANT COPY

SALE

REF#: 00000032
Bank ID: 000000
Batch #: 1549 RRN: 251039550709
09/08/26 14:05:09
AVS: Z CVC: M
Invoice #: WELL

APPR CODE: 04647S
VISA Manual CP
*****4694 **/**

AMOUNT \$2,800.00

APPROVED

SIGNATURE NOT REQUIRED

I AGREE TO PAY ABOVE TOTAL AMOUNT
IN ACCORDANCE WITH CARD ISSUER'S
AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)
RETAIN THIS COPY FOR STATEMENT
VERIFICATION

Thank You
Please Come Again

MERCHANT COPY

09/25/2026