

west virginia department of environmental protection

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

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

Tuesday, June 4, 2024 WELL WORK PERMIT Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC 1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re:

Permit approval for HARDY 12458

47-031-00024-00-00

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: HARDY 12458

Farm Name: FUNK, DENNIS & EMILY

U.S. WELL NUMBER: 47-031-00024-00-00

Vertical Re-Work Date Issued: 6/4/2024

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 within 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 Officer 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.

										V 10 2 V
WELL JOB PLAN			II Engineering &	Technolog	у		PAGE 1	DATE	JOB PREPARED:	3/15/2024
Objective: Deliverabili									PROFILE UPDATE:	
	ng, log, WHX	, CTCO	_					TYPE:	GPMC	
FIELD: Hardy Ink	erman		WELL ID:			7	L	EASE #:	201915	
STATE: WV DIST/TWP: Moorefield			SHL (Lat/ Long			-78.787647		API:	47-031-00024	
DIST/TWP: Moorefield EXISTING TUBULAR	OD	WEIGHT	BHL (Lat/Long)	39.15539		-78.787647)A/E1 1	CNTY:	Hardy	
CONFIGURATION	(inches)	(PPF)	GRADE	THREAD	TOP	EPTH (ft) BOTTOM	FORMATION:	.LINE #:	X78W12458 o MISC INFORMAT	ION postion
Cellar	24	94	GRADE	Weld	0	57	PAY:	Teler (ELEVA	
Conductor	20	59		Weld	0	96	MD TD: 6909		TMG:	TIONS
Surface	13 3/8	48	H-40	8rd LTC	0	510	TVD TD: 6654		KB-RF:	
Intermediate	9 5/8	40	J-55	8rd LTC	0	1979	KB-GL: 14 ft		GL:	
Production	7	23	N-80	8rd LTC	0	6587	CSG	DEPTH		SCHEMATIC
Tubing	2 3/8	4.7	J-55	8rd EUE	0	6621	1000	Dia III	WELLBOILE	CONLINATIO
							-		Refer to "Wellbo	re Diagram" tab
			Refer to "Well	bore Diagra	m" tab					3
Perforations	None						Maximum mea	sured Inc	lination 31 degrees	
Wellhead	API 5k, 7" fl	owstring x	9-5/8" support, 1 1/2	V 23/8" 8r	d EUE WH co	nnection			0.	
D.H. EQUIPMENT				TYPE		DEPTH (ft)			1	
PAG	CKER INFO:	Upper							1	
		Lower							1	
						40			1	
NIPPLE PRO	FILE INFO:	Upper								
		Lower					1			
	DOOL INCO.									
CEMENT INFO	SSSV INFO:					OD! TOO (6)	-			
24 Sanded in						CBL TOC (ft)				
20 71 sacks regu	lar poot omt	Conductor	grouted			0	4			
			3L run. 30 bbls cmt	roturned to e	urfaca	0	-	1		
			s Class A cmt. 30 b			0	+	ľ		
			turned to surface.	DIS CITIC TO SU		4130	-			
0.10 0.10 0.1	300 11 00/110/11	c. 140 officie	named to ounded.			7100	Ⅎ			
MISC INFORMATION				0			+			
REFER TO WELL SUI	MMARY RP		BORE DIAGRAM, dsheet tabs belo		C.	(see				
Kill Fluid Calculation Maximum calculated bot Maximum storage field s				alculation tabs 2952 ps 2500 ps	sig * input					
Well TD: Top of storage zone: Calculated maximum BI- Kill fluid density at top of		top of zone	ı: İpsi OB		- ,	Kill Fluid (TOZ) Kill Fluid (TOZ)				
Proposed depth of RBP Calculated maximum BH Kill fluid density at depth	l pressure at		P:		TVD * input ig * outpu	. ,				
,			fluid density:	9.5 pp	•	er of the two				
Current AOF: Top historical / Last MVRT:	_	82,332 224,629 None availa								
SBT:	р	artial from	10.18.2006 shows g 5790 to 5570, good top logged interval.	quality from						
ROPOSED YEAR:	2024	4	ERCB PERMIT RE DT. APPLIED:	QD:	YES	NO_X_	(Internal) PDS Req	uired:	YES NO	
REPARED BY:	Maria Med	vedeva	REVIEWED BY:		James An	nos	APPROVED:	0 K	4/6	4/24
REP DATE:	3/15/20	024					0 10	/	·	1

RECEIVED
Office of Oil and Gas

MAY 0 3 2024

4703100024W

WELL JOB PLAN		STS Well Engineering & Technology			PAGE 2	DATE JOB PREPARED:	3/15/2024
Objective: I	Deliverability Restoration					LAST PROFILE UPDATE:	
TITLE:	Snub tubing, log, WHX, C	TCO			WORK TYPE:	GPMC	
FIELD:	Hardy Inkerman	WELL:	12458				
STAT:	WV	SHL (Lat/Long):	39,155394	-78.787647	API:	47-031-00024	
TWP:	Moorefield	BHL (Lat/Long):	39.155394	-78.787647	CNTY:	Hardy	
			PRO	CEDURE			

NOTE: Directional wellbore - max inclination is 31 degrees.

Assess condition / integrity of A-section of wellhead to determine if it can handle stand-alone snubbing forces. If deemed necessary, utilize CSI's substructure to provide stability to snubbing stack.

- 1 Obtain EM&CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC.
- Notify landowner.
- 3 Obtain General Work Permit and Wellsite Review & Turnover Form from Operations.
- 4 Notify Reservoir Engineering & Geosciences (REG) of intent to take well out of service.
- 5 Notify environmental inspector prior to beginning work. If required, notify State/Federal regulatory agencies prior to beginning work.
- 6 Disconnect well line
- 7 Prepare access road and well site. Install ECD's per EM&CP.
- 8 Service all wellhead valves
- 9 Document and report to WE&T the initial casing and annular pressures.
- 10 Pump 20 gals methanol and 20 bbls fresh water down tubing to verify it's open. Let set overnight.
- 11 Flow well up casing to verify no bridges and dry wellbore.
- 12 MIRU TTS slickline unit. RIH to find bottom of tubing. Install TTS packoff plug #1 in bottom joint of tubing. Perform negative pressure test in stages to 0 psig. Install TTS packoff plug #2. Perform negative pressure test in stages to 0 psig.
- 13 Remove tbg valve and bonnet. Spray / pour lubricant around top of tubing mandrel and around lock-down pins. Clean mandrel lift threads and verify thread profile. NU 7-1/16" 3M gate valve, Cameron double BOP (blind-shear in bottom / 2-3/8" pipes in top), and annular.
- 14 MIRU stand-alone snubbing stack. Perform low (250 psig) and high (2300 psig) pressure test on each BOP component, including FOSV (2), choke line, blow-off line, and equalization line.
- 15 PU pulling joint, screw into tubing hanger, grab bite on tubing with snubbing slips, equalize pressure across hanger, back out mandrel hold-down pins, and unseat hanger.
- Strip / snub tubing out of hole. On last 3 joints RIH 60 ft every joint with weight on masonry twine to verify depth of upper RBP. Last joint, stop connection just below annular, close gate valve and lower snubbing pipe rams, and bleed pressure to verify last joint. Note that there will likely be pressure inside tubing between the two RBPs.

Note: Tubing will not be rerun.

17 MIRU Baker Atlas Logging. Run guage ring, HRVRT casing inspection log. Verify with Baker reps if a tractor is required due to **directional well profile**. Maximum measured inclination is 31 degrees.

Request 1-day turnaround on HRVRT analysis. Condition of 7" casing will determine next steps. Consult with WE&T engineer before proceeding.

- Install RBP1 at ~6505' correlated to Baker CBL log dated 10.18.2006. Perform negative pressure test down to 0 psi in increments. Load wellbore with
 9.5 ppg NaCl fluid and peform a positive pressure test of the csg/RBP to equivalent of 3000 psig at depth of RBP#1. Install RBP2 300ft above RBP1.
 RDMO Loggers.
- 18 RDMO Loggers.
- 19 Blow down 7" x 9-5/8" annulus, remove BOPs, gate valve, and tubing spool.
- 20 Install new API 5M wellhead reuse existing casing head. Pressure test wellhead seals to 3000 psi.
- 21 MIRU 1.75" or 2" CTU.
- 22 RIH and retrieve RBPs.
- 23 Flow well. If well won't flow unload with nitrogen.
- 24 Perform CTCO and 4000 gals 28% HCl acid matrix treatment.
- 25 RDMO CTU.
- 26 Flow well to recover treatment fluids.
- 27 Perform final 45-min flowback test thru 3/4" choke. Record data in the FLOWTEST and GAS LOSS DATA SHEET.
- 28 Notify WET Project Support that well is back in-service.
- 29 Reclaim R&L.
- 30 Reconnect well line.
- 31 Paint wellhead and well line.
- 32 Commission well by completing, processing, and retain for records the Wellsite Review and Turnover Form.
- 33 Notify REG that well is ready for storage service.

RECEIVED
Office of Oil and Gas

MAY 0 3 2024

WV Department of Environmental Protection

PREPARED BY:	Maria Medvedeva	REVIEWED BY:	James Amos	APPROVED: Sreat & 8	
PREP DATE:	3/15/2024			3/18/23	

Mayor D Kilds 4/24/24

Hardy Inkerman 12458 (API 47-031-00024) - CTCO and Acid Treatment

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

7" 23# N-80 LTC csg set at 6587'

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

Capacity: $[6587 \text{ ft } \times 1.6535 \text{ gal/ft}] = 10,891.6 \text{ gals}; \times 0.0394 \text{ bbl/ft} = 259.5 \text{ bbls}$

Openhole

Capacity 6-1/8" hole: [6909 - 6587] ft x 0.0364 bbl/ft = 11.7 bbls

Total Capacity: 272 bbls

Oriskany:

6619 - 6909

TD:

6909

Fluids Needed

4000 gals 28% HCl acid** treated with corrosion inhibitor, iron control/sequestering agent, and surfactant. Biocide, clay stabilizer, and surfactant to treat +/- 700 bbls fresh water. Liquid caustic on location in case need to neutralize flowback fluids.

* Prior to acid treatment verify that the 7" \times 9-5/8" annuli is full, top off with fresh water treated with biocide, corrosion inhibitor, and clay stabilizer as needed (capacity above 7" TOC is ~120 bbls).

CTCO Procedure

- 1. MIRU 1.75" or 2" CTU.
- 2. Load CT with treated fresh water (TFW) and pressure test CT and BOPs to 3000 psig.
 - * maximum pressure on wellhead components 3500 psig
- 3. Open well and RIH under static conditions.
- 4. At 6350' begin jetting with foamed TFW. Jet to TD and cycle up and down across interval 6550' TD.
- 5. Begin 28% HCl acid foamed to 50Q and cycle up and down across interval 65500′ TD until 2000 gals acid gone.
- 6. Chase acid with 50 bbls TFW foamed to 50Q to neutralize wellbore / flowback fluids.
- 7. Flow well while POOH to 6000'. Flow until returns are relatively dry.
- 8. CTU on stand-by until after acid treatment to unload wellbore if needed.

RECEIVED
Office of Oil and Gas

MAY 0 3 2024

Acid Treatment

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

WV Department of Environmental Protection

•	2000 gals 28% HCl acid	4-6 BPM	Max Treating Press = 3000 psig
	60 bbls bbls TFW	4-6 BPM	Max Treating Press = 2500 psig
=	60 bbls bbls TFW	4-6 BPM	Max Treating Press = 2000 psig
•	50 bbls bbls TFW	4-6 BPM	Max Treating Press = 1500 psig
=	40 bbls TFW	2-4 BPM	Max Treating Press = 1500 psig

SHUT DOWN FOR 30 minutes TO ALLOW ACID TO SOAK

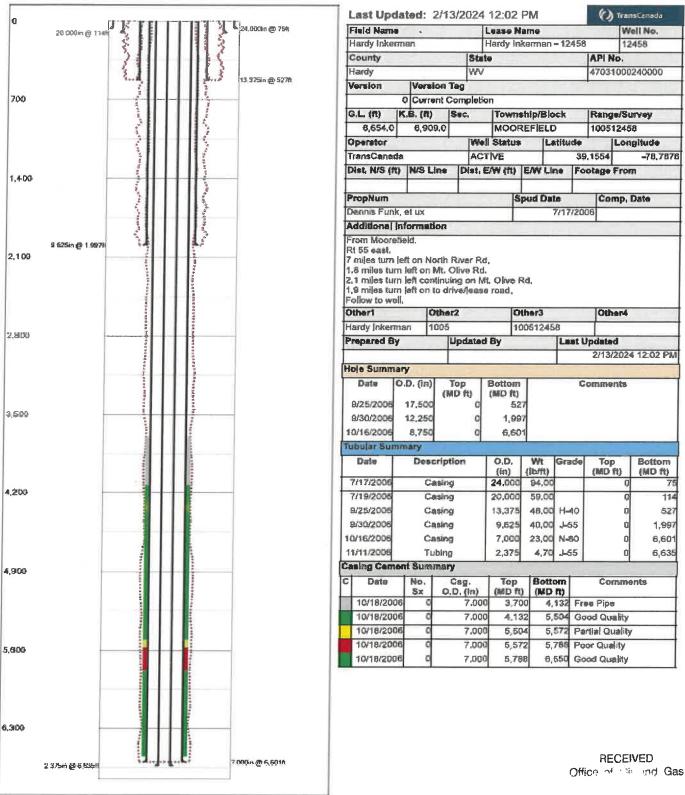
35 bbls TFW
 2-3 BPM
 Max Treating Press = 1500 psig

SHUT DOWN FOR 30 minutes TO ALLOW ACID TO SOAK

30 bbls TFW
 2-3 BPM
 Max Treating Press = 1500 psig

- 2. Flow well. If well quits flowing, RBIH with CT unloading fluid with N2.
- 3. RDMO and release CTU / acid equipment.

CASING CEMENT SUMMARE



MAY 0 3 2024

WR-35 Rev (5-01)

DATE: <u>4/27/07</u> API#: <u>47-031-00024</u>

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Well Operator's Report of Well Work

well Operat	on a vebout	DY MOTH MC	JIK.		
Farm name: Dennis A. Funk		Operator Well No.: 12458			
LOCATION: Elevation: 2009			e: Sector		
District: Moorefield Latitude: 4,415 Feet South of Longitude 9,897 Feet West of Company: Columbia Gas Transmission Corp	39 Deg. 78 Deg.	_10 Mir	ı. <u>00</u> Se	c. c.	
Company. Columbia das Hansimssion Corp	Casing &	Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1700 MacCorkle Ave SE Charleston, WV 25325-1273	24" 94# G	r. B-35	60	57	none – sanded in
Agent: Paul Amick	20" 59# G	r. B-35	100	96	71 sks
Inspector: Bill Hatfield / Craig Duckworth Date Permit Issued: 4/13/06 (re-issue)	13-3/8" 48	8# H-40	533	510	500 sks
Date Well Work Commenced: 7/17/06 . Date Well Work Completed: 11/16/06	9-5/8" 36/	40# J-55	1998	1979	585 aka
Verbal Plugging: Date Permission granted on: not applicable	Plugging: 7" 23# N-80		6604	6587	340 sks
Rotary X Cable Rig Total Depth (feet): 6909	2-3/8" 4.7	# J-55	6621	6621	none
Fresh Water Depth (ft.): 150, 682, 808 ft Salt Water Depth (ft.): none observed					
Is coal being mined in area (N/Y)? no					
Coal Depths (ft.):ft OPEN FLOW DATA					
Producing formation Oriskany Sand Gas: Initial open flow 50,200 MCF/ Final open flow 50,200 MCF/ Time of open flow between initial and Static rock Pressure 1300 psig (d Oil: Initi d Final final tests	al open flow	ow <u>0</u> 7 <u>0</u> Hou	Bbl/d Bbl/urs	d.
Second Producing formation not applicable Pay zone depth (ft) Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d Final open flow MCF/d Final open flow Bbl/d Time of open flow between initial and final tests Hours Static rock Pressure psig (surface pressure) after Hours					
NOTE: ON BACK OF THIS FORM PUT THE INTERVALS, FRACTURING OR STIMULATI LOG WHICH IS A SYSTEMATIC DETAILED INCLUDING COAL ENCOUNTERED BY THE Signed:	NG, PHYS	ICAL CHA ICAL REC	ANGE, ET	C. 2). THE	WELL

Amos - Senior Storage Engineer - Columbia Gas Transmission Corp

06/07/2024

Hardy Well 12458

Well drilled to Oriskany Sandstone for underground natural gas storage.

Formation Record		Top (MD ft)	Bottom (MD ft)
Chaneysville		4244	
Upper Marcellus		6221	6238
Purcell	527	6238	6403
Lower Marcellus		6403	6500
Needmore		6500	6619
Oriskany		6619	6909
TD			6909

Wellbore Telemetry (NAD 27 SPC WV-North Zone)

Surface:

N/S = 239,509 ft

E/W = 2,202,010 ft

Final Depth:

N/S = 238,660 ft

E/W = 2,202,564 ft

 $MD = 6909 \, ft$

TVD = 6654 ft

Perforations:

none

Stimulation:

12,000 gals 28% HCl acid

Avg BH rate:

5.5 BPM

ATP:

0 psig

ISIP:

0 psig

Electric Logs Ran;

10/18/06

GR-Segmented Bond Tool-CCL

10/14/06

GR-Density-CNL-Lateralog

10/14/06

Dipole Sonic

RECEIVED
Office of Oil and Gas

MAY 0 3 2024

^{*} Refer to revised survey plat and Schlumberger's directional drilling survey data report.

WW-2A (Rev. 6-14)

1). Date: <u>04.15.2024</u>

2.) Operator's Well Number

Hardvinkerman1245

State

County

Permit

3.) API Well No.:

47-

031

00024

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

	vner(s) to be served:	5) (a) Coal Ope	
(a) Name	Dennis and Emily Funk	Name	Not operated
Address	4222 Mount Olive Rd	Address	
71. N. N. I	Kirbv. WV 26755	_ ", , , ,	- CENTELL
(b) Name			wner(s) with Declaration RECEIVED Not operated Office of Oil and Gas
Address		Name	Not operated Office of Oil and
	£	Address	MAY 0.3 2024
(c) Name		Name	amont of
Address		Address	WV Department of Environmental Protection
6) Inspector	Gavne Knitowski	(c) Coal Le	essee with Declaration
Address	21 Energy Way	Name	Not operated
	Gormania, WV 26720	Address	
Telephone	304-546-8171		
	TO THE PERSONS NAI	MED ABOVE TA	AKE NOTICE THAT:
			cts by which I hold the right to extract oil and gas
<u>OR</u>			
			n 8(d) of the Code of West Virginia (see page 2)
			nia Code I have served copies of this notice and
application, a loc	Personal Service (Affidavit attac		gh on the above named parties by:
	Certified Mail (Postmarked post		4)
	Publication (Notice of Publication		'/
I have re			agree to the terms and conditions of any permit
issued under this		, , , , , , , , , , , , , , , , , , , ,	agree to the terms and contained or any point.
I certify ι	under penalty of law that I have perso	onally examined a	and am familiar with the information submitted on
this application for	orm and all attachments, and that bar	sed on my inquiry	of those individuals immediately responsible for
	rmation, I believe that the information		
imprisonment.	re that there are significant penalties	for submitting fais	se information, including the possibility of fine and
imprisonment.	Well Operator	Columbia Gas	Transmission, LLC
A CONTRACTOR OF THE PARTY OF TH	D	Maria Medved	
Am	anda J. Pecka Its:		Engineer Storage Technical Services
121		1700 MacCork	
My Co	ommission Expires	Charleston W	V 25314-1273
3330 P	July 27, 2025 Telephone:	304-410-4313	
CHAR		maria medved	deva@tcenergv.com
Subscribed and s	worn before me this day of	Hpril	
My Commission F	amanda J. Pec	ka	Notary Public
My Commission E			
Oil and Gas Privacy N	lotice		

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 06/07/2024

Columbia Gas Transmission, LLC

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



April 15, 2024

Dennis and Emily Funk 4222 Mount Olive Rd Kirby, WV 26755

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection - Office of Oil and Gas, to work on an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Hardy Inkerman 12458 (API 47-031-00024).

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.

on Delivery Restricted Delivery

Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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.

9590 9402 7630 2122 5681 87

7022 2410 0002 6396 3072

2. Article Number (Transfer from service label)

DC Form 3811 July 2020 DOLL

Complete items 1, 2, and 3.

1. Article Addressed to:

or on the front if space permits.

다	Domestic Mail Only	CEIPI
E		ite at www.usps.com®.
7 9 9 5	Certified Mail Fee \$4,40	USE 10726 02
5000	Return Receipt (hardcopy) Return Receipt (electronic) Certified Mail Restricted Delivery Adult Signature Required Adult Signature Restricted Delivery	Postmark
17 TH	Postage \$7.85 \$ \$	04/15/2024
2022	Sent TO DENNIS & EMULY Street and Apt. No., of PO Box No. 4222 Mount	Punt Olive Rd
	City, State, ZIP+4® VX W 2. PS Form 3800, April 2015 PSN 7550-02-000-9047	6965 HI 12458 See Reverse for Instructions
A. Signature	Funk Agent	
B. Received by (Printe	-UNK 4/25/24	
D. Is delivery address If YES, enter delive		RECEIVED Office of Oil and Gas
		MAY 0 3 2024
3. Service Type ☐ Adult Signature ☐ Adult Signature Restricted ☐ Certified Mail Restricted ☐ Certified Mail Restricted	Delvery	WV Department of Environmental Protection
☐ Certified Mail Restricted D☐ Collect on Delivery	Delivery Signature Confirmation Signature Confirmation	06/07/202

06/07/2024

U.S. Postal Service™

WW-2A Surface Waiver (4/16)

SURFACE OWNER WAIVER

County

Hardy

Operator

Columbia Gas Transmission LLC

Operator well number

Hardy Inkerman 12458

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

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

MAY 0 3 2024

WV Department of

Time Limits and methods for filing comments. The law requires these materials to be served on of the date testion 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.

<u>Comments must be in writing.</u> 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.

<u>List of Water Testing Laboratories.</u> 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 PE	RSON	FOR EXECUTION BY A CORPORATION, ETC.			
Signature	Date	Company Name By Its		Date	
Print Name		Signa	iture	Date	

COAL OPE	ERATOR, OWNE	R. OR LES	SSEE	WAIVER		
	,	,		* coal not o	operated	
County Hardy Operator Columbia Gas Transmission LLC	 Operato	r's Well Nu	mber	Hardy Inker	man 12	458
INSTRUCTIONS	TO COAL OPE	RATOR, O	WNER	, OR LESSEE		
To the coal operator, owner, any objection you wish to make or a with the Chief of the Office of Oil as by the Office. Mail objections to:	are required to m	nake by W∖	/ Code	22-6-15, 16 or	17, must	be filed
Chief, Office of Oil and Gas Department of Environmental Proter 601 57 th St. SE Charleston, WV 25304 (304) 926-0499 extension 1654	ction					
	WAIV	ER				
The undersigned coal operate ocation has examined this proposed ocation, the well location has been work proposed to be done at this location the well west Virginia Corequirements of the West Virginia Core	d well location. I added to the mir cation, provided,	f a mine map. The map. The map.	ap exis ne undo erator	its which covers ersigned has no has complied w	the area objection	of well to the
FOR EXECUTION BY A NATURAL PERSO	DN	FOR	EXECU	JTION BY A CORF	PORATION,	ETC.
	Date	Company Name				
Signature		By Its				Date
		8	Signat	ure		Date

RECEIVED
Office of Oil and Gas

MAY 0 3 2024

WW-2A1 (Rev. 1/11)

Operator's Well Number Hardy Inkerman 12458

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
Arlie Funk and Nova Funk	Columbia Gas Transmission Corp.	Storage Lease -	273 / 632
		10950009-500	

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 he reby a cknowledges 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 0.3 2024

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 ac quired from the appr opriate aut hority before the affected activity is initiated.

> Well Operator: By: Its:

Columbia Gas Transmission, LLC

Maria Medvedeva

Senior Wells Engineer Storage Technical Services

WW-2B1 (5-12)

Well	No.	Hardy	Inkerman	12458
------	-----	-------	----------	-------

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 Labor Sampling Cont		
Well Operator Address	Not applicable - existing underground natural gas storage well	
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 **0 3** 2024

WOOMATMEN 974 Environmental Protection

WW-9 (5/16)

API Number 47 -	031	_00024
Operator's Well No	. Hardy	Inkerman 12458

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) Pot Lick Run of North River	Quadrangle Sector, 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	
	Io V If so, what ml.? N/A
Proposed Disposal Method For Treated Pit Wastes:	
Land Application (if selected provide a Underground Injection (UIC Permit No Reuse (at API Number	umber_34-167-23862)
Off Site Disposal (Supply form WW-9 Other (Explain Mud Master 64054; Rese	for disposal location) rve Environmental Services (WMGR 123SW008)
	ervices (WMGR 123SW001)
Will closed loop system be used? If so, describe: yes - steel flow li	ne 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, pol	ymer, starch, CaCO3, KCl, HCl
Drill cuttings disposal method? Leave in pit, landfill, removed offs	ite, etc. N/A
-If left in pit and plan to solidify what medium will be use	d? (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 West Virginia solid waste facility. The notice shall be provided with where it was properly disposed.	
on April 1, 2016, by the Office of Oil and Gas of the West Virginia provisions of the permit are enforceable by law. Violations of any to regulation can lead to enforcement action.	mined and am familiar with the information submitted on this inquiry of those individuals immediately responsible for o btaining and complete. I am aware that there are significant penalties for risonment. OFFICIAL SEAL Amanda J. Pecka Notary Public State of West Virginia My Commission Expires July 27, 2025 3330 PENNSYLVANIA AVE CHARLESTON WV 25302
Subscribed and swom before me this 15th day of A	, 20 24 RECEIVED Office of Oil and Gas
Umanda G Peeka	Notary Public MAY 0 3 2024
My commission expires July 27, 2025	MAI U D 2024

Operator's Well No. Hardy Inkerman 12458

,	atment: 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 s	traw @ 2	ons/acre	
	٤	Seed Mixtures	
Т	emporary	Permanent	
Seed Type	Ibs/acre	Seed Type lbs/acre	
Annual rye	40	Orchard Grass and/or Tall Fescue	29
		Birdsfoot Trefoil (Empire)	ξ
		Annual Rye	12
aps(s) of road, location, povided). If water from the W), and area in acres, of	pit will be land applied, provide	plication (unless engineered plans including this info have water volume, include dimensions (L, W, D) of the pit, a	
ovided). If water from the water, W), and area in acres, of	pit will be land applied, provide the land application area.		
(aps(s) of road, location, provided). If water from the same with the same and area in acres, of notocopied section of invo	pit will be land applied, provide the land application area.		
Iaps(s) of road, location, provided). If water from the water from the water from the water from the control of the water from	pit will be land applied, provide the land application area.		
Iaps(s) of road, location, provided). If water from the water from the water from the water from the control of the water from	pit will be land applied, provide the land application area.		
Iaps(s) of road, location, provided). If water from the water from the water from the water from the control of the water from	pit will be land applied, provide the land application area.		
Iaps(s) of road, location, provided). If water from the water from the water from the water from the control of the water from	pit will be land applied, provide the land application area.		
Iaps(s) of road, location, provided). If water from the water from the water from the water from the control of the water from	pit will be land applied, provide the land application area.		
Iaps(s) of road, location, provided). If water from the water from the water from the water from the control of the water from	pit will be land applied, provide the land application area. lved 7.5' topographic sheet.	e water volume, include dimensions (L, W, D) of the pit, a	

WW-9- GPP Rev. 5/16

	Page	of	
API Number 47 -	031	- 00024	
Operator's Well N	lo. Hard	ly Inkerman 12458	

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): Pot Lick Run of North River Quad: Sector, WV	
Farm Name: Dennis Funk, et ux	
 List the procedures used for the treatment and discharge of fluids. Include a list of all operations that or groundwater. 	ould contaminate th
No fluids planned to be discharged. No fertilizer will be stored on site. Fuel, oil, a will be stored on site, but located within secondary containment. Accidental spills construction equipment, well treatment fluids, and produced well fluids are the on source of contamination to groundwater. Drilling and flowback fluids to be stored accumulated fluids to be hauled off site to UIC disposal facility.	from ly possible
2. Describe procedures and equipment used to protect groundwater quality from the list of potential contam	inant sources above
All construction and well servicing equipment will be monitored and inspected dail Tanks to be monitored daily for leaks. Spill kits will be on site.	ly for leaks.
 List the closest water body, distance to closest water body, and distance from closest Well Head Prodischarge area. 	otection Area to the
Pot Lick Run of North River is at a distance of 0.79 miles NE.	
The Rio General Store WV9916048 is the closest Well Head Protection Area at a 6.18 miles SE from discharge area.	distance of
4. Summarize all activities at your facility that are already regulated for groundwater protection.	
N/A	
	RECEIVED ice of Oil and Gas
Off	
Discuss any existing groundwater quality data for your facility or an adjacent grounds	MAY 0 3 2024

,,,,,

WV Department of Environmental Policetro 2024

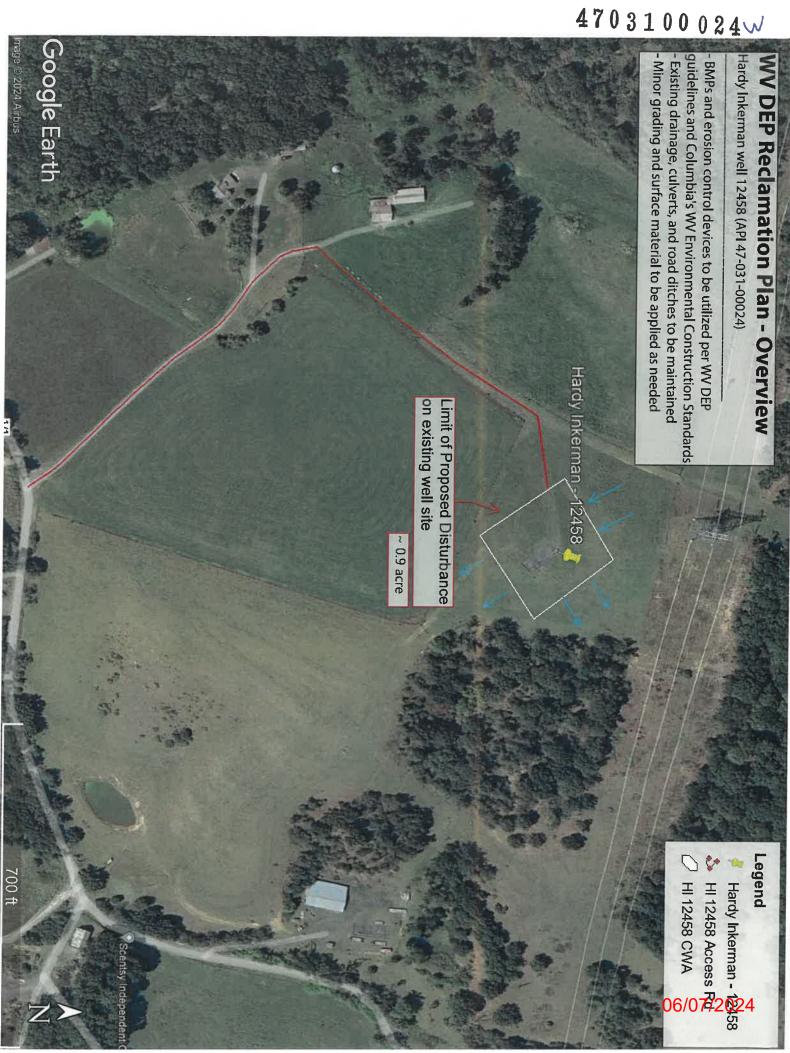
WW-9- GPP Rev. 5/16 Page 2 of 2

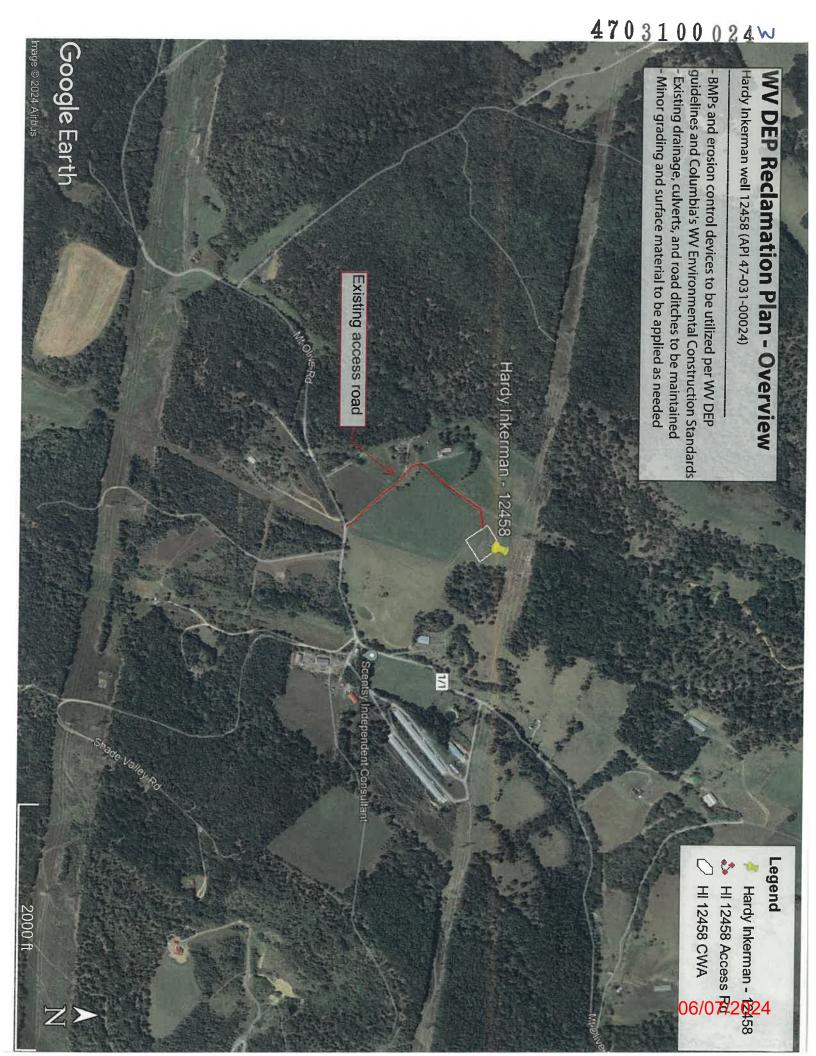
API Number 47 - 031 - 00024

Operator's Well No. Hardy Inkerman 12458

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.
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.
Date: 04/15/2024 RECEIVED Office of Oil and Gas

MAY 0 3 2024





WV Department of Environmental Protection

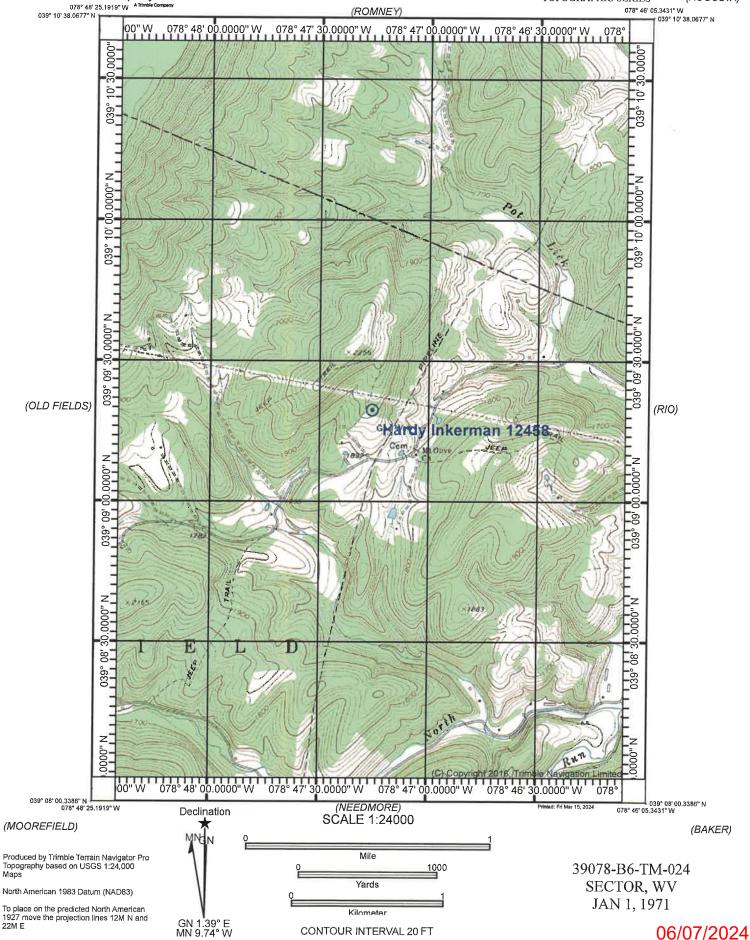
mytopo

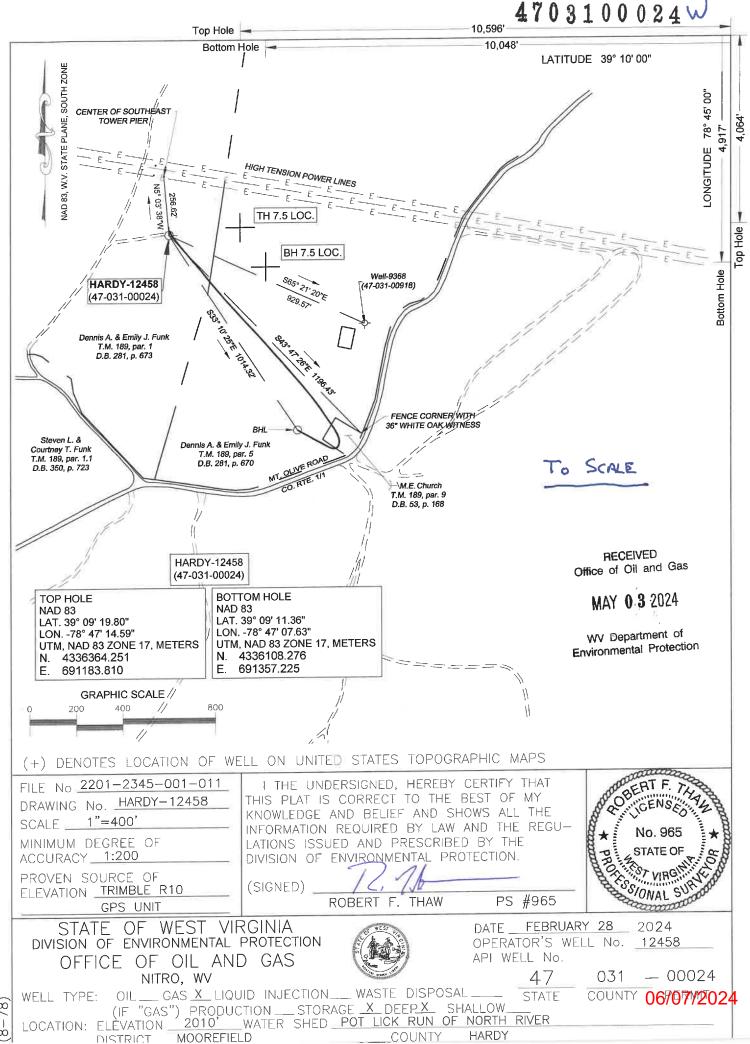
(BURLINGTON)

4703100024W

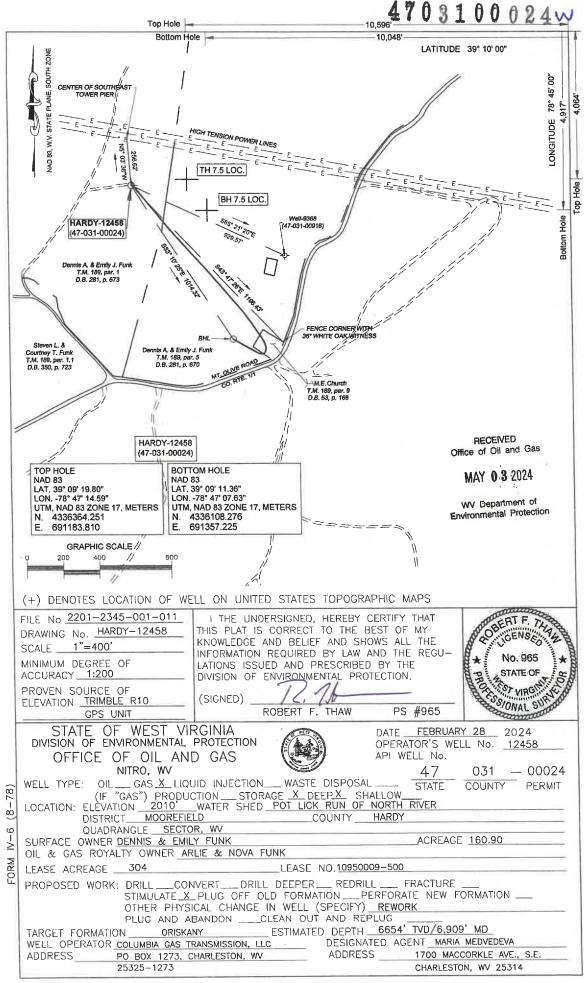
SECTOR QUADRANGLE WEST VIRGINIA TOPOGRAPHIC SERIES

(AUGUSTA)





DISTRICT



Please Come Again MERCHANT COPY

Thank You

httos://mail.google.com/mail/u/0/2ik=69dfaha05a&vipwi=nt&coarch=all&normthid-thrond or 2000 control of announce of an announce

5/3/24, 9:30 AM

Null, Gregory L <gregory.i.null@wv.gov>

Re: API 47-031-00024

1 message

Hankins, Melanie S <melanie.s.hankins@wv.gov> To: "Null, Gregory L" <gregory.I.null@wv.gov>, "Whitlock, Renae D" <renae.d.whitlock@wv.gov>, "McLaughlin, Jeffrey W" <jeffrey.w.

Is this from Sandy Brown of TC Energy or Columbia Gas? Funding info is below.

3323 - fund

2024 - FY

9280 - Unit

6869 - Rev Srce

4097 - Sub Rev

Thanks,

Melanie S. Hankins

Environmental Resources Specialist

West Virginia Department of Environmental Protection

Manual CP

APPR CODE: 09653S VISA

\$900.00

AMOUNT

REF#: 00000001

Bark D: 000000 Batch #: 929 05/03/24

AVS. 1 Intoles f: (713/10012)

TID: 00E30710

WV Dept of Env. Prot. 601 57th St SE Charleston, WV 25304

304-926-0499

SALE

RRN: 124355650375

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41118

(304) 926-0452 fax

Tuesday through Friday 7AM to 5PM

50000 APX 47-031-00024 12458 Jeff McLaughin - 026 Hardy

mana_ medvedera @ Acenery, con 304-410-43/3

On Fri, May 3, 2024 at 9:08 AM Null, Gregory L <gregory.l.null@wv.gov> wrote: I received a \$900 credit card payment for API 47-031-00024.

Can you provide me with the funding to make this deposit?

Thank you.

I MARTE TO PAY MBOYE TOTAL MADUNT
IN ACCORDANCE WITH CARD ISSUER'S
AMRENET
(MERCHANT AGREEMENT IF CREDIT VOUCHER)
RETAIN THIS COPY FOR STATEMENT
VERIFICATION

SIGNATURE NOT REQUIRED

APPROVED

Columbia Gas Transmission, LLC

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



May 2nd, 2024

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

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

Hardy Inkerman 12458 (API 47-031-00024)

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

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

If you have questions, feel free to call.

Regards,

Maria Medvedeva Senior Wells Engineer

Well Engineering & Technology Columbia Gas Transmission, LLC

Mob: 304-410-4313

maria_medvedeva@tcenergy.com

RECEIVED
Office of Oil and Gas

MAY 0.3 2024