



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, September 26, 2023
WELL WORK PERMIT
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for TERRA ALTA 7394
47-077-00022-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

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

Operator's Well Number: TERRA ALTA 7394
Farm Name: MAUPIN, WINFRED COMBS
U.S. WELL NUMBER: 47-077-00022-00-00
Vertical Re-Work
Date Issued: 9/26/2023

Promoting a healthy environment.

09/29/2023

PERMIT CONDITIONS

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

CONDITIONS

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

09/29/2023

4707700022W
CK # 43068
\$900.00
TRANS CANADA
PIPELINES LIMITED

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 Preston Union Aurora, WV 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Terra Alta 7394 3) Elevation: 2132

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

*Handy Kn9
7/18/23*

5) Proposed Target Formation(s): Chert / Oriskany Proposed Target Depth: 4987 / 5151

6) Proposed Total Depth: 5399 Feet Formation at Proposed Total Depth: Helderberg Lime

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

8) Approximate salt water depths: none reported by driller

9) Approximate coal seam depths: None reported by driller

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

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

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

Perform a fresh water treatment. Following results of FWT, perform coil tubing cleanout and 2000 gallon 15% HCL stimulation.

* casing and equipment listed below are existing

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

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13-3/8 *		48	43	43	
Fresh Water	10-3/4 *		32.8	476	476	
Coal	8-5/8 *		24	1436	1436	45 sx
Intermediate	7*		20	4988	4988	60 sx
Production	4-1/2 * N-80 / J-55		12.6	5390	5390	380 sx
Tubing						
Liners						

Packers: Kind: _____
Sizes: _____
Depths Set _____

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4707700022W

WELL JOB PLAN		STS Well Engineering & Technology			PAGE 1	DATE JOB PREPARED: 4/19/2023	
Objective: Deliverability Enhancement					LAST PROFILE UPDATE:		
TITLE: FWW. CTCO / acid stimulate if well performance is not restored following FW wash					WORK TYPE: Deliverability		
FIELD: Terra Alta		WELL ID: 7394			LEASE #: 90332		
STATE: WV		SHL (Lat/ Long) 39.404405		-79.583626	API: 47-077-00022-0000		
DIST/TWP: Union		BHL (Lat/Long) 39.404405		-79.583626	CNTY: Preston		
EXISTING TUBULAR CONFIGURATION		OD (inches)	WEIGHT (PPF)	GRADE	THREAD	DEPTH (ft)	
						TOP	BOTTOM
Conductor		13 3/8	48.0			0	43
Surface		10 3/4	32.8			0	476
Intermediate		8 5/8	24.0			0	1436
Intermediate		7	20.0			0	4988
Production		4 1/2	12.6	N-80		0	15
Production		4 1/2	12.6	J-55		15	5390
Perforations		5012 - 5053' 4 spf in 1959, 5162 - 5348' 6 spf in 1994 + reperf 1998					
Wellhead		API 3K wellhead, 4-1/2" x 7", 4" FL 2"11-1/2V wellhead connection. New 3K 4" master and side valves installed in 2021.					
Refer to "Wellbore Diagram" tab							
D.H. EQUIPMENT		TYPE			DEPTH (ft)		
PACKER INFO:		Upper					
		Lower					
NIPPLE PROFILE INFO:		Upper					
		Lower					
SSSV INFO:							
CEMENT INFO							Calc TOC (ft)
13 3/8	Cement unknown.						-
10 3/4	Cement unknown.						-
8 5/8	45 sx cmt Alpha cement						1179
7	60 sx cmt						4509
4 1/2	2-stage cement job - total of 380 sx cmt, returns to surface, stage collar @ 4353.8' / cement basket 4356.7' per 2022 HRVRT log.						0
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):		2694	psig	* input			
* Maximum storage field surface pressure (MAOP):		2350	psig	* input			
Well TD:		5399	ft TVD	* input			
Top of storage zone (Chert):		4987	ft TVD	* input			
Calculated maximum BH pressure at top of zone:		2680	psig	* output Kill Fluid (TOZ)			
Kill fluid density at top of zone @:		150	psi OB	10.91	ppg	* output Kill Fluid (TOZ)	
Proposed depth of BP (n/a):		4987	ft TVD	* input			
Calculated maximum BH pressure at depth of BP:		2680	psig	* output Kill Fluid (BP)			
Kill fluid density at depth of BP @:		150	psi OB	10.91	ppg	* output Kill Fluid (BP)	
Required minimum kill fluid density:		11.0	ppg	* greater of the two			
Current AOF:		51,410 MCF/D					
Top historical AOF:		75,884 MCF/D					
Last MVRT:		Baker Atlas 6.17.2022 HRVRT noted 29-37% corrosion in 4.5", highest loss being at 4969-4970'.					
SBT:		Baker Atlas 6.17.2022 4.5" Intex CBL noted poor to partial cmt quality 5002 - 760', free pipe to surface.					
PROPOSED YEAR:	2024	ERCB PERMIT REQD:	YES	NO	(Internal) PDS Required:	YES	NO
PREPARED BY:	Maria Medvedeva	DT. APPLIED:	ISSUED:	REVIEWED BY:	James Amos	APPROVED:	<input checked="" type="checkbox"/> Recoverable Signature
PREP DATE:	4/19/2023	X <i>[Signature]</i>					

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James Amos 7/18/2023

09/29/2023

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WELL JOB PLAN		STS Well Engineering & Technology	PAGE 2	DATE JOB PREPARED: 4/19/2023
Objective: Deliverability Enhancement		LAST PROFILE UPDATE:		
TITLE: FWW. CTCO / acid stimulate if well performance is not restored following FW wash	WELL: 7394		WORK TYPE: Deliverability	
FIELD: Terra Alta	SHL (Lat/Long): 39.404405 -79.583626	API: 47-077-00022-0000		
STAT: WV	BHL (Lat/Long): 39.404405 -79.583626	CNTY: Preston		

PROCEDURE

NOTE: 1997 stimulation noted the following - perf intervals were treated using 100gal of acid/foot of perforations (10% FE acid used). The only interval exhibiting a break down was 5049'-5053', which also communicated with the 1-3/4" by 4-1/2" annulus. All other intervals treated freely and went on vacuum when pumping ceased. Sip tool stuck at 5206'-worked free.. Recent workover obtained HRVRT / CBL logs and performed master and side valve changes.

- 1 Obtain State 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 Prepare access road and well site. Install ECD's per EM&CP.
- 7 Service all wellhead valves.
- 8 Document initial flowstring and 4-1/2' x 7" annular pressures.
- 9 If work occurs between May 01 and September 01, injection season, pump 40 bbls TFW down casing and place well back in service. If work occurs between September 01 and April 31, withdraw season, pump 40 bbls TFW down casing, allow to soak 2 days and then place well back in service.
- 10 Perform a 45-min flowback test. Pending flowback results, may have to perform a CTCO and acid stimulation (Step 20+)
- 11 Notify WET Project Support that well is back in-service.
- 12 Reclaim R&L.
- 13 Commission well by completing, processing, and retain for records the Wellsite Review and Turnover Form.
- 14 Notify REG / WE&T that well is ready for storage service.

If flowback test results dictate, complete a CTCO and acid stimulation as per below.

- 20 MIRU 1.75" CTU.
- 21 Flow well. If well won't flow unload with nitrogen.
- 22 Perform CTCO and 2000 gallons of 15% HCL treatment.
- 23 RDMO CTU.
- 24 Flow well to recover treatment fluids.
- 25 Perform final 45-min flowback test thru 3/4" choke.
- 26 Notify WET Project Support that well is back in-service.
- 27 Reclaim R&L.
- 28 Reconnect well line.
- 29 Paint wellhead and well line.
- 30 Commission well by completing, processing, and retain for records the Wellsite Review and Turnover Form.
- 31 Notify REG that well is ready for storage service.

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PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 4/19/2023		

Maury Knott 7/18/2023

09/29/2023

Terra Alta 7394 (API 47-077-00022) - CTCO and Acid Treatment

API 3K wellhead, 4-1/2" FS x 7" support

4-1/2" 12.6# N-80 csg to 15' / 4-1/2" 12.6# J-55 csg set at 5390', stage collar from 4370 - 4374'

Capacity: [5390 ft x 0.63840 gal/ft] = 3441 gals; x 0.0152 bbl/ft = 82 bbls

Openhole

Capacity 6-1/8" hole: 9 ft x 0.03644 bbl/ft = 0.33 bbls

Total Capacity: 83 bbls

Chert: 4987 – 5141

Oriskany: 5151 – 5264

Perforations: 5012 – 5053 @ 4spf, 5162 – 5348' @ 6 spf

TD: 5399

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Fluids Needed

2000 gals 15% HCl acid** treated with corrosion inhibitor, iron control/sequestering agent, H₂S scavenger, and surfactant. Biocide, clay stabilizer, and surfactant to treat +/- 300 bbls fresh water. Liquid caustic on location in case need to neutralize flowback fluids.

** Prior to acid treatment verify that the 4-1/2" x 7" and 7" x 8-5/8" annuli is full, top off with fresh water treated with biocide, corrosion inhibitor, and clay stabilizer as needed.*

CTCO Procedure

1. MIRU 1.75" CTU and H₂S monitoring service.
2. Load CT with treated fresh water (TFW) and pressure test CT and BOPs to 2500 psig.
** maximum pressure on wellhead components 2500 psig*
3. Open well and RIH under static conditions.
4. At 4800' begin jetting with foamed TFW. Jet to TD and cycle up and down across interval 5000' – TD.
5. Begin 15% HCl acid foamed to 50Q and cycle up and down across interval 5000' – TD until 1000 gals acid gone.
6. Chase acid with 40 bbls TFW foamed to 50Q to neutralize wellbore / flowback fluids.
7. Flow well while POOH to 4700'. Flow until returns are relatively dry.
8. CTU on stand-by until after acid treatment to unload wellbore if needed.

Acid Treatment

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

▪ 1000 gals 15% HCl acid	4-6 BPM	Max Treating Press = 2500 psig
▪ 20 bbls bbls TFW	4-6 BPM	Max Treating Press = 2000 psig
▪ 15 bbls bbls TFW	4-6 BPM	Max Treating Press = 1500 psig
▪ 15 bbls bbls TFW	4-6 BPM	Max Treating Press = 1000 psig
▪ 15 bbls TFW	2-4 BPM	Max Treating Press = 1000 psig
		▪ SHUT DOWN FOR 30 minutes TO ALLOW ACID TO SOAK
▪ 10 bbls TFW	2-3 BPM	Max Treating Press = 1000 psig
		▪ SHUT DOWN FOR 30 minutes TO ALLOW ACID TO SOAK
▪ 15 bbls TFW	2-3 BPM	Max Treating Press = 1000 psig

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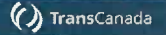
2. Flow well. If well quits flowing, RBIH with CTU / acid equipment with N2.
3. RDMO and release CTU / acid equipment.

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WV Department of Environmental Protection

Last Updated: 3/8/2023 12:06 PM



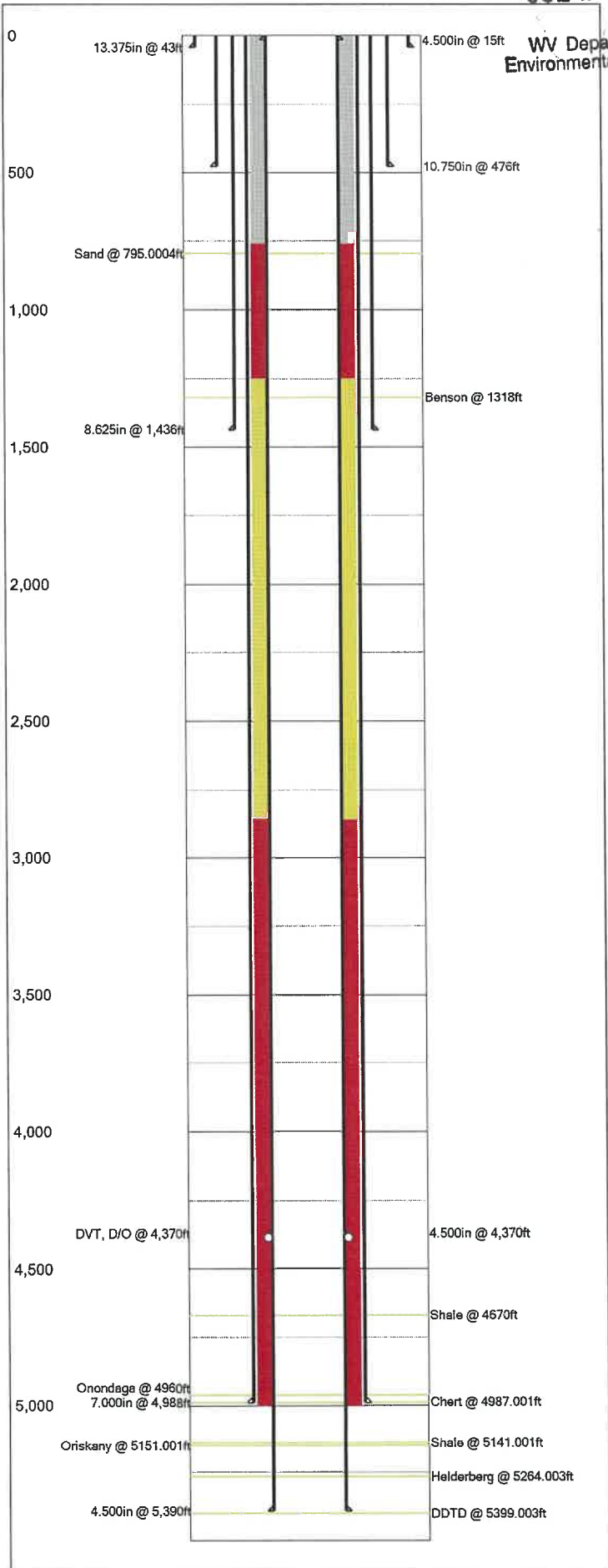
Field Name		Lease Name		Well No.
Terra Alta		Terra Alta - 07394		07394
County		State		API No.
PRESTON		WV		47077000220000
Version		Version Tag		
		0 Current Completion		
G.L. (ft)	K.B. (ft)	Sec.	Township/Block	Range/Survey
5,399.0	5,399.0	172-131	UNION	100307394
Operator		Well Status	Latitude	Longitude
TransCanada		ACTIVE	39.4044	-79.5836
Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From
PropNum		Spud Date	Comp. Date	
"BERNADETTE COLE, ET AL"		10/1/1951		
Additional Information				
Other1	Other2	Other3	Other4	
Terra Alta	1003	100307394		
Prepared By		Updated By	Last Updated	
			3/8/2023 12:06 PM	

Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
10/1/1951	Drive Pipe	13.375	48.00		0	43
10/2/1951	Surface Pipe	10.750	32.75		0	476
10/3/1951	Casing	8.625	24.00		0	1,436
10/4/1951	Casing	7.000	20.00		0	4,988
10/1/1959	Casing	4.500	12.60	N-80	0	15
10/1/1959	Casing	4.500	12.60	J-55	15	4,370
10/1/1959	Casing	4.500	12.60	J-55	4,374	5,390

C	Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	6/17/2022	0	4.500	0	760	Free Pipe
	6/17/2022	0	4.500	760	1,250	Poor Quality
	6/17/2022	0	4.500	1,250	2,860	Partial Quality
	6/17/2022	0	4.500	2,860	5,002	Poor Quality

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)
10/1/1959	DVT, D/O	4.500	3.500	4,370	4,374

Formation	Top (TVD ft)	Comments
Sand	795	Comments: Water-Y FW @200' - SW @635'
Benson	1,318	
Shale	4,670	
Onondaga	4,960	
Chert	4,987	Comments: Gas-Y Gn @5020-5055'
Shale	5,141	Comments: Initial OF=8544 MCF
Oriskany	5,151	
Helderberg	5,264	
DDTD	5,399	



09/29/2023

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4707700022w

WV Department of Environmental Protection

FORM 2010-SR4 CPS (REV. 6-90)

COLUMBIA GAS TRANSMISSION SYSTEM
NOTICE OF STORAGE WELL STATUS CHANGE

FORWARD ORIGINAL ONLY TO STORAGE DEPARTMENT.

DIVISION		STORAGE FIELD <i>Terra Alta</i>		COMPANY WELL NUMBER <i>7394</i>	
FARM NAME		TOWNSHIP-DISTRICT	COUNTY	STATE	EASE-DEED NO.
LAST ACTIVE WELL ON FARM		(THIS BLOCK FOR STORAGE DEPT. USE ONLY)			
<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> SURRENDER LEASE	<input type="checkbox"/> RENEW LEASE	<input type="checkbox"/> OTHER	

DATE COMP. *8/4/94*

WELL STATUS PRIOR TO THIS REPORT	<input type="checkbox"/> PRODUCTION	<input checked="" type="checkbox"/> STORAGE	Remarks <i>7-20-94 Rig up coil tubing wash hole with 5% acid use straddle packer to wash existing perforations. Ran T.D.T. deviation survey and Spinner logs. New perforations within existing storage zone from 5162'-72' 5220'-25' 5238'-48' at 6spf 3 3/8" HSD 41B Hyperjet II Ran METT and Spinner. Casing Damage across chert and at 5239' to 5244'.</i>
	<input type="checkbox"/> DRILLING	<input type="checkbox"/> ACTIVE	
	<input type="checkbox"/> S.I. COMPLETION	<input type="checkbox"/> ABANDONED	

WELL STATUS CHANGE OR WORK PERFORMED	<input type="checkbox"/> COMPLETED <input type="checkbox"/> Gas <input type="checkbox"/> Dry <input type="checkbox"/> INITIAL TURN ON <input type="checkbox"/> REDRILLED FOR STORAGE <input type="checkbox"/> Retained <input type="checkbox"/> Abandoned <input type="checkbox"/> RECONDITIONED <input type="checkbox"/> Retained <input type="checkbox"/> Abandoned <input type="checkbox"/> TRANSFERRED TO <input type="checkbox"/> CNR <input type="checkbox"/> Storage <input type="checkbox"/> PURCHASED FOR STORAGE <input type="checkbox"/> DRILLED DEEPER <input type="checkbox"/> PLUGGED AND ABANDONED <input type="checkbox"/> SOLD <input checked="" type="checkbox"/> OTHER (SEE REMARKS)
--------------------------------------	---

DRILLED TO _____ feet sand PLUGGED BACK NO YES
 If Yes, to depth of _____ feet sand

COMPLETION DATA (If applicable)	WELL TREATMENT <input type="checkbox"/> No <input type="checkbox"/> Yes If Yes, Type of Treatment _____	
	OPEN FLOW TEST	TYPE OF GAUGE <input type="checkbox"/> Orifice Well Tester <input type="checkbox"/> Pitot Tube <input checked="" type="checkbox"/> Other (Specify) <i>2" critical flow prover</i> GAUGE READING _____ inches <input type="checkbox"/> Mercury <input type="checkbox"/> Water or <i>110</i> psig through <i>7/8</i> inch opening after blowing <i>3</i> hours FLOW <i>21,000</i> M cu ft/day DATE <i>4/8/94</i> ROCK PRESSURE <i>1608</i> psig in <i>3</i> hours DATE <i>4/8/94</i>
		FINAL READING <input type="checkbox"/> Shut In <input checked="" type="checkbox"/> Turned On TYPE OF GAUGE <input type="checkbox"/> Orifice Well Tester <input type="checkbox"/> Pitot Tube <input checked="" type="checkbox"/> Other (Specify) <i>2" critical flow prover</i> GAUGE READING _____ inches <input type="checkbox"/> Mercury <input type="checkbox"/> Water or <i>1540</i> psig through <i>3/4</i> inch opening after blowing <i>5</i> hours FLOW <i>21,100</i> M cu ft/day DATE <i>8/10/94</i> ROCK PRESSURE <i>1912</i> psig in <i>5</i> hours DATE <i>8/10/94</i>

AUTHORIZATION FOR WORK PERFORMED	Classification _____ Permit Number _____	For Storage Dept. Use Only		
		SECTION	NOTED BY	DATE
WORK PERFORMED BY	MACHINE NUMBER OR CONTRACTORS NAME _____	STORAGE ENGINEER		
		GEOLOGY		
		MONITORING		
		OFFICE & BUDGETS		
		DIRECTOR DRILLING AND MAINTENANCE		

Compiled By *Tim Maddox* Date *3-3-94*

Reviewed By _____ Date _____
MANAGER-DRILLING & FIELD LIAISON

09/29/2023

JUL 24 2023

739A

WEST VIRGINIA DEPARTMENT OF Environmental Protection
OIL & GAS DIVISION
WELL RECORD

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Permit No. Pros 22
Kingwood Quad.
Company
Address
Farm
Location
Well No.
District
Surface
Mineral
Commenced
Completed
Not shot
Volume
Rock Pressure
Fresh Water
Salt Water

Hope Natural Gas Company
445 West Main St., Clarksburg, W.Va.
Margaret C. Kraus, Acres 219

9638 Elev. 2128
Union Preston County

July 24, 1951
Oct. 12, 1951
8,544,700 G.F.
14 hrs. 2100#
200'; 535'
None recorded

Gas Well
CASING & TUBING

13	43	43
10	476	476
8 1/2	1436	1436
6 5/8	4988	4988

Casing cemented:
8" set in 45 bags
cement
7" set in 60 bags
cement

No coal recorded

Surface	0	80
Slate	80	190
Sand	190	235
Lime	235	422
Slate	422	438
Lime	438	645
Slate	645	688
Brown Sand	688	704
Slate Grey	704	795
Sand	795	806
Gray Slate	806	1000
Lime	1000	1318
Bonson Sand	1318	1345
Lime	1345	1394
Slate Shell	1394	2125
Lime	2125	2400
Slate Shell	2400	2750
Gray Lime	2750	3015
Slate Shell	3015	3560
Brown Shale	3560	3640
White Lime	3640	3798
Brown Shale	3798	4212
Dark Brown Shale	4212	4314
Tully Lime	4314	4350
Brown Shale	4350	4540
Black Lime	4540	4670
Dark Shale	4670	4755
Shale Marcellus	4755	4902
Black Shale	4902	4960
Onondaga	4960	4987
Chert	4987	
T.D.		5058
Gas 5020 to 5053		

5058 +

253.44

4707700022W

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



July 21, 2023

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:

Terra Alta 7394 (API 47-077-00022)

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

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

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Office of Oil & Gas
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WV Department of
Environmental Protection

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

www.tcenergy.com

09/29/2023

WW-2A
(Rev. 6-14)

1.) Date: 07.13.2023
2.) Operator's Well Number Terra Alta 7394
State 47- County 077 Permit 00022
3.) API Well No.:

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 Carolyn Dewitt
Address 115 Seemont Dr
Kinwood, WV 26537
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Gayne Knotowski
Address 21 Energy Way
Gorman, WV 26720
Telephone 304.546.8171
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 _____

RECEIVED
Office of Oil & Gas
JUL 24 2023
WV Department of
Environmental Protection

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

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

x Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

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

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

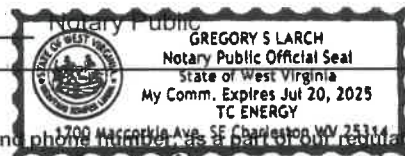
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true,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

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

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

Subscribed and sworn before me this 13 day of July, 2023

Gregory S. Larch
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 number, as required by 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

09/29/2023

4707700022W

Columbia Gas Transmission, LLC

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



July 13, 2023

Carolyn Dewitt
115 Seemont Dr
Kingwood, WV 26537

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Office of Oil & Gas

JUL 24 2023

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 Terra Alta 7394 (API 47-077-00022).

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

Regards,

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

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

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

Kingwood, WV 26537

OFFICIAL USE

Certified Mail Fee	\$4.35	0726
Extra Services & Fees (check box, add fees as appropriate)	\$3.55	03
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$9.65	
Total Postage and Fees	\$17.55	

Sent To Carolyn Dewitt
Street and Apt. No., or PO Box No.

City, State, ZIP+4® TA 7394

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

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 <u>Carolyn Dewitt</u> <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <u>Carolyn Dewitt</u> C. Date of Delivery</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>1. Article Addressed to:</p> <p><u>Carolyn Dewitt</u> <u>115 Seemont Dr.</u> <u>Kingwood, WV 26537</u></p>	<p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Collect on Delivery Restricted Delivery	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®												
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™												
<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery												
<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Signature Confirmation™												
<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery												
<input type="checkbox"/> Collect on Delivery Restricted Delivery													
<p>2. Article Number (Transfer from service label)</p> <p>7022 2410 0002 6396 3003</p>	<p>PS Form 3811, July 2002 PSN 7530-02-000-9047</p>												

www.tcenergy.com

09/29/2023

SURFACE OWNER WAIVER

County Preston

Operator
Operator well number

Columbia Gas Transmission LLC
Terra Alta 7394

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

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Office of Oil & Gas
JUL 24 2023

Time Limits and methods for filing comments. The law requires these materials to be served on you on 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 _____

09/29/2023

COAL OPERATOR, OWNER, OR LESSEE WAIVER

* coal not operated

County Preston
Operator Columbia Gas Transmission LLC

Operator's Well Number Terra Alta 7394

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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Office of Oil & Gas
JUL 24 2023
WV Department of
Environmental Protection

09/29/2023

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

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

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

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Bernadette Cole, et al	United Fuel Gas Company	Storage Lease - 1090332-000	340 / 660

**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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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

09/29/2023

You are viewing this page over a secure connection. [Click here for more information.](#)

West Virginia Secretary of State — Online Data Services

Business and Licensing

Online Data Services Help

Business Organization Detail

NOTICE: The West Virginia Secretary of State's Office makes every reasonable effort to ensure the accuracy of information. However, we make no representation or warranty as to the correctness or completeness of the information. If information is missing from this page, it is not in the The West Virginia Secretary of State's database.

COLUMBIA GAS TRANSMISSION, LLC

Organization Information								
Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason
LLC Limited Liability Company	5/27/1971		5/27/1971	Foreign	Profit			

Organization Information			
Business Purpose	4862 - Transportation and Warehousing - Pipeline Transportation - Pipeline Transportation of Natural Gas		Capital Stock
Charter County		Control Number	0
Charter State	DE	Excess Acres	0
At Will Term	A	Member Managed	MBR
At Will Term Years		Par Value	
Authorized Shares		Young Entrepreneur	Not Specified

09/29/2023

Addresses

Type	Address
Mailing Address	700 LOUISIANA STREET, STE 1300 HOUSTON, TX, 77002 USA
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302
Principal Office Address	700 LOUISIANA STREET, STE 1300 HOUSTON, TX, 77002 USA
Type	Address

Officers

Type	Name/Address
Member	COLUMBIA PIPELINE GROUP, INC. 700 LOUISIANA STREET SUITE 700 HOUSTON, TX, 77002
Type	Name/Address

Name Changes

Date	Old Name
1/30/2009	COLUMBIA GAS TRANSMISSION CORPORATION
Date	Old Name

Subsidiaries

Name	Address
	NISOURCE, INC 801 E 86TH AVENUE MERRILLVILLE, IN, 46410 USA
Name	Address

Date	Amendment
1/30/2009	CONVERSION FILED CHANGING NAME FROM COLUMBIA GAS TRANSMISSION CORPORATION

09/29/2023

11/19/1997	AMEND TO ARTICLES OF INCORPORATION
1/4/1991	MERGER; MERGING COMMONWEALTH GAS PIPELINE CORPORATION, A NON QUAL VA CORP, WITH AND INTO COLUMBIA GAS TRANSMISSION CORPORATION, A QUAL DE CORP, THE SURVIVOR.
11/14/1984	AMENDMENT: TO THE ARTICLES OF INCORPORATION.
3/31/1982	AMENDMENT: TO THE ARTICLES OF INCORPORATION.
3/2/1982	AMENDMENT: CERTIFICATE OF AMENDMENT
7/12/1973	AMENDMENT: CERTIFICATE OF AMENDMENT; ROLL 73
6/5/1973	AMENDMENT: CERTIFICATE OF INCORPORATION; ROLL 72.
1/23/1973	MERGER AMENDMENT: THE PRESTON OIL COMPANY MERGED WITH AND INTO COLUMBIA GAS TRANSMISSION CORPORATION; ROLL 67.
7/29/1971	MERGER AMENDMENT: DUPLICATION OF ABOVE MENTIONED MERGER; ROLL 49
6/29/1971	MERGER: ATLANTIC SEABORD CORP., A DE CORP., CUMBERLAND AND ALLEGHENY GAS COMPANY, A WV CORP., THE MANUFACTURERS LIGHT AND HEAT COMPANY , A PA CORP., UNITED FUEL GAS COMPANY, A WV CORP., HOME GAS COMPANY, A NY CORP., KENTUCKY GAS TRANSMISSION CORPORATION, A DE CORP AND THE OHIO FUEL GAS COMPANY, AN OH CORP, MERGED WITH AND INTO COLUMBIA GAS TRANSMISSION CORPORATION, THE SURVIVOR. ROLL 48
Date	Amendment

Annual Reports

Filed For

2023

2022

2021

2020

2019

2018

2017

2016

2015

2014

2013

2012

2011
2010
2009
2008
2007
2005
2004
2003
2002
2001
2000
1999
Date filed

For more information, please contact the Secretary of State's Office at 304-558-8000.

Tuesday, July 25, 2023 — 10:08 AM

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West Virginia Secretary of State — Online Data Services

Business and Licensing

Online Data Services Help

Business Organization Detail

NOTICE: The West Virginia Secretary of State's Office makes every reasonable effort to ensure the accuracy of information. However, we make no representation or warranty as to the correctness or completeness of the information. If information is missing from this page, it is not in the The West Virginia Secretary of State's database.

UNITED FUEL GAS COMPANY

Organization Information								
Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason
C Corporation	2/1/1916		2/1/1916	Domestic	Profit		6/30/1971	Merger

Organization Information			
Business Purpose		Capital Stock	10000.0000
Charter County		Control Number	0
Charter State	WV	Excess Acres	0
At Will Term		Member Managed	
At Will Term Years		Par Value	100.000000
Authorized Shares	100	Young Entrepreneur	Not Specified

Addresses

Type	Address
Principal Office Address	CHARLESTON, WV, 25301
Type	Address

Date	Amendment
6/30/1971	UNITED FUEL GAS COMPANY, ATLANTIC SEABOARD CORPORATION, CUMBERLAND AND ALLEGHENY GAS COMPANY, MANUFACTURERS LIGHT AND HEAT COMPANY, HOME GAS COMPANY, KENTUCKY GAS TRANSMISSION CORPORATION AND THE OHIO FUEL GAS COMPANY MERGED WITH AND INTO COLUMBIA GAS TRANSMISSION CORPORATION, A DE CORP, THE SURVIVOR. ROLL 48
9/30/1963	AMERE GAS UTILITIES COMPANY MERGED WITH AND INTO UNITED FUEL GAS COMPANY, THE SURVIVOR FILED BOOK 238 PAGE
12/9/1954	INCREASE TO \$10,000,000 (4,000,000 SHARES WITH PAR VALUE AT \$25 PER SHARE) BOOK 216 PAGE 406
12/30/1946	INCREASE TO \$10,000,000 AND CHANGE OF PAR VALUE OF SHARES TO \$25 (400,000 SHARES AT A PAR VALUE OF \$25) BOOK 173 PAGE 296
12/21/1946	INCREASE TO \$400,000 (400,000 SHARES AT PAR VALUE OF \$1 PER SHARE) BOOK 173 PAGE 293
5/31/1944	ARTICLES OF INCORPORATION BOOK 175 PAGE 320
12/17/1938	AMENDMENT: CHANGE AUTHORIZED CAPITAL STOCK FROM 300,000 SHARES AT PAR VALUE OF \$100.00 TO 300,000 SHARES AT PAR VALUE OF \$1.00. BOOK 151 PAGE 451
12/17/1938	AMENDMENT: DECREASE AUTHORIZED STOCK FROM \$30,000,000.00 TO \$300,000.00
4/7/1920	INCREASE TO \$30,000 BOOK 102 PAGE 558
3/14/1916	CHANGE OF NAME FROM KERMIT GAS COMPANY BOOK 32 PAGE 440
Date	Amendment

For more information, please contact the Secretary of State's Office at 304-558-8000.

Tuesday, July 25, 2023 — 10:05 AM

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09/29/2023

N/A

WW-2B1
(5-12)

Well No. Terra Alta 7394

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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JUL 24 2023
WV Department of
Environmental Protection

09/29/2023

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) Gawney Run of Saltlick Creek Quadrangle Aurora, WV 7.5'

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, HCl acid

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

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

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

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

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

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

Company Official Signature [Signature]

Company Official (Typed Name) Maria Medvedeva

Company Official Title Senior Wells Engineer Storage Technical Services

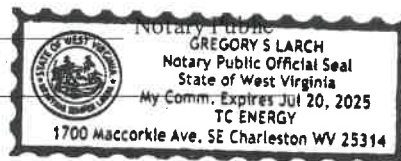
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Office of Oil & Gas

JUL 24 2023

WV Department of
Environmental Protection

Subscribed and sworn before me this 13th day of July, 20 23

Gregory S. Larch
My commission expires July 20th 2025



09/29/2023

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

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

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch hay or straw @ 2 Tons/acre

Seed Mixtures

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Morgan Hunter*

Comments:

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Office of Oil & Gas
JUL 24 2023

WV Department of
Environmental Protection

Title: *Inspector*

Date: *7/18/2023*

Field Reviewed? () Yes () No

09/29/2023

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): Gawney Run of Saltlick Creek Quad: Aurora, WV 7.5'
Farm Name: Bernadette Cole, 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.

Saltlick Creek is at a distance of 0.25 miles W.

The Terra Alta Water Works WV3303917 is the closest Well Head Protection Area at a distance of 3.32 miles NE from discharge area.

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

N/A

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JUL 24 2023
WV Department of
Environmental Protection

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

09/29/2023

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.

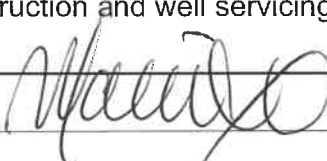
RECEIVED
Office of Oil & Gas
JUL 24 2023
WV Department of
Environmental Protection

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: _____

07.13.2023

09/29/2023

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WV Department of
Environmental Protection



Legend

Terra Alta - 07394



Limit of Proposed Disturbance
on existing well site

~0.4 acre

200 ft

WV DEP Reclamation Plan - Site Detail

Terra Alta well 7394 (API 47-077-00022)

- 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

Terra Alta - 07394

Existing access road

5176

09/29/2023

Google Earth

4707700022W

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WV Department of
Environmental Protection

Legend

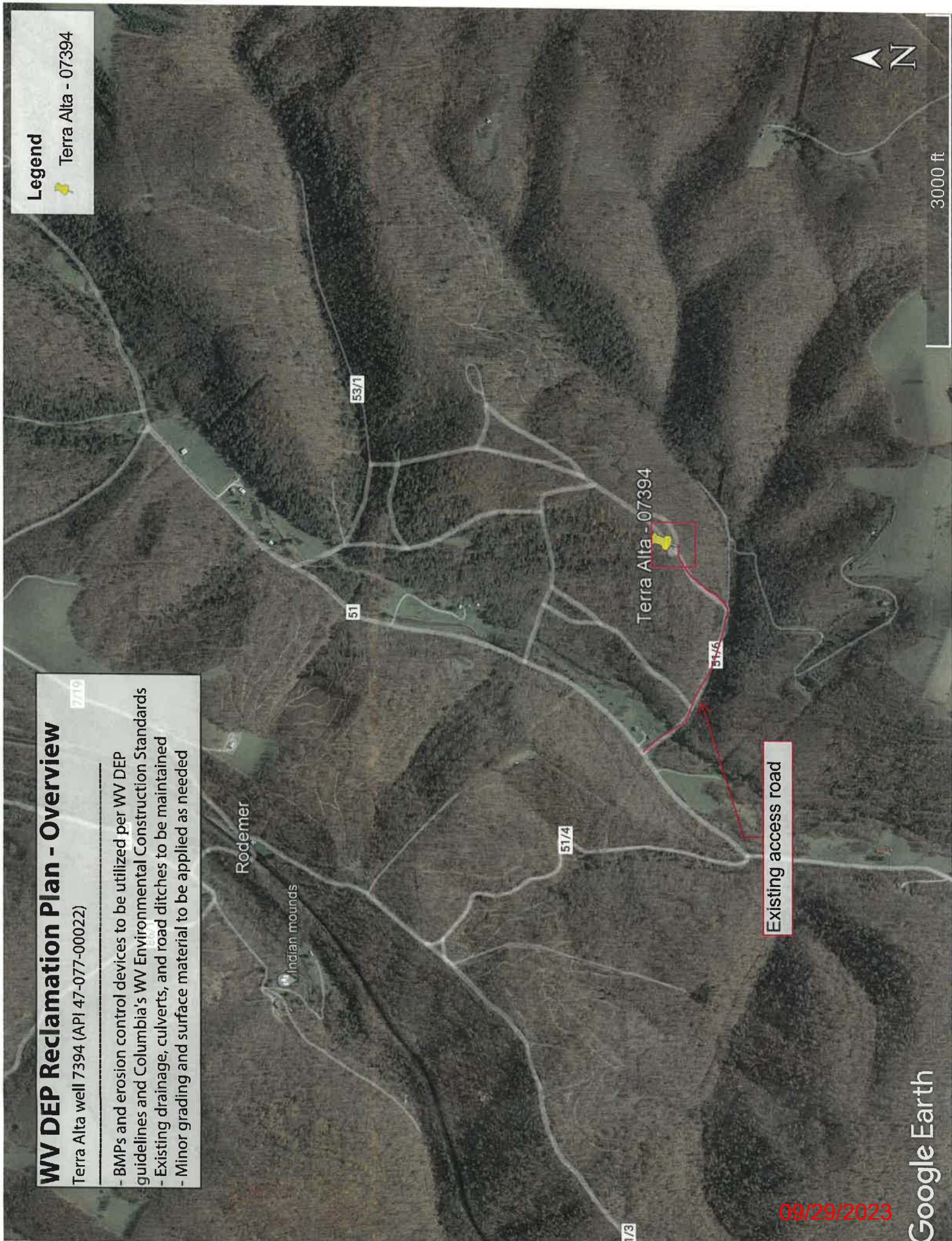
Terra Alta - 07394



WV DEP Reclamation Plan - Overview

Terra Alta well 7394 (API 47-077-00022)

- 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



Google Earth

09/29/2023

3000 ft

4707700022 W

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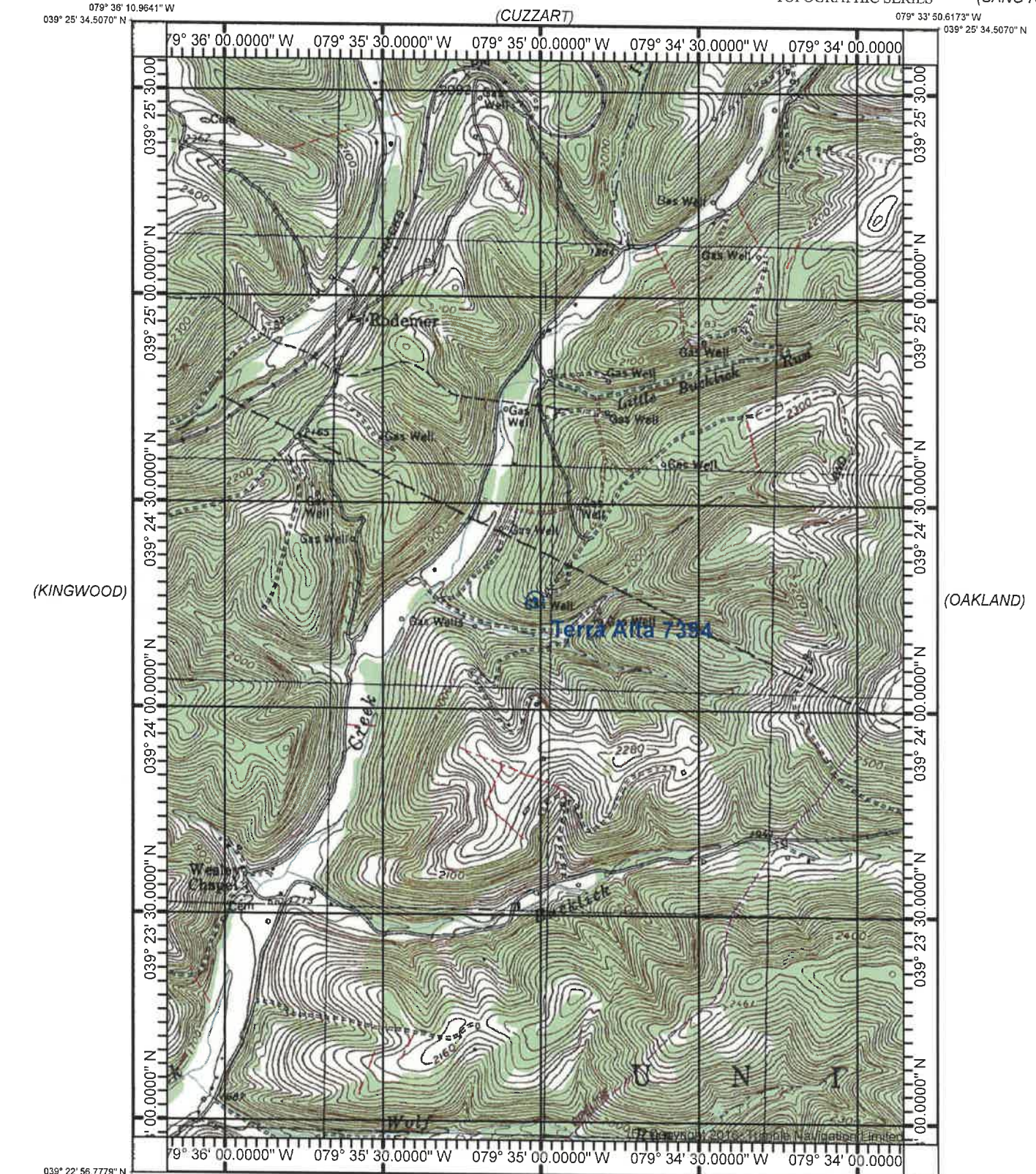
(VALLEY POINT) 

WV Department of
Environmental Protection

TERRA ALTA QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES (SANG RUN)

(CUZZART)

079° 33' 50.6173" W
039° 25' 34.5070" N



(KINGWOOD)

(OAKLAND)

(ROWLESBURG)

(TABLE ROCK)

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

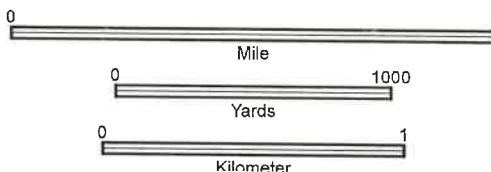
North American 1983 Datum (NAD83)

To place on the predicted North American
1927 move the projection lines 11M N and
19M E

Declination



(AURORA)
SCALE 1:24000



CONTOUR INTERVAL 20 FT

Printed: Tue May 23, 2023

079° 33' 50.6173" W
039° 22' 56.7779" N

39079-D4-TM-024
TERRA ALTA, WV
JAN 1, 2000

09/29/2023

JUL 24 2023

4707700022W

11,661'

WV Department of Environmental Protection

Latitude: 39°25'00"

Longitude: 79°32'30"

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

(NAD 83)
LAT. 39°24'16.98"
LON. -79°34'58.54"

UTM., NAD 83
ZONE 17, METERS
N: 4,362,648.23
E: 622,006.91

7.5 LOC

LANCE SCOTT HAYWOOD &
LEGROS MAXINE MAXIMO
UNION DISTRICT-TM 2 PAR. 6
DEED BOOK 840 PAGE 536

CAROLYN S. DEWITT
PORTLAND DISTRICT-TM 43 PAR. 21
WILL BOOK 52 PAGE 139
PREVIOUS D.B. 622/1062
219 ACRES, +/-

STONE FOUND WITH
3/8" REBAR WITNESS

584°55'21"W 1080.72', (TIE)

N69°01'28"W 798.94', (TIE)

S40°53'25"W 504.84', (TIE)

STONE FOUND WITH
3/8" REBAR WITNESS

CAROLYN S. DEWITT
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GRAPHIC SCALE



1 INCH = 200 FEET

UPTOP INC.
UNION DISTRICT-TM 2 PAR. 11
DEED BOOK 546 PAGE 61

ATLANTIC SEABOARD CORP.
UNION DISTRICT-TM 2 PAR. 19
DEED BOOK 345 PAGE 585

FILE # 23R-100_TERRADON

DRAWING # 7394

SCALE 1"=200'

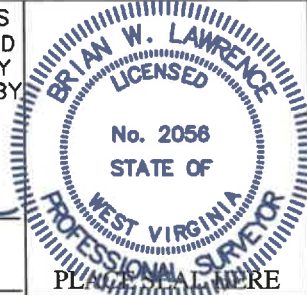
MINIMUM DEGREE OF ACCURACY 1 / 200

PROVEN SOURCE OF ELEVATION SOKKIA GRX3 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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: Brian W. Lawrence
BRIAN W. LAWRENCE

R.P.E.: _____ L.L.S.: 2056



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

OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: 07/10/2023

OPERATORS WELL #: Terra Alta 7394

API WELL # 47 077 000022W
STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED GAWNEY RUN OF SALTICK CREEK ELEVATION: 2127.7'

COUNTY/DISTRICT PRESTON/UNION QUADRANGLE: AURORA, WV 7.5'

SURFACE OWNER CAROLYN S. DEWITT ACREAGE 219

OIL & GAS ROYALTY OWNER: UNITED FUEL GAS COMPANY ACREAGE 219

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE

PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON

CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): dictate CTCO + acid stim

TARGET FORMATION: ORISKANY ESTIMATED DEPTH: 5,399

WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT MARIA MEDVEDEVA

Address PO BOX 1273 Address 1700 MACCORKLE AVE., S.E.

City CHARLESTON State WV Zip Code 25325-1273 City CHARLESTON State WV Zip Code 25314

09/29/2023

JUL 24 2023

4707700022

11,661'

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N.Y. STATE PLANE, NORTH ZONE, NAD 83

(NAD 83)
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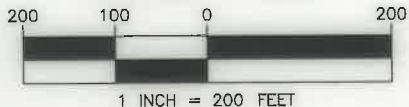
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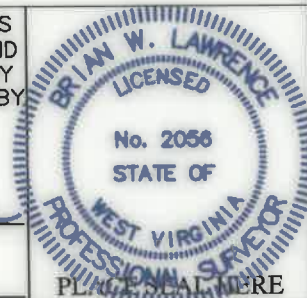
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