



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, December 5, 2023
WELL WORK PERMIT
Horizontal / New Drill

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314


Re: Permit approval for COCO B / 12643
47-039-06401-00-00

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: COCO B / 12643
Farm Name: JAMES A. & FREDA MARIE 
U.S. WELL NUMBER: 47-039-06401-00-00
Horizontal New Drill
Date Issued: 12/05/2023

Promoting a healthy environment.

12/08/2023

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.

12/08/2023

4703906401T #43062
90000

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

1) Well Operator: Columbia Gas Transmission, LLC

307032	Kanawha	Coco	Elk
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Operator ID County District Quadrangle

2) Operator's Well Number: Coco B 12643 3) Elevation: 856 ft PAD 846 ft

4) Well Type: (a) Oil _____ or Gas X _____
(b) If Gas: Production _____ / Underground Storage X _____
Deep X _____ / Shallow _____ 5154 ft TVD GL

5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 6044 ft MD GL

6) Proposed Total Depth: 10962 MD 5171 TVD (GL) Feet Formation at Proposed Total Depth: Oriskany

7) Approximate fresh water strata depths: estimated deepest 693 ft (based on evaluation of 18 existing offset storage wells)

8) Approximate salt water depths: 974 - 1387 ft TVD (GL) (Salt Sand)

9) Approximate coal seam depths: none anticipated

10) Approximate void depths, (coal, Karst, other): none anticipated

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)

Refer to attached wellbore diagram.

Directionally drill well to Oriskany sandstone, open hole complete, acid stimulate reservoir, install pipeline.

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Office of Oil and Gas
APR 14 2023
WV Department of
Environmental Protection

13) **CASING AND TUBING PROGRAM**

Amey W. White
4-5-23

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	
Conductor	24			60	40	71
Fresh Water	18-5/8	K-55	94.5	770	750	574
Intermediate	13-3/8	K-55	68	2190	2170	1535
Intermediate	9-5/8	N-80	47	5697	5677	1264
Production	7	N-80	26	6064	6044	624
Tubing						
Liners						

*CTS X40%
CTS X30% in
note
CTS X30% what*

Packers: Kind: _____
Sizes: _____
Depths Set _____

12/08/2023

Coco B well 12643

Proposed as of 12/08/21

~ not to scale ~

Max surface operating pressure 1800 psig
Max reservoir pressure 2075 psig

Minimum Casing Design Safety Factors

Internal Yield: 1.2
Collapse: 1.2
Tensile: 1.6

18-5/8" Surface csg @ 750 ft GL

94.5 ppf K-55 ERW w/ BTC
Internal Yield: 2420 psi
Collapse: 780 psi
Body Yield Strength: 1469 Klbs
Joint Strength: 1427 Klbs
Cement to surface

Deepest fresh water zone is based on an evaluation of 18 existing offset storage wells. The deepest recorded fresh water interval out of all 18 was at a depth of 153 ft above sea level, or relative to subject storage well, at a depth of 693 ft GL.

13-3/8" Intermed1 csg @ 2170 ft TVD / MD GL

68 ppf K-55 ERW w/ API 8rd STC
Internal Yield: 3450 psi (SF = 1.6 relative to max reservoir press)
Collapse: 1950 psi (SF = 1.9 relative to 0.46 psi/ft overburden gradient)
Body Yield Strength: 1069 Klbs (SF = 7.2 relative to dry pipe weight)
Joint Strength: 718 Klbs (SF = 4.8 relative to dry pipe weight)
Cement to surface

Handwritten signature and date: 4-5-23

9-5/8" Intermed2 csg @ 5051 ft TVD GL (~5677 ft MD GL)

47 ppf N-80 ERW w/ semi-premium
Internal Yield: 6870 psi (SF = 3.3 relative to max reservoir press)
Collapse: 4760 psi (SF = 1.8 relative to 0.50 psi/ft overburden gradient)
Body Yield Strength: 1086 Klbs (SF = 4.0 relative to dry pipe weight)
Joint Strength: 905 Klbs (SF = 3.3 relative to dry pipe weight)
Uniaxial Bend Ratio: 3.0 - 4.3 deg/100 ft
Cement to 500' overlap into 13-3/8" casing

~871 ft

TD ~5171 ft TVD GL
(~10962 ft MD GL)

8-1/2" hole

~4804 ft

Oriskany SS 5154 - 5191 ft TVD GL

6-1/8" hole

7" Flowstring @ 5152 ft TVD GL (~6044 ft MD GL)

26 ppf N-80 ERW w/ premium thread
Internal Yield: 7240 psi (SF = 3.4 relative to max reservoir press)
Collapse: 5410 psi (SF = 2.1 relative to 0.50 psi/ft overburden gradient)
Body Yield Strength: 604 Klbs (SF = 3.8 relative to dry pipe weight)
Joint Strength: 519 Klbs (SF = 3.3 relative to dry pipe weight)
Uniaxial Bend Ratio: 4.3 deg/100 ft
Cement to 500' overlap into 13-3/8" casing
Estimated Design Day Gas Velocity = 43 ft/sec

~5675 ft

Well Pad Elevations

Pre Construction: 856 ft
Post Construction: 846 ft
KB: +/-867 ft

30" hole

24" Conductor @ 40 ft GL

Deepest Fresh Water @ 693 ft GL

22" hole

TOC 1670' TVD / MD GL

Weir SS 1826 - 1996 ft GL
*potentially may encounter oil

17-1/2" hole

Berea SS 2152 - 2156 ft GL

KOP @ 2280 ft MD GL

12-1/4" hole

Marcellus Shale

5012 - 5030 ft TVD GL (5585 - 5627 ft MD GL)

Onondaga LS

5030 - 5154 ft TVD GL
(5627 - 6035 ft MD GL)

12/08/2023

4703906401T

4703906401

Schlumberger

TC Energy

Borehole: **Original Borehole** Well: **CoCo B 12643** Field: **W Kanawha County (NAD 27)** Structure: **TC Energy CoCo B Pad**

Gravity & Magnetic Parameters
 Model: HDGM 2021 Dip: 65.494° Date: 17-Nov-2021
 FS: 50819.427nT Gravity FS: 999.245mgn (9.80665 Based)
 Surface Location NAD27 West Virginia State Plane, Southern Zone, US Feet
 Miscellaneuous CoCo B
 Slot: 12643
 Plan: TC Energy CoCo B 12643 P2 SLS 07Dec21
 TVD Ref: KB(867.5ft above MSL)

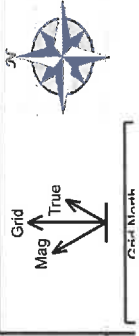
Surface Location		Surface Location		Surface Location	
Latitude	Longitude	Latitude	Longitude	Latitude	Longitude
N 38 24 45.85	W 81 28 19.79	N 38 24 45.85	W 81 28 19.79	N 38 24 45.85	W 81 28 19.79
VSec Azimuth: 61.40					
Grid Coord		Grid Coord		Local Coord	
Northing	Easting	Northing	Easting	N(+)/S(-)	E(+)/W(-)
N 38 25 12.95	W 81 27 17.37	517480.15	1869693.56	5675.01	2716.80
N 38 24 59.81	W 81 28 13.72	516172.66	1865202.28	1105.59	4982.44
Target Description		Dimension		VSec	
CoCo B 12643 BHL	Point	N/A	N/A	5675.01	2716.80
CoCo B 12643 LP	Point	N/A	N/A	1105.59	4982.44

Critical Point	Critical Points					E(+)/W(-)	DLS
	MD	INCL	AZIM	TVD	VSEC		
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maxton	787.00	0.00	296.69	787.00	0.00	0.00	0.00
Salt Sands	965.00	0.00	296.69	965.00	0.00	0.00	0.00
Little Lime	1548.00	0.00	296.69	1548.00	0.00	0.00	0.00
Big Injun	1650.00	0.00	296.69	1650.00	0.00	0.00	0.00
Weir	1847.00	0.00	296.69	1847.00	0.00	0.00	0.00
Coffee	2164.00	0.00	296.69	2164.00	0.00	0.00	0.00
Berea	2173.00	0.00	296.69	2173.00	0.00	0.00	0.00
13.375° Casing Point	2190.00	0.00	296.69	2190.00	0.00	0.00	0.00
KOP - Build @ 3° DLS	2300.00	0.00	296.69	2300.00	0.00	0.00	0.00
Lower Huron	3418.92	33.57	296.69	3356.00	-181.33	143.08	-284.55
Build & Turn @ 4.33° DLS	3595.88	38.83	296.69	3498.71	-240.85	-377.95	0.00
Marcellus	5605.92	63.78	59.10	5033.00	436.05	1139.77	-124.83
Onondaga	5647.81	65.31	59.17	5051.00	473.82	1159.44	4.33
Coniferous	5674.65	66.30	59.85	5062.00	498.29	1171.87	-71.44
9.625° Casing Point	5697.42	67.14	60.41	5071.00	519.20	1182.29	-53.30
7° Casing Point	6064.66	80.90	68.73	5172.00	870.47	1332.57	264.84
Oriskany	6064.66	80.90	68.73	5172.00	870.47	1332.57	264.84
CoCo B 12643 LP	6304.40	90.00	73.77	5191.00	1105.59	1409.22	490.85
CoCo B 12643 BHL	10982.44	90.00	73.77	5191.00	5675.01	2716.80	4982.44

RT	Seq	Survey Tool	Tool	Vision	Hold	Casing	Expect	MD	To	From	MD To	Survey	EOU Size	Comments/
		Survey Tool Code		Tool	Size	Size	Max Incl	(ft)	(ft)	(ft)	(ft)	Frequency	(Semi)	Contingency
					(in)	(in)	(°)					(ft)	Major	Minor
1	1	B006Mb_MWVD+GRF			22	18.625	0	21	1100	0.917	0.917			
		-Depth Only												
1	2	B006Mb_MWVD+IG			22	18.625	21	750	1100	4.372	4.372			
		RF												
1	3	B006Mb_MWVD+IG			17.5	13.375	750	2190	1100	8.672	8.672			
		RF												
1	4	B006Mb_MWVD+IG			12.25	9.625	2190	5050	1100	30.548	19.403			
		RF												
1	5	B006Mb_MWVD+IG			6.5	7	5050	5790	1100	37.208	24.248			
		RF												
1	6	B006Mb_MWVD+IG			6.125	6.125	5790	10982.44	1100	214.539	34.349			
		RF												

EW (ft) Scale = 1:1400.00(ft)

-1600 -1200 -800 -400 0 400 800 1200 1600 2000 2400 2800 3200 3600 4000 4400 4800 5200



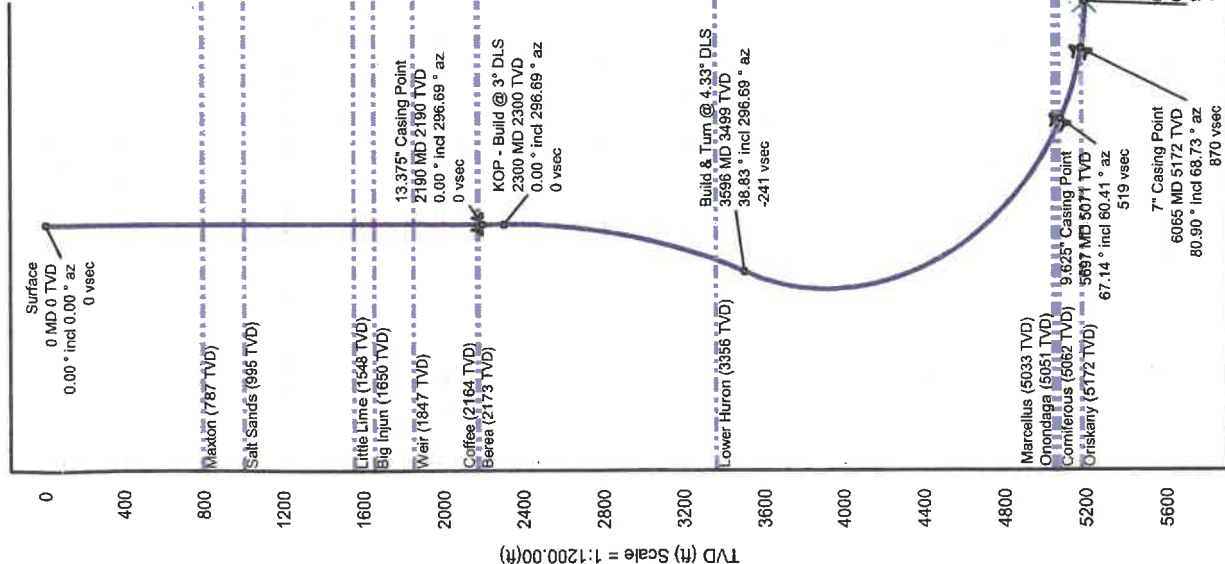
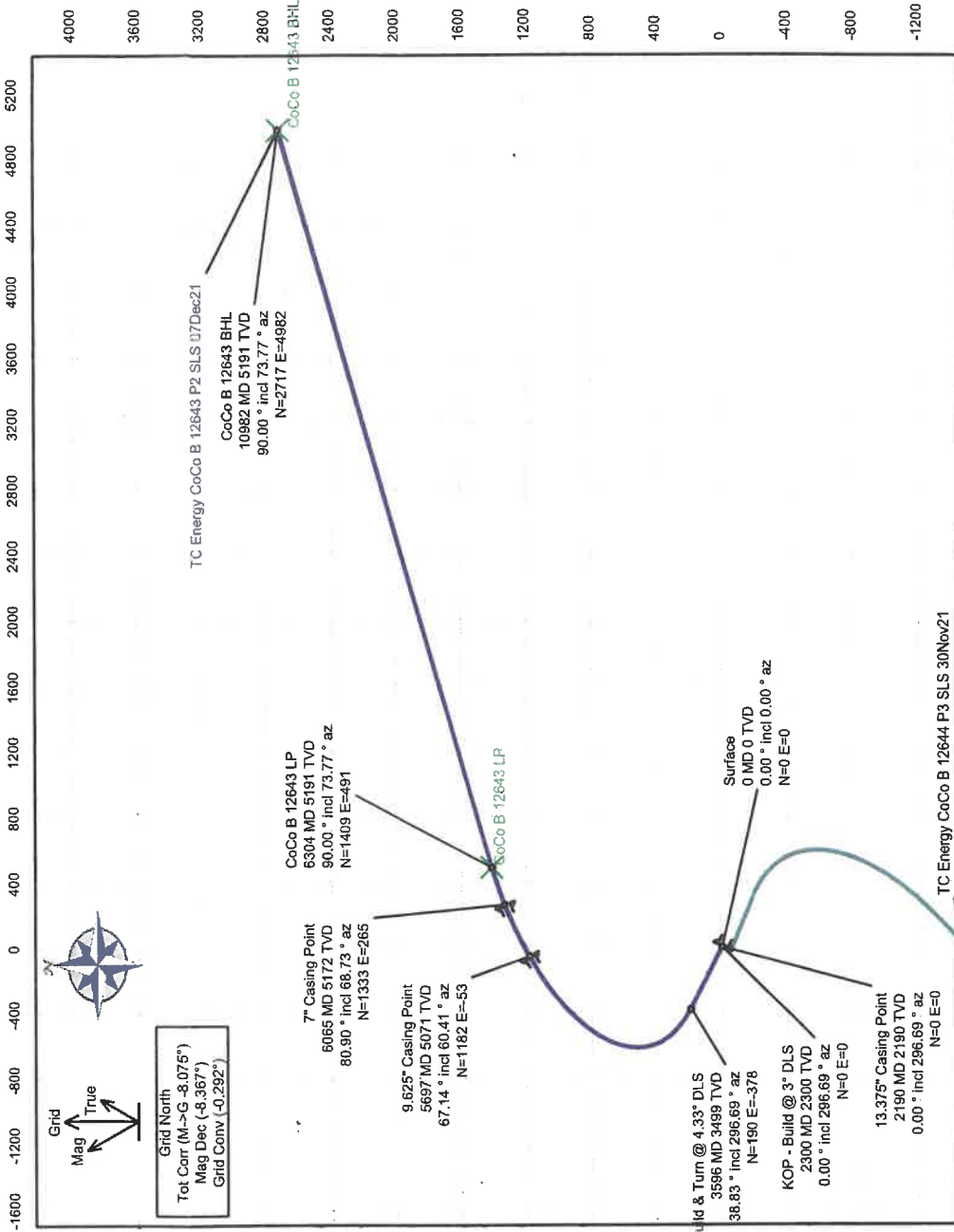
4000

3600

Surface

12/08/2023

NS (ft) Scale = 1:1400.00(ft)



Vertical Section (ft) Azim = 61.40° Scale = 1:1200.00(ft) Origin = 0N/-S, 0E/-W

WW-2A
(Rev. 6-14)

1.) Date: 03/01/2023
2.) Operator's Well Number Coco B 12643
State County Permit
3.) API Well No.: 47- 039 -

**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 Patricia Joe Ranson Address 906 Teague Cir Sugarland, TX 77478
(b) Name _____ Address _____
(c) Name _____ Address _____
5) (a) Coal Operator Not operated Name _____ Address _____
(b) Coal Owner(s) with Declaration Name Not operated Address _____
(c) Coal Lessee with Declaration Name Not operated Address _____
6) Inspector Terry Urban Address P.O. Box 1207 Clendenin, WV 25045 Telephone 304-549-5915

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Office of Oil and Gas
APR 14 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)

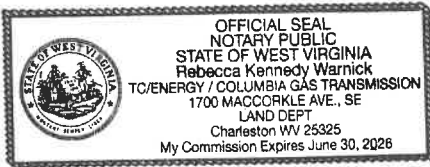
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

- 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: Brent Criser (ATTN: Maria Medvedeva)
Its: Team Leader Well Engineering & Technology
Address: 1700 MacCorkle Ave SE Charleston, WV 25314-1273
Telephone: 304-410-4313
Email: maria_medvedeva@tcenergy.com

[Handwritten signature]
4/13/23

Subscribed and sworn before me this 3rd day of April, 2023

Notary Public

My Commission Expires 6/30/26

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

12/08/2023

SURFACE OWNER WAIVER

Columbia Gas Transmission LLC

County 039
Kanawha

Operator _____
Operator well number Coco B 12643

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
APR 14 2023
WV Department of
Environmental Protection

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

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

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

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

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

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

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

VOLUNTARY STATEMENT OF NO OBJECTION

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

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

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date _____

Company Name _____
By _____
Its _____ Date _____

Print Name

Signature Date _____

12/08/2023

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

4703906401T



April 3, 2023

Patricia Joe Ranson
906 Teague Cir
Sugarland, TX 77478

RECEIVED
Office of Oil and Gas
APR 14 2023
WV Department of
Environmental Protection

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to drill and complete new underground natural gas storage wells located on property owned by you. As reference, the field and well ID is Coco B 12643 and Coco B 12644.

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

Regards,

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

7022 2410 0002 6396 2945

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

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

Sugarland, TX 77478

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	\$3.75
<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	\$17.15

Sent To: Patricia Joe Ranson
Street and Apt. No., or PO Box No.
City, State, ZIP+4®: CB 12643/12644

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

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Patricia Joe Ranson
906 Teague Cir
Sugarland, TX 77478

2. Article Number (Transfer from service label)
7022 2410 0002 6396 2945

3. Service Type
 Adult Signature
 Adult Signature Restricted Delivery
 Certified Mail®
 Certified Mail Restricted Delivery
 Collect on Delivery
 Collect on Delivery Restricted Delivery
 Certified Mail Restricted Delivery (00)

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

B. Received by (Printed Name): D. Wilbur
C. Date of Delivery: 4-7-23
D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

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

www.tcenergy.com

12/08/2023

COAL OPERATOR, OWNER, OR LESSEE WAIVER

* coal not operated

County Kanawha

Operator Columbia Gas Transmission, LLC

Operator's Well Number Coco B 12643

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

RECEIVED
Office of Oil and Gas
APR 14 2023
WV Department of
Environmental Protection

12/08/2023

**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
surface	Matt Amos, et al	Columbia Gas Transmission LLC	Storage Lease	975 / 101
			#1049098-0000	
bottom hole	Matt Amos, et al Charles Pete Bryant, et ux. Mary C Porter, et al. Mildred Pearson Lake, Trustee, et al. Mildred Pearson Lake, Trustee, et al. T. C. Matthews, Trustee, et al. Elbert Woody, et ux, et al.	Columbia Gas Transmission LLC	Storage Leases	975 / 101 127 / 169 1039 / 369 128 / 397 126 / 211 128 / 93 126 / 173
			#1049098-0000	
			#1047327-000	
			#1047327-002	
			#1049470-000	
			#1004771-000	
			#1000807-000	
			#1004772-000	

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:
By: Its:

Columbia Gas Transmission, LLC
Brent Criser *[Signature]* 4/13/23
Senior Wells Engineer - Well Engineering & Technology

12/08/2023

WW-2B1
(5-12)

Well No. Coco B 12643

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 AGES, Applied Geology and Environmental Science, Inc.
Sampling Contractor AGES, Applied Geology and Environmental Science, Inc.

Well Operator Columbia Gas Transmission, LLC
Address 1700 MacCorkle Ave. SE
Charleston, WV 25314-1273
Telephone 304-410-4313

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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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) Coopers Creek-Elk River Quadrangle Blue Creek

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. air, fresh water, polymer drilling fluid

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

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

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-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.

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Company Official Signature [Signature] 4/13/23

Company Official (Typed Name) Brent Criser

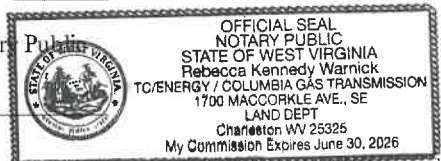
Company Official Title Team Leader - Well Engineering & Technology Storage Technical Services

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Environmental Protection

Subscribed and sworn before me this 3rd day of April, 2026

[Signature] Notary Public

My commission expires 6/30/26



12/08/2023

Proposed Revegetation Treatment: Acres Disturbed 15.87 (total impact area) 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
<u>Annual Rye</u>	<u>40</u>	<u>Orchard Grass and/or Tall Fescue</u>	<u>29</u>
		<u>Birdsfoot Trefoil (Empire)</u>	<u>9</u>
		<u>Annual Rye</u>	<u>12</u>

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]
Comments: _____

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Title: Inspector Del E Gas Date: 4-5-23

Field Reviewed? Yes No

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: Columbia Gas Transmission, LLC
Watershed (HUC 10): Coopers Creek-Elk River Quad: Blue Creek
Farm Name: James and Freda Marie Morton

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. 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.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

Earthen berm to be constructed around perimeter of well pad with storm water sumps to control release of captured precipitation.

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.

Pinch Creek is at a distance of 0.24 miles N.

The Trail Kitchen WV9908037 is the closest Well Head Protection Area at a distance of 11.4 miles E from discharge area.

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

N/A

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

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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.

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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.

Inspections to be performed daily.

Signature: [Handwritten Signature]

Date: 4/13/23

TC Energy CoCo B 12643 P2 SLS 07Dec21 Proposal Geodetic Report

(Def Plan)

Report Date: December 07, 2021 - 02:25 PM
Client: TC Energy
Field: WV Kanawha County (NAD 27)
Structure / Slot: TC Energy CoCo B Pad / CoCo B 12643
Well: CoCo B 12643
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: TC Energy CoCo B 12643 P2 SLS 07Dec21
Survey Date: November 17, 2021
Tort / AHD / DDI / ERD Ratio: 156.166° / 7023.614 ft / 6.366 / 1.353
Coordinate Reference System: NAD27 West Virginia State Plane, Southern Zone, US Feet
Location Lat / Long: N 38° 24' 45.85189", W 81° 28' 19.79401"
Location Grid N/E Y/X: N 514763.537 ftUS, E 1864711.461 ftUS
CRS Grid Convergence Angle: -0.2919°
Grid Scale Factor: 0.99933359
Version / Patch: 2.10.826.8

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Table with columns: Comments, MD (ft), Incl (°), Azim Grid (°), TVD (ft), TVDSS (ft), VSEC (ft), NS (ft), EW (ft), DLS (°/100ft), TF (°), BR (°/100ft), TR (°/100ft), Northing (ftUS), Easting (ftUS), Latitude (°), Longitude (°), Directional Difficulty Index. Rows include Surface, Maxton, Salt Sands, Little Lime, Big Injun, Weir, Coffee, Berea, 13.375" Casing Point, KOP - Build @, 3" DLS, Lower Huron, Build & Tum @, Marcellus, Onondaga, Corniferous, 9.625" Casing Point, Onskany, 7" Casing Point, CoCo B 12643 LP, CoCo B 12643 BHL.

Survey Type: Def Plan

12/08/2023

4703906701T

470390640 IT

Comments MD (ft) Incl (°) Azim Grid (°) TVD (ft) TVDSS (ft) VSEC (ft) NS (ft) EW (ft) DLS (°/100ft) TF (°) BR (°/100ft) TR (°/100ft) Northing (ftUS) Easting (ftUS) Latitude (°) Longitude (°) Directional Difficulty Index

Survey Error Model: ISCWSA Rev 3 *** 3-D 95.000% Confidence 2.7955 sigma
 Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	21.000	1/100.000	22.000	18.625	B006Mb_MWD+IGRF-Depth Only	Original Borehole / TC Energy CoCo B 12643 P2 SLS 07Dec21	
	1	21.000	750.000	1/100.000	22.000	18.625	B006Mb_MWD+IGRF	Original Borehole / TC Energy CoCo B 12643 P2 SLS 07Dec21	
	1	750.000	2190.000	1/100.000	17.500	13.375	B006Mb_MWD+IGRF	Original Borehole / TC Energy CoCo B 12643 P2 SLS 07Dec21	
	1	2190.000	5050.000	1/100.000	12.250	9.625	B006Mb_MWD+IGRF	Original Borehole / TC Energy CoCo B 12643 P2 SLS 07Dec21	
	1	5050.000	5790.000	1/100.000	8.500	7.000	B006Mb_MWD+IGRF	Original Borehole / TC Energy CoCo B 12643 P2 SLS 07Dec21	
	1	5790.000	10982.442	1/100.000	6.125	6.125	B006Mb_MWD+IGRF	Original Borehole / TC Energy CoCo B 12643 P2 SLS 07Dec21	

12/08/2023

WV DEP OFFICE OF OIL & GAS
DEEP WELL SAFETY PLAN

COLUMBIA GAS TRANSMISSION, LLC / TC ENERGY

WV Operator ID 307032

Coco B Storage Well 12643
API Permit No. 47 - 039 - XXXXX - 00 - 00
Surface: James A. & Freda Marie Morton
Elk District - Kanawha County, WV

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Deep Well Safety Plan (rev 03.01.23) prepared by:

By: Brent Criser Date: 4/13/23

Signature: 

Title: Team Leader - Well Engineering & Technology - Columbia Gas Transmission, LLC

12/08/2023

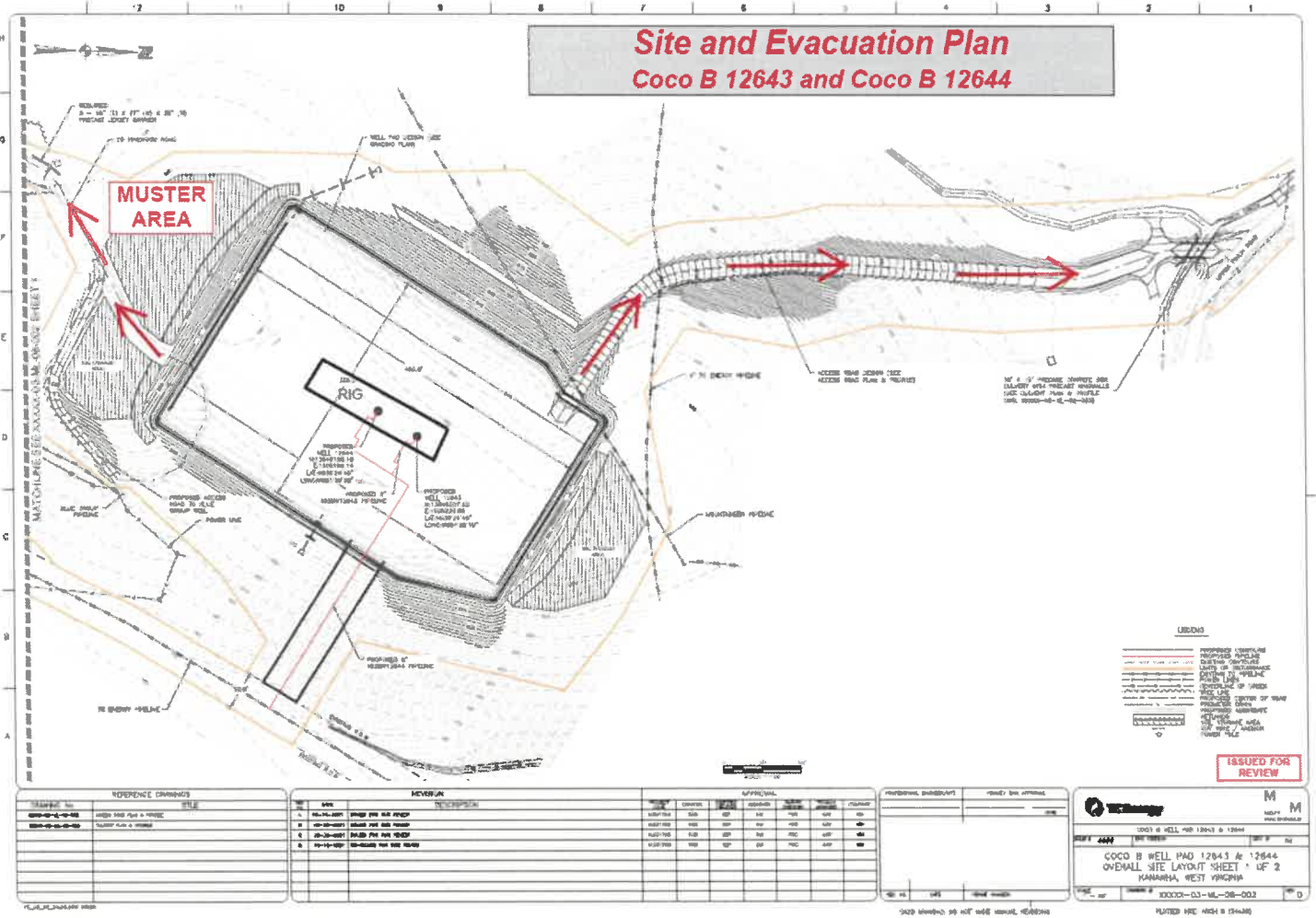
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CONTACTS and TELEPHONE NUMBERS**Emergency**

<u>County/State</u>	<u>Fire</u>	<u>EMS</u>	<u>Police</u>
Kanawha Co, WV	911	911	911

Non-emergency

Pinch Volunteer Fire Dept	304-965-1657	
CAMC Memorial Hospital	304-388-5432	3200 MacCorkle Ave SE Charleston, WV 25304 Left on I-79S to Charleston Merge onto I-77S Exit 98 for 35th St. Bridge Right on MacCorkle Ave SE Right on 31st St SE

Incident Reporting

Columbia Operations Monitoring Center	800-835-7191
---------------------------------------	--------------

Spill Reporting

Columbia Operations Monitoring Center	800-835-7191
WV DEP – Office of Oil & Gas	800-642-3074

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Material Safety Data Sheets (MSDS)

3E Hotline (24 hour service)	800-451-8346
------------------------------	--------------

TC Energy / Columbia Personnel

<u>Name</u>	<u>Office</u>	<u>Cell</u>	<u>Home</u>
Brent Criser	740-746-2251	740-503-8231	
Maria Medvedeva	304-410-4313	304-410-4313	907-978-2684
Steve Simmons	304-373-2413	304-590-5528	304-373-9997
Nathan Salyers	681-230-3026	304-932-5831	

Rig and Crew**WV DEP O&G State Inspector**

Kanawha County	Terry Urban	cell: 304-549-5915
----------------	-------------	--------------------

Columbia Gas Transmission - Confidential

7

12/08/2023

WELL CONSTRUCTION PROGRAM

General Well Information

Storage Well:	Coco B 12643	RECEIVED Office of Oil and Gas APR 14 2023
API Permit:	47 - 037 - xxxxx - 00 - 00	
Surface Owner:	James and Freda Marie Morton	WV Department of Environmental Protection
Lease:	Matt Amos, et al (surface) Matt Amos, et al (bottom-hole)	
Surface Location:	Coco B, Blue Creek Quad, Elk District, Kanawha County, WV	
Elevation:	Pre Site Prep: 856 ft GL Post Site Prep: 846 ft GL Rig KB: 867 ft (21 ft above GL)	

Directions to well (current access): From Charleston, take I-79N
Exit 5 for Big Chimney. Turn Right off exit.
Follow Rt.114 to intersection. At the stop sign go straight.
Turn Left on Indian Creek Rd at light
Follow Indian Creek Rd for 3.3 miles
Turn Left on S Pinch Rd
Turn Right on Pinewood Rd. Follow Pinewood Rd to cattle guard.
Wellsite is at the top of the hill.

Proposed new access road: From Charleston, take I-79N
Exit 5 for Big Chimney. Turn Right off exit.
Follow Rt.114 to intersection. At the stop sign go left on Pennsylvania.
Follow Pennsylvania Ave to N Pinch Rd. Turn Right.
From N Pinch Rd, turn left on New Hope Rd.
Take first Right to Upper Pinch Rd.
New wellpad access road will be on the right off Stella Dr.

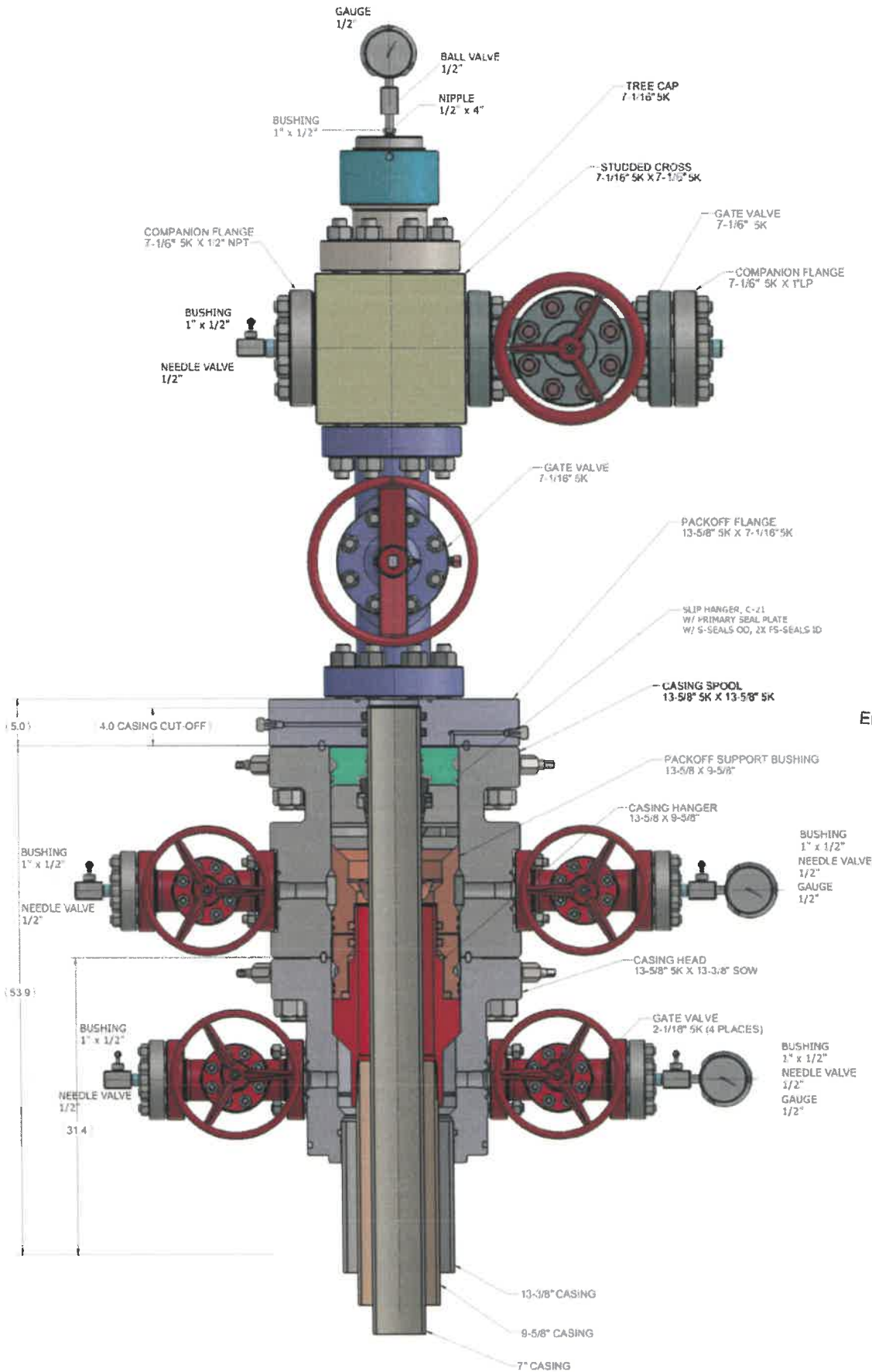
Concise Procedure

Spud and seat 40 ft GL of 24" conductor pipe. Drill 22" hole to +/-750 ft GL. Run 18-5/8" casing to minimum depth of 750 ft GL (60 ft below deepest fresh water) and cement to surface. Drill 17-1/2" hole to +/-2170 ft GL. Run 13-3/8" casing to a minimum depth of 2170 ft GL and cement to surface. Drill 12-1/4" hole to kick-off point at ~2280' MD GL. Directionally drill to a depth of ~50 ft into the Onondaga at +/-5677' ft MD GL (5051' TVD GL). Run 9-5/8" casing and cement to a 500' overlap into the 13-3/8" casing.

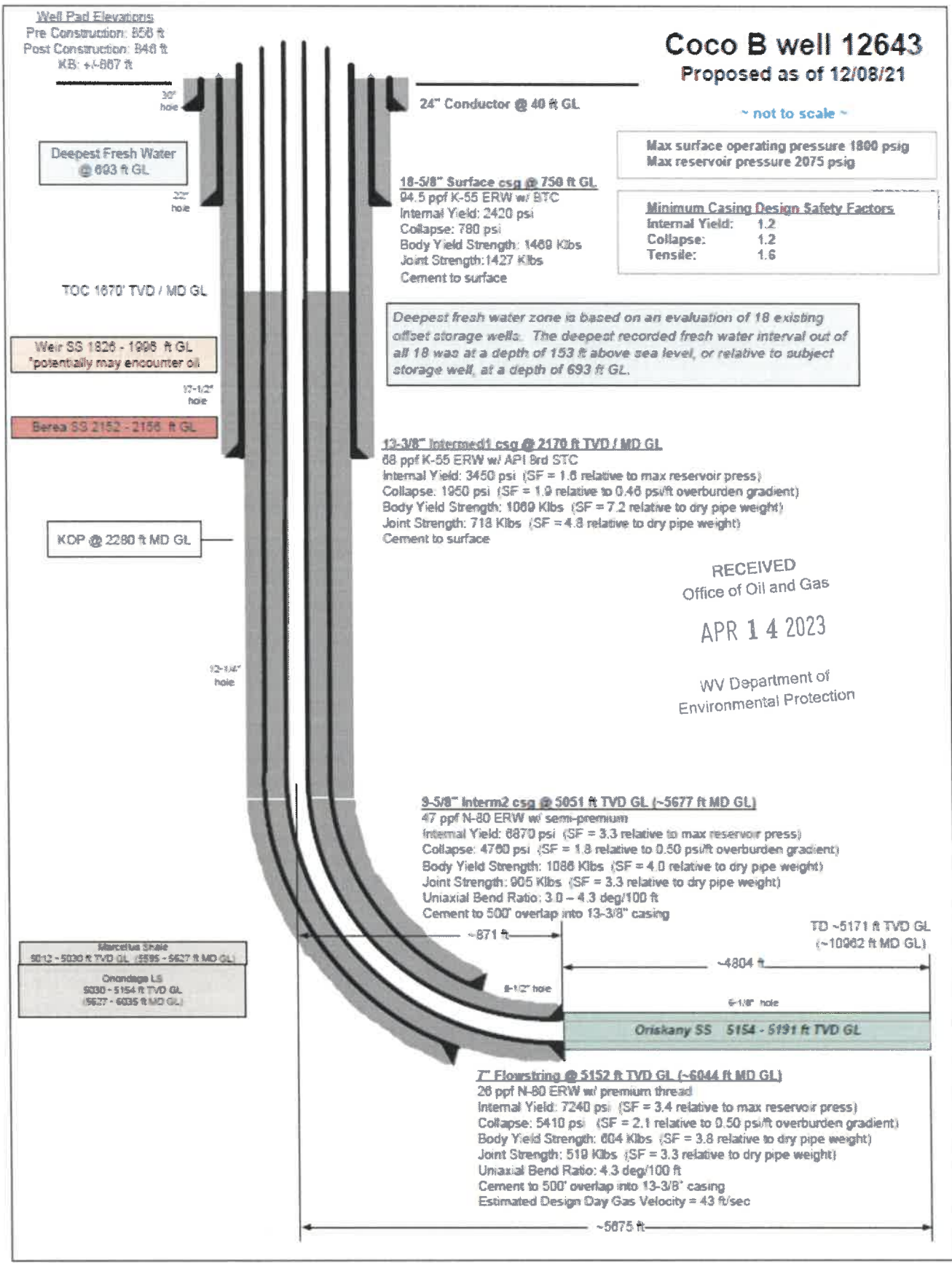
Run cement bond log. Directionally drill 8-1/2" hole into the top of the Oriskany +/- 6044' MD GL (5152' TVD GL). Run 7" casing and also cement to a 500' overlap into the 13-3/8" casing. Run cement bond log. Drill 6-1/8" horizontally through the Oriskany reservoir section to well TD of +/- 10962' MD GL (5171' TVD GL). Install wellhead equipment. Acid stimulate openhole reservoir section using 10,000 gallons HCl acid.

Casing Program						
Type	Size	Planned Setting Depth	Depth Relation	Weight	Grade	Cement Top
Conductor	24"	40 ft GL				surface
Surface	18-5/8"	750 ft GL	60' below fresh water	94.5 ppf	K-55 ERW	surface
Intermediate #1	13-3/8"	2170 ft GL	30' below Berea	68 ppf	K-55 ERW	surface
Intermediate #2	9-5/8"	5677 ft GL	50' below Marcellus	47 ppf	N-80 ERW	1670' MD / TVD
Flow String	7"	6044 ft GL	Oriskany top	26 ppf	N-80 ERW	1670' MD / TVD

ESTIMATED FORMATION TOPS (GL)			
Formation	Tops (TVD)	Base (TVD)	Comments
			RECEIVED Office of Oil and Gas APR 14 2023
Salt Sand	974	1387	Sandstone
Maxton	766	1496	Sandstone
Little Lime	1527	1561	Limestone
Big Lime	1581	1621	Limestone
Big Injun	1629	1739	Sandstone
Weir	1826	1996	Sandstone - potentially may encounter oil
Coffee	2143	2152	Shale
Berea	2152	2156	Sandstone
Lower Huron	3335	4147	Shale
Marcellus	5012	5030	Shale
Onondaga	5030	5041	Limestone
Corniferous (portion of Onon)	5041	5154	Limestone
Oriskany	5154	5191	Sandstone



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BOP EQUIPMENT

Description of BOP's to be Installed on each Casing String

Casing – 24"	Diverter
Casing – 18-5/8"	BOP Type: Double Ram and Annular Size: 18" Pressure Rating: 5000 psi
Casing – 13-3/8"	BOP Type: Double Ram and Annular Size: 13" Pressure Rating: 5000 psi
Casing – 9-5/8"	BOP Type: Double Ram and Annular Size: 7-1/16" Pressure Rating: 5000 psi
Casing – 7"	BOP Type: Double Ram and Annular Size: 7-1/16" Pressure Rating: 5000 psi

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BOP Installation and Pressure Testing

1. The 18" BOP will be installed when nipping up on the 18-5/8" casing. BOPs to be pressure tested low/high per API recommended practices.
2. The 13" BOP will be installed when nipping up on the 13-3/8" casing. BOPs to be pressure tested low/high per API recommended practices.
3. The 13" BOP stack will be installed when nipping up on the 9-5/8" casing. BOPs to be pressure tested low/high per API recommended practices.
4. The 13" BOP stack will be installed when nipping up on the 7" casing. BOPs to be pressure tested low/high per API recommended practices.

Personnel with IADC Well Control Certifications

Brent Criser	(IADC Wild Well Control)
Steve Simmons	(IADC Wild Well Control)
Nathan Salyers	(IADC Wild Well Control)
Maria Medvedeva	(IADC Wild Well Control)
_____	Tool Pusher
_____	Consultant
_____	Consultant

Recording of Significant Drilling Events

A detailed record of significant drilling events will be recorded in Columbia Gas' well log book or in their digital morning reporting system. The State inspector will be notified upon any significant events, including but not limited to: encountering hydrogen sulfide gas and well control events.

WELL FLARING OPERATIONSFlare Line Installation

1. Flaring operations are not planned. In the event of a well control situation that warrants flaring, a minimally rated 5000 psi double choke manifold with 4-1/2" panic line and 3-1/2" choke lines will be installed. The lines will be a minimum of 175 ft in length. They will be securely anchored with chains to fixed objects and/or buried.

Ignition Methods and Notification

1. Primary – Electronic.
2. Backup – Marine flare pistol.

* Local fire department will be notified prior to flaring operations.

Minimum Distance of Clearing of Flammable Material

All flammable material will be kept a minimum distance of 150 ft from flare.

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WELL KILLING OPERATIONS

In the event well killing operations are required, industry accepted best practices will be utilized. There will be at minimum one person on site at all times that holds an IADC Well Control Certification.

Inventory of Materials to be used to Mix Kill Weight Fluid

Maximum reservoir pore pressure is 2075 psig for Coco B Storage field. A column of fresh water (8.33 ppg) at reservoir depth will exert 2229 psi in hydrostatic pressure. This creates an overbalance of >150 psi.

There will be approximately 300 bbls of pre-mixed viscosified drilling fluid on site, and a minimum of 300 bbls of fresh water. Additives and chemicals sufficient to mix 300 bbls drilling fluid will be stored on site, and extra material available at Paragon Drilling Fluids in Newcomerstown, OH.

Mixing and Fluid Pumping

Either rig mud pumps or dispatched service company will be utilized for mud mixing and pumping in the event of a well control event.

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HYDROGEN SULFIDE OPERATIONS

Wind socks to be present on site to detect direction of prevailing winds.

Monitoring

Mobile monitors will be utilized to detect the presence of H₂S. A detector will be kept in the dog house for use by rig personnel to monitor rig floor and cellar area. Columbia Gas personnel will wear personal monitors at all times.

Training

Personnel involved in drilling operations will be trained in H₂S in drilling operations to a minimum awareness level, to be completed prior to spudding the well.

Notification and Control

If H₂S is detected, all work will cease and personnel on site will be immediately evacuated to a pre-determined muster point until a more comprehensive assessment of source, concentration, and atmospheric conditions are completed.

The WV DEP Office of Oil and Gas, including the local inspector, will be notified of incident.

In the event the existence of H₂S cannot be alleviated from the work site, Columbia will implement an emergency response plan to secure the site, contract a 3rd party H₂S monitoring service to administer a safety program, and provide formal training to all personnel involved in future activities.

Public Notification

The implementation of the emergency response plan will assess the need to notify and evacuate local residence and the general public as deemed appropriate. Atmospheric conditions will be continuously monitored to adjust safe zone perimeters.

Emergency Responders

Emergency responders will be briefed prior to entering site to ensure they are aware and properly trained to respond to an H₂S release event.

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Oil&Gas

Wells, Horizontal Only

WellStatus

-  Active Well
-  Permit Issued
-  Permit Application
-  Plugged

Wells, Active Status Only

WellUse

-  Brine Disposal
-  Fluid Injection
-  Gas Production
-  House Gas
-  Observation
-  Oil Production
-  Production
-  Solution Mining
-  Storage
-  Vent
-  <all other values>

Wells, Other than Active Status

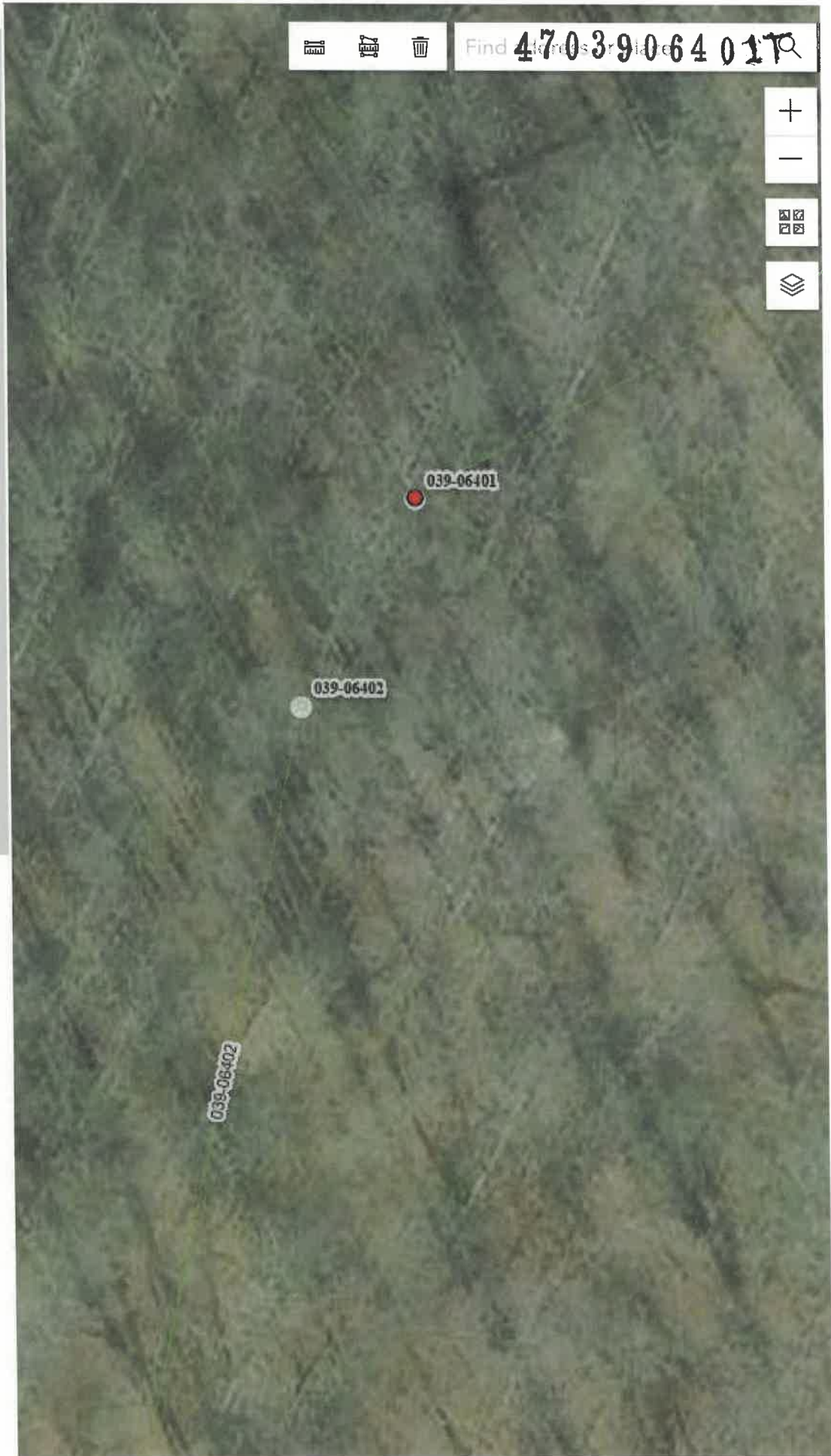
WellUse

-  Brine Disposal
-  Fluid Injection
-  Gas Production
-  House Gas
-  Observation
-  Oil Production
-  Production
-  Solution Mining
-  Storage
-  Vent
-  <all other values>

Wells, Not in DEP Database



Wells, Plugged



12/08/2023

begin date	end date	rainfall total
<input type="text"/>	<input type="text"/>	<input type="button" value="update"/>

Oil&Gas

Wells, Horizontal Only

WellStatus

-  Active Well
-  Permit Issued
-  Permit Application
-  Plugged

Wells, Active Status Only

WellUse

-  Brine Disposal
-  Fluid Injection
-  Gas Production
-  House Gas
-  Observation
-  Oil Production
-  Production
-  Solution Mining
-  Storage
-  Vent
-  <all other values>

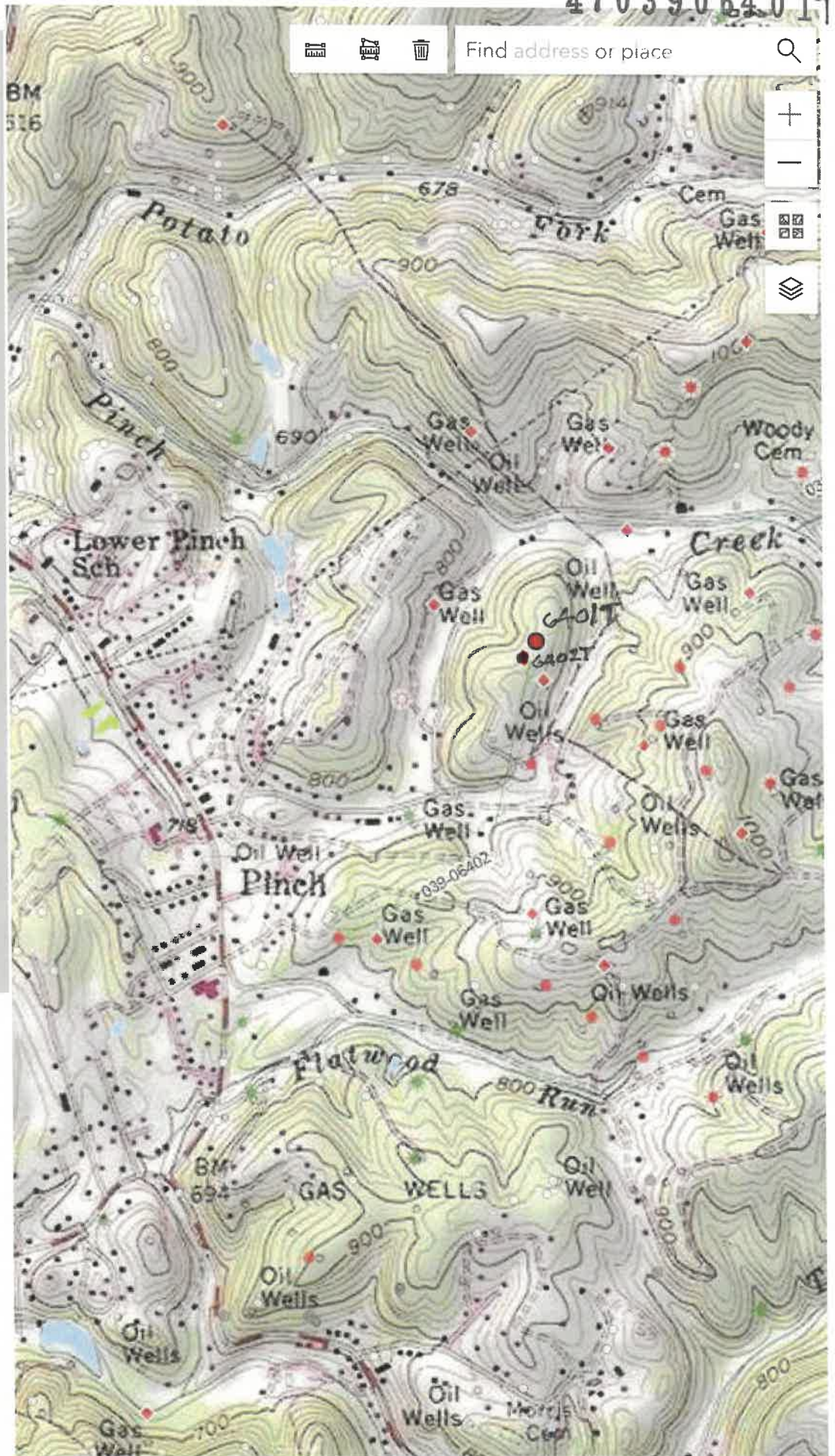
Wells, Other than Active Status

WellUse

-  Brine Disposal
-  Fluid Injection
-  Gas Production
-  House Gas
-  Observation
-  Oil Production
-  Production
-  Solution Mining
-  Storage
-  Vent
-  <all other values>

Wells, Not in DEP Database

Wells, Plugged



12/08/2023

begin date end date rainfall total

4703906401T

3,916'

1,397'

SURFACE LOCATION OF WELL ON UNITED STATES (NAD83)
TOPOGRAPHIC MAPS (7 1/2")
(NAD83)
LAT: 38° 24' 46.20"
LONG: 81° 28' 19.22"

(UTM METERS NAD83)
N: 4,251,726.8'
E: 458,792.2'

Latitude: 38° 25' 00"

Longitude: 81° 27' 30"

PROPOSED LANDING POINT
(STORAGE WELL 12643)
NAD83
LAT: N 38°25'00"
LONG: W 81°28'13"
UTM METERS (NAD83)
N: 4,252,156.2'
E: 458,942.0'
TOTAL DEPTH: 5,178' TVD 8,748' MD

PROPOSED BOTTOM-HOLE LOCATION
(STORAGE WELL 12643)
NAD83
LAT: N 38°25'13"
LONG: W 81°27'17"
UTM METERS (NAD83)
N: 4,252,554.5'
E: 460,310.5'
TOTAL DEPTH: 5,178' TVD 8,748' MD

PROPOSED SURFACE HOLE LOCATION
(STORAGE WELL 12643)
NAD83
LAT: N 38°24'46"
LONG: W 81°28'19"
UTM METERS (NAD83)
N: 4,251,762.8'
E: 458,792.2'
TOTAL DEPTH: 5,178' TVD 8,748' MD

Grid North
WV SOUTH, NAD 83(2011)

JAMES A. AND FRED A. MORTON
DEED BOOK 1996, PAGE 448
PID 15 29014600040000
GAS WELL 07079
ID 030307079
API 4703901329
MARK STALEY & KRISTAL ROBERTON
DEED BOOK 2933, PAGE 767
PID 15 29009400000000

JOHN L & DONNA L BRANNO
DEED BOOK 2887, PAGE 523
PID 15 29014600050000
FRED A MORTON
DEED BOOK 1092, PAGE 271
PID 15 29014500000000

GAS WELL 07229
ID 030307229
API 47039009320000
PROPERTY CORNER
FOUND 1" IRON PIPE

JAMES A. & FRED A. MORTON
DEED BOOK 1471, PAGE 546
PID 15 29014600010000

PROPERTY CORNER
FOUND 3/4" IRON ROD
W/ CAP (WILKINSON PD #52)

GAS WELL 07096
ID 030307096
API 47039012600000

PATRICK A. & DELORES H. TAYLOR
DEED BOOK 2286, PAGE 453
PID 15 388007300000000

ROGER L. & PAULA D. SHAFER
DEED BOOK 2213, PAGE 431
PID 15 29F0022000000000

GAS WELL 07076
ID 030307076
API 470390009510000

GAS WELL 07099
ID 030307099
API 47039012950000

EUGENE SPANGLER & JOSEPHINE SPANGLER
DEED BOOK 2046, PAGE 641
PID 15 29014900020000

GAS WELL 07043
ID 030307043
API 47039009330000
BLUE GROUP
PRODUCTION WELL
API 47039050E30000
JARRETT 17

GAS WELL 07230
ID 030307230
API 47039008220000

NOTES:
1. THIS PLAT HAS BEEN PREPARED FROM DEEDS AND TAX MAPS NOT A BOUNDARY SURVEY
2. NO BUILDINGS OR WELLS LOCATED WITHIN 200'

FILE # _____
DRAWING # 12643
SCALE: 1" = 1200'
MINIMUM DEGREE OF ACCURACY: 1:2,500'
PROVEN SOURCE STATIC GPS SURVEY OF ELEVATION: WITH TIES TO NGS DATA

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: _____
R.P.E.: _____ L.L.S.: 2252 PLACE SEAL HERE

+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: 12-10-21
OPERATOR'S WELL #: 12643
API WELL #: 47 STATE 039 COUNTY 06401T PERMIT

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

WATERSHED: COOPERS CREEK-ELK RIVER (050500070908) ELEVATION: 856'

COUNTY/DISTRICT: 039-KANAWHA / 4-ELK QUADRANGLE: 258-BLUE CREEK

SURFACE OWNER: JAMES A. & FRED A. MORTON ACREAGE: 57 3/4
GAS ROYALTY OWNER MATT AMOS, ET AL

OIL & GAS ROYALTY OWNER: LEASE NO. 1049098-0000 (SURFACE) (BOTTOM HOLE) REFER TO FORM WW-2A1 ACREAGE: 851.5

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE SPECIFY: 12/08/2023

TARGET FORMATION: ORISKANY SANDSTONE (STORAGE RESERVOIR) ESTIMATED DEPTH: 5,178 FT. TVD 8,748 FT. MD

WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT JAMES AMOS
Address 1700 MACCORKLE AVE. SE PO BOX 1273 Address 1700 MACCORKLE AVE. SE PO BOX 1273
City CHARLESTON State WV Zip Code 25325-1273 City CHARLESTON State WV Zip Code 25325-1273

C:\TRANSCANADA\507104926_COCO_B_NEW_WELLS\PIPELINE\DRAWING\LANDPLATS\NEW PLATS_20230605\PLAT_OVERALL.DWG - PLOT TIME: 10/20/2023 9:59 AM

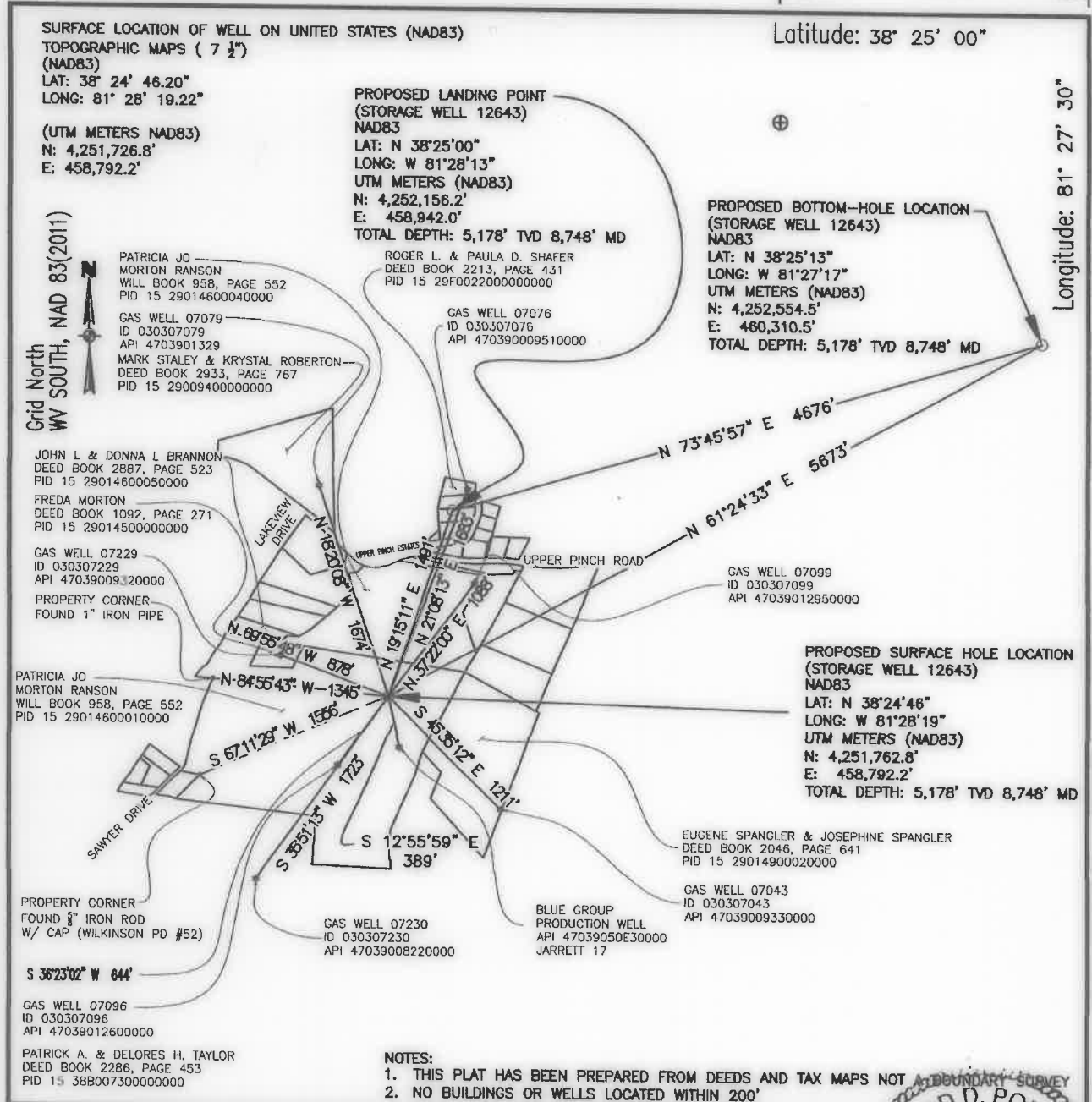
4703906401

3,916'

Latitude: 38° 25' 00"

1,397'

Longitude: 81° 27' 30"

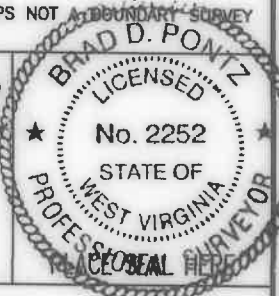


NOTES:

- 1. THIS PLAT HAS BEEN PREPARED FROM DEEDS AND TAX MAPS NOT A BOUNDARY SURVEY
- 2. NO BUILDINGS OR WELLS LOCATED WITHIN 200'

FILE # _____
 DRAWING # 12643
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY: 1:2,500'
 PROVEN SOURCE OF ELEVATION: STATIC GPS SURVEY WITH TIES TO NGS DATA

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: [Signature] 11/13/23
 R.P.E.: _____ L.L.S.: 2252



+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: 12-10-21
 OPERATOR'S WELL #: 12643
 API WELL #: 47 039 06401T
 STATE COUNTY PERMIT

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

WATERSHED: COOPERS CREEK-ELK RIVER (050500070908) ELEVATION: 856'
 COUNTY/DISTRICT: 039-KANAWHA / 4-ELK QUADRANGLE: 258-BLUE CREEK

SURFACE OWNER: PATRICIA JO MORTON RANSON ACREAGE: 57 3/4
 OIL & GAS ROYALTY OWNER: GAS ROYALTY OWNER MATT AMOS, ET AL
LEASE NO. 1049098-0000 (SURFACE) (BOTTOM HOLE) REFER TO FORM WW-2A1 ACREAGE: 851.5

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE SPECIFY: _____

TARGET FORMATION: ORISKANY SANDSTONE (STORAGE RESERVOIR) ESTIMATED DEPTH: 5,178 FT. TVD
8,748 FT. MD

WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT JAMES AMOS
 Address 1700 MACCORKLE AVE. SE PO BOX 1273 Address 1700 MACCORKLE AVE. SE PO BOX 1273
 City CHARLESTON State WV Zip Code 25325-1273 City CHARLESTON State WV Zip Code 25325-1273

G:\TRANSCANADA\507104926_COCO_B_NEW_WELLS\PIPELINE\DRAWING\LANDPLATS\NEW_PLAT\OVERALL_REVISED.DWG - PLOT TIME: 11/13/2023 3:58 PM