



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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Tuesday, December 05, 2017
WELL WORK PERMIT
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 7250
47-107-00333-00-00

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: 7250
Farm Name: COX, DAVID L.
U.S. WELL NUMBER: 47-107-00333-00-00
Vertical / Re-Work
Date Issued: 12/5/2017

Promoting a healthy environment.

12/08/2017

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, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WV-107-00333 W

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	Wood	Steele	Rockport, WV
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Operator ID County District Quadrangle

2) Operator's Well Number: Rockport 7250 3) Elevation: 826.1 ft

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

5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 5016 ft

6) Proposed Total Depth: 5031 (existing) Feet Formation at Proposed Total Depth: Oriskany

7) Approximate fresh water strata depths: none reported by driller in 1950

8) Approximate salt water depths: 1790 ft (as reported by driller in 1950)

9) Approximate coal seam depths: none reported by driller in 1950

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10) Approximate void depths, (coal, Karst, other): none reported by driller in 1950

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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)

Re-perforate and perform coiled tubing clean-out and acid treatment. Less than 2000 gals acid.

* Casing listed below are existing. No plans to remove, alter, or install new casing/tubing.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	
Conductor	16			20	20	no record of cement
Remnant	10.75			1156	982 - 1156	no record of cement
Surface	8.625			2045	2045	cement pour down annulus - no record of volume
Remnant	7			4913	2035 - 4913	15 sx
Production	3.5	J-55	9.20	5031	5031	records indicate "filled to surface" -
Tubing						no record of cement volume behind 3.5"
Liners						

Packers: Kind: Parmaco Wall & Anchor
Sizes: 3.5"
Depths Set 4966 ft (slotted or perforated anchor ran below)

12/08/2017

WR-35
Rev (5-01)

DATE: 4/7/2009
API #: 47-107-00333

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

Rework

Well Operator's Report of Well Work

Farm name: Cox, David L. Operator Well No.: 7250

LOCATION: Elevation: 827 ft Quadrangle: Rockport

District: Steele County: Wood
Latitude: 2,180 Feet South of 39 Deg. 05 Min. 00 Sec.
Longitude 1,250 Feet West of 81 Deg. 32 Min. 30 Sec.

Company: Columbia Gas Transmission, LLC

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1700 MacCorkle Ave SE Charleston, WV 25325-1273	This is an existing storage well - no casing or tubing pulled or ran.			
Agent: Paul Amick				
Inspector: Larry Parrish				
Date Permit Issued: 6/4/2002				
Date Well Work Commenced: 8/13/02				
Date Well Work Completed: 11/1/02				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 5031				
Fresh Water Depth (ft.): not applicable - rework				
Salt Water Depth (ft.): not applicable - rework				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): <u>none reported</u> ft				

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OPEN FLOW DATA

Producing formation Oriskany Sand Pay zone depth (ft) 5017 - 5023
Gas: Initial open flow not applicable MCF/d Oil: Initial open flow none Bbl/d
Final open flow 38.900 MCF/d No oil
Time of open flow between initial and final tests not applicable Hours
Static rock Pressure 1550 psig (surface pressure) after 24 Hours

Second Producing formation N/A Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: *James E. Amos*
By: James E. Amos - Senior Storage Engineer - Columbia Gas Transmission, LLC
Date: 4/7/09

12/08/2017

Rockport storage well 7250

This is an existing storage well. Below is a summary of work performed.

- 1) Well was cleaned to TD, killed, e-logs ran, new API wellhead installed, and fracture stimulated.

Logs Ran: 10/21/02	Baker Atlas Logging	GR-Neutron
10/22/02	Baker Atlas Logging	MicroVertilog (pipe inspection)
10/24/02	Baker Atlas Logging	Cement Bond

Fracture stimulation:	500 gals HCl acid
	395 bbls fluid
	102 MCF nitrogen
	19,000 lbs sand
	Avg BH rate: 15 BPM
	Avg TP: 4200 psig
	ISIP: 3550 psig

* Note that no earthen pit was utilized. Rework and stimulation fluids recovered via steel tanks and transported to LAD in Wheeling, WV for processing.

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Form: WW - 2B

107-00333F

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

6 583

1) Well Operator Columbia Gas Transmission 10450 Wood Steele Rockport
Operator ID County District Quadrangle

2) Operator's Well Number: Rockport #7250 3) Elevation: 827'

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

5) Proposed Target Formation(s): Oriskany Sandstone

6) Proposed Total Depth: 5031 Feet

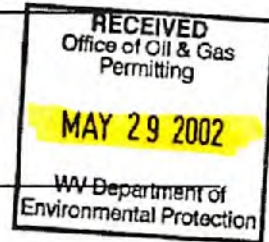
7) Approximate fresh water strata depths: None reported

8) Approximate salt water depths: 1790'

9) Approximate coal seam depths: None

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

11) Describe proposed well work Kill well with Coiled tubing, Install new API 5M wellhead
Hydrofracture Oriskany Sand. Return to service.



12) CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight	Drilling		Left in well
<u>Conductor</u>	<u>16"</u>					
<u>Surface</u>	<u>13-3/8"</u>		<u>48 #/ft</u>	<u>758'</u>	<u>0'</u>	
<u>Intermed.</u>	<u>10-3/4"</u>		<u>48 #/ft</u>	<u>1156'</u>	<u>188'</u>	
<u>Intermed.</u>	<u>8-5/8"</u>		<u>24 #/ft</u>	<u>2045'</u>	<u>2045'</u>	
<u>Intermed.</u>	<u>7"</u>		<u>23 #/ft</u>	<u>4913'</u>	<u>4913'</u>	
<u>Production</u>	<u>3-1/2"</u>	<u>J-55</u>	<u>9.2 #/ft</u>	<u>4970'</u>	<u>4970'</u>	<u>Surface</u>

#250. Packers:

CK # 0510R51

7250

Casing Record

Steel Line Measurement

Pease Natural Gas Company

Well No. 9468 Lease No. 59045 Frank Gilmore

Steele District, County - Wood, W. Va.

Drilling Commenced Aug. 24, 1950

Drilling Completed Nov. 14, 1950

Elevation 827' 171 acres

Drilling Contractor - C. F. Engel

13-3/8" 766' Pld.
10 3/4" 1170' 982' Pld.
8-5/8" 2062' left in well
7" 4974' left in well

758
1156*
2045
4913 set in
15 bags cement

8058

Formation	Top	Bottom	Steel Line Measurement	Water Found Depth	Gas Found Depth	Remarks
Slate & Shell	756	828	758			
Sand	1085	1115				
1st Salt	1156	1245	1156			
2nd Salt	1293	1418				
3rd Salt	1528	1551				
Lime	1580	1633				
Sand	1662	1830		1790		Hole full water
Injum	1830	2022				
Lime	2022	2280	2045			
Brown Shale	3870	4176			3930	Show of gas
Corniferous	4892	5016	4913			
Oriskany	5016			5017-22		Test 4,340,000
				5022-27		" 4,282,000
Total Depth		5031'				

Final Test - 3,965,000 - Rock 425 - 72 hours

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Packer Record

13-3/8" Shoe Set at 758' in 26 bags aquagel (pulled)
10-3/4" " " " 1156' in 23 " " (part pulled)
8 5/8" " " " 2045' in 20 " "
7" " " " 4913' in 15 " cement

Cementing Record

Size Hole Cemented 8"
Size Casing " 7"

NOT SHOT

* Unable to pull this
188' not recoverable

47-107-00333 Rework



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Bellville

WELL RECORD

Permit No. 400 333

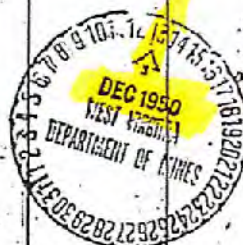
Oil Well Gas Well (XWB)

Company Hops Natural Gas Company
 Address 445 West Main St, Clarksburg, W. Va.
 Farm Frank Gilmore Acres 1.71
 Location (waters) _____
 Well No. 9468 Elev. 827
 District Steele County Wood
 The surface of tract is owned in fee by _____
 Address _____
 Mineral rights are owned by _____
 Address _____
 Drilling commenced August 24, 1950
 Drilling completed November 11, 1950
 Date Shot Not From _____ To _____
 With _____
 Open Flow /10ths Water in _____ Inch
 /10ths Merc. in _____ Inch
 Volume 3,965,000 Cu. Ft.
 Rock Pressure 425# lbs. _____ hrs.
 Oil _____ bbla, 1st 24 hrs.
 Fresh water none recorded feet _____ feet
 Salt water 1790 feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16	20	20	
13	758	Pulled	
10	1156	188	Size of
8 1/2	2045	2045	
6 1/2	4918	4918	Depth set
5 3/16			
3 1/2			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

8" 20 bags Gel 40 bags Fibrotex
 CASING CEMENTED SIZE No. Ft. _____
 7" casing in 15 bags cement
 GOAL WAS ENCOUNTERED AT none recorded INCHES
 FEET INCHES FEET INCHES
 FEET INCHES FEET INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Surface			0	50			
Lime			50	60			
Red rock			60	70			
Slate			70	100			
Red rock			100	127			
Sand			127	165			
Slate			165	218			
Red rock			218	240			
Slate			240	268			
Red rock			268	357			
Slate			357	463			
Red rock			463	485			
Sand			485	505			
Slate			505	537			
Red rock			537	570			
Slate			570	606			
Red rock			606	630			
Slate			630	646			
Red rock			646	656			
Sand			656	756			
Slate			756	828			
Red rock			828	969			
Slate			969	1190			
Red rock			990	1085			
Sand			1085	1115			
Slate			1115	1156			
FIRST SALT			1156	1245			
Slate shell			1245	1293			
SECOND SALT			1293	1418			
Slate shell			1418	1528			
THIRD SALT			1528	1551			
Slate clack			1551	1580			
Lime			1580	1633			
Slate			1633	1662			
Sand			1680	1830	water	1790	
BIG IN JUN			1830	2022			
Lime			2022	2280			
Slate shell			2280	2320			



(Over)

Formation	Color	Hard or Soft	Top	Bottom	Oil Gas or Water	Depth Found	Remarks
Shale			2320	2333			
Lime			2333	2495			
Slate shell			2495	2753			
Lime			2753	2960			
Slate shell			2960	3870			
Brown shale			3870	4176	show gas	3930	
Slate			4176	4876			
Brown shale			4876	4892			
CORNIFEROUS LIME			4892	5016	gas	5017-22	
ORISKANY			5016				
Total depth				5031			

Date December 8, 1950, 19

APPROVED: Hope Natural Gas Company, Owner

E. H. Tolson

By _____

(Title of Agent)

0791

WW-2A
(Rev. 6-14)

1.) Date: 11/1/2017
2.) Operator's Well Number Rockport 7250
State County Permit
3.) API Well No.: 47- 107 - 00333

**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 Sandra J. Cox Address 635 Queen Hollow Road
Rockport, WV 26169
(b) Name Address
(c) Name Address
5) (a) Coal Operator Name Address
(b) Coal Owner(s) with Declaration Name Address
(c) Coal Lessee with Declaration Name Address
6) Inspector Jamie Stevens Address 105 Kentuck Rd
Kenna, WV 25248 Telephone 304-206-7775

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WV Department of
Environmental Protection

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

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

OR

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

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

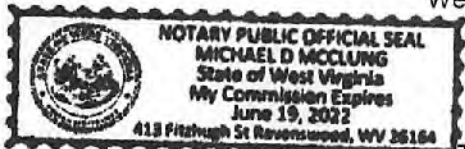
- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

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

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

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

Well Operator: Columbia Gas Transmission, LLC
By: James E. Amos
Its: Senior Engineer
Address: 48 Columbia Gas Rd
Sandville, WV 25275
Telephone: 304-373-2412
Email: james_amos@transcanada.com



Subscribed and sworn before me this 3rd day of NOVEMBER, 2017
Michael D. McClung Notary Public
My Commission Expires 6/19/22

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

12/08/2017

WW-2A1
(Rev. 1/11)

Operator's Well Number Rockport 7250

**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
Sandra J. Cox	Columbia Gas Transmission, LLC	Storage lease 50684	367 / 390-392

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

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WV Department of
Environmental Protection

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



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

James E. Amos

Senior Engineer

12/08/2017

WW-9
(5/16)

API Number 47 - 107 - 00333
Operator's Well No. Rockport 7250

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) Queen Branch of Tygart Creek Quadrangle Rockport, WV

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number 34-009-23821, 34-009-23823, 34-009-23824, 34-105-23619)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: yes - steel piping connecting wellhead and tank(s)

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

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? NaCl, biocida, polymer, starch, calcium carbonate, surfactant (CTCO), HCl acid (stimulation)

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

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

-Landfill or offsite name/permit number? if needed: Rumpke Beech Hollow Landfill - Wellston, OH

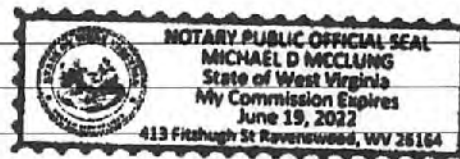
WV Department of
Environmental Protection

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 James E. Amos
Company Official (Typed Name) James E. Amos
Company Official Title Senior Well Services Engineer



Subscribed and sworn before me this 3rd day of NOVEMBER, 2017

Michael D. McClung Notary Public Michael D. McClung

My commission expires 6/19/22

12/08/2017

Proposed Revegetation Treatment: Acres Disturbed < 0.2 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 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.

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Plan Approved by: _____

Jamie Stevens

Comments: _____

Title: _____

Inspector

Date: _____

Nov. 6. 2017

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): Queen Branch of Tygart Creek Quad: Rockport, WV
Farm Name: Cox, Sandra

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.

All construction and well servicing equipment will be monitored and inspected daily for leaks. Fluid pumping well service equipment will have secondary containment under all leak paths. Spill kits will be on site.

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3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Queen Branch of Tygart Creek is approximately 435 ft to the NE.

The closest Well Head Protection Area is 8.8 miles from PWSID WV3305402 (Claywood Park PSD). Refer to enclosed assessment letter dated 9/5/17 from Department of Health and Human Resources, Source Water Assessment and Protection department.

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

N/A

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

12/08/2017

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 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. Small quantities of fuel, oil, and lubrications will be stored on site, but located within secondary containment. Construction and well servicing equipment will be monitored and inspected daily for leaks or spill.

Signature: *Dawn E. Am*
Date: 11/3/17





STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES
BUREAU FOR PUBLIC HEALTH
OFFICE OF ENVIRONMENTAL HEALTH SERVICES

Jim Justice
Governor

Bill J. Crouch
Cabinet Secretary

September 05, 2017

William Timmermeyer
TransCanada -Columbia Pipeline Group
1700 MacCorkle Ave., SE
Charleston, WV 25314

Re: SWAP Information Request
Rockport wells -7265 and 7250
Wood County, West Virginia

Dear Mr. Timmermeyer:

This is a response to the informational request dated September 1, 2017 concerning drinking water sources and protection areas near your right-of-way in Wood County. We are now providing you with a link to download our active public water supply protection areas for download at this location, https://www.wvdhhr.org/oehs/eed/swap/GISTA_Downloads.asp. RECEIVED
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Or view the map here,

<https://oehsportal.wvdhhr.org/wvswap/index.html>

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Based on the current information, we have found that the 1-mile buffer of one Well of your project (well 7250) intersects a protection area.

The closest distances to the Source Water and Protection Areas are as follow:

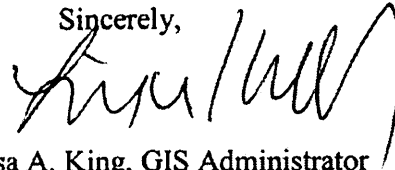
ID	Well Name	Distance	PWSID	System Name
1	Well 7265 Wood County	10.4 miles from the Water Source	WV3305402	Claywood Park PSD
		10.6 from WHPA	WV9954030	Belleville HydroElectric Recreation
		1.0 mile from ZPC	WV3305402	Claywood Park PSD
2	Well 7250 Wood County	8.8 miles from the Water Source	WV3305402	Claywood Park PSD
		10.49 miles from WHPA	WV9954030	Belleville HydroElectric Recreation
		Intersect the ZPC	WV3305402	Claywood Park PSD

Both locations are around 153 river miles upstream from the Public Water System WVAWC - Huntington.

We do not have information regarding ground water monitoring wells. I suggest you contact the WV DEP, this is the link for the ground water monitoring information <http://www.dep.wv.gov/WWE/Programs/gw/Pages/gwhome.aspx>.

I hope the information provided helps you with the completion of your project. If you have any questions, please do not hesitate to contact me at (304) 356-4309.

Sincerely,



Lisa A. King, GIS Administrator
Source Water Assessment and Protection

CC: William J. Toomey

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WV DEP Reclamation Plan - Site Detail

Rockport Well 7250 (API 107-00333)

Janice 11/6/2017

- 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 surfacing material to be applied as needed



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Rockport - 07250

existing access road

existing access road

WV DEP Reclamation Plan - Overview

Rockport Well 7250 (API 107-00333)

- BMPs to be utilized per WV DEP guidelines
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and road surfacing material to be applied as needed

Driving Directions

From North

I-77 to Rockport Exit (~10 miles south of Parkersburg)

Left on Rt 21 south

3 miles turn left on to Slate Creek Road at top of hill before church

(DO NOT PARK ON BLACK TOP PAVEMENT OF CHURCH)

0.9 miles continue straight on to Slate Creek Road

0.7 miles turn left at mail box #8466

Follow 0.8 miles to well site

From South

I-77 to Rockport Exit (~15 miles south of Parkersburg)

Right on Rt 21 south

1.6 miles turn left on to Slate Creek Road at top of hill before church

(DO NOT PARK ON BLACK TOP PAVEMENT OF CHURCH)

0.9 miles continue straight on to Slate Creek Road

0.7 miles turn left at mail box #8466

Follow 0.8 miles to well site

*Amal
11/6/2017*



47-107-00333 W

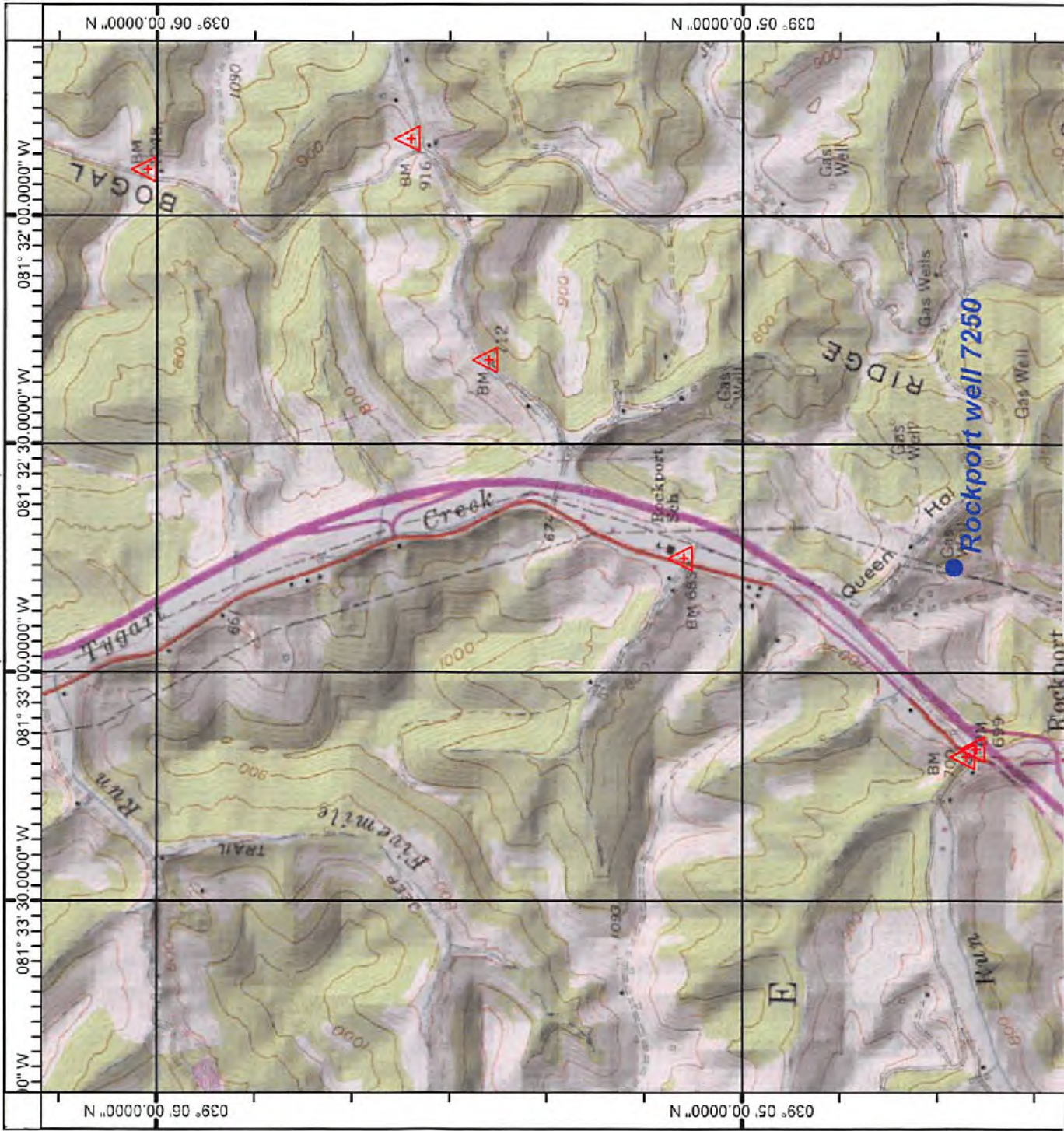
ROCKPORT QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(KANAWHA)



(LUBECK)

081° 33' 55.4287" W 039° 06' 11.7754" N (SOUTH PARKERSBURG) 081° 32' 30.0000" W 081° 31' 36.6281" W 039° 06' 00.0000" W 039° 05' 11.7754" N

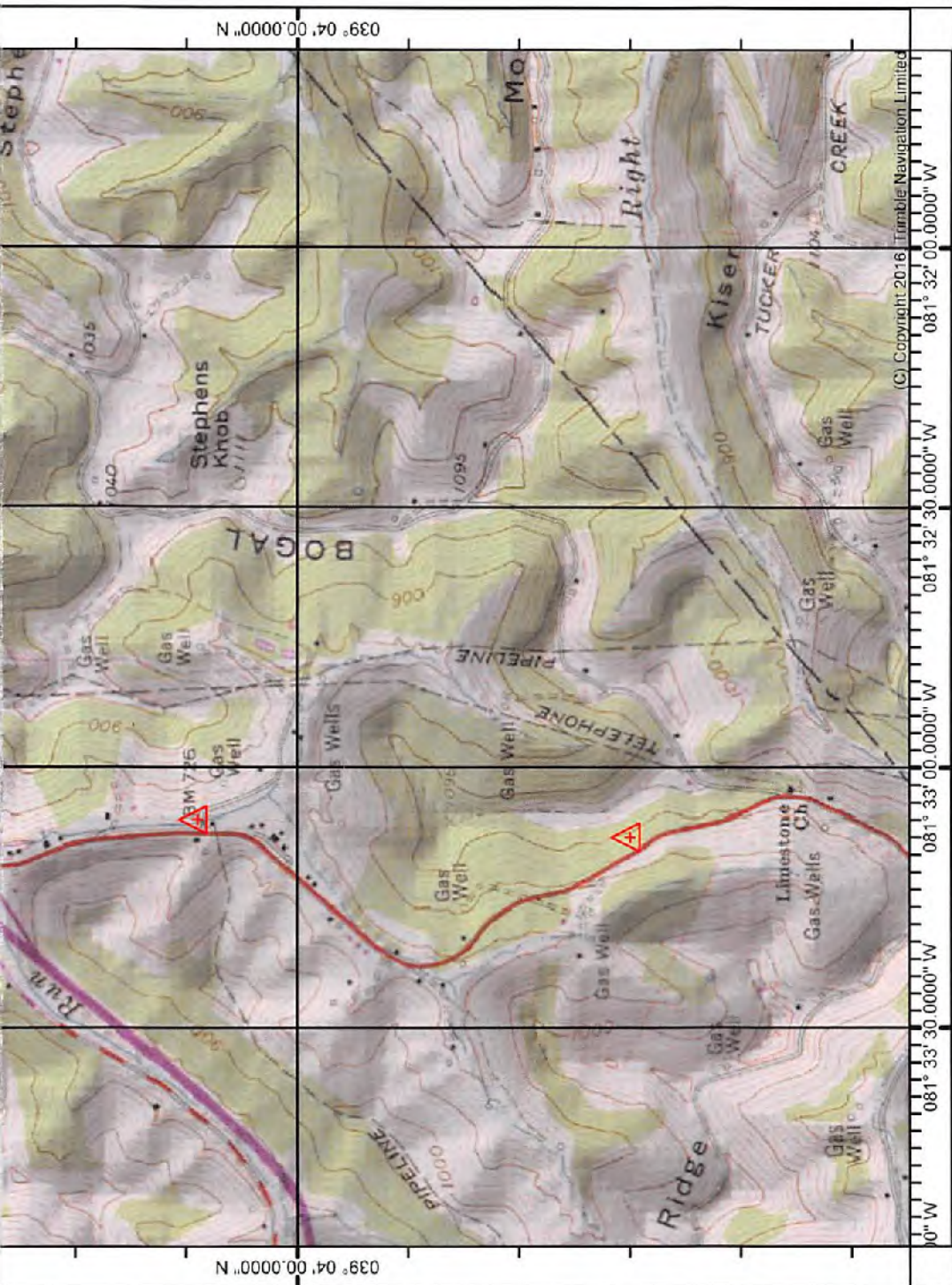


Handwritten: 47-107-00333 Reuben
Signature: [Handwritten signature]

(ELIZABETH)

(POND CREEK)

12/08/2017

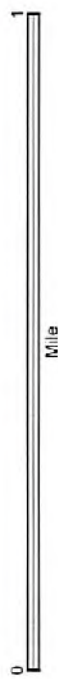


039° 03' 04.3535" N
081° 33' 55.4297" W
039° 04' 00.0000" N
081° 32' 30.0000" W
081° 33' 00.0000" W
081° 32' 00.0000" W
081° 32' 30.0000" W
081° 32' 00.0000" W
039° 03' 04.3535" N
081° 31' 36.6281" W

(REEDY)

(SANDYVILLE)

(LIVERPOOL)
SCALE 1:18056



0 1000
0 1000
0 1000
Mile
Yards
Kilometer

CONTOUR INTERVAL 20 FT

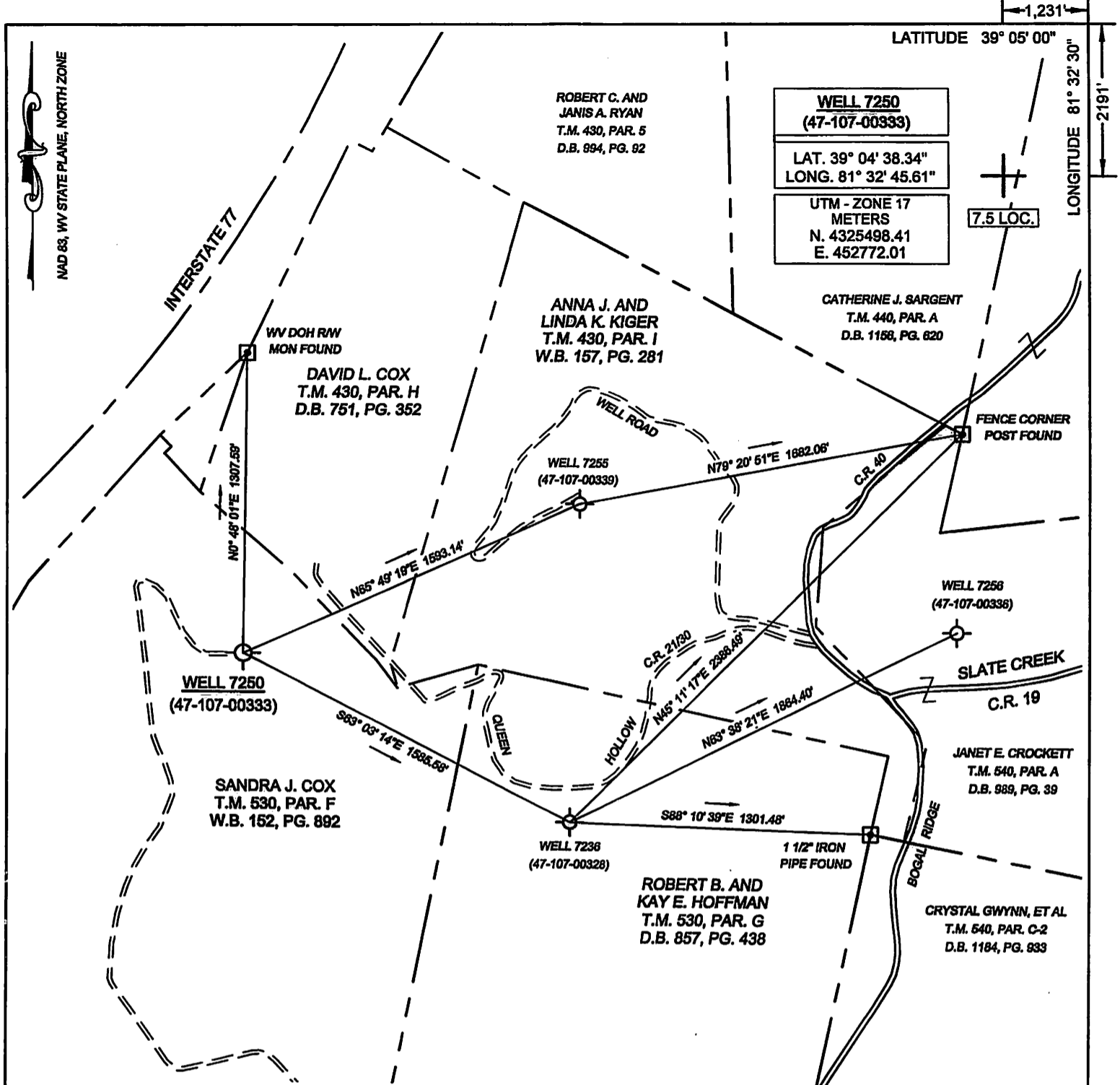
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Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:24,000 Maps
North American 1983 Datum (NAD83)
To place on the predicted North American 1927 meridian
projection lines 9M N and 13M E

39081-A4-TM-024
ROCKPORT, WV
JAN 1, 1975

12/08/2017



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

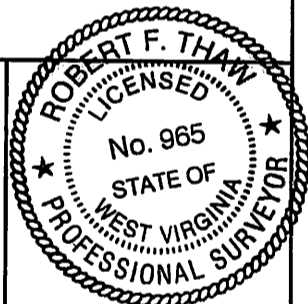
FILE No 1701-2345-011
 DRAWING No. 1701-2345-011
 SCALE 1"=600'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION TRIMBLE R8-3
GPS UNIT

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

(SIGNED)

ROBERT F. THAW

PS #965



PLACE SEAL HERE

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



DATE OCTOBER 20 20 17
 OPERATOR'S WELL No. 7250
 API WELL No.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 107 PERMIT 00333w
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 826.1' WATER SHED QUEEN BRANCH OF TYGART CREEK
 DISTRICT STEELE COUNTY WOOD
 QUADRANGLE ROCKPORT, WV

SURFACE OWNER SANDRA J. COX ACREAGE 171
 OIL & GAS ROYALTY OWNER SANDRA J. COX LEASE ACREAGE 171
 LEASE No. 50684

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ 12/08/2017

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 5016
 WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT PAUL AMICK
 ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS P.O. BOX 1273, CHARLESTON W.V.
25325-1273 25325-1273

WW-2B1
(5-12)

Well No. Rockport 7250

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 contractor chosen to collect sample.

Certified Laboratory Name _____
Sampling Contractor _____

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WV Department of
Environmental Protection

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.

