



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

Friday, April 21, 2017
WELL WORK PERMIT
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC (A)
P. O. BOX 1273

CHARLESTON, WV 253251273

Re: Permit approval for 7106
47-039-01546-00-00

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: 7106
Farm Name: KANAWHA CRUDE OIL CO.
U.S. WELL NUMBER: 47-039-01546-00-00
Vertical / Re-Work
Date Issued: 4/21/2017

Promoting a healthy environment.

04/21/2017

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.

United Fuel Gas Company
COMPANY

SERIAL WELL NO. X-72-7106

LEASE NO. 851

MAP SQUARE 72-63

RECORD OF WELL NO. <u>X-72-7106</u> on the		CASING AND TUBING				TEST BEFORE SHOT
Farm, <u>Condo Oil Co.</u> farm of <u>9th</u> Acres		SIZE	WEIGHT	USED IN DRILLING	LEFT IN WELL	/10 of Water in _____ inch
in <u>10 1/2</u>	District	<u>14"</u>	<u>42#</u>	<u>33'</u>	<u>0</u>	<u>14</u> /10 of Merc. in <u>7</u> inch
<u>Kanawha</u>	County	<u>10-3/4</u>	<u>45.5</u>	<u>1513'</u>	<u>0</u>	Volume <u>5,955,000</u> Cu. ft.
State of: <u>West Virginia</u>		<u>8-5/8</u>	<u>32#</u>	<u>1775'</u>	<u>1461'</u>	TEST AFTER SHOT
Field: <u>Glendon</u>		<u>7" O.D.</u>	<u>23# N-80</u>	<u>5176'</u>	<u>8092'</u>	/10 of Water in _____ inch
Rig Commenced	<u>194</u>					/10 of Merc. in _____ inch
Rig Completed	<u>194</u>					Volume _____ Cu. ft.
Drilling Commenced	<u>194</u>					<u>NR 15</u> Hours After Shot
Drilling Completed <u>12/13/50</u>	<u>194</u>					Rock Pressure <u>700#</u>
Drilling to cost	per foot					Date Shot _____
Contractor is: <u>H. H. Beckett</u>						Size of Torpedo _____
Address: <u>Canawha, W. Va.</u>				SHUT IN		Oil Flowed _____ bbls. 1st 24 hrs.
				Date <u>12/13/50</u>		Oil Pumped _____ bbls. 1st 24 hrs.
Driller's Name <u>J. D. Kelly</u>		<u>7</u> in.		Subing of Casing		
<u>H. H. Beckett</u>				Size of Packer _____		Well abandoned and
				Kind of Packer _____		Plugged _____ 194
				1st Perf. Set _____ from _____		
Elevation: <u>827.56</u>				2nd Perf. Set _____ from _____		

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Soil	0	12		
Sand	12	60		
Slate	60	70		
Sand	70	105		
Slate	105	120		
Sand	120	175		
Slate	175	220		
Sand	220	257		
Slate	257	265		
Lime	265	302		
Slate	302	318		
Lime	318	385		
Slate	385	395		
Lime	395	420		
Slate	420	455		
Lime	455	457		
Slate	457	510		

04/21/2017

SERIAL WELL NO. X-52-7106LEASE NO. 881MAP SQUARE 72-63

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Broken Lime	510	575		
Slate	575	612		
Lime	612	645		
Slate	645	680		
Lime	680	705		
Sand	705	965		
Coal	965	969		
Sand	969	1225		
Slate	1225	1236		
Red Rock	1236	1265		
Slate & Shells	1265	1310		
Lime	1310	1339		
Slate	1339	1346		
Lime	1346	1370		
Slate	1370	1375		
Lime	1375	1407		
Slate	1407	1412		
Lime	1412	1421		
Slate	1421	1426		
Lime	1426	1436		
Slate	1436	1438		
Big Lime	1438	1590		
Injun Sand	1590	1605		
Red Rock	1605	1612		
Gritty Lime	1612	1625		
Wera Sand	1625	1830		
Slate & Shells	1830	2010		
Lime	2010	2073		
Slate & Shells	2073	2420		
Lime	2420	2580		
Slate & Shells	2580	3185		
Brown Shale	3185	3215		
Lime	3215	3425		
Slate & Shells	3425	3625		
Brown Shale	3625	3655		
Slate & Shells	3655	3750		
Brown Shale	3750	4018		

04/21/2017

* RECORD OF INSTALLATION OF 4 1/2" CASING

3901546W

FORM U 465 (REV. 1-69) CSD

3-11-71 *M.A. Jumper*

WORK ORDER 2-5192-71

DATE ISSUED November 5, 1970

GENERAL LEDGER	BUDGET	LOCATION	W. O. NO.
	AUXILIARY	SUBSIDIARY	OTHER
107	221	12	3906

COMPANY United Fuel Gas DEPT. Storage ~~XXXXXX~~ Northern DIVISION

TITLE Well X-52-A-7106 Addition NO. _____ REASON FOR RETIREMENT _____

PURPOSE AND NECESSITY To install heavier equipment and fracture well in order to increase production.

PROJECT LOCATION Elk MAGISTERIAL DISTRICT Rural TAXING DISTRICT Kanawha COUNTY West Virginia STATE

RELATED PROJECT WORK ORDER NO. 222-12-3905 FOR Well X-52-A-7106 Part Removal

COMPANY SELLING GAS AT RETAIL _____ APPROVED BY M.H. Chapman 11-5-70 APPROVED BY [Signature] 11-5-70

DETAIL OF EXPENDITURES

MATERIAL TO BE INSTALLED XXXXXX	SIZE	ESTIMATE			ACTUAL		VARIATION
		QUANTITY	PRICE	AMOUNT	QUANTITY	AMOUNT	
Casing, SM, J-55, 11.6#	4-1/2"	5087'	1.51	7,681.	5098'	7765.24	842.4
Full Flow Packer *	4-1/2"	1		514.	1	-	<514.00
Casing Centralizers *	4-1/2"	5	15.55	78.		-	<78.00
Casing Head	7X4	1	400.40	400.	1	391.08	<89.2
Gate Valve, 300G#	4"	1	757.70	758.	1	755.48	<2.52
Miscellaneous Materials				150.		130.45	<19.55
* INTANGIBLE ITEMS							
TOTAL MATERIAL				9,581.		9,047.25	<538.75
INSTALLATION XXXXXX COST				***	***	***	* ** *
LABOR - COMPANY					2,750.	3,011.39	261.39
CONTRACTS Use of Company Equipment					249.	189.20	<59.80
USE OF AUTOMOBILE AND HAULING					2,500.	2,151.20	<348.80
MISCELLANEOUS SUPPLIES AND EXPENSE					-	86.10	86.10
Cement & Services *					536.	1,145.50	609.50
Logging					515.	516.88	1.88
Fracturing Services					2,382.	2,378.23	<3.77
Killing Well					380.	-	<380.00
RIGHTS OF WAY AND COST OF SECURING <u>RENTAL OF EQUIPMENT</u>					-	22.64	22.64
STORES EXPENSE AND FREIGHT					1,459.	1,323.41	<135.59
LABOR BENEFITS					455.	498.01	43.01
INTEREST DURING CONSTRUCTION					66.	61.54	<4.46
ADMINISTRATIVE AND GENERAL LABOR OVERHEADS					126.	123.17	<2.83
TOTAL INSTALLATION XXXXXX COST					11,418.	11,507.27	89.27
TOTAL ESTIMATE					20,999.	20,549.52	<449.48

INDICATE NORTH _____ SKETCH AND LOCATION Comp. 11 INVENTORY MAP NO. F-48 72/63

Note: Move in spudder and string of cleaning out tools. Cleaned well out end run 4-1/2" casing. Fracture well and report results.

Comp. 11

RECEIVED 04/21/2017
Office of Oil and Gas

APR 05 2017

WV Department of
Protection

107-221-12-3906

WW-2A1
(Rev. 1/11)

Operator's Well Number Coco A 7106

**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
Kanawha Crude Oil Co.	Columbia Gas Transmission, LLC	Storage Lease 881	2616/402

**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

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

04/21/2017

WW-2B1
(5-12)

Well No. Coco A 7106

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name _____
Sampling Contractor _____

Well Operator Not applicable - existing underground natural gas storage well.

Address _____

Telephone _____

RECEIVED
Office of Oil and Gas

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.

WW-2A
(Rev. 6-14)

1.) Date: 2/20/17
2.) Operator's Well Number Coco A 7106
State County Permit
3.) API Well No.: 47- 039 - 01546

**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: 5) (a) Coal Operator
(a) Name Darvl & Annette England Name not operated
Address 368 Schrader Mtn. Road Address _____
Elkview, WV 25071
(b) Name Frankie C. & Ruth A. England (b) Coal Owner(s) with Declaration
Address 368 Schrader Mtn. Road Name _____
Elkview, WV 25071 Address _____
(c) Name _____ Name _____
Address _____ Address _____
6) Inspector Terry Urban (c) Coal Lessee with Declaration
Address PO Box 1207 Name _____
Clendenin, WV 25045 Address _____
Telephone 304-549-5915

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

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, L.L.C. Office of Oil and Gas
By: James E. Amos
Its: Senior Engineer APR 05 2017
Address: 48 Columbia Gas Rd
Sandville, WV 25275 WV Department of
Telephone: 304-373-2412 Environmental Protection
Email: james_amos@transcanada.com

Subscribed and sworn before me this 9th day of MARCH, 2017, 01546

[Signature] Notary Public
My Commission Expires 5-7-2017

3901546W

7016 0750 0000 9118 5042

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

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

OFFICIAL USE

Certified Mail Fee
 \$ 3.35

Extra Services & Fees (check box, add fees as appropriate)

Return Receipt (hardcopy) \$ 2.75

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

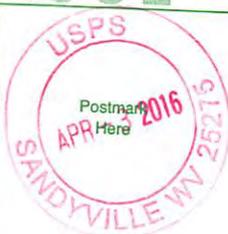
Adult Signature Restricted Delivery \$ _____

Postage
 \$ 1.82

Total Postage and Fees
 \$ 7.92

Sent To **DARYL & ANNETTE ENGLAND**
 Street and Apt. No., or PO Box No.
368 SCHRADER MTN RD
 City, State, ZIP+4®
ELKVIEW, WV 25071

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



7015 1730 0000 2656 5301

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

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

OFFICIAL USE

Certified Mail Fee
 \$ 3.35

Extra Services & Fees (check box, add fees as appropriate)

Return Receipt (hardcopy) \$ 2.75

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

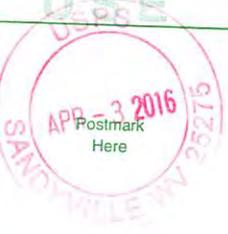
Adult Signature Restricted Delivery \$ _____

Postage
 \$ 1.82

Total Postage and Fees
 \$ 7.92

Sent To **FRANKIE & RUTH ENGLAND**
 Street and Apt. No., or PO Box No.
368 SCHRADER MTN RD
 City, State, ZIP+4®
ELKVIEW, WV 25071

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



RECEIVED
Office of Oil and Gas

APR 05 2017

WV Department of
Environmental Protection

04/21/2017



1700 MacCorkle Ave SE
P.O. Box 1273
Charleston, WV 25325

April 3, 2017

Daryl & Annette England
368 Schrader Mtn Road
Elkview, WV 25071

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to work on an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Coco A 7106 (API 47-039-01546).

As part of the well permitting process required by the Office of Oil and Gas, Columbia, the well operator, is required to provide a copy of all applicable permit forms for your review and record retention. Columbia encourages you to review each form in detail, and follow the instructions as outlined.

Sincerely,

A handwritten signature in black ink that reads "Jim Amos". The signature is fluid and cursive, with the first name "Jim" being particularly prominent.

Jim Amos
Senior Well Services Engineer
Columbia Gas Transmission, LLC

04/21/2017



1700 MacCorkle Ave SE
P.O. Box 1273
Charleston, WV 25325

April 3, 2017

Frankie & Ruth England
368 Schrader Mtn Road
Elkview, WV 25071

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to work on an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Coco A 7106 (API 47-039-01546).

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Sincerely,

A handwritten signature in black ink that reads "Jim Amos". The signature is fluid and cursive, with the first name "Jim" being more prominent than the last name "Amos".

Jim Amos
Senior Well Services Engineer
Columbia Gas Transmission, LLC

04/21/2017

3901546W

WW-9
(5/16)

API Number 47 - 039 - 01546
Operator's Well No. Coco A 7106

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) Kelly Fork of Blue Creek 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: TU

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. N/A - no drilling

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

Additives to be used in drilling medium? N/A - no drilling fluid to be used

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

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

-Landfill or offsite name/permit number? if needed: Pinegrove Landfill - Amanda, OH

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 9th day of March, 2017
M. H. McClung Notary Public

My commission expires 5-8-2017



3901546W

Operator's Well No. Coco A 7106

Proposed Revegetation Treatment: Acres Disturbed < 0.5 Prevegetation pH 6

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch 2 Tons/acre

Notes
- If Tall Fescue is used, plant endophyte-free certified seed
- Legumes to be inoculated by manufacturer's recommendation

Seed M

Temporary

Permanent

Seed Type	lbs/acre
Winter Wheat (6/15 - 11/15)	40
Spring Wheat (2/15 - 6/15)	40

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

* seed rate to be doubled for broadcast seeding

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:

Comments:

Title:

Inspector Del E. Coas

Date:

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): Kelly Fork of Blue Creek Quad: Blue Creek

Farm Name: Kanawha Crude Oil Co

- 1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

No fertilizer will be stored on site. Small quantities of fuel, oil, and lubrications will be stored on site, but located within secondary containment.

Spills from construction equipment and well treatment fluids is the only source of contaminate to groundwater.

- 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.

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

Kelly Fork is approximately 115 ft to the north.

The closest Well Head Protection Area is within the ZPC (WVAWC Kanawha Valley Dist - PWSID 3302016). Refer to enclosed assessment letter dated 1/5/17 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.

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.

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 lubrication 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.

RECEIVED
Office of Oil and Gas
APR 05 2017
WV Department of
Environmental Protection

Signature: _____

Date: _____



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

Earl Ray Tomblin
Governor

Karen L. Bowling
Cabinet Secretary

January 05, 2017

William Timmermeyer
CESSWI
Natural Resource Permitting Principal
TransCanada | Columbia Pipeline Group
1700 MacCorkle Ave., SE
Charleston, WV 25314

Re: SWAP Information Request –

Dear Mr. Timmermeyer:

In response to the informational request dated January 4, 2017 concerning the closest Protection Areas to the indicated **seven (7) wells**, we have found the following:

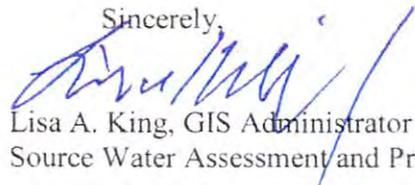
ID	Well Name	Distance	PWSID	System Name
1	Coco A well 7106	within the ZPC	WV3302016	WVAWC KANAWHA VALLEY DIST
2	Glady well 7464/Glady well 7465/Glady well 7467/Glady well 12371	1 mile from WHPA	WV9942049	USFS MIDDLE MOUNTAIN CABINS - HP
		6.2 from ZCC	WV3304202	TOWN OF BEVERLY
		7.0 miles from ZPC	WV3304202	TOWN OF BEVERLY
3	Ripley well 7294	3.8 miles from ZPC	WV3301811	CITY OF RIPLEY
		5 miles from ZCC	WV3301811	CITY OF RIPLEY
		5 miles from WHPA	WV3301810	RAVENSWOOD MUNICIPAL WATER
4	Rockport well 7240	0.7 miles from ZPC	WV3305402	CLAYWOOD PARK PSD

We are now putting up all of our active protection areas for download at this location, https://www.wvdhhr.org/oehs/eed/swap/GISTA_Downloads.asp.

We do not have information regarding private drinking wells in the area. I suggest you contact the county health department for this information.

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

Department of
2017
and Gas

Blue Creek Rd

Magenta Dr

57

Schrader Mountain Rd

Google Earth

04/21/2017

3901546W

WV DEP RECLAMATION PLAN 1/2 - OVERVIEW
Coco A well 7106



Coco A - 07106



500 ft

04/21/2017

WV DEP RECLAMATION PLAN 2/2 - SITE DETAIL

Coco A well 7106

- BMPs and erosion control devices to be utilized per WV DEP guidelines
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material (ie. crushed limestone) to be applied



Filter sock

< 5 degree slope

250 ft

existing access road

**Proposed Limits
of Disturbance on
Existing Well Site**

3901546w



40 ft

Coco A - 07106

parking

< 5 degree slope

100 ft



04/21/2017

39 01546 W

81.4333333° W

81.4166666° W

81.4000000° W

RECEIVED
Office of Oil and Gas

APR 05 2017

Department of
Environmental Protection

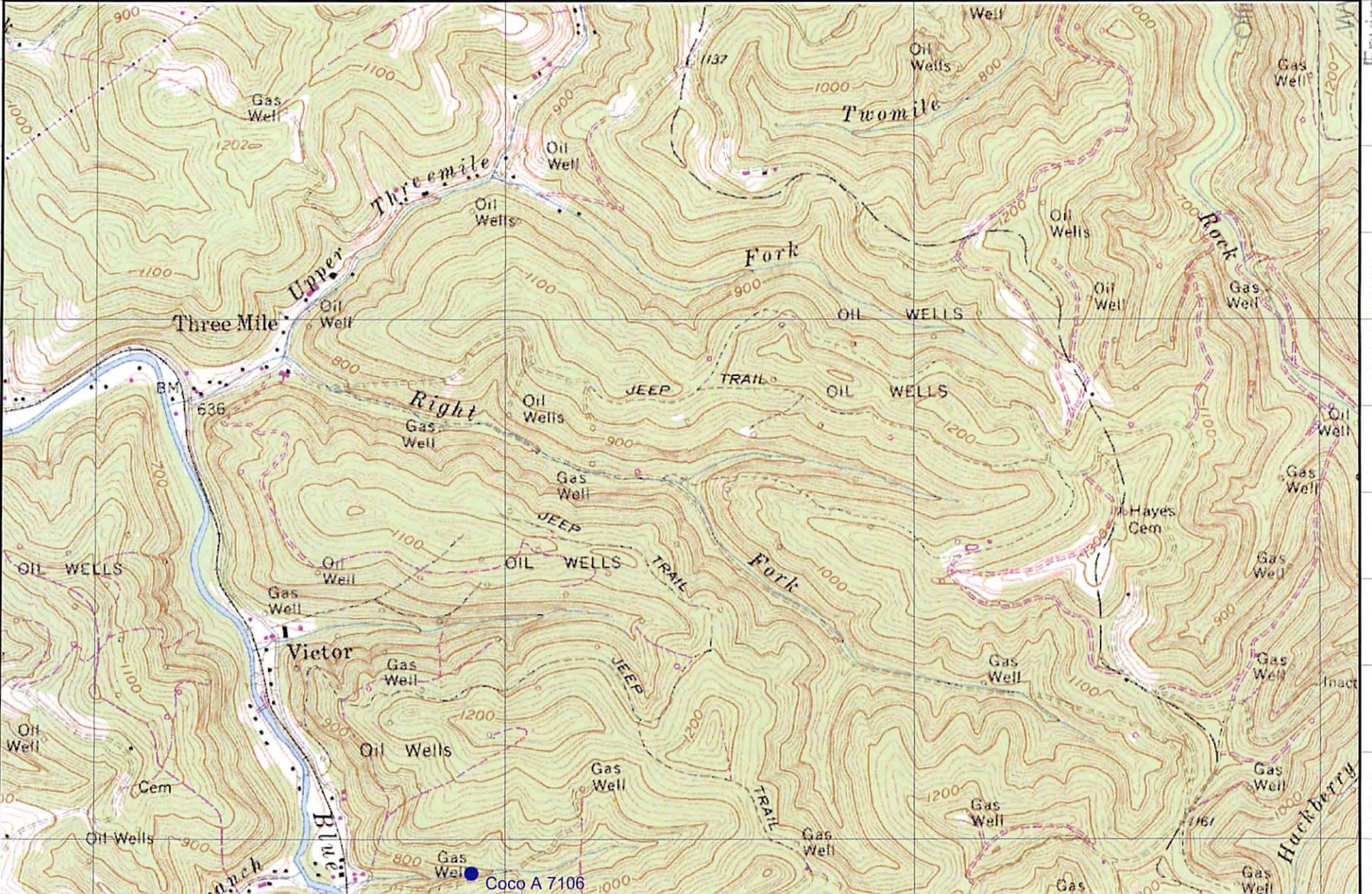
81.3833333° W

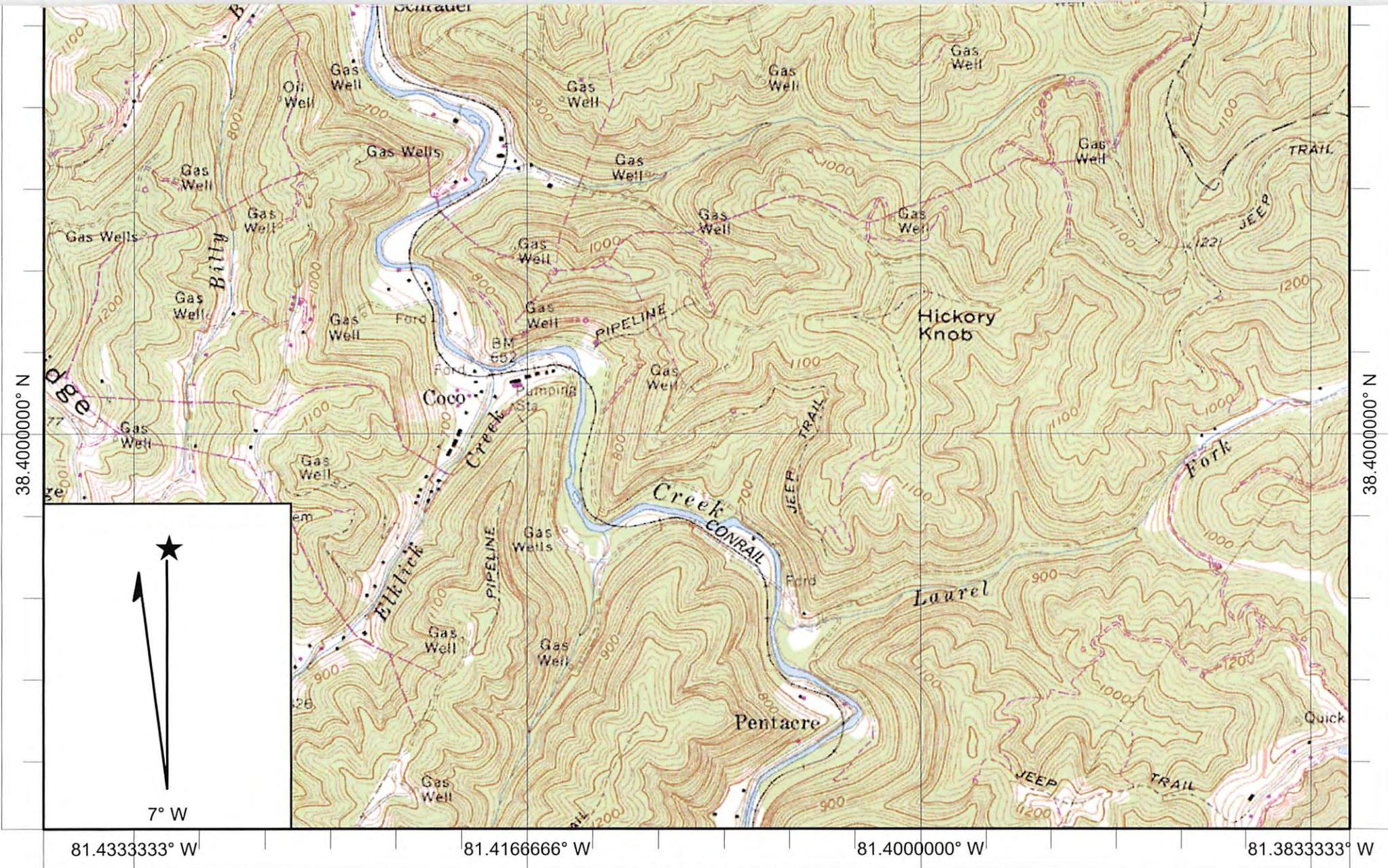
38.4333333° N

38.4166666° N

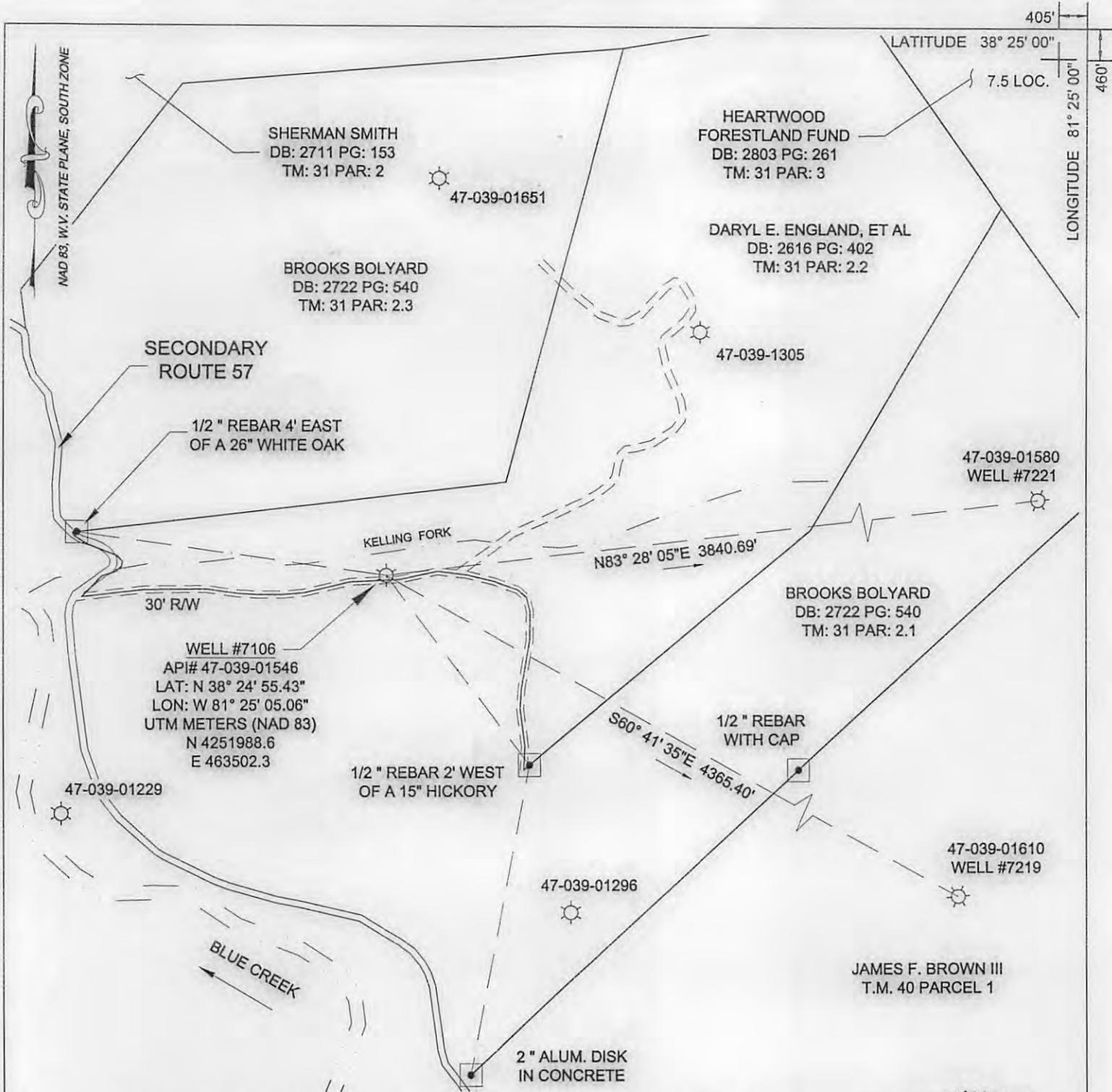
38.4333333° N

38.4166666° N





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

FILE No 1701-2345-001-002
 DRAWING No. COCO A-7106
 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



DATE FEBRUARY 14 2017
 OPERATOR'S WELL No. 7106
 API WELL No. 47 039 - 01546

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 842 WATER SHED BLUE CREEK
 DISTRICT ELK COUNTY KANAWHA
 QUADRANGLE BLUE CREEK

SURFACE OWNER DARYL & ANNETTE ENGLAND & FRANKIE & RUTH ENGLAND ACREAGE 105.64
 OIL & GAS ROYALTY OWNER KANAWHA CRUDE OIL CO. LEASE ACREAGE 900
 LEASE No. 881

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR
 STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW
 FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) PLUG AND ABANDON

04/21/2017

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 5130
 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