



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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Monday, July 29, 2019
WELL WORK PERMIT
Vertical / Re-Work

DOMINION ENERGY TRANSMISSION, INC.
925 WHITE OAKS BOULEVARD
BRIDGEPORT, WV 26330

Re: Permit approval for 5217
47-033-03068-00-00

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.

A blue ink signature of James A. Martin, Chief, is written over a white background. The signature is cursive and stylized.

James A. Martin
Chief

Operator's Well Number: 5217
Farm Name: McDONALD, FRANK
U.S. WELL NUMBER: 47-033-03068-00-00
Vertical Re-Work
Date Issued: 7/29/2019

I

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.

47-033-03068W

WW - 2B
(Rev. 8/10)

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

1) Well Operator: Dominion Energy Transmission, Inc.

307048	Harrison	Union	West Milford
Operator ID	County	District	Quadrangle

2) Operator's Well Number: BW-5217 3) Elevation: 1138'

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

5) Proposed Target Formation(s): Gantz Proposed Target Depth: 1865'

6) Proposed Total Depth: 1880' Feet Formation at Proposed Total Depth: Gantz

7) Approximate fresh water strata depths: n/a

8) Approximate salt water depths: n/a

9) Approximate coal seam depths: n/a

10) Approximate void depths,(coal, Karst, other): N/A

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)
Please see attached work plan. Convert to OBSERVATION WELL FOR Gantz.

SDW
5/6/20

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor						
Fresh Water	13-3/8"	K-55	48#/FT	N/A	290'	CTS
Coal	8-5/8"	K-55	24#/FT	N/A	2101'	1000 SKS
Intermediate						
Production	4-1/2"	J-55	10.5#/FT	N/A	4508'	500 SKS
Tubing						
Liners						

Packers: Kind: _____
Sizes: _____
Depths Set _____

1. Phase 1- Preliminary activities

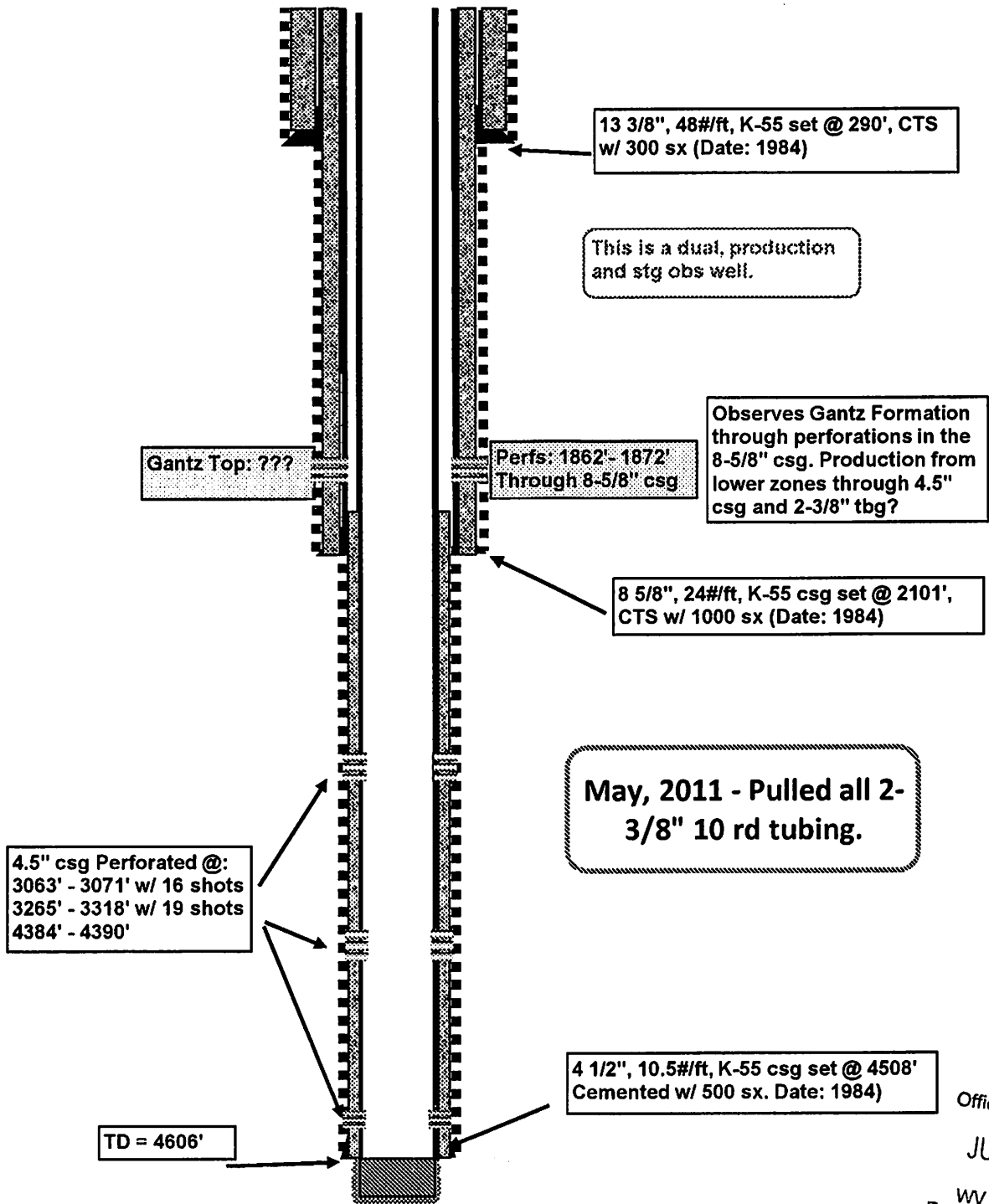
1. File for and receive necessary regulatory permits
2. Upgrade site and access road; disconnect and remove any unnecessary production equipment
3. Install any remaining necessary well site containment

2. Phase 2- Well work activities

1. MIRU rig and any other ancillary equipment
2. Log 4-1/2" casing
3. Install all BOPE equipment
4. TIH with work string to above td
5. Spot cement balance plug from bottom of well to immediately below Gantz, satisfying the requirements of §22-6-24 (a) 13.4.a.1-5
6. TOOH with work string
7. WOC
8. Tag and verify the cement plug top
9. Perforate 4-1/2" casing immediately below Gantz
10. Set cement retainer immediately above 4-1/2" squeeze perforations
11. Squeeze cement into 4-1/2" ~~8~~" annulus. Designed to be to surface. *4 7/8" annulus*
12. WOC
13. TOOH and move out rig
14. RDMO service rig and ancillary equipment
15. Perform top joint and well head change out activities
16. Bond log 4-1/2" casing
17. Perforate 4-1/2" casing across Gantz formation
18. Swab 4-1/2" casing
19. Remove all environmental controls and assure 70% growth of vegetation

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Office of Oil and Gas
JUL 12 2019
WV Department of
Environmental Protection

**Kennedy Storage
BW-5217[OBS]
Permit #47-033-03068-R
Elev = 1138'[GL]**



RECEIVED
Office of Oil and Gas
JUL 12 2019
WV Department of
Environmental Protection

Well Name & Number:		BW-5217		Lease	R. C. McDonald		
County or Parish:		Harrison	State/Prov.	WV	Country:	USA	
Perforations: (MD)					(TVD)	4606'	
Angle/Perfs	Angle @KOP and Depth			KOP TVD			
BHP:	BHT:	Completion Fluid:					
FWHP:	FBHP:	FWHT:	FBHT:	Other:			
Date Completed:	07/10/18				RKB:		
Prepared By:	Richard Cross			Last Revision Date:	01/17/12		



RECEIVED
MAR 10 1985

IV-35
(Rev 8-81)

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date March 8, 1985
Operator's
Well No. 5217
Farm J. H. McDonald
API No. 47-033-3068-RED

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal /
(If "Gas," Production X / Underground Storage X / Deep / Shallow /)

LOCATION: Elevation: 1138' Watershed Two Lick Run
District: Union County Harrison Quadrangle West Milford

COMPANY Consolidated Gas Transmission Corp.
ADDRESS 415 W. Main St., Clarksburg, WV.
DESIGNATED AGENT W. A. Fox
ADDRESS 415 W. Main St., Clarksburg, WV.
SURFACE OWNER Frank McDonald
ADDRESS Rt. 2, Jane Lew, WV 26378
MINERAL RIGHTS OWNER Mary McDonald, Agent
ADDRESS Rt. 2, Jane Lew, WV 26378
OIL AND GAS INSPECTOR FOR THIS WORK Stephen Casey
ADDRESS Rt. 2, Box 232-Jane Lew, WV 26378
PERMIT ISSUED August 27, 1984
DRILLING COMMENCED September 24, 1984
DRILLING COMPLETED December 2, 1984
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13 3/8	290	290	To surface
9-5/8			
8 5/8	2101	2101	To surface
7			
5 1/2			
4-1/2	4509	4509	500 Sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Benson, Balltown & Speechley Depth see tops feet
Depth of completed well 4617 feet Rotary X / Cable Tools
Water strata depth: Fresh none feet; Salt feet
Coal seam depths: 30-33 Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Benson & Balltown Pay zone depth see tops feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 492 Mcf/d / Final open flow Bbl/d
Time of open flow between initial and final tests 1 hours
Static rock pressure 570 psig (surface measurement) after 14 hours shut in
(If applicable due to multiple completion -)
Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

HARRIS 3068-RED

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated-Benson at 3384 - 4390 with 18 holes.
Fractured with 2400# sand, 1400 gal. HCL acid and 800 bbls. of water.

Perforated Balltown at 3318 - 3265 with 19 holes.
Fractured with 80,000# sand, 700 gal. HCL acid, and 800 bbls. of water.

Perforated Speechley at 3063 - 3071 with 16 holes.
Fractured with 80,000# sand, 700 gal. HCL acid and 800 bbls. of water.

EDWARD LEWIS RO

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Cleaned out old hole			0	2414	
New Hole					
Shale			2414	2440	
Sand			2440	2470	
Sand & Shale			2470	2900	
Sand & Shale			2900	4100	
Sand & Shale			4100	4395	
Benson			4395	4415	
Sand & Shale			4415	4617	
Old Hole					
Pittsburgh Coal			30	33	
Dunkard			416	595	
Salt			790	1140	
Injun			1569	1681	
Berea			1859	1880	
Thirty Foot			2036	2085	
Stray			2141	2181	
Gordon			2194	2210	
Fourth			2291	2300	
Fifth			2352	2377	
New Hole					
Warren			2737	2774	
Upper Speechley			2940	2982	
Speechley			3063	3081	
Balltown			2194	3336	
Benson			4382	4391	
Total Depth				4606	

(Attach separate sheets as necessary)

Consolidated Gas Transmission Co.

Well Operator

By: J. L. Duvick, Manager of Production

Date: March 13, 1985

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

RECEIVED

AUG 20 1984



IV-35 (Rev. 8-81)

OIL & GAS DIVISION DEPT. OF MINES

State of West Virginia Department of Mines Oil and Gas Division

Date August 16, 1984 Operator's Well No. 5217 Farm J. H. McDonald API No. 47

WELL OPERATOR'S REPORT OF DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal (If "Gas," Production X / Underground Storage / Deep / Shallow)

LOCATION: Elevation: 11381 Watershed Two Lick Run District: Union County Harrison Quadrangle West Milford

COMPANY Consolidated Gas Transmission Corp. ADDRESS 445 W. Main St., Clarksburg, WV 26301 DESIGNATED AGENT W. A. Fox ADDRESS 445 W. Main St., Clarksburg, WV 26301 SURFACE OWNER Frank McDonald ADDRESS Rt. 2, Jane Lew, WV 26378 MINERAL RIGHTS OWNER Mary McDonald, Agent ADDRESS Rt. 2, Jane Lew, WV 26378 OIL AND GAS INSPECTOR FOR THIS WORK Stephen Casey Rt. 2, Box 232-D ADDRESS Jane Lew, WV 26378 PERMIT ISSUED None

DRILLING COMMENCED May 31, 1918 DRILLING COMPLETED July 10, 1918 IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING? VERBAL PERMISSION OBTAINED ON

Table with 4 columns: Casing Tubing, Used in Drilling, Left in Well, Cement fill up (Cu. ft.). Rows include sizes 20-16, 13/10, 9 5/8, 8 1/4, 8 5/8, 6 5/8, 5 3/16, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION Berea & Thirty Foot Depth See tops feet Depth of completed well 2387 feet Rotary / Cable Tools X Water strata depth: Fresh none feet; Salt feet Coal seam depths: 30-33 Is coal being mined in the area? No

OPEN FLOW DATA Producing formation Berea & Thirty Foot Pay zone depth see tops feet Gas: Initial open flow n/a Mcf/d Oil: Initial open flow Bbl/d Final open flow 1053 Mcf/d Final open flow Bbl/d Time of open flow between initial and final tests n/a hours Static rock pressure 600 psig (surface measurement) after n/a hours shut in (If applicable due to multiple completion--)

WW-2A
(Rev. 6-14)

1.) Date: 5/2/2019
2.) Operator's Well Number BW-5217
State County Permit
3.) API Well No.: 47- Harrison - 03068-R

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 James McDonald ✓
Address 7416 Goodhope Pike
Lost Creek, WV 26385
(b) Name Wade and Marv Ann Dickinson ✓
Address 2845 Bayshore Road
Villas, NJ 08251
(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
Address _____
Telephone _____

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: Dominion Energy Transmission, Inc
By: John M. Love
Its: Designated Agent
Address: 925 White Oaks Blvd
Bridgetown, WV 26330
Telephone: 681-622-1948
Email: john.d.frost@dominionenergy.com

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Office of Oil and Gas
JUL 12 2019
WV Department of Environmental Protection

Subscribed and sworn before me this 13th day of May, 2019

Brenda M. Johnson
My Commission Expires March 31, 2020
Oil and Gas Privacy Notice

Dominion Energy Transmission
OFFICIAL SEAL
Brenda M. Johnson
Notary Public
State of West Virginia
My Commission Expires
March 31, 2020
925 WHITE OAKS BOULEVARD
BRIDGETOWN, WV 26330

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of its 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

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<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	
\$	4.95
Total Postage and Fees	
\$	7.25

Sent To	
James McDonald	
Street and Apt. No., or PO Box 7416 Goochope Pike	
City, State, ZIP+4® Lost Creek, WV 26385	

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

MAY 22 2019
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26830
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<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	
\$	9.95
Total Postage and Fees	
\$	13.25

Sent To	
Wade Dickinson	
Street and Apt. No., or PO Box 2845 Bayshore Road	
City, State, ZIP+4® Villas, NJ 08251	

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

MAY 22 2019
BRIDGEPORT, MD
26830
Postmark Here

RECEIVED
Office of Oil and Gas
JUL 12 2019
WV Department of
Environmental Protection

WW-2B1
(5-12)

Well No. BW-5217

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 No water sources identified for human consumption, domestic animals, or other general use
Sampling Contractor identified within 2000 ft of the existing storage well.

Well Operator Dominion Energy Transmission, Inc
Address 925 White Oaks Blvd
Bridgeport, WV 26330
Telephone 681-622-1948

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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Office of Oil and Gas
JUL 12 2019
WV Department of
Environmental Protection

WW-2A1
(Rev. 1/11)

Operator's Well Number BW-5217

**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
Please see attached document			

**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:

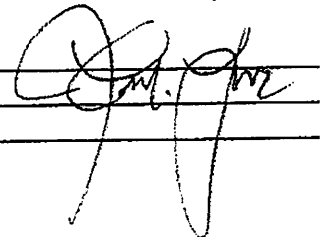
- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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JUL 12 2019
WV Department of
Environmental Protection

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

Well Operator:
By:Its:

Dominion energy transmission
John Love
Director of storage and land services



ATTACHMENT

Grantor/Lessor	Grantee/Lessee	Royalty	Book page
J.H. McDonald	Hope Natural Gas	Storage	174/149

Hope Natural Gas Company changed its name to Consolidated Gas Supply Corporation. On January 1, 1984 Consolidated Gas Supply Corporation assigned its leasehold interest to Consolidated Gas Transmission Corporation. On January 1, 1998 Consolidated Gas Transmission Corporation became CNG Transmission Corporation. As a result of a merger with Dominion Resources Inc. CNG Transmission Corporation changed its name to Dominion Transmission Inc. on May 2000. Dominion Transmission Inc. changed its name to Dominion Energy Transmission Inc. on May 12, 2017.

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JUL 12 2019
WV Department of
Environmental Protection

WW-9
(5/16)

API Number 47 - 033 - 03068-R
Operator's Well No. BW-5217

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Dominion Energy Transmission, Inc OP Code 307048

Watershed (HUC 10) _____ Quadrangle _____

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? _____

Proposed Disposal Method For Treated Pit Wastes:

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

SPW
5/16/20

Will closed loop system be used? If so, describe: Yes, above ground steel pits and dumpster receptacles.

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

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

Additives to be used in drilling medium? Sodium/Potassium Chloride, Xanthan gum, Sodium Bicarbonate, Caustic Soda, Biocide

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? Waste Management, Clarksburg, WV

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 _____

Company Official (Typed Name) John M. Love

Company Official Title Director, Storage and Land Services

Subscribed and sworn before me this _____ day of _____, 20_____

Notary Public

My commission expires _____

47-033-03068 W

Form WW-9

Operator's Well No. BW-5217

Proposed Revegetation Treatment: Acres Disturbed 1.44 Prevegetation pH _____

Lime 3.0 Tons/acre or to correct to pH 6.5

Fertilizer type 10/10/20

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw @ 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Meadow Mix @ 40lbs/acre

Meadow Mix @ 50lbs/acre

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: S. D. W...

Comments: _____

Title: OGS Inspector

Date: 5/6/2019

Field Reviewed? () Yes (X) No

N/A) NO LEADS APPLICATION OF WELL EFFLUENT.

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

Operator Name: Dominion Energy Transmission

Watershed (HUC 10): Middle West Fork River

Quad: West Milford

Farm Name: _____

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

Well workover fluids generated in relation to downhole well work will be contained in above ground tanks and will be hauled offsite for disposal at a DETI approved facility.
Surface water will be handled, as follows:
Surface water not entering the site containment will be diverted to E&S controls, to minimize sedimentation.
Surface water entering the site containment will be evaluated for contamination. If contamination is present, the water will be collected and hauled offsite for disposal at a DETI approved facility. If no contamination has occurred, the water will be discharged from the site and will be diverted to E&S controls, to minimize sedimentation.

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

A temporary cellar will be installed around the well. The cellar will be of metal construction. The floor will be sealed with an impermeable barrier (e.g. synthetic liner, cement, etc.). Full site containment will be employed. The site containment will consist of an impermeable synthetic liner, overlain with matting materials. The sides of the containment will be bermed.

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

Closest water body: Two lick creek
Distance to closest water body (from wellhead): 800 feet
No Well Head Protection Area within 2000' of the discharge area

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

Existing gas storage/production well. Well is operated in accordance with any regulations required, pertaining to groundwater protection.

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

N/A) NO LAND APPLICATION
OF WELL EFFLUENT.

47-033-03068W

No groundwater quality data available.

No sources of water utilized for human consumption, livestock consumption, or other potable use were identified during surveying activities, within 2000'.

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. Fill material utilized will either be existing soil and rock at the site or construction grade aggregate and materials. No deicing is planned for this site. In the event deicing is required, no waste products will be used for this purpose.

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.

Employees will be instructed to identify fluids present in the site containment area. If the fluids have not been contaminated with workover fluid and do not have an oil sheen present, the fluid may be discharged and diverted to E&S controls to minimize sedimentation.

If the fluids present in the site containment area have been contaminated with workover fluid or have an oil sheen present, they will be gathered and hauled to offsite disposal at a DETI approved facility.

E&S controls are to be monitored and maintained.

State regulations require a copy of the permit associated with this GPP to be on site for the duration of the planned well work. This Groundwater Protection Plan will be included in that permit package and may be used as guidance for preventing groundwater contamination.

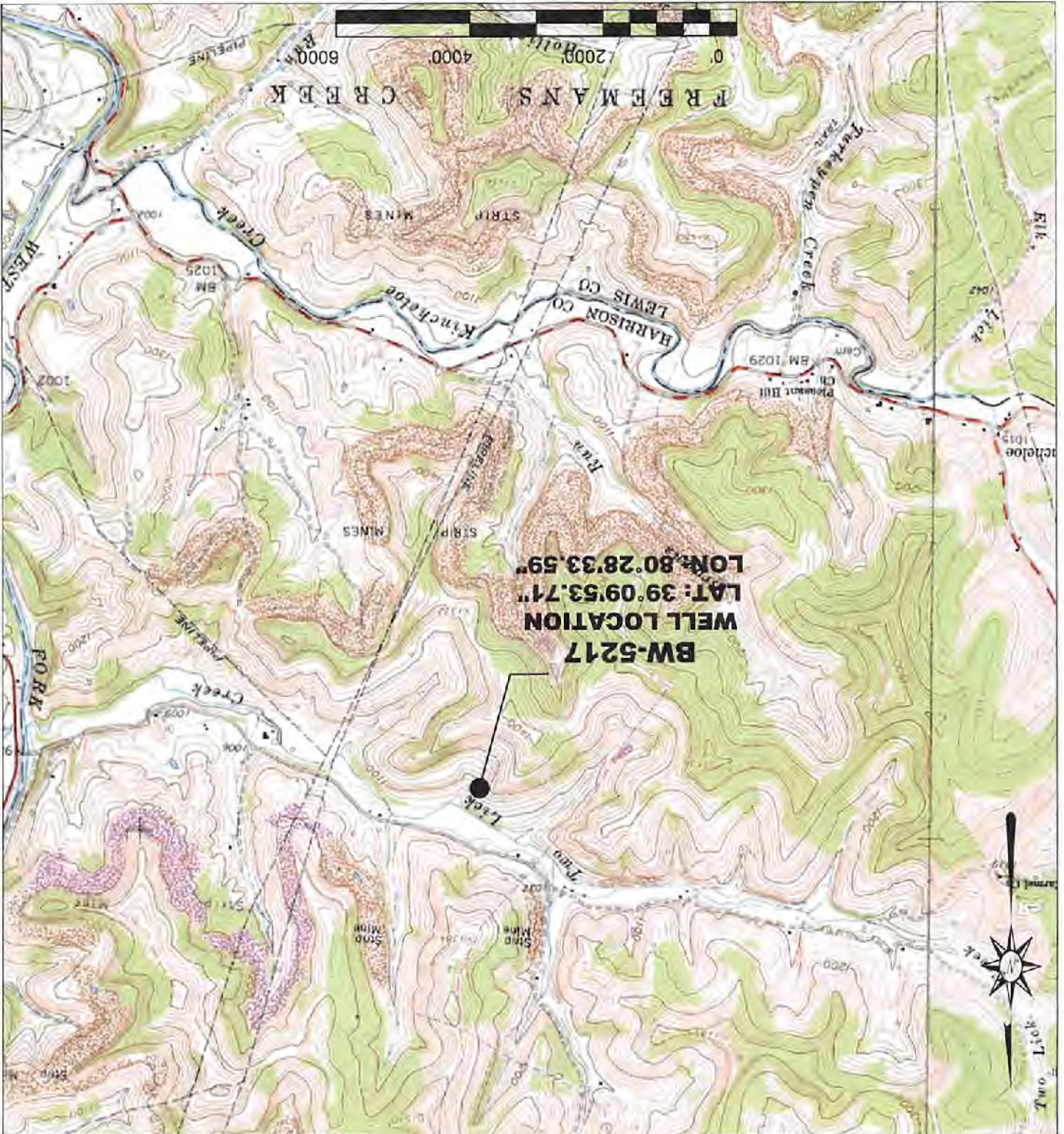
8. Provide provisions and frequency for inspections of all GPP elements and equipment.

E&S controls will be inspected on a weekly basis, at a minimum.

Site containment will be monitored as part of the daily well work activities. Site containment will be removed and hauled offsite to an approved DETI facility, at the completion of the project.

Signature: S. Dubowitz

Date: 5/6/2019



LOCATION MAP
 BW-5217
 Dominion Energy
 July 09, 2019
 West Milford 7.5' Quad
 Quad Section 7
 Scale: 1" = 2000'

POLESTAR
 RECEIVED
 Office of Oil and Gas
 ENGINEERING, SURVEYING, ENVIRONMENTAL
 PHONE: (724) 550-4190 FAX: (724) 550-4128
 400 DIXON BLVD.
 UNIONTOWN, PA 15401

JUL 12 2019

WV Department of
 Environmental Protection

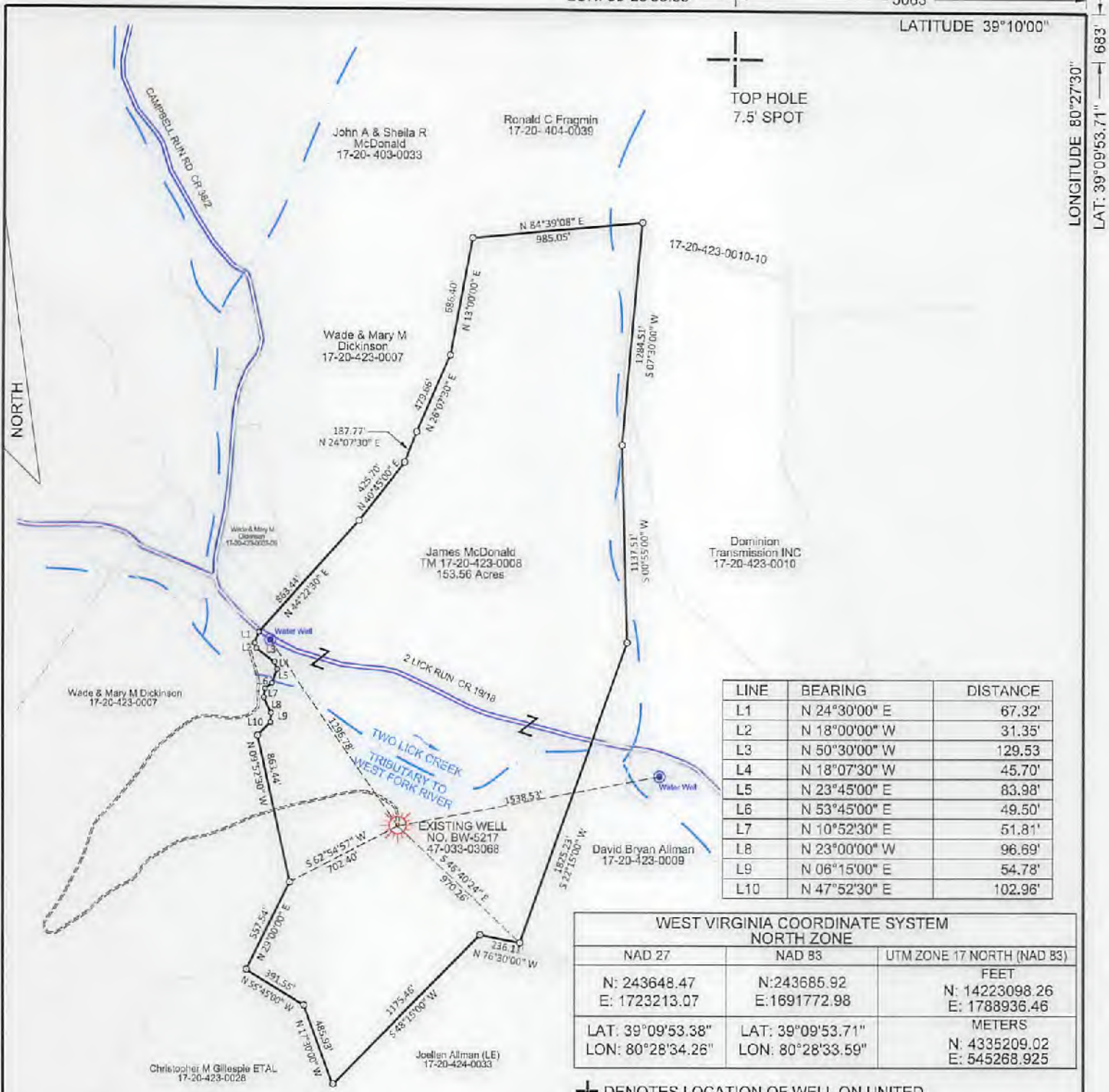
47-033-03068W

LON: 80°28'33.59"

5063

LATITUDE 39°10'00"

LONGITUDE 80°27'30"
LAT: 39°09'53.71" 683



LINE	BEARING	DISTANCE
L1	N 24°30'00" E	67.32'
L2	N 18°00'00" W	31.35'
L3	N 50°30'00" W	129.53'
L4	N 18°07'30" W	45.70'
L5	N 23°45'00" E	83.98'
L6	N 53°45'00" E	49.50'
L7	N 10°52'30" E	51.81'
L8	N 23°00'00" W	96.69'
L9	N 06°15'00" E	54.78'
L10	N 47°52'30" E	102.96'

WEST VIRGINIA COORDINATE SYSTEM NORTH ZONE		
NAD 27	NAD 83	UTM ZONE 17 NORTH (NAD 83)
N: 243648.47 E: 1723213.07	N: 243685.92 E: 1691772.98	FEET N: 14223098.26 E: 1788936.46
LAT: 39°09'53.38" LON: 80°28'34.26"	LAT: 39°09'53.71" LON: 80°28'33.59"	METERS N: 4335209.02 E: 545268.925

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NUMBER: WW-

DRAWING NUMBER: BW-5217 PLAT.DWG

SCALE: 1"=800'

MINIMUM DEGREE OF ACCURACY: SUBMETER

PROVEN SOURCE OF ELEVATION: DGPS (SUBMETER MAPPING GRADE)

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.

Jeffrey N. Waggett

JEFFREY N. WAGGETT, WV P.E. #22316
POLESTAR ENGINEERING
400 DIXON BLVD., UNIONTOWN, PA 15401
PHONE: 724-550-4190



DATE: JULY 15, 2019

OPERATORS WELL NO.: BW-5217 W

API WELL NO.: 47 033 03068
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS": PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION: 1135.14 FT WATERSHED: MIDDLE WEST FORK RIVER DISTRICT: UNION COUNTY: HARRISON QUADRANGLE: WEST MILFORD

SURFACE OWNER: JAMES MCDONALD ACREAGE: 153.56

OIL AND GAS ROYALTY OWNER: 0 LEASE ACREAGE: 0

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG

OTHER PHYSICAL CHANGE IN WELL (SPECIFY) CONVERT STORAGE/PRODUCTION WELL TO STORAGE/OBSERVATION WELL

TARGET FORMATION: GANTZ ESTIMATED DEPTH: 1857-1875 FT

WELL OPERATOR: DOMINION ENERGY TRANSMISSION INC. DESIGNATED AGENT: JOHN LOVE

ADDRESS: 925 WHITE OAKS BLVD. ADDRESS: 925 WHITE OAKS BLVD.

BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

HARRISON COUNTY PERMIT 03089

July, 9th 2019

By U.S Mail, Certified Delivery

7018 0680 0000 8051 9056

WV DEP
Office of Oil and Gas
601 57th Street
Charleston, WV 25304
Art: Jeff McLaughlin OOG

RE: Permit BW-8109 (47-033-03089) Rework Application

To the Office of Oil and Gas,

Dominion Energy Transmission, Inc. is submitting the permit application packet for reworking BW-5217 (47-033-03068-R)

The following documents are enclosed:

- Check for rework application (EF0000113488)
- Permit application packet
- Mylar
- Copies of certified mail receipts from landowners
- Topographic map section

The documents enclosed are for your records and review. If you should have any questions or comments related to the rework operations, please contact me by the means of the information listed below.

Sincerely,


J. Daniel Frost

(C): 681-622-1948

(E): john.d.frost@dominionenergy.com

*CE# 314049
Amt \$ 650
Date 6/6/19*

RECEIVED
Office of Oil and Gas

JUL 12 2019

WV Department of
Environmental Protection