



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

Friday, August 23, 2019
WELL WORK PERMIT
Vertical / Re-Work

DOMINION ENERGY TRANSMISSION, INC.
925 WHITE OAKS BOULEVARD

BRIDGEPORT, WV 26330

Re: Permit approval for 3365
47-041-02593-00-00

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: 3365
Farm Name: FAHEY HEIRS
U.S. WELL NUMBER: 47-041-02593-00-00
Vertical Re-Work
Date Issued: 8/23/2019

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.

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 Lewis Freemans Creek Camden
Operator ID County District Quadrangle

2) Operator's Well Number: AW-3365 3) Elevation: 1050

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

5) Proposed Target Formation(s): Gantz Proposed Target Depth: 2055'

6) Proposed Total Depth: 2289' Feet Formation at Proposed Total Depth: Gantz

7) Approximate fresh water strata depths: 250'

8) Approximate salt water depths: 1560'

9) Approximate coal seam depths: 648'-653'

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. WILL RUN NEW STRING OF 3 1/2" CASING
CEMENTED TO SURFACE TO RESTORE ITS CAPABILITY TO INJECT.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft			
Conductor						
Fresh Water	10 3/4"	N/A	N/A		180'	N/A
Coal	8 5/8"	N/A	N/A		1065'	N/A
Intermediate	7"	N/A	N/A		1965	CTS
Production	5 1/2"	K-55	17 #/ft		2071'	CTS
Tubing	3 1/2"	J-55	9.2 #/ft		2055'	135 Cu. Ft. <u>CTS.</u>
Liners						

RECEIVED
Office of Oil and Gas

Packers: Kind: _____
Sizes: _____
Depths Set _____

JUL 08 2019

AW-3365 Well Work Plan

*Prior to permit work a cement bond log will be run for data gathering purposes.

- Address location as necessary and install site containment.
- MI service rig and ancillary equipment.
- NU well control stack.
- Based on results of the bond log the following sequences may occur
 - A) Attempt to squeeze the 5.5" casing
 - B) and/or cut a window in the 5.5" casing as near the bottom of the 5.5" as practical.
 - C) No remediation of 5.5" casing will be necessary and the well work will proceed as follows.

Process with ★

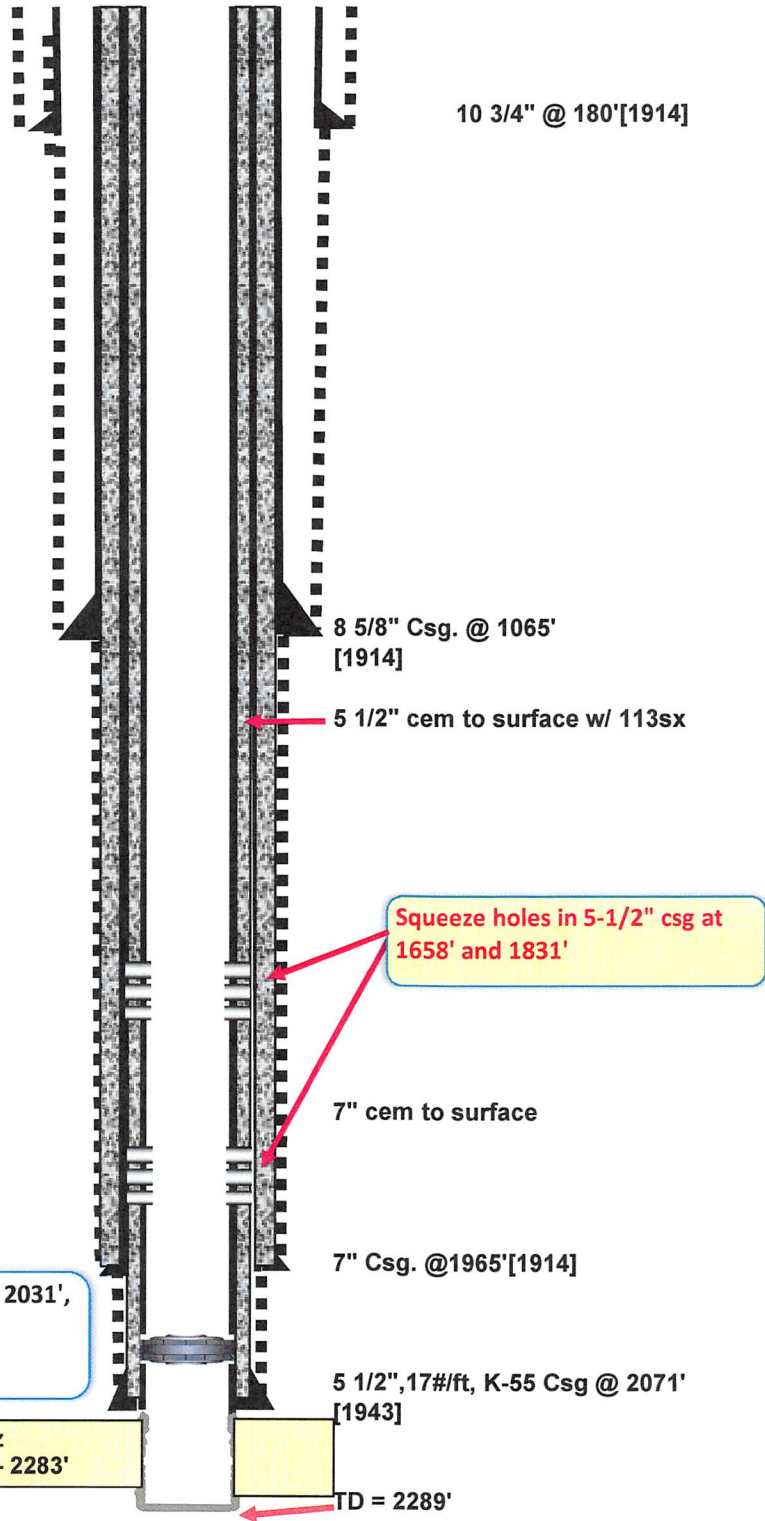
- Pick up roller cone. Clean hole and condition mud.
- Drill out K1 cement plug.
- Attempt to clean out to original TD of 2289'.
- Run 3.5" to 2,055'. *WILL CEMENT TO SURFACE*
- Design to cement with class A blends. WOC a minimum of 8 hours.
- RD MO service rig and ancillary equipment.
- Bond log the 3.5" tubing.
- MI RU coil tubing and ancillary equipment.
- Drill out the float equipment.
- Clean out well to TD.
- Acidize across the storage horizon.
- Flow well clean.
- RD MO coil equipment.
- Surveillance log 3.5" tubing.
- Reclaim location.
- File necessary forms with regulatory agencies. Obtain permit release with WVDEP office of oil and gas.

RECEIVED
Office of Oil and Gas

JUL 08 2019

WV Department of
Environmental Protection

Fink Storage
 AW-3365 [I/W]
 Permit #47-041-02593
 Elev = 1050'[GL]



K1 cement retainer set at 2031',
 6/17/2014

Gantz
 2257'- 2283'

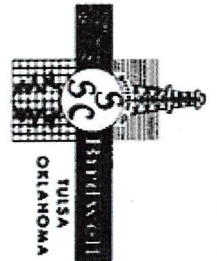
TD = 2289'

RECEIVED
 Office of Oil and Gas
 JUL 08 2019
 WV Department of
 Environmental Protection

Well Name & Number:		AW-3365		Lease	Fahey Heirs		
County or Parish:		Lewis	State/Prov.	WV	Country:	USA	
Perforations: (MD)					(TVD)	2289'	
Angle/Perfs	Angle @KOP and Depth					KOP TVD	
BHP:	BHT:	Completion Fluid:					
FWHP:	FBHP:	FWHT:	FBHT:	Other:			
Date Completed:	05/05/14				RKB:		
Prepared By:	Mark Jenkins		Last Revision Date:	07/15/14			

MYUNG

BEST COPY available



BIRDWELL Nuclear Log

COMPANY THE HOPE NATURAL GAS CO.
 WELL # 3365 FAHEY
 FIELD FREEMANS CREEK DIST.
 COUNTY LEWIS STATE WVA
 LOCATION: FINN STORAGE
 OTHER SERVICES: CALIBER

PERMANENT DATUM TO 5 3/4" CHANGING, ELEV. _____
 LOG MEASURED FROM " _____ ft. above perm. datum
 DRILLING MEASURED FROM " _____

DATE	4-26-62	4-26-62
RUN NO.	ONE	ONE
TYPE LOG	GAMMA	C.S.G.
DEPTH - DRILLER	2080	2090
DEPTH - LOGGER	2089	2089
BOTTOM LOGGED INTERVAL	2089	2087
TOP LOGGED INTERVAL	0	0
TYPE FLUID IN HOLE	WATER	WATER
SALINITY PPM CL.	NA	NA
DENSITY LB./GAL.	NA	NA
LEVEL	0	0
MAX. REC. TEMP. - DEG. F	NA	NA
OPERATING RIG TIME	3 HR	NA
RECORDED BY	WALTER BEYERS	WALTER BEYERS
WITNESSED BY	WALTER BEYERS	WALTER BEYERS
LOCATION	STA 4 & 34 GREEN LAKE	WVA
BORE HOLE RECORD	5" BIT FROM 2051 TO 212	
CASINO RECORD	10" BIT FROM 170 TO 180	
	8 3/4" BIT FROM 190 TO 196.5	
	5 3/4" BIT FROM 2051 TO 2057	

FIELD PRINT

EQUIPMENT DATA

GAMMA RAY			NEUTRON		
RUN NO.	ONE		RUN NO.		
TOOL MODEL NO.	440-A		LOG TYPE		
DIAMETER	3 3/8		TOOL MODEL NO.		
DETECT. MODEL NO.	M670		DIAMETER		
TYPE	GM		DETECT. MODEL NO.		
LENGTH	12"		TYPE		
DIST. TO N. SOURCE	-		LENGTH		
SV CHECKS	2250 + 2280		SOURCE MODEL NO.		
GENERAL			SERIAL NO.		
HOIST TRUCK NO.	253		SPACING		
INST. TRUCK NO.	253		TYPE		
TOOL SERIAL NO.	440-109		STRENGTH-N/SEC.		

LOGGING DATA

GENERAL		GAMMA RAY			NEUTRON					
RUN NO.	DEPTHS	SPEED	T.C.	SENS.	ZERO	API G.R. UNITS	T.C.	SENS.	ZERO	API N. UNITS
	FROM TO	FT/MIN	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.
1	0 2287	25	2.5	60R/HR	L-R	17				

REFERENCE LITERATURE:

REMARKS: GAMMA RAY RUN FOR CORRELATION
 C.G.L RUN TO FIND BOTTOM OF THE PIPE

47-041-02593



Select County: (041) Lewis

Enter Permit #: 02593

Select datatypes: (Check All)

Location Production Plugging

Owner/Completion Stratigraphy Sample

Pay/Show/Water Logs Bim Hole Loc

Get Data Reset

- [Table Descriptions](#)
- [County Code Translations](#)
- [Permit Numbering Series](#)
- [Lease Notes](#)
- [Contact Information](#)
- [Disclaimer](#)
- [WVGES Main](#)
- [Pipeline-Page: New](#)

Geological & Economic Survey:

Well: County = 41 Permit = 02593

Report Time: Wednesday, July 31, 2019 1:43:15 PM

Location Information: [View Map](#)

API 4704102593 LEAS 2593 FARM DISTRICT QUAD 75 QUAD 15 LAT BD 10N 10W E UTM

There is no Bottom Hole Location data for this well

Owner Information:

API 4704102593 CMP_DT SUFFIX STATUS SURFACE_OWNER WELL_NUM CO_NUM LEASE LEASE_NUM MINERAL_OWN OPERATOR_AT COMPLETION PROP_YD PROP_TRGT_FM TFM_EST_PR

Completion Information:

API 4704102593 CMP_DT SUFFIX DT ELEV DATUM FIELD DEEPEST_FM DEEPEST_FMT INITIAL_CLASS FINAL_CLASS TYPE RIG CMP_MTHD TVD TMD NEW_FTG KOD G_BEF G_AFT O_BEF O_AFT NGL_BEF NGL_AFT P_BEF TL_BEF P_AFT TL_AFT BH_P_BEF BH_P_AFT Q_MSRD_B

There is no Pay data for this well

There is no Production Gas data for this well

There is no Production Oil data for this well ** some operators may have reported NGL under Oil

There is no Production NGL data for this well ** some operators may have reported NGL under Oil

There is no Production Water data for this well

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV DATUM
4704102593	Original Loc	Allegheny ss (undf)	CSM: Drill Hole	878	Reasonable	87	Reasonable	1050 Ground Level
4704102593	Original Loc	Allegheny ss (undf)	CSM: Drill Hole	994	Reasonable	93	Reasonable	1050 Ground Level
4704102593	Original Loc	Allegheny ss (undf)	CSM: Drill Hole	1118	Reasonable	7	Reasonable	1050 Ground Level
4704102593	Original Loc	Folsomville SS (undf)	CSM: Drill Hole	1270	Reasonable	67	Reasonable	1050 Ground Level

Wellbore (E-Log) Information:

API 4704102593 LOG_TOP LOG_BOT DEEPEST_FML LOGS_AVAIL_SCAN DIGITIZED GR_TOP GR_BOT D_TOP D_BOT N_TOP N_BOT T_TOP T_BOT S_TOP S_BOT O_TOP O_BOT INCH2 INCHS REDUCED KOP LOGGMD ELEV_NB ELEV_GL ELEV_DF LOG_MSRD_TFROM

Comment: *logs: caliper, ccl: on #35 no permit number

Downloadable Log Images: **We advise you to save the log image file to your PC for viewing.** To do so, right-click the .tif image of interest and select the save option. Then you can direct the file to a location of your choice. Please note these images vary in size and some may take several minutes to download, especially if using a 56k or slower dialup connection.

Quick Reference Guide for Log File Names: For more info about WVGES scanned logs click [here](#)

Geologic log types:

- d density (includes bulk density, compensated density, density, density porosity, grain density, matrix density, etc.)
 - e photoacoustic absorption (PA or PA₂, etc.)
 - f induction (includes dual induction, medium induction, deep induction, etc.)
 - l laterolog
 - m dipmeter
 - n neutron (includes neutron porosity, sidewall neutron--SWN, etc.)
 - o other*
 - s sonic or velocity
 - t temperature (includes borehole temperature, BHT, differential temperature, etc.)
 - z spontaneous potential or potential
- mechanical log types:
- b cement bond
 - c caliper
 - o other*
 - p perforation depth control or perforate

*other logs may include, but are not limited to, such curves as audio, bit size, CCL--casing collar locator, continuous meter, directional survey, gas detector, guard, NCTL--Nuclear Cement Top Locator, radioactive tracer, tension

There is no Plugging data for this well

There is no Sample data for this well

WW-2A
(Rev. 6-14)

1). Date: 5/29/2019
2.) Operator's Well Number AW-3365
State County Permit
3.) API Well No.: 47- Lewis - 02593

**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 John T. Fahev. et al Name _____
Address 3006 Fallen Oak RD Address _____
Morgantown, WV 26508
(b) Name _____ (b) Coal Owner(s) with Declaration
Address _____ Name TJ Fahev Heirs
(c) Name _____ Address C/O John T. Fahev
Address _____ 3006 Fallen Oak Rd
(c) Name _____ Name Morgantown, WV 26508
Address _____ Address _____
6) Inspector Barry Stollings (c) Coal Lessee with Declaration
Address 28 Conifer Drive Name _____
Bridgeport, WV 26330 Address _____
Telephone 304-552-4194

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

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

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

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

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

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

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

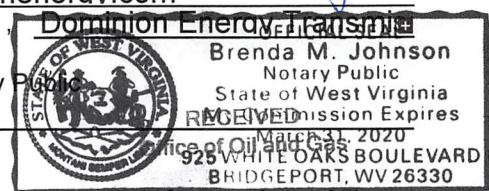
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Dominion Energy Transmission, Inc
By: John M. Love
Its: Designated Agent
Address: 925 White Oaks Blvd
Bridgeport, WV 26330
Telephone: 304-203-5830
Email: Jeffrey.L.Seavv@dominionenergy.com

Subscribed and sworn before me this 31st day of May, 2019

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

Notary Public



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

WW-2A1
(Rev. 1/11)

Operator's Well Number AW-3365

**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
Thomas Fahey, et al	Hope Natural Gas Company	1/16	167/152
Hope Natural Gas Company changed its name to Consolidated Gas Supply Corporation assigned its leasehold interest to Consolidated Gas Transmission Corporation	to Consolidated Gas Supply Corporation interest to Consolidated Gas Transmission Corporation	On January 1, 1984	Consolidated Gas January 1, 1998
Consolidated Gas Transmission Corporation Resources, Inc., CNG Transmission Dominion Transmission, Inc., changed	became CNG Transmission Corporation, As a Corporation changed its name to Dominion its name to Dominion Energy Transmission	result of a merger	with Dominion. on May, 2000. On May 12, 2017
		Transmission, Inc.,	Transmission, Inc.,

**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:

Dominion Energy Transmission, Inc
John M. Love
Director, Storage and Land Services

JUL 08 2019

WV Department of
Environmental Protection

AW-3365 WELL

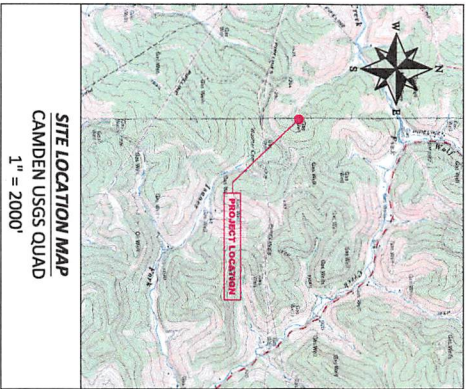
EROSION & SEDIMENTATION CONTROL PLAN

FREEMANS CREEK DISTRICT, LEWIS COUNTY, WEST VIRGINIA

DOMINION ENERGY TRANSMISSION, INC.

PREPARED FOR:
 925 WHITE OAKS BLVD.
 BRIDGEPORT, WV 26330

CONSULTANTS		
SIGNATURES		
DATE		



TS-1	TITLE SHEET
ES-1	EROSION & SEDIMENTATION CONTROL PLAN
DS-1	EROSION & SEDIMENTATION CONTROL NOTES & DETAILS

ABBREVIATIONS	LEGEND	
BSPP - BEST MANAGEMENT PRACTICES	PROPOSED TIE LINE	EXISTING GAS WELL
CS - CUT FILL ROCK	PROPOSED 12" CONDUIT	GRAVEL
ES - EROSION & SEDIMENTATION	PROPOSED 12" CONDUIT	PROPOSED CONCRETE BLOCK 12"x12"
EX - EXISTING	PROPOSED 12" CONDUIT	PROPOSED TIE LINE
LAT - LATITUDE	PROPOSED TIE OF CUT FILL WITH	PROPOSED 12" CONDUIT TIE IN SOIL
LONG - LONGITUDE	PROPOSED TIE OF SLOPE FILL WITH	PROPOSED 12" CONDUIT TIE IN ROCK
QUAD - QUADRANGLE	PROPOSED TIE OF DISTURBANCE	PROPOSED 12" CONDUIT TIE IN ROCK
PROP - PROPOSED	STEELMAN	SUPPLY SILENT FENCE
REC - ROCK CONSTRUCTION ENTRANCE	SOIL BOUNDARY	
	EXISTING GAS LINE	
	EXISTING OVERHEAD ELECTRICAL LINE	
	EXISTING SANITARY SEWER MAIN/POLE	
	EXISTING GAS METER	

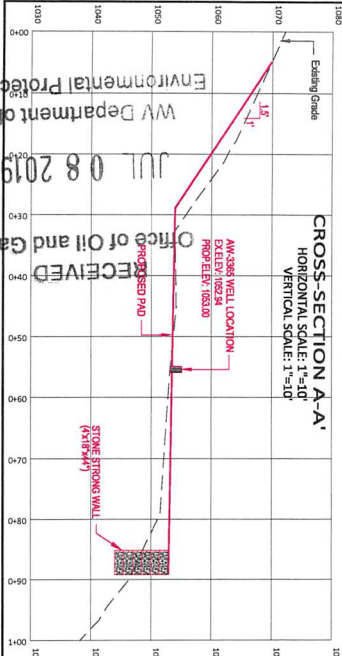
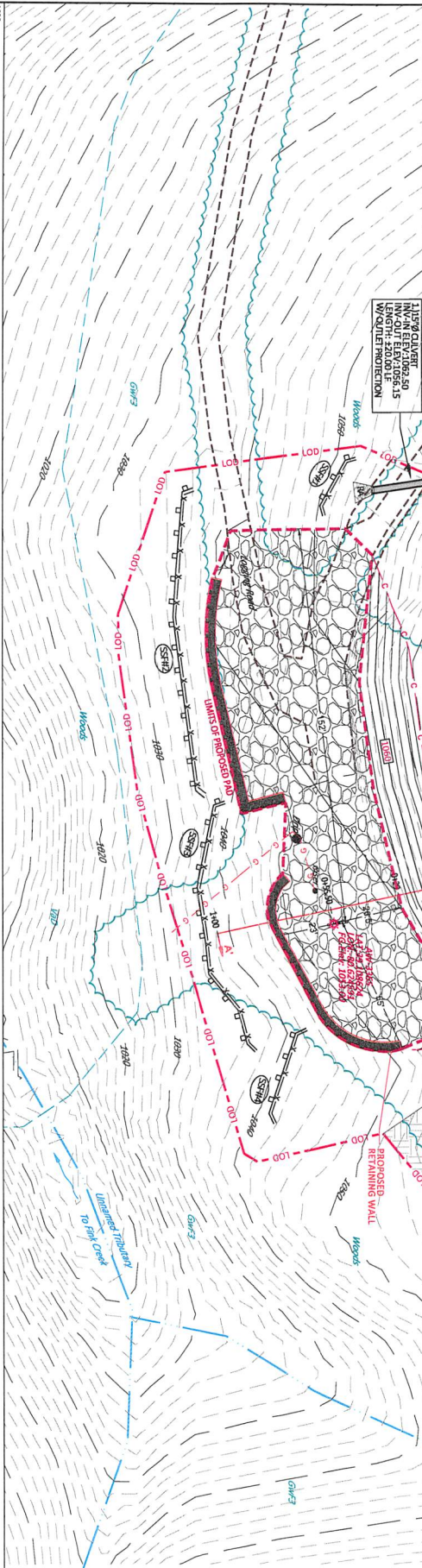
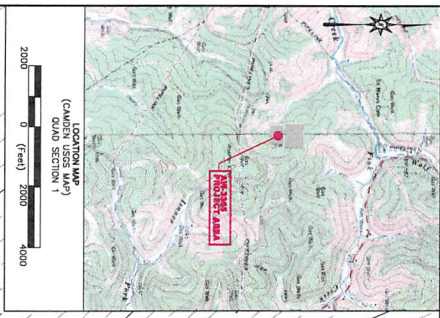
CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES
 YOU WORK NOTICED FOR CONSTRUCTION PHASE
 AND YOU MUST NOTIFY WEST VIRGINIA
 DATA VIRGINIA ONE CALL SYSTEM AT
 811-1

2019
 Environmental Protection
 Oil and Gas

THIS DRAWING IS FOR THE EROSION & SEDIMENTATION CONTROL PLAN/PERMIT ONLY.

TS-1	<p>AW-3365 WELL P&A FREEMANS CREEK DISTRICT LEWIS COUNTY, WEST VIRGINIA</p> <p>PREPARED FOR: DOMINION ENERGY TRANSMISSION, INC.</p>	<p>REVISION RECORD</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">NO.</th> <th style="width: 10%;">DATE</th> <th style="width: 80%;">REVISION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	REVISION													<p>POLESTAR ENGINEERING, SURVEYING, ENVIRONMENTAL PHONE: (724) 550-4190 FAX: (724) 550-4128 400 DIXON BLVD. UNIONTOWN, PA 15401</p>
NO.	DATE	REVISION																
TITLE SHEET	<p>PROJECT NUMBER: DOM-AW3365 PROJECT DATE: 6-28-2019 DRAWING BY: JMC CHECKED BY: JAM</p>																	



CROSS-SECTION A-A'
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'

GENERAL NOTES:

- 1. Temporary and existing access roads must be restored to as close to pre-construction conditions as possible.
- 2. For areas that were not used or disturbed, the contractor is not required to install Erosion & Sedimentation Control (ESC) Best Management Practices (BMP) or perform site restoration.
- 3. ESC diffing from those shown on the plan may be needed by the contractor based on construction and/or tree clearing techniques utilized.
- 4. Soil information obtained from Watson Survey, MNCIS, accessed 03/06/2018.
- 5. This property is in Zone X of the Flood Insurance Rate Map, Community Panel No. 5464100125E and 5464100120E, which has an effective date of April 13, 2013 and is NOT in a Special Flood Hazard Area. Flood insurance is not permitted to decrease in amount as a result of the construction of a flood protection structure. For more information, refer to the Federal Emergency Management Agency.

Perimeter Control #	Perimeter Control Schedule	
	Slope Percent	Slope Ratio (H:V)
SS41	28	1:1
SS42	28	1:1
SS43	28	1:1
SS44	28	1:1
SS45	28	1:1
SS46	28	1:1
SS47	28	1:1
SS48	28	1:1
SS49	28	1:1
SS50	28	1:1
SS51	28	1:1
SS52	28	1:1

CALL BEFORE YOU DIG!

A FEDERAL NOTICE FROM COMMERCIAL PAPER

FOR THE RECORD TO BE KEPT IN A PERMANENT FILE

8-1-1

NO. 1-800-4-A-DIG

THIS DRAWING IS FOR THE EROSION & SEDIMENTATION CONTROL PLAN/PERMIT ONLY.

PROJECT NUMBER: DOM-04355 PROJECT DATE: 02/20/15 DRAWN BY: DEJ CHECKED BY: JAA ES-1	<p>AW-3365 WELL P&A FREEMAN'S CREEK DISTRICT LEWIS COUNTY, WEST VIRGINIA</p> <p>PREPARED FOR: DOMINION ENERGY TRANSMISSION, INC.</p>	<table border="1"> <thead> <tr> <th>DATE</th> <th>REVISION RECORD</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	DATE	REVISION RECORD					<p>POLESTAR ENGINEERING, SURVEYING, ENVIRONMENTAL PHONE: (724) 550-4190 FAX: (724) 550-4128 400 DIXON BLVD. UNIONTOWN, PA 15401</p>
DATE	REVISION RECORD								

TABLE 11.4 - Recommended Seed Mixtures

Table with columns: Mixture Number, Species, Seeding Rate - Pure Live Seed (lb/acre), and Seeding Rate - Total Seed (lb/acre). Lists various grass and legume species like Annual Ryegrass, Perennial Ryegrass, etc.

1. The seed mixture shall be a mixture of pure live seed percentage germination divided by 100. For example, to insure that 5% of the seed is pure live seed, the seed mixture shall be 5% of the seed mixture divided by 100, or 0.05 lb/acre of pure live seed.

TABLE 11.3 - Recommended Seed Mixture for Stabilizing Disturbed Areas

Table with columns: Site Condition, Seed Mixture, and Seeding Rate (lb/acre). Lists conditions like Open and Bare (Forb Only), Weeds (Forb Only), etc.

TABLE 11.1 - Soil Amendment Requirements for the Erosion Control Plan

Table with columns: Soil Amendment, Application Rate, and Notes. Lists amendments like Compost, Fertilizer, etc.

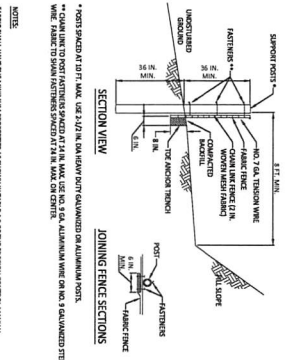
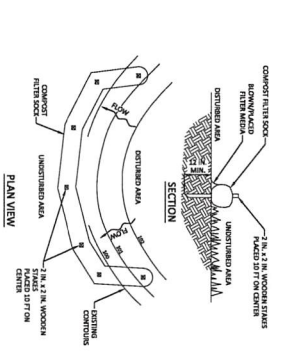


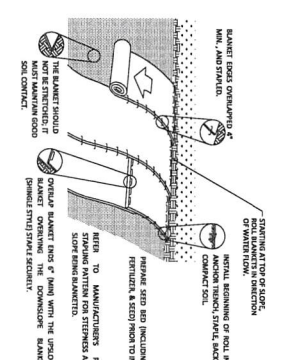
FIGURE 4.2 - MAXIMUM PERMISSIBLE SLOPE (EVEN THROUGH COMPOSITE FILTER SOCKS)

NOTE: 6" diameter socks should only be used to control erosion on individual house lots. The maximum permissible slope (EVEN THROUGH COMPOSITE FILTER SOCKS) is shown in the graph below.



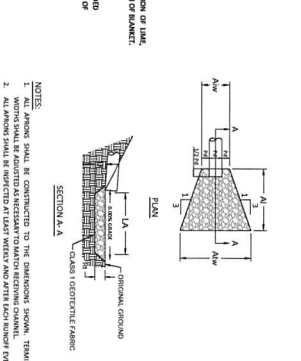
NOTE: THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE.

FIGURE 4.1 - STANDARD CONSTRUCTION DETAIL



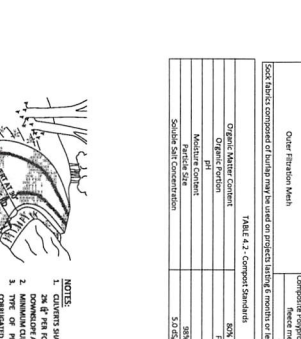
NOTE: THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE.

FIGURE 4.3 - STANDARD CONSTRUCTION DETAIL



NOTE: THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE.

FIGURE 4.4 - STANDARD CONSTRUCTION DETAIL



NOTE: THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE.

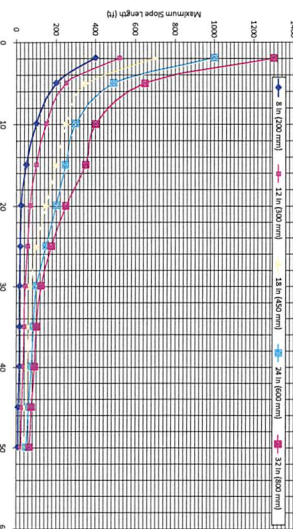
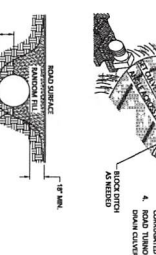


TABLE 4.1 - Composite Sock Fabric Minimum Specifications

Table with columns: Material Type, Weight, and Specifications. Lists materials like 3 mil HPE, 5 mil HPE, etc.

NOTE: The sock fabric shall be composed of 100% polypropylene or 100% polyethylene. The sock fabric shall be composed of 100% polypropylene or 100% polyethylene.



NOTE: THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE. THE SOCK SHALL BE PLACED AT THE TOP OF THE SLOPE.

THIS DRAWING IS FOR THE EROSION & SEDIMENTATION CONTROL PLAN/PERMIT ONLY.

Project information block including: PROJECT NUMBER: DOM-AW335, PROJECT DATE: 6-29-2019, PROJECT SCALE: NTS, OFFICE: B:JAK, and POLESTAR Engineering, Surveying, Environment logo.

4704102593w

WW-9
(5/16)

API Number 47 - 041 - 02593
Operator's Well No. AW-3365

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) Leading Creek Quadrangle Camden

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 _____)

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.

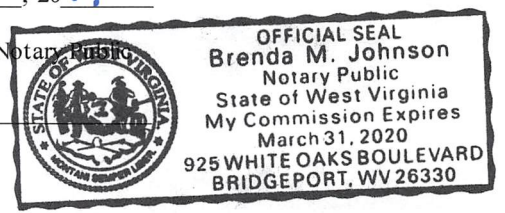
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is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

RECEIVED
Office of Oil and Gas
JUL 08 2019

Subscribed and sworn before me this 31st day of May, 2019

Brenda M. Johnson
My commission expires March 31, 2020



WV Department of Environmental Protection

Proposed Revegetation Treatment: Acres Disturbed .80 Acres 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: Barry Seltzer

Comments: _____

Title: inspector

Date: 5-31-19

Field Reviewed? () Yes () No

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JUL 08 2019

WV Department of
Environmental Protection

July 1, 2019

Coal Database Review

A search was performed for data related to the presence of coal beds and coal mining operations, within the vicinity of well AW-3365 (47-041-02593). This data was gathered from the West Virginia Geologic & Economic Survey and the West Virginia Office of Miner's Health, Safety, and Training. No records of surface or deep mining are recorded, within the vicinity of the aforementioned well.

Drilling records for AW-3365 were reviewed. No coal seams were recorded in the reviewed records.

Well 15456 (47-041-05314) offsets well AW-3365. A review of the drilling records for 15456 was performed, as a means to validate the drilling records for AW-3365. One coal seam was present in 15456, at a depth of 16'. Based on the surface elevation of 15456, this is the Washington Coal. No other coal seams were listed in the drilling records.

Further review indicated 7 economic coal beds are potentially present in north central West Virginia. Although

Washington Coal: Listed at an elevation of $\pm 1180'$. Coal seam is higher in elevation than well AW-3365 (1053' ASL). Coal not present, in relation to well.

Waynesburg A Coal: Not listed in area of well.

Waynesburg Coal: Listed at an elevation of $\pm 1040'$. No record of this coal is indicated in the AW-3365 drilling records.

Uniontown Coal: Listed at an elevation of $\pm 920'$. No record of this coal is indicated in the AW-3365 drilling records.

Sewickley Coal: Listed at an elevation of $\pm 760'$. No record of this coal is indicated in the AW-3365 drilling records.

Redstone Coal: Listed at an elevation of $\pm 700'$. No record of this coal is indicated in the AW-3365 drilling records.

Pittsburgh Coal: Listed at an elevation of $\pm 660'$. No record of this coal is indicated in the AW-3365 drilling records.

Based on the data available and the results of field reviews, no coal related activities are currently being undertaken in the immediate vicinity of the well location and no coal related issues are anticipated to occur during the planned well work. If there are any further questions or concerns related to this coal data evaluation, please do not hesitate to contact me.

Sincerely,



Jason E. Bach, PG

304.669.4850

RECEIVED
Office of Oil and Gas

JUL 08 2019

WV Department of
Environmental Protection

POLESTAR
 ENGINEERING, SURVEYING, ENVIRONMENTAL
 PHONE: (724) 550-4190 FAX: (724) 550-4128
 400 DIXON BLVD.
 UNIONTOWN, PA 15401

LOCATION MAP

AW-3365

Dominion Energy

June 28, 2019

VADIS 7.5' Quad

Quad Section 3

Scale: 1" = 2000'



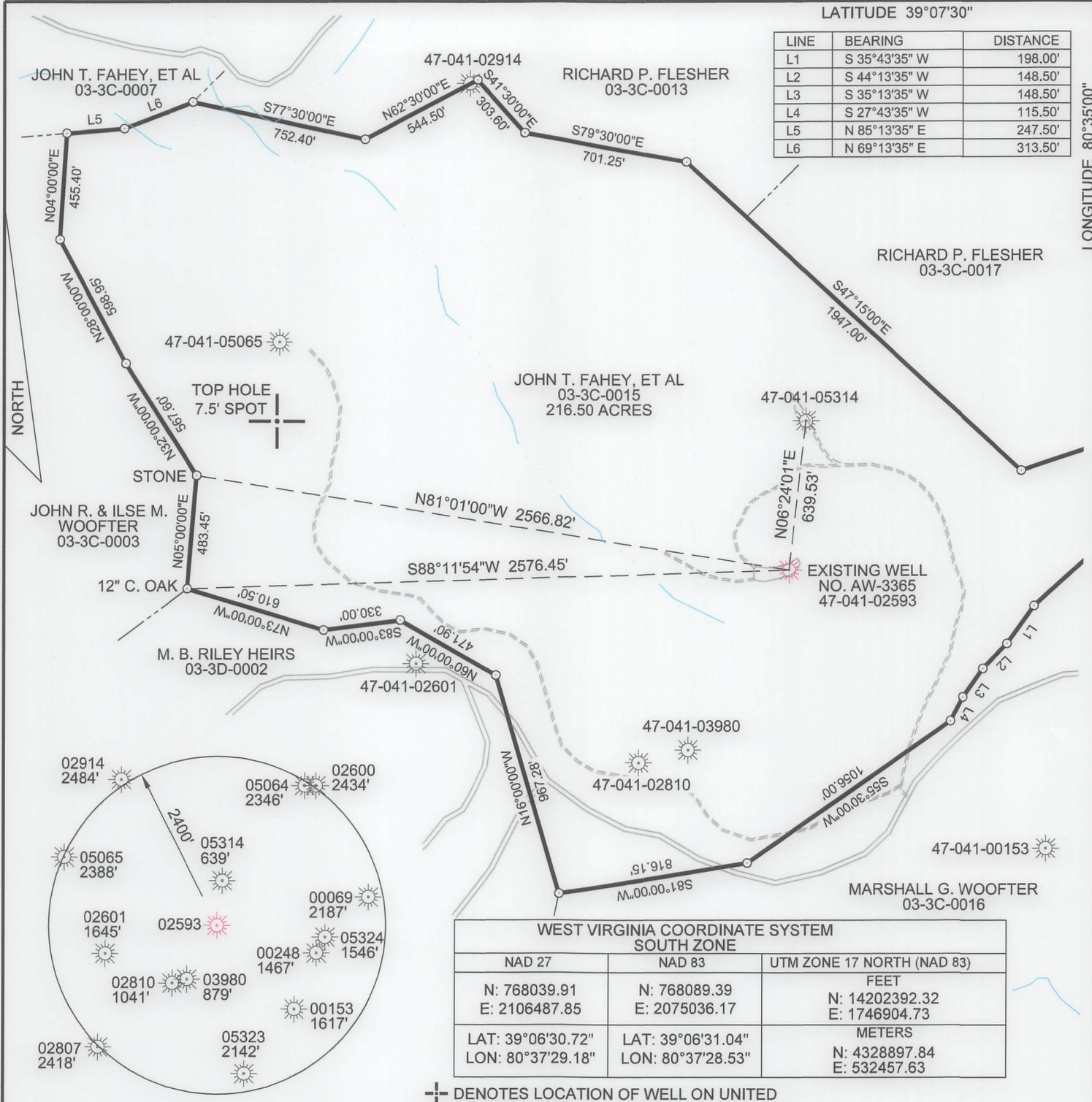
LONG. 80°37'28.5"

11708'

LATITUDE 39°07'30"

LONGITUDE 80°35'00"
5965'
LAT. 39°06'31.0"

LINE	BEARING	DISTANCE
L1	S 35°43'35" W	198.00'
L2	S 44°13'35" W	148.50'
L3	S 35°13'35" W	148.50'
L4	S 27°43'35" W	115.50'
L5	N 85°13'35" E	247.50'
L6	N 69°13'35" E	313.50'



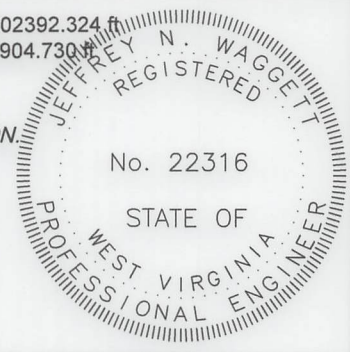
WEST VIRGINIA COORDINATE SYSTEM SOUTH ZONE		
NAD 27	NAD 83	UTM ZONE 17 NORTH (NAD 83)
N: 768039.91 E: 2106487.85	N: 768089.39 E: 2075036.17	FEET N: 14202392.32 E: 1746904.73
LAT: 39°06'30.72" LON: 80°37'29.18"	LAT: 39°06'31.04" LON: 80°37'28.53"	METERS N: 4328897.84 E: 532457.63

⊕ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NUMBER: WV-
DRAWING NUMBER: AW-3365 PLAT.DWG
SCALE: 1"=600'
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: MAY 31, 2019
OPERATORS WELL NO.: AW-3365
API WELL NO.: 47 STATE 041 COUNTY 02593 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: 1053 FT. WATERSHED: LEADING CREEK DISTRICT: FREEMANS CREEK COUNTY: LEWIS QUADRANGLE: CAMDEN

SURFACE OWNER: MARY ANN SHORB, GEORGE C. FAHEY, JR & JOHN T. FAHEY ACREAGE: 216.50

OIL AND GAS ROYALTY OWNER: T.J. FAHEY LEASE ACREAGE: 217.00

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) REWORK WITH NEW PRODUCTION CASING

TARGET FORMATION: GANTZ ESTIMATED DEPTH: 2257 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

LEWIS COUNTY PERMIT 02593