



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 24, 2018
WELL WORK PERMIT
Vertical / Re-Work

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 2345
47-051-00322-00-00

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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is positioned to the right of the printed name and title.

Operator's Well Number: 2345
Farm Name: GRAY, JASON
U.S. WELL NUMBER: 47-051-00322-00-00
Vertical Re-Work
Date Issued: 8/24/2018

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.

WELL LOG SUMMARY

LOCATION	COMPANY The Manufacturers Light & Heat Company				DIV. FIELD 4 Cameron	WELL NO. 2345							
	FARM Jason Gray	ACRES 71	LEASE NO. 2262	DISTRICT Liberty	COUNTY Marshall	STATE W. Va.							
	TOPG. MAP Quadrangle _____ Ft. _____ of _____ of _____ and _____												
CONTRACTOR	TOP CONTRACTOR ADDRESS		Drilled from _____ Ft. to _____ Ft.										
	CONTRACTOR ADDRESS		Type of Rig										
	DRILLING CONTRACTOR ADDRESS		Drilled from _____ Ft. to _____ Ft.										
Type of Rig													
COMMENCED (DATE) Perf. 4/25/62		COMPLETED (DATE) Perf. 4/25/62		COMPLETED TOTAL DEPTH 1861 ft.	DATE PURCHASED	FOR. WELL NO.							
HOLE SIZE	BIT GAUGE (INCHES) FROM-TO (FEET)												
CASING AND TUBING	SIZE (O.D.)	10-3/4"	8-5/8"	5-1/2"									
	WEIGHT/FOOT	32#	24#	17#									
	STEEL GRADE	J	J	J									
(All Measurements less threads)	COUPLING TYPE	Short	Short	Short									
	SETTING DEPTH	219'	605'	1600'									
	LEFT IN HOLE	219'	905'	1600'									
CEMENT	NO. OF SACKS	160	200	400									
	TYPE	I-8	I-8	I-8									
PACKFR	WEIGHT #/GAL.	15.2	15.2	15.2									
	MANUFACTURER	Original	Original	Original									
	TYPE	Record	Record	Record									
WELL STIMULATION	TREATMENT TYPE *	SIZE AND/OR AMOUNT		ZONE TREATED	OPEN FLOW MCF/DAY	PERFORMED BY							
				From to	Before After								
				From to	Before After								
OPEN FLOW TEST	DATE GAUGED	FORMATION	PAY ZONE	TYPE GAUGE (SPECIFY)	PRESSURE (SPECIFY UNITS)	SIZE OPENING-IN.	OPEN FLOW M.C.F./DAY	W.S. BLOWN					
	4 24 62	Big Injun	From 1861' to _____	Pitot Tube	Mercury 2.5"	1 1/2"	3,005M	1/4 Min.					
	4 30 62	Maxton & Big Injun	From 1474' to 1507'	Pitot Tube	Mercury 1.2"	1 1/2"	2,110M	1/2 Hr.					
WELLHEAD PRESSURE TESTS	DATE TAKEN	FORMATION	MINUTE PRESSURE - PSIG					WELLHEAD PRESSURE - PSIG					
			1	3	5	10	20	30	24 HR.	48 HR.	72 HR.	MAX. PRESS.	TIME
	4 25 62	Big Injun	(None Taken)					380					
MISC.	DEPTH MEASUREMENT TAKEN FROM: <input type="checkbox"/> Derrick Floor <input type="checkbox"/> Ground Other (Specify) Top Concrete Block				DIST. TO GROUND	ELEVATION							
	LOGGED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				LOGGED BY (COMPANY) Schlumberger Well Survey Corp.		DATE LOGGED 4 25 62						
REMARKS	* Note: Form PD-17 "Well Fracture Report" to be completed and attached, if applicable												
	Schlumberger Well Survey Corp. perforated Maxton Sand 1474' to 1507', 3-5/8" Cap. and Crack Jets, 1/4 Shots per foot, from 1474' to 1493', 3-1/2" steel carrier jets, 1493 to 1507', 1/4 Shots per foot.												
	This well reconditioned for Storage on W.O. 1751-L-1339-4, no changes made in the material installed on this order.												
Plug Down Pressure						Cement Return							
10"		8"		5"		10"		8"		5"			
100#		650#		750#		Yes		Yes		Yes			

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Attach additional sheets and forward to Production Dept. Pittsburgh General Office

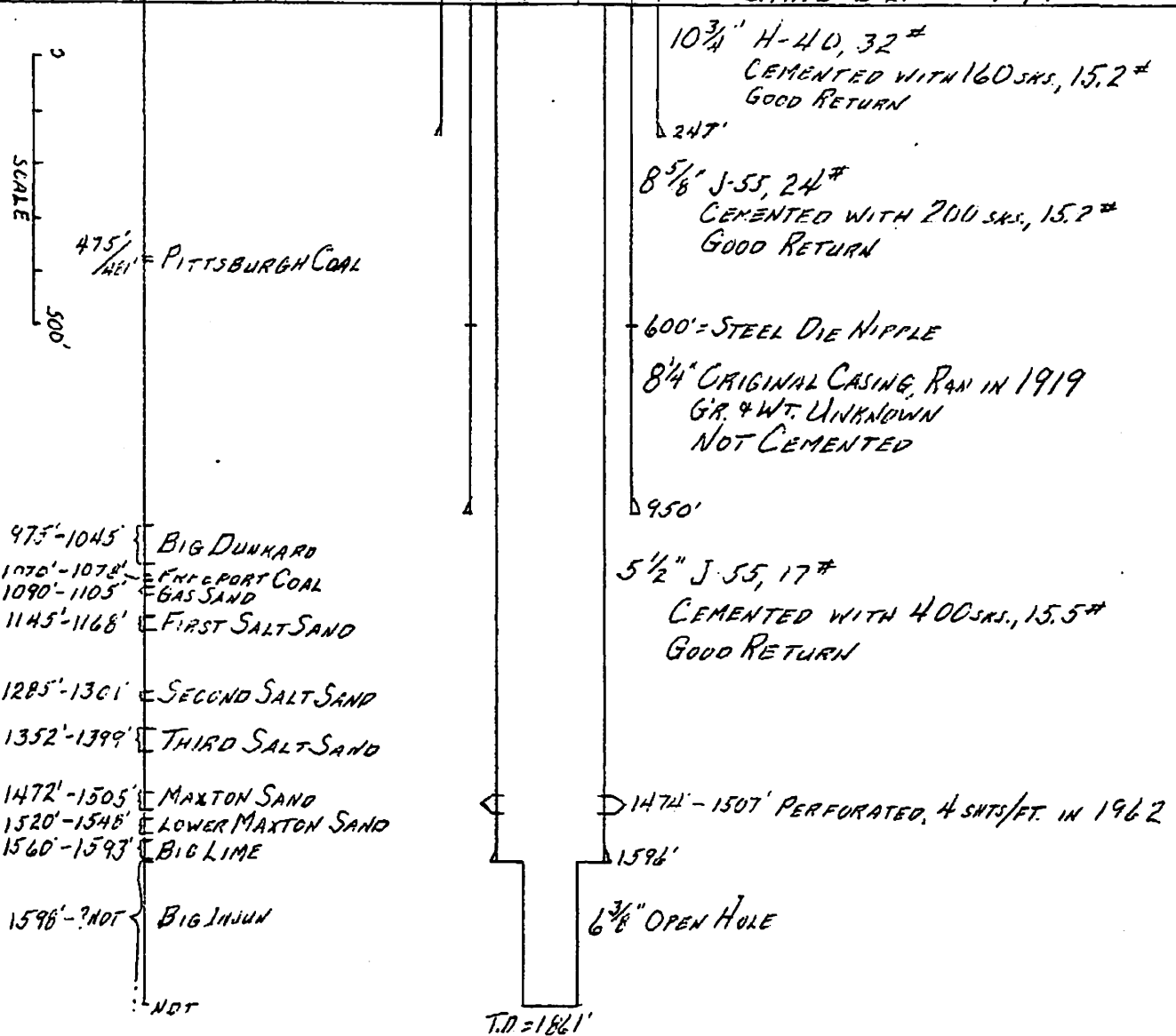
Verified by Charles T. [Signature]
DIVISION ENGINEER

Approved by [Signature]
DIVISION SUPERINTENDENT

VICTORY B STORAGE FIELD WELL 2345 MARS-322-D

WELL STATUS: ACTIVE

GRND. ELEV. = 799'



DRILLED DEEPER AND RECONDITIONED FOR STORAGE IN 1958.

MAXTON SAND PERFORATED 1474'-1507' IN 1962

STORAGE FORMATIONS: MAXTON AND BIG INJUN SANDS

CHN FLOW: 1,830 McFD DATE: 3-15-67

SEE OTHER SIDE FOR LOGGING HISTORY

DRAWN BY: DR DATE: 1985

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08/24/2018

Company

2345

Division Cameron

248 Fourth Ave., Pittsburgh, Pa.

Record of Well No. 2345 on

J. M. E. Gray

Farm

Acres

Cameron Field

Field

Liberty

Township

Marshall County

St. J.

State

Rig Commenced

Nov. 15

1918

Completed

Nov. 25

1918

Drilling Commenced

Dec. 28

1917

Completed

Jan. 27

1917

Cost per foot 7.22

Contractor

237

Address

Liberty

Drillers' Names

BOILER			ENGINE			RIG			
H. P.	No.	Name of Maker	H. P.	No.	Name of Maker	New	Old	Height	Name of Builder
						yes		82	Beaboute

CONDUCTOR AND CASING USED IN DRILLING										
Conductor	13 inch	10 inch	8 1/4 inch	6 3/4 inch	6 1/4 inch	5 1/2 inch	5 ft inch	5 inch	4 inch	
15		230	9	7						

CONDUCTOR AND CASING LEFT IN WELL										
Conductor	13 inch	10 inch	8 1/4 inch	6 3/4 inch	6 1/4 inch	5 1/2 inch	5 ft inch	5 inch	4 inch	3 inch
16										

OIL WELL					GAS WELL					
When Drilled	Size of Torpedo	1st Day's Production	Tubing	Grade	Time	Size of Packer	Depth Set	Packed with	1st Minute Pressure	Back Pressure

FORMATION	Top	Bottom	Thickness	REMARKS
Lime & shale to	0	23	23	
Lime & shale to	23	27	4	
Lime & shale to	27	30	3	
blue to shale	30	31	1	
Lime & shale to	31	32	1	
shale white hard	32	33	1	
Lime & shale to	33	37	4	
shale white soft	37	38	1	
shale white soft	38	39	1	
shale white soft	39	40	1	
shale white soft	40	41	1	
shale black soft	41	42	1	
shale white hard	42	43	1	
shale white soft	43	44	1	
shale white soft	44	45	1	
shale white soft	45	46	1	
shale white soft	46	47	1	
shale white soft	47	48	1	
shale white soft	48	49	1	
shale white soft	49	50	1	
shale white soft	50	51	1	
shale white soft	51	52	1	
shale white soft	52	53	1	
shale white soft	53	54	1	
shale white soft	54	55	1	
shale white soft	55	56	1	
shale white soft	56	57	1	
shale white soft	57	58	1	
shale white soft	58	59	1	
shale white soft	59	60	1	
shale white soft	60	61	1	
shale white soft	61	62	1	
shale white soft	62	63	1	
shale white soft	63	64	1	
shale white soft	64	65	1	
shale white soft	65	66	1	
shale white soft	66	67	1	
shale white soft	67	68	1	
shale white soft	68	69	1	
shale white soft	69	70	1	
shale white soft	70	71	1	
shale white soft	71	72	1	
shale white soft	72	73	1	
shale white soft	73	74	1	
shale white soft	74	75	1	
shale white soft	75	76	1	
shale white soft	76	77	1	
shale white soft	77	78	1	
shale white soft	78	79	1	
shale white soft	79	80	1	
shale white soft	80	81	1	
shale white soft	81	82	1	
shale white soft	82	83	1	
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shale white soft	88	89	1	
shale white soft	89	90	1	
shale white soft	90	91	1	
shale white soft	91	92	1	
shale white soft	92	93	1	
shale white soft	93	94	1	
shale white soft	94	95	1	
shale white soft	95	96	1	
shale white soft	96	97	1	
shale white soft	97	98	1	
shale white soft	98	99	1	
shale white soft	99	100	1	

Jan. 27 1919 well shut in
 in the 678 casing,
 made with spring gages,
 55 - 100 - 130 - 145 - 160
 open flow test: 26/10 water
 in 678 casing

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Examined above information and measurements and found to be correct by
 Contractor
 Examined and approved by
 Superintendent of Co.
 NOTE: The above blank must be filled out carefully by the Contractor, with a complete and accurate record of the Well and accompany, when presented for payment
 All formations and known sands must be given by their proper name, with steel line measurements, and under the head of "Remarks" must be recorded in what sand and
 at what depth Oil, Gas or Water was found, the quantity of same, the quality of the sand, and thickness of pay.
 Make no memoranda of boiler and engine if owned by contractor.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

47-051-00322W
2345

Quadrangle Cameron

WELL RECORD

Permit No. MARS-322-D

Oil or Gas Well GAS
(KIND)

Company <u>The Manufacturers Light and Heat Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>800 Union Trust Building, Pgh. 19, Penna.</u>	Size			Kind of Packer
Farm <u>Jason Gray</u> Acres <u>71</u>	16			
Location (waters)	13			
Well No. <u>2345</u> Elev. <u>868'</u>	10"	<u>249</u>	<u>249</u>	Size of
District <u>Liberty</u> County <u>Marshall</u>	8 1/4"	<u>605</u>	<u>955</u>	Depth set
The surface of tract is owned in fee by	6"			
Address	5 3/16"	<u>1612</u>	<u>1612</u>	
Mineral rights are owned by	8			Perf. top
Address	2			Perf. bottom
Drilling commenced <u>January 29, 1958</u>	Liners Used			Perf. top
Drilling completed <u>May 15, 1958</u>				Perf. bottom
Date Shot From To				
With				
Open Flow /10ths Water in _____ Inch				
/10ths Merc. in _____ Inch				
Volume <u>86 13,693</u> Cu. Ft.				
Rock Pressure <u>26</u> lbs. <u>72</u> hrs.				
Oil _____ bbls., 1st 24 hrs.				
Fresh water _____ feet				
Salt water _____ feet				

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	THICKNESS	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Schamberger Well Survey							All Casing Measured over Threads Run 249' of 10-3/4" Casing, Sals. H. 32# on a Steel Shoe. Cemented with 160 bags Cement, 15.2 lbs. per gallon. Good Cement return at surface. Run 605' of 8-5/8" Casing, Sals. J 8 1/4# and connected it to 350' of original 8-1/4" Casing with a Steel Dis Nipple. Cemented with 200 bags of Cement, 15.2 lbs. per gallon. Good Return of Cement at the surface. Run 1612' of 5-1/2" Casing, Sals. J 17# on a Steel Shoe set at 1600'. Six 5 1/2" x 8-5/8" Centralizers were spaced at following Depths. 220-440-660-880-1100 and 1320'. Cemented with 400 Bags Ceman 15.5 lbs. per gallon. Good return of Cement at the surface. Drilled Injun Sand down from 1717' to 1861' total depth.
Pittsburgh Coal		5	478	483			
Little Lime		8	1523	1531			
Pencil Cave		30	1531	1561			
Big Lime			1561				
Big Injun Sand				1861			
Total Depth				1861			
5-1/2" Shoe Set at				1600			

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The Manufacturers Light and Heat Company
Company

#2345

47-051-00322W

Division Four

Record of well No. 2345 on Jason Gray Farm 71 Acres
Cameron Field Liberty District Marshall County W. Va. State
 Rig Commenced 19 Completed 19
 Drilling Commenced Jan. 29 1958 Completed May 15 1958
 Contractor A. G. Isiminger Address Cameron, West Virginia
 Driller's Name A. G. Isiminger and Edison Isiminger

CASING AND TUBING RECORD

	Conductor	13"	10"	8 1/4"	7"	6 5/8"	5 3/16"	4"	3"
Used in Dril.			249	605			1612		
Left in well			249	955			1612		

PACKER RECORD

SHOOTING RECORD

Shot	Depth Set	Type Packer	Date	Type Explosive	Amount	DEPTH		Volume Before Cu. Ft.	Volume After Cu. Ft.
						Top	Bottom		

VOLUME AND PRESSURE

Date	Reading in Inches	Liquid	Size Orifice	Volume	Sand	PRESSURE IN MIN.					24 Hour R. P.	Max. R. P.	Hours
						1	5	10	30	60			
5-16-58	20/10	Water	5/8"	13,693	Big Injun	1	5					26	72

TOTAL INITIAL OPEN FLOW 13,693

CUBIC FEET PER 24 HOURS

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Schlumberger Well Survey				All Casing Measured over Threads
Pittsburgh Coal	478	483	5	Run 249' of 10-3/4" casing, Sals. H 32# on a
Little Lime	1523	1531	8	Steel Shoe. Cemented with 160 Bags Cement, 15.2
Pencil Cave	1531	1561	30	lbs. per gallon. Good Cement Return at Surface.
Big Lime	1561			Run 605' of 8-5/8" casing, Sals. J 24# and
Big Injun Sand		1861		connected it to 350' of original 8-1/4" casing
Total Depth		1861		With a Steel Die Nipple, Cemented with 200 Bags
5-1/2" Shoe Set at		1600		of Cement, 15.2 lbs. per gallon. Good Return of
				Cement at the Surface. Run 1612' of 5-1/2"
				Casing, Sals. J 17# on a Steel Shoe set at
				1600'. Six 5-1/2" x 8-5/8" Centralizers were
				spaced at following depths, 220-440-660-880-
				1100 and 1320'. Cemented with 400 Bags Cement
				15.5 lbs. per gallon. Good Return of Cement at
				the surface.
				Drilled Injun Sand down from 1717' to 1061'
				total Depth.

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MAY 27 1958
Production

Examined above information and measurements and found to be correct by

A. G. Isiminger Contractor

Examined and Approved by

[Signature] Division Superintendent

NOTE—The above blank must be filled out carefully by the contractor, with a complete and accurate record of the well, and accompany, when presented for payment of the bill for drilling. All formations and known sands must be given by their proper name, with steel line measurements, and under the head of "Remarks" must be recorded in what sand and at what depth Oil, Gas or water was found, the quantity of same, the quality of the sand, and thickness of pay.

08/24/2018

WW-2A
(Rev. 6-14)

1). Date: 6/5/2018
2.) Operator's Well Number Victory B 2345
State 47- County 051 Permit 00322
3.) API Well No.:

**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 Mason Dixon Farms LLC
Address PO Box 360911
Melbourne, FL 32936
(b) Name ~~Jeremiah & Andrea Magers~~
Address ~~145 Millers Cove Ln~~
~~Cameron, WV 26033~~
(c) Name ~~Rodney Wallace~~
Address ~~1066 Fork Ridge Rd~~
~~Moundsville, WV 26041~~
6) Inspector James Nicholson
Address PO Box 44
Moundsville, WV 26041
Telephone 304-552-3874

5) (a) Coal Operator
Name McELROY COAL COMPANY
Address 1000 Consol Energy Dr
Canonsburg, PA 15317
(b) Coal Owner(s) with Declaration
Name Consolidated Coal
Address 1000 Consol Energy Dr
Canonsburg, PA 15317
(c) Coal Lessee with Declaration
Name McElroy Coal Company
Address 1000 Consol Energy Dr
Canonsburg, PA 15317

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TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

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

OR

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

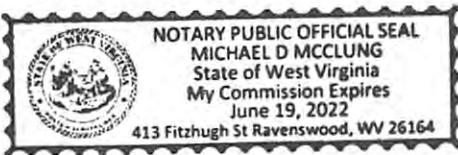
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

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

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

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

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



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

Subscribed and sworn before me this 13th day of July, 00322 2018

Notary Public

My Commission Expires 6/19/2022

Oil and Gas Privacy Notice

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

08/24/2018

WW-2A1
(Rev. 1/11)

Operator's Well Number Victory B 2345

**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
Robert C. Hinkle, et al	Columbia Gas Transmission, LLC	Storage Lease 3002262-000	515 / 597

**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.

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WV Department of
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Well Operator:
By: Its:

Columbia Gas Transmission, LLC

James E. Amos

Senior Engineer

08/24/2018

WW-9
(5/16)

API Number 47 - 051 - 00322
Operator's Well No. Victory B 2345

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) Fish Creek Quadrangle Cameron, WV

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number 34-119-28776, 34-167-23862)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Appalachian Water Services, Masontown, PA (permit 2608201))

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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 planned

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

Additives to be used in drilling medium? No drilling planned; fresh water, polymer, starch, LCM, surfactant, HCl acid, iron control (for clean-out and stimulation)

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A - no drilling planned

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

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

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 13th day of July, 2018
Michael D McCullough Notary Public
My commission expires 6/19/2022



08/24/2018

Proposed Revegetation Treatment: Acres Disturbed < 1.0 Prevegetation pH 6

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch straw @ 2 for permanent (@ 3 for temporary) Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Annual Rye @ 40

Orchard Grass and/or Tall Fescue @ 29

Birdsfoot Trefoil (empire) @ 9

Annual Rye @ 12

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: *Jim Vuleta*

Comments: _____

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Title: *Oil & Gas Inspector*

Date: *7/26/18*

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): Fish Creek Quad: Cameron, WV

Farm Name: Mason Dixon Farms, LLC (WV DEP records indicate Gray, Jason)

- 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.

No discharges planned. Fish Creek is approximately 410 ft to the SW.

PWSID WV9925016 ZPC Covestro (FKA Bayer Material) and PWSID WV3304803 ZPC Sisterville Municipal Water intersects protection area. Refer to enclosed SWAP Protection Area letter dated 2/16/18 from the Dept of Health and Human Resources.

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

N/A

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

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

Signature: *John E. [unclear]*

Date: 7/12/18

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STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES
 Bureau for Public Health

Bill J. Crouch
 Cabinet Secretary

Office of Environmental Health Services

Rahul Gupta, MD, MPH, MBA, FACP
 Commissioner
 State Health Officer

February 16, 2018

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

Re: WV DEP SWAP Info Request
 Protection Areas for 8 wells
 Randolph/Preston/Marshall Counties,

Dear Mr. Timmermeyer:

This is a response to the informational request dated February 15, 2018 concerning protection areas near eight wells.

Based on the current information, we have found the following:

Well	PA PWSID	PA Type	System Name	County	Note
Glady 7455	WV9942049	ZPC	USFS Middle Mountain Cabins HP	Randolph	Distance 1 mile, does not intersect any PA
Glady 7459					Out of WV State
Terra Alta South 7500	WV3303908	ZPC	Kingwood Water Board Primary	Preston	Intersects Protection Area
Victory B 2265	WV9925016	ZPC	Covestro (FKA Bayer Material)	Marshall	Intersects Protection Area
	WV3304803	ZPC	Sistersville Municipal Water	Marshall	Intersects Protection Area
Victory B 2345	WV9925016	ZPC	Covestro (FKA Bayer Material)	Marshall	Intersects Protection Area
	WV3304803	ZPC	Sistersville Municipal Water	Marshall	Intersects Protection Area
Victory B 2589	WV9925016	ZPC	Covestro (FKA Bayer Material)	Marshall	Intersects Protection Area
Victory B 3522	WV9925016	ZPC	Covestro (FKA Bayer Material)	Marshall	Intersects Protection Area
Victory B 4502	WV9925016	ZPC	Covestro (FKA Bayer Material)	Marshall	Distance 250 feet, does not intersect any PA

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.

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 Environmental Protection

Sincerely,

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

CC: William J. Toome

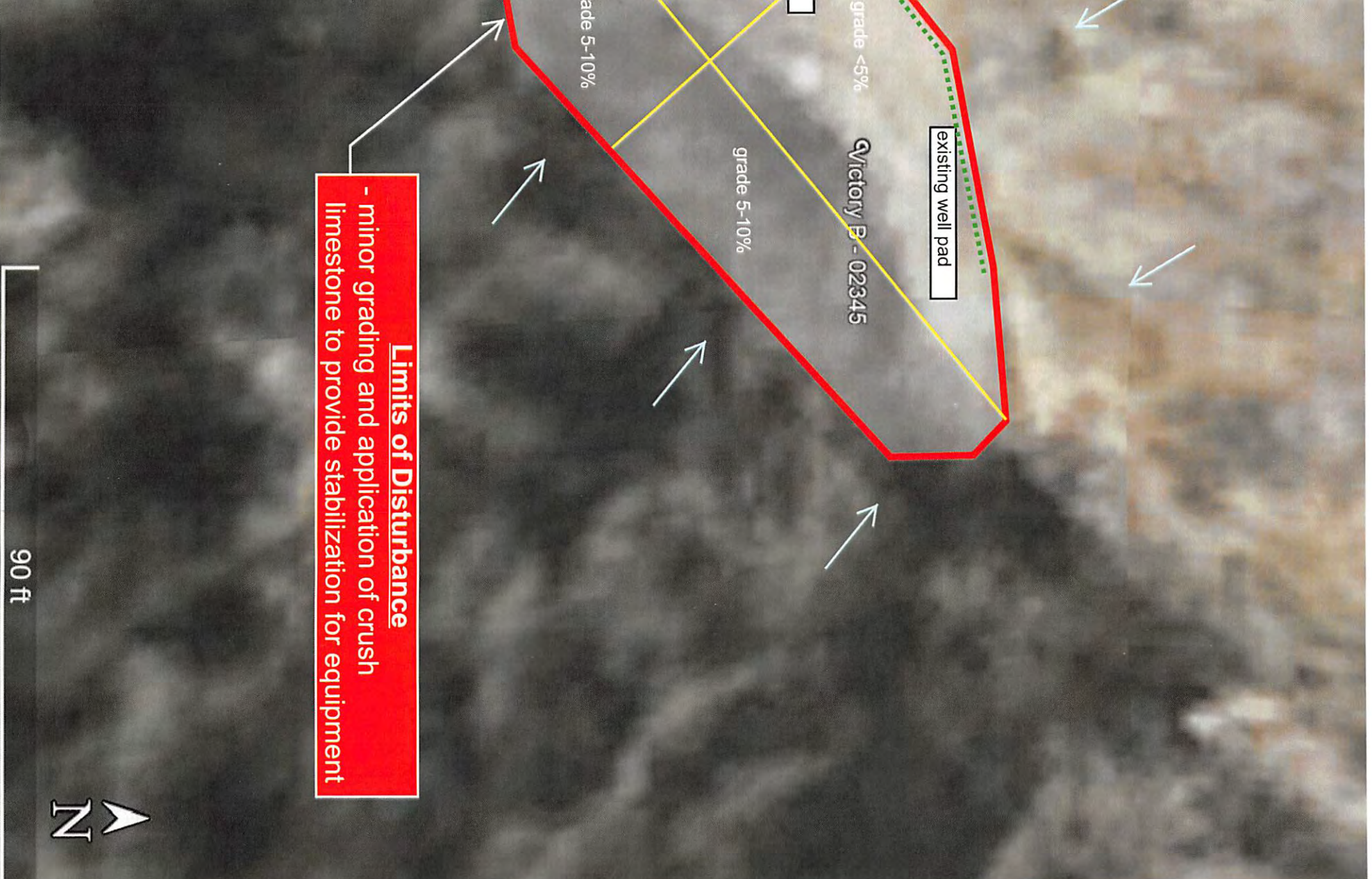
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WV DEP Reclamation Plan

Victory B well 2345

- Existing road surface and culverts to be maintained
- BMPs to be utilized per WV DEP guidelines





existing well pad

Victory B - 02345

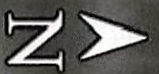
grade <5%

grade 5-10%

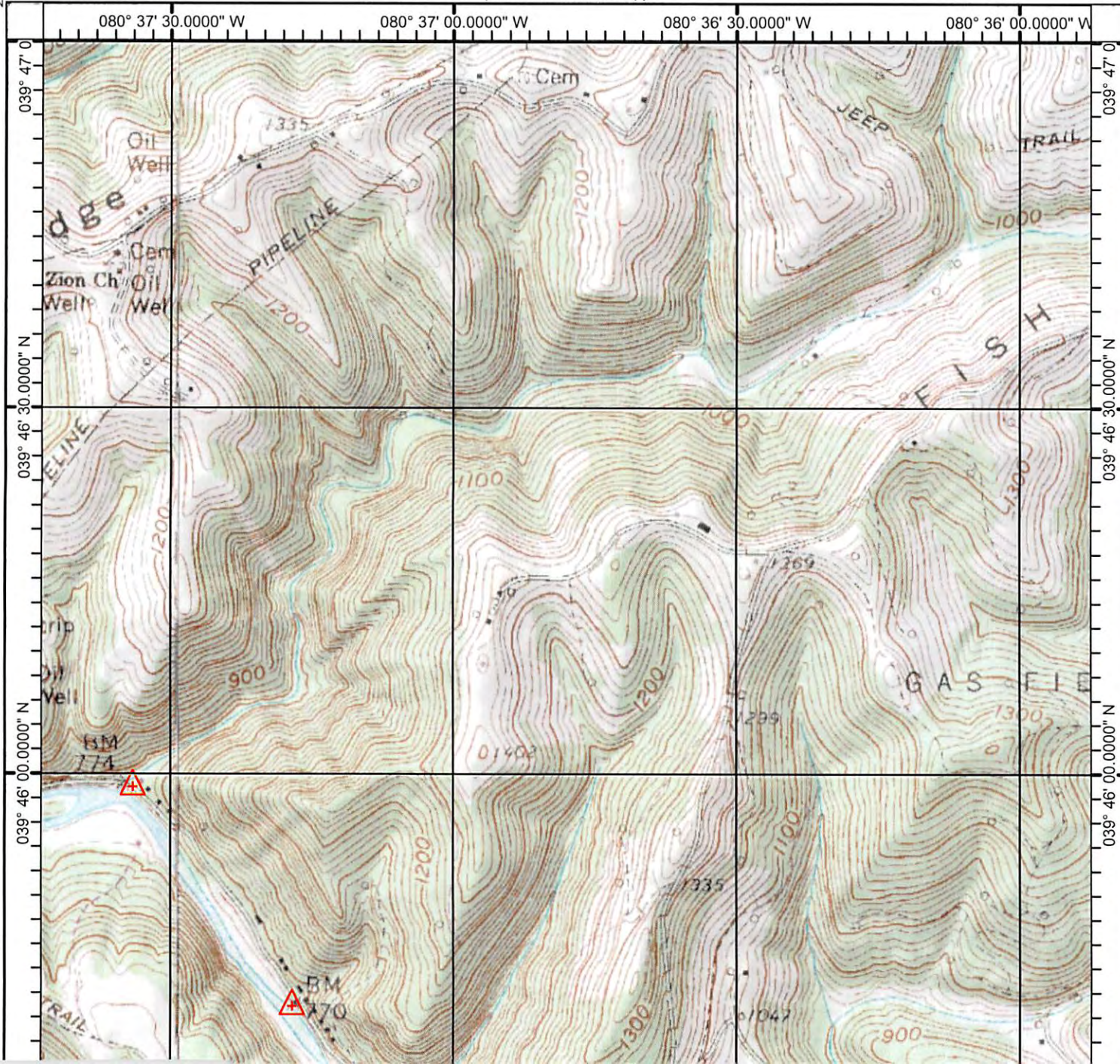
grade 5-10%

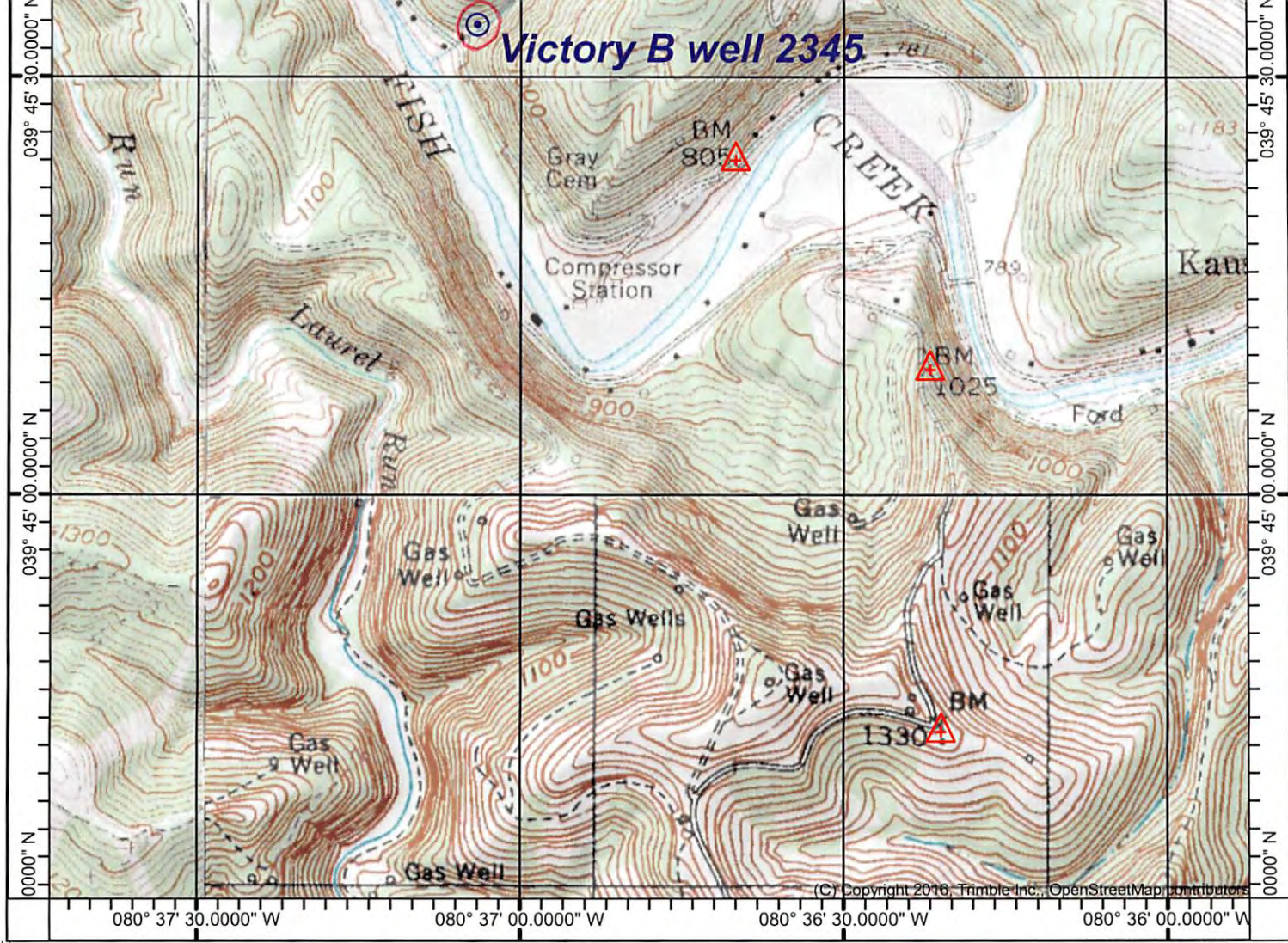
Limits of Disturbance
- minor grading and application of crush limestone to provide stabilization for equipment

90 ft



080° 37' 43.8211" W (Outdoor Contour Map) 080° 35' 52.0304" W
039° 47' 00.1532" N 039° 47' 00.1532" N





Victory B well 2345

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039° 44' 30.6810" N 080° 37' 43.8211" W (Outdoor Contour Map) SCALE 1:14400 (Outdoor Contour Map) 039° 44' 30.6810" N 080° 35' 52.0304" W

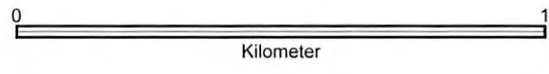
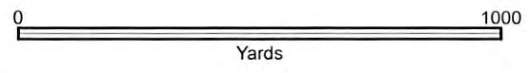
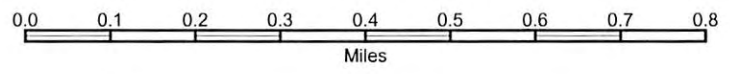
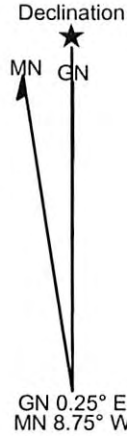
(Outdoor Contour Map)

(Outdoor Contour Map)

Produced by Trimble Terrain Navigator Pro
Topography based on USGS variable Maps

North American 1983 Datum (NAD83)

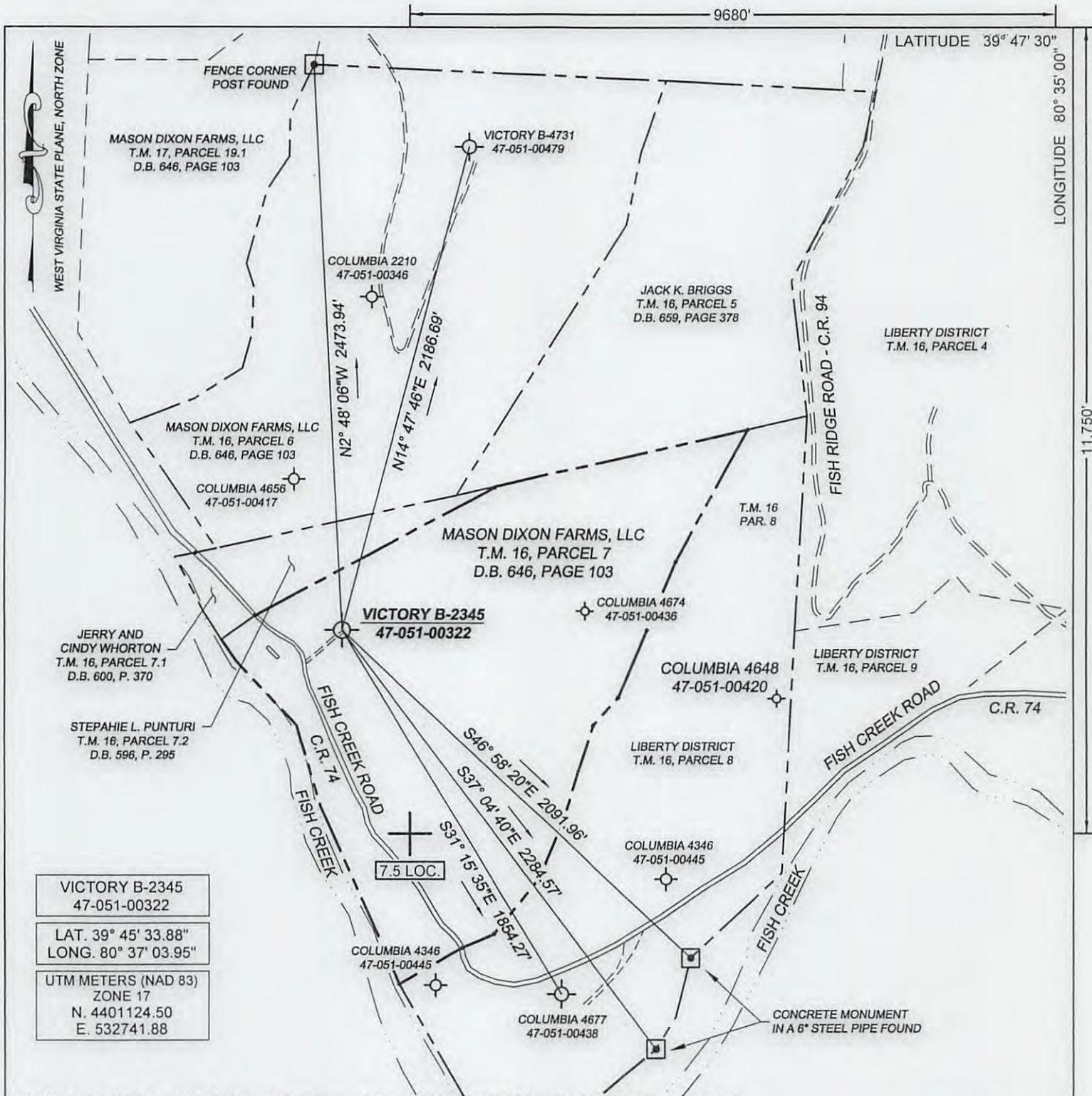
To place on the predicted North American 1927 move the
projection lines 9M N and 17M E



CONTOUR INTERVAL UNKNOWN FT

N/A
CAMERON, WV
UNKNOWN

47-051-00322W



VICTORY B-2345
47-051-00322

LAT. 39° 45' 33.88"
LONG. 80° 37' 03.95"

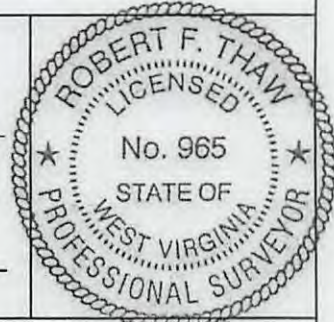
UTM METERS (NAD 83)
ZONE 17
N. 4401124.50
E. 532741.88

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

FILE No. 1701-2345-001-025
DRAWING No. VICTORY B-2345
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) R. Thaw
ROBERT F. THAW PS #965



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

DATE JANUARY 24 2018
OPERATOR'S WELL No. 2345
API WELL No. 47 051 - 00322W

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

LOCATION: ELEVATION 798.3 WATER SHED FISH CREEK
DISTRICT LIBERTY COUNTY MARSHALL
QUADRANGLE CAMERON, WV

SURFACE OWNER MASON DIXON FARMS, LLC ACREAGE 64.7+/-
OIL & GAS ROYALTY OWNER JANET POCHAN, MOUNTAIN MINERALS, DAVY LOU ASHTON, WILLIAM HINKLE, ET AL
LEASE ACREAGE 71 ACRES LEASE No. 3002262-000

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

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION BIG INJUN ESTIMATED DEPTH 1861
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

FORM IV-6 (8-78)