



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

Wednesday, September 5, 2018
WELL WORK PLUGGING PERMIT
Vertical Plugging

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 1-4502
47-051-00320-00-00

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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, 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: 1-4502
Farm Name: CONNELLY, C. F.
U.S. WELL NUMBER: 47-051-00320-00-00
Vertical Plugging
Date Issued: 9/5/2018

D

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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.

1) Date 7/3, 2018
2) Operator's
Well No. Victory B 4502
3) API Well No. 47-051 - 00320

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas x / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage x) Deep ___ / Shallow x

5) Location: Elevation 1213.0 ft Watershed Fish Creek
District Liberty County Marshall Quadrangle Cameron, WV

6) Well Operator Columbia Gas Transmission, LLC 7) Designated Agent James Amos
Address 1700 MacCorkle Ave SE Address 48 Columbia Gas Rd
Charleston, WV 25325 Sandyville, WV 25275

8) Oil and Gas Inspector to be notified Name James Nicholson
Address PO Box 44
Moundsville, WV 26041
9) Plugging Contractor Name Contractor Services Inc
Address 929 Charleston Rd
Spencer, WV 25276

10) Work Order: The work order for the manner of plugging this well is as follows:
* refer to "prior to P&A" and "proposed P&A" wellbore schematics included in permit application
Kill well. Obtain CBL. Clean/drill to original TD of 3052'. Spot cement plugs from TD to 1000'. Perforate @
970' and attempt to squeeze cement. Perforate @ 500' and attempt to squeeze cement. Pull all 4-1/2"
and 7" casing that is free. Spot cement plugs to surface and top off all annuli. Install monument.

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Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector James Nicholson Date 7/26/18

09/07/2018

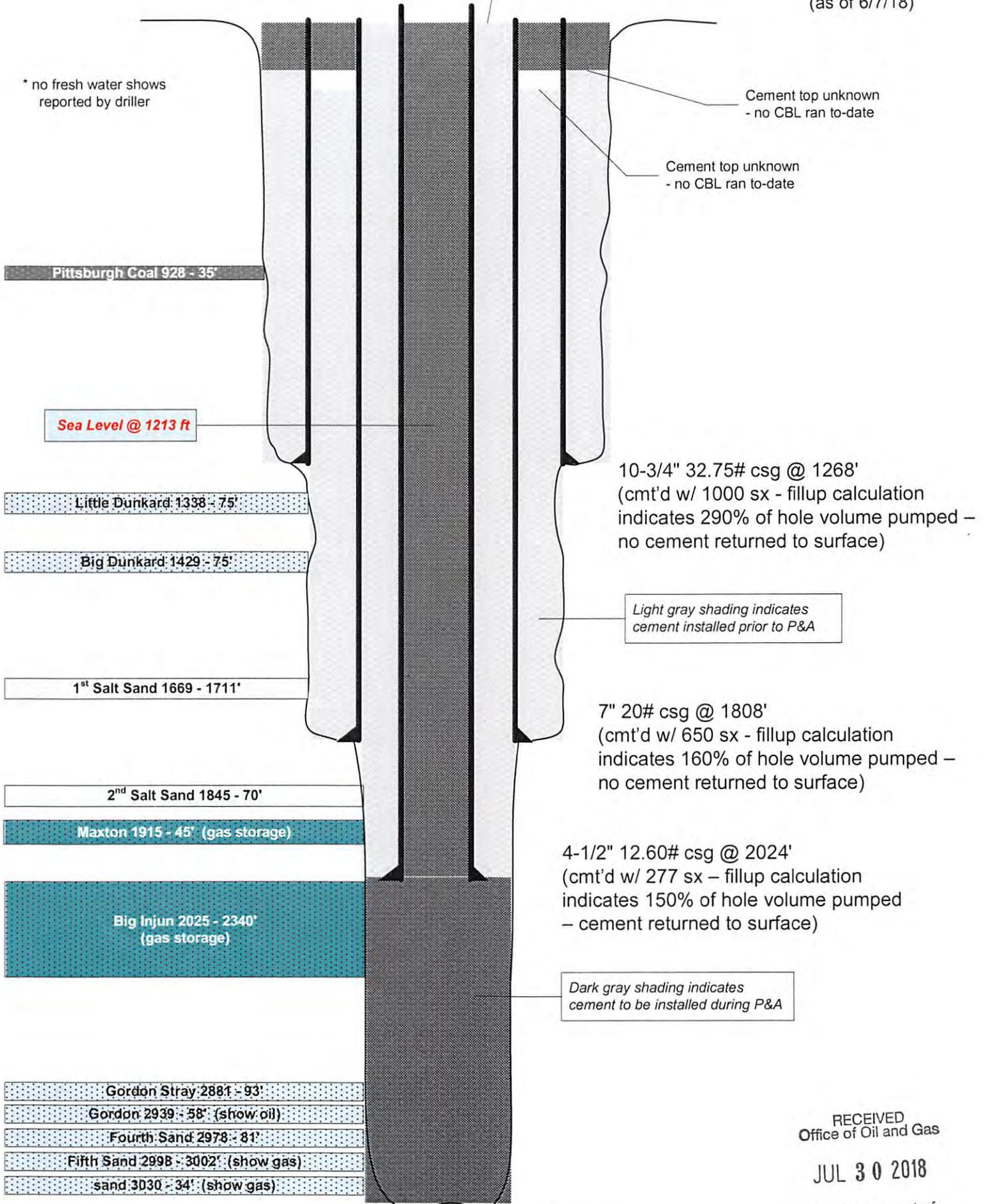
47-051-00320P

VICTORY B 4502

Proposed P&A

(as of 6/7/18)

~ not to scale ~



* no fresh water shows reported by driller

Cement top unknown - no CBL ran to-date

Cement top unknown - no CBL ran to-date

Cement top unknown - no CBL ran to-date

Pittsburgh Coal 928 - 35'

Sea Level @ 1213 ft

Little Dunkard 1338 - 75'

Big Dunkard 1429 - 75'

1st Salt Sand 1669 - 1711'

2nd Salt Sand 1845 - 70'

Maxton 1915 - 45' (gas storage)

Big Injun 2025 - 2340' (gas storage)

Gordon Stray 2881 - 93'

Gordon 2939 - 58' (show oil)

Fourth Sand 2978 - 81'

Fifth Sand 2998 - 3002' (show gas)

sand 3030 - 34' (show gas)

10-3/4" 32.75# csg @ 1268'
(cmt'd w/ 1000 sx - fillup calculation indicates 290% of hole volume pumped - no cement returned to surface)

Light gray shading indicates cement installed prior to P&A

7" 20# csg @ 1808'
(cmt'd w/ 650 sx - fillup calculation indicates 160% of hole volume pumped - no cement returned to surface)

4-1/2" 12.60# csg @ 2024'
(cmt'd w/ 277 sx - fillup calculation indicates 150% of hole volume pumped - cement returned to surface)

Dark gray shading indicates cement to be installed during P&A

TD 3052'

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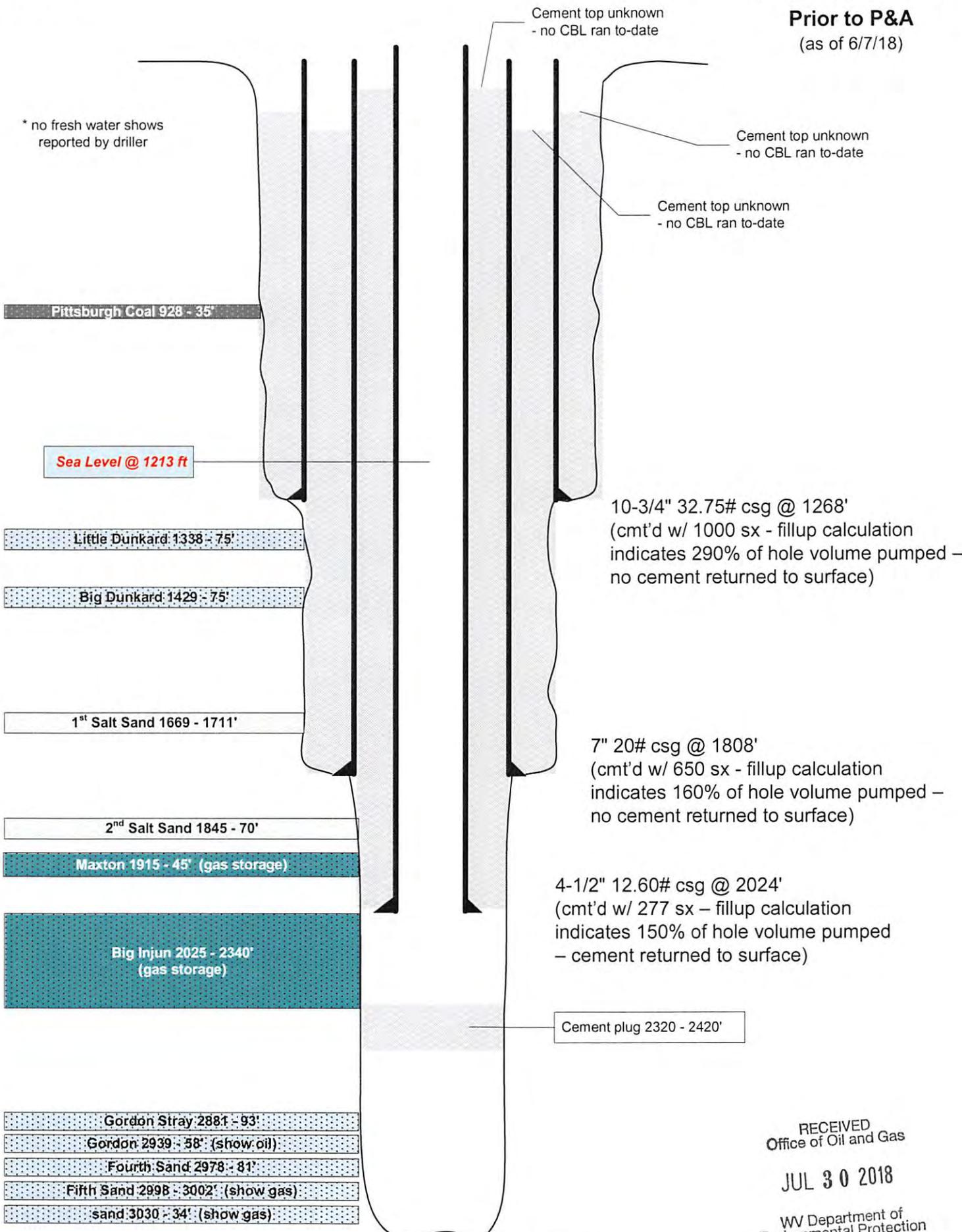
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VICTORY B 4502

Prior to P&A
(as of 6/7/18)

~ not to scale ~



TD 3052'

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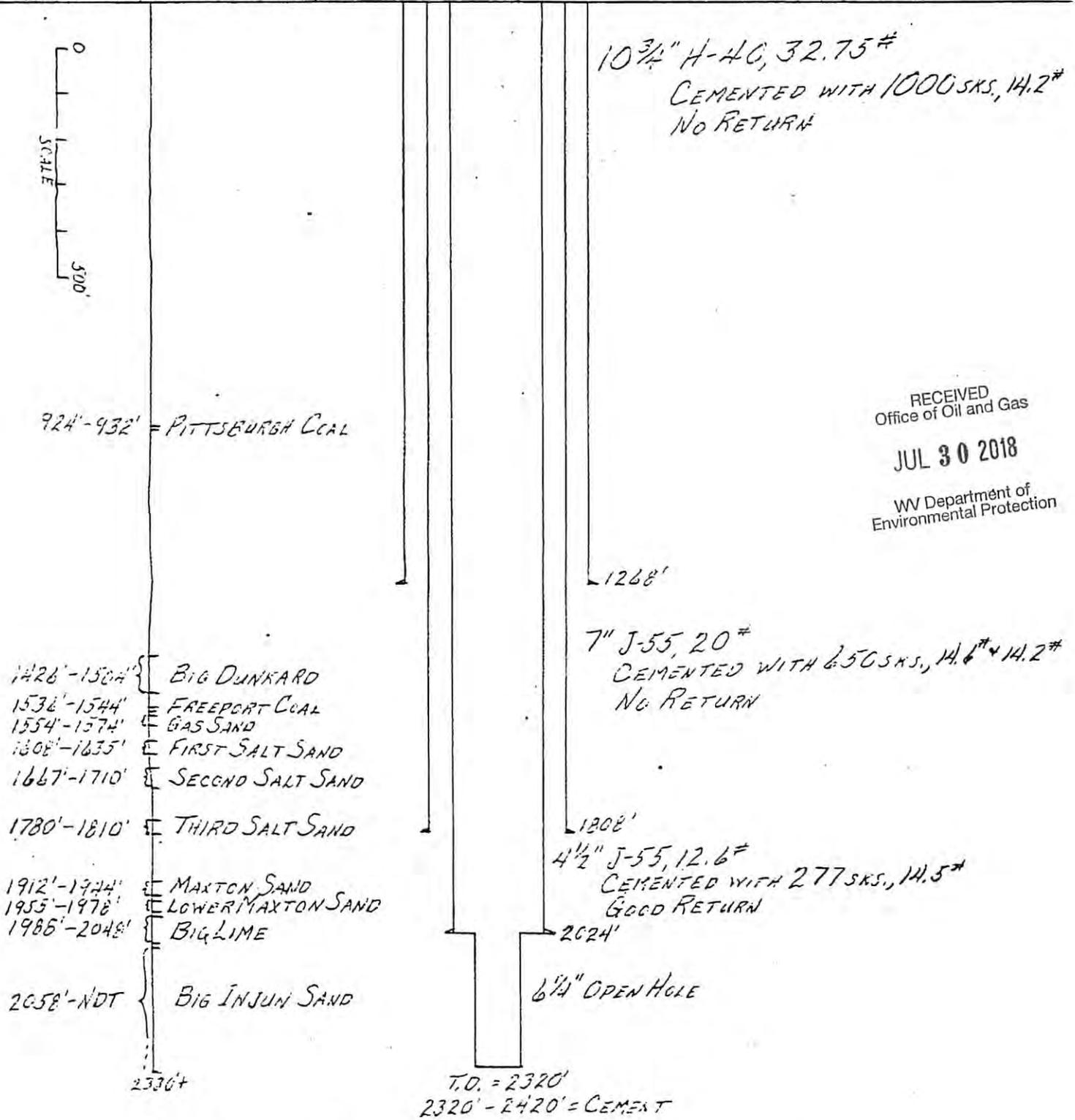
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VICTORY B STORAGE FIELD WELL 4502 MARS-320-R

WELL STATUS: OBSERVATION

GRND. ELEV. = 1218'



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SEE OTHER SIDE FOR RECONDITIONING AND LOGGING HISTORY
DRAWN BY: DH DATE: 1985

WELL LOG SUMMARY

DMG

LOCATION	COMPANY The Manufacturers Light and Heat Company		DIV. FIELD 4 Cameron		WELL NO. 4502							
	FARM C. F. Connelly	ACRES 70	LEASE NO. 28902	DISTRICT - Yankee Liberty	COUNTY Marshall							
	STATE W. Va.	TOPO. MAP Quadrangle _____ Ft. _____ of _____ of _____ and _____										
CONTRACTOR	TOP HOLE CONTRACTOR Company Machine 4056		ADDRESS		Drilled from 0 Ft. to 2420 Ft.							
	DRILLING CONTRACTOR		ADDRESS		Type of Rig Bucyrus Erie Drilling Mach.							
	CONTRACTOR		ADDRESS		Drilled from _____ Ft. to _____ Ft.							
FIRST RIG COMMENCED (DATE)		DRILLING COMPLETED (DATE)		COMPLETED TOTAL DEPTH	DATE PURCHASED							
		Oct. 27, 1959		2320 ft.								
HOLE SIZE	BIT GAUGE (INCHES)	13	8"	6-1/4"	4"							
	FROM-TO (FEET)	0 to 1268	0 to 1808	0 to 2320	0 to 2024							
CASING AND TUBING	SIZE (O.D.)	10-3/4"	7"	4-1/2"								
	WEIGHT/FOOT	32.75	20	12.60								
(All Measurements less threads)	STEEL GRADE	H	J	J								
	COUPLING TYPE	Short	Short	Short								
	SETTING DEPTH	1268	1808	2024								
	LEFT IN HOLE	1268	1808	2024								
	NO. OF SACKS	1000	250 & 400	277								
CEMENT	TYPE	1-S	1-S	1-S								
	WEIGHT #/GAL.	14.2	14.6	14.2	14.5							
PACKER	MANUFACTURER	Halliburton										
	TYPE	Form. Pac. Shoe										
	SETTING DEPTH	4-1/2 x 5-7/8										
WELL STIMULATION	TREATMENT	TYPE *	SIZE AND/OR AMOUNT	ZONE TREATED	OPEN FLOW MCF/DAY							
				From to	Before After							
				From to	Before After							
				From to	Before After							
				From to	Before After							
OPEN FLOW TEST	DATE GAUGED	FORMATION	PAY ZONE	TYPE GAUGE (SPECIFY)	PRESSURE (SPECIFY UNITS)							
	10 27 59	Big Injun	From to	Orifice Well Tester	12/10 water							
WELLHEAD PRESSURE TESTS	DATE TAKEN	FORMATION	MINUTE PRESSURE - PSIG					WELLHEAD PRESSURE - PSIG				
	11 16 59	Big Injun	1	3	5	10	20	30	24 HR.	48 HR.	72 HR.	MAX. PRESS.
MISC.	DEPTH MEASUREMENT TAKEN FROM:		DIST. TO GROUND		ELEVATION							
	<input checked="" type="checkbox"/> Derrick Floor	<input type="checkbox"/> Ground	2 ft.		1205							
REMARKS	LOGGED BY (COMPANY)		DATE LOGGED									
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Schlumberger Well Surveying Corporation		11 19 58							
					10 13 59							
* Note: Form PD-17 "Well Fracture Report" to be completed and attached, if applicable												
10" Set on No. 7 Baker Model "K" Cement Retainer on 2" Tubing. 6" x 4" Centralizers run on 9th-21-33-45-57 and 67th. Joints. Plugged back with Cement from 2420' to 2320' with Cement Bailer.												
Final Pump Pressure 10" 7" 4"												
600 No Record 700												

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

Verified by Andrew T. Galushian
DIVISION ENGINEER

Approved by J. P. [Signature]
DIVISION SUPERINTENDENT

09/07/2018



2-1334-4

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle Canalton
Permit No. MARS-320-R See other #

WELL RECORD

Storage
Oil or Gas Well GAS
(KIND)

Company <u>The Manufacturers Light and Heat Co.</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>800 Union Trust Building, Pittsburg, Pa.</u>	Size			Kind of Packer
Farm <u>C. F. Connally</u> Acres <u>70</u>	16 "			
Location (waters)	18 "	<u>1268</u>	<u>1268</u>	Size of
Well No. <u>4502</u> Elev. <u>1205</u>	10 "			Depth set
District <u>Liberty</u> County <u>Marshall</u>	<u>7 7/8"</u>	<u>1808</u>	<u>1808</u>	
The surface of tract is owned in fee by	<u>7 7/8"</u>	<u>2024</u>	<u>2024</u>	
Address	<u>5 3/16"</u>			Perf. top
Mineral rights are owned by	3			Perf. bottom
Address	2			Perf. top
Drilling commenced	Liners Used			Perf. bottom
Drilling completed <u>October 27, 1959</u>				
Date Shot From To				
With				
Open Flow /10ths Water in Inch	CASING CEMENTED	SIZE	No. Ft.	Date
/10ths Merc. in Inch				
Volume Cu. Ft.				
Rock Pressure <u>275</u> lbs. hrs.	COAL WAS ENCOUNTERED AT	FEET	INCHES	
Oil bbls., 1st 24 hrs.	FEET	INCHES	FEET	INCHES
Fresh water feet feet	FEET	INCHES	FEET	INCHES
Salt water feet feet				

Formation	Color	Hard or Soft Thickness	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Pittsburgh Coal		7	928	935			
Little Dunkard		37	1338	1375			
Big Dunkard		46	1429	1475			
First Salt Sand		42	1669	1711			
Maxton Sand		30	1915	1945			
Big Lime			2024				
Big Injun				2340	Gas At 2195		
TOTAL DEPTH				2320			

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(Over)

REDRILLED AND RECONDITIONED FOR STORAGE IN 1958-1959

STORAGE FORMATIONS: BIG LIME & BIG INJUN

OPEN FLOW: 10.6 MCFD DATE: 10-27-59

LOGGING HISTORY

ORIGINAL LOGS

<u>DATE</u>	<u>TYPE LOG</u>
11-19-58	GAMMA RAY-NEUTRON
11-19-58	TEMPERATURE
9-2-59	SECTION GAUGE
10-13-59	SECTION GAUGE

SURVEILLANCE LOGS

<u>DATE</u>	<u>TYPE LOG</u>
8-5-77	GAMMA RAY-NEUTRON
8-5-77	GAMMA RAY-DIFFERENTIAL TEMPERATURE
8-5-77	SIBILATION SURVEY
11-15-83	GAMMA RAY-T. D. T. NEUTRON
11-15-83	GAMMA RAY-DIFFERENTIAL TEMPERATURE
3-6-84	EMPTY HOLE CYBER SCAN

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VICTORY B 4502

FORM 109 CSD

Carnegie Natural Gas Company

Division: Record of well No. G-985 on G F L... Farm Acres... Field Liberty Township Marshall County West Va State... Rig Commenced May 21 1920 Completed June 4 1920... Drilling Commenced June 27 1920 Completed August 7 1920... Contractor... Driller's Name...

CASING AND TUBING RECORD

Table with columns for Conductor, 13", 10", 3 1/4", 7", 6 5/8", 5 9/16", 4", 3", 2". Rows for Used in Drig. and Left in well.

PACKER RECORD

SHOOTING RECORD

Table with columns for size, Depth Set, Type Packer, Date, Type Explosive, Amount, DEPTH (Top, Bottom), Volume Before Cu. Ft., Volume After Cu. Ft.

VOLUME AND PRESSURE

Table with columns for Date, Reading in Inches, Liquid, Size Orifice, Volume, Sand, PRESSURE IN MIN. (1, 5, 10, 30, 60), 24 Hour R. P., Max. R. P., Hours.

TOTAL INITIAL OPEN FLOW

CUBIC FEET PER 24 HOURS

Main table with columns: FORMATION, TOP, BOTTOM, THICKNESS, REMARKS. Includes entries for Conductor, Shale, Sandstone, etc., and a detailed 'Remarks' section at the bottom.

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Examined above information and measurements and found to be correct by... Examined and Approved by... Contractor... Field 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.

09/07/2018

WEST VIRGINIA DEPARTMENT OF MINES
OIL AND GAS DIVISION

1502

WELL RECORD

Permit No. _____ WELL TO BE ABANDONED. Oil or Gas Well GAS
(Kind)

Company <u>CARNEGIE NATURAL GAS COMPANY</u>		Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>1014 Frick Bldg., PITTSBURGH, PA.</u>		Size			
Farm <u>G. F. CONNELLY</u> Acres <u>70</u>		10			
Location (waters) <u>FISH CREEK</u>		11			Kind of Packer
Well No. <u>8-985</u> Elev. <u>1205</u>		10			Size of
District <u>LIBERTY</u> County <u>MARSHALL</u>		8 1/4		<u>1510'</u>	Depth set
The surface of tract is owned in fee by <u>G. F. CONNELLY</u>		6 7/8		<u>2015'</u>	Perf. top
Address <u>SANDYVILLE, OHIO</u>		5 3/16			Perf. bottom
Mineral rights are owned by <u>G. F. CONNELLY</u>		3			Perf. top
Address <u>SANDYVILLE, OHIO</u>		2			Perf. bottom
Drilling commenced <u>6-22-20</u> -- D.D. <u>5-31-22</u>		Liners Used			
Drilling completed <u>7-31-20</u> -- D.D. <u>6-14-22</u>					
Date shot _____ Depth of shot _____					
Open Flow _____ /10ths Water in _____ Inch					
_____ /10ths Merc. in _____ Inch					
Volume <u>988,000</u> -- D.D. <u>2,500,000</u> Cu. Ft.		CASING CEMENTED	SIZE	No. FT.	Date
Rock Pressure _____ lbs.					
Oil _____ bbls. 1st 24 hrs.		COAL WAS ENCOUNTERED AT <u>650</u> FEET _____ INCHES			
Fresh water _____ feet _____ feet		<u>878</u> FEET _____ INCHES <u>940</u> FEET _____ INCHES			
Salt water _____ feet _____ feet		FEET _____ INCHES FEET _____ INCHES			

Formation	Color	Hard or Soft	Top	Bottom	Oil Gas or Water	Depth Found	Remarks
Waynesburg Coal			650'	654'			
Maplewood Coal			832	837			
Pittsburgh Coal			960	967			
Little Dunkard			1350	1350			
Big Dunkard			1460	1467			
Gas Sand			1615	1620			
1st Salt Sand			1690	1730			
2nd Salt Sand			1845	1870			
Mason Sand			1985	1985			
Big Injun			2025		Show of Gas Gas at	2015 2193-2195	
TOTAL DEPTH - 7-31-20 --			2207'				
Big Injun				2355			
Gordon Stray			2481	2595	Show oil & gas	2481-2544	
Gordon Sand			2599	2598	Show of gas Gas	2579 2599	
4th Sand			2978	2981	Gas	3001-3034	
5th Sand			2998	3008			
Sand			3030	3034			
TOTAL DEPTH - 6-14-22 --				3092'			

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WW-4A
Revised 6-07

1) Date: 7/3/18
2) Operator's Well Number
Victory B 4502
3) API Well No.: 47 - 051 - 00320

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Judith Ann Burge & Virginia Lee Bailey</u>	Name <u>not operated</u>
Address <u>7828 Silver Lake Ct</u>	Address _____
<u>Westerville, OH 43082</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Consolidated Coal</u>
_____	Address <u>1000 Consol Energy Dr</u>
_____	<u>Canonsburg, PA 15317</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>James Nicholson</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 44</u>	Name <u>not leased</u>
<u>Moundsville, WV 26041</u>	Address _____
Telephone <u>304-552-3874</u>	_____

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WV Department of
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TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

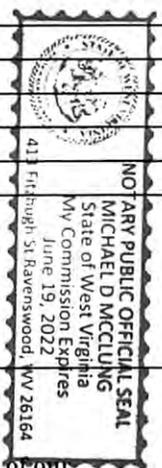
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator Columbia Gas Transmission, LLC
 By: James Amos
 Its: Senior Engineer
 Address 48 Columbia Gas Rd
Sandyville, WV 25275
 Telephone 304-373-2412

Subscribed and sworn before me this 13th day of July 2018
Michael D McClung Notary Public
 My Commission Expires 06/19/2022



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.

09/07/2018

WW-9
(5/16)

API Number 47 - 051 - 000320
Operator's Well No. Victory B 4502

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: fresh water, cement returns, bentonite gel, NaCl salt

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 20

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, Station W1 Ronco WTP, Masontown, PA - Permit 2608201)

Will closed loop system be used? If so, describe: no

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

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

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Additives to be used in drilling medium? _____

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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) subsoils

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Environmental Protection

-Landfill or offsite name/permit number? _____

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 [Signature]

Company Official (Typed Name) James E. Amos

Company Official Title Senior Engineer, Well Engineering & Technology

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

[Signature] Notary Public

My commission expires 6/19/2022



09/07/2018

Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch 2 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

Upland

For wetland areas: Annual Rye (40 lbs/acre) until indigenous plants re-establish cover.

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: *James Welsh*
Comments: _____

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Title: Oil & Gas (as per) 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: Connelly, C. F.

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 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 equipment will be inspected daily for leaks. 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.

Fish Creek is +/-850 east of wellhead. The PA PWSID WV9925016 (Covestro - FKA Bayer Material) is 250 feet, does not intersect protection area. Refer to enclosed assessment letter from Department of Health and Human Resources, Source Water Assessment and Protection department.

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

N/A

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

09/07/2018

N/A

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

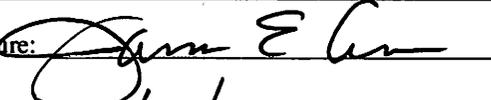
No waste material will be used for deicing or fill material on the property.

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 equipment will be inspected daily for leaks or spill.

Signature: 
Date: 7/12/18

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09/07/2018



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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CC: William J. Toome

Sincerely,

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

WV DEP Reclamation Plan - Siting Detail

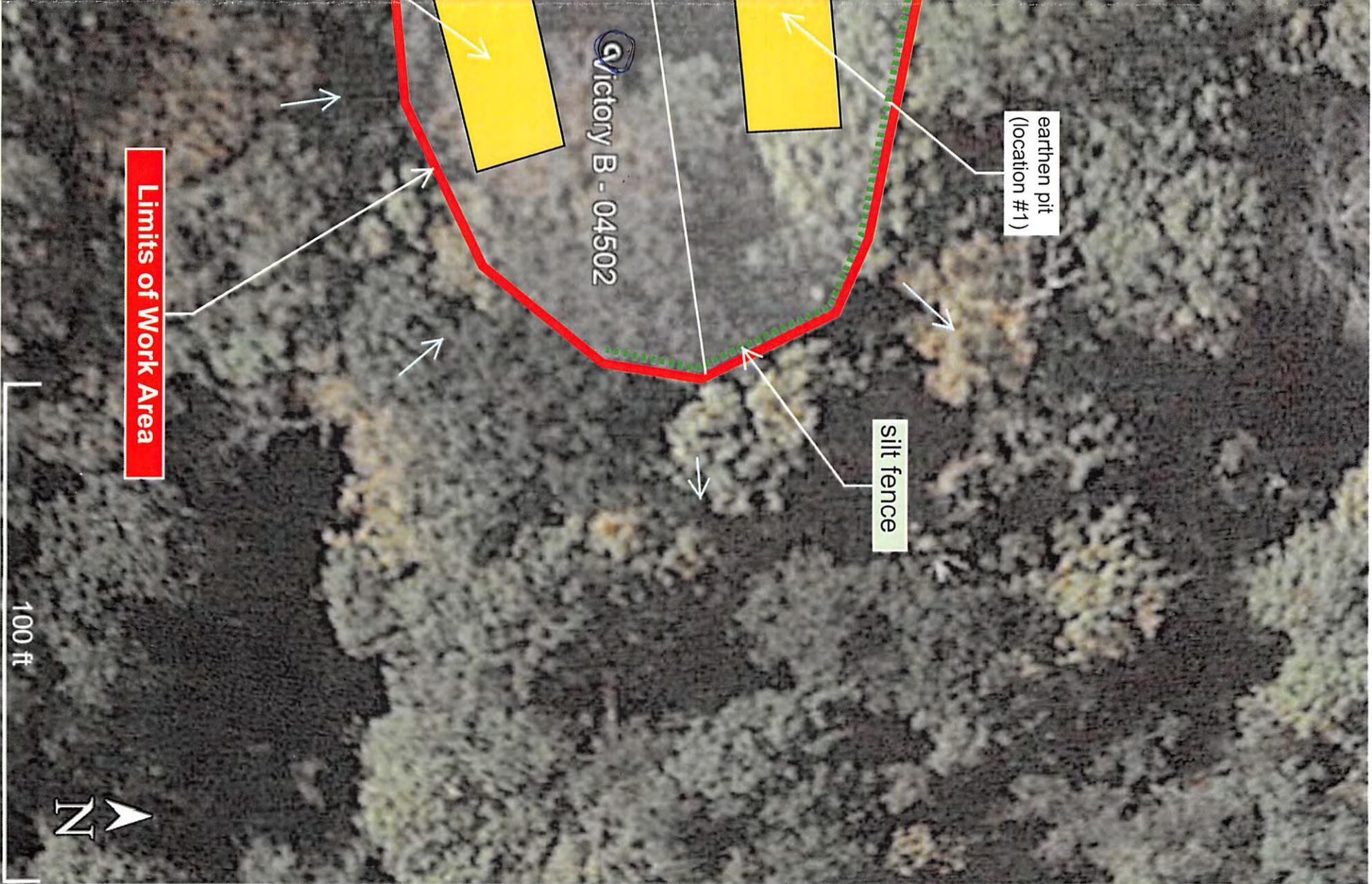
Victory B storage well 4502

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



Google Earth

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47-051-00320P



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WV DEP Reclamation Plan - Overview

Victory B storage well 4502

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



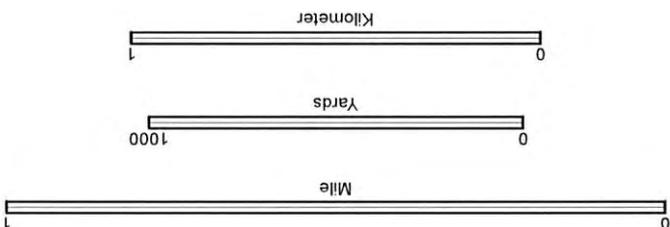
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39080-G4-TM-024
CAMERON, WV
JAN 1, 1988

CONTOUR INTERVAL 20 FT



MN 8.73° W
GN 0.26° E

Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:24,000 Maps
North American 1983 Datum (NAD83)
To place on the predicted North American 1927 move the
projection lines 9M N and 17M E

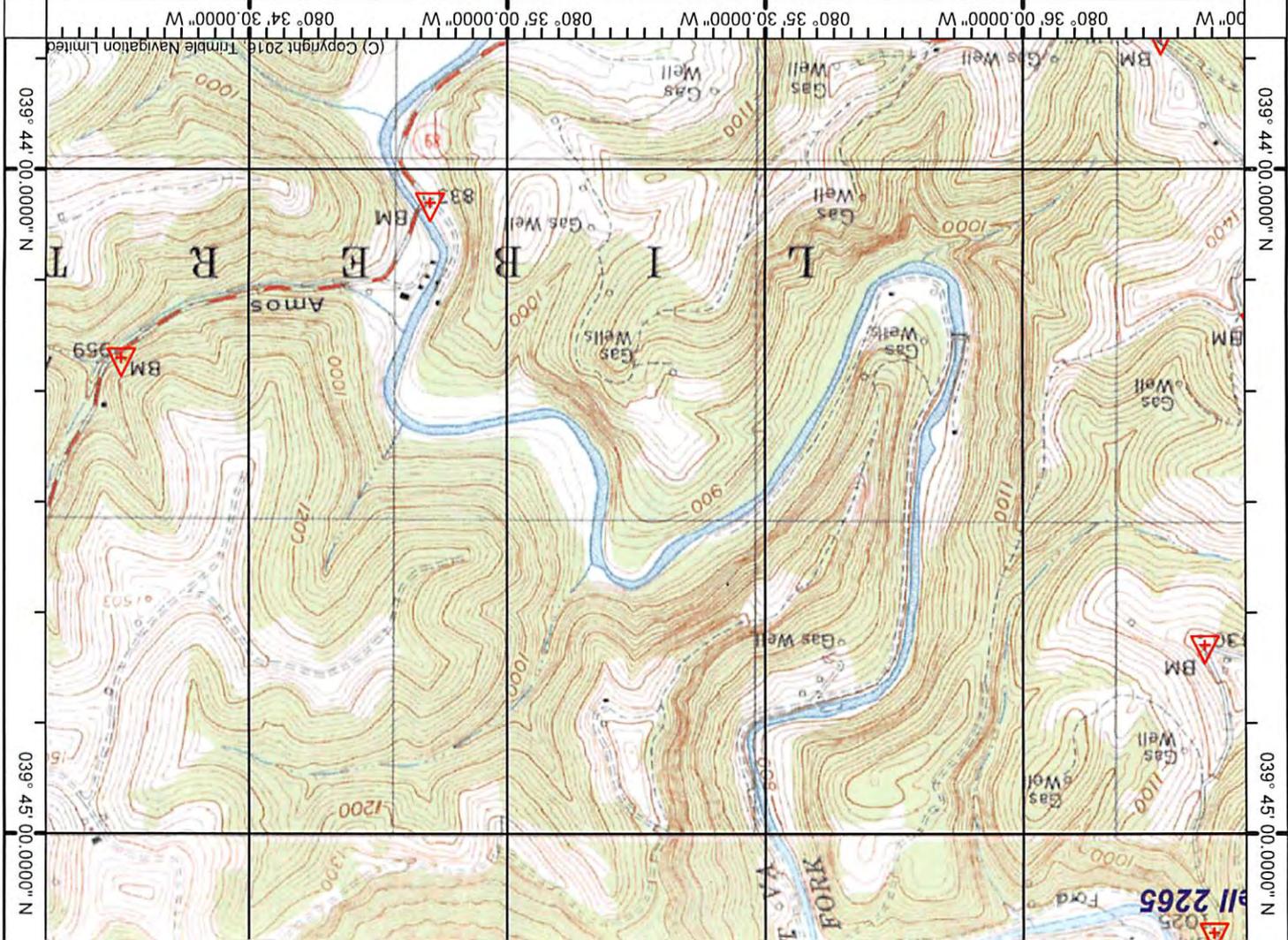
(HUNDRED)

SCALE 1:18056
(LITTLETON)

Declination

(WILEYVILLE)

039° 43' 47.7532" N 080° 36' 25.7799" W
039° 44' 00.0000" N 080° 36' 00.0000" W
039° 44' 30.0000" N 080° 35' 30.0000" W
039° 45' 00.0000" N 080° 35' 00.0000" W
039° 45' 30.0000" N 080° 34' 30.0000" W



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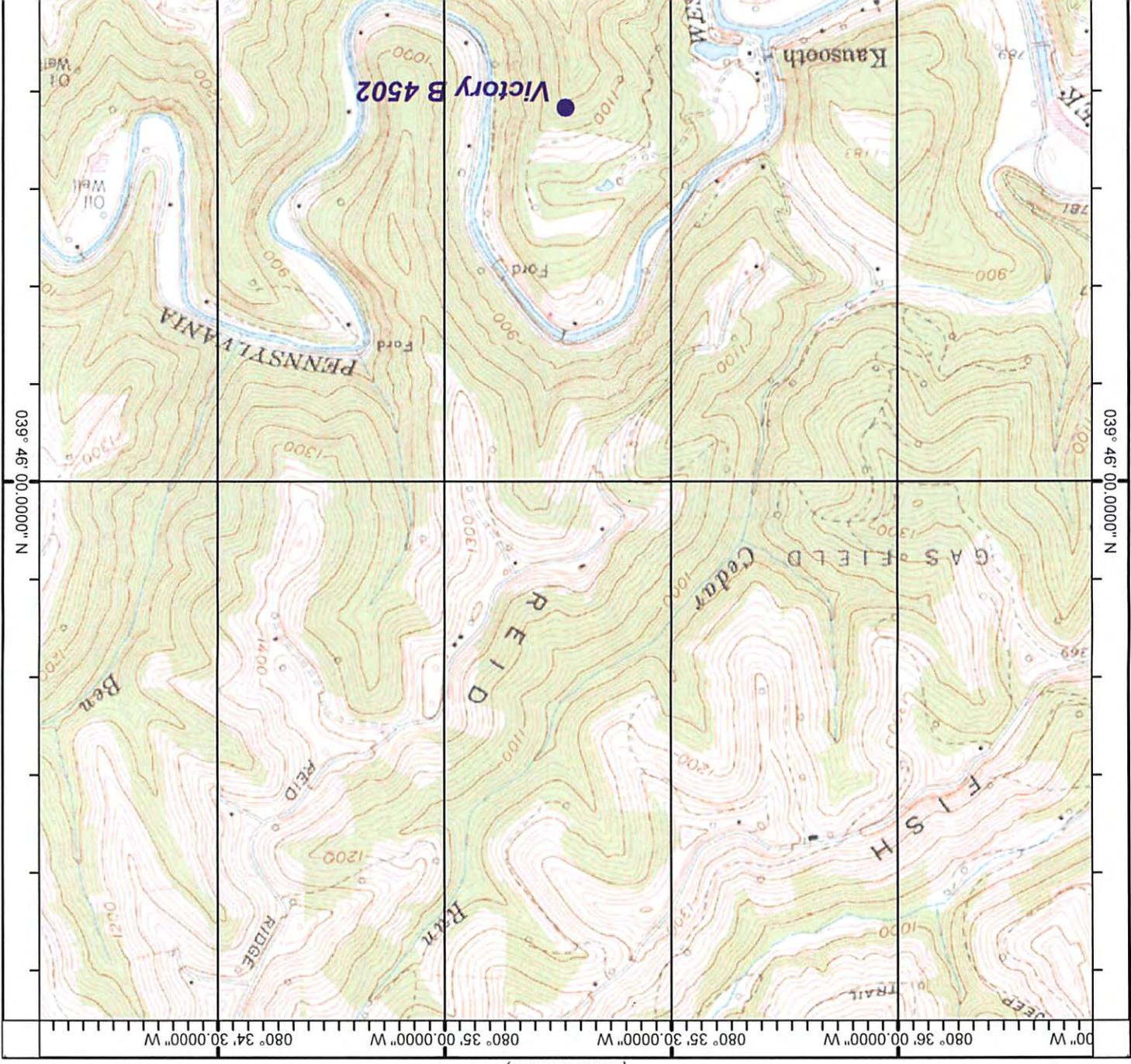
47-051-00320P

(MOUNDSVILLE)



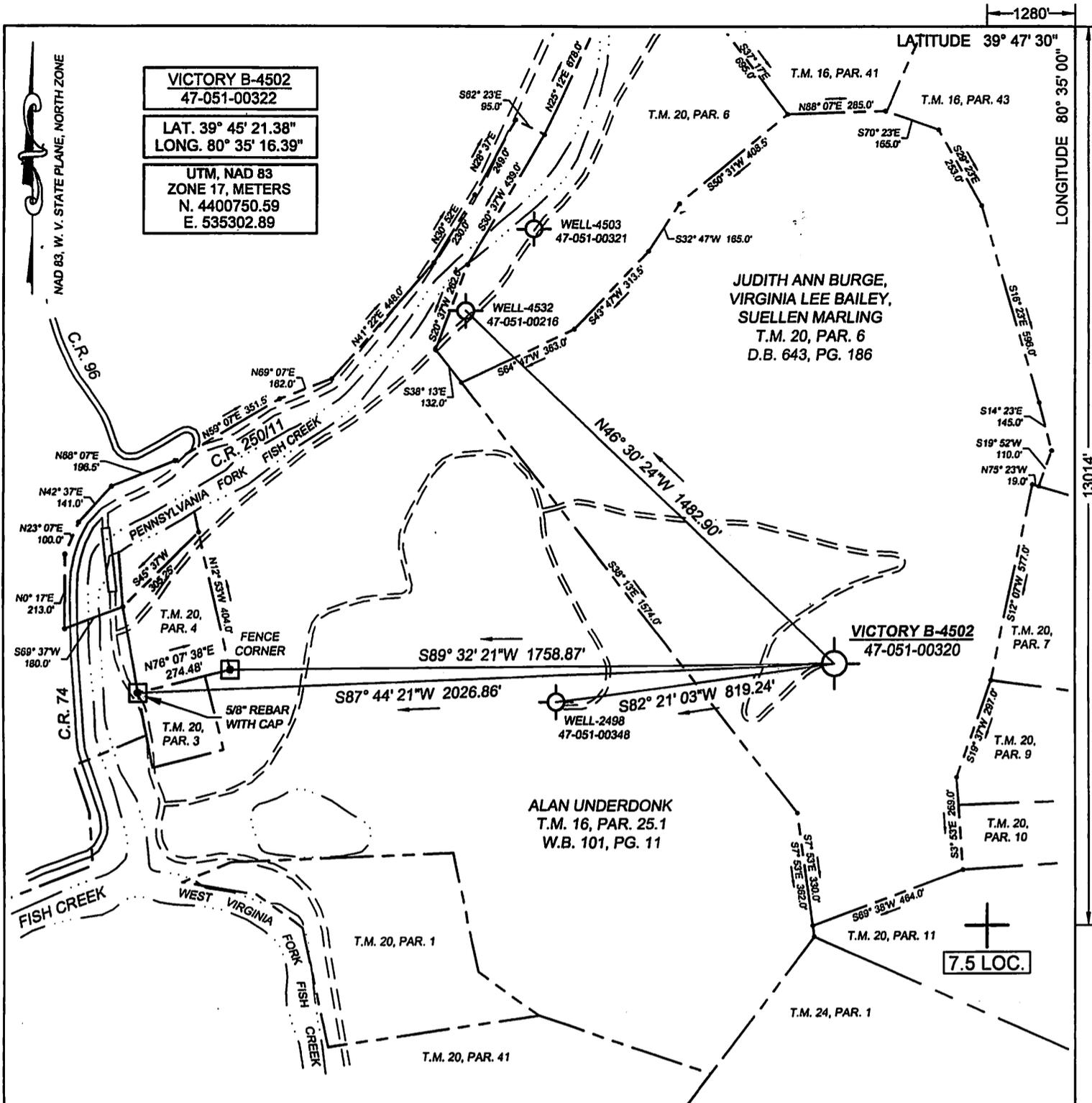
CAMERON QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(Outdoor Contour Map)



(GLEN EASTON)

(Outdoor Contour Map)



VICTORY B-4502
47-051-00322

LAT. 39° 45' 21.38"
LONG. 80° 35' 16.39"

UTM, NAD 83
ZONE 17, METERS
N. 4400750.59
E. 535302.89

JUDITH ANN BURGE,
VIRGINIA LEE BAILEY,
SUELLEN MARLING
T.M. 20, PAR. 6
D.B. 643, PG. 186

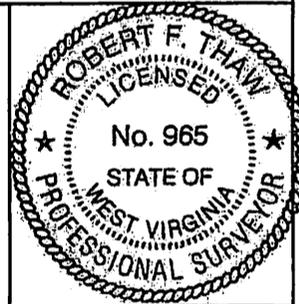
ALAN UNDERDONK
T.M. 16, PAR. 25.1
W.B. 101, PG. 11

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

FILE No 1701-2345-001-028
DRAWING No. VICTORY B-4502
SCALE 1"=400'
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. F. Thaw
ROBERT F. THAW PS #965



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

DATE MAY 18, 2018
OPERATOR'S WELL No. 4502
API WELL No. 47 051 - 00320P

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

LOCATION: ELEVATION 1213.0 WATER SHED FISH CREEK
DISTRICT LIBERTY COUNTY MARSHALL
QUADRANGLE CAMERON, WV

SURFACE OWNER JUDITH ANN BURGE, VIRGINIA LEE BAILEY, SUELLEN MARLING ACREAGE 50 AC.±
OIL & GAS ROYALTY OWNER JESSIE M. MARLING, ET AL / C.F. CONELLY, ET UX

LEASE ACREAGE 70 / 70 LEASE No. 3032058-000 / 3028902-000

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

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION BIG INJUN ESTIMATED DEPTH 2320
WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT JAMES AMOS
ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS P.O. BOX 1273, CHARLESTON W.V.
25325-1273 25325-1273