



**west virginia** department of environmental protection

Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

April 23, 2015

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-8300104, issued to COLUMBIA GAS TRANSMISSION, LLC, 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 all 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. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: 7425  
Farm Name: USA

**API Well Number: 47-8300104**

**Permit Type: Plugging**

Date Issued: 04/23/2015

## 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

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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.

8300104P

WW-4B  
Rev. 2/01

1) Date 2/5, 2015  
2) Operator's  
Well No. Glady 7425  
3) API Well No. 47-083 - 00104

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 X / Shallow       

5) Location: Elevation 975.5 m (3200.5 ft) Watershed Laurel Lick Run of Glady Fork  
District Dry Fork County Randolph Quadrangle Bowden, WV

6) Well Operator Columbia Gas Transmission, LLC 7) Designated Agent Paul Amick  
Address 1700 MacCorkle Ave SE Address 1700 MacCorkle Ave SE  
Charleston, WV 25325-1273 Charleston, WV 25325-1273

8) Oil and Gas Inspector to be notified Name Bill Hatfield  
Address PO Box 522  
Buckhannon, WV 26201  
9) Plugging Contractor Name Contractor Services Inc (CSI)  
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 "before P&A" and "proposed post P&A" wellbore schematics  
Kill well. Pull tubing, packer, and liner. Obtain cement bond log to determine cemented interval(s). Clean to TD and install bottom cement plug across storage perfs/zones. Install mechanical bridge plug above bottom cement plug. Cut and pull all casing that is free. If casing is not removed, and CBL indicates casing is not cemented, perforate and squeeze cement across driller shows and any intervals known to contain oil, gas, or water. If casing is removed exposing borehole, install cement plugs across subject intervals based on same criteria. Install cement plugs across all casing top stubs and casing shoes. Install top/surface plug. Grout conductor annulus. Cut off all remaining casing 24" below GL (requested by the US Forestry Service since wells are located in Monongahela National Forest) and install steel cap with API no. tack-welded on top. Note that 6% bentonite gel will be spotted between all cement plugs.

SET 200' CLASS A CEMENT PLUG FROM 3200' - 3000'

RECEIVED *gdm*  
Office of Oil and Gas

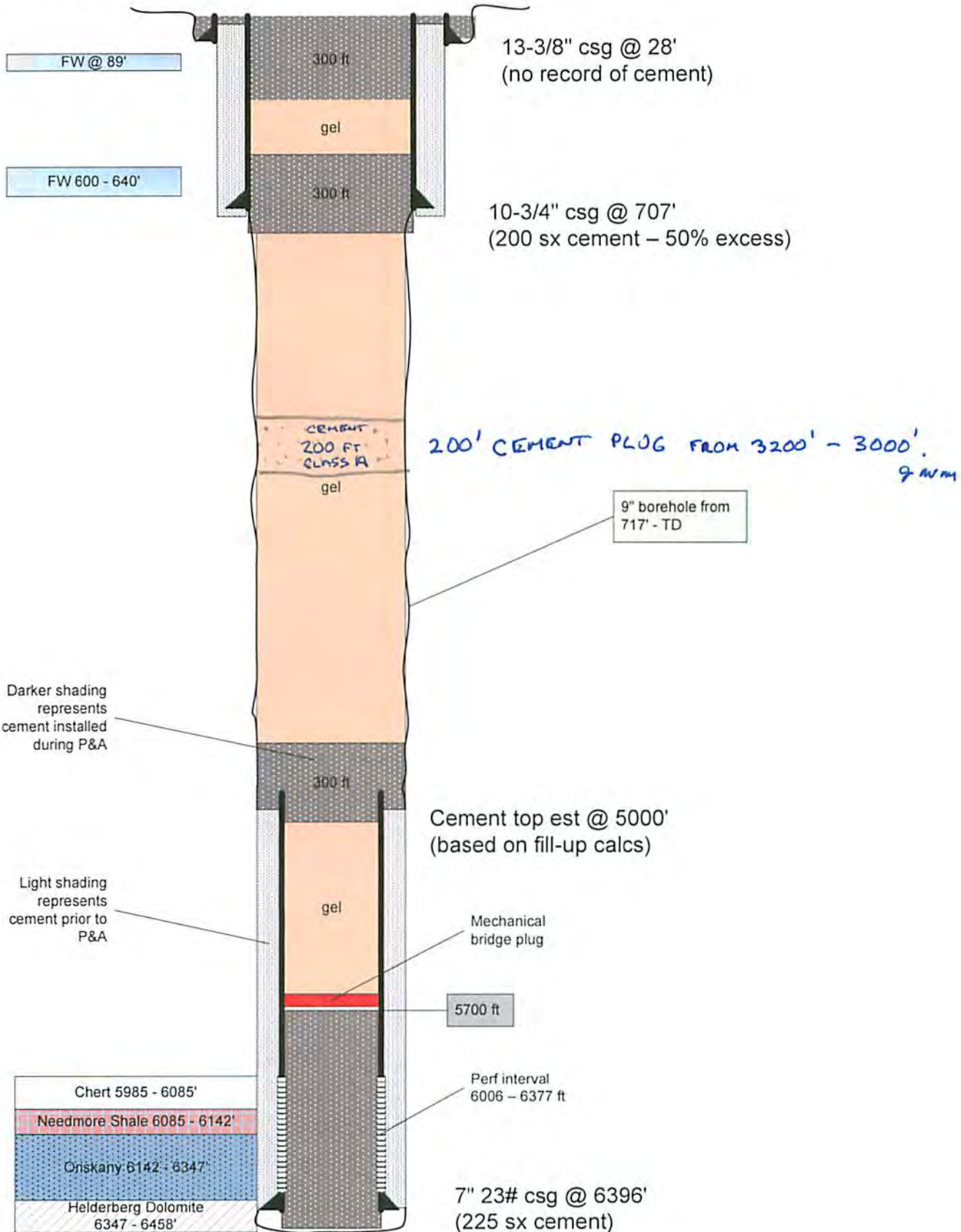
Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector *Debra O'Hara* Date 3-12-15

MAR 19 2015  
WV Department of  
Environmental Protection

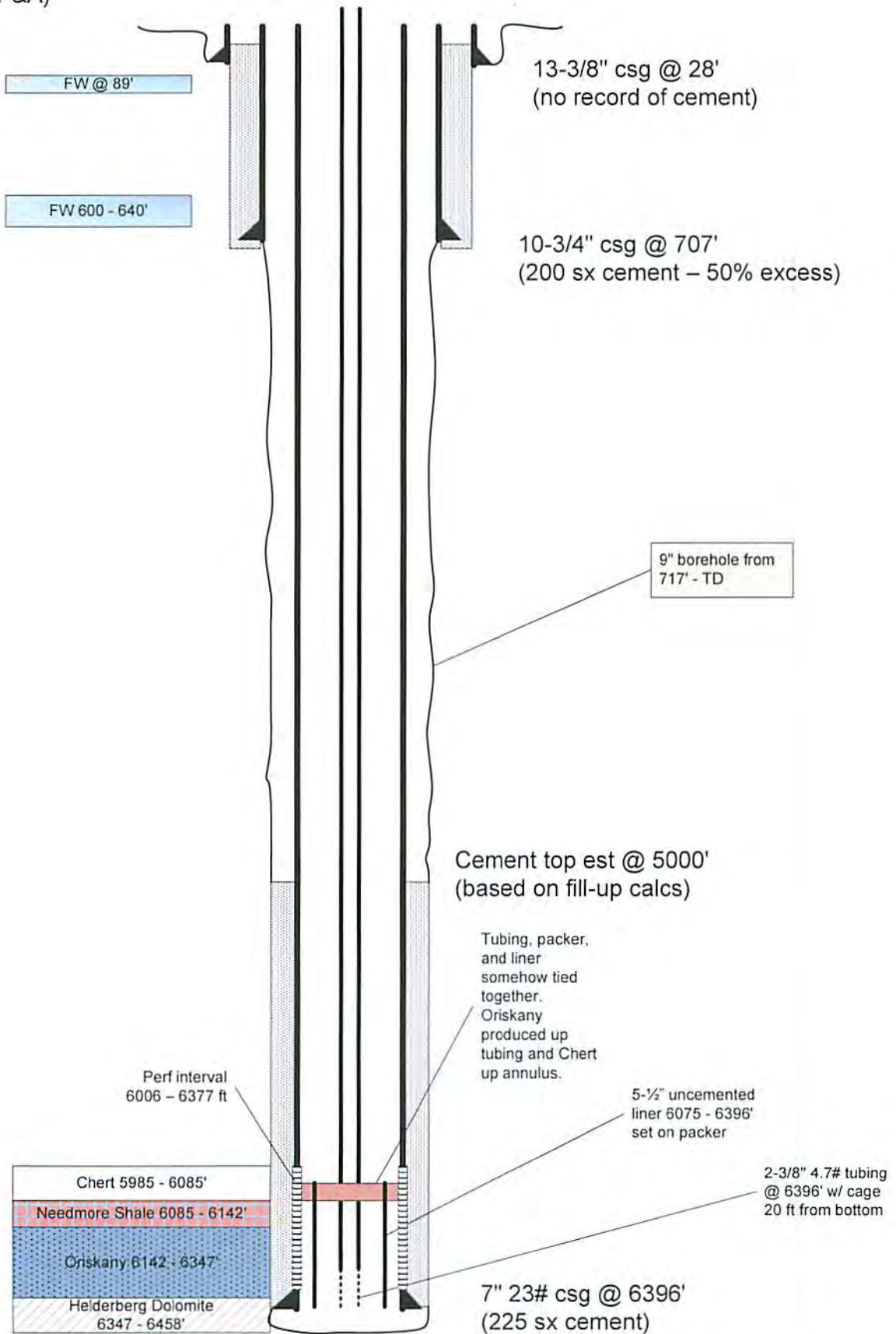
04/24/2015

GLADY 7425  
2/4/15  
(proposed post P&A)



TD 6410'

GLADY 7425  
2/4/15  
(prior to P&A)



TD 6410'



GLADY 7425

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Quadrangle Horton 5 SW

Permit No. RAN-104

WELL RECORD

Oil or Gas Well gas  
(KIND)

Company Columbian Carbon Company, Oper.  
Address Box 873, Charleston 23, W. Va.  
Farm United States of America Acres 1757  
Location (waters) Glady Fork  
Well No. K-1, GW-1301 Elev. 3176.22'  
District Dry Fork County Randolph  
The surface of tract is owned in fee by Director, Bureau of Land Management  
Interior Bldg. Address Washington 25, D. C.  
Mineral rights are owned by same  
Address \_\_\_\_\_

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
3/8" 48#	28'5"	28'5"	Parmaco Anchor
3/4" 32#	750'2"	750'2"	Size of 2-3/8"
5 3/16			Depth set 6075'
3			Perf. top _____
3/8" 4.7#	6435'9"	6435'9"	Perf. bottom _____
Liners Used w/ 2" cage 20' off btm.			Perf. top _____
5-1/2" 15#	321'3"	321'3"	Perf. bottom _____

Drilling commenced 4-27-59  
Drilling completed 6-1-59  
Date Shot not shot From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_  
Open Flow /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch  
Volume show Cu. Ft.  
Rock Pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
WELL ACIDIZED not acidized  
WELL FRACTURED see reverse side for fracturing record

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
see reverse side  
COAL WAS ENCOUNTERED AT none FEET \_\_\_\_\_ INCHES  
FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

RESULT AFTER TREATMENT Total gas 2,565,000 cu. ft. - Oriskany 2,186 MCF - Chert 379 MCF  
ROCK PRESSURE AFTER TREATMENT 4 das. Chert 1820# - Oriskany 1870#  
Fresh Water 89' 610' 635-40' Feet Salt Water \_\_\_\_\_ Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Soil			0	10			
Lime & Slate			10	180	F. water	89'	2 blrs/hr.
Lime			180	210			
Broken Lime			210	520			
Gritty Lime			520	600			
Sand			600	630	F. water		
Sand & Lime			630	668	F. water		
Slate & Shells			668	750			
Lime			750	1135			
Shale and Lime			1135	1330			
Lime			1330	1510			
Lime and Shale			1510	1775			
Lime			1775	1900			
Shale and Lime			1900	2615			
Shale			2615	3005			
Shale and Lime			3005	3160			
Shale			3160	4210			
Shale and Lime			4210	4365			
Shale			4365	4795			
Shale, Slate and Lime			4795	5030			
Shale			5030	5860			
Lime			5860	5985			
Chert			5985	6085			
Shale			6085	6142			
Oriskany			6142	6347			
Shale & Lime			6347	6410			
TOTAL DEPTH				6410'	Rotary=6396'	Landing Flange	

RECEIVED  
Office of Oil and Gas  
610'  
635-40'  
MAR 40 19 2015  
WV Department of Environmental Protection

04/24/2015

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks	
<u>CASING RECORD</u>								
5-12-59	10-3/4"	casing ran at	707'	DLM-cemented with	200 sacks			
6-4-59	7"	casing ran at 6396'	Landing Flange with guide shoe, 5 centralizers and differential fill	up collar-	cemented with 225 sacks.			
<u>Perforating and Fracturing Record</u>								
6-7-59	Perforated	Chert 6041-46'; 6037-39'; 6020-36'; 6006-20'	with 106 shots					
7-6-59	Ran 3"	tubing and set Baker Model A Packer at	5978'.					
7-8-59	Fractured the	Chert. Show of gas before fracturing. Pumped in 1,000 gallons MCA. Loaded tubing with 1302 gallons water with Tergitol. Broke down with 1,344 gallons water and Tergitol. Maximum pressure 3150#-broke to 2200#. Fractured with 10,240 gallons water and Tergitol with 15,000# 20-40 sand, Started sand at 1/2#/gallon. Increased sand to 1-3/4#/gallon at end of treatment. Pressure started at 2900#-held at 3700# when sand was cut off. Time 21 minutes - Injection rate 487 gpm. Flushed with 2310 gallons water and Tergitol. Pressure started at 3700#-went to 5600# maximum. Total 16,204 gallons of fluid - 160 gallons Tergitol-20 minutes after shut in had 1300# pressure.						
7-14-59	Cleaned out -	gas gauged 3/10 W. 3" = 164MCF	from Chert.					
7-15-59	Perforated	Oriskany as follows:						
	6324-77'	gas gauged 4/10 W. 3" = 190M	(164 MCF from Chert)					
	6290-95'	gas gauged 5/10 W. 3" = 212M	(164 MCF from Chert)					
	6272-75'	gas gauged 9/10 W. 3" = 285M	(164MCF from Chert)					
	6207-56'	gas gauged 10/10 W. 3" = 300M	(164 MCF from Chert)					
	6175-77'	Gas gauged 10/10 W. 3" = 300M	(164 MCF from Chert)					
	6141-57'	gas gauged 10/10 W. 3" = 300M	(164 MCF from Chert)					
7-21-59	Ran 3"	tubing and set packer at	6078'					
7-22-59	Fractured the	Oriskany. Ran 1,000 gallons mud acid. Used 86 barrels water to fill hole and breakdown. Breakdown pressure 3700#. Started sand at 1/2#/gallon-gradually increased to 1-1/4#/gallon. Ran 75 perf balls. Cut back on sand to 1/2#/gallon-gradually increased to 1#/gallon. Ran 33 more perf balls. Maximum treating pressure 3100#. Used 490 barrels water and sand, 21,400# 20-40 sand, 50 barrels water to flush with, 220 gallons Tergitol.						
Final open flow	Tubing (Oriskany)	gas gauged 39/10 M. 3"					2,186,000 cu. ft.	
	Braden Head (Chert)	gas gauged 16/10 W. 3"					379,000 cu. ft.	
Total all gas						2,565,000 cu. ft.		
4 day rock pressure	Braden Head (Chert)	1820# - Tubing (Oriskany)	1870#					

04/24/2015

Date August 17, 1959

APPROVED Columbian Carbon Co., Oper. Owner

By W. S. Moore, Mgr. of Prod.  
(Title)

Formation	Color	Hard or Soft	Top / 0	Bottom	Oil, Gas or Water	Depth Found	Remarks
<b>CASING RECORD</b>							
5-12-59	10-3/4"						casing ran at 707' DLM-cemented with 200 sacks.
6-4-59	7"						casing ran at 6396' Landing Flange with guide shoe, 5 centralizers and differential fill up collar - cemented with 225 sacks.
<b>Perforating and Fracturing Record</b>							
6-7-59							Perforated Chert 6041-46'; 6037-39'; 6020-36'; 6006-20' with 106 shots
7-6-59							Ran 3" tubing and set Baker Model A Packer at 5978'
7-8-59							Fractured the Chert. Show of gas before fracturing. Pumped in 1,000 gallons MCA. Loaded tubing with 1302 gallons water with Tergitol. Broke down with 1344 gallons water and Tergitol. Maximum pressure 3150#-broke to 2200#. Fractured with 10,240 gallons water and Tergitol with 15,000# 20-40 sand. Started sand at 1/2#/gallon. Increased sand to 1-3/4#/gallon at end of treatment. Pressure started at 2900#-held at 3700# when sand was cut off. Time 21 minutes - injection rate 487 gpm. Flushed with 2310 gallons water and Tergitol. Pressure started at 3700#-went to 5600# maximum. Total 16,204 gallons of fluid - 160 gallons Tergitol-20 minutes after shut in had 1300# pressure.
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	Final open flow Tubing (Oriskany)						gas gauged 39/10 M. 3" 2,186,000 cu. ft.
	Braden Head (Chert)						gas gauged 16/10 W. 3" 379,000 cu. ft.
	Total all gas						2,565,000 cu. ft.
4 day rock pressure	Braden Head (Chert)						1820# - Tubing (Oriskany) 1870#

04/24/2015

Date August 17, 19 59

APPROVED Columbian Carbon Co. Oper., OwnerBy W. S. Moore, Mgr. of Prod.  
(Title)



WW-4A  
Revised 6-07

1) Date: 2/5/15  
2) Operator's Well Number  
Glady 7425  
3) API Well No.: 47 - 083 - 00104

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

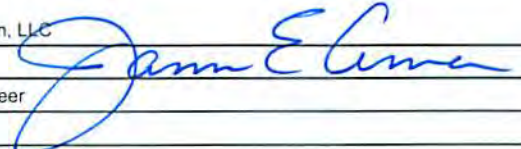
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>US Dept of Interior (managed by BLM)</u>	Name <u>not operated</u>
Address <u>626 East Wisconsin Ave Suite 200</u>	Address _____
<u>Milwaukee, WI 53202-4617</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Bill Hatfield</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 522</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-767-1828</u>	_____

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

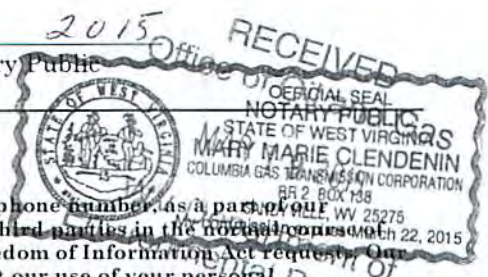
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

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 E Amos   
 Its: Senior Well Services Engineer  
 Address 1700 MacCorkle Ave SE  
Charleston, WV 25325-1273  
 Telephone 304-483-0073

Subscribed and sworn before me this 9th day of March 2015  
Mary Marie Clendenin Notary Public  
 My Commission Expires 3/22/2015



**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](mailto:depprivacyofficer@wv.gov).

04/24/2015

Note that this well is located in the Monongahela National Forest. The surface owner is the US Dept of Interior, and is managed by the BLM and US Forestry Service. Both parties have already approved the proposed well work per the enclosed BLM Sundry Notices and Reports on Wells dated 3/6/15, and USFS Condition of Approval dated 2/20/15. Columbia requests that the 15 day comment period be waived, and the well work permit be issued at the DEP's earliest convenience.

**SURFACE OWNER WAIVER**

Operator's Well Number

Glady 7425

**TO SURFACE OWNERS NAMED ON PAGE WW4-A**

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.  
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON  
ETC.

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Office of Oil and Gas  
MAR 19 2015  
FOR EXECUTION BY A CORPORATION,  
WV Department of  
Environmental Protection

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name  
By  
Its

Signature Date 04/24/2015

## Revisions to Operator-Submitted EC Data for Sundry Notice #293231

	<b>Operator Submitted</b>	<b>BLM Revised (AFMSS)</b>
Sundry Type:	ABD NOI	VARI NOI
Lease:	WVBLMA023190A	UNLEASED
Agreement:	WVES39982	WVES39982 (WVES39982)
Operator:	COLUMBIA GAS TRANSMISSION, LLC 1700 MACCORKLE AVE SE CHARLESTON, WV 25325-1273 Ph: 304-357-3445	COLUMBIA GAS TRANSMISSION LLC 1700 MACCORKLE AVE SE CHARLESTON, WV 25325-1273 Ph: 304.373.2412 Fx: 304-373-2438
Admin Contact:	JAMES E AMOS SENIOR ENGINEER E-Mail: jamos@nisource.com Cell: 304-483-0073 Ph: 304-373-2412 Fx: 304-357-2438	JAMES E AMOS SENIOR ENGINEER E-Mail: jamos@nisource.com Cell: 304-483-0073 Ph: 304-373-2412 Fx: 304-373-2438
Tech Contact:	JAMES E AMOS SENIOR ENGINEER E-Mail: jamos@nisource.com Cell: 304-483-0073 Ph: 304-373-2412 Fx: 304-357-2438	JAMES E AMOS SENIOR ENGINEER E-Mail: jamos@nisource.com Cell: 304-483-0073 Ph: 304-373-2412 Fx: 304-373-2438
Location:		
State:	WV	WV
County:	RANDOLPH	RANDOLPH
Field/Pool:	GLADY STORAGE FIELD	GLADY
Well/Facility:	GLADY 7425 38.876336 N Lat, 79.635115 W Lon	7425 Tract US-26F 38.876400 N Lat, 79.635400 W Lon

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MAR 19 2015  
WV Department of  
Environmental Protection  
04/24/2015

7425  
47-083-00104  
**Columbia Gas Transmission, LLC**  
WVES 39982  
February 20, 2015  
**Conditions of Approval**

1. Contact Jim Wood or Julie King, BLM inspectors, a minimum of 72 hours prior to starting abandoning operations.
2. \*\*Variance to Onshore Order 2 III.G.9. A minimum of a 8.6 ppg fluid shall be pumped in between plugs.
3. BLM may direct you to test critical/questionable plugs by tagging with the working pipe string.
4. Within 30 days after you finish plugging the well, send BLM a final Sundry Notice Form 3160-5 summarizing the actual downhole work performed, the dates the work was started and completed, and the status of reclamation activities.

**USFS Final Reclamation Requirements**

- 1) Removal of all surface structures, tanks, fence and signs.
- 2) Collection and storage of all drill and produced fluids into tanks.
- 3) Proper disposal of all fluids off National Forest System Lands. Land application is not permitted.
- 4) All pipe/wellhead casing removed down to ground level or below ground as applicable.
- 5) Re-contour the well pad/site to original contour line as practicable or as directed by responsible Forest official.
- 6) The contractor shall provide portable toilets for use during plugging/abandonment and reclamation activities.
- 7) Gathering line(s) to be left in place and welded closed.
- 8) All access roads will be maintained as necessary during the reclamation. After reclamation activities at the well sites have been completed, any Forest Service System road into the well site, for which the operator has been responsible for maintenance activities, shall be reshaped to remove potholes and ruts and to establish proper crowning. All drainage structures including culverts, ditches and dips shall be cleaned, reshaped, or repaired as necessary for proper drainage. Stone or other suitable materials shall be provided as necessary to complete the reshaping and repair activities, as determined by the U.S. Forest Service.
- 9) Prior to commencement of activities, the operator shall provide site specific erosion control plans, for the area of disturbance associated with each activity, to the U.S. Forest Service for review and acceptance. The erosion control plan shall show all silt-fence,

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U.S. Forest Service  
Department of  
Environmental Protection  
04/24/2015

straw bales and other erosion control devices to be used to prevent erosion and to prevent sediment from escaping the work area, and shall show their respective locations. All trapped sediment shall be properly disposed of and all erosion control devices shall be removed from National Forest System Lands upon completion of the reclamation process.

- 10) Earth disturbing/re-contouring activities are to be completed by the end of the normal operating season which is November 15.
- 11) Contact the FS at least 48 hours prior to commencing reclamation measures.
- 12) No trees over 5" DBH shall be cut between March 31<sup>st</sup> and November 15<sup>th</sup> without prior Forest Service Approval.
- 13) Addition of organics to the soil and break up of ground compaction may be required to obtain satisfactory re-vegetation. All organics, to be used in the reclamation process, must be approved prior to being brought onto Forest property.
- 14) All non-system Forest Service roads associated with the well site shall be de-compacted and reshaped to match existing ground contours as part of the reclamation process.
- 15) The well site monument will be surveyed, placed at least 2-3 feet below the final ground surface, and located using GPS.
- 16) Use the following enclosed seed mix, lime, fertilizer and straw mulch rates and amounts listed below.

### **SEEDMIX**

Winter Wheat (June 15-Nov. 15) or Spring Wheat (Feb15 – June 15) – 40 lbs./acre  
 Alfalfa (pre inoculated) – 10 lbs./acre  
 Durana Clover (pre inoculated) – 2 lbs./acre  
 Mammoth Red Cover (pre inoculated) – 5 lbs./acre  
 Chicory – 3 lbs./acre

**Total seeding will be 60 lbs./acre.**

### **MULCH-**

Weed free straw

### **FERTILIZER-**

Use 10-20-10, at 500 lbs./acre

### **LIME**

Lime pellets at 3 tons/acre

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

5. Lease Serial No.  
**UNLEASED**

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

7. If Unit or CA/Agreement, Name and/or No.  
**WVES39982**

8. Well Name and No.  
**7425**

9. API Well No.  
**47-083-00104-00-S1**

10. Field and Pool, or Exploratory  
**GLADY**

11. County or Parish, and State  
**RANDOLPH COUNTY, WV**

1. Type of Well  
 Oil Well  Gas Well  Other: **UNKNOWN OTH**

2. Name of Operator **COLUMBIA GAS TRANSMISSION LLC** Contact: **JAMES E AMOS**  
-Mail: **jamos@nisource.com**

3a. Address  
**1700 MACCORKLE AVE SE  
CHARLESTON, WV 25325-1273**

3b. Phone No. (include area code)  
**Ph: 304-373-2412  
Fx: 304-373-2438**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**Tract US-26F  
38.876400 N Lat, 79.635400 W Lon**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Onshore Order Variance
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Project to be performed between 4/1/15 - 11/15/15.  
Duration: +/- 45 days.

P&A Procedure:  
\* refer to "before P&A" and "proposed post P&A" wellbore schematics  
\* method of P&A to comply with WV DEP Office of Oil & Gas regulations/code

1. Kill well.
2. Pull tubing.
3. Obtain cement bond log to determine cemented interval(s).
4. Clean to TD and install bottom cement plug across storage perms/zone(s).
5. Install mechanical bridge plug above bottom cement plug.

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #293231 verified by the BLM Well Information System  
For COLUMBIA GAS TRANSMISSION LLC, sent to the Milwaukee  
Committed to AFMSS for processing by CAROL VAN RYZIN on 02/27/2015 (15CVR0022SE)**

Name (Printed/Typed) <b>JAMES E AMOS</b>	Title <b>SENIOR ENGINEER</b>
Signature (Electronic Submission)	Date <b>02/26/2015</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By <b>TREY MITCHELL</b>	Title <b>PETROLEUM ENGINEER</b>	Date <b>03/06/2015</b>
----------------------------------	---------------------------------	------------------------

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Milwaukee

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**Additional data for EC transaction #293231 that would not fit on the form****32. Additional remarks, continued**

6. Cut and pull all casing that is free.
7. Perforate and squeeze cement any casing that can't be pulled across driller shows.
8. Install cement plugs across all driller shows, casing stub tops, and casing shoes.
9. Install top/surface cement plug.
10. Grout conductor annulus.
11. Cut off all casing remaining 24" below GL (per US Forestry Service).

\* Note that 8.6 ppg 6% bentonite gel will be spotted between all cement plugs. See request for waiver below.

---

COLUMBIA IS RESUBMITTING THIS SUNDRY NOTICE PER DIRECTION FROM MR. TREY MITCHELL (BLM ENGINEER) SEEKING RE-APPROVAL WITH THE FOLLOWING WAIVER.

THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION - OFFICE OF OIL & GAS, REQUIRES THAT ALL SPACERS BETWEEN CEMENT PLUGS BE FRESH WATER BASED. ONSHORE OIL & GAS ORDER(S) REQUIRE SPACERS TO HAVE A MINIMUM DENSITY OF 9.0 PPG. BASED ON TYPICAL DRILLING AND WELL SERVICING FLUIDS RHEOLOGY, IN ORDER TO ATTAIN A SPACER FLUID WITH A DENSITY OF 9.0 PPG (OR GREATER) THAT WILL MAINTAIN DENSITY OVER AN EXTENDED PERIOD OF TIME, A SALT COMPONENT IS REQUIRED. PER AN EXPLANATION PROVIDED BY THE WV DEP, SALT (NaCl, KCl, CaCl, etc) IS NOT PERMITTED IN THE SPACER BECAUSE OF THE POSSIBILITY FOR CONTAMINATION OF FRESH WATER STRATA.

DUE TO THE CONFLICTING REGULATORY REQUIREMENTS DESCRIBED ABOVE, COLUMBIA IS REQUESTING A WAIVER FROM THE BLM TO UTILIZE 8.6 PPG 6% BENTONITE GEL SPACERS BASED ON THE FOLLOWING JUSTIFICATION. ACCORDING TO WELL RECORDS AND A +50 YEAR HISTORY OF OPERATING IN THE GLADY STORAGE FIELD, COLUMBIA HAS NO DATA TO SUGGEST THAT PORE PRESSURE GRADIENTS EXCEED 0.447 PSI/FT (8.6 PPG EQUIVALENT). THIS INFO WAS PRESENTED TO MR. MITCHELL VIA TELEPHONE CONVERSATION ON 2/26/15, AND AFTER DISCUSSIONS, WAS DETERMINED SHOULD BE ADEQUATE SUPPORT TO GRANT THE WAIVER AND RE-APPROVE THE SUNDRY NOTICE.

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**GOVERNMENT CONTACTS**

Bureau of Land Management (BLM)  
Northeastern States Field Office  
626 East Wisconsin Ave., Suite 200  
Milwaukee, Wisconsin 53202-4617

<b>Name</b>	<b>Agency/Title</b>	<b>Office Phone</b>	<b>Mobile Phone</b>
Jim Wood	BLM/Engineering Technician	(740) 373-5029	(414) 573-4548
Julie King	BLM/Engineering Technician		(985)-856-6296
Will Wilson	FS/Minerals Administrator	(304) 636-1800 Ext 275	-

**TAM 022015**

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8300104P



Re: Glady Well 7468

William Timmermeyer to: Arbogast, Chad H -FS

Cc: Jim Amos, Jason Chambers

02/20/2015 10:18 AM

Follow Up: Normal Priority.

History: This message has been replied to and forwarded.

Thank you for the clarification.

Sent from my iPhone

On Feb 20, 2015, at 10:17 AM, Arbogast, Chad H -FS <[charbogast@fs.fed.us](mailto:charbogast@fs.fed.us)> wrote:

The washing of the equipment is geared more toward earth moving equipment such as dozers, excavators, rubber-tired hoes etc. The vehicles should be washed prior to the initial entrance, and rewashed if they are used elsewhere and get coated in heavy soil such as mud in the fender wells, around the bumper, in the undercarriage, etc.

Also, the equipment should be washed when changing areas within the Forest, such as moving from one well pad to another which is not in an adjacent location. The vehicles that are mainly road vehicles are not as great a concern so long as there is no build-up of soil underneath or on the vehicle.

Chad

<M2.png> **Chad Arbogast**  
**Forest Minerals Technician/Greenbrier District Range Manager**  
**Forest Service**  
Monongahela National Forest  
p: 304-456-3335 x121  
f: 304-456-3441  
[charbogast@fs.fed.us](mailto:charbogast@fs.fed.us)  
P.O. box 67 Route 250/92  
Bartow, WV 24920  
[www.fs.fed.us](http://www.fs.fed.us)  
<M3.png><M4.png><M5.png>  
Caring for the land and serving people

**From:** [wtimmermeyer@nisource.com](mailto:wtimmermeyer@nisource.com) [mailto:[wtimmermeyer@nisource.com](mailto:wtimmermeyer@nisource.com)]

**Sent:** Thursday, February 19, 2015 12:53 PM

**To:** Arbogast, Chad H -FS

**Cc:** [jamos@nisource.com](mailto:jamos@nisource.com); [jchambers@nisource.com](mailto:jchambers@nisource.com)

**Subject:** RE: Glady Well 7468

Chad,

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05115951  
600

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM  
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Columbia Gas Transmission, LLC OP Code 307032

Watershed Laurel Lick Run of Gladly Fork Quadrangle Bowden, WV

Elevation 975.5 m (3200.5 ft) County Randolph District Dry fork

Description of anticipated Pit Waste: fresh water, starch, polymer, bentonite, cement returns

Will a synthetic liner be used in the pit? yes - 30 mil

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number 34-119-28776, 34-167-23862, 34-121-2459 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Pinegrove Landfill - Amanda, OH)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain \_\_\_\_\_)
- Swabbing
- Plugging

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

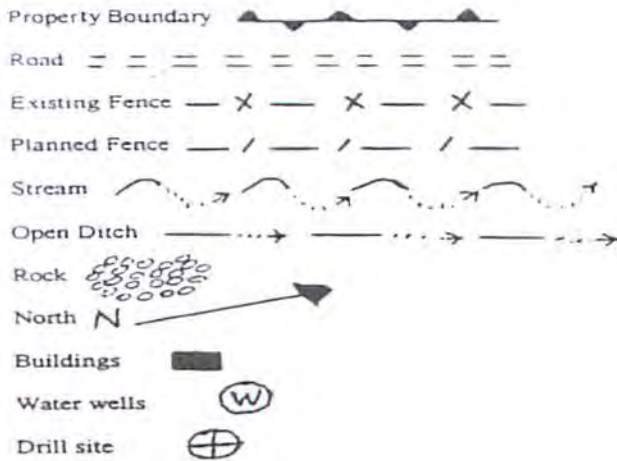
Company Official Signature James E Amos  
Company Official (Typed Name) James E Amos  
Company Official Title Senior Well Services Engineer

Subscribed and sworn before me this 9th day of March, 20 15

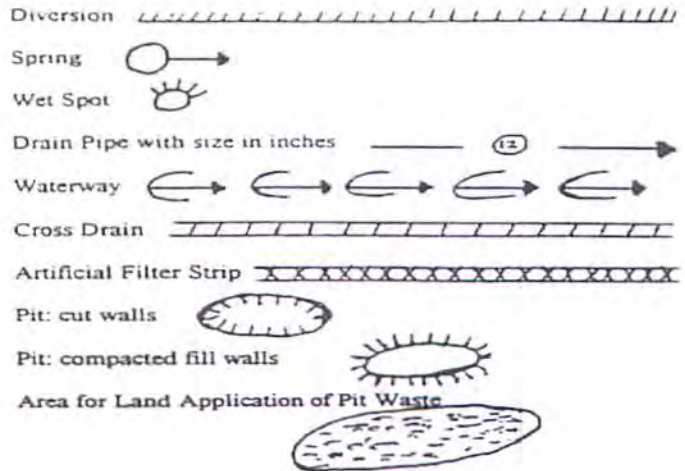
Mary Marie Clendenen

My commission expires 3/22/2015

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MAR 19 2015  
WV Department of Environmental Protection  
OFFICIAL SEAL  
NOTARY PUBLIC  
STATE OF WEST VIRGINIA  
MARY MARIE CLENDENEN  
COLUMBIA GAS TRANSMISSION CORPORATION  
SANDVILLE, WV 25275  
My commission expires March 22, 2015  
04/24/2015



LEGEND



Proposed Revegetation Treatment: Acres Disturbed < 0.5 acre Prevegetation pH 6.0

Lime pellets @ 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-10 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch weed free straw @ 2 Tons/acre

*\* Note that fertilizer, lime, mulch, seed mix, and application rates determined by US Forestry Service.*

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Winter Wheat (6/15 - 11/15)	40	Durana Clover (pre-inoculated)	2
Spring Wheat (2/15 - 6/15)	40	Mammoth Red Clover (pre-inoculated)	5
Alfalfa (pre-inoculated)	10	Chicory	3

\* total seeding will be @ 60 lb/acre

Attach:  
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bryan O'Hara

Comments: \_\_\_\_\_

Title: \_\_\_\_\_

Date: 3-12-15

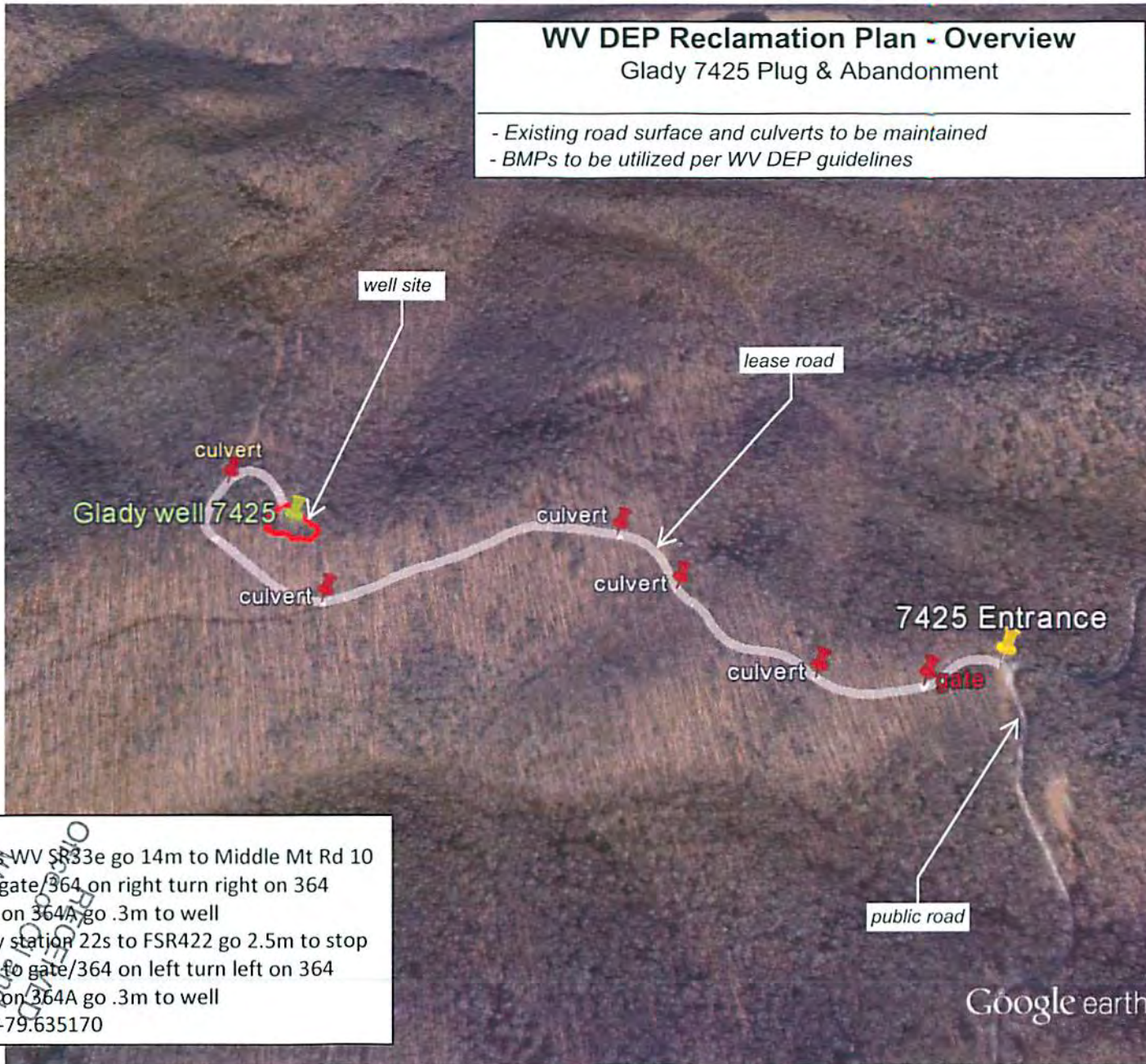
Field Reviewed? ( ) Yes ( X ) No

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# WV DEP Reclamation Plan - Overview

## Glady 7425 Plug & Abandonment

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



### Directions

Option 1 From Elkins WV SR33e go 14m to Middle Mt Rd 10 turn right go 1.6m to gate/364 on right turn right on 364 go .4m @Y bear right on 364A go .3m to well

Option 2 From Glady station 22s to FSR422 go 2.5m to stop sign turn left go 9.5m to gate/364 on left turn left on 364 go .4m @Y bear right on 364A go .3m to well

GPS well 38.876384 -79.635170

Google earth

feet 2000  
meters 700

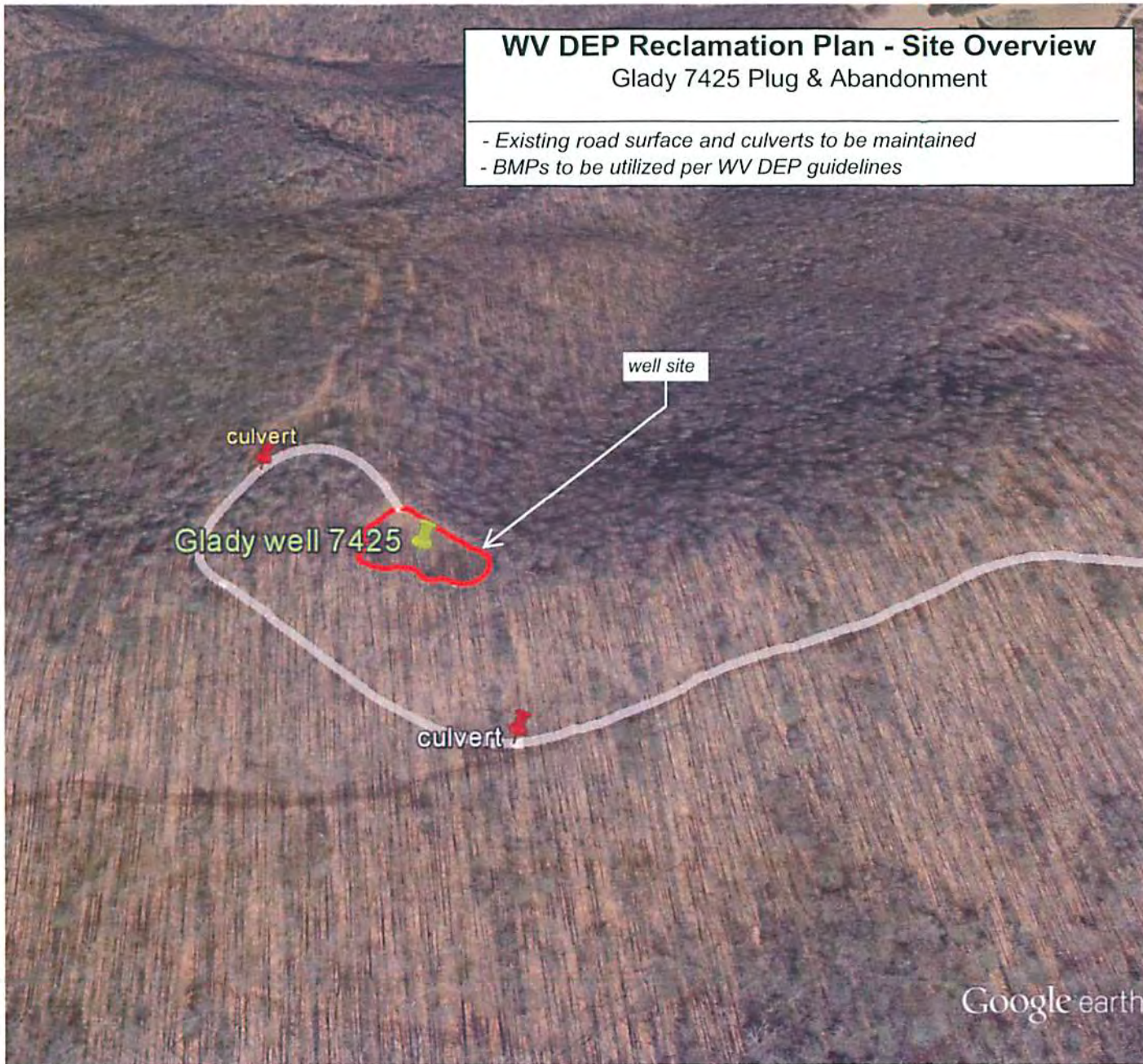


8300104P

# WV DEP Reclamation Plan - Site Overview

## Glady 7425 Plug & Abandonment

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



Google earth



83001049

# WV DEP Reclamation Plan - Site Detail

## Glady 7425 Plug & Abandonment

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

lease road

Limit of Disturbance - to be confined to pre-disturbed area

proposed location of earthen pit

120 ft

230 ft

Glady well 7425

\* less than 5 degree slope within LOD

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MAR 19 2015  
11:41 AM  
C:\Users\GDS

Google earth

Google earth



8300104P

WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas  
**WELL LOCATION FORM: GPS**

API: 47-083-00104 WELL NO.: 7425

FARM NAME: US Dept of Interior

RESPONSIBLE PARTY NAME: Columbia Gas Transmission, LLC

COUNTY: Randolph DISTRICT: Dry Fork

QUADRANGLE: Bowden, WV

SURFACE OWNER: US Dept of Interior

ROYALTY OWNER: US Dept of Interior (storage lease)

UTM GPS NORTHING: 4303938.8 m

UTM GPS EASTING: 618395.6 m GPS ELEVATION: 975.5 m (3200')

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:  
Survey grade GPS  : Post Processed Differential

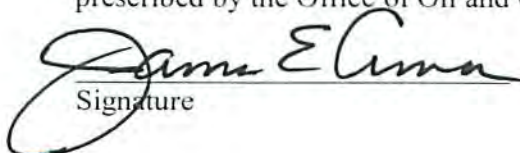
Real-Time Differential

Mapping Grade GPS  : Post Processed Differential

Real-Time Differential

- Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

  
Signature

Senior Engineer  
Title

1/27/15  
Date

WW-4B

API No. 083-00104  
Farm Name US Dept of Interior  
Well No. Gladys 7425

\* Coal not operated

**INSTRUCTIONS TO COAL OPERATORS  
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

**WAIVER**

The undersigned coal operator \_\_\_\_/ owner \_\_\_\_/ lessee \_\_\_\_/ of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Its \_\_\_\_\_

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Environmental Protection

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

March 18, 2015

WV DEP – Office of Oil & Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304-2345

Enclosed are plugging applications for six storage wells in Columbia's Gladly Storage Field.

Note that these wells are located in the Monongahela National Forest. The surface owner is the US Department of Interior, and is managed by the Federal Bureau of Land Management (BLM) and the US Forestry Service (USFS). Both parties have already approved the proposed work per the enclosed BLM Sundry Notices and Reports on Wells and the USFS Condition of Approval documents. Neither agency wants a copy of the WV DEP – Office of Oil & Gas permit package. Therefore, Columbia requests that the 15-day comment period be waived, and the well work permits be issued at the DEP's earliest convenience.

If you have questions, feel free to call.

Regards,

A handwritten signature in black ink that reads "Jim Amos". The signature is fluid and cursive, with the first and last letters of the first and last names being capitalized and prominent.

Jim Amos  
Senior Well Services Engineer  
Columbia Pipeline Group

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