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 28, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-8300100, 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 penalities 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: 7435
Farm Name: HILL, D. H. & A. CONSO
API Well Number: 47-8300100
Permit Type: Plugging
Date Issued: 04/28/2015

Promoting a healthy environment.

8300100 P

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.

8300100P

OFFSET MARKER

The Office of Oil and Gas is ~~considering~~ granting a general variance to the requirements under 35CSR4-5.5b of erecting a monument upon the plugging of certain wells. If granted, the following conditions will be met:

1) the well will be surveyed and a plat constructed as required under 22-6 of the WV Code and 35CSR4,
2) a readily visible, permanent offset marker, in as close proximity as reasonably possible, will be erected and will provide distance and bearing information to the plugged well,
3) the plugging affidavit (form WR-38), will document the absence of a monument at the well location and document the existence and location of the offset marker,
4) a steel plate no smaller that one square foot shall be affixed to the well casing no deeper than three feet below the ground surface and be inscribed with the api number of the well.

To qualify under the general variance, an operator may make a variance request to the Chief of the Office of Oil and Gas for a specific well(s) in conjunction with a showing of good cause by the surface owner.

- SET MARKER AT BASE OF A SLOPE, IF POSSIBLE, TO HELP PROTECT IT FROM HARM.
- PAINT MARKER AN ENVIRONMENTALLY FRIENDLY SHADE OF GREEN.

JWM

8300100P

WW-4B
Rev. 2/01

1) Date 2/5, 2015
2) Operator's Well No. Glady 7435
3) API Well No. 47- 083 - 00100

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 969.3 m (3180.1 ft) Watershed White Run of East Fork of Glady Fork
District Dry Fork County Randolph Quadrangle Glady, WV

6) Well Operator Columbia Gas Transmission, LLC
Address 1700 MacCorkle Ave SE
Charleston, WV 25325-1273

7) Designated Agent Paul Amick
Address 1700 MacCorkle Ave SE
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. 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 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.

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WV Department of
Environmental Protection

- SET 200' CLASS A CEMENT PLUG FROM 2500' TO 2300'.
- TAG ALL CEMENT PLUGS, ADD CEMENT IF NEEDED.
- MUST SET AN OFFSET MARKER.

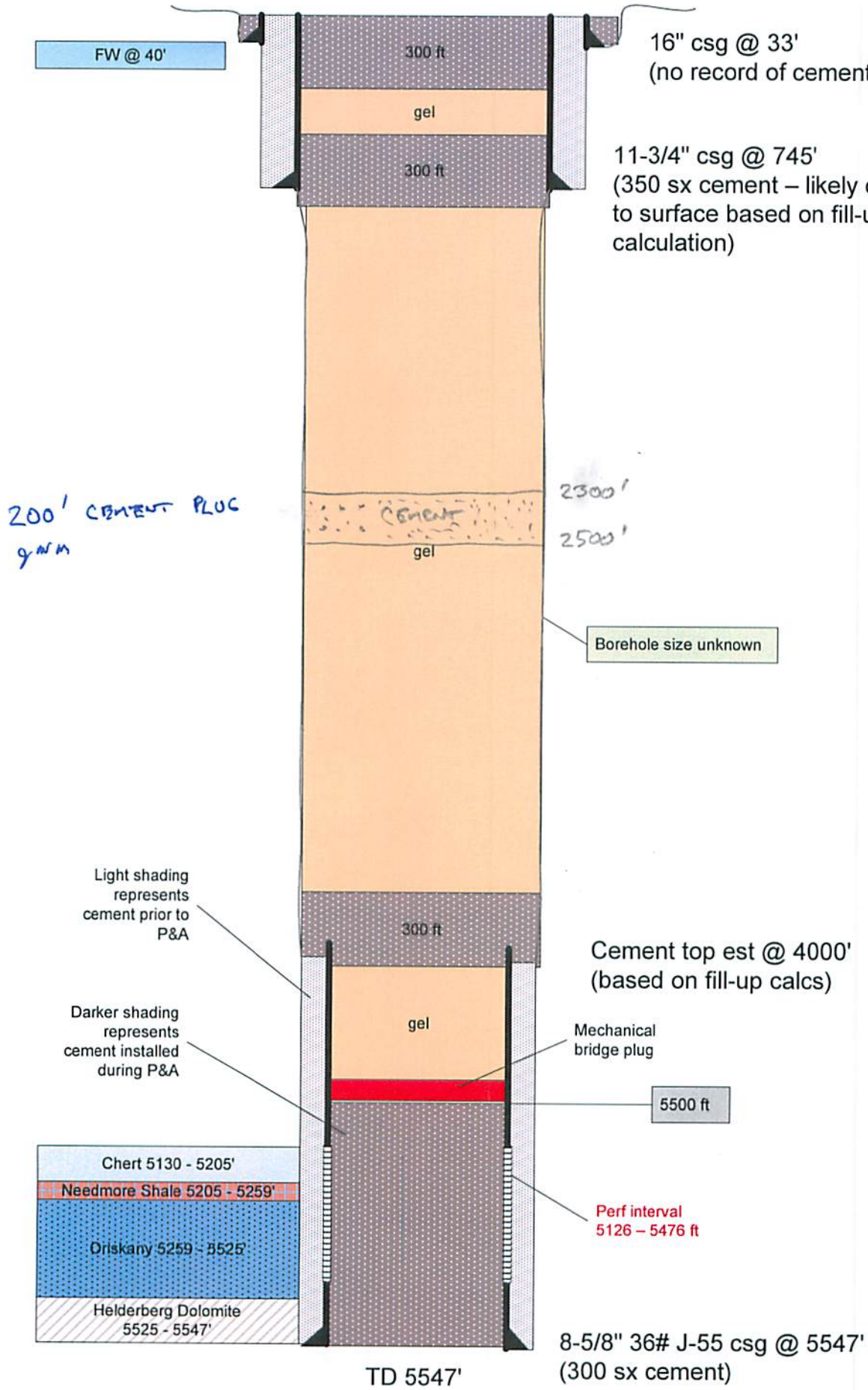
JAM

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

Work order approved by inspector Bryan O'Hern Date 3-12-15

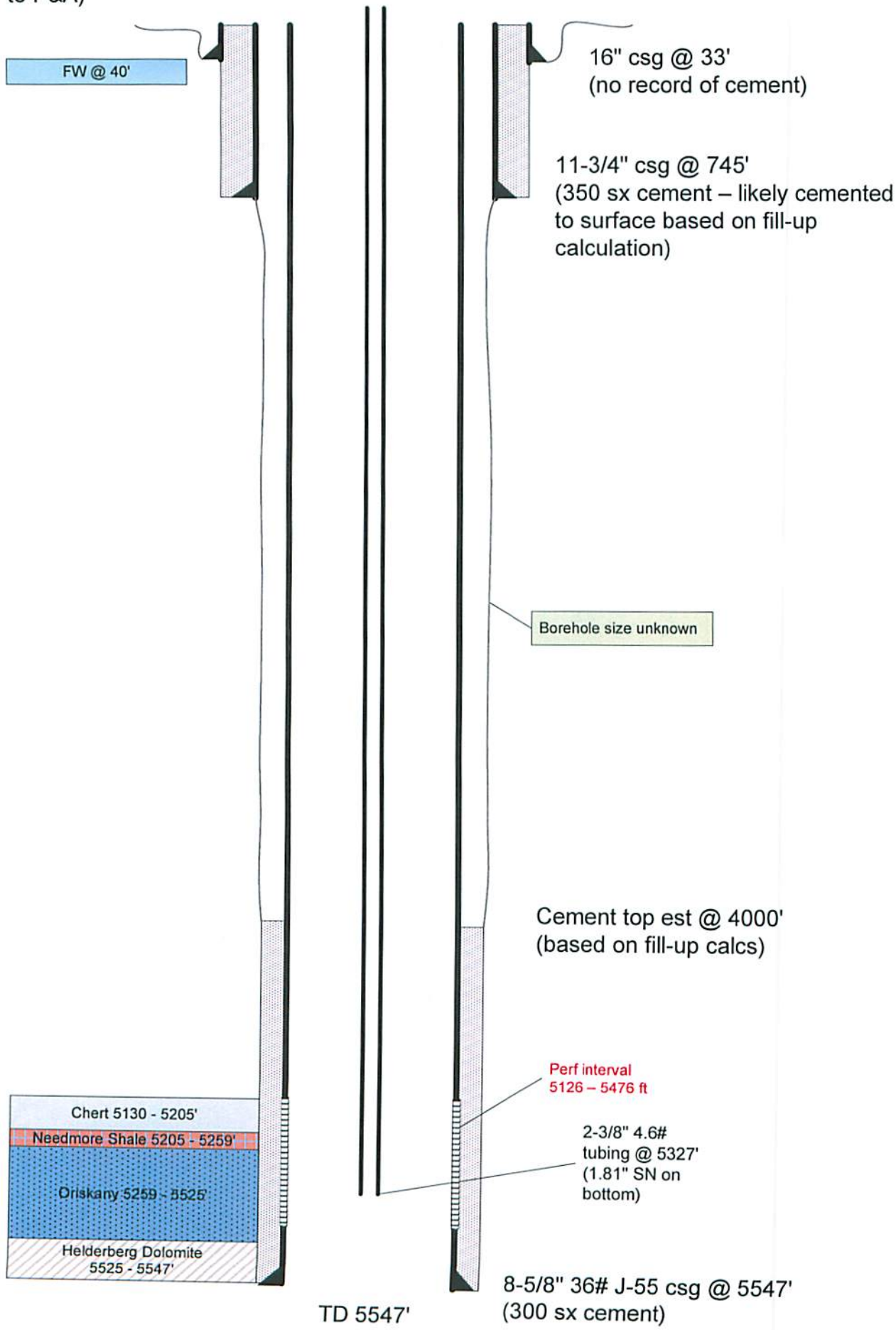
8300100P

GLADY 7435
2/4/15
(Proposed post P&A)



8300100 P

GLADY 7435
2/4/15
(Prior to P&A)



8300100P

OC-10

GLADY 7435

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

Quadrangle Horton 9 SW

Permit No. Ran-100

Oil or Gas Well Gas (KIND)

Company Columbian Carbon Company, Operator
Address Box 873, Charleston 23, W. Va.
Farm D. H. Hill Arnold Consolidation Acres 1200
Location (waters) Bill White Run of Glady Fork
Well No. 1 - GW-1292 Elev. 3176.50'
District Dry Fork County Randolph
The surface of tract is owned in fee by Boyd Phares Heirs
Address
Mineral rights are owned by Director, Bureau of Land Management.
Address Washington 25, D.C.

Drilling commenced 9-29-58
Drilling completed 11-10-58
Date Shot Not shot From To
With
Open Flow 10 /10ths Water in 1" Inch
/10ths Merc. in Inch
Volume 33,000 Cu. Ft.
Rock Pressure 600 lbs. 14 hrs.
Oil bbls., 1st 24 hrs.
WELL ACIDIZED Not acidized

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16" 65#	32'8"	32'8"	Kind of Packer Anchor
13			
10 3/4" 42#	765'11"	745'11"	Size of 5 1/2"
8 1/4" 36#	5592'6"	5592'6"	
6 5/8			Depth set 5248'
5 3/16			
3			Perf. top
2 3/8" 4.6#	5594'6"	5594'6"	Perf. bottom
Anchor Tubing Used	298'7"	298'7"	Perf. top
			Perf. bottom

CASING CEMENTED SIZE No. Ft. Date
See reverse side.
COAL WAS ENCOUNTERED AT None FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

WELL FRACTURED See reverse side.

RESULT AFTER TREATMENT Chert - 231 MCF; Oriskany - 207 MCF; Total 438 MCF.
ROCK PRESSURE AFTER TREATMENT 12 day pressure on Chert 1600#; 2 day pressure on Oriskany 1240#.
Fresh Water 40' Feet Salt Water Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface			0	20			
Slate & Shells			20	40			
Lime			40	100	Fresh water	40'	
Gritty Lime			100	190			
Lime, Broken			190	270			
Lime			270	410			
Slate & Lime			410	450			
Lime			450	660			
Lime and Sand			660	695			
Lime			695	860			
Lime & Shale			860	1035			
Lime			1035	1650			
Shale & Lime			1650	1865			
Lime			1865	2155			
Lime & Shale			2155	2270			
Lime			2270	2430			
Shale & Lime Streaks			2430	3040			
Shale			3040	3125			
Shale & Lime			3125	4105			
Shale			4105	4410			
Shale & Lime			4410	4560			
Shale			4560	4645			
Black Shale			4645	4652			
Shale			4652	5060			
Lime			5060	5130			
Chert			5130	5205			
Shale			5205	5259			
Oriskany			5259	5525			
Lime			5525	5547			
Total depth				5547'	Landing Flange Measurement		

(over)

F30529

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks

Fracturing Record

12-3-58 - Perforated Chert and Oriskany as follows:

5474-76'		4 shots per foot	9	shots	No gas	
5442-52'		4 " " "	41	"	"	"
5405-13'	5416-24'	4 " " "	66	"	"	"
5277-85'	5287-96'	4 " " "	70	"	Gas	gauged 5/10 W 1" 23,560 cu. ft
5258-64'		4 " " "	25	"		
5126-41'		4 " " "	61	"	Gas	gauging 33,330 cubic feet
Total ----------			272	"		

12-8-58 - Ran tubing and set packer at 5056'
12-9-58 - 600# pressure in 14 hours. Pumped in 2,000 gallons mud acid-displaced with 7 pumps Starting pressure 2300# -went to 2500# maximum pressure - pumping wide open. Used 12,000 gallons water with 1% tergitol. Started sand .7#/gallon. Pressure started at 2,600# - increased gradually to 3,200# maximum pressure. 3,000# pressure at end of water and sand, 7,500# 20-40 Sand, 1,500# 10-30 Sand to tail in with. Started perf balls when 4,000 gallons water and sand in, Used 200 perf balls. Pumping time 16 minutes - injection rate - 750 gpm. Flushed with 90 barrels water. Pressure 3,000# -increased to 3,250# at end of treatment. Time - 7 minutes 540 gpm. Shut in. 9 minutes after quit pumping 1100# pressure.

12-11-58 - Released packer - lowered andreset between Chert and Oriskany. Oriskany gas gauged 6/10 W 2" - 103 MCF - Chert gas 479 MCF - total 582 MCF.

12-12-58 - Pulled tubing and cleaned out. Re-ran 3" tubing and set packer at 5190', after setting packer Oriskany gas gauged 20/10 W 1" - 47,130 cu. ft. - 20 1/2 hour pressure on Oriskany 1240#. Chert gas shut in.

12-19-58 - Re-fractured the Oriskany. Pumped in 500 gallons MCA. Pumped in 2200 gallons water with Tergitol to load tubing. Displaced 500 gallons MCA with 2 pumps - maximum pressure 2400# - broke to 1800#. Shut down 10 minutes - broke down with 5 pumps - started at 3200# maximum - dropped gradually to 3050#. Started sand at .7#/gallon with water and tergitol. Used 30 barrels to break. Pumped in 10,000 gallons water and sand. Pressure started at 3050# - went to 3600# maximum. Broke to 3150# at end of sand. Used 6700# 20-40 Sand and 1500# 10-30 sand. Started perf balls when 3,000 gallons in. Used 200 balls. Flushed with 90 barrels water. Pressure 3150# when starting - increased to 3250# at end of water. Used 200 gallons tergitol - 100 of 08 and 100 of TMN. Total pumping time 25 minutes - injection rate 600 gpm. Breaking time 2 minutes - injection rate 630 gpm. Water and sand time 16 min. Injection rate 600 gpm Flushing time 7 minutes - 540 gpm. S.I. 10 minutes after quit pumping at 1200#.

12-22-58 - Released packer, pulled tubing and cleaned out to bottom. Ran 298' 7" of 5 1/2" anchor with 2 3/8" tubing; tubing cage 31'8" off of bottom. 2 x 5½ x 7 packer, set at 5248 between Chert & Oriskany.

Final open flow - Chert gas	231,000 cubic feet
Final open flow - Oriskany gas	207,000 cubic feet
Total open flow	438,000 cubic feet

24 hour pressure on Chert 760#.
48 hour rock pressure on Chert 990#.
71 hour rock pressure on Chert 1105#.
5 day rock pressure on Chert 1340#.
12 day rock pressure on Chert 1600#.

23 hour rock pressure on Oriskany 1040#.
48 hour rock pressure on Oriskany 1240#.

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Casing Record

10-22-58 - Ran 11 3/4" casing at 753' DLM. Cemented with 350 sacks.

11-11-58 - Ran 8 5/8" casing at 5547' Schlumberger Measurement with guide shoe and 5 centralizers Cemented with 300 sacks.

Cable tools 0 - 542'

Rotary tools 542' - Total depth

Date January 22, 1959

APPROVED Columbian Carbon Company, Operator ~~Owner~~

By R. B. Anderson, General Manager
(Title)

8300100 P

F-3059 D.

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks

Fracturing Record

12-3-58 - Perforated Chert and Oriskany as follows:

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5442-52'		4 " " "	41	"	"	"
5405-13'	5416-24'	4 " " "	66	"	"	"
5277-85'	5287-96'	4 " " "	70	"	Gas	gauged 5/10 W 1" 23,560 cu. ft
5258-64'		4 " " "	25	"		
5126-41'		4 " " "	61	"	Gas	gauging 33,330 cubic feet
Total ----------			272	"		

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Final open flow - Oriskany gas 207,000 cubic feet

Total open flow 438,000 cubic feet

24 hour pressure on Chert 760#.
48 hour rock pressure on Chert 990#.
71 hour rock pressure on Chert 1105#.
5 day rock pressure on Chert 1340#.
12 day rock pressure on Chert 1600#.

23 hour rock pressure on Oriskany 1040#.
48 hour rock pressure on Oriskany 1240#.

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Cable tools 0 - 542'

Rotary tools 542' - Total depth

Date January 22, 19 59

APPROVED Columbian Carbon Company, Operator ~~Owner~~

By R. B. Anderson, General Manager
(Title)

8300100P

WW-4A
Revised 6-07

1) Date: 2/5/15
2) Operator's Well Number
Glady 7435

3) API Well No.: 47 - 083 - 00100

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: US Dept of Interior (managed by BLM)
Address: 626 East Wisconsin Ave Suite 200
Milwaukee, WI 53202-4617
(b) Name
Address
(c) Name
Address

5) (a) Coal Operator
Name: not operated
Address
(b) Coal Owner(s) with Declaration
Name
Address
Name
Address
(c) Coal Lessee with Declaration
Name
Address

6) Inspector: Bill Hatfield
Address: PO Box 522
Buckhannon, WV 26201
Telephone: 304-767-1828

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

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Office of Oil and Gas
MAR 19 2015
WV Department of
Environmental Protection

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

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
MARY MARIE CLENDENIN
COLUMBIA GAS TRANSMISSION CORPORATION
RR 2 BOX 138
SANDYVILLE, WV 25275
My commission expires March 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 depprivacyoffier@wv.gov.

8300100P

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 7435

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 57th 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.

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Office of Oil and Gas
MAR 19 2015
WV Department of
Environmental Protection

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.

Date _____

_____
Signature

FOR EXECUTION BY A CORPORATION,

Name _____
By _____
Its _____ Date _____

Signature Date

8300100P

Revisions to Operator-Submitted EC Data for Sundry Notice #293242

	Operator Submitted	BLM Revised (AFMSS)
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: 304-373-2438	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: 304-373-2438	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 7435 38.780717 N Lat, 79.681280 W Lon	7435 Tract US-71 38.780700 N Lat, 79.681600 W Lon

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Form 3160-5
(August 2007)

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
UNLEASED

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other: UNKNOWN OTH

8. Well Name and No.
7435

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

9. API Well No.
47-083-00100-00-S1

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

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

10. Field and Pool, or Exploratory
GLADY

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Tract US-71
38.780700 N Lat, 79.681600 W Lon

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

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Onshore Order Variance
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 recomplete 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 recompletion 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 perfs/zone(s).
5. Install mechanical bridge plug above bottom cement plug.

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

Electronic Submission #293242 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 (15CVR0024SE)

Name *(Printed/Typed)* JAMES E AMOS — Title SENIOR ENGINEER

Signature (Electronic Submission) — Date 02/26/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By TREY MITCHELL — Title PETROLEUM ENGINEER — Date 03/06/2015

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

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Additional data for EC transaction #293242 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 remaining casing 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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7435
47-083-00100
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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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 31st and November 15th 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) he 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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GOVERNMENT CONTACTS

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

Name	Agency/Title	Office Phone	Mobile Phone
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	-

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Re: Glady Well 7468
William Timmermeyer to Arbogast, Chad H -FS 02/20/2015 10:18 AM
Cc: Jim Amos, Jason Chambers

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> 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
P.O. box 67 Route 250/92
Bartow, WV 24920
www.fs.fed.us
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Caring for the land and serving people

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From: wtimmermeyer@nisource.com [mailto:wtimmermeyer@nisource.com]
Sent: Thursday, February 19, 2015 12:53 PM
To: Arbogast, Chad H -FS
Cc: jamos@nisource.com; jchambers@nisource.com
Subject: RE: Glady Well 7468

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Chad,

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WW-4B

API No. 083-00100
Farm Name US Dept of Interior
Well No. Glady 7435

* 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 then 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 _____

8300100P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 083 - 00100
Operator's Well No. Glady 7435

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 White Run of East Fork of Glady Fork Quadrangle Glady, WV

Elevation 969.3 m (3180.1 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
X Underground Injection (UIC Permit Number 34-119-28776, 34-167-23862, 34-121-2459)
_____ Reuse (at API Number _____)
_____ Off Site Dispposal (Supply form WW-9 for disposal location)
X Other (Explain Pinegrove Landfill - Amanda, OH

Proposed Work For Which Pit Will Be Used:

_____ Drilling _____ Swabbing
_____ Workover X Plugging
_____ Other (Explain _____

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 Clendenin Notory Public

My commission expires 3/22/2015

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OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
MARY MARIE CLENDENIN
COLUMBIA GAS TRANSMISSION CORPORATION
RR 2 BOX 138
SANDYVILLE, WV 25275
My commission expires March 22, 2015

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Form WW-9

Operator's Well No. Glady 7435

LEGEND

Property Boundary
Road
Existing Fence
Planned Fence
Stream
Open Ditch
Rock
North N
Buildings
Water wells W
Drill site

Diversion
Spring
Wet Spot
Drain Pipe with size in inches 12
Waterway
Cross Drain
Artificial Filter Strip
Pit: cut walls
Pit: compacted fill walls
Area for Land Application of Pit Waste

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 Seed Type	lbs/acre	Area II 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.

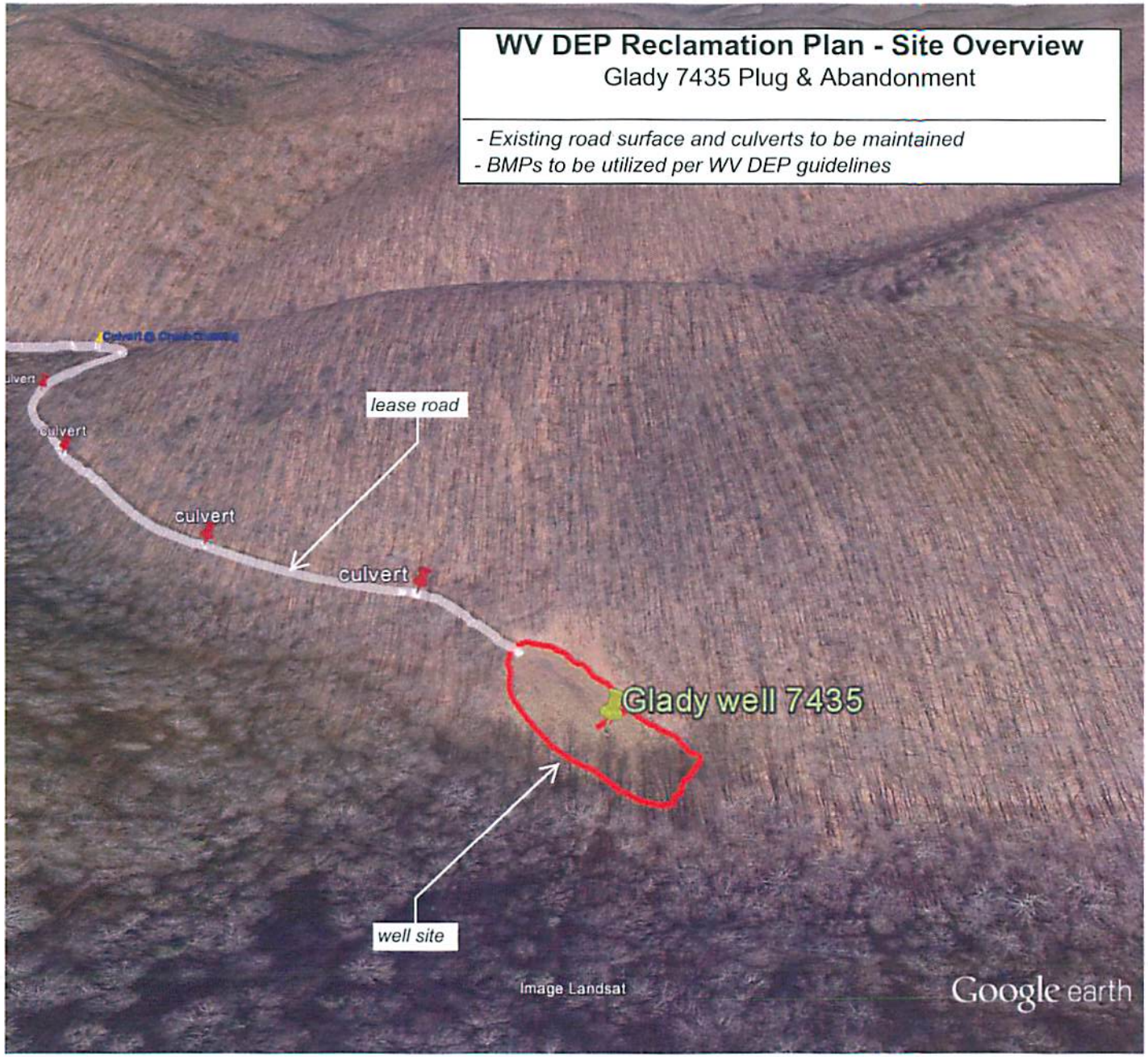
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bryan O'Hern

Comments:

Title: Date: 3-12-15

Field Reviewed? ( ) Yes (X) No



Google earth

feet 600

meters 100

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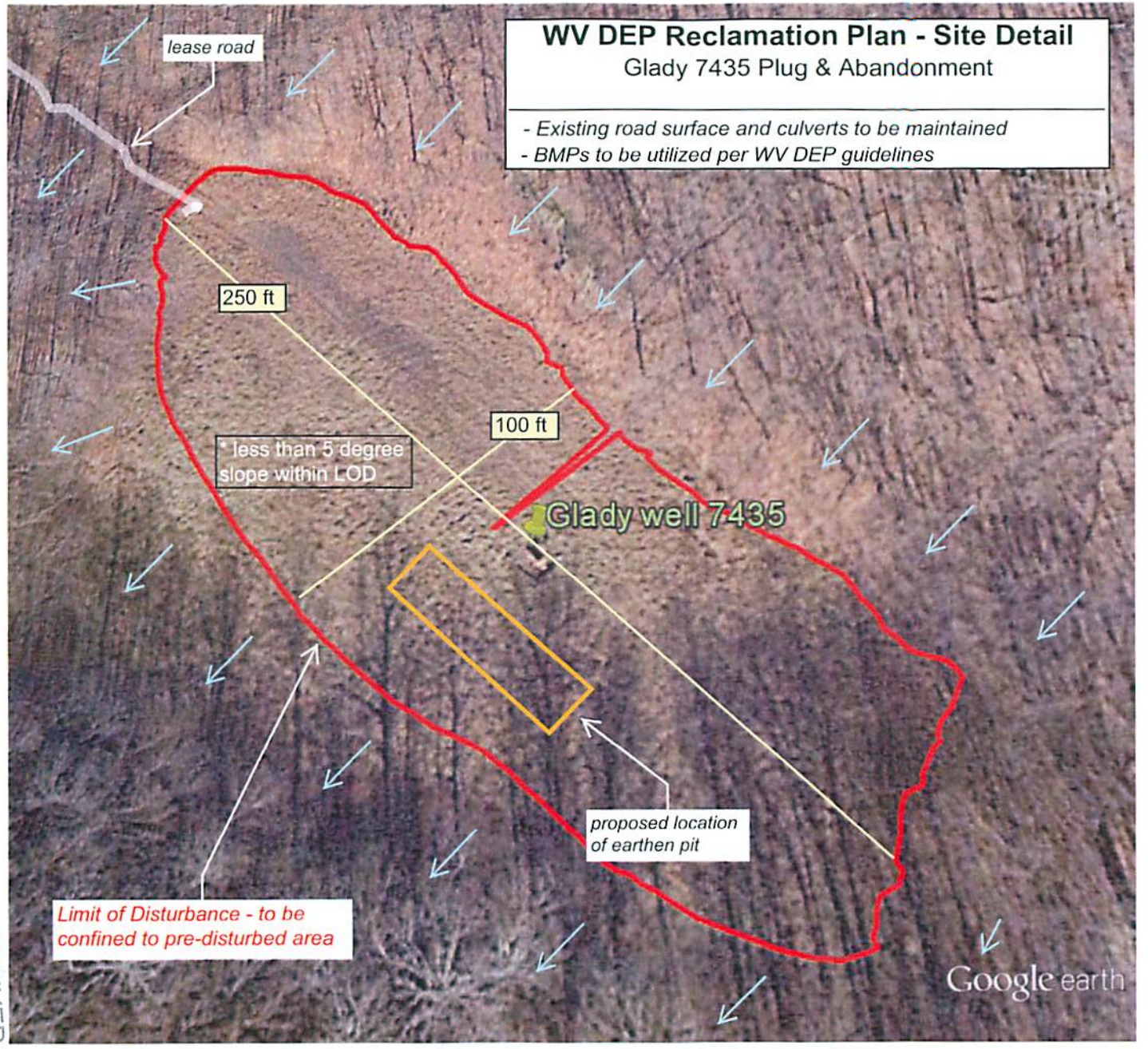

feet 100
meters 50

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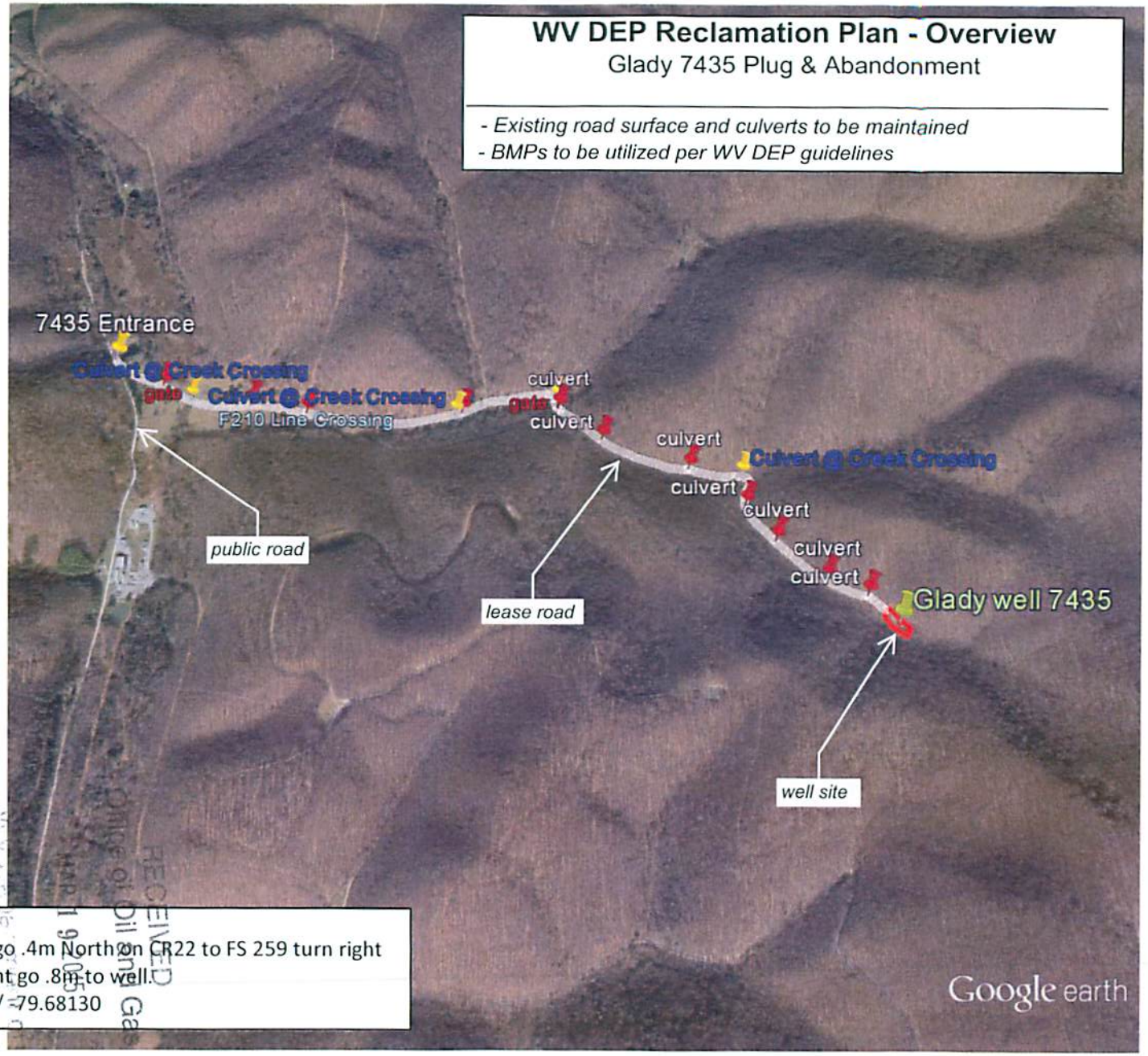
WV DEP Reclamation Plan - Overview

Glady 7435 Plug & Abandonment

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



Directions

From Glady station go .4m North on CR22 to FS 259 turn right go .7m to Y bear right go .8m to well.

GPS well 38.780703/ -79.68130

miles 1

km 2

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WW-7
8-30-06

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

API: 47-083-00100 WELL NO.: 7435

FARM NAME: US Dept of Interior

RESPONSIBLE PARTY NAME: Columbia Gas Transmission, LLC

COUNTY: Randolph DISTRICT: Dry Fork

QUADRANGLE: Glady, WV

SURFACE OWNER: US Dept of Interior

ROYALTY OWNER: US Dept of Interior (storage lease)

UTM GPS NORTHING: 4293268.7 m

UTM GPS EASTING: 614544.0 m GPS ELEVATION: 969.3 m (3179.0')

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:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS ____: Post Processed Differential ____

Real-Time Differential ____

Mapping Grade GPS X: Post Processed Differential X

Real-Time Differential ____

4. **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	Title	Date
	Senior Engineer	1/27/15