



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

June 02, 2015

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-7500037, 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: GLADY 7468
Farm Name: U.S. FOREST SERVICE

API Well Number: 47- 7500037

Permit Type: Re-Work

Date Issued: 06/02/2015

Promoting a healthy environment.

06/05/2015

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

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

CK# 5114034
750-00

7500037W

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Columbia Gas Transmission, LLC 307032 Pocahontas Green Bank Sinks of Gandy
Operator ID County District Quadrangle

2) Operator's Well Number: Glady 7468 (existing well) 3) Elevation: 3749

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

5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 6043

6) Proposed Total Depth: 6260 (existing) Feet Formation at Proposed Total Depth: Helderberg

7) Approximate fresh water strata depths: 405 ft (per driller in 1966)

8) Approximate salt water depths: none reported by driller in 1966

9) Approximate coal seam depths: none reported by driller in 1966

10) Approximate void depths,(coal, Karst, other): none reported by driller in 1966

11) Does land contain coal seams tributary to active mine? no

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

Kill well. Pull tubing. Obtain cement bond and pipe inspection logs. Install bridge plug. Install new API wellhead.
Pull bridge plug. Clean well to TD using coil tubing. Perform acid stimulation.

* Casing and tubing listed below are existing.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13.375	H-40	48.0	39	39	12 sx
Fresh Water	9.625	H-40	32	1424	1424	530
Coal						
Intermediate						
Production	7.0	J-55/N-80	23.0	6048	6048	267
Tubing	2.375	J-55	4.7		6252	Received
Liners						Office of Oil & Gas

Packers: Kind: none
Sizes: _____
Depths Set _____

APR 16 2015

7500037W

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.
WVBLMA022923

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.
7468

9. API Well No.
47-075-00037-00-S1

10. Field and Pool, or Exploratory
GLADY

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

1. Type of Well
 Oil Well Gas Well Other: INJECTION

2. Name of Operator
COLUMBIA GAS TRANSMISSION LLC
Contact: JAMES E AMOS
E-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-52
38.718370 N Lat, 79.741480 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 checked="" 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 type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<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 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 3/1/15 - 11/1/15.
Duration: +/- 60 days.

Procedure:

1. Kill well.
2. Pull tubing.
3. Obtain pipe inspection elog.
4. Install mechanical bridge plug.
5. Install new API 5M wellhead.
6. Pull bridge plug.
7. Clean to TD using coil tubing.
8. Perform acid treatment.

Received
Office of Oil & Gas
APR 16 2015

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

Electronic Submission #290592 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 02/05/2015 (15CVR0020SE)

Name (Printed/Typed) JAMES E AMOS

Title SENIOR ENGINEER

Signature (Electronic Submission)

Date 02/04/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By TREY MITCHELL

Title PETROLEUM ENGINEER

Date 02/09/2015

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 ****

06/05/2015

Revisions to Operator-Submitted EC Data for Sundry Notice #290592

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	ACID NOI	ACID NOI
Lease:	WVBLMA023190A	WVBLMA022923
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:	POCAHONTAS	POCAHONTAS
Field/Pool:	GLADY STORAGE FIELD	GLADY
Well/Facility:	GLADY 7468 38.718344 N Lat, 79.741156 W Lon	7468 Tract US-52 38.718370 N Lat, 79.741480 W Lon

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7500037W

7468
47-075-00037
WVES 39982
Columbia Gas Transmission, LLC
February 9, 2015
Conditions of Approval

1. Subsequent sundry with completion report required within 2 weeks of completing the workover.

TAM 020915

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7500037W



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> 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
<M3.png><M4.png><M5.png>
Caring for the land and serving people

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APR 16 2015

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

Chad,

06/05/2015

7500037W

X77-7468

U. S. A. Dept. of Interior Tr. #52
Atlantic Seaboard Corporation
Green Bank District, Pocahontas County, W.Va.
Map Square - 164-83
Commenced - 6-10-66
Completed - 6-23-66
Elevation - 3743.62' Gr.
3760.62' RKB

Size	CASING: Weight	Point	
13 3/8"		39'	Cemented with 12 sacks regular with 3% CaCl ₂
9 5/8"		1430'	Cemented with 430 cu. ft. "Litepoz" and 100 cu.ft. regular with 3% CaCl ₂
7"	23#	6048'	Cemented with 200 cu.ft. "Litepoz" and 500 gals. Latex
2 3/8"		6252'	

CONTRACTOR: Lohmann-Johnson

Surface	0	22
Sand	22	83
Shale	83	445
Sand	445	570
Shale	570	1130
Sand	1130	1456
Shale	1456	2132
Sand	2132	2300
Shale & Sand	2300	3345
Shale	3345	5397
Tully Lime	5397	5422
Marcellus Shale	5422	5797
Onondaga Lime	5797	5850
Chert	5850	6005
Needmore Shale	6005	6043
Oriskany Sand	6043	6245
Helderberg	6245	
Total Depth		6260'

Water 405'

Gas show 6199-6202'

All gas test 3/10 W 4" 291 M when drilling completed.

Test before acidized 3/10 W 4" 291 M
Acidized 6-28-66 with 12,000 gallons 28% Hcl, 4,000 gallons overflush water.
Test after acidized 88# spring gauge 4" 37,000 M

FINAL OPEN FLOW - 37,000 M - Oriskany
R.P. 1530#

Shut in 6-30-66

Permit No. - Poca.-37

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Office of Oil & Gas
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7500037W

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Pocahontas

Operator Columbia Gas Transmission, LLC
Operator well number Glady 7468

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (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

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 "Sundry Notices and Reports on Wells" documents dated 2/9/15. Columbia requests that the 15 day comment period be waived, and the well work permit be issued at the DEP's earliest convenience.

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 **FIFTEEN (15) 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 a 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.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

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 Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

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

FOR EXECUTION BY A CORPORATION, ETC.

_____	Date _____	Company Name _____
Signature		By _____
		Its _____
		Date _____

_____		Signature _____
Print Name		Date _____

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APR 18 2015

06/05/2015

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
US Dept of Interior	Columbia Gas Transmission, LLC	Storage Lease 1090700-000	not recorded

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**


The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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Office of Oil & Gas
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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:
By: Its:

Columbia Gas Transmission, LLC
 James E. Amos 
 Senior Engineer

7500037W

WW-9
Rev. 5/10

Page _____ of _____
API Number 47 - 075 - 00037
Operator's Well No. Gladly 7468

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 Snorting Lick Run of the Greenbrier River Quadrangle Sinks of Gandy

Elevation 3749 County Pocahontas District Green Bank

Description of anticipated Pit Waste: no earthen pit to be utilized

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

Will a synthetic liner be used in the pit? N/A. If so, what 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)

ANY WELL EFFLUENT MUST
BE CONTAINED IN TANKS
AND DISPOSED OF PROPERLY.
JMM

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. freshwater

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

Additives to be used? NaCl, biocide, polymer, starch, calcium carbonate, surfactant (CTCO)

Will closed loop system be used? yes

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-If left in pit and plan to solidify what medium will be used? Cement, lime, sawdust

-Landfill or offsite name/permit number? if needed: Pinegrove Landfill - Amanda, OH

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

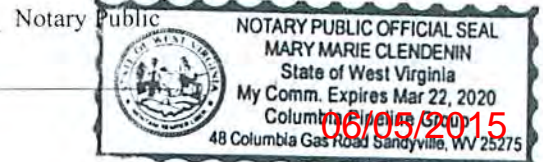
Company Official Title Senior Well Services Engineer

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Office of Oil & Gas
APR 16 2015

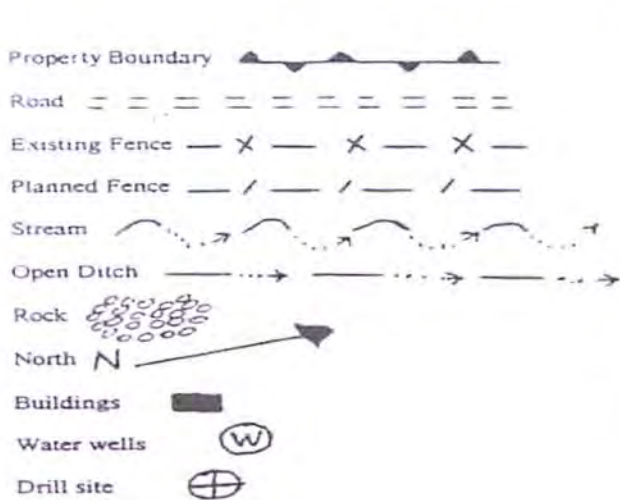
Subscribed and sworn before me this 7th day of April, 2020

Mary Marie Clendenin

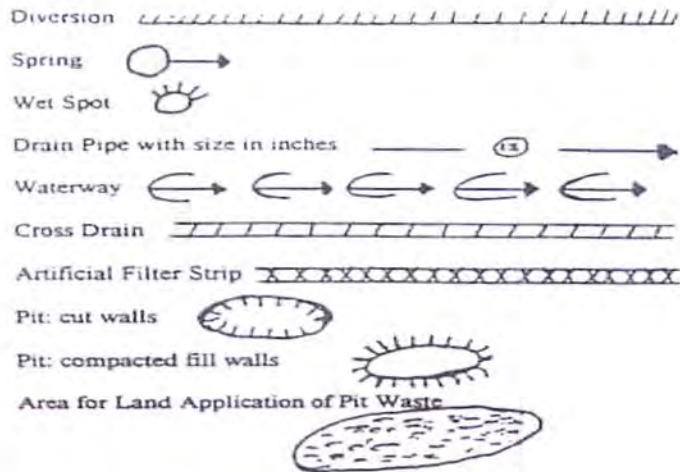
My commission expires 3/22/2020



7500037W



LEGEND



Proposed Revegetation Treatment: Acres Disturbed < 0.5 Prevegetation pH 6

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

Seed Mixtures

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

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.

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Office of Oil & Gas
APR 10 2015

Plan Approved by: [Signature]

Comments: _____

Title: Oil & Gas Inspector

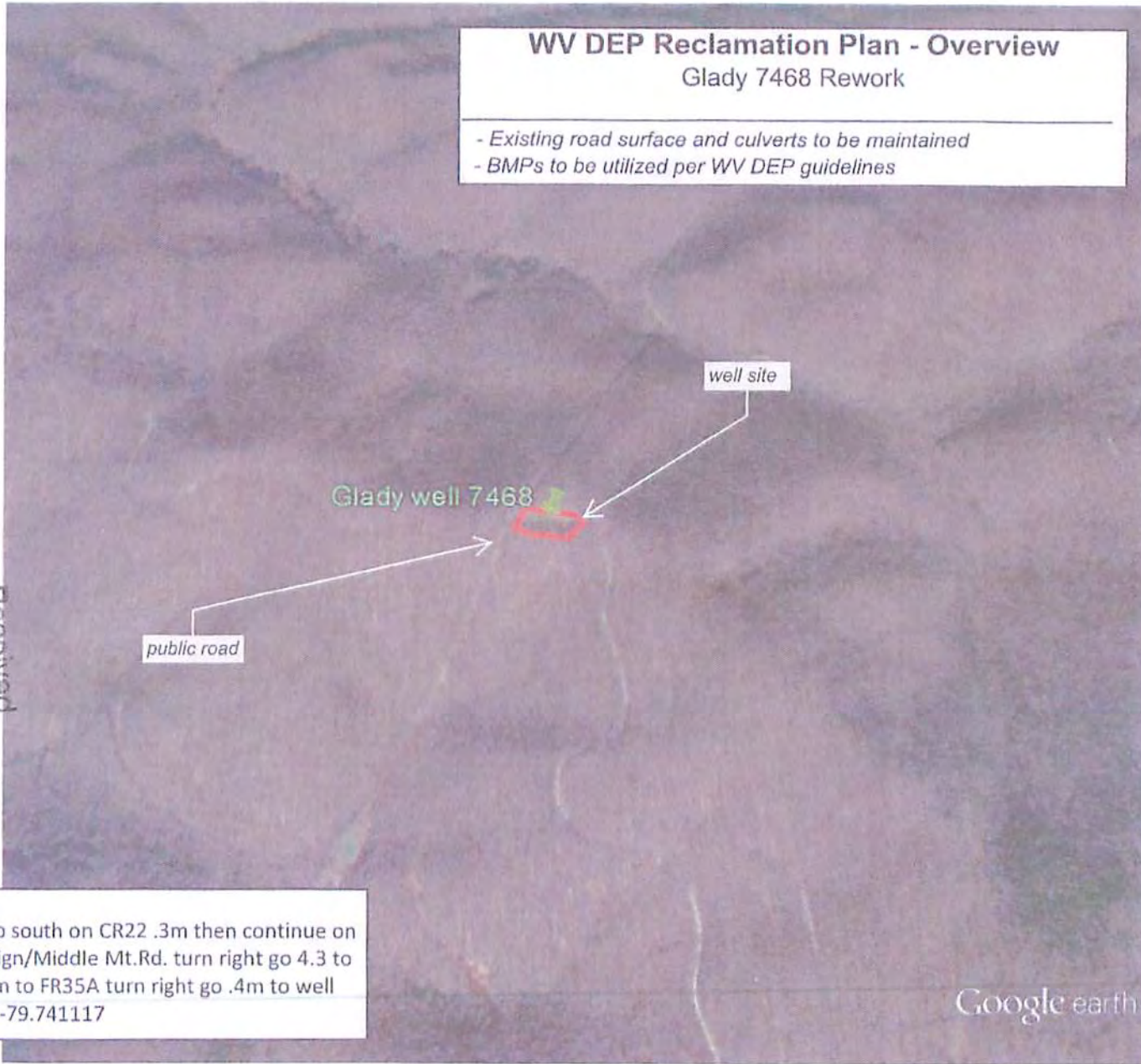
Date: 4-9-15

Field Reviewed? () Yes () No

WV DEP Reclamation Plan - Overview

Glady 7468 Rework

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



Super O'Hair
4-9-15

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Directions
From Glady station go south on CR22 .3m then continue on FR422 2.5m to stop sign/Middle Mt.Rd. turn right go 4.3 to FR35 turn right go .6m to FR35A turn right go .4m to well
GPS well 38.718326/ -79.741117

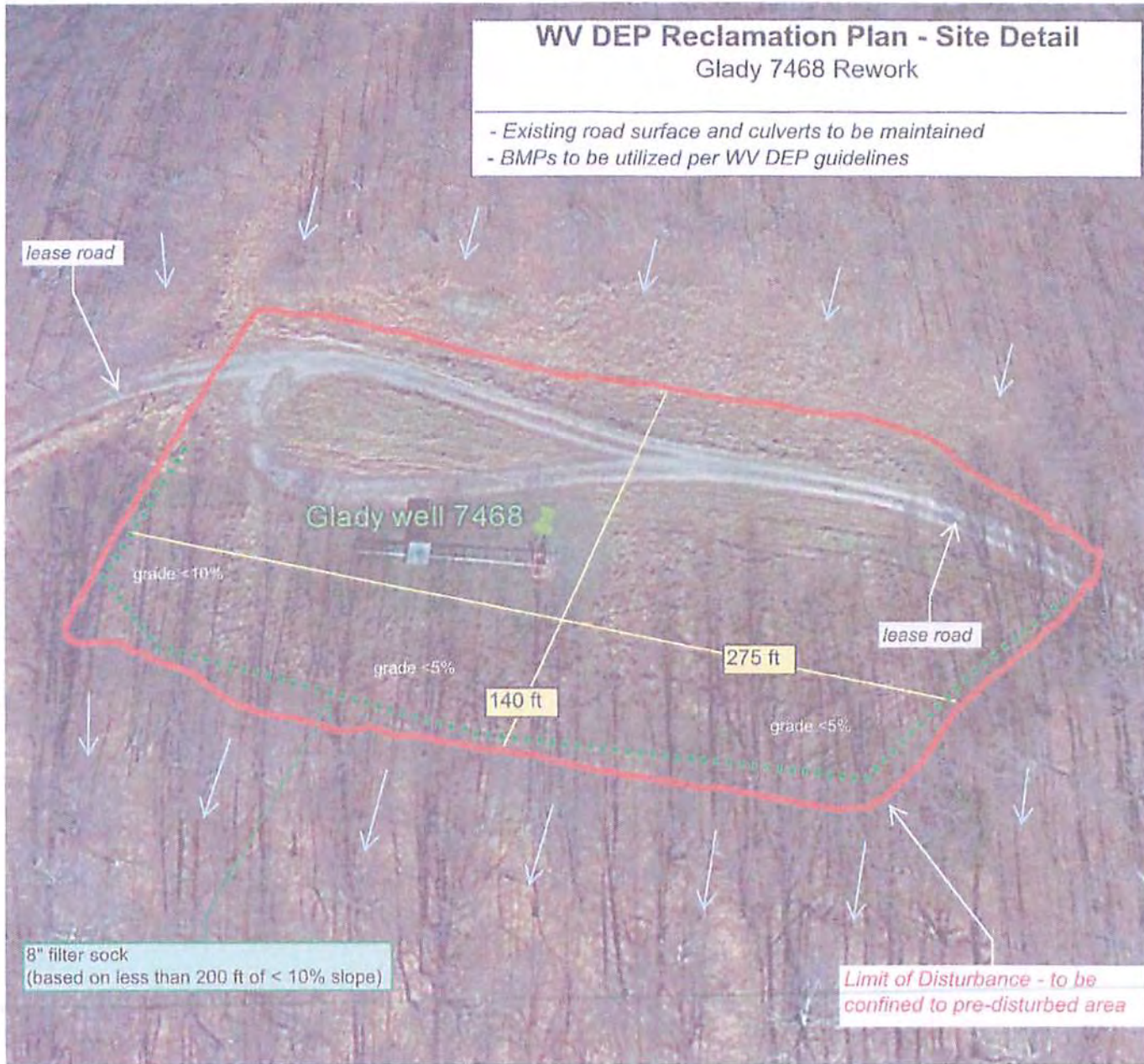
Google earth



7500037W

WV DEP Reclamation Plan - Site Detail
 Glady 7468 Rework

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



*Becky O'Brien
 4-9-15*

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8" filter sock
 (based on less than 200 ft of < 10% slope)

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

Google earth



7500037W

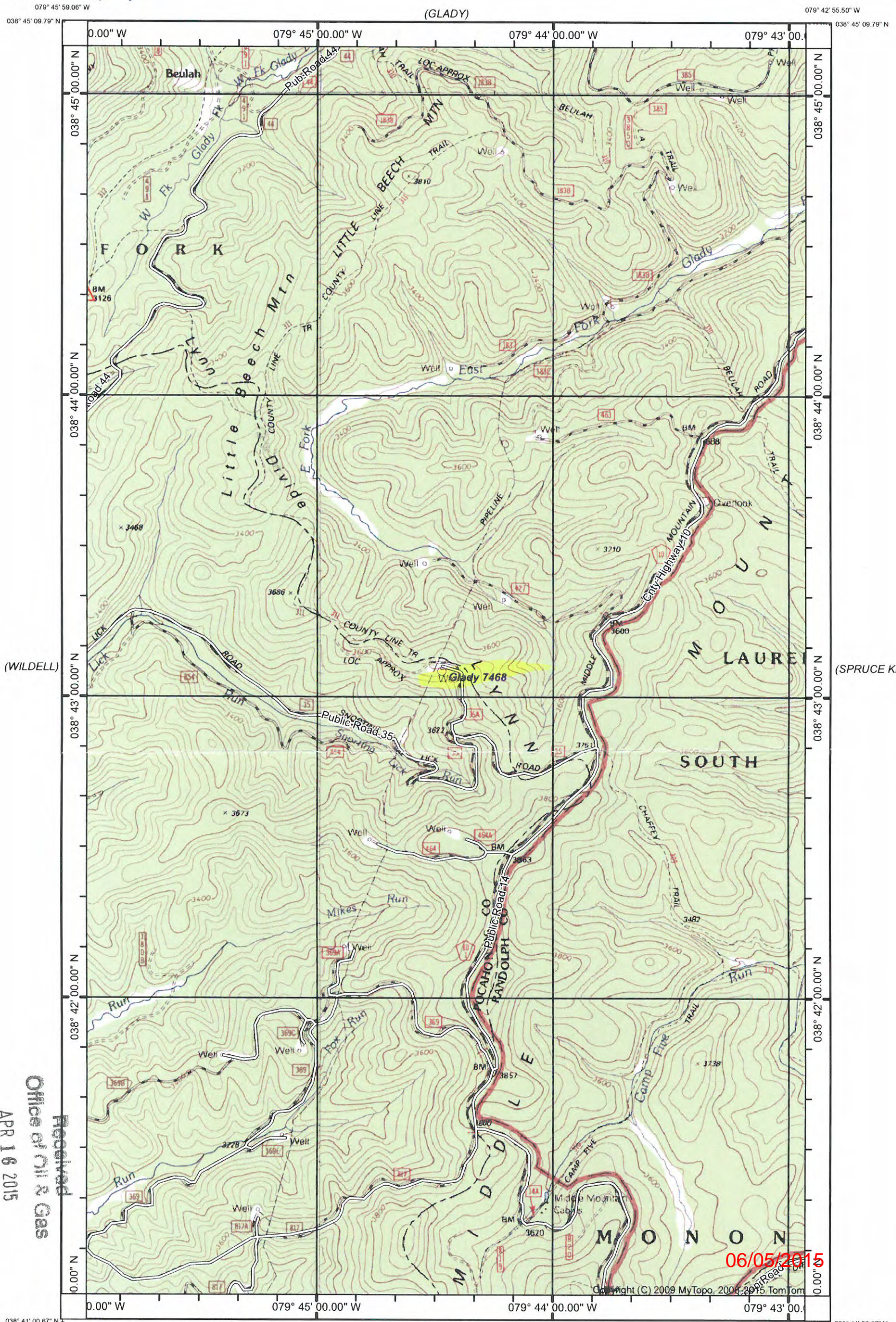
7500037W

(BEVERLY EAST)



SINKS OF GANDY QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(WHITMER)



Received
Office of Oil & Gas
APR 16 2015

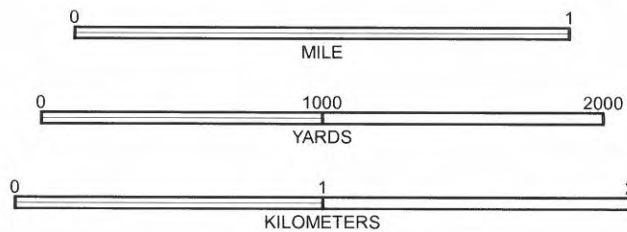
06/05/2015

(DURBIN)

Declination



(THORNWOOD)
SCALE 1:24000



Printed: Tue Jan 06, 2015

038° 41' 00.67" N
079° 42' 55.50" W

(SNOWY MT)

Produced by MyTopo Terrain Navigator
Topography based on USGS 1:24,000 Maps

North American 1983 Datum (NAD83)
Lambert Conformal Conic Projection

To place on the predicted North American 1927 move the
projection lines 13M N and 19M E

SINKS OF GANDY, WV
1998

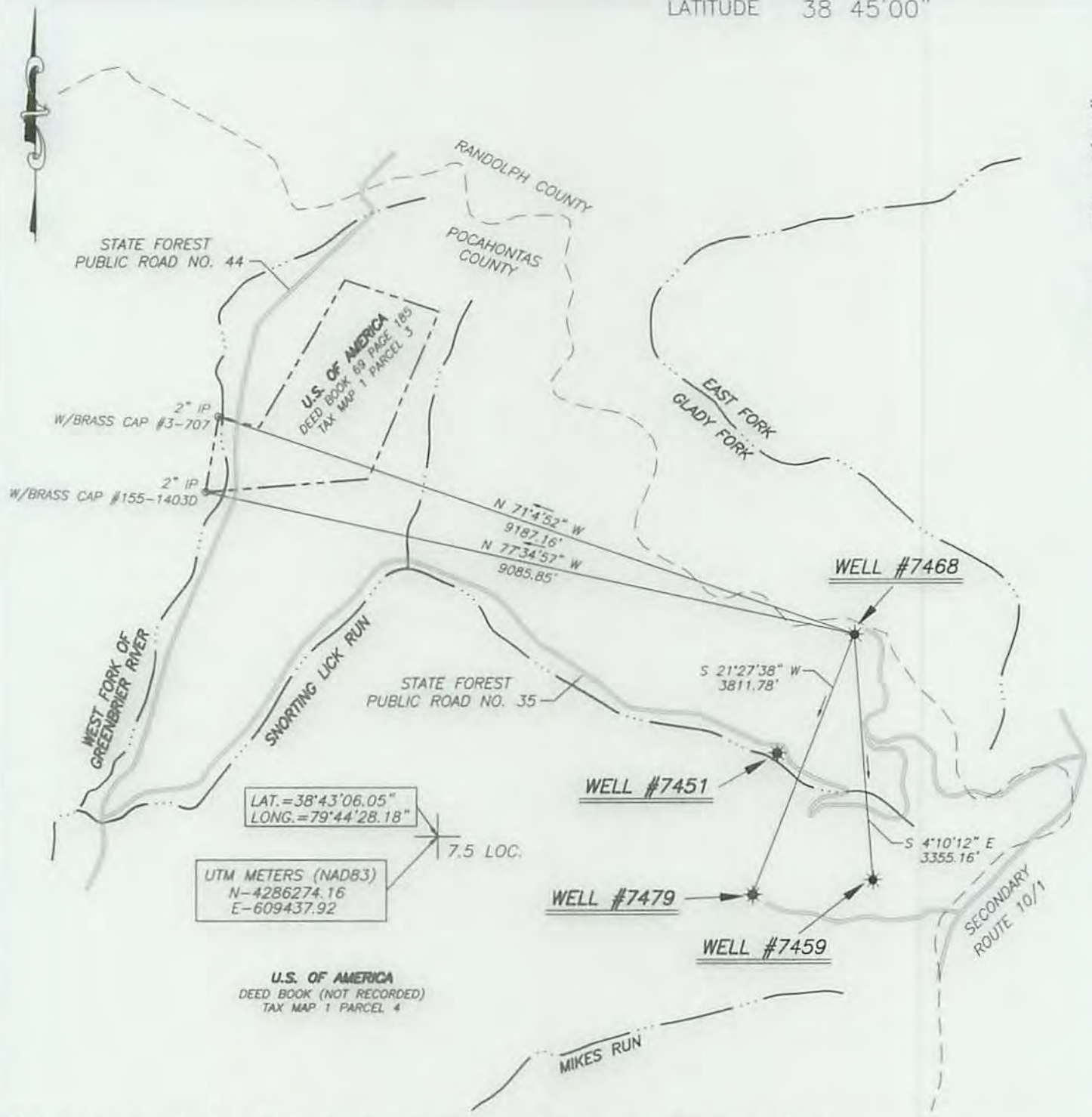
CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM 1929

9,440'

LATITUDE 38 45'00"

LONGITUDE 79 42'30"

11,550'



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

FILE No 15-100-002
 DRAWING No. 15-100-002
 SCALE 1"=2000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION TRIMBLE PRO XH 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)

Richard J. Prine
 RICHARD J. PRINE PS #851



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



DATE MARCH 20 20 15
 OPERATOR'S WELL No. 7468
 API WELL No.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 075 PERMIT 00037W
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 3749 WATER SHED SNORTING LICK RUN
 DISTRICT GREENBANK COUNTY POCAHONTAS
 QUADRANGLE SINKS OF GANDY

SURFACE OWNER U.S. DEPT. OF INTERIOR ACREAGE 6,595
 OIL & GAS ROYALTY OWNER U.S. DEPT. OF INTERIOR LEASE ACREAGE 1,852
 LEASE No. 90700

06/05/2015

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

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION CHERT & ORISKANY ESTIMATED DEPTH 6260
 WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT PAUL AMICK
 ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS P.O. BOX 1273, CHARLESTON W.V.
25325-1273 25325-1273

FORM IV-6 (8-78)



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

April 6, 2015

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

Enclosed is a permit application to acid stimulate Columbia's Gladys storage well 7468 (API 075-00037).

Note that this well is 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".

Jim Amos
Senior Well Services Engineer
Columbia Pipeline Group

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APR 16 2015

06/05/2015

7500037W

WW-2B1

Well No. Glady 7468

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 2000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name _____
Sampling Contractor _____

Well Operator Not applicable - existing underground natural gas storage well.

Address _____

Telephone _____

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 2000 feet of the proposed site please indicate such.

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