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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Jim Justice , Governor  
Austin Caperton , Cabinet Secretary  
www.dep.wv.gov

Wednesday, December 20, 2017  
WELL WORK PERMIT  
Vertical / Plugging

HALL DRILLING, LLC  
1137 E. WASHINGTON AVE.

ELLENBORO, WV 26346

Re: Permit approval for HALL DRILLING, LLC 3  
47-085-09909-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: HALL DRILLING, LLC 3  
Farm Name: TECH SERVICE CENTER  
U.S. WELL NUMBER: 47-085-09909-00-00  
Vertical / Plugging  
Date Issued: 12/20/2017

Promoting a healthy environment.

12/22/2017

## 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.

WW-4B  
Rev. 2/01

1) Date November 7, 2017  
2) Operator's  
Well No.            Tech Service Center No. 3  
3) API Well No. 47-085 - 09909

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        / Liquid injection X / Waste disposal X /  
(If "Gas, Production        or Underground storage       ) Deep        / Shallow       

5) Location: Elevation 1,010' Watershed Hushers Run  
District Clay County Ritchie Quadrangle Ellenboro 7.5'

6) Well Operator Hall Drilling, LLC 7) Designated Agent M.T. Hall  
Address 1137 E. Washington Ave. Address 1137 E. Washington Ave.  
Ellenboro, WV 26346 Ellenboro, WV 26346

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Michael Goff Name Meadows Well Service, LLC  
Address 1723 Auburn Road Address 45 Meadows Drive  
Pullman, WV 26421 Ravenswood, WV 26164

10) Work Order: The work order for the manner of plugging this well is as follows:

**\*\* See Attached Sheet \*\***

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

Work order approved by inspector Michael Goff Date 11/15/17

12/22/2017

**MANNER OF PLUGGING FOR:  
TECH SERVICE CENTER NO.3 (47-085-09909)**

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Elevation: 1,010'

TD: 7,056'

Casing: 9 5/8" 148' Cemented to Surface  
7" 3,100' Cemented to Surface  
4 1/2" 6,611' TOC - 2,810' (Est.)

PBTD: 6,640'

Perfs: 6,485' - 6,491' (Oriskany)

**WORK ORDER**

Plug No.1 Set Cast Iron Bridge Plug @ 6,470'

Plug No.2 6,470' - ~~6,270'~~ **6100'** ABOVE MARCELLUS. *g n m*  
Freepoint, cut & pull 4 1/2' @ est. 2,800'

Plug No.3 2,850' - 2,750' (across 4 1/2" casing cut)

Plug No.4 1,060' - 960' (@ Elevation)

Plug No.5 190' to Surface (Covers Casing Seat)

**NOTES:**

Fill with 6% Gel between all cement Plugs  
Erect Monument with API Number

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12/22/2017  
11/15/17

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: May 16<sup>th</sup>, 2013  
API #: 47-085-09909

Farm name: Tech Service Operator Well No.: 3

LOCATION: Elevation: 1010' Quadrangle: Ellenboro 7.5'

District: Clay County: Richie  
Latitude: 1650 Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude: 4140 Feet West of 80 Deg. 00 Min. 00 Sec.

Company: Hall Drilling, LLC

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 289, Ellenboro, WV 26346				
Agent: <u>Mike Hall</u>				
Inspector: <u>David Cowan</u>	9 5/8"	148'	148'	CTS
Date Permit Issued: <u>08/09/2011</u>				
Date Well Work Commenced: <u>05/14/2012</u>	7"	3100'	3100'	CTS
Date Well Work Completed: <u>06/07/2012</u>				
Verbal Plugging:	4.5"	6611'	6611'	335 SKS
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>	2 3/8"	5990'	5990'	On Packer
Total Vertical Depth (ft): <u>7067'</u>				
Total Measured Depth (ft): <u>7067'</u>				
Fresh Water Depth (ft.): <u>50'</u>				
Salt Water Depth (ft.): <u>1010'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>N/A</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

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OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Oriskany Pay zone depth (ft) 6454'  
Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 0 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests N/A Hours  
Static rock Pressure 0 psig (surface pressure) after 0 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

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MAY 22 2013

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

  
Signature

05/16/2013  
Date

05/24/2013

12/22/2017

85.09909

Were core samples taken? Yes \_\_\_\_\_ No X      Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforated from 6485' to 6491'

Sand - 42,680 lbs to total

Fluid - 2,370 bbl total

Slurry Rat - 31 bpm avg.

Plug Back Details Including Plug Type and Depth(s):

75 SKS - 7056' to 6640'

Formations Encountered:      Top Depth      /      Bottom Depth  
Surface:

Formations Encountered:	Top Depth	Bottom Depth
Lime/Sand/Shale	0'	6158'
Marcellus	6158'	6218'
Lime/Sand/Shale	6218'	6454'
Oriskany	6454'	6516'
Lime/Sand/Shale	6516'	7056' TD

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05/24/2013

12/22/2017

WW-4A  
Revised 6-07

1) Date: November 7, 2017  
2) Operator's Well Number Tech Service Center No.3

3) API Well No.: 47 - 085 - 09909

**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>Tech Service Center</u>	Name <u>NA</u>
Address <u>265 Hall's Drive</u>	Address <u>RECEIVED</u>
<u>Pennsboro, WV 26415</u>	<u>Office of Oil and Gas</u>
(b) Name _____	(b) Coal Owner(s) with Declaration <u>NOV 15 2017</u>
Address _____	Name <u>NA</u>
(c) Name _____	Address <u>WV Department of</u>
Address _____	<u>Environmental Protection</u>
6) Inspector _____	(c) Coal Lessee with Declaration
Address _____	Name <u>NA</u>
Telephone _____	Address _____

**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 Hall Drilling, LLC, 1137 E. Washington Ave., Ellenboro, WV 26346  
 By: M.T. Hall M.T. Hall  
 Its: Designated Agent  
 Address 1137 E. Washington Ave., Ellenboro, WV 26346  
 Telephone 304-869-3404



Subscribed and sworn before me this 14th day of November, 2017  
Angela D. Demore Notary Public  
 My Commission Expires Oct. 30, 2022

**Oil and Gas Privacy Notice**

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

**SURFACE OWNER WAIVER**

Operator's Well  
Number

Tech Service Center No.3

**INSTRUCTIONS 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

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**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.

FOR EXECUTION BY A CORPORATION,  
*Hall Drilling LLC & Tech Service Center*

\_\_\_\_\_  
Signature

Date

Name

By

Its

*MT Hall*

*M.T. Hall*

*Vice President*

Date *11-14-17*

Signature

Date

**12/22/2017**



WW-9  
(5/16)

API Number 47 - 085 - 09909  
Operator's Well No. Tech Service Center No.3

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Hall Drilling, LLC OP Code 494480467  
Watershed (HUC 10) Hushers Run Quadrangle Ellenboro 7.5'

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

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: \_\_\_\_\_

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

ANY WELL EFFLUENT MUST BE  
CONTAINED IN TANKS UNTIL  
DISPOSED OF OFF-SITE. *gmm*  
MAG  
11/15/17

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Any fluids will be hauled for off site disposal at an authorized site to be determined at the time the well is plugged)

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Will closed loop system be used? If so, describe: NA

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

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

Additives to be used in drilling medium? NA

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. NA

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

-Landfill or offsite name/permit number? \_\_\_\_\_

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

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

Company Official Signature *M.T. Hall*

Company Official (Typed Name) M.T. Hall

Company Official Title Designated Agent

Subscribed and sworn before me this 14<sup>th</sup> day of November, 20 17

*Angela D De Moss*

My commission expires Oct. 30, 2022



12/22/2017

Proposed Revegetation Treatment: Acres Disturbed 0.5 Ac. Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch Straw 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

**\*\* Sediment Control Will Be In Place At All Times \*\***

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

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Plan Approved by: Michael Daff

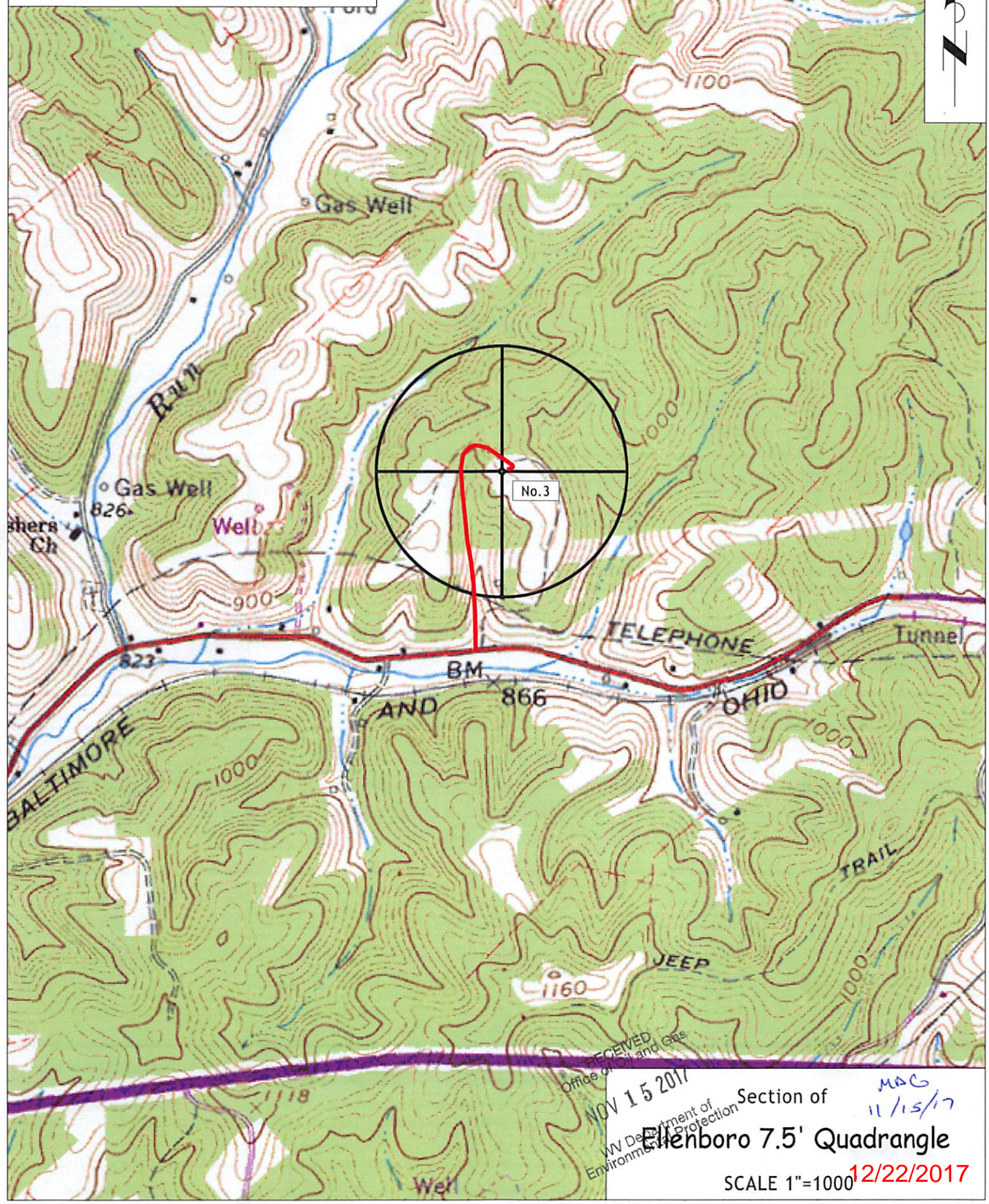
Comments: Reclaim all disturbed areas.

Title: Oil & Gas Inspector

Date: 11/15/17

Field Reviewed?  Yes  No

SUBJECT WELL  
Tech Service Center No.3  
47-085-09909



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Section of Ellenboro 7.5' Quadrangle

SCALE 1"=1000  
12/22/2017

MAG  
11/15/17

WW-7  
8-30-06



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

API: 47-085-09909 WELL NO.: 3

FARM NAME: Tech Service Center

RESPONSIBLE PARTY NAME: Hall Drilling, LLC

COUNTY: Ritchie DISTRICT: Clay

QUADRANGLE: Ellenboro 7.5'

SURFACE OWNER: Tech Service Center

ROYALTY OWNER: Tech Service Center

UTM GPS NORTHING: 4,348,649

UTM GPS EASTING: 498,754 GPS ELEVATION: 308 m.

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(1010.24')

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.

MT Hall  
Signature

Designated Agt.  
Title

11-14-17  
Date