



west virginia department of environmental protection

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

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

Monday, October 16, 2017
WELL WORK PERMIT
Vertical / Plugging

HALL DRILLING, LLC
1137 E. WASHINGTON AVE.

ELLENBORO, WV 26346

Re: Permit approval for SHANLEY 4
47-085-09173-00-00

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: SHANLEY 4
Farm Name: TECH SERVICE CENTER
U.S. WELL NUMBER: 47-085-09173-00-00
Vertical / Plugging
Date Issued: 10/16/2017

Promoting a healthy environment.

10/20/2017

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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.

10/20/2017

1) Date August 26, 2017
2) Operator's Well No. Mary Shanley No.4
3) API Well No. 47-085 - 09173

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

5) Location: Elevation 1,017' 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 Name Michael Goff
Address 1723 Auburn Road
Pullman, WV 26421
9) Plugging Contractor Name Meadows Well Service, LLC
Address 45 Meadows Drive
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 9/15/17

**MANNER OF PLUGGING FOR:
MARY SHANLEY NO.4 (47-085-09173)**

Elevation: 1,017'

TD: 2,970'

Casing: 9 5/8" 130' Cemented to Surface
7" 1,223' 50 Sacks - Est. TOC - 800'
4 1/2" 2,544' TOC - 1,200'

PBTD: 2,538'

Perfs: 1,928' - 2,021'
1,696' - 1,700'

WORK ORDER

Plug No.1	2,050' - 1,850' - or obtainable bottom
Plug No.2	1,640' - 1,540' Freepoint, cut & pull 4 1/2' @ est. 1,200'
Plug No.3	1,250' - 1,150' (across casing cut) Freepoint, cut & pull 7" @ est. 800'
Plug No.4	850' - 750' (across casing cut)
Plug No.5	180' to Surface

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NOTES:

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

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WELL RECORD

Shanley 4
 PERMIT # 47-085-09173
 elevation 1017

DETAILS OF PERFORATED INTERVALS:

2021 1928 250 SACKS FOAM
 1700 1698 1000 gals acid

<u>FORMATION COLOR</u>	<u>HARD/SOFT TOP</u>	<u>BOTTOM</u>	<u>OIL GAS WATER</u>	<u>DEPTH</u>	<u>REMARKS</u>
MISC. RED ROCK & SHALES	0	1248		130	9 5/8
SAND	1248	1365		1207	7
SHALE	1365	1438			
SAND	1438	1483			
SHALE	1483	1540			
RATTY SAND	1540	1604			
SHALE	1604	1650			
SAND	1650	1740			
SHALE	1740	1812			
RATTY SAND	1812	1820			
LIME	1820	1824			
SAND	1824	1854			
LIME	1854	1910			
INJUN	1910	2048 gas		2018	
SHALE	2048	2290			
WIER	2290	2372			
SHALE	2372	2970 td		4 1/2 set @ 2544	

SIGNED:



JAY-BEE PRODUCTION CO.

BY IT'S: PRESIDENT

DATE: 8/1/2005

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NOV 04 2005
 10/20/2017

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State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

MW

Well Operator's Report of Well Work

Farm name: Shanley Operator Well No.: 4
LOCATION: Elevation: 1017 Quadrangle: Ellenboro
District: Clay County: Ritchie
Latitude: 1080 Feet South of 39 Deg. 17 Min. 30 Sec.
Longitude 4700 Feet West of 81 Deg. 00 Min. 00 Sec.

Company: Jay-Bee Oil & Gas Inc.

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1720 Rt. 22 East Union, N.J. 07083				
Agent: Randy Broda	9 5/8	130	130	Cts
Inspector: Steve Mossor				
Date Permit Issued: 5/13/05	7	1223	1223	50 sks
Date Well Work Commenced: 6/4/05				
Date Well Work Completed: 6/11/05	4 1/2	2544	2544	105 sks
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig 30				
Total Depth (feet): 2970				
Fresh Water Depth (ft.): 75'				
Salt Water Depth (ft.): n/a				
Is coal being mined in area (N/Y)? n				
Coal Depths (ft.): n/a				

OPEN FLOW DATA

Producing formation Injun, Maxton Pay zone depth (ft) See Well Record
Gas: Initial open flow 20 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 40 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 72 Hours
Static rock Pressure 540 psig (surface pressure) after 96 Hours

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Permitting
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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

NOTE: ON BACK OF THIS FORM 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 ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: _____
By: Randy Broda
Date: 8/1/05

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WV Department of Environmental Protection

10/20/2017
NOV 04 2005

RIT 9173

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WW-4A
Revised 6-07

1) Date: August 26, 2017
2) Operator's Well Number
Mary Shanley No.4

3) API Well No.: 47 - 085 - 09173

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> <i>WJ</i>	Name <u>NA</u>
Address <u>265 Hall's Drive</u>	Address _____
<u>Pennsboro, WV 26415</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector _____	(c) Coal Lessee with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
Telephone _____	_____

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

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WV Department of Environmental Protection

Subscribed and sworn before me this 6th day of September, 2017 by M.T. Hall *designated agent, Hall Drilling LLC*
 My Commission Expires 8-5-22 *Melissa K. McClutcheon*



Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information in the normal course of business or as needed to comply with state or federal laws, 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.

10/20/2017

8509173P

SURFACE OWNER WAIVER

Operator's Well
Number

Mary Shanley No.4

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 57th 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

_____	Date _____	Name _____	_____
Signature		By <i>M.T. Hall</i>	_____
		Its <i>Vice President</i>	Date <i>9-6-17</i>

Signature _____ Date **10/20/2017**

WW-9
(5/16)

API Number 47 - 085 - 09173
Operator's Well No. Mary Shanley No.4

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

ANY WELL EFFLUENT MUST BE
CONTAINED IN TANKS BEFORE OFF-SITE
DISPOSAL. gmm

If so, please describe anticipated pit waste: _____
Will a synthetic liner be used in the pit? Yes No If so, what ml? _____

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9-15-17

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) _____

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

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Additives to be used in drilling medium? NA

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

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-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.

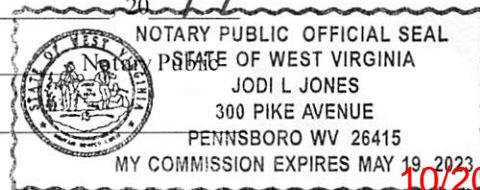
Company Official Signature M.T. Hall

Company Official (Typed Name) M.T. Hall

Company Official Title Designated Agent

Subscribed and sworn before me this 15 day of September 2017

My commission expires May 19, 2023



10/20/2017

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 Gaff

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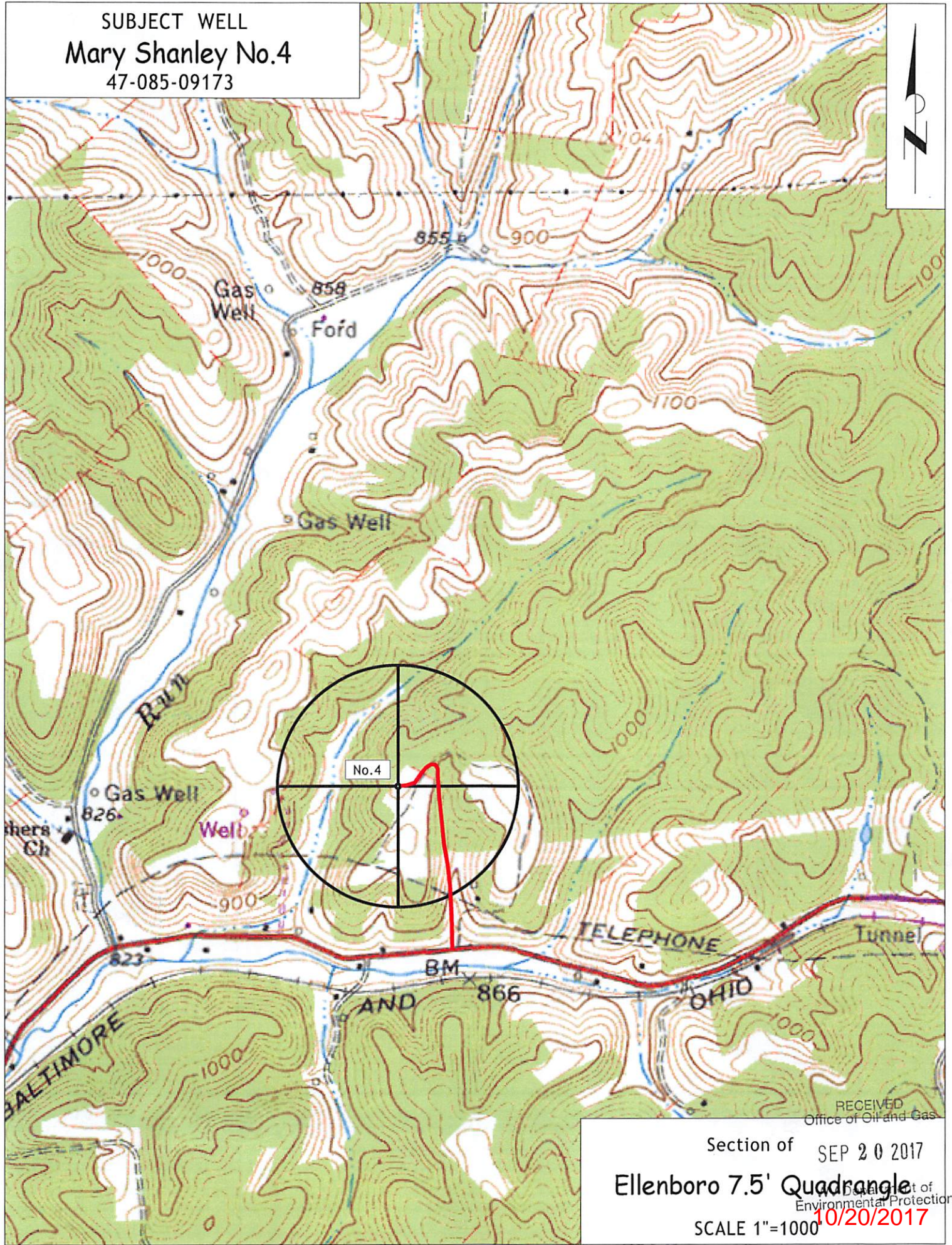
Comments: Seed & Mulch disturbed areas.

Title: Oil & Gas Inspector

Date: 9-15-17

Field Reviewed? Yes No

SUBJECT WELL
Mary Shanley No.4
47-085-09173



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Section of SEP 20 2017
Ellenboro 7.5' Quadrangle
SCALE 1"=1000
10/20/2017
Department of Environmental Protection

85 09173 P

WW-7
8-30-06



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

API: 47-085-09173 WELL NO.: 4

FARM NAME: Mary Shanley

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: 4,348,625

UTM GPS EASTING: 498,555 GPS ELEVATION: 310 m. (1017')

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.

CMT Hall
Signature

Designated Agt.
Title

9-6-17
Date

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