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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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, October 16, 2019  
WELL WORK PLUGGING PERMIT  
Vertical Plugging

HG ENERGY II APPALACHIA, LLC  
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for 33898  
47-033-05197-00-00

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.

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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, 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: 33898  
Farm Name: WARD, EVELYN MARIE  
U.S. WELL NUMBER: 47-033-05197-00-00  
Vertical Plugging  
Date Issued: 10/16/2019

## 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.

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### 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 September 3, 2019  
2) Operator's  
Well No. 33898  
3) API Well No. 47-033 - 05197 P

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 X or Underground storage \_\_\_) Deep X / Shallow \_\_\_

5) Location: Elevation 985' Watershed West Fork River  
District Grant County Harrison Quadrangle West Milford

6) Well Operator HG Energy II Appalachia, LLC 7) Designated Agent Diane White  
Address 5260 Dupont Road Address 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Sam Ward Name To Be Determined Upon Approval of Permit  
Address P.O. Box 2327 Address \_\_\_\_\_  
Buckhannon, WV 26201

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

**\*\* See Attached Sheet for Plugging Manners \*\***

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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 S. D. Whitt Date 9/6/2019

API No 47-033-05197  
Farm Ward, Evelyn Marie  
Well # 33898  
County Harrison, WV

Cement Plug #5  
0'-100'  
6% Bentonite Gel  
Cement Plug #4  
400' - 613'

6% Bentonite Gel

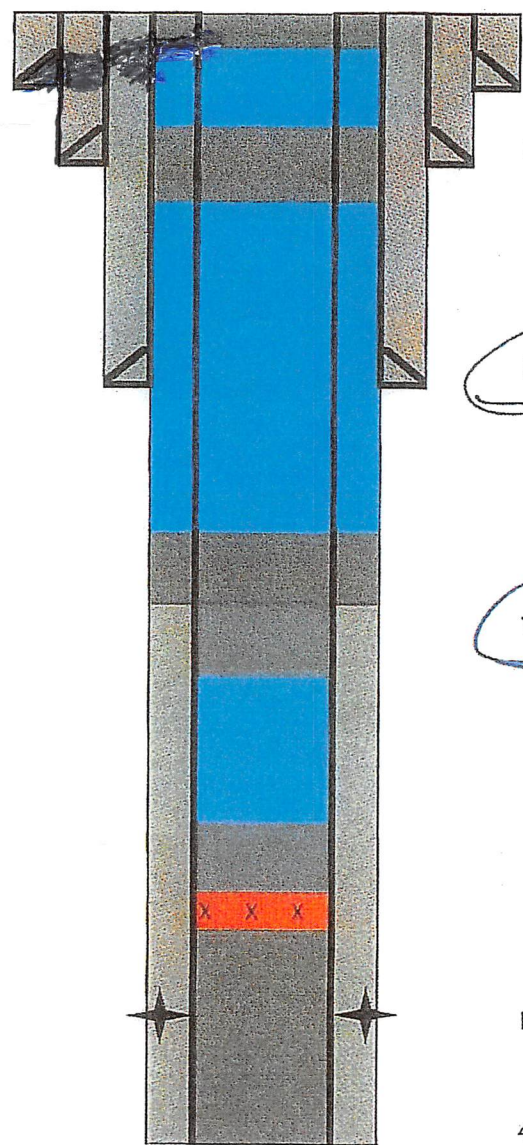
Cement Plug #3  
4800' - 5000'

6% Bentonite Gel

Cement Plug #2  
6400' - 6500'

CIBP @ 6500' & 6600'

Cement Plug #1  
6671' - 6971'



16" Conductor @ 37', Sanded In

11-3/4" Surface @ 513', TOC @ Surface

8-5/8" Intermediate @ 1505', TOC @ Surface

TOC @ 4900' EST

Perforations: 6855' - 6902'

4-1/2" 11.6# P110 @ 6971'

*SDW*  
*9/6/2019*

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**PLUGGING PROCEDURE**

- 1 Run Tubing to TD
- 2 Establish Circulation w/ Fresh Water, Load Hole w/ Fresh Water
- 3 Set Cement Plug #1 (Balanced Plug), TOOH
- 4 Tag TOC, Set CIBP's w/ WL
- 5 TIH, Set Cement Plug #2 (Balanced Plug), TOOH
- 6 Cut and Recover 4-1/2" Casing
- 7 TIH, Set Cement Plug #3 (Balanced Plug), TOOH
- 8 Set Cement Plug #4 (Balanced Plug), TOOH
- 9 Set Cement Plug #5 (Balanced Plug), TOOH
- 10 Install Monument



State of West Virginia  
 Department of Environmental Protection

DATE: DEC 29, 2009  
 API No: 47-033-05197 P  
 Lease No: FK079962 & LC071243

Office of Oil and Gas  
 Well Operator's Report of Well Work

Farm Name: WARD, EVELYN MARIE Operator Well No. 33898 Rev

LOCATION: Elevation: 985.01' Quadrangle: West Milford

District: Grant County: Harrison  
 Latitude: 7,320 Feet South of: 39 Deg. 12 Min. 30 Sec.  
 Longitude: 450 Feet West of: 80 Deg. 25 Min. 00 Sec.

Company: Dominion Exploration & Production, Inc.

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 1248 Jane Lew, WV 26378				
Agent: Rodney J. Biggs				
Inspector: Tim Bennett				
Date Permit Issued: 1/29/2009				
Date Well Work Commenced: 9/22/2009	16"	37'	37'	Sand In
Date Well Work Completed: 10/31/2009				
Verbal Plugging:	11 3/4"	513'	513'	220 sks
Date Permission granted on:				
Rotary X Cable Rig	8 5/8"	1505'	1505'	350 sks
Total Depth (feet): 6,986'				
Fresh Water Depth (ft.): 25',40',115',585'	4 1/2"	6971'	6971'	400 sks
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)?: No				
Coal Depths (ft.): 405'-425'				
Oil Depths (ft.): N/A				

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OPEN FLOW DATA

Producing formation MARCELLUS Pay zone depth (ft) 6855'-6902'  
 Gas: Initial production 625 MCF/d Oil: Initial open flow 0 Bbl/d  
 Final open flow N/A MCF/d Final open flow 0 Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours  
 Initial Flowing Pressure 255 psig (surface pressure) after \_\_\_\_\_ Hours

WV Department of Environmental Protection

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: Rodney J. Biggs  
 Date: 11/30/09

WR-35

Rev (5-01)

Page 2 of 2

WELL: 33898 Rev DEPI

47-033-05197F

10/31/2009 HALLIBURTON FRACED WELL AS FOLLOWS; PUMPED A  
TOTAL OF 433,405 LBS OF 80/100 SAND AND 374,467 LBS OF 40/70 SAND.  
TOTAL FLUID TO RECOVER 24,576 BBLs ATP 6721 PSI, ATR 84 BPM,  
ISIP 4850 PSI, 15 MIN SIP 2950 PSI.

Fill	0	6	Clay	6	12
Millford Rock	12	22	Sand&Shale	22	160
Sand	160	275	Sand&Shale	275	298
Sand	298	405	Coal	405	425
Sand&Shale	425	861	Sand	861	964
Sand&Shale	964	1157	Little Lime	1157	1187
Sand&Shale	1187	1202	Big Lime	1202	

<b>GAMMA RAY/ FORMATION</b>			
DEPI #33898 Rev	<b>TOPS</b>		47-033-05197
	<b>TOP</b>	<b>BASE</b>	
BIG LIME	1205	1264	
BIG INJUN SAND	1265	1365	
GANTZ	1580	1590	
FIFTY FOOT	1696	1752	
THIRTY FOOT	1780	1794	
GORDON	1850	2011	
FOURTH SAND	2038	2058	
FIFTH SAND	2104	2124	
BAYARD	2148	2164	
ELIZABETH	2420	2516	
WARREN	2546	2620	
SPEECHLEY	2680	2830	
BALLTOWN	2950	3058	
BRADFORD	3520	3558	
FAULT	3975		
BENSON	4258	4306	
LEOPLD	4430	4500	
ALEXANDER	4590	4680	
THIRD ELK	4830	4850	
SYCAMORE GRIT	6107	6140	
BURKETT	6626	6644	
TULLY	6645	6685	
MARCELLUS	6814	6914	
ONONDAGA	6915	6946	
HUNTERSVILLE	6947		
LTD	6994		

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WW-4A  
Revised 6-07

1) Date: July 15, 2019  
2) Operator's Well Number  
33898  
3) API Well No.: 47 - 033 - 05197 P

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

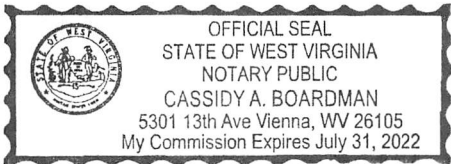
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Evelyn M. Ward, c/o Richard Ward</u>	Name <u>NA</u>
Address <u>9496 Good Hope Road</u>	Address _____
<u>Jane Lew, WV 26378</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Sam Ward</u>	(c) Coal Lessee with Declaration
Address <u>P. O. Box 2327</u>	Name <u>NA</u>
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-389-7583</u>	_____

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

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

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



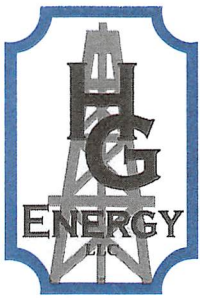
Well Operator	<u>HG Energy II Appalachia, LLC</u>	RECEIVED Office of Oil and Gas
By:	<u>Diane White</u> <i>Diane White</i>	SEP 12 2019
Its:	<u>Agent</u>	WV Department of Environmental Protection
Address	<u>5260 Dupont Road</u> <u>Parkersburg, WV 26101</u>	
Telephone	<u>304-420-1119</u>	

Subscribed and sworn before me this 3<sup>rd</sup> day of September, 2019  
Cassidy A. Boardman Notary Public  
My Commission Expires 7/31/2022

**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 [depprivacyoffier@wv.gov](mailto:depprivacyoffier@wv.gov).

47-033-05197P



**HG Energy, LLC**  
5260 Dupont Road  
Parkersburg, WV 26101  
(304) 420-1100 - Office  
(304) 863-3172 - Fax

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September 3, 2019

Evelyn M. Ward  
c/o Richard Ward  
9496 Good Hope Road  
Jane Lew, WV 26378

RE: Ward No. 33898  
Grant District, Harrison County  
West Virginia

Dear Landowner:

Enclosed are copies of various application papers that we have filed with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a landowner are detailed in the enclosed permit application papers.

No action on your part is required. If you have any questions or comments regarding this application, you may call this office at (304) 420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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WW-9  
(5/16)

API Number 47 - 033 - 05197 P  
Operator's Well No. \_\_\_\_\_

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

Operator Name HG Energy II Appalachia, LLC OP Code 494519932

Watershed (HUC 10) West Fork River Quadrangle West Milford

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: Fluids encountered while plugging subject well will be shipped offsite to an approved landfill

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? N/A

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 Fluids will be stored in tanks for offsite disposal)

Will closed loop system be used? If so, describe: No

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. Remove offsite

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

-Landfill or offsite name/permit number? To be determined upon approval of permit

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.

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Company Official Signature Diane White

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Company Official (Typed Name) Diane White

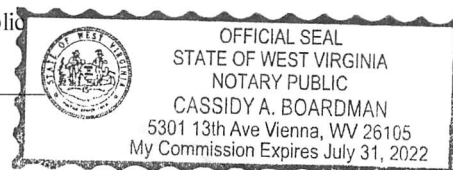
WV Department of  
Environmental Protection

Company Official Title Agent

Subscribed and sworn before me this 3rd day of September, 2019

Cassidy A. Boardman Notary Public

My commission expires 7/31/2022



Form WW-9

Operator's Well No. \_\_\_\_\_

Proposed Revegetation Treatment: Acres Disturbed 0.5 acres 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 Maintained 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.

Plan Approved by: [Signature]

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: OO6 Inspector

Date: 9/6/2019

Field Reviewed?  Yes  No

N/A

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

Operator Name: HG Energy II Appalachia, LLC  
Watershed (HUC 10): West Fork River Quad: West Milford  
Farm Name: \_\_\_\_\_

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

NA

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

NA

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

NA

4. Summarize all activities at your facility that are already regulated for groundwater protection.

NA

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WV Department of  
Environmental Protection

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A

NA

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

NA

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

NA

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

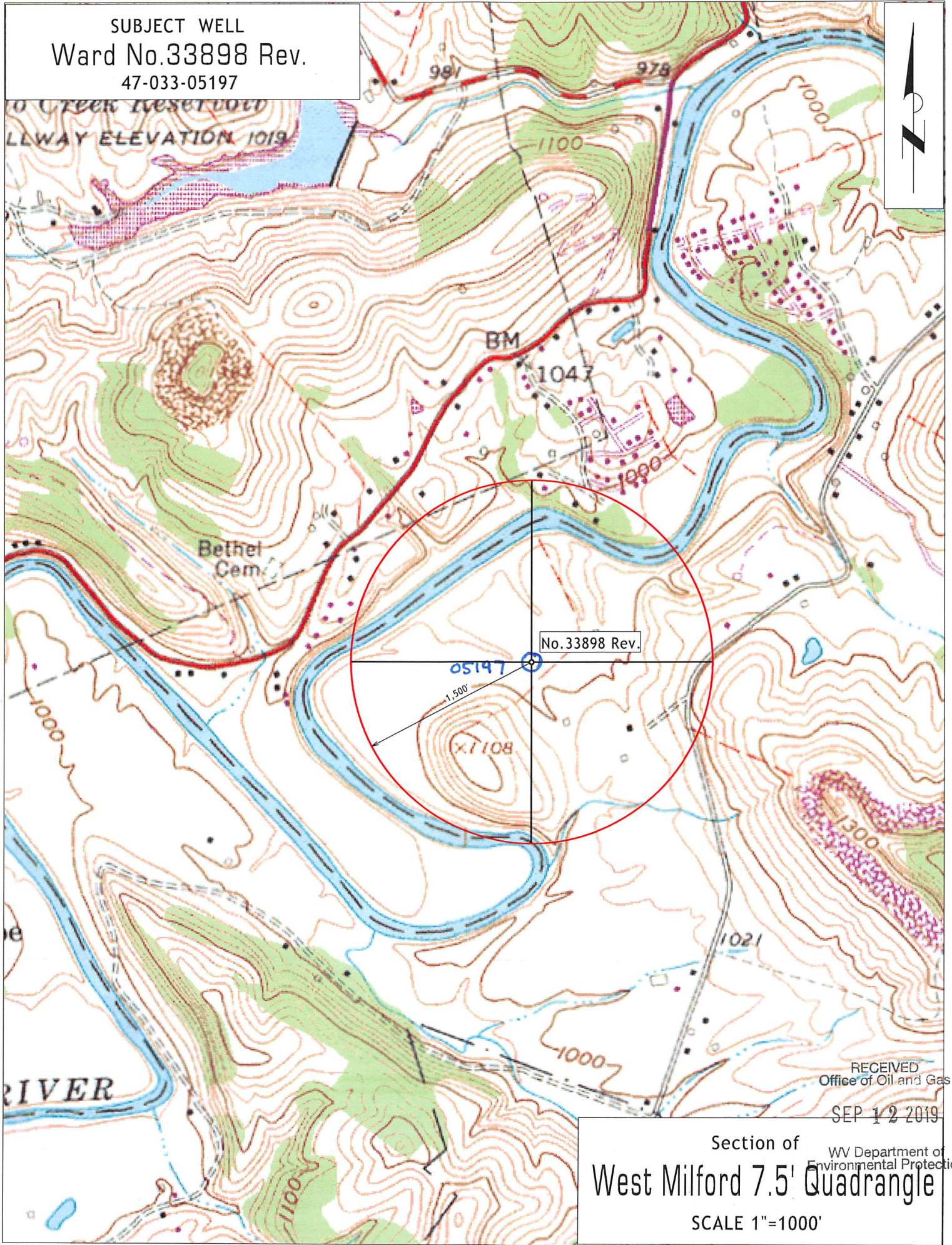
NA

Signature: Diane White

Date: 9-3-19



SUBJECT WELL  
Ward No.33898 Rev.  
47-033-05197



No.33898 Rev.

05197

1,500'

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Section of WV Department of  
West Milford 7.5' Quadrangle Environmental Protection  
SCALE 1"=1000'



West Virginia Department of Environmental Protection  
Office of Oil & Gas

**WELL LOCATION FORM: GPS**

API: 47- 033 - 05197 WELL NO: 33898 Rev.

FARM NAME: Evelyn Marie Ward

RESPONSIBLE PARTY NAME: HG Energy, LLC

COUNTY: Harrison DISTRICT: Grant

QUADRANGLE: West Milford 7.5'

SURFACE OWNER: Evelyn Marie Ward (LE)

ROYALTY OWNER: Evelyn Ward et al.

UTM GPS NORTHING: 4,337,833

UTM GPS EASTING: 550,253 GPS ELEVATION: 300 m.

985'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit on the above well. The Office of Oil & 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  Post Processed Differential   
 Real-Time Differential

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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.

Diane White Diane C. White  
Signature

Designated Agent  
Title

August 30, 2019  
Date