



**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

September 29, 2015

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-9500855, issued to HG ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin

Chief

Operator's Well No: EMELINE ASH 5

Farm Name: ASH, EMALINE

**API Well Number: 47-9500855**

**Permit Type: Plugging**

Date Issued: 09/29/2015

**Promoting a healthy environment.**

**10/02/2015**

## 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

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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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

9500855P

WW-4B  
Rev. 2/01

- 1) Date July 17, 2015
- 2) Operator's  
Well No. Emaline Ash 5
- 3) API Well No. 47-005 - 00555

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 977' Watershed Indian Creek  
District McElroy County Tyler Quadrangle Centerpoint 7.5'
- 6) Well Operator HG Energy, 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 Mike Goff Name To Be Determined Upon Approval of Permit  
Address PO Box 134 Address       
Pullman, WV 26421

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

\*\*See attached sheet\*\*

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WV Department of  
Environmental Protection

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

Work order approved by inspector Richard Goff Date 7-30-15

10/02/2015

9500855P

WW-4B - Conti  
Rev. 2/01

1) Date: July 17, 2015  
2) Operator's Well Number  
Emaline Ash 5  
3) API Well No: 47 - 095 - 0855  
State County Permit

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 \_\_\_\_\_ Waste Disposal \_\_\_\_\_  
 (If "Gas", Production \_\_\_\_\_ Underground Storage \_\_\_\_\_ ) Deep \_\_\_\_\_ Shallow

5) LOCATION: Elevation: 977' Watershed: Indian Creek  
 District: McElroy County: Tyler Quadrangle Centerpoint 7.5'

6) WELL OPERATOR: HG Energy, LLC 4.94E+08  
 Address 5260 Dupont Road  
 Parkersburg, WV 26101

7) DESIGNATED AGENT Diane White  
 Address 5260 Dupont Road  
 Parkersburg, WV 26101

8) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name Mike Goff  
 Address PO Box 134  
 Pullman, WV 26421

9) PLUGGING CONTRACTOR  
 Name To Be Determined Upon Approval of Permit  
 Address \_\_\_\_\_

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

TD- 2,940'

Manners of plugging:

- Plug #1 2850' - 2750'  
Located above perforations and Gordon  
Free Point, cut and pull 4 1/2" casing approx. 2300'
- Plug #2 - approx. 2350' - 2250'  
Located at 4 1/2" casing stub
- Plug #3 - 1025' - 750'  
Located at Elevation, 8 5/8" casing shoe and coal seam
- Plug #4 - 350' - 250'  
Freshwater
- Plug #5 - 100' - 0'  
Surface

Recover all possible casing. If casing can not be recovered, perforate for plug placement.

Monument:  
6" minimum diameter metal pipe  
30" above surface  
10' in well below surface  
Sealed with cement  
API identification (1/2") height numbering

6% Gel between all plugs

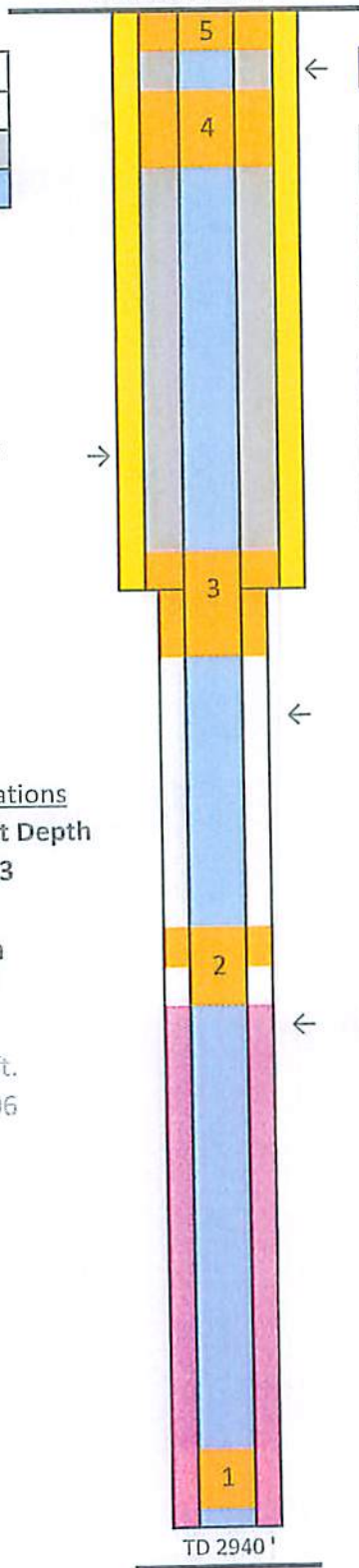
MAC  
7-30-15  
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10/02/2015

Well: Emaline Ash #5

Elevation: 977'

Casing Information		
Size	Depth	Weight
8 5/8"	880	20#/ft.
4 1/2"	2935	9.5#/ft.



380 sacks cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	2300'

Cement Plugs		
NO.	Bottom	Top
1	2850	2750
2	2350	2250
3	1025	750
4	350	250
5	100	0

Hole Size 10 7/8"

7 7/8" Hole Size

Bottom Hole Cement Level Calculations

# Sacks Used                      Cement Depth  
100                                      2563

Hole Size              Casing Size      Depth  
7.875                      4.5                      2935

diameter delta      Conv. Factor      bbls / ft.  
41.765625      1029.4      0.0406

cubic ft. per vertical ft. depth  
0.227795902

Sacks per vertical ft. depth  
0.268799164

100 Sks Cement T.O.C. 2563'

Highest Perforation 2870'

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7-30-15

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TD 2940'

CG-10  
Rev. - 9-71



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
**Oil and Gas Division**  
**WELL RECORD**

Quadrangle Centerpoint 7.5'  
Permit No. 47-095-0855

Rotary \_\_\_\_\_ Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood  Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Company <u>Pennzoil Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P. O. Box 1588, Parkersburg, WV</u>				
Farm <u>Emaline Ash</u> Acres <u>42</u>	Size <u>20-16</u>			
Location (waters) <u>Indian Creek</u>	Cond. <u>13-10"</u>			
Well No. <u>5</u> Elev. <u>976.89'</u>	<u>9 5/8</u>			
District <u>McElroy</u> County <u>Tyler</u>	<u>8 5/8</u>	<u>881</u>	<u>881</u>	<u>230 sks</u>
The surface of tract is owned in fee by <u>F. M. Lemasters</u>	<u>7</u>			
Address <u>Alvy, Wv</u>	<u>4 1/2</u>			
Mineral rights are owned by <u>Dessel P. Yeater</u>	<u>4 1/2</u>	<u>2937</u>	<u>2937</u>	<u>100 sks.</u>
Address <u>639 Washington Ave., Clarksburg, WV</u>	<u>3</u>			
Drilling Commenced <u>12-2-80</u>	<u>2</u>			
Drilling Completed <u>12-9-80</u>	Liners Used			
Initial open flow _____ cu. ft. _____ bbls.				
Final production _____ cu. ft. per day _____ bbls.				
Well open _____ hrs. before test _____ RP.				

Attach copy of cementing record.

Well treatment details:  
Water Injection Well  
Perf: 2870-2878-16H  
Fractured 12-30-80 w/250 qals. 15% HCL, 160 BGW, 1000# 20/40 sd  
Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Gordon Depth \_\_\_\_\_

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			0	1272		
Shale			1272	1432		
Sand & Shale			1432	2008		
Little Lime			2008	2020		
Pencil Cave			2020	2036		
Blue Monday			2036	2066		
Big Lime			2066	2136		
Loyalhanna			2136	2160		
Pocono Big Injun			2160	2282		
Pocono Shale			2282	2840		
<u>Gordon</u>			<u>2840</u>	<u>2940</u>		
Total Depth				2940		
PBD				<u>2920</u>		

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Environmental Protection

9500855P

WW-4A  
Revised 6-07

1) Date: July 17, 2015  
2) Operator's Well Number  
Emaline Ash 5

3) API Well No.: 47 - 095 - 00855

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:  
(a) Name American Energy Partners  
Address 8082 Indian Creek Road  
Jacksonburg, WV 26377  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Mike Goff  
Address P. O. Box 134  
Pullman, WV 26421  
Telephone 304-549-9823

5) (a) Coal Operator  
Name NA  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name NA  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name NA  
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  
It:  
Address  
Telephone

HG Energy, LLC  
Diane White Diane White  
Agent  
5260 Dupont Road  
Parkersburg, WV 26101  
304-420-1119

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WV Department of  
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Subscribed and sworn before me this 17th day of July 2015 \_\_\_\_\_ Notary Public

My Commission Expires Oct. 4, 2016

MSC  
1-30-15

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).

10/02/2015

95008337

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 HG Energy, LLC OP Code 494497948

Watershed Indian Creek Quadrangle Centerpoint 7.5"

Elevation 977' County Tyler District McElroy

Description of anticipated Pit Waste: Fluids encountered while plugging subject well

Will a synthetic liner be used in the pit? Yes a minimum of 20 mil thickness synthetic liner must be used. *SPW*

*MAG  
7-30-15*

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_ )

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain \_\_\_\_\_ )
- Swabbing
- Plugging

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.

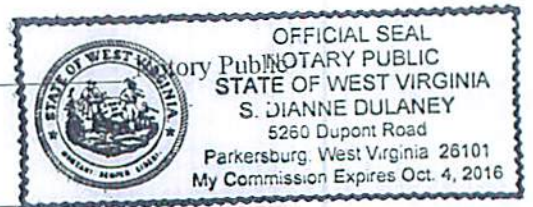
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AUG 17 2015

Company Official Signature Diane White  
Company Official (Typed Name) Diane White  
Company Official Title Agent  
WV Department of Environmental Protection

Subscribed and sworn before me this 17th day of July, 2015

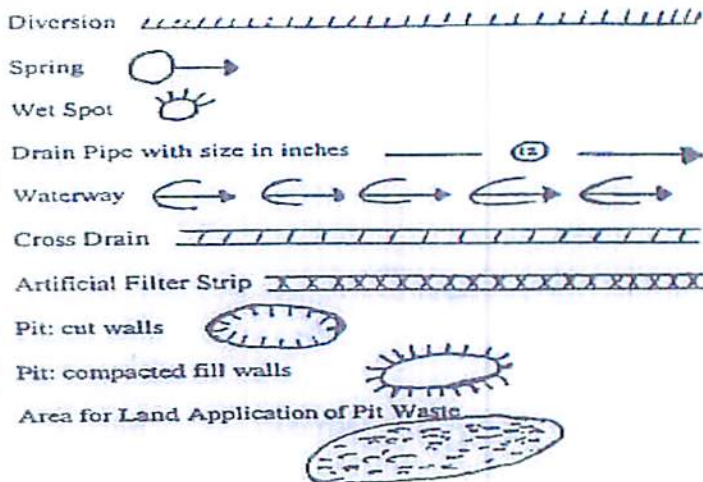
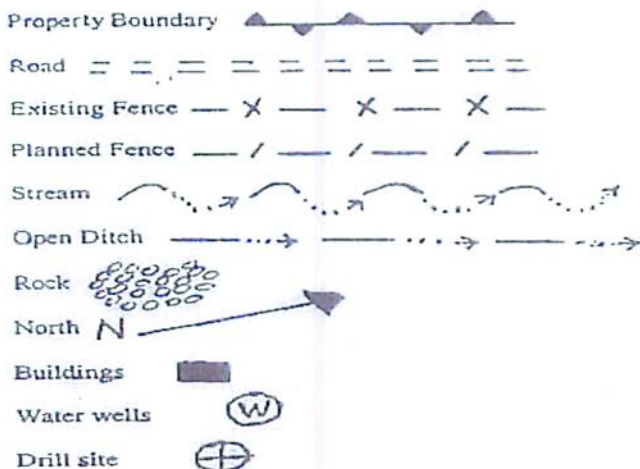
*[Signature]*  
My commission expires Oct. 4, 2016



10/02/2015



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 0.8 acres Prevegetation pH \_\_\_\_\_  
 Lime 3 Tons/acre or to correct to pH 6.5  
 Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)  
 Mulch Straw 2 Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre
Tall Fescue		40
Ladino Clover		5

Seed Type	Area II	lbs/acre
Tall Fescue		40
Ladino Clover		5

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Attach:  
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Hoff

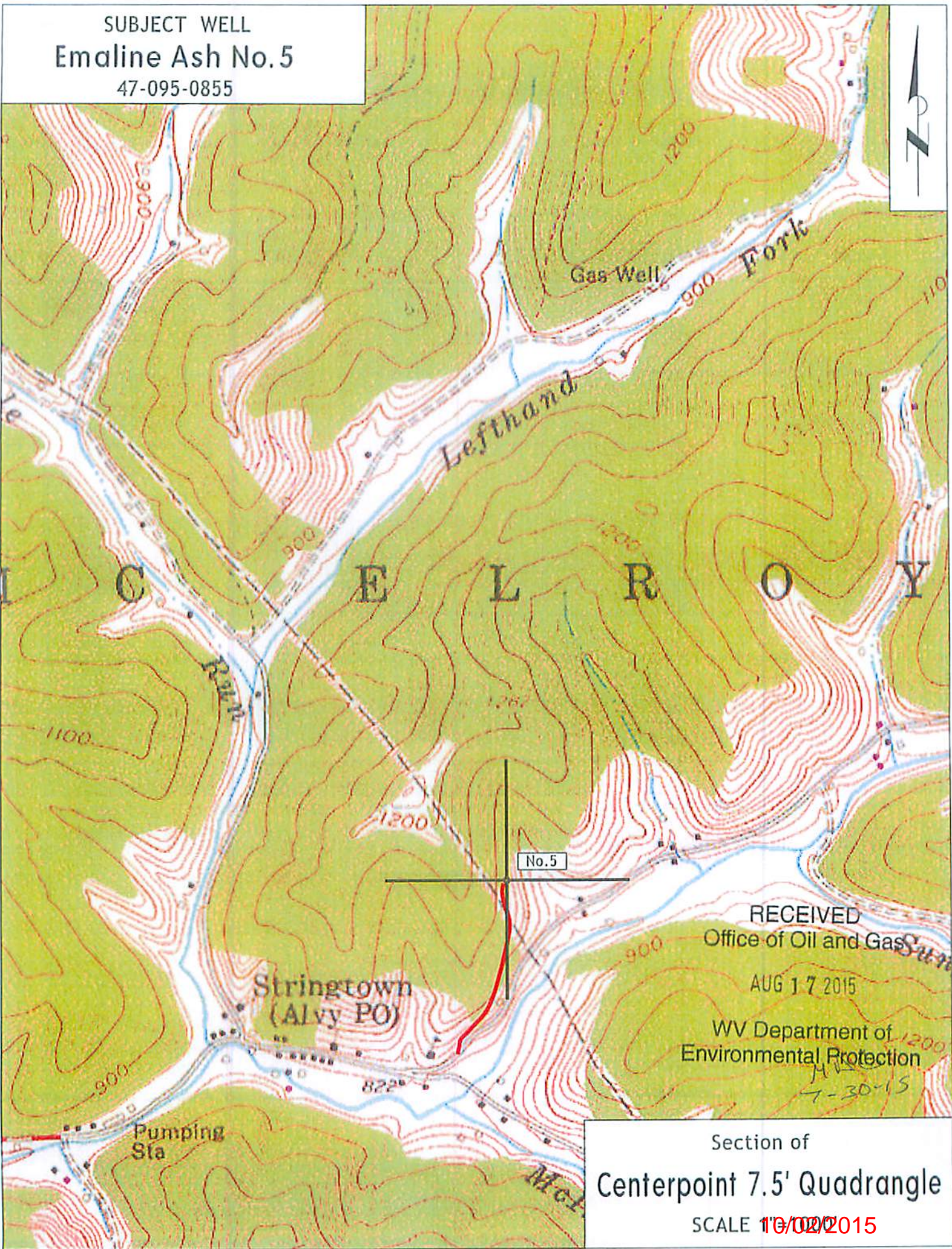
Comments: Preseed & mulch any disturbed areas.

Title: Oil & Gas Inspector

Date: 7-30-15

Field Reviewed? ( ) Yes (  ) No

SUBJECT WELL  
Emaline Ash No.5  
47-095-0855



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WV Department of  
Environmental Protection  
HV  
7-30-15

Section of  
Centerpoint 7.5' Quadrangle  
SCALE 1"=100'

10/02/2015

WW-7  
8-30-06

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

API: 47- 095 - 0855 WELL NO: 5

FARM NAME: Emaline Ash

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Tyler DISTRICT: McElroy

QUADRANGLE: Centerpoint 7.5'

SURFACE OWNER: American Energy Partners et al.

ROYALTY OWNER: American Energy Partners et al.

UTM GPS NORTHING: 4,366,649 (NAD 83)

UTM GPS EASTING: 526,627 (NAD 83) GPS ELEVATION: 298 m. (977')

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	<input type="checkbox"/>	Post Processed Differential	<input type="checkbox"/>
		Real-Time Differential	<input type="checkbox"/>
Mapping Grade GPS	<input checked="" type="checkbox"/>	Post Processed Differential	<input checked="" type="checkbox"/>
		Real-Time Differential	<input type="checkbox"/>

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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

May 27, 2015  
Date