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**west virginia** department of environmental protection

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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

August 31, 2015

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-8704075, 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: G. W. SMITH 1

Farm Name: SMITH, G. W.

**API Well Number: 47-8704075**

**Permit Type: Plugging**

Date Issued: 08/31/2015

**Promoting a healthy environment.**

**09/04/2015**

## 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.

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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.

8704075P

WW-4B  
Rev. 2/01

1) Date July 31, 2015  
2) Operator's  
Well No. G.W. Smith 2  
3) API Well No. 47-037 - 4075

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

5) Location: Elevation 1170' Watershed Laurel Fork  
District Smithfield County Roane Quadrangle Looneyville 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 Name Joe Taylor  
Address 1478 Claylick Road  
Ripley, WV 25271  
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:

\*\* See Attached Sheet \*\*

Received  
Office of Oil & Gas  
AUG 10 2015

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

Work order approved by inspector  Date 8-4-15

09/04/2015



- 1) Date: July 31, 2015
- 2) Operator's Well Number GW Smith 2
- 3) API Well No: 47 - 087 - 4075  
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 \_\_\_\_\_ X Liquid Injection \_\_\_\_\_ Waste Disposal \_\_\_\_\_  
(If "Gas", Production \_\_\_\_\_ Underground Storage \_\_\_\_\_ ) Deep \_\_\_\_\_ Shallow \_\_\_\_\_ x
- 5) LOCATION: Elevation: 1170' Watershed: Whetstone Run Smith Run Looneyville 7.5'  
District: Smithfield Mannington County: Marion Roane Quadrangle Glover Gap 7.5'
- 6) WELL OPERATOR: HG Energy, LLC 4.94E+08 7) DESIGNATED AGENT Diane White  
Address 5260 Dupont Road Address 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) PLUGGING CONTRACTOR  
Name Joe Taylor Name To Be Determined Upon Approval of Permit  
Address 1478 Claylick Road Address \_\_\_\_\_  
Ripley, WV 25271 \_\_\_\_\_

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

TD- 2,189'

Manners of plugging:

- Plug #1 -  
2000' - 1900'  
Located above Big Injun  
Free point, part and pull 4 1/2" casing at approx 1600'
- Plug #2 -  
Located at 4 1/2" casing stub (approx 1650' - 1550')
- Plug #3 -  
Located at elevation 1225' - 1125'
- Plug #4 -  
Located at 8 1/4" casing shoe 1050' - 950'
- Plug #5 -  
Located at 8 1/4" casing stub (approx 450') and below fresh water 500' - 400'
- Plug #6 - 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

Received  
Office of Oil & Gas  
AUG 10 2015

*[Handwritten Signature]*  
8-4-15

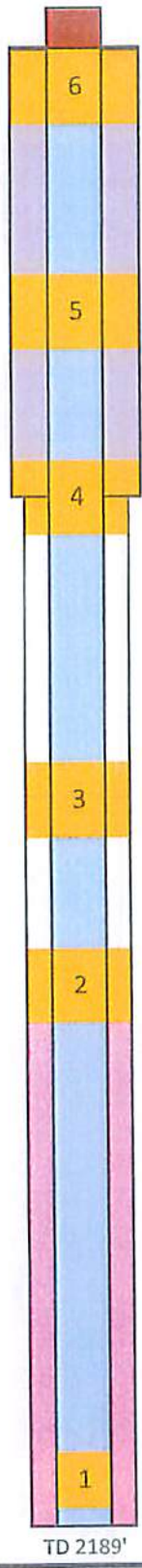
09/04/2015

Well: G.W. Smith #2

Monument to extend 30" above surface. 10' into well. 6" min metal pipe, sealed with cement. API i.D.

Elevation: 1170'

Casing Information		
Size	Depth	Weight
8 1/4"	985	#/ft.
4 1/2"	2135	#/ft.



Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	1600'
8 1/4"	450'

Cement Plugs		
NO.	Bottom	Top
1	2000	1900
2	1650	1550
3	1225	1125
4	1050	950
5	500	400
6	100	0

Bottom Hole Cement Level Calculations

# Sacks Used                      Cement Depth  
 25                                      1885.367

Hole Size            Casing Size            Depth  
 6                      4.5                      2132

diameter delta      Conv. Factor      bbls / ft.  
 15.75                  1029.4              0.0153

cubic ft. per vertical ft. depth  
 0.085902832

Sacks per vertical ft. depth  
 0.101365341

Yield options

- 50/50 posmix 6% gel = 1.64
- Neat w/ salt flakes = 1.19
- 50/50 w/ 2% gel = 1.27

← 25 Sks Cement T.O.C. 1885'

*[Handwritten Signature]*  
 8-4-15

Received  
 Office of Oil & Gas  
 AUG 10 2015



SHIRLEY DANIELS

Form OO-10



RECEIVED

NOV 9 1971 Rotary

 STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES & GAS DIVISION  
 OIL AND GAS WELLS DIVISION
Spudder Tools Storage 
 Combination  
 Oil or Gas Well Mixed  
 (KIND)

 Quadrangle Walton  
 Permit No. ROA-516A-Re Drill

## WELL RECORD

 Company Hess Oil Company  
 Address P. O. Box 173, Spencer, W. Va. 25276  
 Farm G. W. Smith Acres 53  
 Location (waters) Laura Fork  
 Well No. 2 Elev. 1170.6  
 District Smithfield County Roane  
 The surface of tract is owned in fee by  
L. D. Keffar Address Spencer Rt.  
 Mineral rights are owned by R. L. McCulity, et al  
 Address Spencer, W. Va.  
 Drilling commenced May 24, 1971  
 Drilling completed June 11, 1971  
 Date Shot From To

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13			Size of
10	14	14	
8 1/4	985	985*	Depth set
6 3/4			
5 3/16			
4 1/4		2132	Perf. top
5			Perf. bottom
2		2175	Perf. top
Liners Used			Perf. bottom

 With  
 Open Flow /10ths Water in \_\_\_\_\_ Inch  
 /10ths Merc. in \_\_\_\_\_ Inch

 Volume \_\_\_\_\_ Cu. Ft.  
 Rock Pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
 Oil \_\_\_\_\_ bbls. 1st 24 hrs.

## WELL ACIDIZED (DETAILS)

WELL FRACTURED (DETAILS) 550 bbl water, 25,000# sand (Open Hole Frac)RESULT AFTER TREATMENT (netal open flow or bbls.) 8 bbl oil - 120 M cu ft gasROCK PRESSURE AFTER TREATMENT 85# HOURS
 Fresh Water \_\_\_\_\_ Feet Salt Water \_\_\_\_\_ Feet  
 Producing Sand Big Injun Depth 2114 - 2189

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Big Dunkard			980	1090			
Salt Sand			1680	1970			
Little Lime			1970	1995			
Lime			1995	2012			
Pencil Cave			2012	2020			
Big Lime			2020	2144			
Big Injun			2114	2189			
TD				2189			

NOTE: The above formations are copied from the original log as none could be identified as the well was being re-opened.

\* The 8" casing was reported left in well when plugged in 1948.

(over)

09/04/2015



8704075P

WW-4A  
Revised 6-07

1) Date: July 31, 2015  
2) Operator's Well Number  
GW Smith 2  
3) API Well No.: 47 - 087 - 4075

**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>Charles Wprostok</u> ✓	Name <u>NA</u>
Address <u>230 Griffin Run Road</u>	Address _____
<u>Spencer, WV 25276</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Joe Taylor</u>	(c) Coal Lessee with Declaration
Address <u>1478 Claylick Road</u> <i>JOZ</i>	Name <u>NA</u>
<u>Ripley, WV 25271</u>	Address _____
Telephone <u>304-380-7469</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 HG Energy, LLC  
 By: Diane White *Diane White*  
 Its: Agent  
 Address 5260 Dupont Road  
Parkersburg, WV 26101  
 Telephone 304-420-1119

**Received**  
**Office of Oil & Gas**  
**AUG 10 2015**

Subscribed and sworn before me this 31st day of July, 2015

Tyler Ritchie Notary Public  
My Commission Expires June 23, 2020

**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).

09/04/2015



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 Laurel Fork Quadrangle Looneyville 7.5'

Elevation 1170' County Roane District Smithfield

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

Will a synthetic liner be used in the pit? 20 mil.

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.

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

Received  
Office of Oil & Gas

Subscribed and sworn before me this 31st day of July, 2015

AUG 10 2015

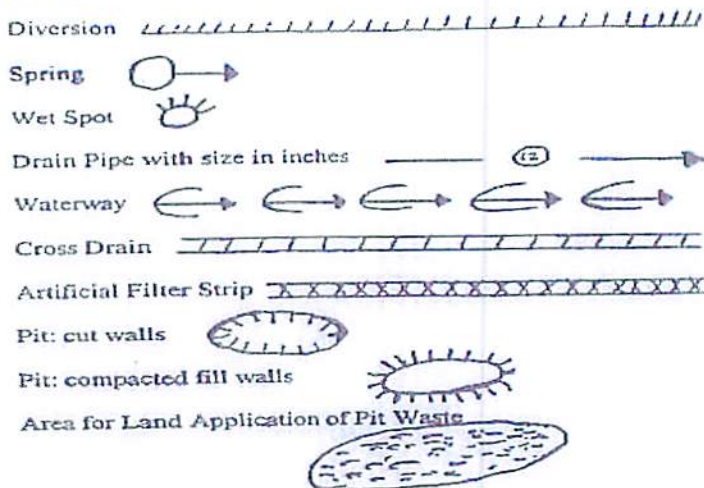
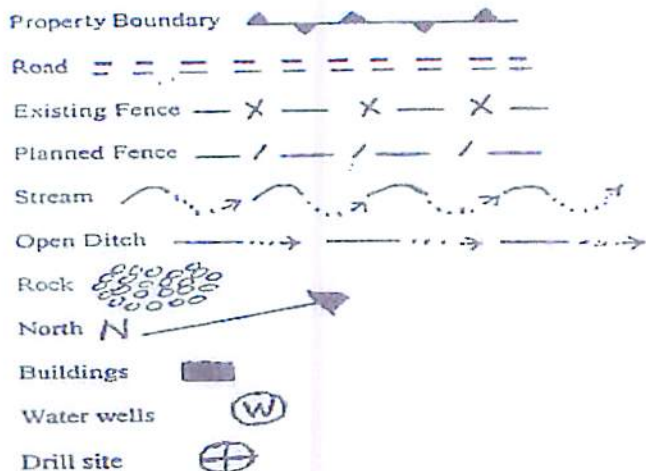
Sybil Ritchie Notary Public

My commission expires June 23, 2020





LEGEND



Proposed Revegetation Treatment: Acres Disturbed .03 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

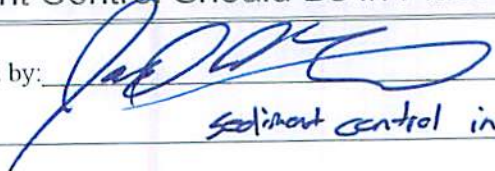
Seed Mixtures

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

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

Photocopied section of involved 7.5' topographic sheet.

**\*\*Sediment Control Should Be in Place at all Times\*\***

Plan Approved by: 

Comments: sediment control in place at all times.

Received  
Office of Oil & Gas  
AUG 10 2015

Title: OSG Inspector Date: 8-4-15

Field Reviewed? ( ) Yes (  ) No



8704075P

SUBJECT WELL  
G.W. Smith No.2  
47-087-4075



Section of  
Looneyville 7.5' Quadrangle  
SCALE 1"=1000  
09/04/2015



8704075P

WW-7  
5-02

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

API: 47- 087 - 4075 WELL NO: 2

FARM NAME: G.W. Smith No.2

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Roane DISTRICT: Smithfield

QUADRANGLE: Looneyville 7.5'

SURFACE OWNER: Charles Wyrostok

ROYALTY OWNER: H.G. Energy, LLC et al.

UTM GPS NORTHING: 4,284,228 (NAD 83)

UTM GPS EASTING: 475,505 (NAD 83) GPS ELEVATION: 358 m. (1174')

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"/>

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

July 30, 2015  
Date

Received  
Office of Oil & Gas  
Designated Agent  
AUG 10 2015  
Title

09/04/2015