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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

February 10, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-4301647, 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: 7  
Farm Name: SMITH, WILLIAM & REBA  
**API Well Number: 47-4301647**  
**Permit Type: Plugging**  
Date Issued: 02/10/2016

Promoting a healthy environment.

02/12/2016

## 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.

43016A7P

WW-4B  
Rev. 2/01

1) Date January 11, 2016  
2) Operator's  
Well No. W. T. Harris 7  
3) API Well No. 47-043 - 1647

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 701' Watershed Hayzlett Fork  
District Duval County Lincoln Quadrangle Garrett's Bend 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 Jeremy James  
Address P. O. Box 36  
Clendenin, WV 25045  
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 \*\*

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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 [Signature] Date 1-27-16

02/12/2016

4301647A

WW-4B - Conti  
Rev. 2/01

1) Date: January 12, 2016  
2) Operator's Well Number W T Harris 7  
3) API Well No: 47 - 043 - 1647  
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   x   Gas   x   Liquid Injection        Waste Disposal         
(If "Gas", Production        Underground Storage        ) Deep        Shallow   x  

5) LOCATION: Elevation:   701'   Watershed:   Hayzlett Fork    
District:   Duval   County:   Lincoln   Quadrangle   Garretts Bend 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   Jeremy James   Name   To Be Determined Upon Approval of Permit    
Address   P. O. Box 36   Address         
  Clendenin, WV 25045  

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

TD- 2,265'

Manners of plugging:  
 Plug #1 - ~~2000' - 1900'~~ 2150 - 2050 tag plug + reset if below 2050  
 Located above the highest perforation  
 Free point, part and pull 4 1/2" casing at approx ~~1750' - 1600'~~  
 Plug # 2 - Approx. ~~1800' - 1700'~~ 1650 - 1550 if unable to pull, set 100ft. Cement plug across cut + cut again + pull below sea level  
 Located at 4 1/2" casing stub  
 Plug #3 - Elevation 750 - 650  
 Located at elevation  
 Plug #4 - 300' - 0'  
 Located at 8 5/8" casing shoe, fresh water, 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

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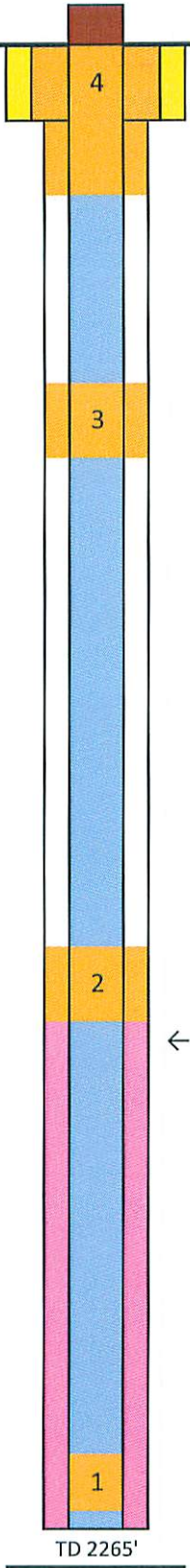
02/12/2016

Well: W.T. Harris #7

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

Elevation: 702'

Casing Information		
Size	Depth	Weight
8 5/8"	139'	20#/ft.
4 1/2"	2263'	10.5#/ft.



75 sacks cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	1750

Hole Size 6.75" →

Cement Plugs		
NO.	Bottom	Top
1	2000	1900
2	1800	1700
3	750	650
4	300	0
5		

Bottom Hole Cement Level Calculations

# Sacks Used                      Cement Depth  
50                                      1958.079

Hole Size      Casing Size      Depth  
6.75              4.5              2265

diameter delta      Conv. Factor      bbls / ft.  
25.3125              1029.4              0.02459

cubic ft. per vertical ft. depth  
0.138058122

Sacks per vertical ft. depth  
0.162908584

Yield options

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

50 Sks Cement T.O.C. 1960'

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Highest Perforation 2196' 04 2016

WV Department of  
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TD 2265'

★ CEMENT PLUGS MUST BE  
CLASS A CEMENT WITH NO MORE THAN 3% CaCl<sub>2</sub>  
AND NO OTHER ADDITIVES. *gamm*

**PENNZOIL COMPANY**  
**Well Completion Report**  
 75% DeArman - 25% Pz1.

Lease: W. T. HARRIS Well No. 7 New Well X Old Well     

District: Duval County: Lincoln State: West Virginia

Pool Name: Griffithsville Northeast Pool No. 57 Elevation 702.44' KB: XL

Producing Formation: Berea Depth: From 2184' to 2208'

Date Drilled In: December 12, 1975 Pays: Oil: From 2184' to 2208'

Original Total Depth: 2265' From      to     

Plug Back Depth: 2246' Gas: From 2184' to 2208'

Production                      Initial                      Present                      After Fracture

Oil                                      \_\_\_\_\_

Gas                                      \_\_\_\_\_

Surface Csg. set @ 139' KB: GM Gr. 8-5/8" H-40 New:Used Wt. 20# Collars ST&C

Cement Reg. Heat Amount 75 Sacks Plug Down @ 12:00 <sup>Midnight</sup> ~~AM:PM~~ Date 12-8-75

Production Csg. set @ 2263' KB: GM Gr. 4-1/2" H-40 New:Used Wt. 10.50# Collars ST&C

Cement 50/50 Posmix Amount 50 Sacks Plug Down @ 12:15 ~~AM:PM~~ Date 12-12-75

Logged by: Basin Surveys Date: December 12, 1975

Logs Used: \_\_\_\_\_

Perforated by: McCullough Date: December 19, 1975

Perforations: 2196'-2201' - 4 holes/ft. - 20 holes

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Treatment Data

	<u>Fluid</u>	<u>Sand</u>	<u>Acid</u>	<u>Solvent</u>	<u>Gel</u>	<u>Breaking Agent</u>	<u>Fluid Loss Agent</u>	<u>F.R. Agent</u>	<u>N.E. Agent</u>
Type	<u>Crude</u>	<u>20/40</u>	<u>15% HCl</u>	<u>Parathin</u>	_____	_____	_____	_____	<u>15-N</u>

Amount 555 25,000 500 55 \_\_\_\_\_

Breakdown Pressure: 1700 Treating Pressure: Max. 2850 Min. 2200 Avg. 2625

Avg. Inj. Rate 25.0 BPM ISIP 1500 @ 11:55 AM:PM 5 min. SIP 1400

10 min. SIP 1200 15 min. SIP 950 Other 1-3/4 hrs. 400#

EQUIPMENT USED

Service Company: \_\_\_\_\_ HHP 1608

By: George P. SanFilippo Date Fractured: 12-19-75

Office of Oil and Gas

FEB 04 2016

WV Department of Environmental Protection

WW-4A  
Revised 6-07

1) Date: January 11, 2016  
2) Operator's Well Number  
W. T. Harris 7  
3) API Well No.: 47 - 043 - 1647

**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>Ashley Medley &amp; Mark McDavid</u> ✓	Name <u>NA</u>
Address <u>1911 Garrett's Bend Road</u>	Address _____
<u>Sod, WV 25564</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Jeremy James</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 36</u>	Name <u>NA</u>
<u>Clendenin, WV 25045</u>	Address _____
Telephone <u>304-951-2596</u>	_____

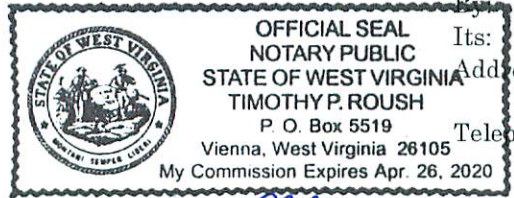
**TO THE PERSONS NAMED ABOVE:** You should have received this Form and the following documents:

- (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  
 Agent Diane White  
 Address 5260 Dupont Road  
Parkersburg, WV 26101  
 Telephone 304-420-1119



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Subscribed and sworn before me this 11th day of January  
[Signature] Notary Public  
 My Commission Expires 4/26/2020

WV Department of Environmental Protection

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).

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy, LLC OP Code 494497948

Watershed (HUC 10) Hayzlett Fork Quadrangle Garrett's Bend 7.5'

Elevation 701' County Lincoln District Duval

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

Will a pit be used for drill cuttings? Yes x No \_\_\_\_\_

If so, please describe anticipated pit waste: Fluids recovered while plugging subject well

Will a synthetic liner be used in the pit? Yes x No \_\_\_\_\_ If so, what ml.? 30 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 \_\_\_\_\_)

Will closed loop system be used? No

Drilling medium anticipated for this well? 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) NA

-Landfill or offsite name/permit number? NA

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

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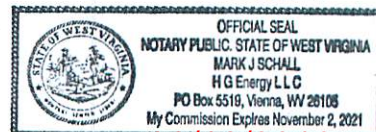
WV Department of  
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Subscribed and sworn before me this 12 day of January, 2016

*[Signature]*

Notary Public

My commission expires NOVEMBER 2, 2021



02/12/2016



Form WW-9

Operator's Well No. W T Harris 7

Proposed Revegetation Treatment: Acres Disturbed 0.7 acres Prevegetation pH \_\_\_\_\_

Lime 2 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

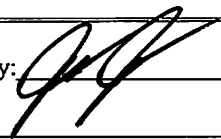
Seed Mixtures

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

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

Title: inspector OOG

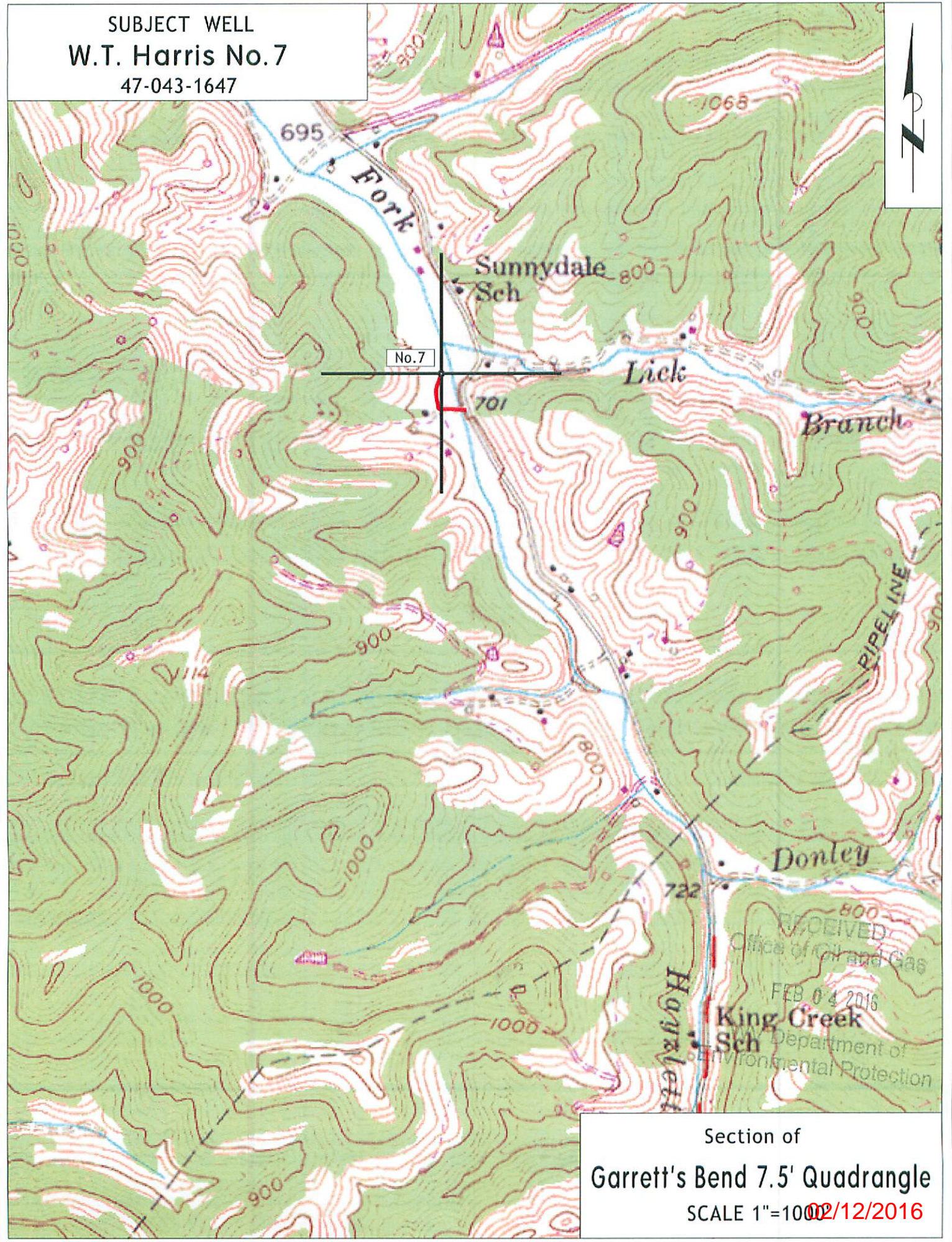
Date: 1-26-16

Field Reviewed? ( ) Yes ( ) No

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SUBJECT WELL  
W.T. Harris No. 7  
47-043-1647



Section of  
Garrett's Bend 7.5' Quadrangle  
SCALE 1"=1000'

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FEB 04 2016  
Department of  
Environmental Protection

02/12/2016

West Virginia Department of Environmental Protection  
Office of Oil & Gas

**WELL LOCATION FORM: GPS**

API: 47- 043 - 1647 WELL NO: 7

FARM NAME: W.T. Harris No.7

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Lincoln DISTRICT: Duval

QUADRANGLE: Garrett's Bend 7.5'

SURFACE OWNER: Ashley Medley & Mark McDavid

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

UTM GPS NORTHING: 4,238,405 (NAD 83)

UTM GPS EASTING: 421,554 (NAD 83) GPS ELEVATION: 214 m. 702.0'

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. FEB 04 2016

Diane White Diane C. White  
Signature

WV Department of Environmental Protection  
Designated Agent  
Title

November 24, 2015  
Date