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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

July 22, 2015

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-8703016, 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: 4  
Farm Name: BAYS, P. A.  
**API Well Number: 47-8703016**  
**Permit Type: Plugging**  
Date Issued: 07/22/2015

# 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.





8703016P

WW-4B  
Rev. 2/01

1) Date: June 5, 2015  
2) Operator's Well Number P. A. Bays 4  
3) API Well No: 47 - 087 - 3016  
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: 1054' Watershed: Laurel Fork  
District: Smithfield County: Roane Quadrangle Looneyville 7.5'

6) WELL OPERATOR: HG Energy, LLC 494497948 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 Ed Gainer Name To Be Determined Upon Approval of Permit  
Address P. O. Box 821 Address     
Spencer, WV 25276   

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

TD- 2189'

Manners of plugging:

- Plug #1 2100' - 2000'
- If unable to pull all 5 1/4" casing - free point, part and pull (approx 1500')
- Plug #2 -located at 5 1/2" casing stub approx 1550' - 1450'
- Plug #3 -located at 8 1/4" casing shoe / elevation 1100' - 900'
- If unable to pull all 8 1/4" casing - free point, part and pull (approx 700')
- Plug #4 - located at 8 1/4" stub, approx 750' - 650'
- Plug #5 - pull all possible 10", plug 300' - surface

RECORDS PROVIDED  
INDICATE 10" & 8 1/4"  
WAS PULLED.  
jmm

6% Gel between all plugs  
Monument min. 6" metal pipe, 30" above surface, 10' in well below surface, sealed w/cement & API ID

  
6/10/15

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07/24/2015

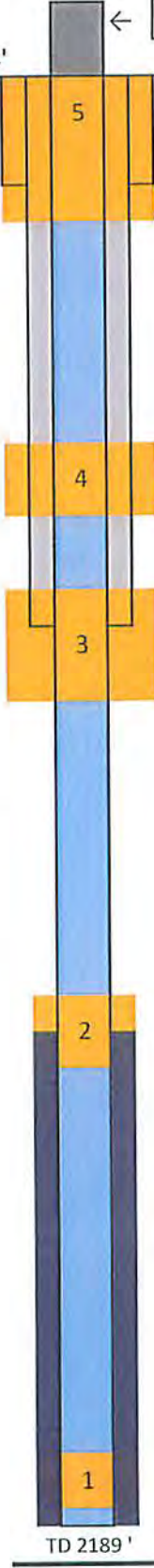
Well: P.A. Bays #4

Monument min. 6" dia. metal pipe, 30" above surface, 10' in well below surface, sealed with cement, API id.

Casing Information		
Size	Depth	Weight
10"	240	#/ft.
8 1/4"	985	#/ft.
5 1/2"	2138	14#/ft.

Freepoint Cut and Pull Casing	
Size	Approx. Depth
5 1/2"	1500
8 1/4"	700
10"	200

Cement Plugs		
NO.	Bottom	Top
1	2100	2000
2	1550	1450
3	1100	900
4	750	650
5	300	0



Bottom Hole Cement Level Calculations

# Sacks Used                      Cement Depth  
 70                                      1599.028

Hole Size            Casing Size    Depth  
 7                      5.5              2138

diameter delta    Conv. Factor    bbls / ft.  
 18.75              1029.4        0.018214

cubic ft. per vertical ft. depth  
 0.102265276

Sacks per vertical ft. depth  
 0.1298769            ← Edit Yield Options

Yield options

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

Note: 6% gel between all plugs

Perforation 2137' - 2187'

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8703016P

First 24 Hours from } \_\_\_\_\_ Sand \_\_\_\_\_ Bbls. \_\_\_\_\_ By \_\_\_\_\_ Sup \_\_\_\_\_

P.A. Bays Farm, No. of Lease \_\_\_\_\_ No. Acn \_\_\_\_\_  
 Smithfield District Boone County West Virginia Stat \_\_\_\_\_

Well No. Four Date of Location \_\_\_\_\_ 19 \_\_\_\_\_  
 Commenced \_\_\_\_\_ 19 \_\_\_\_\_ } \_\_\_\_\_ Contracto  
 Completed \_\_\_\_\_ 19 \_\_\_\_\_ }  
 Beg. Commenced \_\_\_\_\_ 19 \_\_\_\_\_ } \_\_\_\_\_ Contracto  
 Completed November 1st, 19 11 \_\_\_\_\_ }

CASING RECORD

CHARGED TO WELL		PUT IN WELL		BOTTOM OF CASING		PULLED OUT OF WELL		LEFT IN WELL		TRANSFERRED BEFORE COMPLETION		LEFT AT WELL NOT IN USE	
Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.
240		240		240		240							
985		985		985		985							
2014		2014		2014				2014					

LITHOLOGICAL DESCRIPTION	TOP	BOTTOM	THICKNESS	SHOT RECORD							
				Month	Day	Yr.	Size Shot	Length of Shell	Top of Shot	Bottom of Shot	
red Sand	985	1095									
land	1681	1975		11	2	11	30				
Cave	2000	2012									
me	2012	2137									
jun Sand	2137	2167	~12 1/2'								
jun Sand Oil		2175									

REMARKS:  
 Water at 1731'  
 Water at 2052'  
 Small Show Gas at 2142'

ABANDONED			
Size	Casing Pulled	Casing Left In	Notes

REMARKS:  
 #4-51-1124

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*CX # 3067  
100.00*

8703016A

1) Date: June 5, 2015  
2) Operator's Well Number  
P. A. Bays 4  
3) API Well No.: 47 - 087 - 3016

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

<b>4) Surface Owner(s) to be served:</b>	<b>5) (a) Coal Operator</b>
(a) Name <u>Marvin G. Miller et al.</u>	Name <u>NA</u>
Address <u>4326 Clay 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 _____
_____	_____
<b>6) Inspector</b> <u>Ed Gainer</u>	(c) Coal Lessee with Declaration
Address <u>P. O. Box 821</u>	Name <u>NA</u>
<u>Spencer, WV 25276</u>	Address _____
Telephone <u>304-389-7582</u>	_____

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

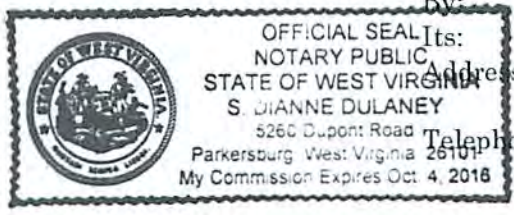
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

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.

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Well Operator HG Energy, LLC  
By: Diane White *Diane White*  
Agent  
5260 Dupont Road  
Parkersburg, WV 26101  
304-420-1119



Subscribed and sworn before me this 5th day of June  
S. Dianne Dulaney Notary Public  
My Commission Expires Oct 4, 2016

**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).

07/24/2015

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 1054' County Roane District Smithfield

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

Will a synthetic liner be used in the pit? Yes - 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.

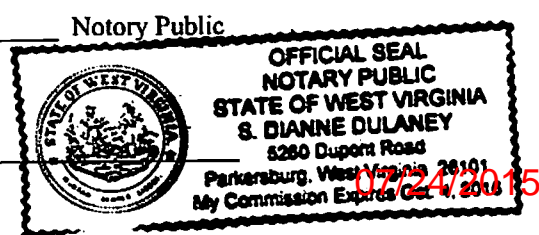
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is 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 RECEIVED  
 Company Official (Typed Name) Diane White Office of Oil and Gas  
 Company Official Title Agent JUN 18 2015

Subscribed and sworn before me this 5th day of June, 2015 WV Department of  
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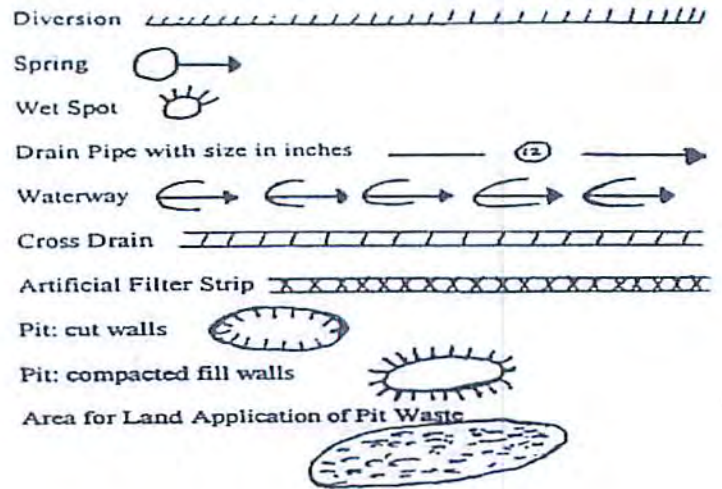
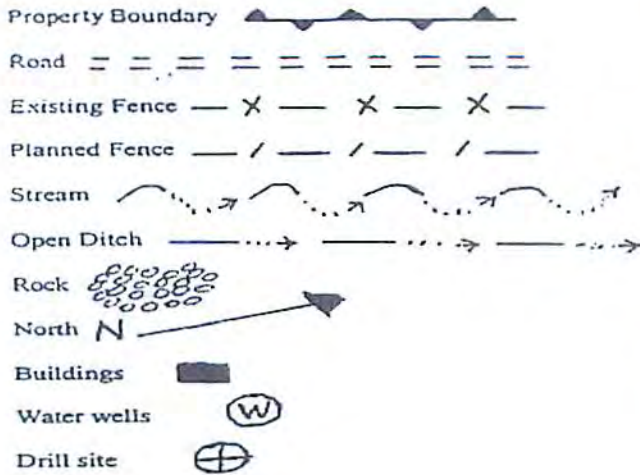
S Dianne Dulaney

My commission expires Oct 4, 2016





LEGEND



Proposed Revegetation Treatment: Acres Disturbed 0.7 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

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: \_\_\_\_\_

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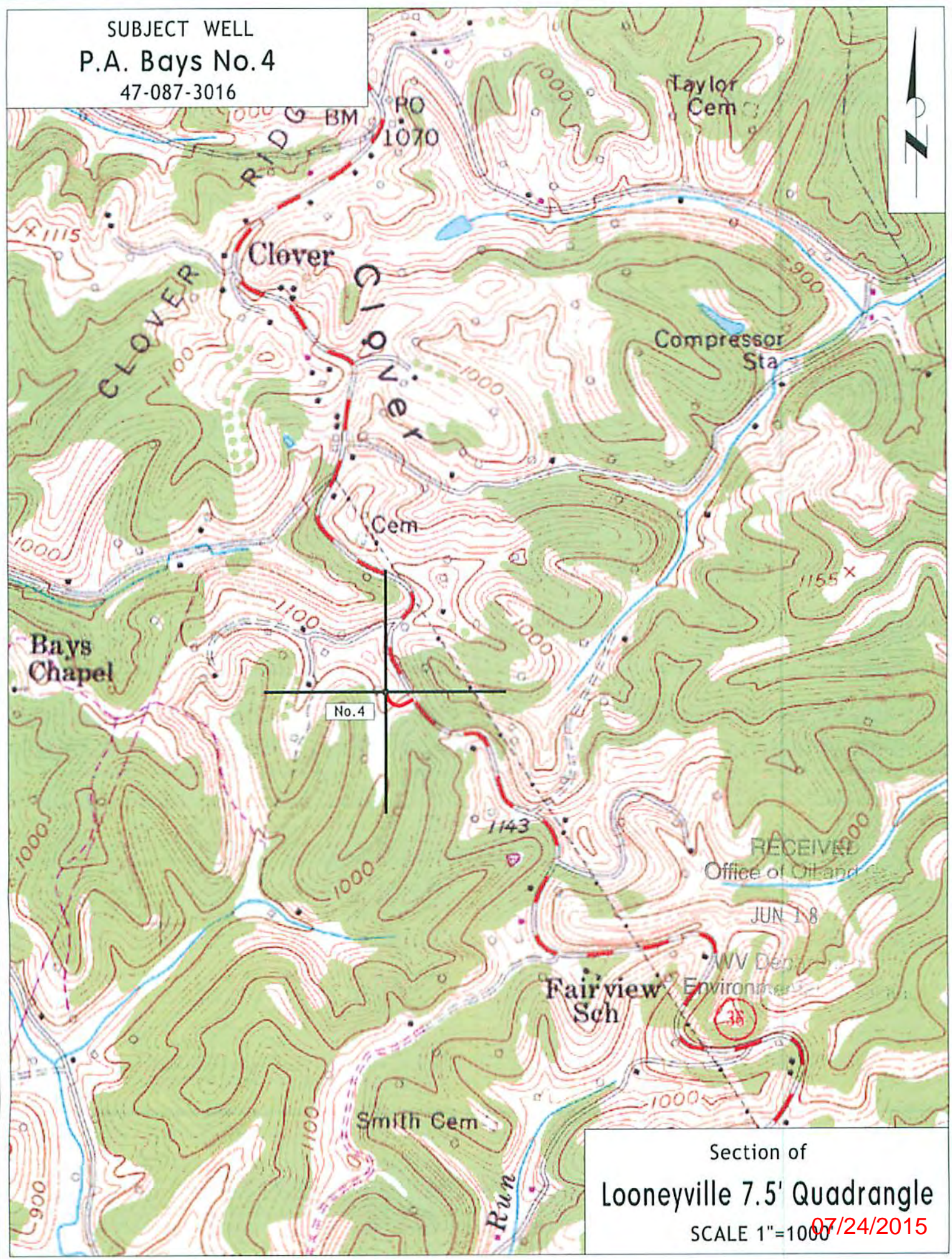
Title: Inspector

Date: 6/10/15

Field Reviewed? ( ) Yes (X) No



SUBJECT WELL  
P.A. Bays No.4  
47-087-3016



Section of  
Looneyville 7.5' Quadrangle  
SCALE 1"=1000' 07/24/2015



8703016P

WW-7  
5-02

West Virginia Department of Environmental Protection  
Office of Oil & Gas

**WELL LOCATION FORM: GPS**

API: 47- 087 - 3016 WELL NO: 4

FARM NAME: P.A. Bays No.4

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Roane DISTRICT: Smithfield

QUADRANGLE: Looneyville 7.5'

SURFACE OWNER: Marvin G. Miller et al.

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

UTM GPS NORTHING: 4,285,046 (NAD 83)

UTM GPS EASTING: 475,225 (NAD 83) GPS ELEVATION: 346 m. (1054')

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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Designated **Environment**

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 **Environment**  
Title

June 5, 2015  
Date

07/24/2015