



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

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

Promoting a healthy environment.

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

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 No. PA Bays 4
3) API Well No. 47-087 - 3018

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 _____ / Liquid injection _____ / Waste disposal _____ /
(If "Gas, Production _____ or Underground storage _____) Deep _____ / Shallow X

5) Location: Elevation 1054' 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 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:

"See Attached Sheet"

RECEIVED
Office of Oil and Gas

JUN 18 2015

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  Date 6/10/15

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 x Gas Liquid Injection Waste Disposal
(If "Gas", Production Underground Storage) Deep Shallow x
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

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

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


6/10/15

RECEIVED
Office of Oil and Gas
JUN 18 2015
WV Department of
Environmental Protection

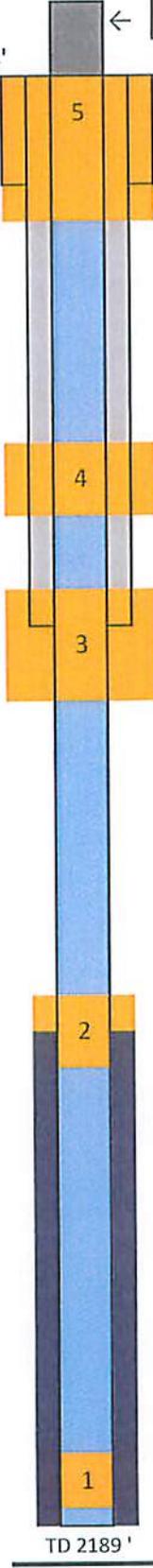
Well: P.A. Bays #4

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'

RECEIVED
 Office of Oil and Gas

JUN 18 2015

WV Department of
 Environmental Protection

870 3016P

First 24 Hours from } _____ Sand _____ Bbls. _____ By _____ Sup _____

P.A. Bays Farm, No. of Lease _____ No. Acn _____
 Smithfield District Beane County West Virginia Stat _____

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

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									
Sand	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	

REMARKS:
 #4-51-1124

RECEIVED
 Office of Oil and Gas

JUN 18 2015

WV Department of
 Environmental Protection

8703016A

WW-4A
Revised 6-07

*CX # 3067
100.00*

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**

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(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 _____
_____	_____
6) Inspector <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.

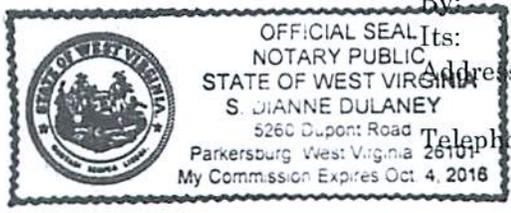
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental 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.

RECEIVED
Office of Oil and Gas

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

JUN 18 2015

WV Department of
Environmental Protection



Subscribed and sworn before me this 5th day of June
S. Jianne 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.

8703016A

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**
Office of Oil and Gas

Company Official (Typed Name) Diane White

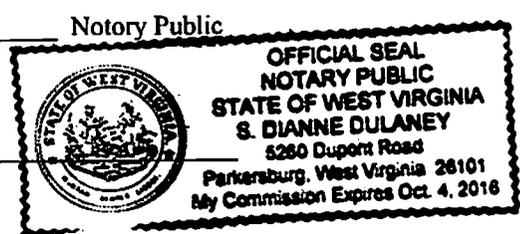
Company Official Title Agent JUN 18 2015

WV Department of
Environmental Protection

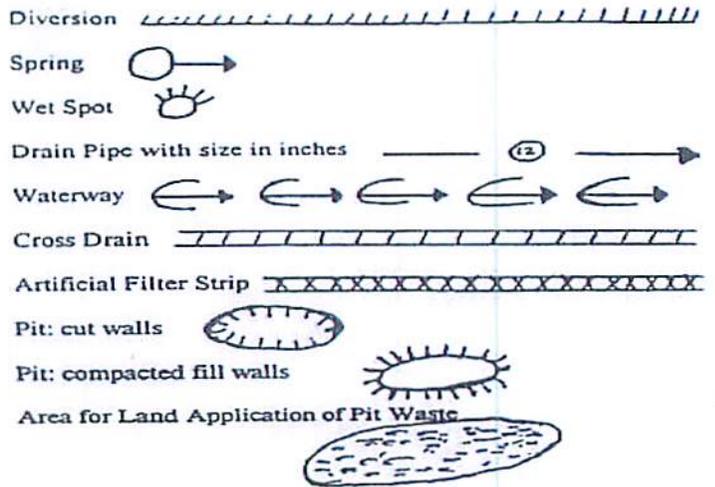
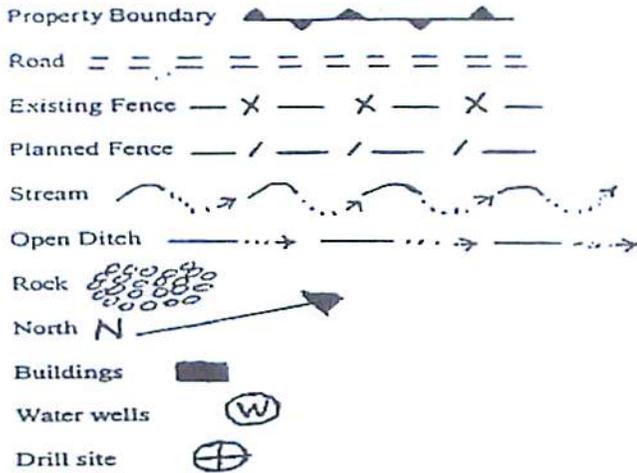
Subscribed and sworn before me this 5th day of June, 2015

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: _____

RECEIVED
Office of Oil and Gas
JUN 18 2015

WV Department of
Environmental Protection

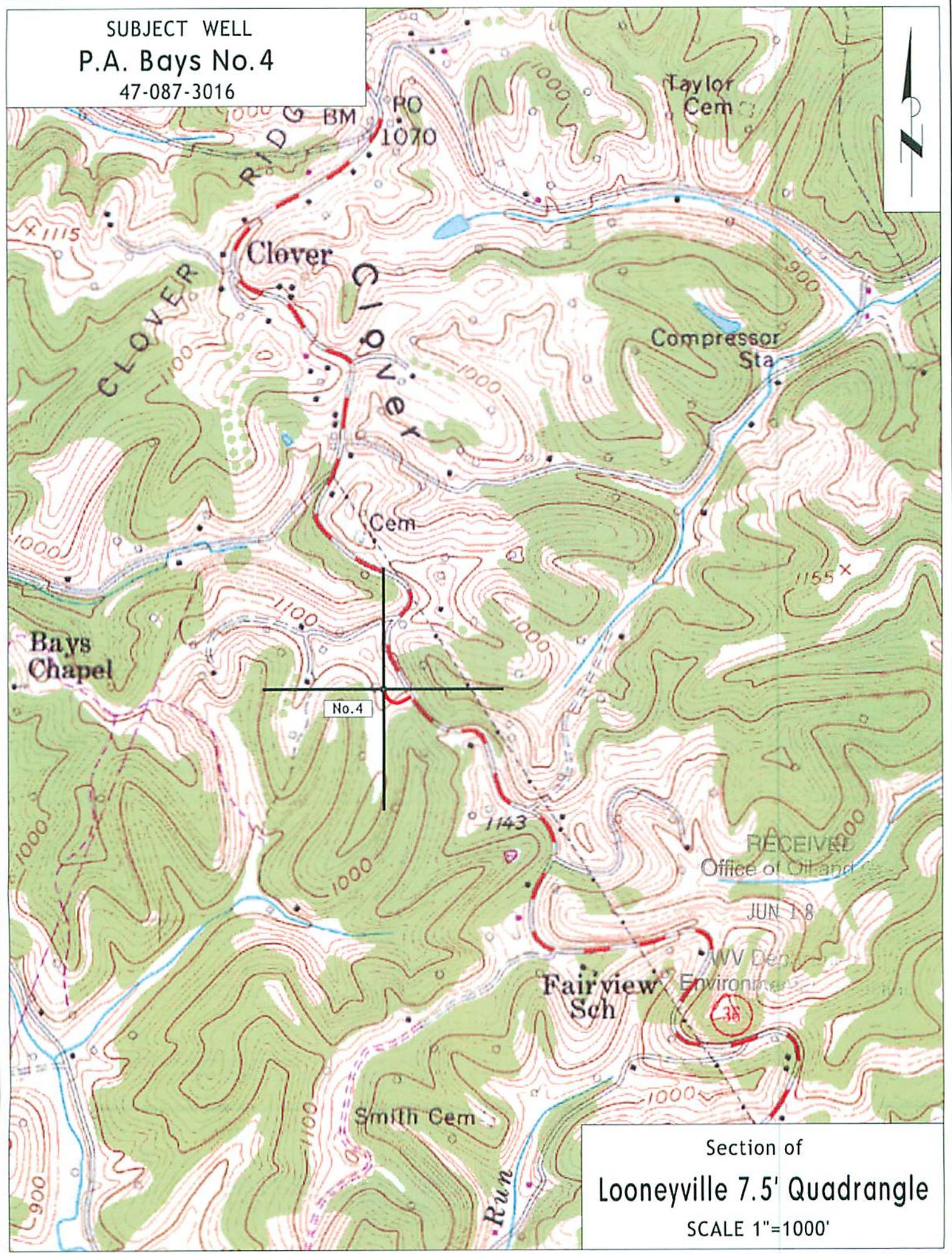
Title: Inspector

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'

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"/>

RECEIVED
Office of Oil and Gas
JUN 18 2015

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

WV Department of Environmental Protection
Designated Environmental Protection Director
Title

June 5, 2015
Date