



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: 47-9501508, 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: LEMASTERS H-10
Farm Name: WADSWORTH, FRANCES & C.I.
API Well Number: 47-9501508
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

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.

- 1) Date July 15, 2015
- 2) Operator's
Well No. AD Lemasters H-10
- 3) API Well No. 47-005 - 01508

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 or Underground storage) Deep / Shallow
- 5) Location: Elevation 1120' Watershed Left Hand Fork
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 Michael Goff Date 7-30-15

10/02/2015

95015087

Rev. 2/01

- 1) Date: July 15, 2015
- 2) Operator's Well Number AD Lemasters H-10
- 3) API Well No: 47 - 095 - 1508
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: 1120' Watershed: Left Hand Fork
 District: McElroy County: Tyler Quadrangle Centerpoint 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 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:

TD- 3,120'

Manners of plugging:

- Plug #1 3000' - 2900'
 Located above highest perforations
 Free Point, part and pull 4 1/2" casing at approx. 1900'
- Plug #2 - 1950' - 1850'
 Located at 4 1/2" casing stub
- Plug #3 - 1175' - 1075'
 Located at Elevation
- Plug #4 - 925' - 825'
 Located through Pittsburgh Coal (885')
- Plug #5 - 425' - 325'
 Located at 8 5/8" casing shoe/Freshwater
- 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

MAG
7/30/15

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OFFICE USE ONLY

PLUGGING PERMIT

Permit Number _____ Date _____ 19____

This permit covering the well operator and the well location shown below is evidence of permission granted to plug in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector 24 hours before actual work has commenced.

The permitted work is as described in the Notice and Application, plat, subject to any modifications and conditions on the reverse hereof.

Permit expires _____ unless plugging is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing:	WPCP	Other
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 Chief, Office of Oil & Gas

NOTE: Keep one copy of this permit posted at the plugging location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator

10/02/2015

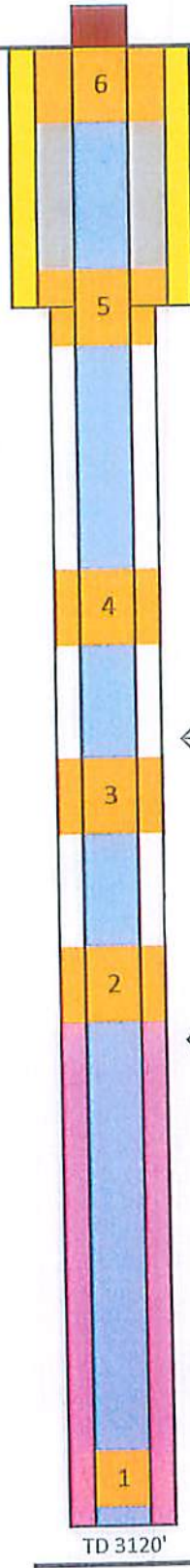
Well: A.D. Lemasters H-10

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

Elevation: 1120'

Casing Information		
Size	Depth	Weight
8 5/8"	380	20 #/ft.
4 1/2"	3125	10.5 #/ft.

Hole Size 10 5/8" →



← 150 sacks cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	1900

Cement Plugs		
NO.	Bottom	Top
1	3000	2900
2	1950	1850
3	1175	1075
4	925	825
5	425	325
6	100	0

← 7 7/8" Hole Size

← 300 Sks Cement T.O.C. 2008'

Bottom Hole Cement Level Calculations

Sacks Used Cement Depth
300 2008.925

Hole Size Casing Size Depth
7.875 4.5 3125

diameter delta Conv. Factor bbls / ft.
41.765625 1029.4 0.040573

cubic ft. per vertical ft. depth
0.227795902

Sacks per vertical ft. depth
0.268799164

Yield options

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

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Highest Perforation 3058'

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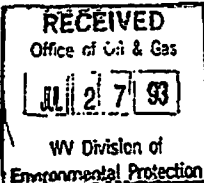
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WV Department of
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WR-35



26-Oct-92
API # 47- 95-01508

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: WADSWORTH, FRANCES & C.I. Operator Well No.: LEMASTERS #10

LOCATION: Elevation: 1120.00 Quadrangle: CENTER POINT

District: MCELROY County: TYLER
Latitude: 13100 Feet South of 39 Deg. 30Min. 0 Sec.
Longitude 6200 Feet West of 80 Deg. 40 Min. 0 Sec

Company: PENNZOIL PRODUCTS COMPANY
P. O. BOX 5519
VIENNA, WV 26105-5519

Agent: JAMES A. CREWS

Inspector: MIKE UNDERWOOD
Permit Issued: 10/26/92
Well work Commenced: 12/3/92
Well work Completed: 12/31/92
Verbal Plugging
Permission granted on: _____
Rotary Cable _____ Rig
Total Depth (feet) 3160'
Fresh water depths (ft) N/A
Salt water depths (ft) N/A

Is coal being mined in area (Y/N)? N
Coal Depths (ft): N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8	397	397	To Surface 100 Sks.
4 1/2	3124.85	3124.85	300 Sks.

OPEN FLOW DATA

Producing formation Gordon Pay zone depth (ft) 3030' - 30'
 Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d
 Final open flow Show MCF/d Final open flow Show Bbl/d
 Time of open flow between initial and final tests NA Hours
 Static rock Pressure NA psig (surface pressure) after NA Hours

Second producing formation _____ Pay zone depth (ft) _____
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Reviewed TMG
Recorded _____

For: PENNZOIL PRODUCTS COMPANY
Timothy P. Roush
By: Supervisor - Surveying/Mapping
Date: 3-3-93

10/02/2015

TREATMENT

PERFORATED: Gordon w/17 Holes 3058' - 3095'
 Treated w/300 Gal. Reg. H.F. Acid, 260 Bbl. Gelled Water,
 1500# 80/100 & 3500# 20/40 Sand

WELL LOG

Shale	0 - 360
Sand & Shale	360 - 710
Sand	710 - 725
Shale	725 - 810
Sand	810 - 860
Sand & Shale	860 - 1030
Sand	1030 - 1060
Sand & Shale	1060 - 1395
Sand	1395 - 1450
Sand & Shale	1450 - 1605
Sand	1605 - 1645
Shale	1645 - 1790
Sand	1790 - 1810
Sand & Shale	1810 - 2010
Sand	2010 - 2040
Sand & Shale	2040 - 2480
Shale	2480 - 3030
Gordon	3030 - 3095
T.D.	3160

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WW-4A
Revised 6-07

1) Date: July 15, 2015
2) Operator's Well Number
AD Lemasters H-10

3) API Well No.: 47 - 095 - 01508

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>WV Dept of Natural Resources</u>	Name <u>NA</u>
Address <u>Capital Complex - Bld 3, Room 643</u>	Address _____
<u>Charleston, WV 25305</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	(c) Coal Lessee with Declaration
6) Inspector <u>Mike Goff</u>	Name <u>NA</u>
Address <u>P. O. Box 134</u>	Address _____
<u>Pullman, WV 26421</u>	_____
Telephone <u>304-549-9823</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.

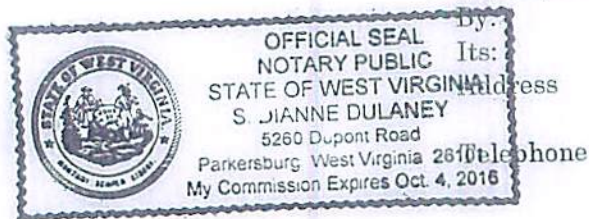
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental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

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 15th day of July 2015
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.

10/02/2015
7-30-15

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 Left Hand Fork Quadrangle Centerpoint 7.5"

Elevation 1120' 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. p.t must be lined with a minimum of 20 mil thickness synthetic liner. TPW

MALC
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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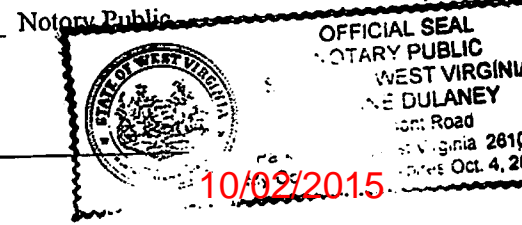
AUG 17 2015

WV Department of
Environmental Protection

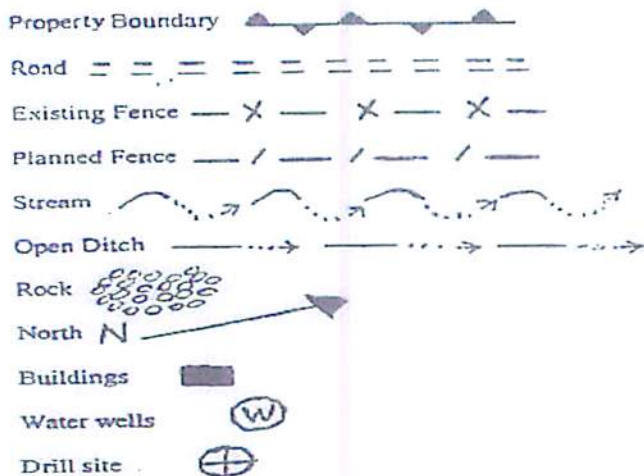
Company Official Signature Diane White
Company Official (Typed Name) Diane White
Company Official Title Agent

Subscribed and sworn before me this 15th day of July, 2015

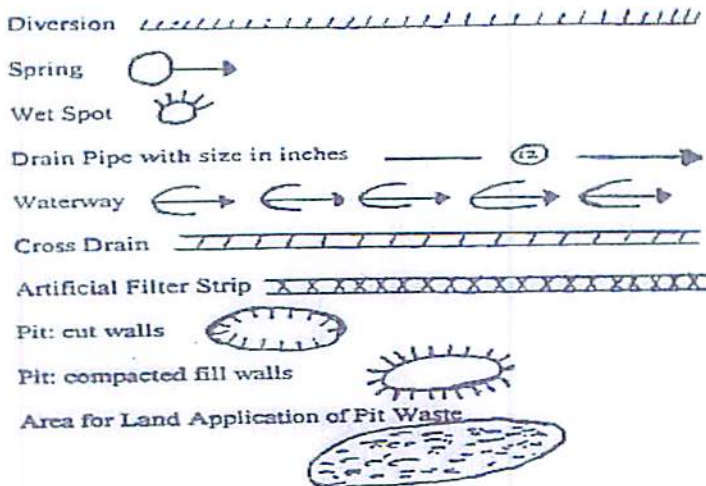
Dianne Dulaney



My commission expires Oct 4, 2015



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 0.6 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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WV Department of
Environmental Protection

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 Doff

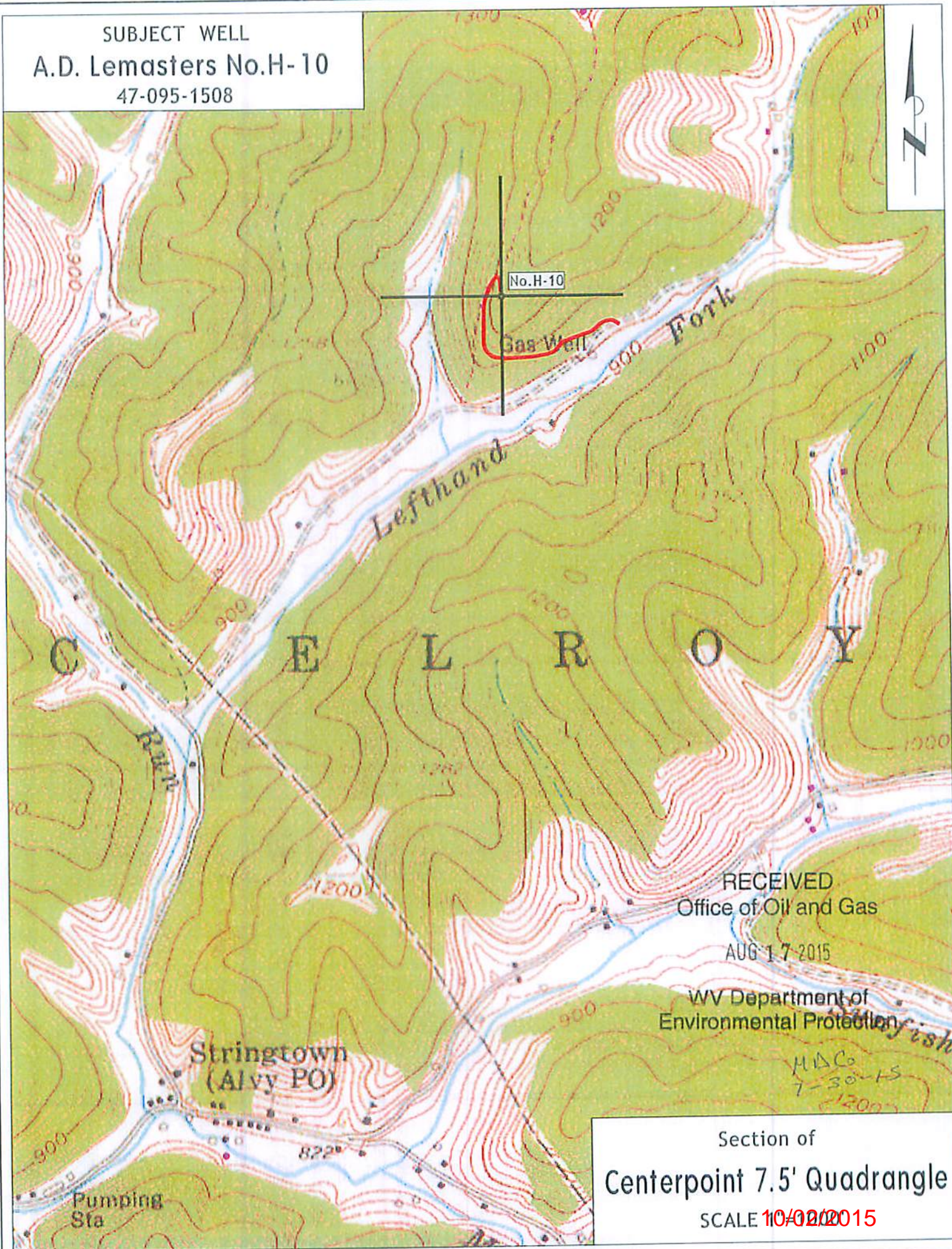
Comments: Preseed & Mulch any disturbed areas.

Title: Oil & Gas Inspector

Date: 7-30-15

Field Reviewed? () Yes () No

SUBJECT WELL
A.D. Lemasters No.H-10
47-095-1508



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WV Department of
Environmental Protection

MDCo
7-30-15
(1200)

Section of
Centerpoint 7.5' Quadrangle
SCALE 10/02/2015

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

API: 47- 095 - 1508 WELL NO: H-10

FARM NAME: A.D. Lemasters No.H-10

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Tyler DISTRICT: McElroy

QUADRANGLE: Centerpoint 7.5'

SURFACE OWNER: W.Va. Dept. of Natural Resources

ROYALTY OWNER: American Energy Partners, LLC et al.

UTM GPS NORTHING: 4,368,295 (NAD 83)

UTM GPS EASTING: 526,799 (NAD 83) GPS ELEVATION: 344 m. (1128')

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

June 3, 2015
Date