



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: 47-9501764, 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: A. LEMASTERS 22
Farm Name: TALKINGTON, MARK E., ETUX
API Well Number: 47-9501764
Permit Type: Plugging
Date Issued: 09/29/2015

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 22
- 3) API Well No. 47-005 -- 01704

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 1159' 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 Name Mike Goff
Address PO Box 134
Pullman, WV 26421

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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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

- 1) Date: July 15, 2015
- 2) Operator's Well Number AD Lemasters 22
- 3) API Well No: 47 - 095 - 1764
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: 1159' 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:

*MAG
7-30-15*

TD-3,257'

Manners of plugging:

- Plug #1 3150' - 3050'
Free Point, part and pull 4 1/2" casing
- Plug #2 - 2150' - 2050'
Located at 4 1/2" casing stub
- Plug #3 - 1200' - 950'
Located at Elevation and through Pittsburgh Coal
- Plug #4 - 550' - 450'
Located at 8 5/8" shoe/below fresh water
- Plug #5 - 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

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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

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

Well: A.D. Lemasters #22

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

Elevation: 1159'

Casing Information		
Size	Depth	Weight
8 5/8"	484'	20#/ft.
4 1/2"	3206'	10.5#/ft.

210 sacks cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	2100'

Hole Size 11" →

Pittsburgh Coal 1018'

Cement Plugs		
NO.	Bottom	Top
1	3150	3050
2	2150	2050
3	1200	950
4	550	450
5	100	0

7 7/8" Hole Size

Bottom Hole Cement Level Calculations

Sacks Used Cement Depth
300 2269.308

Hole Size Casing Size Depth
7.875 4.5 3210

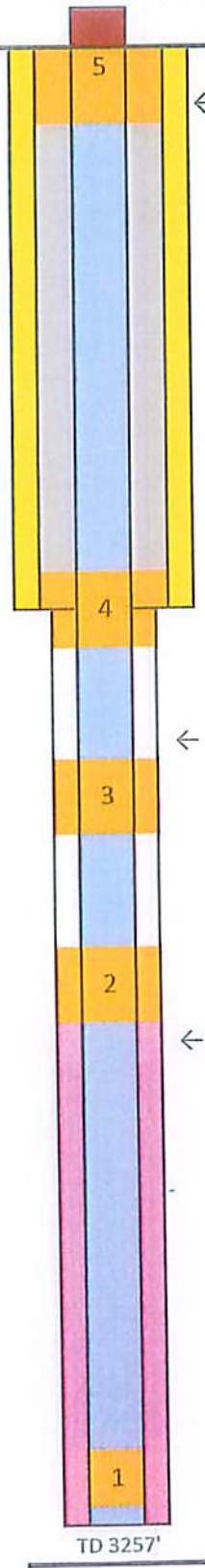
diameter delta Conv. Factor bbls / ft.
41.765625 1029.4 0.040573

cubic ft. per vertical ft. depth
0.227795902

Sacks per vertical ft. depth
0.318914263

Yield options

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



*MAC
7-30-15*

300 Sks Cement T.O.C. 2269'

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Highest Perforation 3188'

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235

14-Apr-04
API# 47 095 1764

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

Well Operator's Report of Well Work

Farm name: TALKINGTON ET EX, MARY E. Operator Well No.: A LEMASTERS 22

LOCATION: Elevation: 1,159.00 Quadrangle: CENTERPOINT 7.5'

District: MCELROY County: TYLER
Latitude: 12,400 Feet south of 39 Deg 30 Min 0 Sec.
Longitude: 4,500 Feet west of 80 Deg 40 Min 00 Sec.

Company: EAST RESOURCES, INC.
P.O. BOX 5519
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: MIKE UNDERWOOD

Permit Issued: 04/14/04

Well work Commenced: 04/23/04

Well work Completed: 05/21/04

Verbal plugging permission granted on: _____

Rotary Cable _____ Rig _____

Total Depth (feet) 3257

Fresh water depths (ft) NA

Salt water depths (ft) NA

NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
8 5/8"	484.00'	484.00'	210 sks
4 1/2"	3206.50'	3206.50'	300 sks

OPEN FLOW DATA waterflood producer

This well was drilled directionally to a bottom hole location 198' N and 523' E of surface location

Producing formation Gordon Pay zone depth (ft) 3188-3198

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

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.

For: EAST RESOURCES, INC.
By: [Signature]
Date: 7/19/04

Treatment:

Treated perforations 3188' -3198' w/ 250 gals 15% HCL, 298 Bbls cross linked gel and 19,000 # 20/40 sand

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Well Log:

0	602	Sand and Shale
602	630	Sand
630	813	Shale
813	865	Sand
865	980	Shale
980	1000	Sand
1000	1036	Shale
1036	1062	Sand
1062	1072	Shale
1072	1080	Sand
1080	1398	Shale
1398	1450	Sand
1450	1602	Shale
1602	1696	Sand
1696	1712	Shale
1712	1752	Sand
1752	1790	Shale
1790	1864	Sand
1864	1890	Shale
1890	1924	Sand
1924	1990	Shale
1990	2068	Sand
2068	2109	Shale
2109	2160	Sand
2160	2258	Shale
2258	2304	Sand
2304	2386	Big Lime
2386	2561	Big Injun
2561	3168	Shale
3168	3188	Gordon Stray
3188	3208	Gordon
3208	3257	Shale

10/02/2015

DRILLING PROGNOSIS
A D LEMASTERS NO. 22
McElroy Dist - Tyler County, WV

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LOCATION: Stringtown
PERMIT NO.: 47-095-01764
ELEVATION: 1159' G.L. OR 1169' K. B.

DRILLING AND CASING PROGRAM: Drill at least an 11" hole to approx. 470', set approx. 450', 8 5/8" O D, 20 #/ft limited service casing on a casing shoe. Cement back to surface with 210 sks. reg. neat cement with 3% CaCl₂ and 1/4# Flocele/sk. W.O.C. 8 hrs.

Drill a 7 7/8" hole to approx. 3290' MD. Set 4 1/2", 10.5#/ft, J-55 casing. Cement with 155 sks 50/50 Pozmix w/ 2% CaCl₂ 6% gel, 1/8# flocele/sk, and 145 sks 50/50 Pozmix w/ 2% CaCl₂ 2% gel, 1/8# flocele/sk. Perform MIT on casing after plug is landed by pressuring casing to 2000 psig for 20 minutes and recording on chart.

DRILLING FLUID: Air or fluid to total depth. Use freshwater to surface casing point, 2% - 3% KCL system below surface casing. Prior to drilling Gordon water loss to be reduced to 20 cc or less.

DIRECTIONAL DRILLING: A down hole motor will be run at approx 1200'. The motor will be run until an angle of approximately 18° is built at N 69° 15' E. A stabilized bottom hole assembly may be run at that time to maintain angle and direction to TD. Directional surveys will be run while the motor is in the hole and every third connection thereafter unless directed otherwise by company representative. The target (at top of Gordon) is 560' N 69° 15' E of surface location.

DRILLING TIME AND SAMPLES: One foot drilling time from surface to total depth. Ten-foot samples from 2200' to total depth.

LOGGING: To be determined at time of drilling

PIPE TALLY: Drill string will be strapped out on last trip at or before coring point or total depth is reached. If a correction of more than five feet (5') is necessary, then drill string is to be strapped going back in hole.

FORMATION TOPS:	Pittsburgh Coal	1018' K.B. (TVD) or 1018' KB (MD)
	Big Lime	2263' K.B. (TVD) or 2309' KB (MD)
	Big Injun	2386' K.B. (TVD) or 2437' KB (MD)
	Pocono Shale	2487' K.B. (TVD) or 2544' KB (MD)
	Gordon Stray	3049' K.B. (TVD) or 3136' KB (MD)
	Gordon	3063' K.B. (TVD) or 3150' KB (MD)
	Shale	3083' K.B. (TVD) or 3171' KB (MD)
	T.D.	3200' K.B. (TVD) or 3290' KB (MD)

SUPERVISION: A morning report will be called into the Parkersburg office by 8:00 a.m. each morning.

		Office	Cell	Home
Roger Heldman	Engineer	1-800-579-7684	481-9061	(740) 678-8210
Marvin Rollins	Foreman	889-3334	481-3574	(304) 873-2305

9501764P

WW-4A
Revised 6-07

1) Date: July 15, 2015
2) Operator's Well Number
AD Lemasters 22
3) API Well No.: 47 - 095 - 01764

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:
(a) Name Mark & Melinda Talkington ✓
Address 1210 Lefthand Fork Road
Jacksonburg, WV 26377
(b) Name James & Betty McCoy ✓
Address HC 62, Box 80-C
Jacksonburg, WV 26377
(c) Name _____
Address _____
6) Inspector Mike Goff
Address P. O. Box 134
Pullman, WV 26421
Telephone 304-549-9823

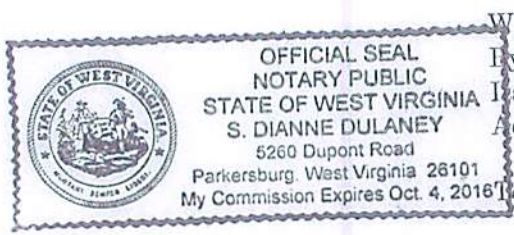
5) (a) Coal Operator
Name NA
Address _____
(b) Coal Owner(s) with Declaration
Name NA
Address _____
Name _____
Address _____
(c) Coal Lessee with Declaration
Name NA
Address _____

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*
Is: Agent
Address 5260 Dupont Road
Parkersburg, WV 26101
Telephone 304-420-1119

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Subscribed and sworn before me this 15th day of July 2015
S. Dianne Dulaney Notary Public
My Commission Expires Oct 4, 2016

MACo
7-30-15

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 depprivacyoffier@wv.gov.
10/02/2015

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 Left Hand Fork Quadrangle Centerpoint 7.5"

Elevation 1159' 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 pit must be lined with a minimum of 20 mil thickness synthetic liner. *ADG 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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Company Official Signature Diane White

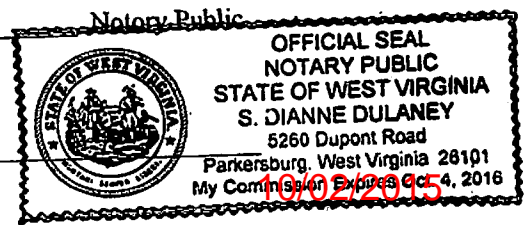
Company Official (Typed Name) Diane White AUG 17 2015

Company Official Title Agent WV Department of Environmental Protection

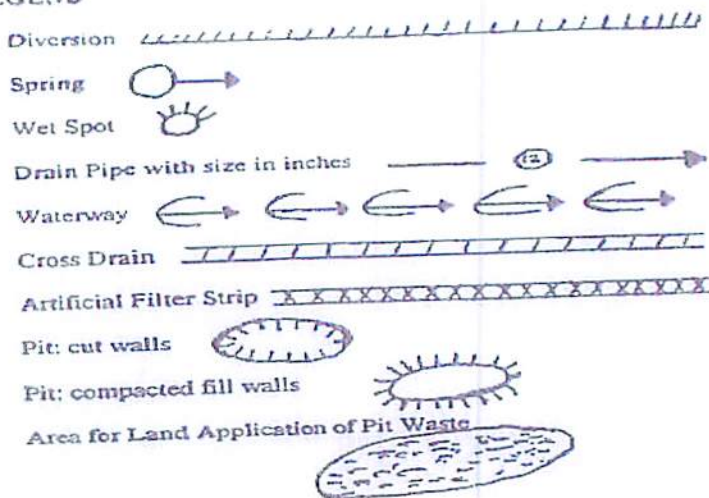
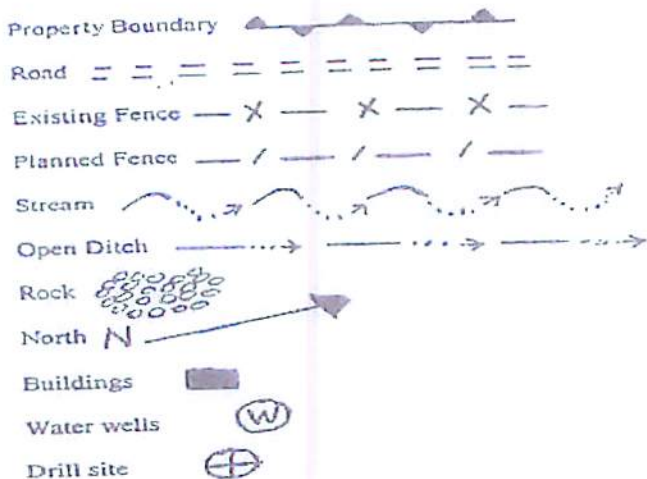
Subscribed and sworn before me this 15th day of July, 2015

Dianne Dulaney

My commission expires Oct 4, 2016



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 0.7 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

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

Photocopied section of involved 7.5' topographic sheet.

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Plan Approved by: Michael Daff

Comments: Preseed & Mulch any disturbed areas

Title: Oil & Gas Inspector

Date: 7-30-15

Field Reviewed? () Yes () No

SUBJECT WELL
A.D. Lemasters No.22
47-095-1764



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MAC
7-30-15

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 - 1764 WELL NO: 22

FARM NAME: A.D. Lemasters No.22

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Tyler DISTRICT: McElroy

QUADRANGLE: Centerpoint 7.5'

SURFACE OWNER: Mark & Melinda Talkington et al.

ROYALTY OWNER: American Energy Partners, LLC et al.

UTM GPS NORTHING: 4,368,535 (NAD 83)

UTM GPS EASTING: 527,318 (NAD 83) GPS ELEVATION: 353 m. (1159')

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