



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Earl Ray Tomblin , Governor
Randy C. Huffman , Cabinet Secretary
www.dep.wv.gov

Thursday, September 08, 2016
WELL WORK PERMIT
Vertical / Plugging

HG ENERGY, LLC
5260 DUPONT ROAD


PARKERSBURG, WV 26101

Re: Permit approval for F. LEMASTERS 13
47-095-01911-00-00

This well work permit 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 any additional specific 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.


James A. Martin
Chief

Operator's Well Number: F. LEMASTERS 13
Farm Name: WADSWORTH, RANDY & TERRY
U.S. WELL NUMBER: 47-095-01911-00-00
Vertical / Plugging
Date Issued: 9/8/2016

Promoting a healthy environment.

09/09/2016

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

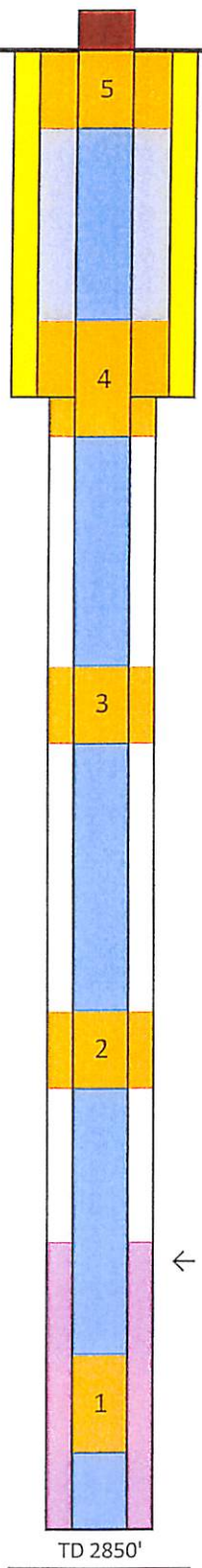
1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of 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.

Well: F.M. Lemasters 13

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

Elevation: 931'

Casing Information		
Size	Depth	Weight
7"	580	17#/ft.
4 1/2"	2939	10.5#/ft.



120 sacks cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	1800'

Cement Plugs		
NO.	Bottom	Top
1	2750	2650
2	1850	1750
3	980	880
4	625	525
5	100	0

Hole Size 6.75" →

Bottom Hole Cement Level Calculations

Sacks Used Cement Depth
 150 2079.238

Hole Size Casing Size Depth
 6.75 4.5 3000

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

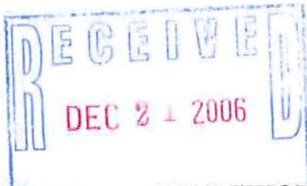
- 50/50 posmix 6% gel = 1.64
- Neat w/ salt flakes = 1.19
- 50/50 w/ 2% gel = 1.27

DMH 6-7-16 *JPS 6-7-16*

150 Sacks Cement T.O.C. 2080'

Highest Perforation 2799'

Received
 Office of Oil & Gas
 JUN 16 2016



State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

COPY

Farm name: WADSWORTH, RANDY & TERRY Operator Well No.: F. LEMASTERS 13

LOCATION: Elevation: 931' Quadrangle: CENTERPOINT 7.5'
District: MCCELROY County: TYLER
Latitude: 3,575 Feet south of 39 Deg 27 Min 30 Sec.
Longitude: 9,750 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: 09/21/06
Well work Commenced: 10/12/06
Well work Completed: 11/17/06

Verbal plugging permission granted on: _____
Rotary X Cable _____ Rig _____
Total Depth (feet) 3000'
Fresh water depths (ft) _____

Salt water depths (ft) _____

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

Casing/ tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
7"	580'	580'	120 sks
4 1/2"	2939'	2939'	150 sks

OPEN FLOW DATA * WATERFLOOD PRODUCER

Producing formation Gordon Pay zone depth (ft) 2799'-2814'
 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: 12/20/06

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Office of Oil & Gas
16 2016

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Treatment : Treated perforations (2799'-2814') (4SPF) via 4 1/2 casing w/ 250 gals. 15% HCl acid, 209 bbls cross linked gel, and 11,000# 30/50 sand.

Well Log :

0	130	Sand and Shale
130	162	Sand
162	363	Shale
363	376	Sand
376	436	Shale
436	470	Sand
470	512	Shale
512	526	Sand
526	731	Shale
731	750	Sand
750	802	Shale
802	818	Sand
818	1124	Shale
1124	1170	Sand
1170	1246	Shale
1246	1258	Sand
1258	1358	Shale
1358	1394	Sand
1394	1464	Shale
1464	1501	Sand
1501	1555	Shale
1555	1588	Sand
1588	1632	Shale
1632	1656	Sand
1656	1730	Shale
1730	1756	Sand
1756	1934	Shale
1934	1948	Sand
1948	1962	Shale
1962	1992	Sand
1992	2058	Big Lime
2058	2220	Big Injun
2220	2774	Shale
2774	2794	Gordon Stray
2794	2814	Gordon
2814	2830	Shale
2830	2838	Sand
2838	3000	Shale
3000		TD

9501911P

WW-4A
Revised 6-07

1) Date: May 27, 2016
2) Operator's Well Number F. M. Lemasters 13

3) API Well No.: 47 - 095 - 1911

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

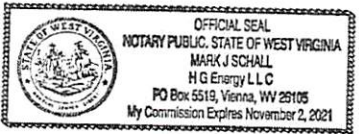
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Randy & Terry Wadsworth</u>	Name <u>NA</u>
Address <u>1108 McIntyre Fork Road</u>	Address _____
<u>Alvy, WV 26322</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Derek Haught</u>	(c) Coal Lessee with Declaration
Address <u>P. O. Box 85</u>	Name <u>NA</u>
<u>Smithville, WV 26178</u>	Address _____
Telephone <u>304-206-7613</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 *Diane White*
 Its: Agent
 Address 5260 Dupont Road
Parkersburg, WV 26101
 Telephone 304-420-1119

Subscribed and sworn before me this 27th day of May 2016
 _____ Notary Public
 My Commission Expires NOVEMBER 2, 2021

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.

RECEIVED
 Office of Oil and Gas
 SEP 8 2016
 WV Department of Environmental Protection
 09/09/2016

9501911P

WW-9
(5/16)

API Number 47 - 095 - 1911
Operator's Well No. FM Lemasters 13

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) Stackpole Run Quadrangle Centerpoint 7.5'

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

ANY WELL EFFLUENT MUST
BE CONTAINED IN TANKS
AND DISPOSED OF PROPERLY.
JWH

Will closed loop system be used? If so, describe: No

Drilling medium anticipated for this well (vertical and horizontal)? 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? To Be Determined at Time of Plugging

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JPS
6-7-16
WJ

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, 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

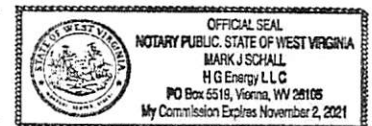
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Office of Oil and Gas
WV Dept of Environmental Protection

SEP 8 2016

Subscribed and sworn before me this 27th day of May, 2016

[Signature] Notary Public

My commission expires NOVEMBER 2, 2021



09/09/2016

Proposed Revegetation Treatment: Acres Disturbed 1.0 acre Prevegetation pH _____

Lime _____ 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount _____ 500 lbs/acre

Mulch Straw _____ 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
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:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: _____

Title: Oil & Gas Inspector

Date: 6-7-16

Field Reviewed? Yes No

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SEP 16 2016

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

Operator Name: HG Energy, LLC
Watershed (HUC 10): Stackpole Run Quad: Centerpoint 7.5'
Farm Name: FM Lemasters

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

Not Applicable

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

Not Applicable

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Not Applicable

Dmit
6-7-16
JPS
6-7-16

4. Summarize all activities at your facility that are already regulated for groundwater protection.

Not Applicable

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5. Discuss any existing groundwater quality data for your facility or an adjacent property.

Not Applicable

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

Not Applicable

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

Not Applicable

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6-7-16

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

Not Applicable

JPS
6/7/16

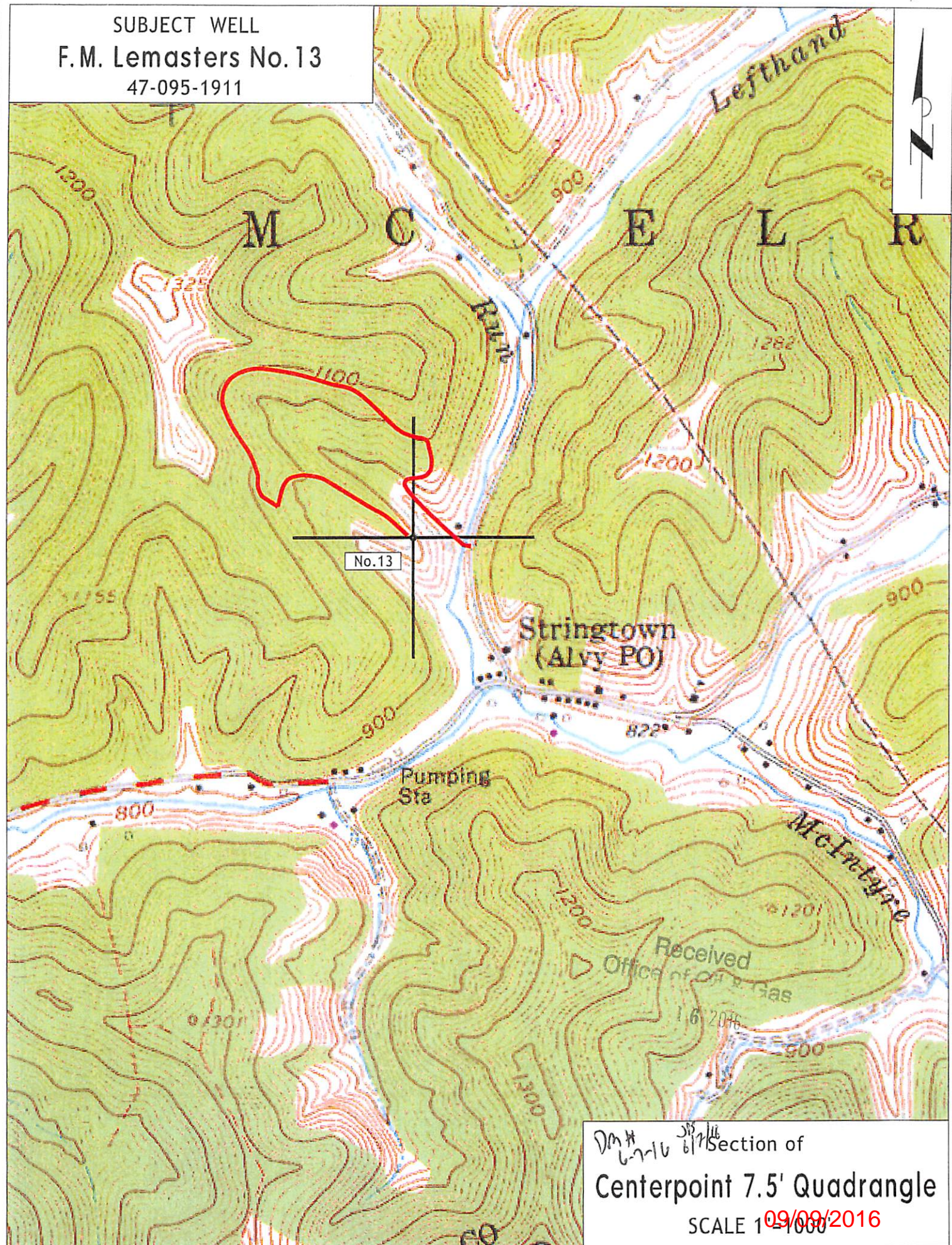
Signature: Diane White

Date: 5-27-2016

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JUN 16 2016

9501911P

SUBJECT WELL
F.M. Lemasters No.13
47-095-1911



DM # 6-216 5/5/16 Section of
Centerpoint 7.5' Quadrangle
SCALE 1"=1000' 09/09/2016

West Virginia Department of Environmental Protection
Office of Oil & Gas

WELL LOCATION FORM: GPS

API: 47- 095 - 1911 WELL NO: 13

FARM NAME: F.M. Lemasters No.13

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Tyler DISTRICT: McElroy

QUADRANGLE: Centerpoint 7.5'

SURFACE OWNER: Randy & Terry Wadsworth

ROYALTY OWNER: Ascent Resources

UTM GPS NORTHING: 4,366,602 (NAD 83)

UTM GPS EASTING: 525,727 (NAD 83) GPS ELEVATION: 284 m.

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"/>

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

May 26, 2016
Date

Designated Agent
Title

Received
Office of Oil & Gas

09/09/2016