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

9501911P

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.

9501911 P

WW-4B
Rev. 2/01

1) Date May 27, 2016
2) Operator's
Well No. FM Lemasters 13
3) API Well No. 47- 095 - 1911

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 931' Watershed Stackpole Run
District McElroy County Tyler Quadrangle Centerpoint 7.5'

6) Well Operator HG Energy, LLC
Address 5260 Dupont Road
Parkersburg, WV 26101

7) Designated Agent Diane White
Address 5260 Dupont Road
Parkersburg, WV 26101

8) Oil and Gas Inspector to be notified
Name Derek Haught
Address P. O. Box 85
Smithville, WV 26178

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 **

Received
Office of Oil & Gas
JUN 16 2016

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector _____ Date 6-7-16

9501911P

WW-4B - Conti
Rev. 2/01

1) Date: May 27, 2016
2) Operator's Well Number
F M Lemasters 13
3) API Well No: 47 - 095 - 1911
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: 931' Watershed: Stackpole Run
District: McElroy County: Tyler Quadrangle Centerpoint 7.5'

6) WELL OPERATOR: HG Energy, LLC 494497948
Address 5260 Dupont Road
Parkersburg, WV 26101

7) DESIGNATED AGENT Diane White
Address 5260 Dupont Road
Parkersburg, WV 26101

8) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Derek Haught
Address P. O. Box 85
Smithville, WV 26178

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:

TD- 2,850'

Manners of plugging:
SPOT GEL.
Plug #1 - 2750' - 2650'
Located above highest perforation
Plug # 2 - 1850' - 1750'
Located at 4 1/2" casing cut
Free point, part and pull 4 1/2" casing at approximately 1800'
Plug #3 - 980' - 880'
Located at elevation
Plug #4 - 625' -525'
Located at 7" casing shoe
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

DMH 6-7-16 JB 6-7-16

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JUN 16 2016

OK

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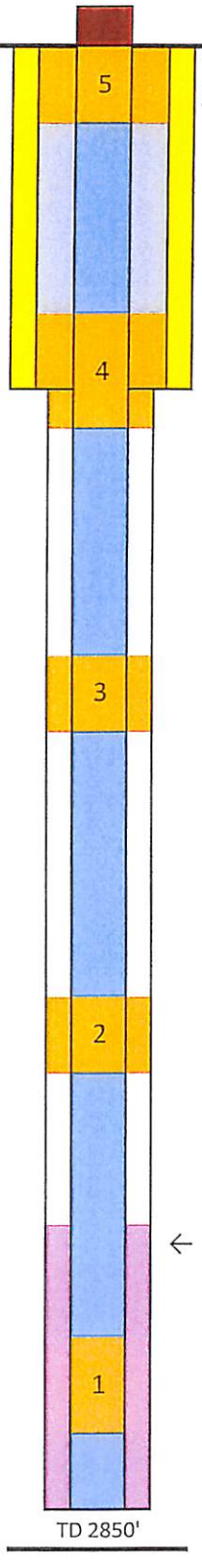
Well: F.M. Lemasters 13

Elevation: 931'

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

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'

Hole Size 6.75" →

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

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'

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Office of Oil & Gas
JUN 16 2016

9501911P

WR-35

9/21/2006

API # 47 095 1911

RECEIVED
DEC 2 1 2006

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: MCELROY 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.

Received
Office of Oil & Gas
JAN 16 2016

For: EAST RESOURCES, INC.
By: _____
Date: 12/20/06

9501911P

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 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Randy & Terry Wadsworth
Address: 1108 McIntyre Fork Road
Alvy, WV 26322
(b) Name:
Address:
(c) Name:
Address:

6) Inspector: Derek Haught
Address: P. O. Box 85
Smithville, WV 26178
Telephone: 304-206-7613

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.

OFFICIAL SEAL
NOTARY PUBLIC, STATE OF WEST VIRGINIA
MARK J SCHALL
H G Energy L L C
PO Box 5519, Vienna, WV 26105
My Commission Expires November 2, 2021

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 depprivacyoffier@wv.gov.

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

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:

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

_____ 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 _____

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

DMH 6-7-16
JPS 6-7-16
gpm

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.

RECEIVED
Office of Oil & Gas
SEP 8 2016
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 27th day of May, 2016

Notary Public

My commission expires NOVEMBER 2, 2021

OFFICIAL SEAL
NOTARY PUBLIC, STATE OF WEST VIRGINIA
MARK J SCHALL
HG Energy LLC
PO Box 5519, Vienna, WV 26105
My Commission Expires November 2, 2021

9501911P

Form WW-9

Operator's Well No. FM Lemasters 13

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: _____

Comments: _____

Title: Oil & Gas Inspector Date: 6-7-16

Field Reviewed? (✓) Yes ( ) No

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Office of Oil & Gas
JUN 16 2016

9501911P

WW-9- GPP
Rev. 5/16

Page _____ of _____
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
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

DMH 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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Office of Oil & Gas
JAN 16 2016

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

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WW-9- GPP
Rev. 5/16

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

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

DMH 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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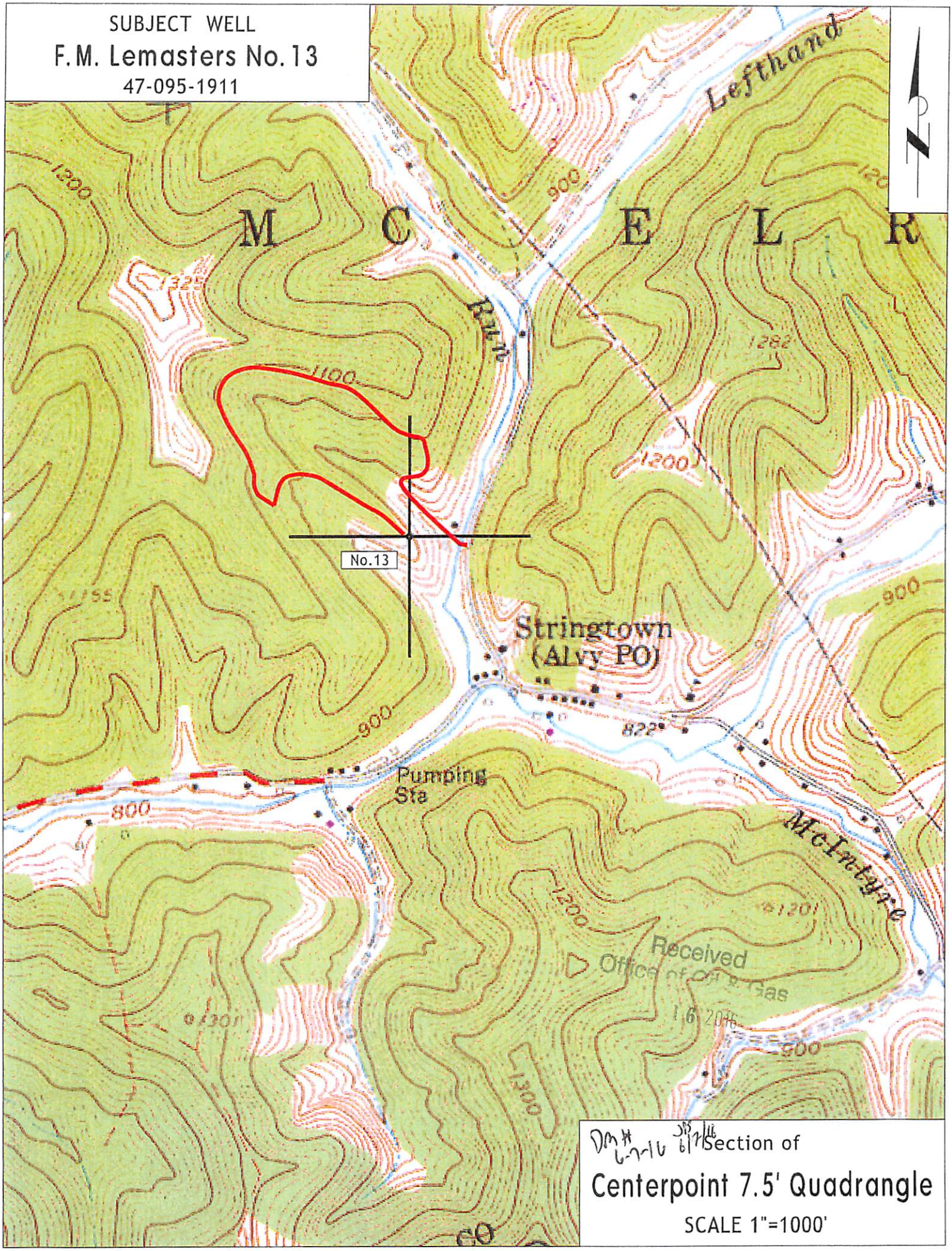
Office of Oil & Gas
JUN 16 2016

9501911P

SUBJECT WELL

F.M. Lemasters No. 13

47-095-1911



Section of

Centerpoint 7.5' Quadrangle

SCALE 1"=1000'

9501911P

WW-7
5-02

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	___	Post Processed Differential	___
		Real-Time Differential	___
Mapping Grade GPS	X	Post Processed Differential	X
		Real-Time Differential	___

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 Designated Agent

Signature Title

May 26, 2016

Date

Received
Office of Oil & Gas

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