



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

Tuesday, August 02, 2016
WELL WORK PERMIT
Vertical / Plugging - 2

HG ENERGY, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for 11
47-043-01603-00-00

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: 11
Farm Name: SWEETLAND LAND & MIN.
U.S. WELL NUMBER: 47-043-01603-00-00
Vertical / Plugging - 2
Date Issued: 8/2/2016

Promoting a healthy environment.

08/05/2016

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

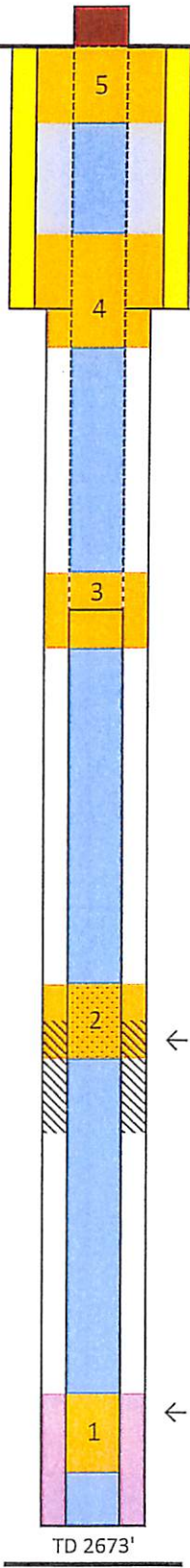
1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of 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.
4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

4301603P

Well: Sweetland Land & Mineral Co. 11
 API: 47-43-1603
 Elevation: 1119'

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

Casing Information		
Size	Depth	Weight
8 5/8"	508'	20#/ft.
4 1/2"	2680'	9.5#/ft.



← 365 sacks cement to surface

Freepoint Cut and Pull Casing	
Size	Approx. Depth
4 1/2"	1911' or 1119'

Hole Size 6.75" →

Cement Plugs		
NO.	Bottom	Top
1	2550	2450
2	1950	1850
3	1160	1060
4	550	450
5	100	0

FJS

Bottom Hole Cement Level Calculations

Sacks Used Cement Depth
 50 2450.167

Hole Size Casing Size Depth
 6.75 4.5 2671

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
 0.226415321

Yield options

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

← Big Lime 1911' - 2084'

← 50 Sks Cement T.O.C. 2450'

← Highest Perforation 2608'

Received
 Office of Oil & Gas
 JUL 05 2016

PBTD 2647'

PENNZOIL COMPANY
Well Completion Report

Lease: Sweetland Land & Mineral Co. Well No. 11 New Well X Old Well

District: Duval County: Lincoln State: West Virginia

Pool Name: Griffithsville Northeast Pool No. 57 Elevation KB: GL

Producing Formation: Berea Depth: From to

Date Drilled In: 11-29-74 Pays: Oil: From to
From to

Original Total Depth: 2673' Gas: From to

Plug Back Depth: 2647' From to

Production	Initial	Present	After Fracture
Oil	<u> </u>	<u> </u>	<u> </u>
Gas	<u> </u>	<u> </u>	<u> </u>

Surface Csg. set @ 514' KB: GL Gr. H-40 New:Used Wt. Collars

Cement reg. neat Amount 365 Sacks Plug Down @ 2:15 AM: AM Date 11-25-74

Production Csg. set @ 2671' KB: GL Gr. H40 New:Used Wt. Collars

Cement 50/50 Posmix Amount 50 Sacks Plug Down @ 12:00 AM: AM Date 11-29-74

Logged by: Basin Surveys Date: 11-29-74

Logs Used: Gamma Ray-Comp. Density - Caliper

Perforated by: McCullough Date: 12-27-74

Perforations: 2608-2613 - 20 holes - 4 holes/ft.

Treatment Data

Type	Fluid	Sand	Acid	Solvent	Gel	Breaking Agent	Fluid Loss	F.R. Agent	N.E. Agent
Lease Crude	<u> </u>	<u>20/40</u>	<u>15% HCl</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>Morflo II</u>
Amount	<u>544</u>	<u>19,000</u>	<u>500</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>4</u>

Breakdown Pressure: 1400 Treating Pressure: Max. 2300 Min. 2200 Avg. 2275

Avg. Inj. Rate 26.8 BPM ISIP 1300 @ AM:PM 5 min. SIP 1100

10 min. SIP 1000 15 min. SIP 900 Other

EQUIPMENT USED

Service Company: Halliburton HHP - 1522

By: John R. Blomberg Date Fractured: 12-27-74

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4301603P

PENNZOIL COMPANY

NEW WELL REPORT

LEASE No. 46162-01 337 ACRES WORKING DISTRICT Southern Area
Sweetland Land & Min. Co. FARM WELL No. 11 N. 80 E. 73 W. 73
Duval DISTRICT OR TOWNSHIP Lincoln COUNTY St. Albans QUAD.
 LOCATION MADE _____ 19 74 DRILLING COMMENCED November 24, 19 74
 DRILLING EQUIPMENT USED SFUDDER ROTARY DRILLING COMPLETED November 29, 19 74
 DRILLING EQUIPMENT FURNISHED BY F.W.A. Drilling Company TOTAL DEPTH 2673' SAND Berea
 ELEVATION: FLOOR 1127.4 DRILLING CONTRACTOR F.W.A. Drilling Company
 ELEVATION: GROUND 1119.4 WORK ORDER No. 70-24682

FORMATION RECORD

KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST	KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST
Sub Structure	0	8							
Sur.R. & Red Rock	8	255							
Shale	255	1587							
Salt Sand	1587	1800							
Shale	1800	1826							
Sand	1826	1882							
Little Lime	1882	1908							
Pencil Cave	1908	1911							
Big Lime	1911	2084							
McCrary Shale	2084	2122							
Pocono Injun	2122	2168							
Shale	2168	2252							
Wier Sand	2252	2317							
Shale	2317	2578							
Coffee Shale	2578	2599							
Berea	2599	2620							
Shale	2620	2673							
Total Depth		2673							
Logged by: Basin Surveys 11-29-74 to 2669 ft. Gamma Ray-Density									

RECEIVED
 Office of Oil & Gas
 JUL 05 2016

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WW-4A
Revised 6-07

1) Date: June 21, 2016
2) Operator's Well Number
Sweetland L&M 11

3) API Well No.: 47 - 043 - 1603

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

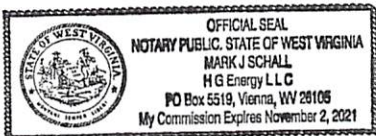
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Janet Ingram</u>	Name <u>NA</u>
Address <u>8 Wildcat Road</u>	Address _____
<u>Sod, WV 25564</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Jeffery L. Smith</u>	(c) Coal Lessee with Declaration
Address <u>5349 Karen Circle, Apt #2101</u>	Name <u>NA</u>
<u>Cross Lanes, WV 25313</u>	Address _____
Telephone <u>681-313-6743</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	<u>HG Energy, LLC</u>
	By:	<u>Diane White</u> <i>Diane White</i>
	Its:	<u>Agent</u>
	Address	<u>5260 Dupont Road</u> <u>Parkersburg, WV 26101</u>
	Telephone	<u>304-420-1119</u>

Received
Office of Oil & Gas
JUL 05 2016

Subscribed and sworn before me this 21st day of June
Mark J Schall Notary Public
My Commission Expires NOVEMBER 2ND, 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.

08/05/2016

WW-9
(5/16)

API Number 47 - 043 - 1603
Operator's Well No. Sweetland L&M 11

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) Joe's Creek Quadrangle Garrett's Bend 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 BEFORE HAULING TO OFF SITE LOCATION.

- 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 fluids will be hauled for off site disposal at an authorized site to be determined at the time the well is plugged)

Will closed loop system be used? If so, describe: NA

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) _____

-Landfill or offsite name/permit number? _____

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.

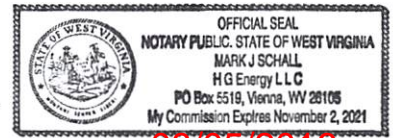
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is 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

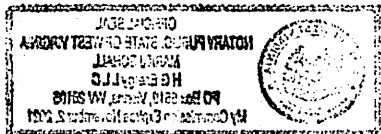
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Subscribed and sworn before me this 21st day of June, 2016
[Signature] Notary Public

My commission expires NOVEMBER 2, 2021



08/05/2016



08/05/2016

Proposed Revegetation Treatment: Acres Disturbed 1.4 acres 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

(Handwritten initials JS in a circle)

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: Jeffrey Smith

Comments: _____

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Title: Oil & Gas Inspector Date: 06/21/2016

Field Reviewed? Yes No

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

Operator Name: HG Energy, LLC
Watershed (HUC 10): Joe's Creek Quad: Garrett's Bend 7.5'
Farm Name: Sweetland L&M

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

NA

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

NA

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

NA

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

NA

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

NA

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

NA

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.

NA

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

NA

Signature: Diane White

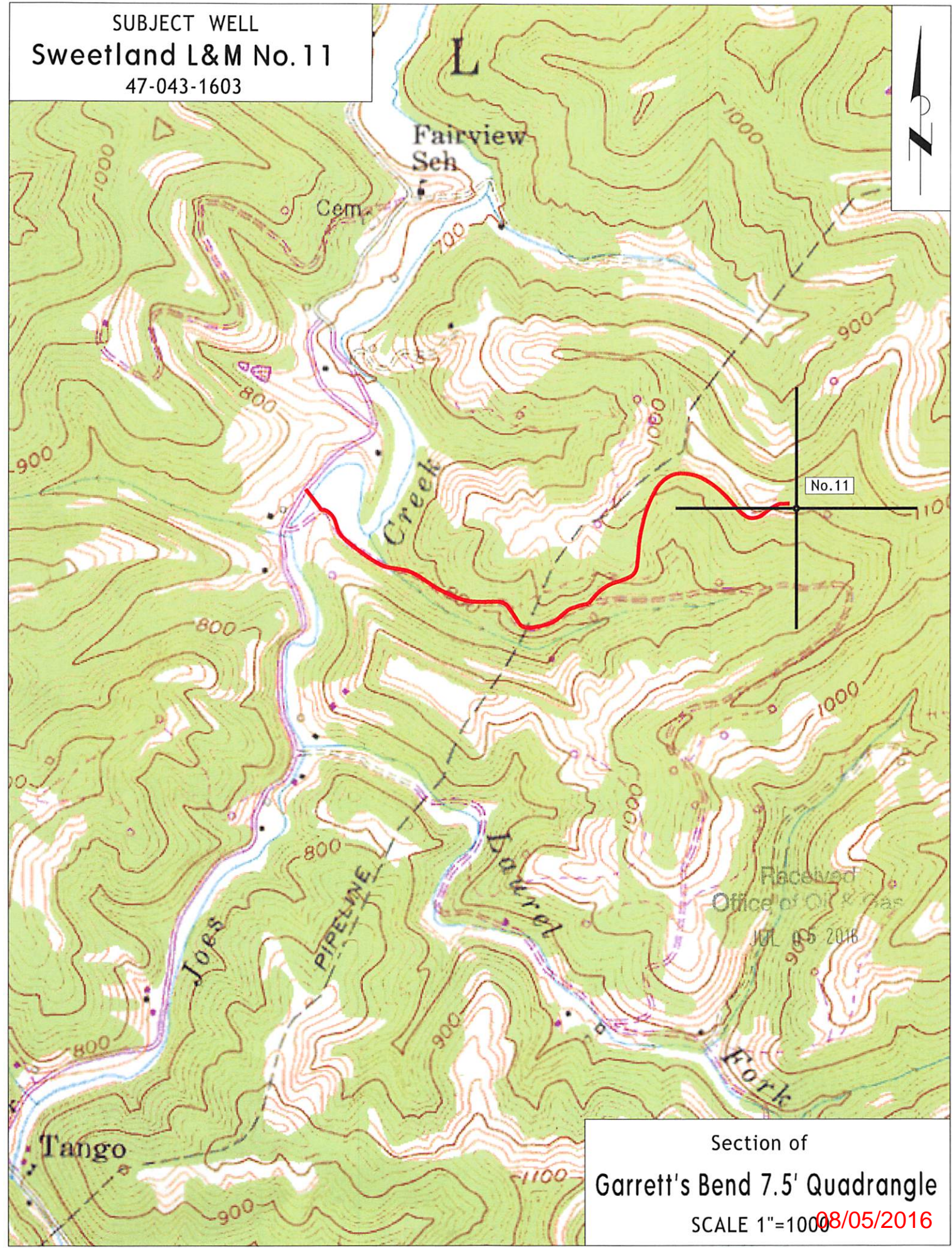
Date: 06/21/2016

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08/05/2016

4301603P

SUBJECT WELL
Sweetland L&M No. 11
47-043-1603



Section of
Garrett's Bend 7.5' Quadrangle
SCALE 1"=1000 08/05/2016

West Virginia Department of Environmental Protection
Office of Oil & Gas

WELL LOCATION FORM: GPS

API: 47- 043 - 1603 WELL NO: 11

FARM NAME: Sweetland L&M No.11

RESPONSIBLE PARTY NAME: H.G. Energy, LLC

COUNTY: Lincoln DISTRICT: Duval - 2

QUADRANGLE: Garrett's Bend 7.5' -358

SURFACE OWNER: Janet Ingram

ROYALTY OWNER: H.G. Energy, LLC et al.

UTM GPS NORTHING: 4,235,863 (NAD 83)

UTM GPS EASTING: 420,960 (NAD 83) GPS ELEVATION: 340 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.

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JUL 05 2016

Diane White Diane C. White
Signature

Designated Agent
Title

January 15, 2016
Date