

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

Austin Caperton , Cabinet Secretary www.dep.wv.gov

Tuesday, February 13, 2018 WELL WORK PERMIT Vertical / New Drill

HG ENERGY, LLC 5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for ROBERT FOWLER NO. 505

47-043-03580-00-00

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: ROBERT FOWLER NO. 505

Farm Name: ANDY & REBECCA MCCLURE JU.S. WELL NUMBER: 47-043-03580-00-00

Vertical / New Drill

Date Issued: 2/13/2018

Promoting a healthy environment.



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. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
- 3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
- 4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 5. 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.
- 6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
- 7. Well work activities shall not constitute a hazard to the safety of persons.
- 8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

FORM WW-3 (B) 1/12



1)	Date:	11/29/201	17					
2)	Operator	r's Well l	No.	Rot	ert Fowler 505			
3)	API We	Il No.:	47	-	Lincoln	s		
			State		County		Permit	
11	HIC Por	mit No						

STATE OF WEST VIRGINIA NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

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7) WELL OPERA	District	_	10		Co	unty Lincoln	TED ACE		gle Griffithsville	7.5	
	_	260 Dupont				8) DESIGNA					
Add		and the last of the same			_		Addres		oont Road		
VOIL & CARD		arkersburg,		ED		10) DDII I D	C CONTER		urg, WV 26101		
	S INSPECTOR TO BE NOTIFIED fery Smith					10) DRILLING CONTRACTOR Name To Be Determined Upon Approval of Permit					
Address 5369 Bi	9 Big Tyler Road					Address					
Cross La	anes, WV 25	313				4400					
12) GEOLOGIC 1 13) Estimated Dep 14) Approximate of 15) Approximate of 16) Is coal being r 17) Virgin reservo	oth of Cor water stra coal seam mined in t	npleted \ ta depths depths: he area?	TION Be Well, (or a : Fre 417' Yes	hysical erea actual de esh 100	change in v	Feet	2337	Feet (top)		Feet (bottom)	
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FORM WW-3 (A) 1/12



1) Date:	November	29, 2017	7				
2) Operato	r's Well	No.	Robert	Fowler 505			
3) API We	ell No.:	47	-		-		
		State		County		Permit	
4) UIC Per	mit No.	HICO	OUTTO				

STATE OF WEST VIRGINIA NOTICE OF LIQUID INJECTION OF WASTE DISPOSAL WELL WORK PERMIT APPLICATION FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS,

J Juliace OW	ner(S) To Be Served / 7) (a) Coal Operator	
(a) Name		Name NA	
Address	109 Coon Whistle Hollow A	Address	
And the St	Yawkey, WV 25573		
(b) Name		b) Coal Owner(S) With D	Declaration Of Record
Address		Name NA	
	A	Address	-
(c) Name	N	Name NA	
Address		Address	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
6) Inspector	Jeffery Smith 7) (c) Coal Lessee with Decl	aration Of Record
Address	5369 Big Tyler Road	Name NA	W. C.
	Cross Lanes, WV 25313	Address	
Telephone	681-313-6743		
The date THE REASON APPLICATION	rosion and sediment control and for reclamation proposed for the first injection or waste disposed by YOU HAVE RECEIVED THESE DOCUMN WHICH ARE SUMMARIZED IN THE "INSATION [(FORM WW-3(B)] DESIGNATED TO	posal is MENTS IS THAT YOU STRUCTIONS" ON THE	20 17 . HAVE RIGHTS REGARDING THE E REVERSE SIDE OF THE COPY OF
Notice and Ap West Virginia Application and and Reclamation	ALL. at under Chapter 22-6 of the West Virginia Code plication and accompanying documents for a V Department of Environmental Protection, with d depicted on the attached Form WW-6. Copie	e, the undersigned well of Well Work Permit with the h respect to a well at the es of this Notice, the App Med mail or delivered by	perator proposes to file or has filed this he Chief of the Office of Oil and Gas, he location described on the attached dication, the plat, and the Construction land Gas hand to the person(s) named affector (still and Gas
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(5-	1	2))

Well No.	Robert Fowler 505

West Virginia Department of Environmental Protection Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name		Sturm Environmental Lab
Sampling Contr	ractor	Sturm Environmental Lab
Well Operator	HG Energy, LLC	c
Address	5260 Dupont Re	oad
	Parkersburg, W	V 26101
Telephone	34-420-1119	

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site of the p

* No water sources within 1000 feet. There is a wantianmental Protection source (Andy & Becky McClure) which has been recently tested approximately 1200 feet from the proposed site.

WW-9 (2/15)

API Number 47 -	•
Operator's Well No.	Robert Fowler 505

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

FLUIDS/ CUTTINGS DISPO	OSAL & RECLAN	MATION PLAN	
Operator Name HG Energy, LLC		OP Code 494497948	
Watershed (HUC 10) Porter Fork	Quadrangle	Griffithsville 7.5'	
Do you anticipate using more than 5,000 bbls of water to complete Will a pit be used? Yes No		rilling production well	No 🗸
Will a synthetic liner be used in the pit? Yes		so, what ml.? 30 mil	
Proposed Disposal Method For Treated Pit Wastes:			
Land Application			
Underground Injection (UIC Permit	Number		
Reuse (at API Number)
Off Site Disposal (Supply form WW Other (Explain No land application of		ation)	
Will closed loop system be used? If so, describe: NA			
Drilling medium anticipated for this well (vertical and horizontal	al)? Air, freshwate	r, oil based, etc. Air, fres	hwater
-If oil based, what type? Synthetic, petroleum, etc. NA			
Additives to be used in drilling medium? Water, soap, KCI			
Drill cuttings disposal method? Leave in pit, landfill, removed	offsite, etc. Remo	ve offsite to approved facility	
-If left in pit and plan to solidify what medium will be	used? (cement, lin	ne, sawdust) NA	
-Landfill or offsite name/permit number?			
Permittee shall provide written notice to the Office of Oil and G West Virginia solid waste facility. The notice shall be provided where it was properly disposed.			
I certify that I understand and agree to the terms and con August 1, 2005, by the Office of Oil and Gas of the West Vin provisions of the permit are enforceable by law. Violations of law or regulation can lead to enforcement action. I certify under penalty of law that I have personally application form and all attachments thereto and that, based obtaining the information, I believe that the information is tree penalties for submitting false information, including the possibility.	rginia Department any term or cond examined and ar I on my inquiry rue, accurate, and	of Environmental Protection of the general perm in familiar with the information of those individuals im- complete. I am aware	tion. I understand that the nit and/or other applicable rmation submitted on this mediately responsible for
Company Official Signature Diane White			
Company Official (Typed Name) Diane White			JAN 1 8 2018
Company Official Title Agent			WV Department of Environmental Protection
Subscribed and sworn before me this 29th day of No	vember	, 20_17	
Cll Sle		Notary Public	OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGIN MARK J SCHALL H G Energy L L O
My commission expires $11/2/202/$			PO Box 5519, Vienne, WW 28105 My Commission Expires November 2, 2021 02/16/2018

Operator's Well No. Robert Fowler 505

Proposed Revegetation Treatm	nent: Acres Disturbed 1.0	Prevegetation p	Н
Lime 3	Tons/acre or to correct to	pH _6.5	
Fertilizer type 10-20)-20	<u> </u>	
Fertilizer amount	500	_lbs/acre	
Mulch_Straw	2_ _{_Tot}	ns/acre	
	\$	Seed Mixtures	
Ten	nporary	Perm	anent
Seed Type Tall Fescue	lbs/acre 40	Seed Type Tall Fescue	lbs/acre 40
Ladino Clover	5	Ladino Clover	5
Attach: Drawing(s) of road, location, provided)		application (unless engineered plans in	ncluding this info have be
Attach: Drawing(s) of road, location, provided) Photocopied section of involv Plan Approved by:	pit and proposed area for land ed 7.5' topographic sheet.	l application (unless engineered plans in	
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WW-9- GPP Rev. 5/16

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API Number 47	
Operator's Well No.	Robert Fowler 505

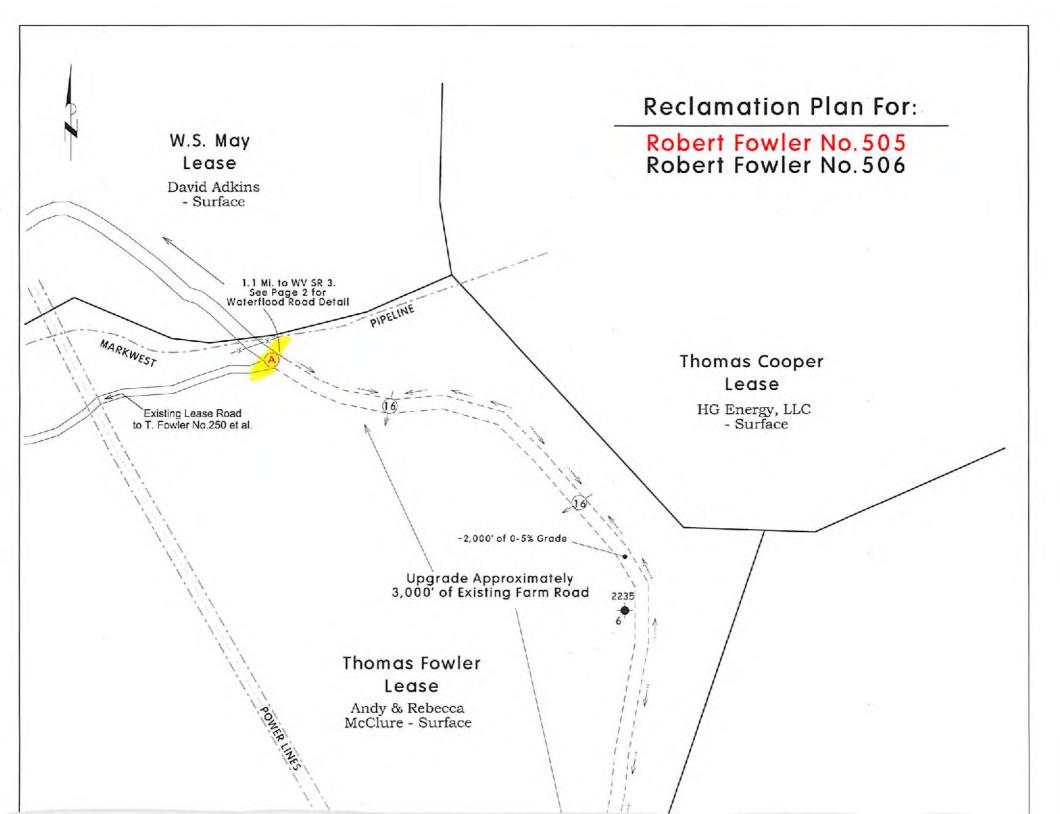
STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

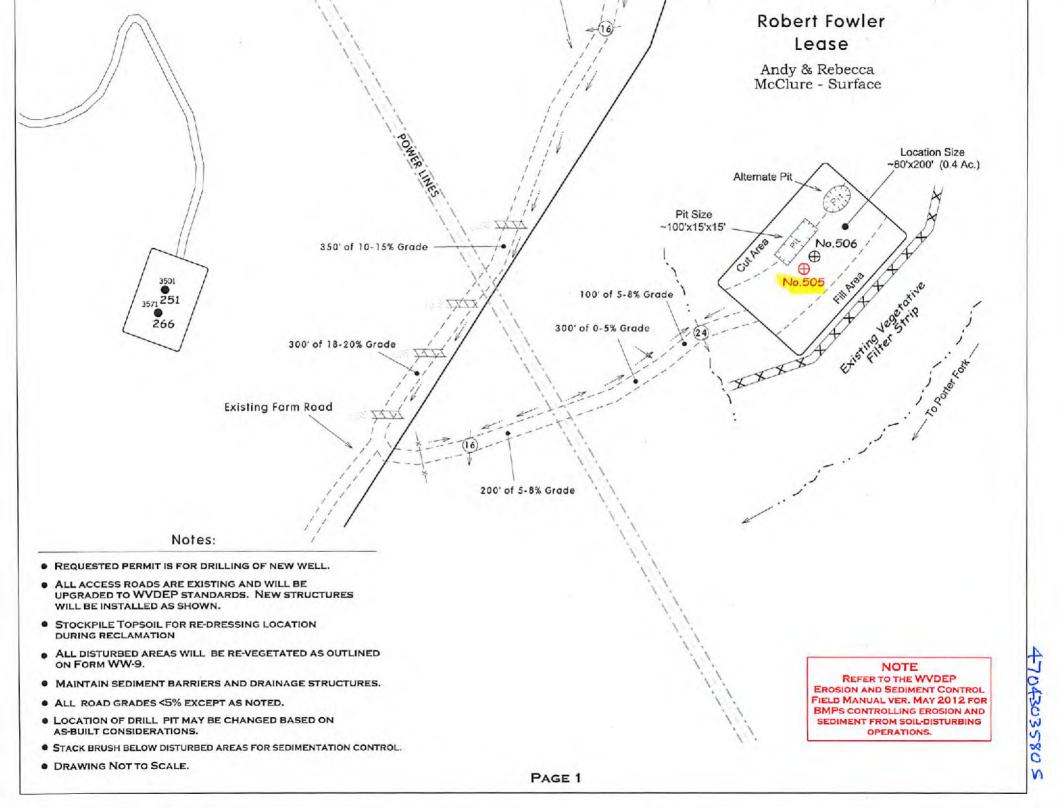
GROUNDWAT	TER PROTECTION PLAN
Operator Name: HG Energy, LLC	
Vatershed (HUC 10): Porter Fork	Quad: Griffithsville 7.5'
arm Name: Robert Fowler	
. List the procedures used for the treatment and dischargroundwater.	rge of fluids. Include a list of all operations that could contaminate the
NA - No land application of fluids	
. Describe procedures and equipment used to protect gro	oundwater quality from the list of potential contaminant sources above.
NA	
. List the closest water body, distance to closest wate discharge area.	er body, and distance from closest Well Head Protection Area to the
NA	
ING.	
. Summarize all activities at your facility that are alread	y regulated for groundwater protection.
NA	
	Office of Oil and Gas
	Office of Oil and Gas
	JAN 1 8 2018
<u> </u>	Environmental Protection

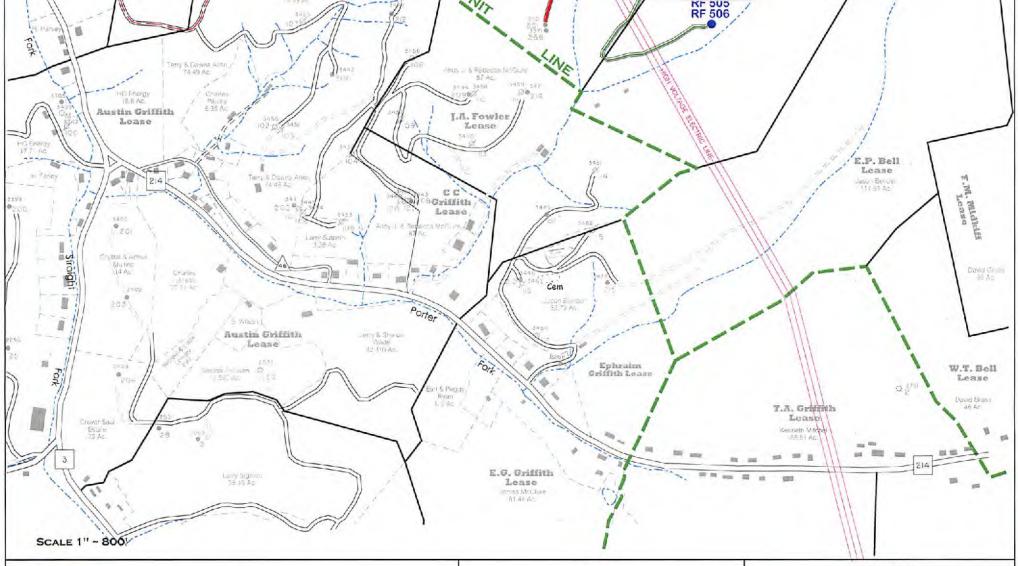
5. Discuss any existing groundwater quality data for your facility or an adjacent property.

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	API Number 47 Operator's Well No. Robert Fowler 505
NA	
Provide a statement that no waste material v	will be used for deicing or fill material on the property.
NA	
Describe the groundwater protection instru provide direction on how to prevent ground	uction and training to be provided to the employees. Job procedures shall dwater contamination.
NA	
Provide provisions and frequency for inspe	ections of all GPP elements and equipment.
NA	
	Office of Oil and Gas
Signature: Diane White	JAN 1 8 2018
	WV Department of Environmental Protection

Date: December 1, 2017









GRIIFTHSVILLE WATERFLOOD

Lincoln County, W.Va.

RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2018 DRILLING PROGRAM

NOTES

- 1. REFER TO THE WVDEP EROSION AND SEDIMENTATION CONTROL MANUAL (VER. MAY 20, 2013) FOR BMP'S CONTROLLING EROSION AND SEDIMENTATION FROM ALL SOIL-DISTURBING OPERATIONS.
- 2. SEE PAGE ONE OF RECLAMATION PLAN FOR DETAILS OF NEW ROAD CONSTRUCTION AND ROAD UPGRADES FROM POINT A TO DRILL SITE LOCATION.
- 3. EXISTING WATERFLOOD ACCESS ROADS WILL BE MAINTAINED IN PRESENT CONDITION. THESE ROADS WERE CONSTRUCTED UNDER CONDITIONS SET FORTH IN VARIOUS DRILLING PERMITS ISSUED BY WVDEP-OOG PRIOR TO 2015 (AS SHOWN). SEE PERMITS ON FILE FOR MORE DETAIL.

LEGEND

EXISTING WATERFLOOD ROADS TO BE USED.

OTHER EXISTING MAIN WATERFLOOD ROADS (POSSIBLE ACCESS).

EXISTING LEASE OR FARM ROADS TO BE UPGRADED.

NEW ROADS TO BE CONSTRUCTED.

LOCATION FOR PROPOSED WELLS

POTENTIAL WATER SUPPLY SOURCE TO BE SAMPLED (LOC. APPROX.)

NOVEMBER 14, 2017

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