

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

June 30, 2015

WELL WORK PERMIT Secondary Recovery Well

This permit, API Well Number: 47-4303481, 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.

James Martin

Chief

Operator's Well No: E. J. MAY 153

Farm Name: JOHNSON, J., LOVEJOY

API Well Number: 47-4303481

Permit Type: Secondary Recovery Well

Date Issued: 06/30/2015

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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

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.
- 2. 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 on this 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



Date: Operator's Well 1	No.	Edi	na J May 153		
3) API Well No.:	47	-	Lincoln	-	S
	State		County		Permit
4) UIC Permit No.	UIC2	2043	01AP		

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

	District	: Duval			Co	atershed: Be		Quadrar	ngle Griffit	thsville 7.5'
7) WELL OPER	ATOR: H	G Energy,	LLC			8) DESIGNA	TED AGE			anovino 7.0
		260 Dupor				-7	Addre	***************************************	upont Road	
	P	arkersburg	, WV 2610	01				-	burg, WV 2	
9) OIL & GAS I		R TO BI	E NOTIFI	IED		10) DRILLIN	IG CONTI			
	ny James							ned Upon App	roval of Per	rmit
The state of the s	Box 147					Address				
Ona, V	WV 25545					_				
11) PROPOSED 12) GEOLOGIC	TARGET	FORMA	TION BE	ohysical erea	nation change in	well (specify) Depth	rate new fo	drill ormation Feet (top		Stimulate Convert Feet (bottom
13) Estimated De	epth of Cor	npleted V				sting well): 319	6 TMD	Feet		
14) Approximate				esh 355		Feet	Salt	1205	Feet	
15) Approximate			405							
16) Is coal being					_ No		43.50.0			
17) Virgin reserv					psi	g Source	Estimated			
18) Estimated res	DRODOCI	ture pres	sure 26	50 DED 4 T	TOMO I					psig (BHFP)
19) MAXIMUM	PROPOSI	ED INJE	CTION O	PERAT		Volume per hou	r 25 BBL	Bottom l	nole pressi	are 2400 psi
19) MAXIMUM 20) DETAILED	PROPOSI IDENTIFI	ED INJEC	CTION O	PERAT FERIAL	S TO BE I	NJECTED, INC	CLUDING	ADDITIVE	nole pressi	are 2400 psi
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15034815 CC# 2996 \$ 65000

FORM WW-3 (A) 1/12



1) Date:	April 9, 2	015				
2) Operate	or's Well	No.	Edna .	J May 153		
3) API W	ell No.:	47	-		-	
		State		County		Permit
4) UIC Per	mit No.	UIC2	R04301	AP		

STATE OF WEST VIRGINIA NOTICE OF LIQUID INJECTION OF WASTE DISPOSAL WELL WORK PERMIT APPLICATION

	mer(S) To Be Served	7) (a) Coal Op		
(a) Name	HG Energy, LLC	Name	NA	
Address	5260 Dupont Road	Address		
	Parkersburg, WV 26101	the state of the	A	
(b) Name	Dwight & Debra Lovejoy		wner(S) With Declaration Of Recor	rd
Address	5 Bethel Drive	Name	NA	
	Yawkey, VW 25573	Address	-	
(c) Name	Jonathan Johnson	Name		
Address	5 Bethel Drive	Address		
1,440,400	Yawkey, WV 25573			
6) Inspector	Jeremy James	7) (c) Coal Le	ssee with Declaration Of Record	
Address	P. O. Box 147	Name	NA	
2000	Ona, WV 25545	Address	-	
Telephone	304-951-2596	1.0000000		
parties inv (2) The plat ((3) The Cons plan for e	lication For A Liquid Injection or V volved in the drilling or other work; surveyor's map) showing the well lo truction and Reclamation Plan on For rosion and sediment control and for	ocation on Form WW-6 orm WW-9 (unless the reclamation for the site	5; and well work is only to plug a well),	, which sets out the
The date	proposed for the first injection or	waste disposal is _		20 15 .
APPLICATION	N YOU HAVE RECEIVED THES N WHICH ARE SUMMARIZED IN ATION [(FORM WW-3(B)] DESIGNALL.	N THE "INSTRUCTION	ONS" ON THE REVERSE SIDE	OF THE COPY OF
Notice and Ap	at under Chapter 22-6 of the West V plication and accompanying docum Department of Environmental Pro	ents for a Well Work	Permit with the Chief of the Offi	ice of Oil and Gas,

Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan 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 the mailing or delivery to the Chief.

by paorication in certain circumstances) on or before the day of the mi	aning of derivery to	o the emer.
The person signing this document shall m	ake the followin	g certification:
i certify under penalty of law that I have personally examined and	Well Operator	HG Energy, LLC
	Address	5260 Dupont Road
attachments and that, based on my inquiry of those individuals		Parkersburg, WW 26101
immediately responsible for obtaining the information, I believe that	By:	Diane White
the information is true, accurate and complete. I am aware that there	Its:	Agent
are significant penalties for submitting false information, including the possibility of fine and imprisonment.	Signature:	Diane White

WW-2B1
(5-12)

Well No. Edna J May 153

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
Sampling Contractor

Well Operator
Address

Environmental Lab

Sturm Environmental Lab

Sturm Environmental Lab

Sturm Environmental Lab

Telephone

Sturm Environmental Lab

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, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

- See Attached Sheet -

Received

WW-2B1 Page 2 - Continued Well No.

Edna J May 153

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.

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 underlining which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site please indicate such.

Surface Owners Identified With Water Sources to be Sampled and Tested:

- Jonathan Johnson
 Bethel Drive
 Yawkey, WV 25573
- Dwight Lovejoy
 5 Bethel Drive
 Yawkey, WV 25573
- * Randall Coy
 1 First American Way
 Westlake, TX 76262

- Gloria Dingess
 5109 Straight Fork Road
 Griffithsville, WV 25521
- * Tommy Adkins 5174 Midway Road Yawkey, WV 25573
- * Angela & Ricky Stump 5172 Midway Road Yawkey, WV 25573

Roceived

WW-9 Rev. 5/10

P	age	154		of	
API Number 47 -			- 1		
Operator's Well No.	Edna	J May	153		

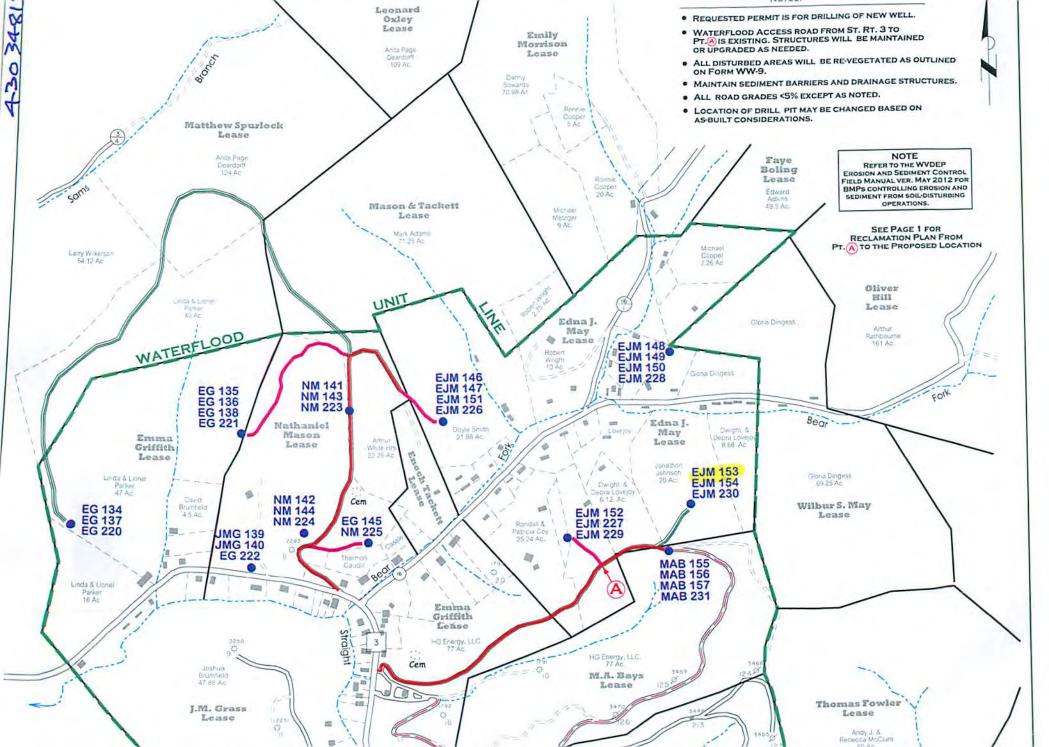
STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

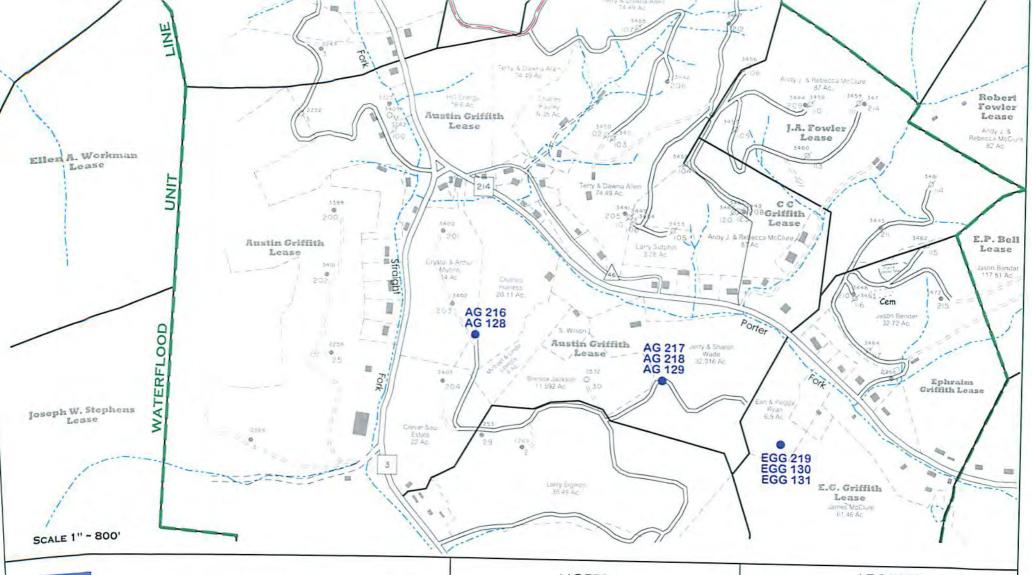
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name HG Energy, L	LC	OP Code 49449	/948
Watershed Bear Fork		Quadrangle Griffithsville 7.5'	
Elevation 970'	County Lincoln	District Duval	
The second secon	Waste Fluids encountered while d		
Do you anticipate using more	than 5,000 bbls of water to comple	te the proposed well work? Yes_	No X
Will a synthetic liner be used	in the pit? Yes	so, what mil.? 20 mil	
Una Ret Off	nd Application derground Injection (UIC Permit) use (at API Number 'Site Disposal (Supply form WW-)
	or this well? Air, freshwater, oil ba		
-If oil based, what ty Additives to be used? Water,	pe? Synthetic, petroleum, etc. NA		
Will closed loop system be use			
-If left in pit and plan	The second secon	ffsite, etc. Leave in pit sed? Cement, lime, sawdustNative	
on August 1, 2005, by the Off provisions of the permit are e law or regulation can lead to e I certify under penal application form and all atta obtaining the information, I leave to the control of the	ice of Oil and Gas of the West Virg inforceable by law. Violations of inforcement action. ity of law that I have personally of the behavior of the condition of	enditions of the GENERAL WATER ginia Department of Environmental any term or condition of the general examined and am familiar with the on my inquiry of those individua ie, accurate, and complete. I am ty of fine or imprisonment.	Protection. I understand the I permit and/or other appli- information submitted or Is immediately responsible.
Company Official (Typed Na	me) Diane White		APR 2 7 2015
Company Official (Typed Na Company Official Title Agent	me) Diane White		APR 2 7 2015
	me) Diane White	W	APR 2 7 2015 Office of Oil and Great Dept. of Environmental Pro-
			Office of Oil and Gres

Operator's Well No. Edna J May 153

		L	EGEND			
Property Boundary			Diversion Levelle			
Road = = = = = = = = = = = = = = = = = = =			Spring —			
Planned Fence — X — X — X — X — X — X — X — X — X —			Wet Spot			
			Drain Pipe with size in inc	ches (3		
			Waterway \longleftrightarrow	$\rightarrow \leftarrow \leftarrow \leftarrow \leftarrow$		
			Cross Drain			
			Artificial Filter Strip	***************************************		
			Pit: cut walls	3		
Buildings			Pit: compacted fill walls			
Water wells W			Area for Land Application	of Pit Waste		
Drill site 🕀			(
		4.0				
Proposed Revegetation Treatm	nent: Acres Disturbed	1.0 acr	es Prevegetation	on pH		
Lime 3	Tons/acre or to con	rrect to nH	6.5			
	10/13/46/6 0/10 60/	በ ርር ር (0 ያ/ 1 _				
Fertilizer (10-20-20 c	or equivalent)5(lbs/a	cre (500 lbs minimum)			
Mulch Straw		2 Tons/aci	re			
		Seed 1	Mixtures			
Ате	a I			Area II		
Seed Type	lbs/acre		Seed Type	lbs/acre		
Tall Fescue	40		Tall Fescue	40		
Ladino Clover	5		Ladino Clover	5		
Sediment Control	to be Maintain	ed at all	Times			
Attach:						
Drawing(s) of road, location,p	it and proposed area fo	or land applic	cation.			
Photocopied section of involve	ed 7 5! tonographic sha	at		Received		
Thotocopied section of invotve	za 7.5 topograpnie sne	CI.		•		
				<u>ΔPR-2-7-2015</u>		
Plan Approved by: Rolph	2 D. Truples	<i>4</i>)		711 11 2 7 2010		
• •				Office of Oil and Gas		
Comments:				WV Dept. of Environmental Protection		
<u> </u>						
Title: District In	poctok		Date: Opril 23,	2015		
Field Reviewed?	ncolar Yes) No			







GRIIFTHSVILLE WATERFLOOD

Lincoln County, W.Va.

RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2015 DRILLING PROGRAM (NORTH)

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.

AG 216

LOCATION FOR PROPOSED WELLS

•

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

MARCH 3, 2015

PAGE 2

