

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

Monday, February 12, 2018 WELL WORK PERMIT Vertical / New Drill

HG ENERGY, LLC 5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for W. S. MAY NO. 500

47-043-03576-00-00

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: W. S. MAY NO. 500

Farm Name: D. ARTHUR RAYBOURN & MAJORIE RAYBOURN (L. E.)

U.S. WELL NUMBER: 47-043-03576-00-00

Vertical / New Drill

Date Issued: 2/12/2018

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: 12/07/201 2) Operator's Well I		10/	S. May 500	
	NO.	VV	3. May 500	
3) API Well No.:	47	-	Lincoln	
	State		County	Permit
4) IIIC Permit No	Lucai	no ton	nan.	

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

5) WELL 6) LOCA		quid Injecti ation: 721'	on	/		ction (not stora	ge)	/ v	Vaste Disposal
0) 110 011.		rict: Duval			•	unty Lincoln	di i Oik	Quadra	ngle Griffithsville 7.5'
7) WELL	OPERATOR:		IC			8) DESIGNA	TED AGE		0
7) 11 EDE	Address	5260 Dupont			-	o) DESIGNA	Addre		pont Road
	11441635	Parkersburg,					Addio		burg, WV 26101
9) OII &	GAS INSPEC			TED		10) DRILLIN	G CONTI	-	ouig, WV 20101
Name	Jeffery Smith	TOR TO D	LINOIH.	ILD				d Upon Approva	al of Permit
Address	5369 Big Tyler F	load				Address			
	Cross Lanes, W	/ 25313							
12) GEOL 13) Estima 14) Appro 15) Appro 16) Is coal 17) Virgin 18) Estima 19) MAXI 20) DETA water, bac 21) FILTE	ximate water s ximate coal sea being mined in reservoir presented reservoir f MUM PROPO ILED IDENTI ctericides and other ERS (IF ANY)	ET FORMA Completed V trata depths am depths: n the area? sure in targ racture pres OSED INJE FICATION chemicals as n	TION B Well, (or : 230' Yes	physical erea actual decesh 40 ion 1250 pper ATTERIAI intain water coal bed fill	change in very change	/ Performell (specify) Depth (specify) Tepth (specify) Depth (specify) Feet Source Source Volume per hounded	2335 5 TMD Salt Estimated r 25 BBL	Feet (top Feet 900 Bottom l	
23) CASIN	G AND TUBIN	G PROGRA	M						
CASING		311	ECIFICAT	IONS		FOOTAGE IN	TEDWALE	CEMENT	PACKERS
TUBING :	The state of the s		Weight per ft.	New	Used	For Drilling	Left In Well	FILL -UP OR SACKS (CU. FT.)	PACAEAS
Conductor									Kinds
Fresh Water	r 7°	LS	17#	×		280'	280°	CTS	
Coal									Sizes
Intermediat	e								2.375°
Production	4 1/2	J-55	10.5#	×		2460'	2460'	150	Depths set
Tubing	2 3/8'	J-55	4.6#	×		2235'	2235		2135'
Liners									Perforations
									Top Bottom
								5	
			1						Office of Oil and Gas
24) APPLI	ICANT'S OPE			were acq	uired from	BP Mineral Hold	ings III, LLC		on and Gas
by dee	d/	lease x		other co	ontract ice in Lea		06/18/1904	Book 55	JAM record in the
								25511	Environment of

WW-2B1	ĺ
(5-12)	

Well No.	W. S. May 500	
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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		Sturm Environmental Lab
		Sturm Environmental Lab
Well Operator	HG Energy, LL	
Address 5260 Dupont R		oad
	Parkersburg, W	V 26101
Telephone 304-420-1119		

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

* David Adkins water was sampled and tested. RECEIVED Office of Oil and Gas

JAN 18 2018

WV Department of Environmental Protection

FORM WW-3 (A) 1/12

(a) Name

Address

(b) Name

5) Surface Owner(S) To Be Served

805 Windgate Court

Villa Hills, KY 41017



D. Arthur Raybourne & Marjorie Raybourne (L.E.)

1)	Date:	December	7, 2017				
2)	Operato	r's Well	No.	W. S. N	lay 500		
3)	API We	ell No.:	47	-		-	
			State		County		Permit
4)	UIC Per	mit No.	UIC2F	04302AF	,		

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,

Name

Address

7) (a) Coal Operator

7) (b) Coal Owner(S) With Declaration Of Record

Address		ame NA		
(c) Name		ame NA		
Address	Ac	ddress		
6) Inspector	Jeffery Smith 7) (c) Coal Lessee with Dec	laration Of Record	
Address		ame NA		
	Cross Lanes, WV 25313 Ac	ddress		
Telephone	681-313-6743	****		
(3) The Cons plan for e	surveyor's map) showing the well location on For truction and Reclamation Plan on Form WW-9 (to rosion and sediment control and for reclamation for proposed for the first injection or waste dispo-	unless the well work is or the site and access ro	pad.	which sets out the
THE REASON APPLICATION THE APPLICA ACTION AT A	N YOU HAVE RECEIVED THESE DOCUMEN WHICH ARE SUMMARIZED IN THE "INS'ATION [(FORM WW-3(B)] DESIGNATED TO ALL.	ENTS IS THAT YOU TRUCTIONS" ON TH YOU, HOWEVER Y	E REVERSE SIDE O OU ARE NOT REQU	F THE COPY OF JIRED TO TAKE
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WW-9 (2/15)

API	Number	47	-	

Operator's Well No. W. S. May 500

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

FLUIDS/ CUTTING	GS DISPOSAL & RECLAMATION PLAN	
Operator Name HG Energy, LLC	OP Code 49449	7948
Watershed (HUC 10) Bear Fork	Quadrangle Griffithsville 7.5'	
Do you anticipate using more than 5,000 bbls of water Will a pit be used? Yes No If so, please describe anticipated pit waste:	INVECTION	No V
Will a synthetic liner be used in the pit? Yes		
Proposed Disposal Method For Treated Pit W		
Land Application Underground Injection (UI Reuse (at API Number	C Permit Numberorm WW-9 for disposal location)	
Will closed loop system be used? If so, describe: NA		
Drilling medium anticipated for this well (vertical and	horizontal)? Air, freshwater, oil based, etc.	Air, freshwater
-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, r	emoved offsite, etc. Remove offsite to approved	facility
-If left in pit and plan to solidify what mediun		
-Landfill or offsite name/permit number?		
Permittee shall provide written notice to the Office of Owest Virginia solid waste facility. The notice shall be where it was properly disposed.		
I certify that I understand and agree to the ter on August 1, 2005, by the Office of Oil and Gas of the provisions of the permit are enforceable by law. Viol law or regulation can lead to enforcement action. I certify under penalty of law that I have papplication form and all attachments thereto and the obtaining the information, I believe that the information penalties for submitting false information, including the	West Virginia Department of Environmental ations of any term or condition of the general ersonally examined and am familiar with the at, based on my inquiry of those individuation is true, accurate, and complete. I am a possibility of fine or imprisonment.	Protection. I understand that the all permit and/or other applicable information submitted on this als immediately responsible for
Company Official Signature Diane W	hite	The of Oil an
Company Official (Typed Name) Diane White		JAN 1820
Company Official Title Agent		WV Departmen Environmental Pro
Subscribed and sworn before me this 7th co	ay of December , 20_17	(processorosconosconosconosconosconosconoscono
Calde	Notary Pul	NAME OF THE MANY SOMET
My commission expires 11/2/2021		PO Box 5519, Vienna, W My Commission Expires Nove

WW-9- GPP Rev. 5/16

	Page	of	
API Number 47 -	•		
Operator's Well N	lo. W. S. N	lay 500	

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

atershed (HUC 10): Bear Fork	Quad: Griffithsville 7.5'
ırm Name: W. S. May	
List the procedures used for the treatment and dischar groundwater.	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 water discharge area.	r body, and distance from closest Well Head Protection Area to the
NA	
Summarize all activities at your facility that are already	y regulated for groundwater protection.
Summarize all activities at your facility that are already	y regulated for groundwater protection. RECEIVED Office of Oil and 3 JAN 18 2018

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

WW-9- GPP	Page of
Rev. 5/16	Page of API Number 47 Operator's Well No. W. S. May 500
	operators well no. w. c. may ess
NA	
6. Provide a statement that no waste man	terial will be used for deicing or fill material on the property.
NA	
NA	
7. Describe the groundwater protection provide direction on how to prevent g	instruction and training to be provided to the employees. Job procedures shall
provide direction on now to prevent g	groundwater containination.
NA	
Provide provisions and frequency for	inspections of all GPP elements and equipment.
NA	
	RECEIVED
Signature: Diane White	
	JAN 1 8 2018
Date: December 7, 2017	WV Department of Environmental Protection
	1.010011

HG Energy, LLC			
Proposed Revegetation Treat	ment: Acres Disturbed 0.4	Prevegetation pl	H
Lime	3 Tons/acre or to correct to pH	6.5	
Fertilizer type 10-2	20-20		
Fertilizer amount	500 <u>lbs</u>	acre /	
Mulch Straw	2 Tons/ac	re	
	Sood	Mixturas	
<u>S</u> Temporary		Seed Mixtures Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5
attach: Drawing(s) of road, location, rovided)	Will Be In Place At All Ti pit and proposed area for land appli ved 7.5' topographic sheet.		cluding this info have be
Attach: Drawing(s) of road, location, provided) Photocopied section of involv	pit and proposed area for land appli ved 7.5' topographic sheet.		cluding this info have be
Attach: Drawing(s) of road, location, provided) Photocopied section of involv Plan Approved by:	pit and proposed area for land appli ved 7.5' topographic sheet.	cation (unless engineered plans inc	
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Operator's Well No. W. S. MAY No. 500

LECEND





